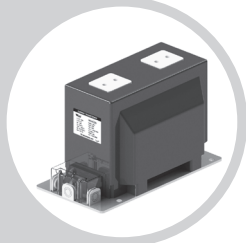


고압 계기용 변류기

Medium Voltage Current Transformer



권선형 변류기(CT)
Winding type Current Transformer22



DIN Type 권선형 변류기(CT)
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DIGITAL PROTECTIVE RELAY

안전을위한주의사항 Guidelines for Safety

- “안전을위한 주의사항” 은 제품을 안전하고 올바르게 사용하여 사고나 위험을 미리 막기 위한 것이므로 반드시 지켜 주십시오.
- 주의사항은 “경고”와 “주의”의 두 가지로 구분되어있으며 “경고”와 “주의”의 의미는 다음과 같습니다.

⚠ 경고 지시사항을 위반하였을 때 심각한 상해나 사망이 발생할 가능성이 있는 경우입니다.

⚠ 주의 지시사항을 위반하였을 때 경미한 상해나 제품손상이 발생할 가능성이 있는 경우입니다.

- 제품과 사용설명서에 표시된 ⚠ 그림기호의 의미를 특정 조건 하에서 위험이 발생할 우려가 있으므로 주의하라는 기호입니다.

⚠ 경고

1. 인명이나 재산상에 영향이 큰 기기 (예: 원자력제어, 의료기기, 차량, 철도, 항공, 연소장치, 오락기기 등 또는 안전장치)에 사용될 경우 반드시 2중으로 안전장치를 부착한후 사용하여 주십시오.
 - 화재, 인명사고, 재산상의 손실이 발생할 수 있습니다.
2. 반드시 패널에 취부 하여 사용하시고 FG 또는 \perp 단자는 접지하여 주십시오.
 - 감전의 우려가 있습니다.
3. 전원이 인가된 상태에서 결선 및 점검, 보수를 하지 마십시오.
 - 감전의 우려가 있습니다.
4. 자사 수리가술자 이외에는 제품을 개조하지 마십시오.
 - 감전의 화재의 우려가 있습니다.
5. 입력 전원시양을 반드시 확인하시고 전원 연결 시 반드시 단자번호를 확인하시고 연결하십시오.
 - 화재의 우려가 있습니다.
6. 전원을 차단한 직후에 부하측 단자를 만지지 마십시오.
 - 감전의 우려가 있습니다.

⚠ 주의

1. 실외에서 사용하지 마십시오.(옥외용은 별도주문)
 - 제품의 수명이 짧아지는 원인이 되어 감전의 우려가 있습니다.
2. 전원 및 부하배선 연결 시에는 부하전류에 따른 전선의 굵기에 유의하여 주십시오..
 - 전류에 비하여 전선의 굵기가 가늘면 화재의 위험이 있습니다.
3. 단자대의 나사는 규정토크로 조여 주십시오.

규정토크(TORQUE) - M 3.5 : 0.6 ~ 1.2 N(6~12Kgf.cm), M 4 : 1.3 ~ 1.5 N(10~14Kgf.cm), M 5 : 2.1 ~ 3.0 N(15~25Kgf.cm)

나사가 풀리면 접촉불량으로 화재의 우려가 있습니다.
4. 반드시 정격과 성능 범위내에서 사용하여 주십시오.
 - 제품의 수명이 단축되고 고장 발생의 원인이 됩니다.
5. 청소시 물, 유기용제 등의 사용을 금합니다.
 - 감전 및 화재와 제품변형의 우려가 있습니다.
6. 가연성가스, 폭발성가스, 습기, 직사광선, 복사열, 진동, 충격이 있는 장소에서의 설치 및 운전을 금합니다.
 - 제품수명 단축 및 고장, 화재, 폭발의 위험이 있습니다.
7. 제품의 내부로 먼지나 배선찌꺼기 등의 유해한 도체가 유입되지 않도록 하여주십시오.
 - 고장 및 화재의 우려가 있습니다.
8. 동작 중 방열판류에는 고열이 발생하므로 절대 만지지 마십시오.
 - 감전 및 화상의 우려가 있습니다.
9. 제품폐기 시에는 산업폐기물로서 처리하여 주십시오.

- Guidelines for safety is to use product safe and properly and prevent accidents or dangers. Never forget to keep it.
- Guidelines can be classified into two, warning and caution, and their meanings are as follows.

⚠ Warning When there is the possibility that serious injury or death can occur when violating directions.

⚠ Caution When there is the possibility that slight injury or the damage of products can occur when violating directions.

- The meaning of ⚠ lexigram indicated on the products and instructions is to handle with care as any danger can occur under specific conditions.

⚠ Warning

1. When using in instruments that have great influence on lives or properties(for examples: nuclear energy control, medical equipment, vehicles, railroad, aviation, combustion apparatus, entertainment systems or safety device), use after being sure to attach duplex safety device.
 - There may be fire, loss of lives, or property damages.
2. Use after being sure to attach to panel, and ground FG or \perp a terminal.
 - There may be the possibility of electric shock.
3. Don't connect, inspect and repair under the power-up.
 - There may be the possibility of electric shock.
4. Don't remodel products except by the company's engineers.
 - There may be the possibility of fire or electric shock.
5. Be sure to check input power source options, and connect after checking terminal number when connecting power sources.
 - There may be the possibility of fire.
6. Don't touch the terminal of load side immediately after power source is cut off.
 - There may be the possibility of electric shock.

⚠ Caution

1. Don't use outdoors (for outdoor, separate order)
 - It can be a cause of product's life becoming short, and there may be the possibility of electric shock.
2. When connecting power source and load wiring, pay attention to the thickness of cables according to load current.
 - There may be the danger of fire if the thickness of cables is thin for the current.
3. Tighten the screw of port by the regulated torque.

The regulated torque - M 3.5 : 0.6 ~ 1.2 N(6~12Kgf.cm), M4 : 1.3~1.5 N(10~14Kgf.cm), M 5 : 2.1 ~ 3.0 N(15~25Kgf.cm)

-If the screw comes loose, there may be the possibility of fire because of bad contact.
4. Be sure to use within the range of rating and performance.
 - Product's life is shortened, and it may be a cause of troubles.
5. Don't use water or organic solvent when cleaning.
 - There may be the possibility of electric shock, fire and product deformation.
6. Don't install or operate in places with inflammable gas, explosive gas, direct ray of light, radiation heat, vibration and shock.
 - There may be the possibility of troubles and fire.
7. Make sure that harmful conductors such as dust or fragments of cables may not be flowed into the inside of product.
 - There may be the possibility of trouble or fire.
8. Never touch during operation as there is superheat on the radiator board.
 - There may be the possibility of trouble or fire.
9. Dispose as industrial waste when discarding products.

주문시 확인 승낙 사항

Items to be verified and approved when ordering products

운영 제품을 구입하는 고객 여러분께!

저희 운영 제품을 이용해 주셔서 대단히 감사합니다.
본 카탈로그에서 당사 제품을 주문하실 경우, 견적서, 계약서, 사양서 등에 특기사항이 없는 경우에는 다음의 적합 용도조건, 보증내용등을 적용합니다.
아래 내용을 확인하시고 승낙하신 후 주문해 주십시오.

1. 보증 내용

- ① 보증기간
당사 제품의 보증기간은 구입 후 또는 지정 장소 납입 후 1년으로 합니다.
- ② 보증 범위
상기 보증 기간 중에 당사측의 책임으로 당사 제품에 고장이 발생한 경우 대체품 제공 또는 수리를 제품 구입 장소에서 무상으로 실시합니다. 단, 고장의 원인이 다음에 해당하는 경우에는 이 보증 대상 범위에서 제외됩니다.
 - a) 본 카탈로그 또는 사양서에 기재되어 있는 이외의 조건, 환경, 취급 및 사용에 의한 경우
 - b) 당사 제품 이외의 원인에 의한 경우
 - c) 당사 이외에 의한 개조 또는 수리에 의한 경우
 - d) 당사 제품의 본래 사용법 이외의 사용에 의한 경우
 - e) 당사 출하 당시의 과학, 기술 수준으로는 예측 할 수 없었던 경우
 - f) 기타 천재지변, 재해 등 당사측의 책임이 아닌 원인에 의한 경우참고로 여기서의 보증은 당사 제품 단품의 보증을 의미하는 것이며, 당사 제품 고장에 의해 유발되는 손해는 보증 대상에서 제외됩니다.

2. 책임의 제한

- ① 당사 제품에 기인해 발생한 특별손해, 간접손해, 또는 소극적 손해에 대해 당사는 일체의 책임을 지지 않습니다.
- ② 프로그래밍 가능한 당사제품에 대해 당사 이외의 자가 실시한 프로그램 또는 그에 의해 발생한 결과에 대해 당사는 일체의 책임을 지지 않습니다.

3. 적합 용도의 조건

- ① 당사 제품을 다른 제품과 조합해서 사용하는 경우에 적합해야 할 규격, 법규 및 규제는 고객이 직접 확인해 주십시오.
또 고객이 사용하는 시스템, 기계, 장치에 대한 당사제품의 적합성은 고객이 직접 확인해 주십시오.
이것이 실시되지 않는 경우 당사는 당사 제품의 적합성에 대해 책임을 지지 않습니다.
- ② 다음 용도에 사용하는 경우, 당사 영업 담당자와 상담하고 사양서 등을 통해 확인하는 한편 정적, 성능에 대해 여유를 주거나 만일 고장이 발생해도 위험을 최소화 할 수 있는 안전 회로 등의 안전 대책을 2중으로 강구해 주십시오.
 - a) 실외, 잠재적인 화학적 오염 또는 전기적 방해를 받는 용도 또는 본 카탈로그에 기재되지 않는 조건이나 환경에서 사용.
 - b) 원자력 제어설비, 소각설비, 철도, 항공, 차량설비, 의료용 기계, 반도체 제조장비, 오락기계, 안전장치 및 행정 기관이나 개별 업계의 규정에 따른 설비
 - c) 인명이나 재산에 위험이 미칠 수 있는 시스템, 기계, 장치
 - d) 가스, 수도, 전기의 공급 시스템, 24시간 연속 운전 시스템 등 높은 신뢰성이 필요한 설비
 - e) 자동차(2륜차 포함) 탑재 설비
 - f) 기타상기 a)~e)에 준하며 고도의 안전성이 필요한 용도
- ③ 고객이 당사 제품을 인명이나 재산에 중대한 위험을 미치는 용도에 사용하는 경우에는 시스템 전체적으로 위험을 알리거나 여유 있는 설계에 의해 필요한 안전성을 확보할 수 있도록 설계되어 있는지 당사 제품이 전체적으로 의도한 용도에 적절히 배전, 설치 되어 있는지 반드시 고객이 직접 사전에 확인해 주십시오.
- ④ 본 카탈로그에 기재되어 있는 용도는 참고용이므로 채택 시에는 기기, 장치의 기능과 안전성을 확인 한 후에 사용해 주십시오.
- ⑤ 당사 제품의 잘못된 사용으로 고객 또는 제 3자에게 예기치 않는 손해가 발생하지 않도록 사용상의 금지 사항 및 주의 사항을 완전히 숙지 한 후 반드시 지켜 주십시오.

4. 사양변경

본 카탈로그에 기재된 제품의 사양 및 동봉품은 개선 또는 기타 사유에 의해 필요에 따라 변경될 수 있습니다.
당사 영업 담당자와 상담하고 당사 제품의 실제 사양을 확인해 주십시오.

5. 서비스의 범위

당사 제품의 가격에는 기술자 파견 등의 서비스 비용은 포함되어 있지 않습니다.
원하실 경우에는 당사 영업 담당자와 상담해 주십시오.

6. 적용 범위

상기 사항은 대한민국 내에서의 거래 및 사용을 전제로 합니다.
해외에서의 거래 및 사용에 대해서는 당사 영업 담당자와 사전에 상담해 주십시오.

Dear customers who purchase Woon Young products!

Thank you for purchasing Woon Young products.
If there is no particular information on estimates, contracts or specifications when you order products from this catalog, the following conditions of use and warranty shall apply. Please place orders after you read and approve the following items.

1. Content of Warranty

- ① Warranty period
The warranty period of this product shall be 1 year from the date of purchase or from the day the product is delivered to a designated place.
- ② Scope of warranty
If failure occurs due to reasons attributable to this company during the above-said warranty period, this company will provide substitute products or repair the product free of charge at the place of purchase. However, if the cause of failure is one of the following, it shall be excluded from being eligible for warranty benefits.
 - a) Products were handled or used under the conditions and environment not entered in this catalog or in specification.
 - b) Failure occurred due to reasons other than those caused by this product.
 - c) Failure occurred due to modification or repairs performed by persons other than this company.
 - d) Failure occurred because the product was used based on the method other than the original usage of this product.
 - e) Failure was not expected by the scientific and technical levels prevailing at the time of shipment.
 - f) Failure occurred due to causes beyond the control of this company, e.g. natural disasters and accidents.Warranty as specified herein means the warranty covering only the product of this company, and any damage caused by the failure of this product shall be excluded from being eligible for warranty coverage.

2. Limitations on responsibility

- ① This company shall not be held liable whatsoever for any special damage, indirect damage or passive damage caused by this product of this company.
- ② This company shall not be held liable whatsoever for any programming performed by persons other than this company on the programmable products or for the results of such programming.

3. Conditions of compatibility

- ① Please check the standards, laws and regulations applicable when this product is used in combination with other products.
In addition, be sure to check the compatibility of this product covering the systems, machines and devices used by you.
If you fail to take actions as above, this company shall not be held liable for the compatibility of the product.
- ② If the product is used for the following purposes, discuss details with the sales manager of this company based on the provided specifications. At the same time, allow sufficient rating and performance, or take appropriate safety measures through the safety circuits that can minimize risks even if failure occurs.
 - a) Using the product outside or under environment exposed to potential chemical pollution or electric interference, or using the products under the conditions or environment not specified in this catalog.
 - b) Nuclear controllers, incinerators, railways, aviation, vehicles, medical equipment, semiconductor manufacturing equipment, game machines, safety devices and equipment regulated by administrative agencies or individual maker.
 - c) Systems, machines and devices that can cause personal or property damage.
 - d) Equipment requiring high degree of reliability, e.g. gas, water and electricity supply systems, and 24-hour continuous operation systems.
 - e) Automobile (including two-wheeled vehicles) mounted equipment
 - f) Other purposes equivalent to the above-said paragraph a) through e) requiring high degree of safety.
- ③ If the product is used for purposes that might induce serious personal or property damage, be sure that you inform risks covering the entire system in advance or verify whether the product is designed to ensure required safety or whether the product is properly connected and installed to suit the intended overall purposes
- ④ The purposes of the products shown in this catalog are only for reference purposes. Apply such purposes only after you check the functions and the safety of the equipment and devices.
- ⑤ To prevent unexpected damage to you or to third parties resulting from improper use of this product, be sure to use the product after you thoroughly read and understand items related to prohibitions and caution during use.

4. Changing specifications

The products and specifications entered in this catalog are subject to change as needed for improvement or for other reasons. Discuss with the sales manager of this company and verify actual specifications of the products.

5. Range of service

The product prices do not contain any service expenses, e.g. dispatch of technicians. If you need any services, discuss with the sales manager of this company.

6. Scope of application

Items described above are on the premise that the products are traded and used in the Republic of Korea. Discuss with the sales manager of this company regarding overseas transactions and uses.

INSTRUMENT TRANSFORMERS

기술적 설명 Technical Description

1. 계기용변성기의 일반사항

- 계기용변성기는 대 전류 또는 고전압의 전기에너지를 측정계기, 계량기 또는 보호계전기 등의 2차 측 접속장치에 적합한 측정이 가능한 표준전류 또는 전압으로 변환해주는 전기기기로서, 변류기(Current Transformer), 계기용변압기(Voltage Transformer) 및 계기용 변압변류기(Combined Voltage and Current Transformer)로 구분되어진다.

계기용변성기는 그 사용목적에 따라 전력량 측정, 선로보호 및 전력계통 운영에 있어서 매우 중요한 역할을 함으로, 사용 시 적용 선로의 차단특성, 전압전류특성 및 전기적기계적 특성을 충분히 고려해야한다.

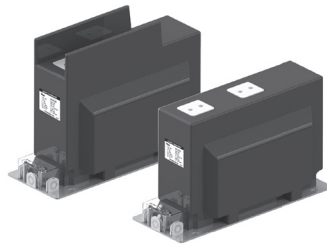
1. Instrument transformer general

- The instrument transformer is an electric device to convert the electric energy of large current and high voltage into measurable standard currents or voltages suitable for interface units on the secondary side such as measuring instruments, gauges or protection relays, and is classified into Current Transformer, Voltage Transformer, and Combined Voltage and Current Transformer.

The current transformer plays a very important role in watt-hour measurement, line protection and power system operation depending on its use purpose, so consider the cutoff characteristics, voltage/current characteristics and electrical/mechanical characteristics of the line applied enough when using it.

1-1. Classification of instrument transformers

구분(Division)	형태(Type)	설치상태(Installation status)
Current transformer(CT)	1. Winding type current transformer 2. Post busbar type current transformer 3. Bushing type current transformer 4. Zero phase current transformer	Indoors / outdoors
Voltage transformer(VT)	1. Earthed vottage transformer 2. Non-earthed vottage transformer	Indoors / outdoors
Combined voltage and current transformer(MOF)	1. Combined voltage and current transformer	Indoors / outdoors



Current Transformer



Voltage Transformer

1-2. 디자인

- 계기용변성기는 사용목적, 절연방식, 정격사양과 설치환경 등을 고려해서 다음과 같은 다른 디자인으로 차별화 할 수 있다.
 - 옥내 및 옥외 설치를 위한 부싱형변성기
 - 표준배전반용 DIN 규격을 적용한 권선형변류기
 - 절연형태에 따른 Line to Ground 및 Line to Line형태의 Single 및 Double pole 형태의 계기용변압기.

1-2. Design

- The instrument transformer can be differentiated in the following different designs considering the use purpose, insulation method, rating specification and installation environment.
 - Bushing type transformer for indoor and outdoor installation
 - Winding type current transformer using the DIN standard for standard switchboards
 - Line to Ground and Line to Line type Single and Double pole voltage transformer depending on insulation types.

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1-3. Standard

국제규격 (International)	IEC61869-1,2,3	Current Transformer Voltage Transformer
미국 (U.S.A)	IEEE(ANSI)C57.13	Requirements for Instrument Transformers
한국 (KOREA)	KS C 1706 KS C 1707	Instrument transformer(For standard and general gauges) Instrument transformer(For power supply)
일본 (JAPAN)	JIS C 1731 JIS C 1736 JEC 1201	Instrument transformer(For general gauges) Instrument transformer(For power supply) Instrument transformer(For protection relays)
호주 (AUSTRALIA)	AS IEC60044-1,2,3	Current Transformer Voltage Transformer Combined Transformer
캐나다 (CANADA)	CSN/CSA C60044-1,2	
독일 (Germany)	VDE0414	Rules for Instrument Transformer

1-4. Insulation level

Standard	Maximum voltage [kV]	Power-frequency test [kV, 1min]	Impulse [kV (BIL)]
KS C 1706	1.15	4	-
	3.45	16(3A) / 10(3B)	45(3A) / 30(3B)
	7.2	22(6A) / 16(6B)	60(6A) / 45(6B)
	11.5	28	90(10A) / 75(10B)
	25.8	50	125/150
	34.5	70	170/200
IEC 61869-1, 2, 3 AS 60044-1, 2, 3 CAN/CSA C60044-1, 2, 3	0.72	3	-
	3.6	10	20/40
	7.2	20	40/60
	12	28	60/75
	17.5	38	75/95
	24	50	95/125
	36	70	145/170
IEEE(ANSI) C 57.13	1.2	10	30
	2.75	15	45
	5.60	19	60
	9.52	26	75
	15.5	34	95/110
	25.5	40/50	125/150
	36.5	70	200
JEC 1201 JIS 1731	1.15	4	-
	3.45	10/16	30/45
	6.9	16/22	45/60
	11.5	28	75/90
	23	50	125/150

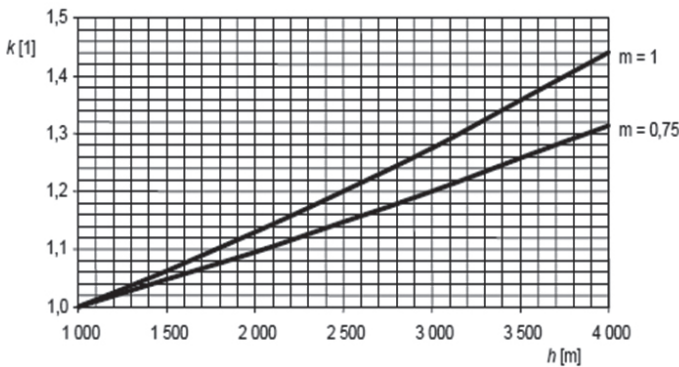
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1-5. 계기용변성기의 설치환경

- 사용온도
 - 계기용변성기의 설치 및 운전에 대한 온도범주는 충분히 고려되어야한다.

Min. temperature (°C)	Max. temperature (°C)	Humidity
-5 -25 -40	40 40 40	Relative humidity/24 hours 95% Relative humidity/months 90%

- 고도
 - 1000m 이상의 고도에 설치를 위해서는 표준화된 기준 대기 조건에서의 아크 거리는 서비스 위치에서 요구되는 내전압 강도를 곱해서 결정해야 한다.



These factors can be calculated with the following equation :

$$k = e^{m(h-1000)/8150}$$

where

h is the altitude in metres:

m = 1 for power-frequency and lightning impulse voltage:

m = 0,75 for switching impulse voltage.

1-5. Installation environment for instrument transformers

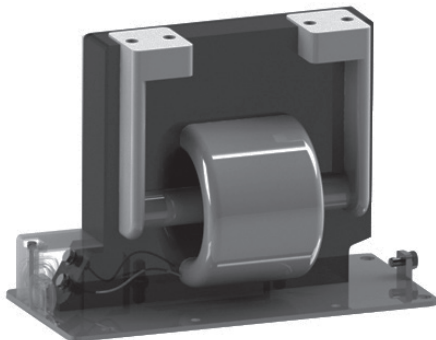
- Service temperature
 - Consider the temperature categories for installation and operation of instrument transformers enough.

- Altitude
 - To install this at a 1000m or higher altitude, determine the arc distance at a standardized reference atmospheric condition by multiplying it by the dielectric strength required at the service position.

2. 변류기

2-1. 구조

- (1) 변류기는 1차 전류에 비례하여 측정이 가능하고 표준화 된 낮은 전류로 변환 시키는 장치로서, 자성체를 가지는 실리콘 및 니켈의 철심이 내부에 독립적으로 구성이 된다.
- (2) 2차 권선은 철심에 균등하게 권선되기 때문에 1차권선과 2차 권선은 강한 자기적인 결합을 형성시킨다.
- (3) 2차권선의 턴 수는 1차 및 2차 전류비에 의해 결정되어진다. 사용시 철심코어와 2차 권선은 반드시 접지되어야한다.
- (4) 1차 정격전류와 단시간전류(Ith)에 따라 1차 권선은 한 턴의 고정된 도체형태를 가지거나 여러 턴 횟수를 가진다.
- (5) 변류기 설계 시 최고회로전압에 따른 절연설계를 고려해야한다.
- (6) 1차권선과 2차권선 및 2차권선의 철심코어는 자동진공주형 방식을 통하여 에폭시로 싸여진 하나의 단일제품으로 형성된다.
- (7) 하나의 형상으로 주형 된 몸체는 금속바닥에 장착되어지며, 2차 단자는 에폭시수지 본체에 내장되고 플라스틱 커버에 의해 보호된다.
- (8) 1차권선의 끝은 황동 또는 구리합금의 평평한 터미널("P1/P2")로 접지하고, 에폭시수지 바디의 상단에 위치한다.
- (9) 접지나사는 변류기의 접지용 바닥판에 사용가능하다. 접지는 스위치기어의 프레임에 직접 혹은 별도의 접지 바에서 접지 할 수 있다.



변류기 내부구조
Internal structure of the current transformer

2. Current Transformer

2-1. Structure

- (1) The current transformer is a device to convert the primary current into a measurable standardized lower current in proportion to the primary current, and has a silicon and nickel core with ferromagnetic substances inside independently.
- (2) The secondary winding is wound uniformly around the core, so the primary winding and the secondary winding form a strong magnetic combination.
- (3) The number of turns of the secondary winding is determined by the current ratio of the primary and the secondary. The core and the secondary winding must be grounded during use
- (4) Depending on the primary rated current and the short-time current(Ith), the primary winding has a fixed conductor type of one turn or multiple turns.
- (5) When designing a current transformer, consider the insulation design depending on the maximum circuit voltage
- (6) The primary winding and the secondary winding and the core of the secondary winding shall be formed in a single product enclosed with epoxy through a automatic vacuum casting method.
- (7) The body cast in a shape is installed on a metal floor, and the secondary terminal is installed in the epoxy resin body and protected by a plastic cover.
- (8) The end of the primary winding is grounded on a flat brass or copper alloy terminal("P1/P2"), and is located at the top of the epoxy resin body.
- (9) The ground screw can be used on the ground floor plate of the current transformer. Grounding can be performed directly to the frame of the switch gear or to a separate ground bar.

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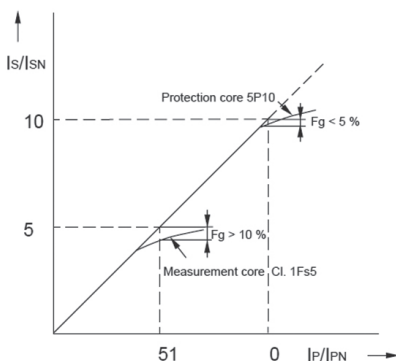
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2-2. 정의

- (1) 정격 1차 및 2차 전류
 - 1차 및 2차 전류 값은 변류기의 성능 비를 나타낸다. 1 또는 5A의 2차 정격 전류를 사용하는 것이 일반적이다.
- (2) 정격 연속 열전류
 - 이것은 1차 권선을 통해 2차 권선으로 연속적으로 전류가 흐르는 동안 온도가 지정된 값을 초과하여 상승하지 않는 전류 값이다. 정격 연속 열전류와 정격전류가 동일하지만, 전류가 더 높을 수 있다는 것이 일반적이다.
- (3) 정격 단시간 열전류
 - 1차 전류의 r.m.s 값은 변류기가 1~3초 동안 유해한 영향이나 충격 없이 견디는 값이다. 2차 권선은 단락되어야 한다.
- (4) 정격 동적전류
 - 1차 전류의 피크 값은 변류기가 전자기력에 의해 전기적으로 또는 기계적으로 손상되지 않고 견디는 값이다. 2차 권선은 단락되어야 한다.
- (5) 부담
 - 부담은 2차 회로의 임피던스이고 저항에서의 역할이다. 부담은 일반적으로 지정된 역할 및 정격 2차 전류에서 볼트암페어(VA)로 표현된다.
- (6) 정격부담
 - 부담 값은 사양서의 정확도 요건에 기초한다.
- (7) 오차제한
 - 계기용 변류기의 합성오차는 과전류 발생 시 연결된 계량장치를 보호하기 위해 10% 이상이어야 한다. 반대로 1차 전류의 정격 오차 제한에서 보호용 변류기의 합성오차는 5%(5P)나 10%(10P)와 같거나 그보다 작아 연결된 보호 장치의 적절한 트리핑이 확보되어야 한다.
- (8) 기기안전계수
 - 전류가 변류기의 1차 권선을 통해 흐르는 시스템이 고장 날 경우, 이 장치는 정격기계의 보안계수 값(FS)이 작을 경우 변류기에 의해 최고수준의 보호를 제공한다.
- (8) 확장전류
 - 요청 변류기는 120%의 기준 값보다 높은 확장 전류 정격을 위해 설계될 수 있다. 예를 들어 150% 및 200%의 추가적인 수치가 있다. 이것은 정확도가 정격 1차 전류의 150% 또는 200%로 보장된다는 것을 의미한다.
- (9) 서비스 및 접지
 - 2차 권선은 일반적으로 부담 또는 단락단자에 항상 연결되어 있어야 한다. 그렇지 않으면 위험고전압이 2차 단자에서 발생할 수 있다. 2차 권선의 끝은 변류기의 금속부분에 잘 접지되어야 한다.
- (10) 초과전류 범위
 - 시스템 고장의 경우, 1차 정격 전류로부터 1차 전류의 한계까지 2차 정격전류가 증가한다. 오차제한은 2차 부담이 정격부담과 동일한 경우에만 관찰된다. 부담이 정격부담과 상이한 경우, 기기안전계수는 변경 된다.

2-2. Definition

- (1) Rated primary and secondary current
 - The primary and secondary current value means the performance ratio of a current transformer. It is general to use a secondary rated current of 1 or 5A.
- (2) Rated continuous thermal current
 - This is a current value in which the temperature doesn't rise over the designated value while currents flow continuously to the secondary winding through the primary winding. The rated continuous thermal current is equal to the rated current, but can be higher in currents in general.
- (3) Rated short-time thermal current
 - The r.m.s value of the primary current is a value that the current transformer endures for 1~3 sec without harmful effects or shocks. The secondary winding shall be shorted.
- (4) Rated dynamic current
 - The peak value of the primary current is a value that the current transformer endures without being damaged electrically or mechanically by the electromagnetic force. The secondary winding shall be shorted.
- (5) Burden
 - The burden is the impedance of the secondary winding and is a power factor in resistance. The burden is represented in volt-ampere(VA) in the designated power factor and the rated secondary current in general.
- (6) Rated burden
 - The burden value is based on the accuracy requirements of the specification.
- (7) Error limit
 - The resultant error of a current transformer shall be over 10% to protect the connected measuring device in the case of overcurrents. On the contrary, the resultant error of a protective current transformer in the rated error limit of the primary current shall be equal to or less than 5%(5P) or 10%(10P) to secure proper tripping of the connected protective device.
- (8) Instrument safety factor
 - When the system where currents flow through the primary winding of a current transformer becomes out of order, this device provides protection of top level via the current transformer if the safety factor(Fs) of the rated device is small.
- (8) Expanded current ratings
 - The requested current transformer can be designed for a higher expanded current rating than the reference value of 120%. For example, there are additional values of 150% and 200%. This means that the accuracy is guaranteed up to 150% or 200% of the rated primary current.
- (9) Service and grounding
 - The secondary winding shall always be connected to the burden or short-circuit terminal in general. Otherwise, there can happen a dangerous high voltage at the secondary terminal. The end of the secondary winding shall be well grounded to the metal part of the current transformer.
- (10) Overcurrent range
 - In the case of system faults, the secondary rated current increases from the primary rated current ratio to the primary current limit. Error limit is observed only when the secondary burden is equal to the rated burden. If the burden is different from the rated burden, the device safety factor changes.



1.3.3.1 오차계급
정격전류에서 허용되는 전류의 허용 오차 한도이다. 일반적으로 전류오차의 한계는 정격 전류의 1%에서 120%까지의 범위에 대해 계산된다.

1.3.3.1 Error class
This is the allowable error limit of currents allowed in the rated current. Generally, the limit of current errors is calculated over the 1%~120% range of the rated current.

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● IEC 61869-2 에 따른 전류오차 및 위상차에 대한 허용 한계

Allowable limit of current errors and phase differences according to IEC 61869-2

Accuracy Class	± percentage of current error at percentage of rated current					± phase displacement in minutes at percentage of rated current				
	1	5	20	100	120	1	5	20	100	120
Measuring Current Transformers										
0.1	-	0.4	0.2	0.1	0.1	-	15	8	5	5
0.2s	0.75	0.35	0.2	0.2	0.2	30	15	10	10	10
0.2	-	0.5	0.35	0.2	0.2	-	30	15	10	10
0.5s	1.5	0.75	0.5	0.5	0.5	90	45	30	30	30
0.5	-	1.5	0.75	0.5	0.5	-	90	45	30	30
1	-	3.0	1.5	1.0	1.0	-	180	90	60	60
Protective Current Transformers										
5P	-	-	-	1	-	-	-	-	60	-
10P	-	-	-	3	-	-	-	-	-	-

2-3. 변류기의 시험

(1) 변류기의 사용수명에 대한 안전성을 확보하기 위해서, 다음과 같은 시험 형식시험과 일상시험이 수행되어야 한다.

- 충격 내전압 시험(형식시험)
- 1차 및 2차 권선의 상용주파수 내전압 시험(일상시험)
- 부분 방전 테스트(일상시험)
- 온도상승시험(형식시험)
- 과전류강도시험(형식시험)
- 2차 개로시험(형식시험)
- 여자특성시험(일상시험)
- 정밀도시험(일상시험)

(2) 온도상승시험

- 변류기는 IEC-standard에 설명된 대로 절연계급 "E"종으로 설계되었으며, 절대 최대 온도는 115° C이다. 최대 온도 증가는 40° C의 주변 온도에서 75° K를 초과해서는 안 된다.

(3) 부분방전 시험

- 변류기는 유전체 안전에도 불구하고, 부분 방전 시험을 수행해야 한다. 이러한 시험은 정격전압이 3.6kV이상의 모든 변류기에 대해 필요하다. 허용기준은 다음과 같다.

Type of earthing of the neutral system	PD Test Voltage (kV)	Partial Discharge Level (pC)
Earthed neutral system	Um	< 50pC
Isolated or non effectively earthed neutral system	(1.2*Um)/√3	< 20pC

2-3. Test of current transformers

(1) To secure safety for the service life of current transformers, execute the following type tests and routine tests.

- Impulse voltage withstand test(type test)
- Power frequency withstand voltage test for the primary and secondary winding(routine test)
- Partial discharge test(routine test)
- Temperature rise test(type test)
- Short time current test(type test)
- Secondary open test(type test)
- Excitation characteristic test(routine test)
- Accuracy test(routine test)

(2) Temperature rise test

- The current transformer is designed as insulation class "E" as described in the IEC-standard, and its absolute maximum temperature is 115°C. The maximum temperature rise shall not exceed 75° K above 40°C ambient temperature.

(3) Partial discharge test

- For current transformers, execute a partial discharge test despite their dielectric safety. This test is necessary for all current transformers of 3.6kV or higher rated voltage. The allowable criterion is as follows.

HV / CT
고압 변류기

HV / VT : MOF
고압 변압기

LV / CT
저압 변류기

LV / VT
저압 변압기

RELA Y
보호 계전기

ELD
누전 경보기

GFR
지락 계전기

ZCT
영용 변류기

METER
지시 전기 계기

SPD
서지 보호기

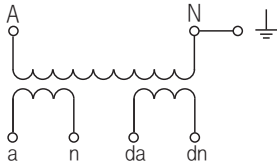
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INSTRUMENT TRANSFORMERS

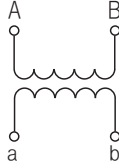
기술적 설명 Technical Description

3. 변압기

- 변압기는 1차전압에 비례하여 측정 가능하고 고전압을 표준화된 전압으로 변환시키는 장치이다. 변압기는 2차권선이 되어진 하나의 철심코어를 가진다. 계기용변압기는 단극 또는 이중극 절연설계를 제공할 수 있다. 오픈델타회로가 필요하다면 추가권선은 단극 접지절연 변압기에 제공 할 수 있다.



오픈델타권선을 가진 단극절연변압기회로
Single-pole insulation voltage transformer circuit
with open delta wiring



이중극절연변압기회로
Double-pole insulation voltage
transformer circuit

- 계기용변압기에 단락이 발생하는 것은 매우 위험하다. 단극 절연 변압기 1차권선의 끝은 2차 단자함 내부 및 뒷면의 "N"에 연결되고, 작동 중에 제거되어서는 안 된다.

3-1. 계기용변압기 구조

- (1) 계기용변압기는 하나의 자성철심코어를 가진다. 단극전압절연 변압기의 2차 측 권선은 접지된 철심코어에 부착 된다. 이중극 절연 변압기의 경우 1차와 2차 권선사이의 절연설계는 상 - 대지 전압의 반으로 설계되어야 한다. 2차 권선은 3kV의 시험 전압을 견딜 수 있도록 설계된다.



단극전압 절연변압기
Single-pole insulation voltage transformer

- (2) 고압1차권선과 2차 권선을 완전히 에폭시수지로 감싸기 위해 고 진공 상태에서 주형이 이루어져 성형되어진다.
- (3) 성형된 본체는 금속 바닥판위에 장착된다. 2차 단자는 에폭시수지 바디 안에 장착되고 플라스틱 커버에 의해 보호된다.
- (4) 1차권선의 끝은 황동 또는 구리합금으로 제작된 인서트로 연결 되고, 에폭시수지 바디의 상단에 위치한다.
- (5) 변압기의 접지를 위하여 바닥판위에 접지나사를 사용할 수 있다. 접지는 스위치기어의 프레임에 직접 혹은 별도의 접지 바에 배치할 수 있다.

3. Voltage Transformer

- The voltage transformer is a device to convert a high voltage into a standardized voltage in proportion to the primary voltage. The voltage transformer has an iron core with the secondary winding. The voltage transformer can provide insulation design of single pole or double poles. If an open delta circuit is needed, an additional winding can be provided to the single-pole grounded insulation voltage transformer.

- Occurrence of short circuits in voltage transformers is very dangerous. The end of the primary winding of the single-pole insulation voltage transformer shall be connected to the "N" inside and back of the secondary terminal box, and shall not be removed during operation.

3-1. Structure of voltage transformers

- (1) The voltage transformer has a magnetic iron core. The secondary winding of a single-pole insulation voltage transformer is attached to the grounded iron core. The insulation between the primary winding and the secondary winding of a double-pole insulation voltage transformer shall be designed as a half of the phase-ground voltage. The secondary winding shall be designed to endure the test voltage of inter-resisting 3kV.
- (2) The mold is cast in a high vacuum state to enclose the high-voltage primary winding and secondary winding completely with epoxy resin.
- (3) The cast body is installed on a metal floor plate. The secondary terminals are installed inside the epoxy resin body and protected with a plastic cover.
- (4) The end of the primary is connected to the insert made of brass or copper alloy, and is located at the top of the epoxy resin body.
- (5) To ground the voltage transformer, it is possible to use ground screws on the floor plate. Grounding can be done directly to the frame of the switch gear or to a separate ground bar.

기술적 설명 Technical Description

3-2. 정의

- (1) 기기의 최고 전압
 - 기기의 최고회로전압(상-상)에 따라 절연설계가 고려되어야한다.
- (2) 정격 1, 2차 전압
 - 변압기의 1차, 2차 전압의 값은, 그것의 성능을 기반으로 한다. 그 값은 변압기의 명판에 표시 된다.
- (3) 정격변압비
 - 정격1차 전압과 정격2차 전압의 비율
- (4) 전압 오류 및 위상 변위의 제한
 - 정격 주파수의 전압이상 및 위상변위는 다음 표에 주어진 값을 초과 하지 아니한다. 정격전압의 80%에서 120%사이의 임의 전압, 정격부담의 25%에서 100%사이의 부담 값, 0.8의 역률을 기준으로 한다.

Accuracy class	Voltage error ±%	Phase displacement ± minutes
0.2	0.2	10
0.5	0.5	20
1	1	40

- (5) 정격출력
 - 계기용변압기는 피상 전력 값(특정 역률에서 VA)으로 정격2차 전압에서 2차회로에 공급하도록 하고, 정격부담이 연결된다.
- (6) 정격부담
 - 정확도 요건을 기반으로 하는 연결선을 포함하여 접속된 부담의 결보기 저항.
- (7) 온도상승 제한 출력
 - 온도상승의 한계를 초과하지 않고 정격1차 전압에서 2차 권선에 걸릴 수 있는 정격전압을 참조한 피상 전력의 값.
- (8) 잔류전압권선의 정격 온도상승 제한 출력
 - 잔류권선의 온도상승 제한 출력은 2차전압과 단위역률과 관련하여 볼트 암페어(VA)에 지정되어야 한다. 잔류권선이 오픈델타 회로에 연결되어 있는 동안 이 권선들은 고장조건에서만 부담으로 작용한다. 따라서 최대 8시간의 시간이 선택될 수 있다.
- (9) 정격 전압 계수
 - 정격 전압 계수는 시스템 접지상태에 따라 최대 동작 전압에 의해 결정 된다. 단극 절연변압기에서 8시간동안 부하 1.9 x 정격 전압의 정격전압 계수를 사용하는 것이 일반적이다. 정격계수는 다른 모든 타입의 1.2UN 으로 정의된다.

Rated voltage factor	Rated times	Method of connecting the primary winding and system earthing conditions
1.2	Continuous	Between phases in any network
1.2	Continuous	Between transformer star-point and earth in any network
1.5	30s	
1.2	Continuous	Between phase and earth in a non-effectively earthed neutral system with automatic earth-fault tripping
1.9	30s	
1.2	Continuous	Between phase and earth in an isolated neutral system without automatic earth-fault tripping or in a resonant earthed system without automatic earth-fault tripping
1.9	8h	

3-2. Definition

- (1) Highest voltage for equipment
 - The insulation design shall be considered according to the maximum circuit voltage (phase-phase) of the device.
- (2) Rated primary and secondary voltage
 - The primary and secondary voltage value of the voltage transformer shall be based on its performance. The value is indicated on the nameplate of the voltage transformer.
- (3) Rated voltage transformation ratio
 - Ratio of the rated secondary voltage to the rated primary voltage
- (4) Limit of voltage errors and phase displacements
 - The voltage errors and phase displacements of the rated frequency shall not exceed the values given in the following table. This is based on arbitrary voltages between 80% and 120% of the rated voltage, burden values between 25% and 100% of the rated burden, and power factors of 0.8.
- (5) Rated output
 - The voltage transformer supplies the apparent power value(VA at a particular power factor) to the secondary circuit at the rated secondary voltage, and is connected with a rated burden.
- (6) Rated burden
 - This is an apparent resistance of the connected burden including the connection wires based on the exact requirements.
- (7) Temperature rise limit output
 - This is the value of apparent power considering the rated voltage applicable to the secondary winding from the rated primary voltage without exceeding the temperature rise limit.
- (8) Rated temperature rise limit output of the residual voltage winding
 - The temperature rise limit output of the residual voltage winding shall be designated in the volt-ampere(VA) in connection with the secondary voltage and the unit power factor. While the remaining winding are connected to an open delta circuit, these winding act as a burden only at fault conditions. Therefore, a maximum of 8 hours can be selected.
- (9) Rated voltage factor
 - The rated voltage factor is determined by the maximum operation voltage depending on the system ground state. For a single-pole insulation voltage transformer, it is general to use a rated voltage factor of load 1.9 x rated voltage for 8 hours. The rating factor is defined as 1.2UN for all other types.

HV / CT
고압변류기

HV / VT : MOF
고압변압기

LV / CT
저압변류기

LV / VT
저압변압기

RELA Y
보호계전기

ELD
누전경보기

GF R
지락계전기

ZCT
영용변류기

METER
지시전계기

SPD
서지보호기

SHUNT
센트

INSTRUMENT TRANSFORMERS

기술적 설명 Technical Description

3-3. 계기용변압기의 시험

- 계기용변압기의 사용수명에 대한 안전성을 확보하기 위해서, 다음과 같은 시험 형식시험과 일상시험이 수행되어야 한다.
 - 정격 충격 내전압 시험(형식시험)
 - 1차 및 2차 권선의 상용주파수 내전압 시험(일상시험)
 - 부분 방전 시험(일상시험)
 - 온도상승시험(형식시험)
 - 단락강도시험(형식시험)
 - 정밀도시험(일상시험)
- (1) 온도상승시험
 - 계기용변압기는 IEC-standard에 설명된 대로 절연계급 "E"종으로 설계되었으며, 절대 최대 온도는 115° C이다. 최대 온도 증가는 40° C의 주변 온도에서 75° K를 초과해서는 안 된다.
- (2) 부분방전 시험
 - 계기용변압기의 유전체 안전에도 불구하고, 부분 방전 시험을 수행해야 한다. 이러한 시험은 정격전압이 3.6kV이상의 모든 변압기에 대해 필요하다. 허용기준은 다음과 같다.

3-3. Test of voltage transformers

- To secure safety for the service life of a voltage transformer, execute the following type tests and routine tests.
 - Impulse voltage withstand test(type test)
 - Power frequency withstand voltage test of the primary and secondary winding(routine test)
 - Partial discharge test(routine test)
 - Temperature rise test(type test)
 - Short circuit withstand capability test(type test)
 - Accuracy test(routine test)
- (1) Temperature rise test
 - The voltage transformer is designed as insulation class "E" as described in the IEC-standard, and its absolute maximum temperature is 115° C. The maximum temperature rise shall not exceed 75° K above 40° C ambient temperature..
- (2) Partial discharge test
 - For voltage transformers, execute a partial discharge test despite their dielectric safety. This test is necessary for all voltage transformers of 3.6kV or higher rated voltage. The allowable criterion is as follows.

Type of earthing of the neutral system	PD Test Voltage (kV)	Partial Discharge Level (pC)
Earthed neutral system (earth fault factors ≤1.4) - Earthed VT	U_m $(1.2 \cdot U_m) / \sqrt{3}$	< 50pC < 20pC
Earthed neutral system (earth fault factors ≤1.4) - Unearthed VT	$(1.2 \cdot U_m)$	< 20pC
Isolated or non effectively earthed neutral system (earth fault factors >1.4) - Earthed VT	$(1.2 \cdot U_m)$ $(1.2 \cdot U_m) / \sqrt{3}$	< 50pC < 20pC
Isolated or non effectively earthed neutral system (earth fault factors >1.4) - Unearthed VT	$(1.2 \cdot U_m)$	< 20pC

4. 취급방법

- (1) 수취 후 처리
 - 모든 변성기는 운송을 위해 적절하게 포장되어 있다. 운송 중에 발생한 손상확인을 위해 수령한 즉시 포장을 검사해야 한다. 어떠한 외부 손상이라도 발견되거나 부적절한 취급의 징후가 있을 경우, 즉시 판매자에게 통보해야 한다.
 - (2) 안전권고
 - 작동 중에 이 전기 장비에 위험 전압이 발생합니다. 서비스 지침을 위반하면 재산상의 손해, 중상 또는 사망까지도 초래할 수 있습니다. 자격을 갖춘 작업자에게만 이 장비에 대한 작업을 수행해야 하며, 경고, 안전 알림 및 유지 관리 절차를 숙지한 후에 이 작업을 수행할 수 있습니다.
- ※ 이 장비의 성공적이고 안전한 작동은 적절한 취급, 설치, 작동 및 유지 보수에 달려 있습니다.

4. Handling method

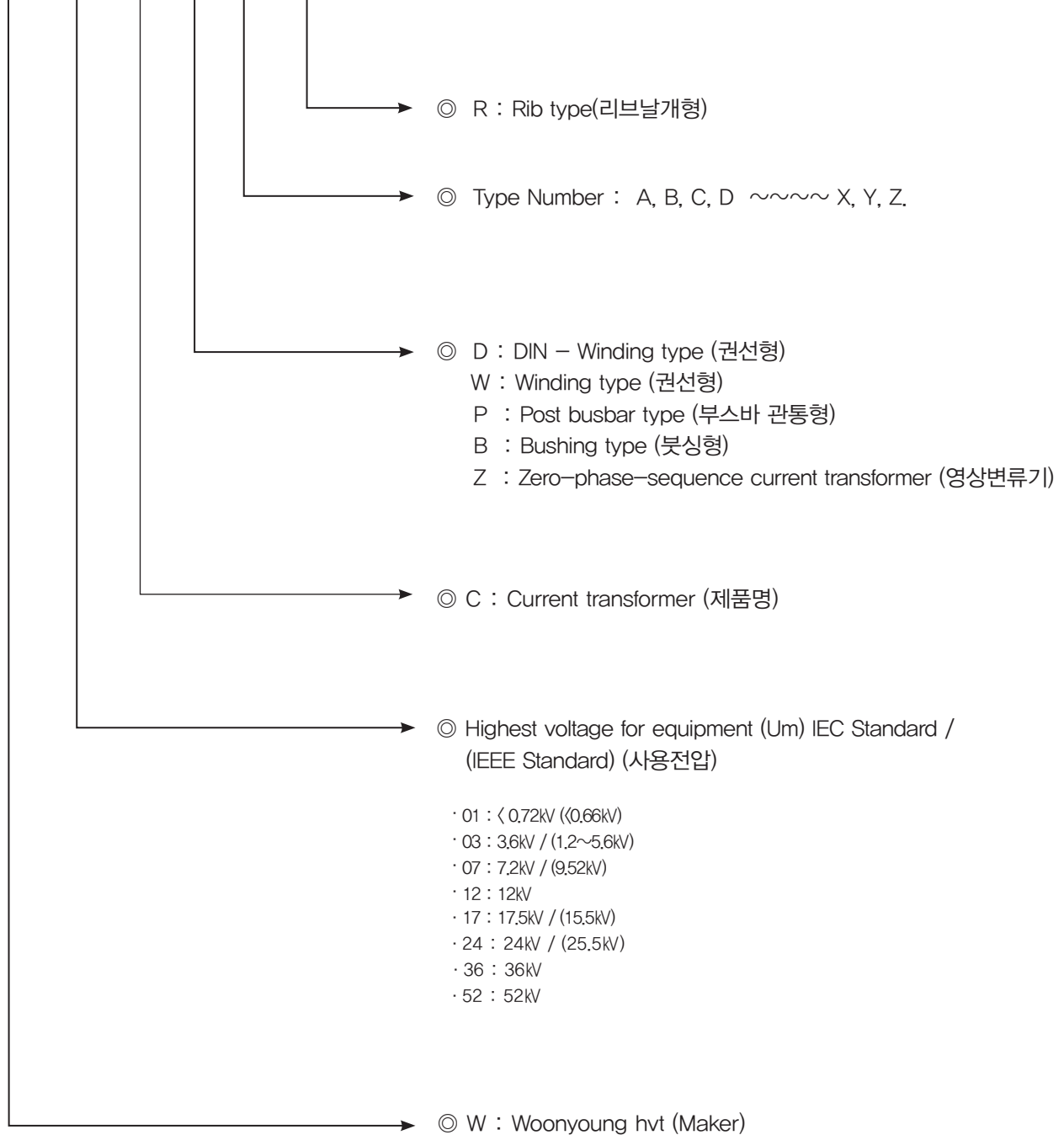
- (1) Treatment after receipt
 - All the instrument transformers shall be properly packed for transportation. To check the damage generated during transportation, inspect the packing as soon as receiving the product. If any external damage is found or any symptom of improper handling appears, then inform the seller thereof immediately.
 - (2) Safety recommendation
 - Dangerous voltages can happen to this electric equipment during operation. Violating the service guideline can cause proper damage, serious injury or death. Let only the qualified persons do work for this equipment, and let them understand the warning, safety notice and maintenance procedure well before starting this work
- ※ The successful and safe operation of this equipment depends on proper handling, installation, operation and maintenance.

CURRENT TRANSFORMERS

모델구분표 Model Description

● Type Description

W XX C X X (X)



※ 기타 모든 Mold 구조형 제품은 주문에 의해 제작가능합니다.

H
V
/
C
T
고압변류기

H
V
/
V
T
:
M
O
F
고압변압기

L
V
/
C
T
저압변류기

L
V
/
V
T
저압변압기

R
E
L
A
Y
보호계전기

E
L
D
누전경보기

G
F
R
지락계전기

Z
C
T
영상변류기

M
E
T
E
R
지시전기계기

S
P
D
서지보호기

S
H
U
N
T
선편트

WINDING TYPE (권선형) CURRENT TRANSFORMER

3.6~7.2kV (5~600A / 40In~12.5kA)

W07CWA



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 7.2kV

W07CWA 변류기는 최고 회로전압 7.2kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(3.6kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능합니다.

The W07CWA current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 7.2kV-class insulation performance, and the less voltage(3.6kV) product has the same dimensions. This product has a miniature light-weight compact structure to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core.

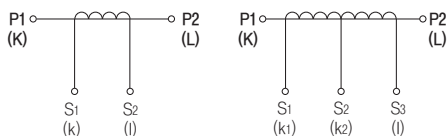
● Feature

규격 Standard	IEC - KS C - JEC
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL	
	W07CWA	
Highest voltage for equipment (Um)	3.6kV	7.2kV
Rated power-frequency withstand voltage (60sec)	10kV	20kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave	40kV	60kV
Rated frequency	50 / 60Hz	
Rated primary current(Ipr)	5 to 600A	
Rated secondary current(Isr)	5 or 1A	
Rated continuous thermal current	120%	
Rated short-time thermal current Ith (1sec)	40In~12.5kA	
Rated dynamic current Idyn (2.5×Ith)	31.25kA	
Insulation class (according to 60085)	E	
Standard	According to customer requirements	
Weight (approx.)	10kg	

● Connection Diagram



1 - Core Single ratio

1 - Core Double ratio

WINDING TYPE (권선형) CURRENT TRANSFORMER



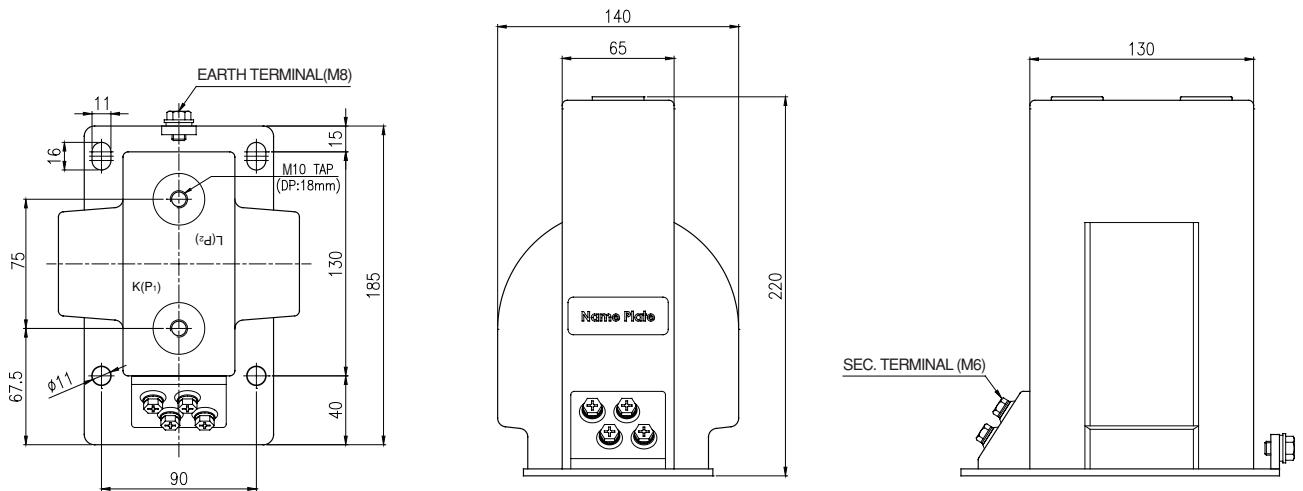
고압계기용변성기

3.6~7.2kV (5~600A / 40In~12.5kA)

● Specification

ITEM	Rated short time current	Current Ratio		IEC 61869-2			KSC 1706, JEC 1201			IEEE C57.13	
		Single	Double	Class	Burden	Over Current Factor	Class	Burden	Over Current Factor	Class	Burden
Metering	40In	5/5A~600/5A	10-5/5A~600-300/5A	0.5	15VA	FS5	1.0	15VA	-	0.6,1.2	12.5VA (B-0.5)
	75In	5/5A~600/5A	10-5/5A~600-300/5A								
	8kA	75/5A~600/5A	150-75/5A~600-300/5A								
	40In	5/5A~600/5A	10-5/5A~600-300/5A	1.0	30VA	FS10	1.0	40VA	-	1.2	22.5VA (B-0.9)
	75In	5/5A~600/5A	10-5/5A~600-300/5A								
	8kA	75/5A~600/5A	150-75/5A~600-300/5A								
Protection	40In	5/5A~600/5A	10-5/5A~600-300/5A	5P 10P	15VA	10	1P	15VA	n>10	T50	12.5VA
	8kA	75/5A~600/5A	200-100/5A~600-300/5A								
	40In	5/5A~600/5A	10-5/5A~600-300/5A	5P 10P	15VA	20	1P	15VA	n>20		
	8kA	150/5A~600/5A	150-75/5A~600-300/5A								

● Dimension



HV / C T
고압변류기

HV / VT : MOF
고압변압기

LV / C T
저압변류기

LV / VT
저압변압기

RELA Y
보호계전기

ELD
누전경보기

GFR
지락계전기

ZCT
영상변류기

METER
지시계전기

SPD
서지보호기

SHUNT
센트

WINDING TYPE (권선형) CURRENT TRANSFORMER

3.6~7.2kV (5~600A / 40In~12.5kA)

W07CWB



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 7.2kV

W07CWB 변류기는 최고 회로전압 7.2kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(3.6kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능합니다.

The W07CWB current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 7.2kV-class insulation performance, and the less voltage(3.6kV) product has the same dimensions. This product has a miniature light-weight compact structure to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core.

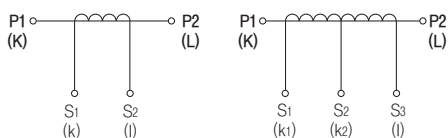
● Feature

규격 Standard	IEC - KS C - JEC
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL	
	W07CWB	
Highest voltage for equipment (Um)	3.6kV	7.2kV
Rated power-frequency withstand voltage (60sec)	10kV	20kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave	40kV	60kV
Rated frequency	50 / 60Hz	
Rated primary current(Ipr)	5 to 600A	
Rated secondary current(Isr)	5 or 1A	
Rated continuous thermal current	120%	
Rated short-time thermal current Ith (1sec)	40In~12.5kA	
Rated dynamic current Idyn (2.5×Ith)	31.25kA	
Insulation class (according to 60085)	E	
Standard	According to customer requirements	
Weight (approx.)	10kg	

● Connection Diagram



1 - Core Single ratio

1 - Core Double ratio

WINDING TYPE (권선형) CURRENT TRANSFORMER



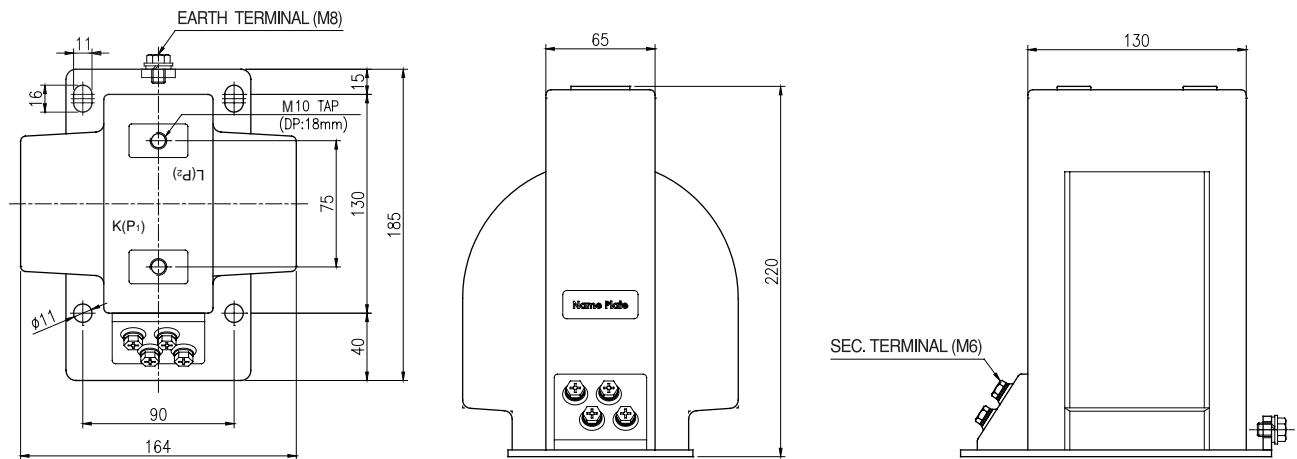
고압계기용변성기

3.6~7.2kV (5~600A / 40In~12.5kA)

● Specification

ITEM	Rated short time current	Current Ratio		IEC 61869-2			KSC 1706, JEC 1201			IEEE C57.13	
		Single	Double	Class	Burden	Over Current Factor	Class	Burden	Over Current Factor	Class	Burden
Metering	40In	5/5A~600/5A	10-5/5A~600-300/5A	0.5	15VA	FS5	1.0	15VA	-	0.6,1.2	12.5VA (B-0.5)
	75In	5/5A~600/5A	10-5/5A~600-300/5A								
	8kA	75/5A~600/5A	150-75/5A~600-300/5A								
	40In	5/5A~600/5A	10-5/5A~600-300/5A	1.0	30VA	FS10	1.0	40VA	-	1.2	22.5VA (B-0.9)
	75In	5/5A~600/5A	10-5/5A~600-300/5A								
	8kA	75/5A~600/5A	150-75/5A~600-300/5A								
Protection	40In	5/5A~600/5A	10-5/5A~600-300/5A	5P 10P	15VA	10	1P	15VA	n>10	T50	12.5VA
	8kA	75/5A~600/5A	200-100/5A~600-300/5A								
	40In	5/5A~600/5A	10-5/5A~600-300/5A	5P 10P	15VA	20	1P	15VA	n>20		
	8kA	150/5A~600/5A	150-75/5A~600-300/5A								

● Dimension



HV / CT
고압변류기

HV / VIT : MOF
고압변압기

LV / CT
저압변류기

LV / VIT
저압변압기

RELA Y
보호계전기

ELD
누전경보기

GFR
지락계전기

ZCT
영상변류기

METER
지시계전기

SPD
서지보호기

SHUNT
센트

WINDING TYPE (권선형) CURRENT TRANSFORMER

3.6~12kV (5~1500A / 40In~25kA)

W12CWA



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 12kV

W12CWA 변류기는 최고 회로전압 12kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(3.6, 7.2kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core, 2core 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능합니다.

The W12CWA current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 12kV-class insulation performance, and the less voltage(3.6, 7.2kV) product has the same dimensions. This product has a miniature light-weight compact structure to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

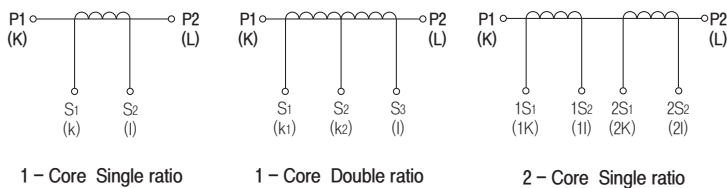
● Feature

규격 Standard	IEC - KS C - JEC
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W12CWA		
Highest voltage for equipment (Um)	3.6kV	7.2kV	12kV
Rated power-frequency withstand voltage (60sec)	10kV	20kV	28kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave	40kV	60kV	75kV
Rated frequency	50 / 60Hz		
Rated primary current(Ipr)	5 to 1500A		
Rated secondary current(Isr)	5 or 1A		
Rated continuous thermal current	120%		
Rated short-time thermal current Ith (1sec)	40In~25kA		
Rated dynamic current Idyn (2.5×Ith)	62.5kA		
Insulation class (according to 60085)	E		
Standard	According to customer requirements		
Weight (approx.)	16kg		

● Connection Diagram



WINDING TYPE (권선형) CURRENT TRANSFORMER



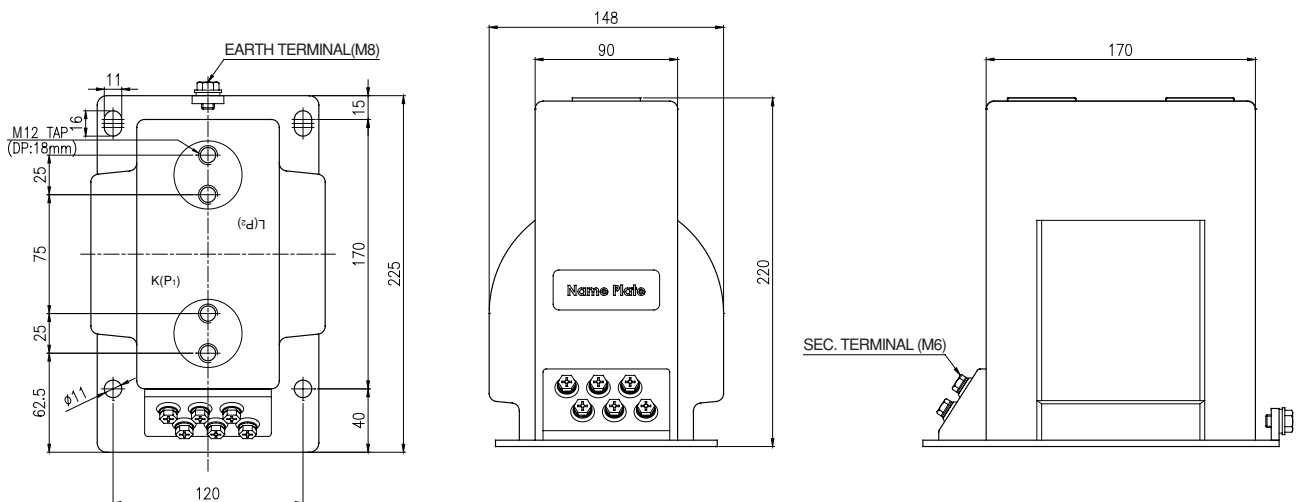
고압계기용변성기

3.6~12kV (5~1500A / 40In~25kA)

● Specification

ITEM	Rated short time current	Current Ratio		IEC 61869-2			KSC 1706, JEC 1201			IEEE C57.13		
		Single	Double	Class	Burden	Over Current Factor	Class	Burden	Over Current Factor	Class	Burden	
Metering	8kA	20/5A~1500/5A	40~20/5A~1500~750/5A	1.0	15VA	FS5 FS10	1.0	15VA	-	0.6,1.2	12.5VA (B-0.5)	
	12.5kA	25/5A~1500/5A	50~25/5A~1500~750/5A									
	25kA	50/5A~1500/5A	100~50/5A~1500~750/5A									
	Protection	150In	5/5A~400/5A	10~5/5A~400~200/5A	5P 10P	15VA	10	1P	15VA	n>10	T50	22.5VA (B-0.9)
		8kA	25/5A~1500/5A	50~25/5A~1500~750/5A								
		12.5kA	40/5A~1500/5A	80~40/5A~1500~750/5A								
Protection		25kA	75/5A~1500/5A	150~75/5A~1500~750/5A	5P 10P	30VA	10	1P	40VA	n>10	T100	45VA (B-1.8)
		75In	5/5A~800/5A	10~5/5A~800~400/5A								
		8kA	50/5A~1500/5A	50~25/5A~1500~750/5A								
	Protection	12.5kA	75/5A~1500/5A	80~40/5A~1500~750/5A	5P 10P	15VA	20	1P	15VA	n>20	T200	25VA
		25kA	150/5A~1500/5A	150~75/5A~1500~750/5A								
		40In	5/5A~1500/5A	10~5/5A~1500~750/5A								
2core		8kA	100/5A~1500/5A	100~75/5A~1500~750/5A	1.0/5P	15/15VA	10	1.0/1P	15/15VA	n>10	-	-
		12.5kA	150/5A~1500/5A	150~75/5A~1500~750/5A								
		25kA	300/5A~1500/5A	600~300/5A~1500~750/5A								
	40In	5~1500/5~5A	-									
	75In	5~800/5~5A	-									

● Dimension



HV / CT
고압변류기

HV / V-T : MOF
고압변압기

LV / CT
저압변류기

LV / V-T
저압변압기

RELA Y
보호계전기

ELD
누전경보기

GFR
지락계전기

ZCT
영상변류기

METER
지시계전기

SPD
서지보호기

SHUNT
센트

WINDING TYPE (권선형) CURRENT TRANSFORMER

3.6~12kV (5~1500A / 40In~40kA)

W12CWB



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 12kV

W12CWB 변류기는 최고 회로전압 12kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(3.6, 7.2kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core, 2core 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능합니다.

The W12CWB current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 12kV-class insulation performance, and the less voltage(3.6, 7.2kV) product has the same dimensions. This product has a miniature light-weight compact structure to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

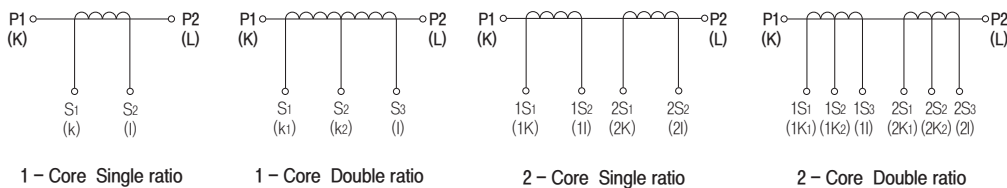
● Feature

규격 Standard	IEC - KS C - JEC
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W12CWB		
Highest voltage for equipment (Um)	3,6kV	7,2kV	12kV
Rated power-frequency withstand voltage (60sec)	10kV	20kV	28kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave	40kV	60kV	75kV
Rated frequency	50 / 60Hz		
Rated primary current(Ipr)	5 to 1500A		
Rated secondary current(Isr)	5 or 1A		
Rated continuous thermal current	120%		
Rated short-time thermal current Ith (1sec)	40In~40kA		
Rated dynamic current Idyn (2.5×Ith)	100kA		
Insulation class (according to 60085)	E		
Standard	According to customer requirements		
Weight (approx.)	20kg		

● Connection Diagram



WINDING TYPE (권선형) CURRENT TRANSFORMER



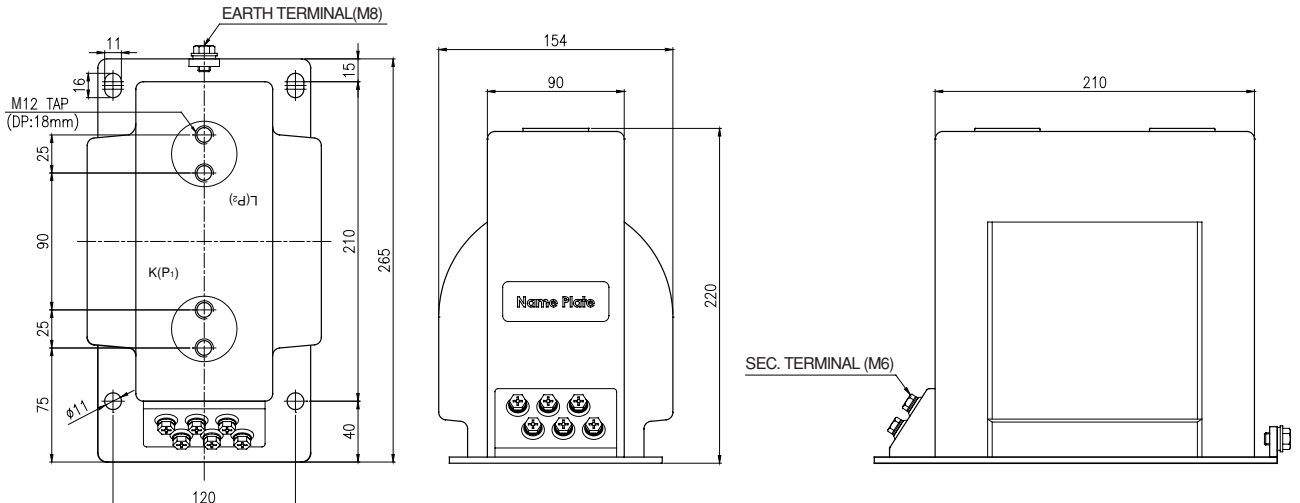
고압계기용변성기

3.6~12kV (5~1500A / 40In~40kA)

● Specification

ITEM	Rated short time current	Current Ratio		IEC 61869-2			KSC 1706, JEC 1201			IEEE C57.13		
		Single	Double	Class	Burden	Over Current Factor	Class	Burden	Over Current Factor	Class	Burden	
Metering	300In	5/5~200/5A	10~5/5~200~100/5A	1.0	15VA	FS5 FS10	1.0	15VA	-	0.6,1.2	12.5VA (B-0.5)	
	8kA	10/5~1500/5A	20~10/5~1500~750/5A									
	12.5kA	15/5~1500/5A	30~15/5~1500~750/5A									
	25kA	25/5~1500/5A	50~25/5~1500~750/5A									
	31.5kA	40/5~1500/5A	80~40/5~1500~750/5A									
	40kA	75/5~1500/5A	150~75/5~1500~750/5A									
	Protection	300In	5/5~200/5A	10~5/5~200~100/5A	0.5 1.0	15VA 30VA	FS5 FS10	0.5 1.0	15VA 40VA	-	1.2	22.5VA (B-0.9) 45VA (B-1.8)
		8kA	15/5~1500/5A	30~15/5~1500~750/5A								
		12.5kA	20/5~1500/5A	40~20/5~1500~750/5A								
		25kA	40/5~1500/5A	80~40/5~1500~750/5A								
31.5kA		50/5~1500/5A	100~50/5~1500~750/5A									
40kA		100/5~1500/5A	200~100/5~1500~750/5A									
2core		8kA	15/5~1500/5A	30~15/5~1500~750/5A	5P 10P	15VA	10 10	1P	15VA	n>10 n>20	T50	12.5VA
		12.5kA	20/5~1500/5A	40~20/5~1500~750/5A								
		25kA	50/5~1500/5A	100~50/5~1500~750/5A								
		31.5kA	60/5~1500/5A	120~60/5~1500~750/5A								
	40kA	100/5~1500/5A	200~100/5~1500~750/5A									
	8kA	40/5~1500/5A	80~40/5~1500~750/5A	5P 10P								
	12.5kA	50/5~1500/5A	100~50/5~1500~750/5A									
	25kA	120/5~1500/5A	240~120/5~1500~750/5A									
	31.5kA	150/5~1500/5A	300~150/5~1500~750/5A									
	2core	40kA	250/5~1500/5A	500~250/5~1500~750/5A	5P 10P	30VA	20 20/10	1P	40VA	n>20	T200	50VA
8kA		100/5~1500/5A	200~100/5~1500~750/5A									
12.5kA		120/5~1500/5A	240~120/5~1500~750/5A									
25kA		250/5~1500/5A	500~250/5~1500~750/5A									
31.5kA		400/5~1500/5A	800~400/5~1500~750/5A									
40kA		500/5~1500/5A	1000~500/5~1500~750/5A									
2core		40In	5~1500/5~5A	10~5/5~5~1500~750/5~5A	1.0/5P	15/15VA	10	1.0/1P	15/15VA	n>10	-	-
		75In	5~800/5~5A	10~5/5~5~800~400/5~5A								
		8kA	30~1500/5~5A	60~30/5~5~1500~750/5~5A								
		12.5kA	40~1500/5~5A	80~40/5~5~1500~750/5~5A								
	25kA	100~1500/5~5A	200~100/5~5~1500~750/5~5A									
	31.5kA	200~1500/5~5A	400~200/5~5~1500~750/5~5A									
	2core	40kA	200~1500/5~5A	400~200/5~5~1500~750/5~5A	1.0/5P	15/15VA 30/30VA	20 10	1.0/1P	15/15VA 30/30VA	n>20 n>10	-	-
		40In	5~1500/5~5A	10~5/5~5~1500~750/5~5A								
		8kA	60~1500/5~5A	120~60/5~5~1500~750/5~5A								
		12.5kA	100~1500/5~5A	200~100/5~5~1500~750/5~5A								
25kA		200~1500/5~5A	400~200/5~5~1500~750/5~5A									
31.5kA		500~1500/5~5A	1000~500/5~5~1500~750/5~5A									
2core		40kA	500~1500/5~5A	1000~500/5~5~1500~750/5~5A								

● Dimension



HV/CT 고압변류기
HV/VT·MOF 고압변압기
LV/CT 저압변류기
LV/VT 저압변압기
RELA이 보호계전기
ELD 누전경보기
GFR 지락계전기
ZCT 영압변류기
METER 지시계기
SPD 서지보호기
SHUNT 셉트

WINDING TYPE (권선형) CURRENT TRANSFORMER

3.6~12kV (5~1500A / 40In~40kA)

W12CWC



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 12kV

W12CWC 변류기는 최고 회로전압 12kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(3.6, 7.2kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core, 2core 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능합니다.

The W12CWC current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 12kV-class insulation performance, and the less voltage(3.6, 7.2kV) product has the same dimensions. This product has a miniature light-weight compact structure to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

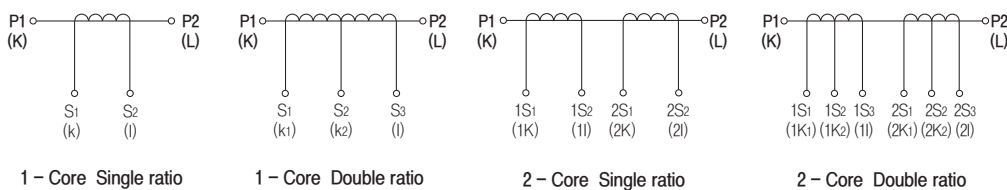
● Feature

규격 Standard	IEC - KS C - JEC
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W12CWC		
Highest voltage for equipment (Um)	3,6kV	7,2kV	12kV
Rated power-frequency withstand voltage (60sec)	10kV	20kV	28kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave	40kV	60kV	75kV
Rated frequency	50 / 60Hz		
Rated primary current(Ipr)	5 to 1500A		
Rated secondary current(Isr)	5 or 1A		
Rated continuous thermal current	120%		
Rated short-time thermal current Ith (1sec)	40In~40kA		
Rated dynamic current Idyn (2.5×Ith)	100kA		
Insulation class (according to 60085)	E		
Standard	According to customer requirements		
Weight (approx.)	25kg		

● Connection Diagram



WINDING TYPE (권선형) CURRENT TRANSFORMER



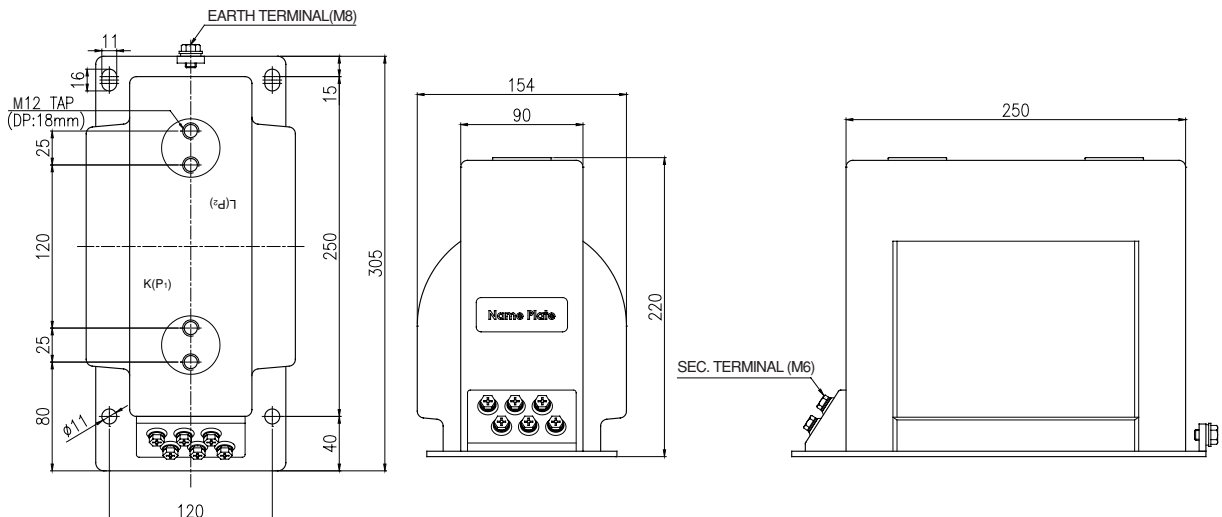
고압계기용변성기

3.6~12kV (5~1500A / 40In~40kA)

● Specification

ITEM	Rated short time current	Current Ratio		IEC 61869-2			KSC 1706, JEC 1201			IEEE C57.13	
		Single	Double	Class	Burden	Over Current Factor	Class	Burden	Over Current Factor	Class	Burden
Metering	300In	5/5A~200/5A	200-100/5A~1500-750/5A	1.0	15VA	FS5 FS10	1.0	15VA	-	0.6,1.2	12.5VA (B-0.5)
	8kA	15/5A~1500/5A	30-15/5A~1500-750/5A								
	12.5kA	20/5A~1500/5A	40-20/5A~1500-750/5A								
	25kA	25/5A~1500/5A	50-25/5A~1500-750/5A								
	31.5kA	40/5A~1500/5A	150-75/5A~1500-750/5A								
	40kA	50/5A~1500/5A	100-50/5A~1500-750/5A	0.5 1.0	15VA 30VA	FS5 FS10	0.5 1.0	15VA 40VA	-	1.2	22.5VA (B-0.9)
	150In	5/5A~400/5A	10-5/5A~400-200/5A								
	300In	10/5A~200/5A	20-10/5A~200-100/5A								
	8kA	30/5A~1500/5A	60-30/5A~1500-750/5A								
	12.5kA	50/5A~1500/5A	100-50/5A~1500-750/5A								
25kA	75/5A~1500/5A	150-75/5A~1500-750/5A	5P 10P	15VA	10	1P	15VA	n>10	T50	12.5VA	
31.5kA	100/5A~1500/5A	200-100/5A~1500-750/5A									
40kA	150/5A~1500/5A	300-150/5A~1500-750/5A									
150In	5/5A~400/5A	10-5/5A~400-200/5A									
8kA	20/5A~1500/5A	40-20/5A~1500-750/5A									
Protection	12.5kA	25/5A~1500/5A	50-25/5A~1500-750/5A	5P 10P	30VA	10	1P	40VA	n>10	T100	25VA
	25kA	50/5A~1500/5A	100-50/5A~1500-750/5A								
	31.5kA	75/5A~1500/5A	150-75/5A~1500-750/5A								
	40kA	100/5A~1500/5A	200-100/5A~1500-750/5A								
	40In	5/5A~800/5A	10-5/5A~800-400/5A								
	8kA	50/5A~1500/5A	100-50/5A~1500-750/5A	5P 10P	30VA	20	1P	15VA	n>20	T200	50VA
	12.5kA	75/5A~1500/5A	150-75/5A~1500-750/5A								
	25kA	100/5A~1500/5A	200-100/5A~1500-750/5A								
	31.5kA	200/5A~1500/5A	400-200/5A~1500-750/5A								
	40kA	300/5A~1500/5A	600-300/5A~1500-750/5A								
2core	75In	5-800A/5-5A	10-5/5-5-800-400/5-5A	1.0/5P	15/15VA	10	1.0/1P	15/15VA	n>10	-	-
	8kA	30-1500A/5-5A	60-30/5-5-1500-750/5-5A								
	12.5kA	40-1500A/5-5A	80-40/5-5-1500-750/5-5A								
	25kA	75-1500A/5-5A	150-75/5-5-1500-750/5-5A								
	31.5kA	100-1500A/5-5A	200-100/5-5-1500-750/5-5A								
	40kA	150-1500A/5-5A	300-150/5-5-1500-750/5-5A	1.0/5P	15/15VA 30/30VA	20 10	1.0/1P	15/15VA 40/40VA	n>20 n>10	-	-
	40In	5-1500A/5-5A	10-5/5-5-800-400/5-5A								
	8kA	60-1500A/5-5A	120-60/5-5-1500-750/5-5A								
	12.5kA	100-1500A/5-5A	200-100/5-5-1500-750/5-5A								
	25kA	200-1500A/5-5A	400-200/5-5-1500-750/5-5A								
31.5kA	250-1500A/5-5A	500-250/5-5-1500-750/5-5A									
40kA	300-1500A/5-5A	600-300/5-5-1500-750/5-5A									

● Dimension

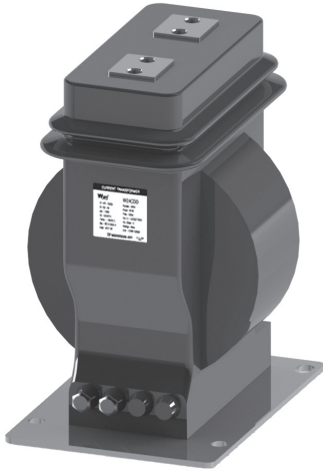


HV/CT 고압변류기
HV/VT-MOF 고압변압기
LV/CT 저압변류기
LV/VT 저압변압기
RELA 보호계전기
ELD 누전경보기
GFR 지락계전기
ZCT 영압변류기
METER 지시전기계기
SPD 서지보호기
SHUNT 셉트

WINDING TYPE (권선형) CURRENT TRANSFORMER

12~24kV (5~600A / 40In~31.5kA)

W24CWS



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 24kV

W24CWS 변류기는 최고 회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(12, 17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1Core, 2Core 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능하다.

The W24CWS current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and the less voltage(12, 17.5kV) product has the same dimensions. This product has a miniature light-weight compact structure to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

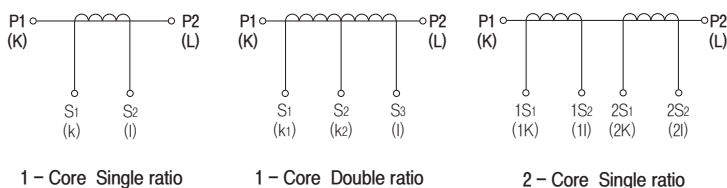
● Feature

규격 Standard	IEC - KS C - JEC
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL	W24CWS		
		12kV	17.5kV	24kV
Highest voltage for equipment (Um)		12kV	17.5kV	24kV
Rated power-frequency withstand voltage (60sec)		28kV	38kV	50kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave		75kV	95kV	125kV
Rated frequency		50 / 60Hz		
Rated primary current(Ipr)		5 to 600A		
Rated secondary current(Isr)		5 or 1A		
Rated continuous thermal current		120%		
Rated short-time thermal current Ith (1sec)		40In~31.5kA		
Rated dynamic current Idyn (2.5× Ith)		78.75kA		
Insulation class (according to 60085)		E		
Standard		According to customer requirements		
Weight (approx.)				

● Connection Diagram



WINDING TYPE (권선형) CURRENT TRANSFORMER



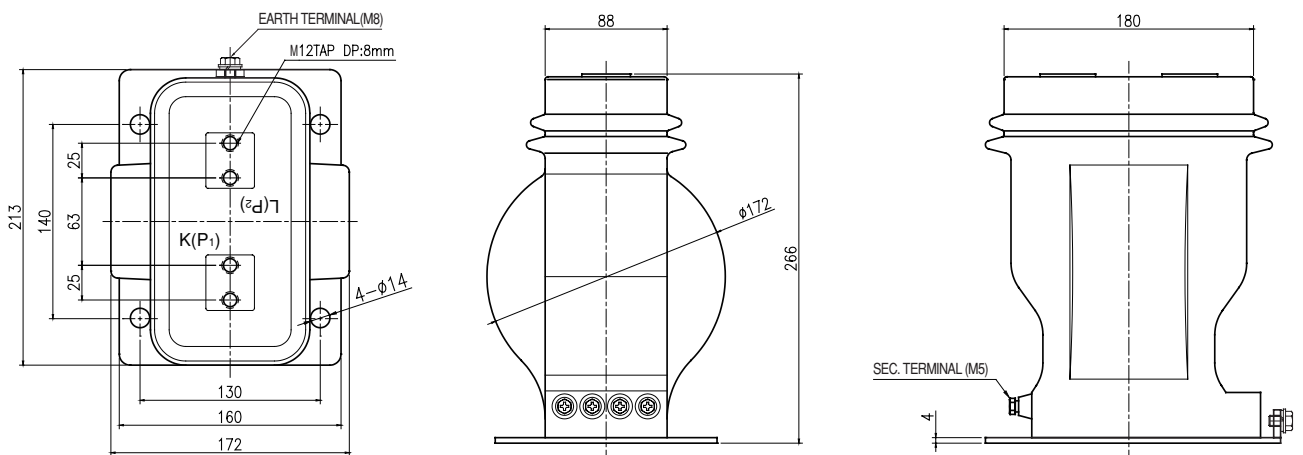
고압계기용변성기

12~24kV (5~600A / 40In~31.5kA)

● Specification

ITEM	Rated short time current	Current Ratio	IEC 61869-2			KSC 1706		IEEE C57.13		
			Class	Burden	Over Current Factor	Class	Burden	Class	Burden	Over Current Factor
Metering	8kA	20/5A~600/5A	1.0	15VA	FS5	1.0	15VA	-	-	-
	12.5kA	30/5A~600/5A								
	25kA	50/5A~600/5A								
	31.5kA	75/5A~600/5A								
	150In	5/5A~600/5A	0.5 1.0	15VA 30VA	FS10	0.5 1.0	15VA 40VA	-	-	-
	8kA	25/5A~600/5A								
	12.5kA	40/5A~600/5A								
	25kA	75/5A~600/5A								
31.5kA	100/5A~600/5A	5P 10P	15VA	10	-	-	1P	15VA	n)10	
150In	5/5A~600/5A									
8kA	20/5A~600/5A									
12.5kA	25/5A~600/5A									
Protection	25kA	50/5A~600/5A	5P 10P	30VA	10	-	-	1P	40VA	n)10
	31.5kA	75/5A~600/5A								
	75In	5/5A~600/5A								
	8kA	50/5A~600/5A								
	12.5kA	75/5A~600/5A	5P 10P	15VA	20	-	-	1P	15VA	n)20
	25kA	150/5A~600/5A								
	31.5kA	200/5A~600/5A								
	40In	5/5A~600/5A								
8kA	100/5A~600/5A	5P 10P	15VA	20	-	-	1P	15VA	n)20	
12.5kA	150/5A~600/5A									
25kA	300/5A~600/5A									
31.5kA	200/5A~600/5A									

● Dimension



HV / CT
고압변류기

HV / V T : MOF
고압변압기

LV / CT
저압변류기

LV / V T
저압변압기

RELA Y
보호계전기

ELD
누전경보기

GF R
지락계전기

ZCT
영용변류기

METE R
지시전계기

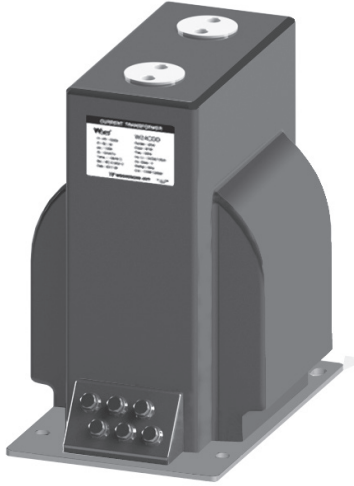
SP D
서지보호기

SHUNT
센트

WINDING TYPE (권선형) CURRENT TRANSFORMER

12~24kV (5~1500A / 40In~40kA)

W17CWA



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 24kV

W17CWA 변류기는 최고 회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(12,17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core, 2core 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능하다.

The W17CWA current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and the less voltage(12, 17.5kV) product has the same dimensions. This product has a miniature light-weight compact structure to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

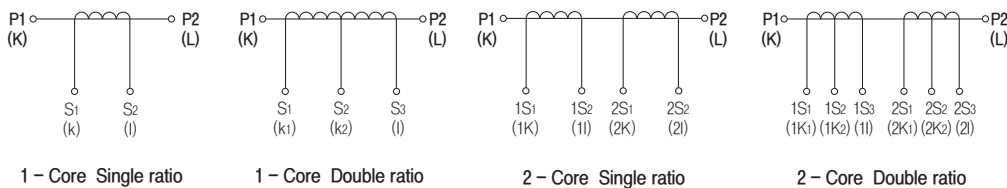
● Feature

규격 Standard	IEC - KS C - JEC
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W17CWA		
Highest voltage for equipment (Um)	12kV	17.5kV	24kV
Rated power-frequency withstand voltage (60sec)	28kV	38kV	50kV
Rated lighting impulse withstand voltage (1,2/50μs)full wave	75kV	95kV	125kV
Rated frequency	50 / 60Hz		
Rated primary current(Ipr)	5 to 1500A		
Rated secondary current(Isr)	5 or 1A		
Rated continuous thermal current	120%		
Rated short-time thermal current Ith (1sec)	40In~40kA		
Rated dynamic current Idyn (2,5Xlth)	100kA		
Insulation class (according to 60085)	E		
Standard	According to customer requirements		
Weight (approx.)	25kg		

● Connection Diagram



WINDING TYPE (권선형) CURRENT TRANSFORMER



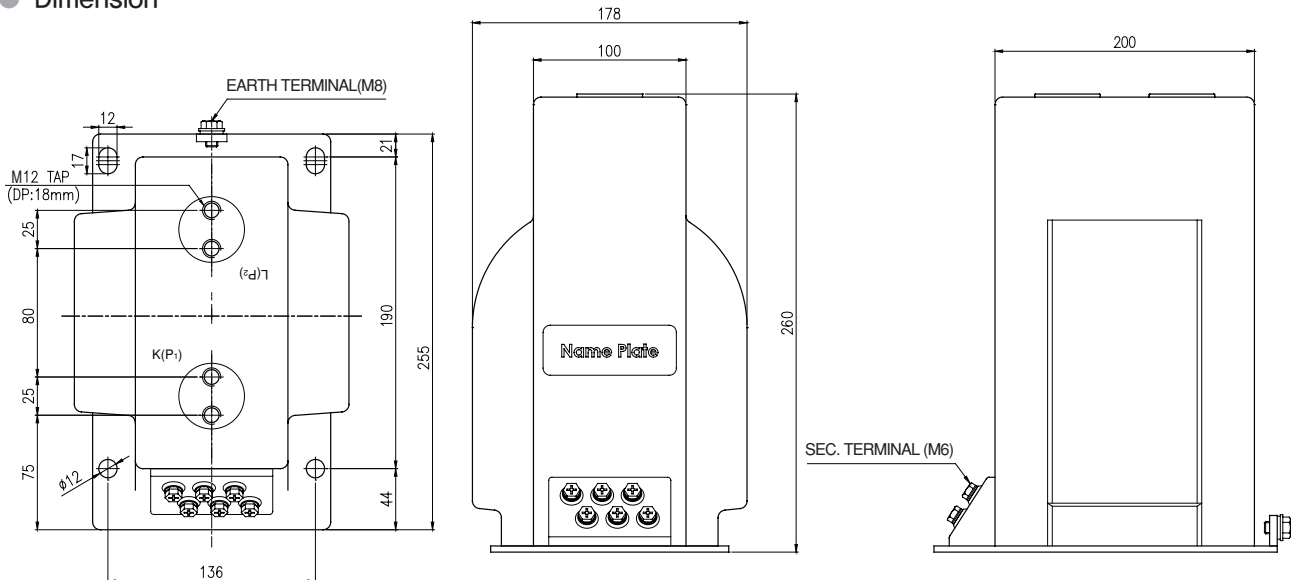
고압계기용변성기

12~24kV (5~1500A / 40In~40kA)

● Specification

ITEM	Rated short time current	Current Ratio		IEC 61869-2			KSC 1706, JEC 1201			IEEE C57.13								
		Single	Double	Class	Burden	Over Current Factor	Class	Burden	Burden	Class	Burden							
Metering	8kA	20/5A~1500/5A	40-20/5A~1500-750/5A	1.0	15VA	FS5	1.0	15VA	-	0.6, 1.2	12.5VA (B-0.5)							
	12.5kA	25/5A~1500/5A	50-25/5A~1500-750/5A															
	25kA	50/5A~1500/5A	100-50/5A~1500-750/5A															
	31.5kA	75/5A~1500/5A	150-75/5A~1500-750/5A															
	40kA	100/5A~1500/5A	200-100/5A~1500-750/5A															
	150In	5/5A~400/5A	10-5/5A~400-200/5A	0.5 1.0	15VA 30VA	FS10	0.5 1.0	15VA 40VA	-	1.2	22.5VA (B-0.9) 45VA (B-1.8)							
	8kA	25/5A~1500/5A	50-25/5A~1500-750/5A															
	12.5kA	40/5A~1500/5A	80-40/5A~1500-750/5A															
	25kA	75/5A~1500/5A	150-75/5A~1500-750/5A															
	31.5kA	100/5A~1500/5A	200-100/5A~1500-750/5A															
40kA	150/5A~1500/5A	300-150/5A~1500-750/5A	5P 10P	15VA	10	1P	15VA	n)10	T50	12.5VA								
150In	5/5A~400/5A	10-5/5A~400-200/5A																
8kA	20/5A~1500/5A	40-20/5A~1500-750/5A																
12.5kA	20/5A~1500/5A	40-20/5A~1500-750/5A																
25kA	50/5A~1500/5A	100-50/5A~1500-750/5A																
31.5kA	75/5A~1500/5A	150-75/5A~1500-750/5A																
40kA	100/5A~1500/5A	200-100/5A~1500-750/5A																
75In	5/5A~800/5A	10-5/5A~800-400/5A									5P 10P	30VA	10	1P	40VA	n)10	T100	25VA
8kA	50/5A~1500/5A	100-50/5A~1500-750/5A																
12.5kA	75/5A~1500/5A	150-75/5A~1500-750/5A																
25kA	150/5A~1500/5A	300-150/5A~1500-750/5A																
31.5kA	200/5A~1500/5A	400-200/5A~1500-750/5A																
40kA	250/5A~1500/5A	500-250/5A~1500-750/5A	5P 10P	15VA	20	1P	15VA	n)20	T200	50VA								
40In	5/5A~800/5A	10-5/5A~800-400/5A																
8kA	100/5A~1500/5A	200-100A~1500-750/5A																
12.5kA	150/5A~1500/5A	300-150A~1500-750/5A																
25kA	300/5A~1500/5A	600-300/5A~1500-750/5A																
31.5kA	400/5A~1500/5A	800-400/5A~1500-750/5A																
40kA	600/5A~1500/5A	1200-600/5A~1500-750/5A																

● Dimension



HV / C T
고압변류기

HV / V T · M O F
고압변압기

L V / C T
저압변류기

L V / V T
저압변압기

R E L A Y
보호계전기

E L D
누전경보기

G F R
지락계전기

Z C T
영상변류기

M E T E R
지시계전기

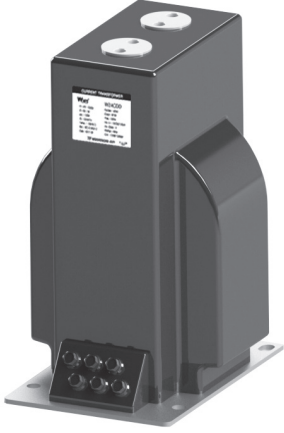
S P D
서지보호기

S H U N T
선틀

WINDING TYPE (권선형) CURRENT TRANSFORMER

12~24kV (5~1500A / 40In~40kA)

W24CWA



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 24kV

W24CWA 변류기는 최고 회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(12,17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core, 2core 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능하다.

The W24CWA current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and the less voltage(12, 17.5kV) product has the same dimensions. This product has a miniature light-weight compact structure to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

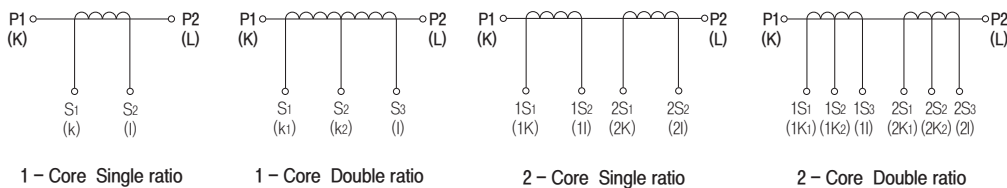
● Feature

규격 Standard	IEC - KS C - JEC
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W24CWA		
Highest voltage for equipment (Um)	12kV	17.5kV	24kV
Rated power-frequency withstand voltage (60sec)	28kV	38kV	50kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave	75kV	95kV	125kV
Rated frequency	50 / 60Hz		
Rated primary current(Ipr)	5 to 1500A		
Rated secondary current(Isr)	5 or 1A		
Rated continuous thermal current	120%		
Rated short-time thermal current Ith (1sec)	40In~40kA		
Rated dynamic current Idyn (2.5×Ith)	100kA		
Insulation class (according to 60085)	E		
Standard	According to customer requirements		
Weight (approx.)	25kg		

● Connection Diagram



WINDING TYPE (권선형) CURRENT TRANSFORMER



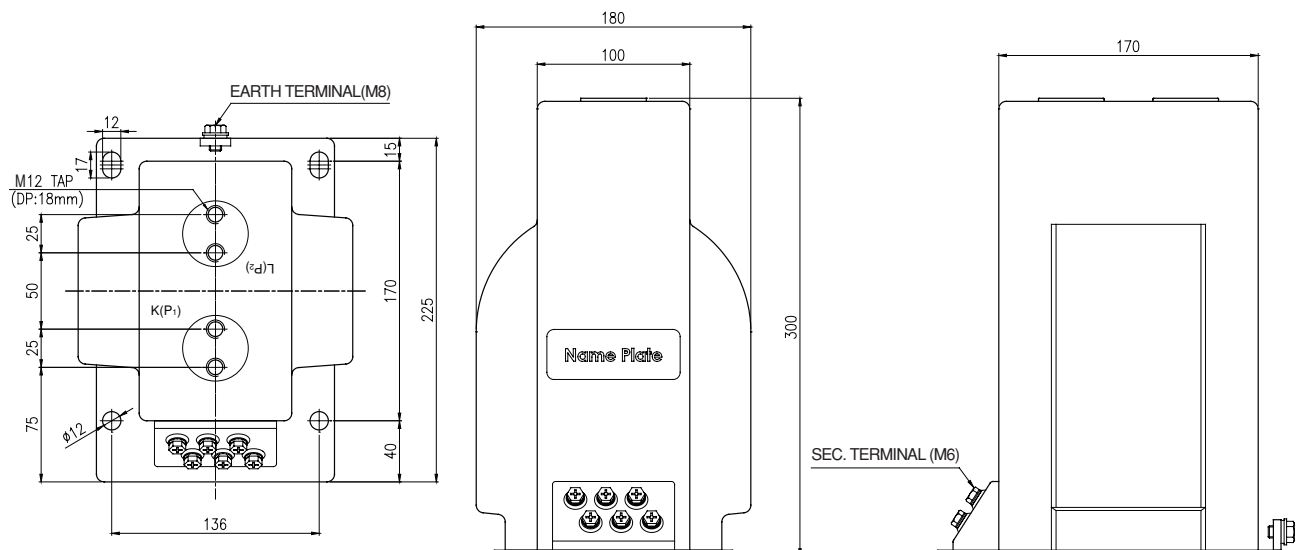
고압계기용변성기

12~24kV (5~1500A / 40In~40kA)

● Specification

ITEM	Rated short time current	Current Ratio		IEC 61869-2			KSC 1706, JEC 1201			IEEE C57.13	
		Single	Double	Class	Burden	Over Current Factor	Class	Burden	Burden	Class	Burden
Metering	8kA	20/5A~1500/5A	40-20/5A~1500-750/5A	1.0	15VA	FS5	1.0	15VA	-	0.6, 1.2	12.5VA (B-0.5)
	12.5kA	25/5A~1500/5A	50-25/5A~1500-750/5A								
	25kA	50/5A~1500/5A	100-50/5A~1500-750/5A								
	31.5kA	75/5A~1500/5A	150-75/5A~1500-750/5A								
	40kA	100/5A~1500/5A	200-100/5A~1500-750/5A								
	150In	5/5A~400/5A	10-5/5A~400-200/5A	0.5 1.0	15VA 30VA	FS10	0.5 1.0	15VA 40VA	-	1.2	22.5VA (B-0.9) 45VA (B-1.8)
	8kA	25/5A~1500/5A	50-25/5A~1500-750/5A								
	12.5kA	40/5A~1500/5A	80-40/5A~1500-750/5A								
	25kA	75/5A~1500/5A	150-75/5A~1500-750/5A								
	31.5kA	100/5A~1500/5A	200-100/5A~1500-750/5A								
40kA	150/5A~1500/5A	300-150/5A~1500-750/5A	5P 10P	15VA	10	1P	15VA	n)10	T50	12.5VA	
150In	5/5A~400/5A	10-5/5A~400-200/5A									
8kA	20/5A~1500/5A	40-20/5A~1500-750/5A									
12.5kA	25/5A~1500/5A	50-25/5A~1500-750/5A									
25kA	50/5A~1500/5A	100-50/5A~1500-750/5A									
31.5kA	75/5A~1500/5A	150-75/5A~1500-750/5A									
40kA	100/5A~1500/5A	200-100/5A~1500-750/5A		5P 10P	30VA	10	1P	40VA	n)10	T100	25VA
75In	5/5A~800/5A	10-5/5A~800-400/5A									
8kA	50/5A~1500/5A	100-50/5A~1500-750/5A									
12.5kA	75/5A~1500/5A	150-75/5A~1500-750/5A									
25kA	150/5A~1500/5A	300-150/5A~1500-750/5A									
31.5kA	200/5A~1500/5A	400-200/5A~1500-750/5A	5P 10P	15VA	20	1P	15VA	n)20	T200	50VA	
40kA	250/5A~1500/5A	500-250/5A~1500-750/5A									
40In	5/5A~800/5A	10-5/5A~800-400/5A									
8kA	100/5A~1500/5A	200-100A~1500-750/5A									
12.5kA	150/5A~1500/5A	300-150A~1500-750/5A									
25kA	300/5A~1500/5A	600-300/5A~1500-750/5A									
31.5kA	400/5A~1500/5A	800-400/5A~1500-750/5A	40kA	600/5A~1500/5A	1200-600/5A~1500-750/5A						

● Dimension



HV / C T
고압변류기

HV / V T · M O F
고압변압기

L V / C T
저압변류기

L V / V T
저압변압기

R E L A Y
보호계전기

E L D
누전경보기

G F R
지락계전기

Z C T
영압변류기

M E T E R
지시계전기

S P D
서지보호기

S H U N T
셔트

WINDING TYPE (권선형) CURRENT TRANSFORMER

12~24kV (5~1500A / 40In~40kA)

W24CWB



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 24kV

W24CWB 변류기는 최고 회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(12,17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core, 2core 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능하다.

The W24CWB current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and the less voltage(12, 17.5kV) product has the same dimensions. This product has a miniature light-weight compact structure to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

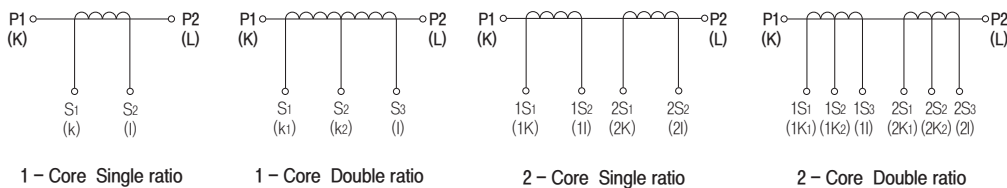
● Feature

규격 Standard	IEC - KS C - JEC
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W24CWB		
Highest voltage for equipment (Um)	12kV	17.5kV	24kV
Rated power-frequency withstand voltage (60sec)	28kV	38kV	50kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave	75kV	95kV	125kV
Rated frequency	50 / 60Hz		
Rated primary current(Ipr)	5 to 1500A		
Rated secondary current(Isr)	5 or 1A		
Rated continuous thermal current	120%		
Rated short-time thermal current Ith (1sec)	40In~40kA		
Rated dynamic current Idyn (2.5×Ith)	100kA		
Insulation class (according to 60085)	E		
Standard	According to customer requirements		
Weight (approx.)	30kg		

● Connection Diagram



WINDING TYPE (권선형) CURRENT TRANSFORMER



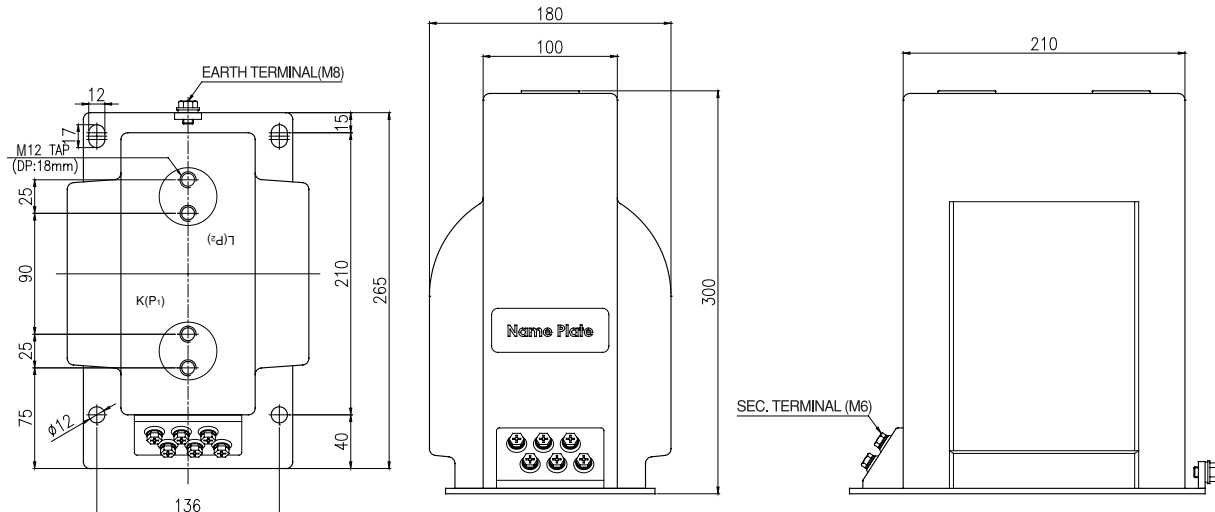
고압계기용변성기

12~24kV (5~1500A / 40In~40kA)

● Specification

ITEM	Rated short time current	Current Ratio		IEC 61869-2			KSC 1706, JEC 1201			IEEE C57.13	
		Single	Double	Class	Burden	Over Current Factor	Class	Burden	Over Current Factor	Class	Burden
Metering	300In	5/5A~200/5A	200-100/5A~1500-750/5A	1.0	15VA	FS5 FS10	1.0	15VA	-	0.6,1.2	12.5VA (B-0.5)
	8kA	15/5A~1500/5A	30-15/5A~1500-750/5A								
	12.5kA	20/5A~1500/5A	40-20/5A~1500-750/5A								
	25kA	25/5A~1500/5A	50-25/5A~1500-750/5A								
	31.5kA	40/5A~1500/5A	150-75/5A~1500-750/5A								
	40kA	50/5A~1500/5A	100-50/5A~1500-750/5A	0.5 1.0	15VA 30VA	FS5 FS10	0.5 1.0	15VA 40VA	-	1.2	22.5VA (B-0.9)
	150In	5/5A~400/5A	10-5/5A~400-200/5A								
	300In	5/5A~200/5A	10-5/5A~200-100/5A								
	8kA	25/5A~1500/5A	50-25/5A~1500-750/5A								
	12.5kA	40/5A~1500/5A	80-40/5A~1500-750/5A								
Protection	25kA	75/5A~1500/5A	150-75/5A~1500-750/5A	5P 10P	15VA	10	1P	15VA	n)10	T50	12.5VA
	31.5kA	100/5A~1500/5A	200-100/5A~1500-750/5A								
	40kA	150/5A~1500/5A	300-150/5A~1500-750/5A								
	150In	5/5A~400/5A	10-5/5A~400-200/5A								
	8kA	20/5A~1500/5A	40-20/5A~1500-750/5A								
	12.5kA	25/5A~1500/5A	50-25/5A~1500-750/5A	5P 10p	30VA	10	1P	40VA	n)10	T100	25VA
	25kA	50/5A~1500/5A	100-50/5A~1500-750/5A								
	31.5kA	75/5A~1500/5A	150-75/5A~1500-750/5A								
	40kA	100/5A~1500/5A	200-100/5A~1500-750/5A								
	40In	5/5A~800/5A	10-5/5A~800-400/5A								
	8kA	50/5A~1500/5A	100-50/5A~1500-750/5A	5P 10P	30VA	20	1P	15VA	n)20	T200	50VA
	12.5kA	75/5A~1500/5A	150-75/5A~1500-750/5A								
	25kA	100/5A~1500/5A	200-100/5A~1500-750/5A								
	31.5kA	150/5A~1500/5A	300-150/5A~1500-750/5A								
40kA	200/5A~1500/5A	400-200/5A~1500-750/5A									
2core	31.5kA	300/5A~1500/5A	600-300/5A~1500-750/5A	1.0/5P	15/15VA	10	1.0/1P	15/15VA	n)10	-	-
	40kA	400/5A~1500/5A	800-400/5A~1500-750/5A								
	75In	5~800A/5-5A	10-5/5-5~800-400/5-5A								
	8kA	30~1500A/5-5A	60-30/5-5~1500-750/5-5A								
	12.5kA	40~1500A/5-5A	80-40/5-5~1500-750/5-5A								
	25kA	75~1500A/5-5A	150-75/5-5~1500-750/5-5A	1.0/5P	15/15VA 30/30VA	20 10	1.0/1P	15/15VA 40/40VA	n)20 n)10	-	-
	31.5kA	100~1500A/5-5A	200-100/5-5~1500-750/5-5A								
	40kA	150~1500A/5-5A	300-150/5-5~1500-750/5-5A								
	40In	5~1500A/5-5A	10-5/5-5~800-400/5-5A								
	8kA	60~1500A/5-5A	120-60/5-5~1500-750/5-5A								

● Dimension



HV/CT 고압변류기
HV/VT·MOF 고압변압기
LV/CT 저압변류기
LV/VT 저압변압기
RELA 보호계전기
ELD 누전경보기
GFR 지락계전기
ZCT 영종변류기
METER 지시전기계기
SPD 서지보호기
SHUNT 션트

WINDING TYPE (권선형) CURRENT TRANSFORMER

12~24kV (5~1500A / 40In~40kA)

W24CWC



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 24kV

W24CWC 변류기는 최고 회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(12,17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core, 2core 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능하다.

The W24CWC current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and the less voltage(12, 17.5kV) product has the same dimensions. This product has a miniature light-weight compact structure to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

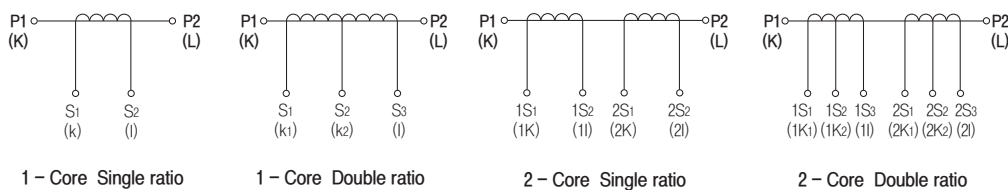
● Feature

규격 Standard	IEC - KS C - JEC
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W24CWC		
Highest voltage for equipment (Um)	12kV	17.5kV	24kV
Rated power-frequency withstand voltage (60sec)	28kV	38kV	50kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave	75kV	95kV	125kV
Rated frequency	50 / 60Hz		
Rated primary current(Ipr)	5 to 1500A		
Rated secondary current(Isr)	5 or 1A		
Rated continuous thermal current	120%		
Rated short-time thermal current Ith (1sec)	40In~40kA		
Rated dynamic current Idyn (2.5× Ith)	100kA		
Insulation class (according to 60085)	E		
Standard	According to customer requirements		
Weight (approx.)	35kg		

● Connection Diagram



WINDING TYPE (권선형) CURRENT TRANSFORMER



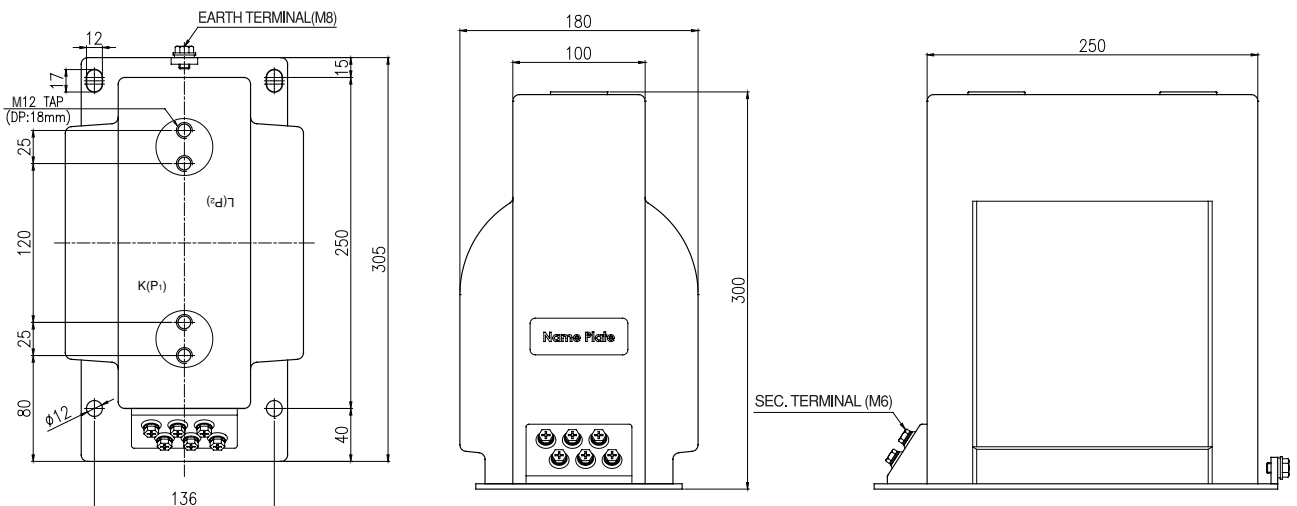
고압계기용변성기

12~24kV (5~1500A / 40In~40kA)

● Specification

ITEM	Rated short time current	Current Ratio		IEC 61869-2			KSC 1706, JEC 1201			IEEE C57.13	
		Single	Double	Class	Burden	Over Current Factor	Class	Burden	Over Current Factor	Class	Burden
Metering	8kA	15/5A~2000/5A	30-15/5A~1500-750/5A	0,5 1,0	15VA 30VA	FS5 FS10	0,5 1,0	15VA 40VA	-	0,6,1,2 1,2 1,2	12,5VA (B-0,5) 22,5VA (B-0,9) 45VA (B-1,8)
	12,5kA	20/5A~2000/5A	40-20/5A~1500-750/5A								
	25kA	25/5A~2000/5A	50-25/5A~1500-750/5A								
	31,5kA	40/5A~2000/5A	150-75/5A~1500-750/5A								
	40kA	50/5A~2000/5A	100-50/5A~1500-750/5A								
Protection	150In	5/5A~400/5A	10-5/5A~400-200/5A	5P 10P	15VA	10	1P	15VA	n>10	T50	12,5VA
	8kA	20/5A~2000/5A	40-20/5A~1500-750/5A								
	12,5kA	25/5A~2000/5A	50-25/5A~1500-750/5A								
	25kA	50/5A~2000/5A	100-50/5A~1500-750/5A								
	31,5kA	75/5A~2000/5A	150-75/5A~1500-750/5A								
	40kA	100/5A~2000/5A	200-100/5A~1500-750/5A								
	75In	5/5A~800/5A	10-5/5A~800-400/5A	5P 10P	30VA	10	1P	40VA	n>10	T100	25VA
	8kA	50/5A~2000/5A	100-50/5A~1500-750/5A								
	12,5kA	30/5A~2000/5A	150-75/5A~1500-750/5A								
	25kA	150/5A~2000/5A	300-150/5A~1500-750/5A								
	31,5kA	200/5A~2000/5A	400-200/5A~1500-750/5A								
	40kA	250/5A~2000/5A	500-250/5A~1500-750/5A								
	40In	5/5A~800/5A	10-5/5A~800-400/5A	5P 10P	30VA	20	1P	15VA	n>20	T200	50VA
	8kA	75/5A~2000/5A	150-75/5A~1500-750/5A								
	12,5kA	100/5A~2000/5A	200-100/5A~1500-750/5A								
25kA	200/5A~2000/5A	400-200/5A~1500-750/5A									
31,5kA	300/5A~2000/5A	600-300/5A~1500-750/5A									
40kA	300/5A~2000/5A	600-300/5A~1500-750/5A									
2core	75In	5~800A/5-5A	10-5/5-5~800-400/5-5A	1,0/5P	15/15VA	10	1,0/1P	15/15VA	n>10	-	-
	8kA	30~2000A/5-5A	60-30/5-5~1500-750/5A								
	12,5kA	40~2000A/5-5A	80-40/5-5~1500-750/5A								
	25kA	75~2000A/5-5A	150-75/5-5~1500-750/5A								
	31,5kA	100~2000A/5-5A	200-100/5-5~1500-750/5A								
	40kA	150~2000A/5-5A	300-150/5-5~1500-750/5A								
	40In	5~2000A/5-5A	10-5/5-5~800-400/5-5A	1,0/5P	15/15VA 30/30VA	20 10	1,0/1P	15/15VA 40/40VA	n>20 n>10	-	-
	8kA	60~2000A/5-5A	120-60/5-5~1500-750/5A								
	12,5kA	100~2000A/5-5A	200-100/5-5~1500-750/5A								
	25kA	200~2000A/5-5A	400-200/5-5~1500-750/5A								
31,5kA	250~2000A/5-5A	500-250/5-5~1500-750/5A									
40kA	300~2000A/5-5A	600-300/5-5~1500-750/5A									

● Dimension



HV/CT 고압변류기
HV/VT·MOF 고압변압기
LV/CT 저압변류기
LV/VT 저압변압기
RELA Y 보호계전기
ELD 누전경보기
GFR 지락계전기
ZCT 영압변류기
METER 지시계전기
SPD 서지보호기
SHUNT 션트

WINDING TYPE (권선형) CURRENT TRANSFORMER

12~24kV (5~3200A / 40In~40kA)

W24CWD



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 24kV

W24CWD 변류기는 최고 회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(12,17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core, 2core 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능하다.

The W24CWD current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and the less voltage(12, 17.5kV) product has the same dimensions. This product has a miniature light-weight compact structure to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

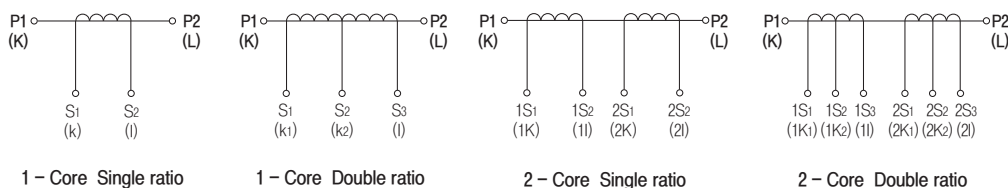
● Feature

규격 Standard	IEC - KS C - JEC
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W24CWD		
Highest voltage for equipment (Um)	12kV	17.5kV	24kV
Rated power-frequency withstand voltage (60sec)	28kV	38kV	50kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave	75kV	95kV	125kV
Rated frequency	50 / 60Hz		
Rated primary current(Ipr)	5 to 3200A		
Rated secondary current(Isr)	5 or 1A		
Rated continuous thermal current	120%		
Rated short-time thermal current Ith (1sec)	40In~40kA		
Rated dynamic current Idyn (2.5×Ith)	100kA		
Insulation class (according to 60085)	E		
Standard	According to customer requirements		
Weight (approx.)	40kg		

● Connection Diagram



WINDING TYPE (권선형) CURRENT TRANSFORMER



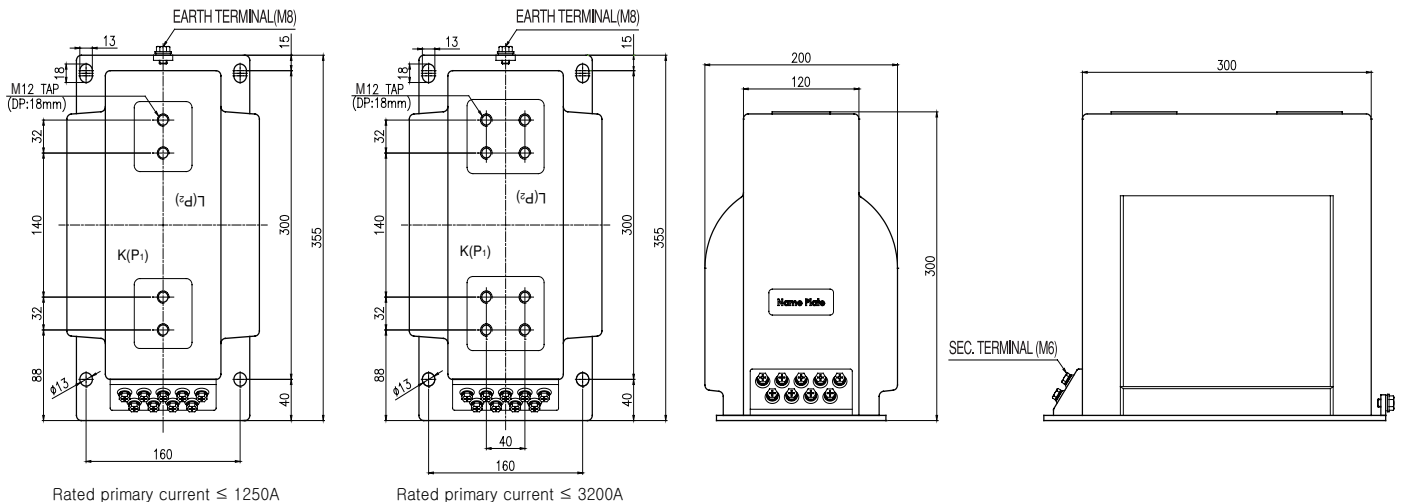
고압계기용변성기

12~24kV (5~3200A / 40In~40kA)

● Specification

ITEM	Rated short time current	Current Ratio		IEC 61869-2			KSC 1706, JEC 1201			IEEE C57.13				
		Single	Double	Class	Burden	Over Current Factor	Class	Burden	Over Current Factor	Class	Burden			
Metering	8kA	5/5A~3200/5A	10~5/5A~3200~1500/5A	1.0	15VA	FS5 FS10	1.0	15VA	-	0.6, 1.2	12.5VA (B-0.5)			
	12.5kA	10/5A~3200/5A	20~10/5A~3200~1500/5A								22.5VA (B-0.9)			
	25kA	15/5A~3200/5A	30~15/5A~3200~1500/5A								45VA (B-1.8)			
	31.5kA	20/5A~3200/5A	40~20/5A~3200~1500/5A											
	40kA	30/5A~3200/5A	60~30/5A~3200~1500/5A											
	Protection	8kA	10/5A~3200/5A	20~10/5A~3200~1500/5A	5P 10P	15VA	10 10	1P	15VA	n>10	T50	12.5VA		
		12.5kA	15/5A~3200/5A	30~15/5A~3200~1500/5A								25VA		
		25kA	30/5A~3200/5A	60~30/5A~3200~1500/5A										
		31.5kA	40/5A~3200/5A	80~40/5A~3200~1500/5A										
		40kA	60/5A~3200/5A	120~60/5A~3200~1500/5A										
2core		8kA	20/5A~3200/5A	40~20/5A~3200~1500/5A	5P 10P	30VA	20 20/10	1P	40VA	n>20	T200	50VA		
		12.5kA	30/5A~3200/5A	60~30/5A~3200~1500/5A										
		25kA	60/5A~3200/5A	120~60/5A~3200~1500/5A										
		31.5kA	75/5A~3200/5A	150~75/5A~3200~1500/5A										
		40kA	120/5A~3200/5A	240~120/5A~3200~1500/5A										
	2core	40In	5~1500/5~5A	10~5/5A~1500~750/5~5A	1.0/5P	15/15VA	10	1.0/1P	15/15VA	n>10	-	-		
		75In	5~800/5~5A	10~5/5A~800~400/5~5A										
		150In	5~400/5~5A	10~5/5A~400~200/5~5A										
		300In	5~200/5~5A	10~5/5A~200~100/5~5A										
		8kA	10~2000/5~5A	20~10/5~5A~3200~1500/5~5A										
		2core	12.5kA	15~2000/5~5A	30~15/5~5A~3200~1500/5~5A	1.0/5P	15/15VA 30/30VA	20 10	1.0/1P	15/15VA 40/40VA	n>20 n>10	-	-	
			25kA	25~2000/5~5A	50~25/5~5A~3200~1500/5~5A									
			31.5kA	30~2000/5~5A	60~30/5~5A~3200~1500/5~5A									
			40kA	40~2000/5~5A	80~40/5~5A~3200~1500/5~5A									
			40In	5~1500/5~5A	10~5/5A~1500~750/5~5A									
			2core	75In	5~800/5~5A	10~5/5A~800~400/5~5A	1.0/5P	30/30VA	20	1.0/1P	40/40VA	n>20	-	-
				150In	5~400/5~5A	10~5/5A~400~200/5~5								
				300In	10~200/5~5A	10~5/5A~200~100/5~5								
				8kA	30~2000/5~5A	60~30/5~5A~3200~1500/5~5A								
				12.5kA	60~2000/5~5A	120~60/5~5A~3200~1500/5~5A								
2core				25kA	120~2000/5~5A	240~120/5~5A~3200~1500/5~5A	1.0/5P	30/30VA	20	1.0/1P	40/40VA	n>20	-	-
				31.5kA	150~2000/5~5A	300~150/5~5A~3200~1500/5~5A								
				40kA	200~2000/5~5A	400~200/5~5A~3200~1500/5~5A								
				75In	5~1500/5~5A	10~5/5A~1500~750/5~5								
				150In	5~400/5~5A	10~5/5A~400~200/5~5								

● Dimension



HV/CT 고압변류기
HV/VT-MOF 고압변압기
LV/CT 저압변류기
LV/VT 저압변압기
RELAY 보호계전기
ELD 누전경보기
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ZCT 영압변류기
METER 지시계기
SPD 서지보호기
SHUNT 션트

WINDING TYPE (권선형) CURRENT TRANSFORMER

12~24kV (5~3200A / 40In~40kA)

W24CWE



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 24kV

W24CWE 변류기는 최고 회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(12,17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core, 2core 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능하다.

The W24CWE current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and the less voltage(12, 17.5kV) product has the same dimensions. This product has a miniature light-weight compact structure to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

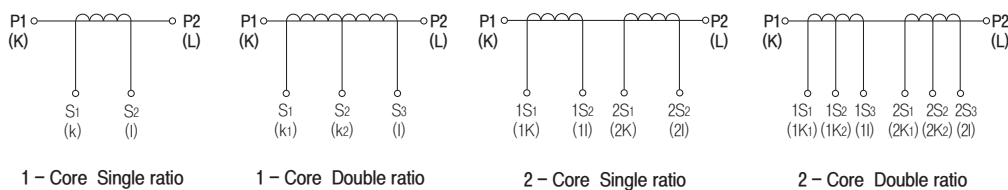
● Feature

규격 Standard	IEC - KS C - JEC
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W24CWE		
Highest voltage for equipment (Um)	12kV	17.5kV	24kV
Rated power-frequency withstand voltage (60sec)	28kV	38kV	50kV
Rated lighting Impulse withstand voltage (1.2/50μs)/full wave	75kV	95kV	125kV
Rated frequency	50 / 60Hz		
Rated primary current(Ipr)	5 to 3200A		
Rated secondary current(Isr)	5 or 1A		
Rated continuous thermal current	120%		
Rated short-time thermal current Ith (1sec)	40In~40kA		
Rated dynamic current Idyn (2.5×Ith)	100kA		
Insulation class (according to 60085)	E		
Standard	According to customer requirements		
Weight (approx.)	45kg		

● Connection Diagram



WINDING TYPE (권선형) CURRENT TRANSFORMER



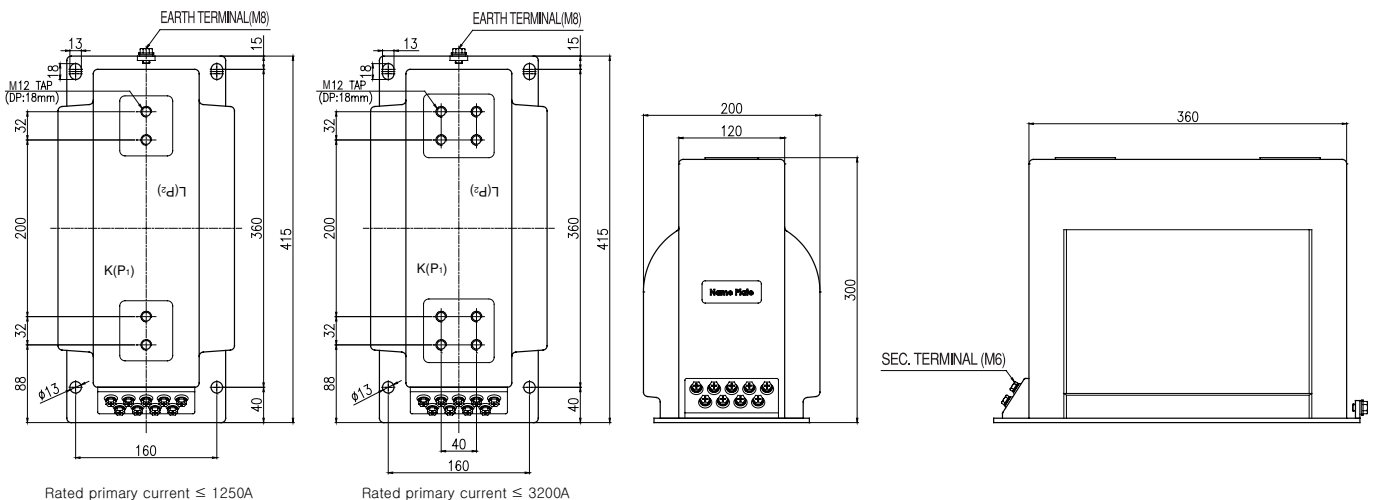
고압계기용변성기

12~24kV (5~3200A / 40In~40kA)

● Specification

ITEM	Rated short time current	Current Ratio		IEC 61869-2			KSC 1706, JEC 1201			IEEE C57.13									
		Single	Double	Class	Burden	Over Current Factor	Class	Burden	Over Current Factor	Class	Burden								
Metering	300In	5/5A~200/5A	10-5/5A~200-100/5A	1.0	15VA	FS5 FS10	1.0	15VA	-	0.6,1.2	12.5VA (B-0.5)								
	8kA	10/5A~3200/5A	20-10/5A~3200-1600/5A																
	12.5kA	15/5A~3200/5A	30-15/5A~3200-1600/5A																
	25kA	20/5A~3200/5A	40-20/5A~3200-1600/5A																
	31.5kA	40/5A~3200/5A	80-40/5A~3200-1600/5A																
	40kA	40/5A~3200/5A	80-40/5A~3200-1600/5A																
	300In	10/5A~200/5A	20-10/5A~200-100/5A									0.5	15VA	FS5 FS10	0.5	15VA	-	1.2	22.5VA (B-0.9)
	8kA	20/5A~3200/5A	40-20/5A~3200-1600/5A																
	12.5kA	25/5A~3200/5A	50-25/5A~3200-1600/5A																
	25kA	35/5A~3200/5A	70-35/5A~3200-1600/5A																
Protection	300In	5/5A~200/5A	10-5/5A~200-100/5A	5P 10P	15VA	10 10	1P	15VA	n>10	T50	12.5VA								
	8kA	10/5A~3200/5A	20-10/5A~3200-1600/5A																
	12.5kA	15/5A~3200/5A	30-15/5A~3200-1600/5A																
	25kA	20/5A~3200/5A	40-20/5A~3200-1600/5A																
	31.5kA	40/5A~3200/5A	80-40/5A~3200-1600/5A																
	40kA	40/5A~3200/5A	80-40/5A~3200-1600/5A																
	150In	5/5A~400/5A	10-5/5A~400-200/5A									5P 10P	30VA	20 20	1P	15VA 40VA	n>20 n>10	T100	25VA
	8kA	20/5A~3200/5A	40-20/5A~3200-1600/5A																
	12.5kA	25/5A~3200/5A	50-25/5A~3200-1600/5A																
	25kA	30/5A~3200/5A	60-30/5A~3200-1600/5A																
2core	31.5kA	75/5A~3200/5A	150-75/5A~3200-1600/5A	5P 10P	30VA	20 20	1P	40VA	n>20	T200	50VA								
	40kA	75/5A~3200/5A	150-75/5A~3200-1600/5A																
	8kA	25/5A~3200/5A	50-25/5A~3200-1600/5A																
	12.5kA	35/5A~3200/5A	70-35/5A~3200-1600/5A																
	2core	25kA	50/5A~3200/5A	100-50/5A~3200-1600/5A	1.0/5P	15/15VA	10	1.0/1P	15/15VA	n>10	-	-							
		31.5kA	100/5A~3200/5A	200-100/5A~3200-1600/5A															
		40kA	100/5A~3200/5A	200-100/5A~3200-1600/5A															
		40In	5~1500/5-5A	10-5/5-5A~1500-750/5-5A															
		75In	5~800/5-5A	10-5/5-5A~800-400/5-5A															
		150In	5~400/5-5A	10-5/5-5A~400-200/5-5A															
300In		5~200/5-5A	20-10/5-5A~200-100/5-5A																
8kA		20~3200/5-5A	40-20/5-5A~3200-1600/5-5A																
12.5kA		30~3200/5-5A	60-30/5-5A~3200-1600/5-5A																
25kA		40~3200/5-5A	80-40/5-5A~3200-1600/5-5A																
31.5kA		80~3200/5-5A	160-80/5-5A~3200-1600/5-5A																
40kA		80~3200/5-5A	160-80/5-5A~3200-1600/5-5A																
40In		10~1500/5-5A	20-10/5-5A~1500-750/5-5																
8kA		50~2000/5-5A	100-50/5-5A~3200-1600/5-5A	1.0/5P									15/15VA 30/30VA	20 10	1.0/1P	15/15VA 40/40VA	n>20 n>10	-	-
12.5kA	70~3200/5-5A	140-70/5-5A~3200-1600/5-5A																	
25kA	100~3200/5-5A	200-100/5-5A~3200-1600/5-5A																	
31.5kA	200~3200/5-5A	400-200/5-5A~3200-1600/5-5A																	
40kA	200~3200/5-5A	400-200/5-5A~3200-1600/5-5A																	

● Dimension



HV/CT 고압변류기
HV/VT-MOF 고압변압기
LV/CT 저압변류기
LV/VT 저압변압기
RELA 보호계전기
ELD 누전경보기
GFR 지락계전기
ZCT 영압변류기
METER 지시계기
SPD 서지보호기
SHUNT 션트

WINDING TYPE (권선형) CURRENT TRANSFORMER

12~24kV (5~3200A / 40In~40kA)

W24CWF



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 24kV

W24CWF 변류기는 최고 회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(12, 17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core, 2core, 3core 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능하다.

The W24CWF current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and the less voltage(12, 17.5kV) product has the same dimensions. This product has a miniature light-weight compact structure to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core, 2 cores and 3cores.

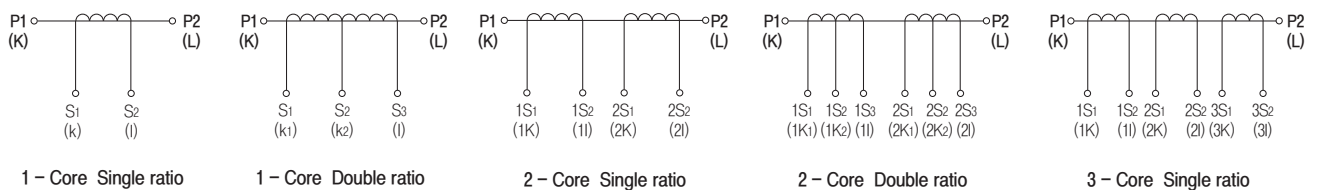
● Feature

규격 Standard	IEC - KS C - JEC
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W24CWF		
Highest voltage for equipment (Um)	12kV	17.5kV	24kV
Rated power-frequency withstand voltage (60sec)	28kV	38kV	50kV
Rated lighting Impulse withstand voltage (1.2/50μs)/full wave	75kV	95kV	125kV
Rated frequency	50 / 60Hz		
Rated primary current(Ipr)	5 to 3200A		
Rated secondary current(Isr)	5 or 1A		
Rated continuous thermal current	120%		
Rated short-time thermal current Ith (1sec)	40In~40kA		
Rated dynamic current Idyn (2.5×Ith)	100kA		
Insulation class (according to 60085)	E		
Standard	According to customer requirements		
Weight (approx.)	50kg		

● Connection Diagram



WINDING TYPE (권선형) CURRENT TRANSFORMER

12~24kV (5~3200A / 40In~40kA)

W24CWG



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 24kV

W24CWG 변류기는 최고 회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(12, 17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 소형경량의 Compact한 변류기 구조를 가짐으로써, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core, 2core, 3core 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능하다.

The W24CWG current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and the less voltage(12, 17.5kV) product has the same dimensions. This product has a miniature light-weight compact structure to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core, 2 cores and 3cores.

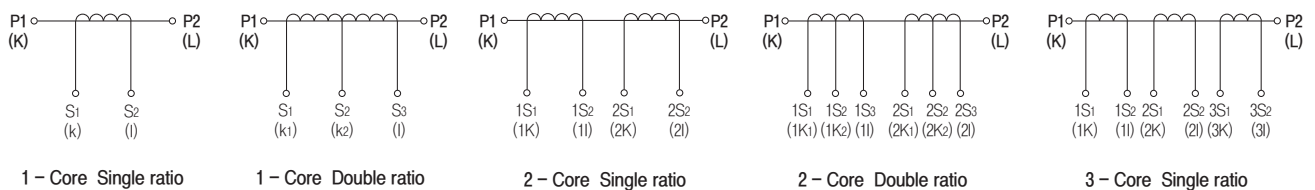
● Feature

규격 Standard	IEC - KS C - JEC
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W24CWG		
Highest voltage for equipment (Um)	12kV	17.5kV	24kV
Rated power-frequency withstand voltage (60sec)	28kV	38kV	50kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave	75kV	95kV	125kV
Rated frequency	50 / 60Hz		
Rated primary current(Ipr)	5 to 3200A		
Rated secondary current(Isr)	5 or 1A		
Rated continuous thermal current	120%		
Rated short-time thermal current Ith (1sec)	40In~40kA		
Rated dynamic current Idyn (2.5×Ith)	100kA		
Insulation class (according to 60085)	E		
Standard	According to customer requirements		
Weight (approx.)	55kg		

● Connection Diagram



WINDING TYPE (권선형) CURRENT TRANSFORMER



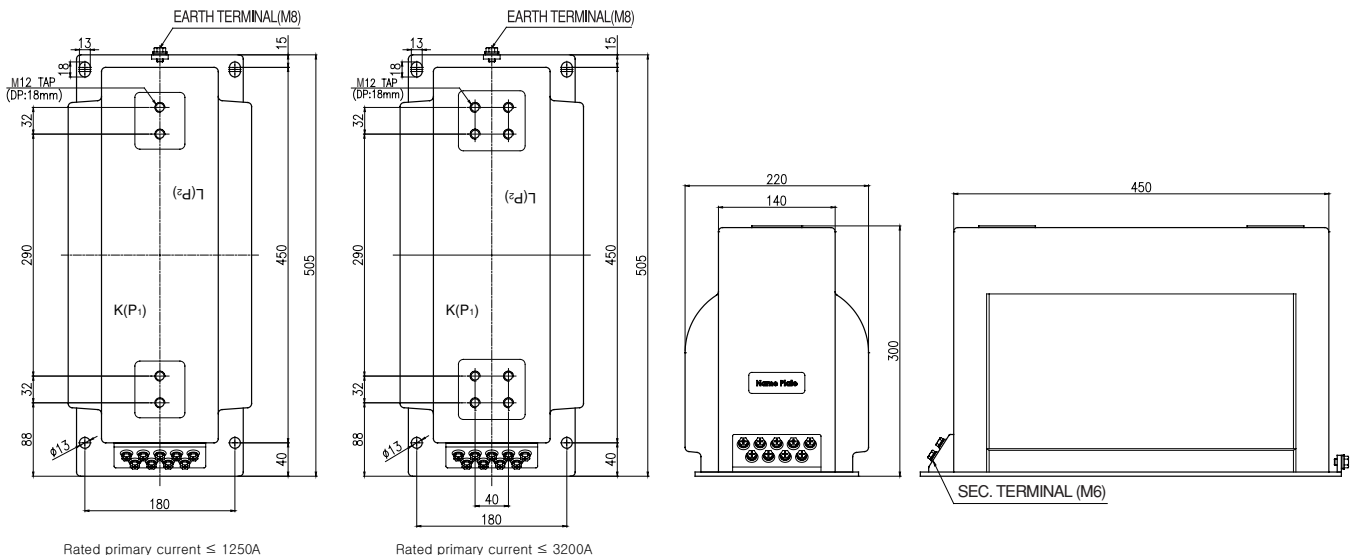
고압계기용변성기

12~24kV (5~3200A / 40In~40kA)

● Specification

ITEM	Rated short time current	Current Ratio		IEC 61869-2			KSC 1706, JEC 1201			IEEE C57.13	
		Single	Double	Class	Burden	Over Current Factor	Class	Burden	Over Current Factor	Class	Burden
Metering	12.5kA	5/5A~3200/5A	10~5/5A~3200~1600/5A	0.5 1.0	15VA 40VA	FS5 FS10	0.5	15VA 40VA	-	0.6, 1.2 1.2 1.2	12.5VA(B-0.5) 22.5VA(B-0.9) 45VA(B-1.8)
	25kA	10/5A~3200/5A	20~10/5A~3200~1600/5A								
	31.5kA	15/5A~3200/5A	30~15/5A~3200~1600/5A								
	40kA	20/5A~3200/5A	40~20/5A~3200~1600/5A								
Protection	8kA	5/5A~3200/5A	10~5/5A~3200~1600/5A	5P 10P	15VA	10 10	1P	15VA	n>10	T50	12.5VA
	12.5kA	5/5A~3200/5A	10~5/5A~3200~1600/5A								
	25kA	10/5A~3200/5A	10~5/5A~3200~1600/5A								
	31.5kA	15/5A~3200/5A	30~15/5A~3200~1600/5A								
	40kA	20/5A~3200/5A	30~15/5A~3200~1600/5A								
	8kA	5/5A~3200/5A	10~5/5A~3200~1600/5A	5P 10P	30VA	20 20	1P	15VA 40VA	n>20 n>10	T100	25VA
	12.5kA	10/5A~3200/5A	20~10/5A~3200~1600/5A								
	25kA	15/5A~3200/5A	30~15/5A~3200~1600/5A								
	31.5kA	25/5A~3200/5A	50~25/5A~3200~1600/5A								
	40kA	40/5A~3200/5A	80~40/5A~3200~1600/5A								
	8kA	15/5A~3200/5A	30~15/5A~3200~1600/5A	5P 10P	30VA	20 20	1P	40VA	n>20	T200	50VA
	12.5kA	20/5A~3200/5A	40~20/5A~3200~1600/5A								
25kA	30/5A~3200/5A	60~30/5A~3200~1600/5A									
31.5kA	50/5A~3200/5A	100~50/5A~3200~1600/5A									
40kA	75/5A~3200/5A	150~75/5A~3200~1600/5A									
2core	8kA	10~3200A/5~5A	20~10/5~5A~3200~1600/5~5A	1.0/5P	15/15VA	10	1.0/1P	15/15	n>10	-	-
	12.5kA	10~3200A/5~5A	20~10/5~5A~3200~1600/5~5A								
	25kA	20~3200A/5~5A	40~20/5~5A~3200~1600/5~5A								
	31.5kA	25~3200A/5~5A	50~25/5~5A~3200~1600/5~5A								
	40kA	40~3200A/5~5A	80~40/5~5A~3200~1600/5~5A								
	8kA	10~3200A/5~5A	20~10/5~5A~3200~1600/5~5A	1.0/5P	15/15VA 30/30VA	20 10	1.0/1P	15/15 40/40	n>20 n>10	-	-
	12.5kA	10~3200A/5~5A	20~10/5~5A~3200~1600/5~5A								
	25kA	20~3200A/5~5A	40~20/5~5A~3200~1600/5~5A								
	31.5kA	25~3200A/5~5A	50~25/5~5A~3200~1600/5~5A								
	40kA	40~3200A/5~5A	80~40/5~5A~3200~1600/5~5A								
	8kA	20~3200A/5~5A	40~20/5~5A~3200~1600/5~5A	1.0/5P	30/30VA	n>20	1.0/1P	40/40	n>20	-	-
	12.5kA	25~3200A/5~5A	50~25/5~5A~3200~1600/5~5A								
25kA	50~3200A/5~5A	100~50/5~5A~3200~1600/5~5A									
31.5kA	75~3200A/5~5A	150~75/5~5A~3200~1600/5~5A									
40kA	100~3200A/5~5A	200~100/5~5A~3200~1600/5~5A									
3core	25kA	75/5~5~5A ~ 3200/5~5~5A	Metering 1st core	0.5 1.0	15VA 30VA	FS 5 FS 10	0.5 1.0	15VA 25VA	-	0.6, 1.2 1.2	12.5VA(B-0.5) 22.5VA(B-0.9)
	31.5kA	100/5~5~5A ~ 3200/5~5~5A	Protection 2nd core	5P 5P	15VA 30VA	20 10	1P 1P	15VA 25VA	n>20 n>10	T100	25VA
	40kA	100/5~5~5A ~ 3200/5~5~5A	Protection1 3rd core	5P 5P	15VA 30VA	20 10	1P 1P	15VA 25VA	n>20 n>10	T100	25VA

● Dimension

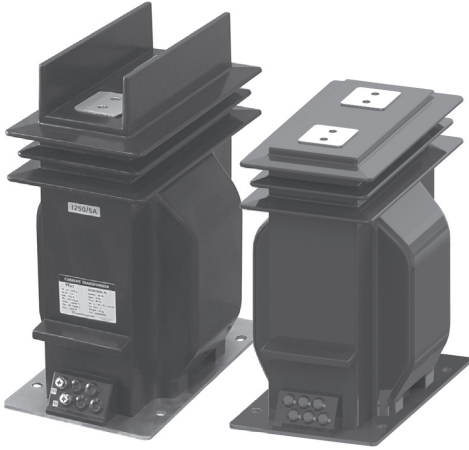


HV/CT 고압변류기
HV/VT-MOF 고압변압기
LV/CT 저압변류기
LV/VT 저압변압기
RELA 보호계전기
ELD 누전경보기
GFR 지락계전기
ZCT 영압변류기
METER 지시계기
SPD 서지보호기
SHUNT 션트

WINDING TYPE (권선형) CURRENT TRANSFORMER

24~36kV (10~3200A / 75In~25kA)

W36CWD(R) / W36CWD



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 36kV

W36CWD(R)/W36CWD 변류기는 최고 회로전압 36kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(17.5kV, 24kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core 및 2 core 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능하다.

The W36CWD(R)/W36CWD current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 36kV-class insulation performance, and the less voltage(17.5kV, 24kV) product has the same dimensions. This product has a miniature light-weight compact structure to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

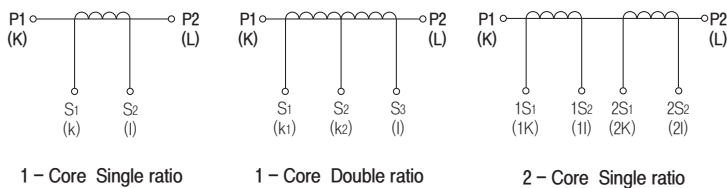
● Feature

규격 Standard	IEC - KS C - JEC
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W36CWD(R) / W36CWD		
Highest voltage for equipment (Um)	17.5kV	24kV	36kV
Rated power-frequency withstand voltage (60sec)	38kV	50kV	70kV
Rated lightning impulse withstand voltage (1,2/50μs)full wave	95kV	125kV	170kV
Rated frequency	50 / 60Hz		
Rated primary current(Ipr)	5 to 3200A		
Rated secondary current(Isr)	5 or 1A		
Rated continuous thermal current	120%		
Rated short-time thermal current Ith (1sec)	25kA		
Rated dynamic current Idyn (2,5×Ith)	62,5kA		
Insulation class (according to 60085)	E		
Standard	According to customer requirements		
Weight (approx.)	45kg		

● Connection Diagram



WINDING TYPE (권선형) CURRENT TRANSFORMER



고압계기용변성기

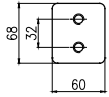
24~36kV (10~3200A / 75In~25kA)

● Specification

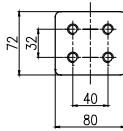
ITEM	Rated short time current	Current Ratio	Service	61869-2			IEEE C57.13			KSC 1706		
				Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor
Single Ratio CT	75In	10/5A~600/5A	Metering	15VA	0.5 1.0	FS5, 10	12.5VA (B-0.5)	0.6 1.2	-	15VA	0.5 1.0	-
	12.5kA	50/5A~1250/5A		30VA	1.0	FS5, 10	22.5VA (B-0.9)	0.6 1.2	-	25VA	0.5 1.0	-
	25kA	100/5A~1250/5A	Protection	15VA	5P 10P	20	45VA (B-1.8)	1.2	-	40VA	1.0	-
		30VA		5P 10P	10	25VA (B-1)	T-100	-	60VA	1.0	-	
2-core Single Ratio CT	75In	20/5-5A~600/5-5A	Metering	15VA	0.5 1.0	FS5, 10	12.5VA (B-0.5)	0.6 1.2	-	15VA	0.2 0.5 1.0	-
	12.5kA	100/5-5A~1250/5-5A		30VA	1.0	FS5, 10	22.5VA (B-0.9)	0.6 1.2	-	25VA	0.5 1.0	-
	25kA	200/5-5A~1250/5-5A	Protection	15VA	5P 10P	20	45VA (B-1.8)	1.2	-	40VA	1.0	-
		30VA		5P 10P	10 (Higher current ratio)	25VA (B-1)	T-100 (Higher current ratio)	-	60VA	1.0	n)20/10 n)10/5 n)10/5 n)5/-	

● Dimension

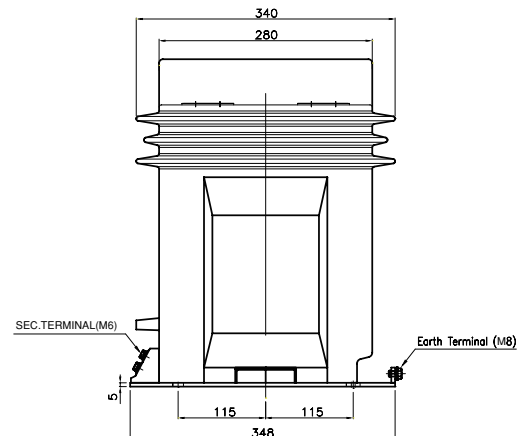
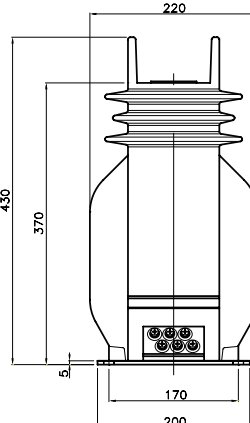
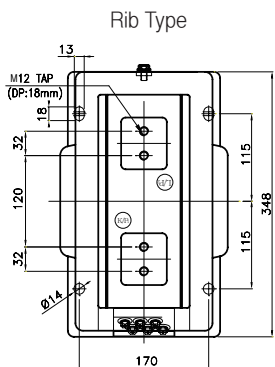
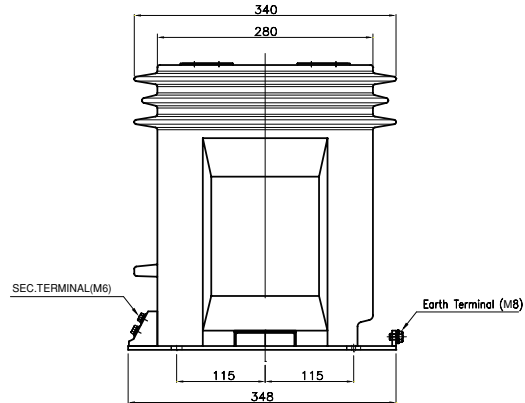
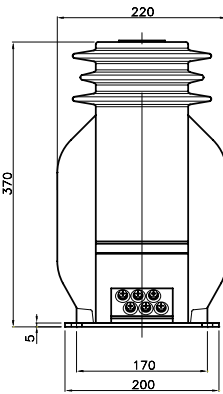
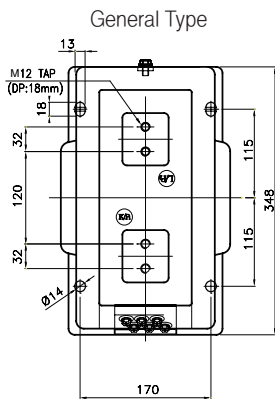
* Primary Terminal



Rated primary current ≤ 1250A
Rated short-time thermal current ≤ 40(100)kA/1s
Material : Copper (C1100)



Rated primary current ≤ 3200A
Rated short-time thermal current ≤ 70(175)kA/1s
Material : Copper (C1100)



HV/CT
고압변류기

HV/VT:MOF
고압변압기

LV/CT
저압변류기

LV/VT
저압변압기

RELA
보호계전기

ELD
누전경보기

GF
지락계전기

ZCT
영용변류기

METER
지시전기계기

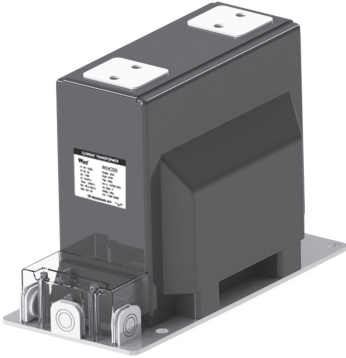
SPD
서지보호기

SHUNT
센트

DIN - WINDING TYPE (권선형) CURRENT TRANSFORMER

3.6~12kV (10~1250A / 75In~40kA)

W12CDA



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 12kV

W12CDA 변류기는 최고 회로전압 12kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(3.6kV, 7.2kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 국제규격 DIN42600(Part 8)에 따라 설계된 Support-type 형태의 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core 및 2 core의 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능합니다.

The W12CDA current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 12kV-class insulation performance, and the less voltage(3.6kV, 7.2kV) product has the same dimensions. This product has a miniature light-weight compact structure of support type designed according to the international standard DIN42600(Part 8) to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

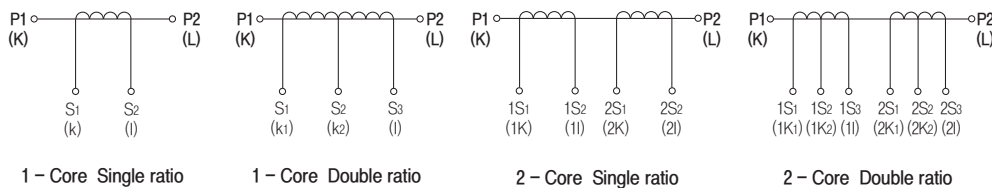
● Feature

규격 Standard	IEC - IEEE - CSA - DIN etc.
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W12CDA		
Highest voltage for equipment (Um)	3.6kV	7.2kV	12kV
Rated power-frequency withstand voltage (60sec)	10kV	20kV	28kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave	40kV	60kV	75kV
Rated frequency	50 / 60Hz		
Rated primary current(Ipr)	10 to 1250A		
Rated secondary current(Isr)	5 or 1A		
Rated continuous thermal current	120%		
Rated short-time thermal current Ith (1sec)	75In~40kA		
Rated dynamic current Idyn (2.5× Ith)	100kA		
Insulation class (according to 60085)	E		
Standard	According to customer requirements		
Weight (approx.)	22kg		

● Connection Diagram



DIN - WINDING TYPE (권선형) CURRENT TRANSFORMER

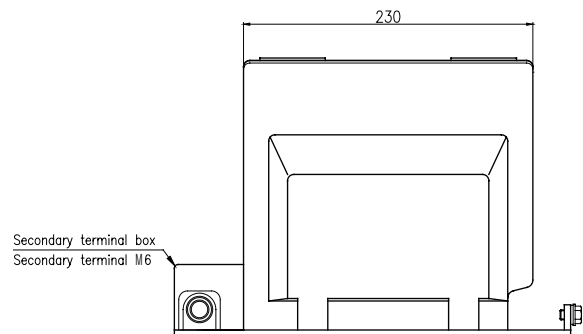
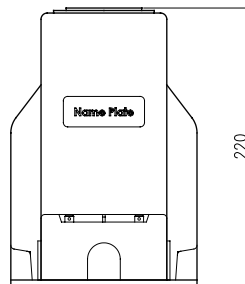
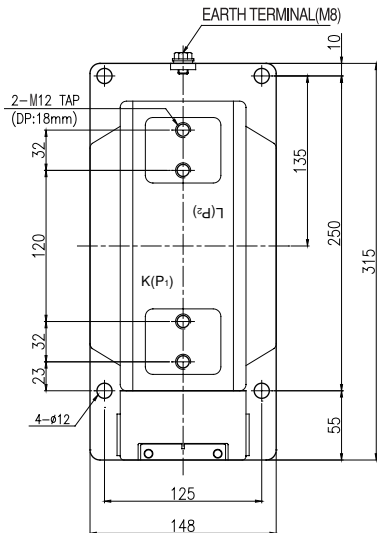
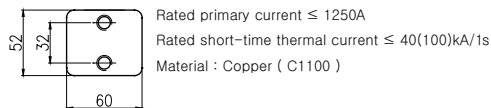
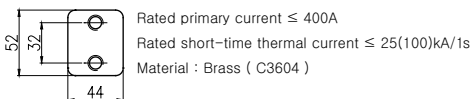
3.6~12kV (10~1250A / 75In~40kA)

● Specification

ITEM	Rated short time current	Current Ratio	Service	61869-2			IEEE C57.13			KSC 1706		
				Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor
Single Ratio CT	75In	10/5A~600/5A	Metering	15VA	0.5 1.0	FS5, 10	12.5VA (B-0.5)	0.6 1.2	-	15VA	0.5 1.0	-
	12.5kA	50/5A~1250/5A		30VA	1.0	FS5, 10	22.5VA (B-0.9)	0.6 1.2	-	25VA	0.5 1.0	-
	25kA	100/5A~1250/5A					45VA (B-1.8)	1.2	-	40VA	1.0	-
	31.5kA	150/5A~1250/5A	Protection	15VA	5P10	20	25VA (B-0.5)	T-100	-	15VA	1P	n>30
	40kA	200/5A~1250/5A		30VA	5P10	20	50VA (B-2)	T-200	-	25VA	1P	n>20
									40VA	1P	n>20	
									60VA	1P 3P	n>10	
2-core Single Ratio CT	75In	20/5-5A~600/5-5A	Metering (1st core)	15VA	1.0	FS5, 10				15VA	1.0	-
	12.5kA	100/5-5A~1250/5-5A	30VA	1.0						25VA	1.0	-
	25kA	200/5-5A~1250/5-5A	Protection (2nd core)	15VA	5P10	20				15VA	1P	n>20
	31.5kA	300/5-5A~1250/5-5A		30VA	5P10	10				25VA	1P	n>10
									40VA	1P	n>10	

● Dimension

* Primary Terminal

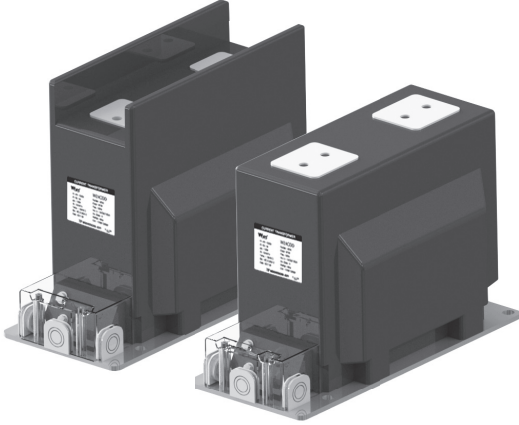


HV / CT 고압변류기
HV / VT : MOF 고압변압기
LV / CT 지압변류기
LV / VT 지압변압기
RELA이 보호계전기
ELD 누전경보기
GFBR 지락계전기
ZCT 영상변류기
METER 지시계기
SPD 서지보호기
SHUNT 셉트

DIN - WINDING TYPE (권선형) CURRENT TRANSFORMER

3.6~12kV (10~3200A / 75In~40kA)

W12CDB(R) / W12CDB



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 12kV

W12CDB(R)/W12CDB 변류기는 최고 회로전압 12kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(3.6kV, 7.2kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 국제규격 DIN42600(Part 8)에 따라 설계된 Support-type 형태의 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core 및 2 core의 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능합니다.

The W12CDB(R)/W12CDB current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 12kV-class insulation performance, and the less voltage(3.6kV, 7.2kV) product has the same dimensions. This product has a miniature light-weight compact structure of support type designed according to the international standard DIN42600(Part 8) to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

● Feature

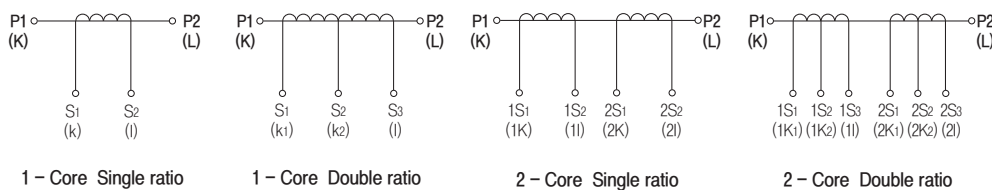
규격 Standard	IEC - IEEE - CSA - DIN etc.
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W12CDB(R) / W12CDB		
Highest voltage for equipment (Um)	3.6kV	7.2kV	12kV
Rated power-frequency withstand voltage (60sec)	10kV	20kV	28kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave	40kV	60kV	75kV
Rated frequency	50 / 60Hz		
Rated primary current(Ipr)	20 to 3200A		
Rated secondary current(Isr)	5 or 1A		
Rated continuous thermal current	120%		
Rated short-time thermal current Ith (1sec)	8~40kA		
Rated dynamic current Idyn (2.5×Ith)	100kA		
Insulation class (according to 60085)	E		
Standard	According to customer requirements		
Weight (approx.)	24kg		

※ "R" : Rib type (날개형)

● Connection Diagram



DIN - WINDING TYPE (권선형) CURRENT TRANSFORMER

3.6~12kV (10~3200A / 75In~40kA)

● Specification

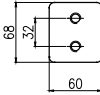
ITEM	Rated short time current	Current Ratio	Service	IEC 61869-2			IEEE C57.13			KSC 1706		
				Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor
Single Ratio CT	8kA	20/5A~3200/5A	Metering	10VA	0.5 1.0	FS5,10	12.5VA (B-0.5)	0.6 1.2	-	5VA 10VA 15VA	0.5 1.0 0.5 1.0 0.5 1.0	- - -
	12.5kA	40/5A~3200/5A		15VA	1.0	FS5,10	22.5VA (B-0.9)	0.6 1.2	-	25VA 40VA	1.0 1.0	- -
	25kA	50/5A~3200/5A	Protection	10VA	5P10	20	12.5VA (B-0.5)	T-100	-	5VA 10VA	1P 1P	n>20 n>15
	40kA	100/5A~3200/5A		15VA	5P10	20	25VA (B-1)	T-200	-	15VA 40VA	1P 1P	n>10 n>5
2-core Single Ratio CT	8kA	20/5-5A~3200/5-5A	Metering (1st core)	10VA	0.5 1.0	FS5,10	-	-	-	5VA 10VA 15VA	0.5 1.0 0.5 1.0 1.0	-
	12.5kA	40/5-5A~3200/5-5A		15VA	1.0		-	-	-	-	-	-
	25kA	50/5-5A~3200/5-5A	Protection (2nd core)	10VA	5P10	20	-	-	-	5VA 10VA 15VA	1P 1P 1P	n>20 n>15 n>10
	40kA	100/5-5A~3200/5-5A		15VA	5P10	10	-	-	-	-	-	

● Dimension

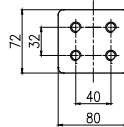
* Primary Terminal



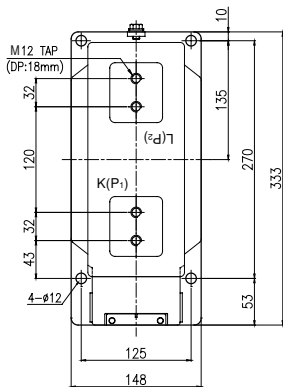
Rated primary current ≤ 400A
Rated short-time thermal current ≤ 25(100)kA/1s
Material : Brass (C3604)



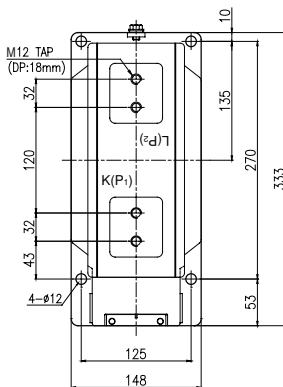
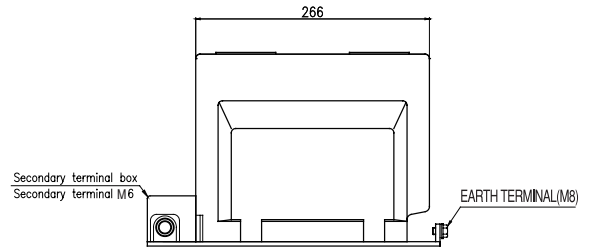
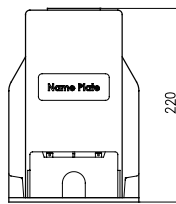
Rated primary current ≤ 1250A
Rated short-time thermal current ≤ 40(100)kA/1s
Material : Copper (C1100)



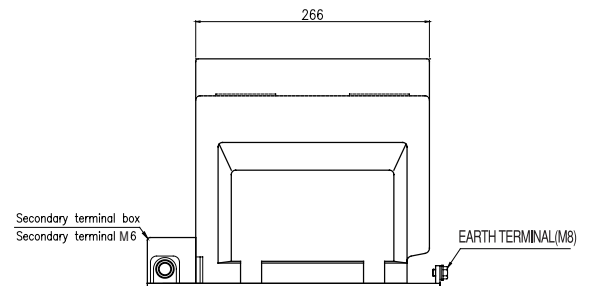
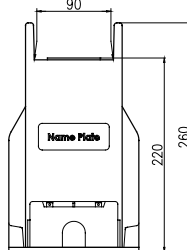
Rated primary current ≤ 3200A
Rated short-time thermal current ≤ 70(175)kA/1s
Material : Copper (C1100)



General Type



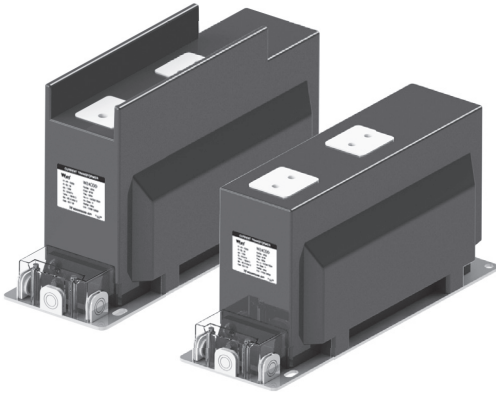
Rib Type



DIN - WINDING TYPE (권선형) CURRENT TRANSFORMER

3.6~12kV (75~3200A / 12.5~40kA)

W12CDC(R) / W12CDC



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 12kV

W12CDC(R)/W12CDC 변류기는 최고 회로전압 12kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(3.6kV, 7.2kV) 제품에 대해서는 동일한 치수 (DIMENSION)를 가진다. 본 제품은 국제규격 DIN42600(Part 8)에 따라 설계된 Support-type 형태의 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core 및 2 core, 3 core의 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능합니다.

The W12CDC(R)/W12CDC current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 12kV-class insulation performance, and the less voltage(3.6kV, 7.2kV) product has the same dimensions. This product has a miniature light-weight compact structure of support type designed according to the international standard DIN42600(Part 8) to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core, 2 cores and 3 cores.

● Feature

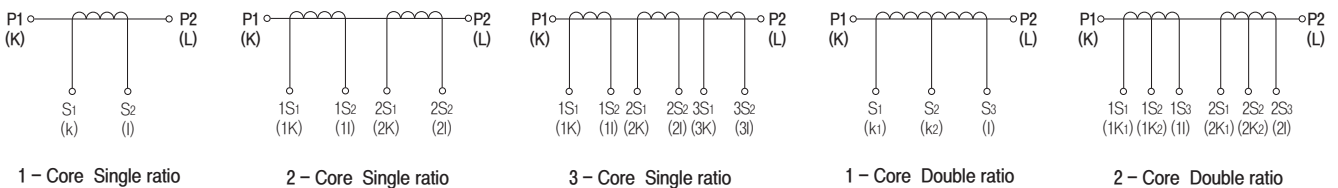
규격 Standard	IEC - IEEE - CSA - DIN etc.
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W12CDC(R) / W12CDC		
Highest voltage for equipment (Um)	3.6kV	7.2kV	12kV
Rated power-frequency withstand voltage (60sec)	10kV	20kV	28kV
Rated lighting impulse withstand voltage (1.2/50μs/full wave)	40kV	60kV	75kV
Rated frequency	50 / 60Hz		
Rated primary current(Ipr)	75 to 3200A		
Rated secondary current(Isr)	5 or 1A		
Rated continuous thermal current	120%		
Rated short-time thermal current Ith (1sec)	12.5~40kA		
Rated dynamic current Idyn (2.5×Ith)	100kA		
Insulation class (according to 60085)	E		
Standard	According to customer requirements		
Weight (approx.)	40kg		

※ "R" : Rib type (날개형)

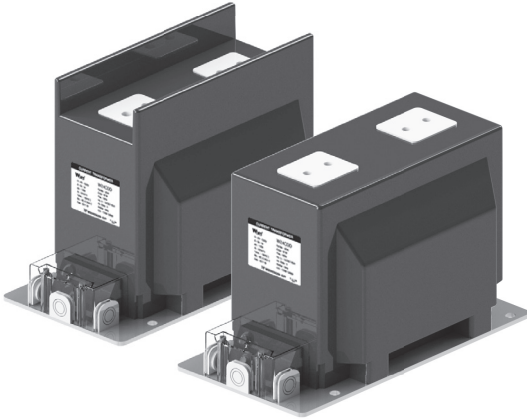
● Connection Diagram



DIN - WINDING TYPE (권선형) CURRENT TRANSFORMER

3.6~12kV (75~3200A / 12.5~40kA)

W12CDD(R) / W12CDD



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 12kV

W12CDD(R)/W12CDD 변류기는 최고 회로전압 12kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(3.6kV, 7.2kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 국제규격 DIN42600(Part 8)에 따라 설계된 Support-type 형태의 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core 및 2 core, 3 core의 단일 비 또는 다중비 형태의 제품으로 설계 및 제작이 가능합니다.

The W12CDD(R)/W12CDD current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 12kV-class insulation performance, and the less voltage(3.6kV, 7.2kV) product has the same dimensions. This product has a miniature light-weight compact structure of support type designed according to the international standard DIN42600(Part 8) to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core, 2 cores and 3 cores.

● Feature

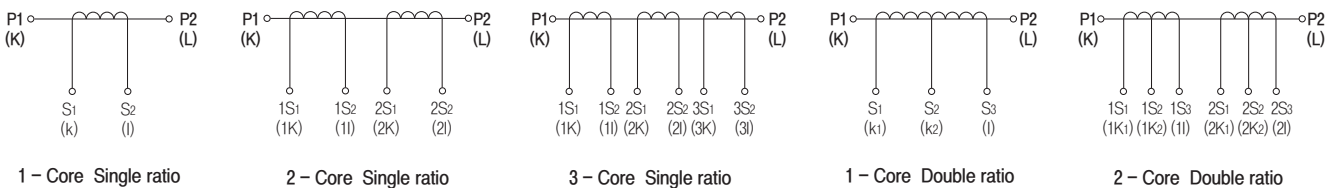
규격 Standard	IEC - IEEE - CSA - DIN etc.
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/ or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W12CDD(R) / W12CDD		
Highest voltage for equipment (Um)	3.6kV	7.2kV	12kV
Rated power-frequency withstand voltage (60sec)	10kV	20kV	28kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave	40kV	60kV	75kV
Rated frequency	50 / 60Hz		
Rated primary current(Ipr)	75 to 3200A		
Rated secondary current(Isr)	5 or 1A		
Rated continuous thermal current	120%		
Rated short-time thermal current Ith (1sec)	12.5~40kA		
Rated dynamic current Idyn (2.5×Ith)	100kA		
Insulation class (according to 60085)	E		
Standard	According to customer requirements		
Weight (approx.)	40kg		

※ "R" : Rib type (날개형)

● Connection Diagram



DIN - WINDING TYPE (권선형) CURRENT TRANSFORMER

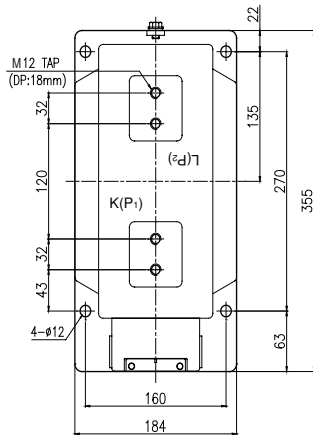
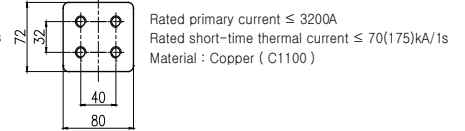
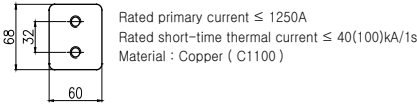
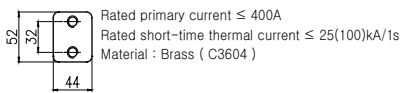
3.6~12kV (75~3200A / 12.5~40kA)

● Specification

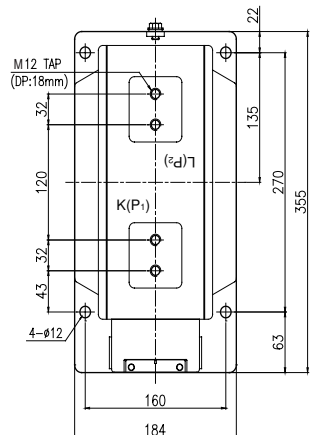
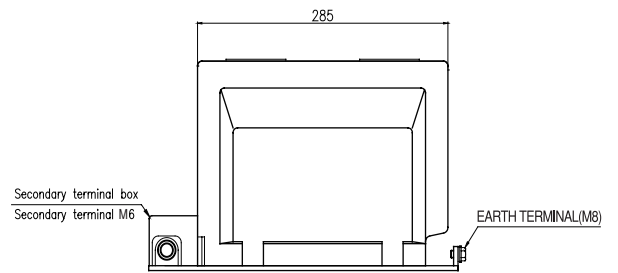
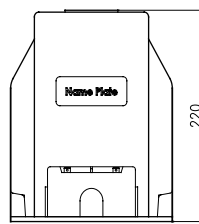
ITEM	Rated short time current	Current Ratio	Service	IEC 61869-2			IEEE C57.13			KSC 1706		
				Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor
Single Ratio CT	12.5kA	40/5A~3200/5A	Metering	15VA	0.5 1.0	FS5,10	12.5VA (B-0.5)	0.6 1.2	-	15VA	0.5 1.0	-
				30VA	1.0	FS5,10	22.5VA (B-0.9)	0.6 1.2	-	25VA	0.5 1.0	-
	40kA	100/5A~3200/5A	Protection	15VA	5P10	30	45VA (B-1.8)	1.2	-	40VA	1.0	-
2-core Single Ratio CT	12.5kA	40/5-5A~3200/5-5A	Metering (1st core)	15VA	0.5 1.0	-	-	-	-	15VA	0.5 1.0	-
				25VA	0.5 1.0	-	-	-	-	25VA	0.5 1.0	-
	40VA	1.0	-	-	-	-	40VA	1.0	-			
2-core Single Ratio CT	25kA	75/5-5A~3200/5-5A	Protection (2nd core)	15VA	5P10	30	-	-	-	15VA	1P	n)30
				30VA	5P10	20	-	-	-	25VA	1P	n)20
	40kA	100/5-5A~3200/5-5A	Protection (2nd core)	30VA	5P10	20	-	-	-	40VA	1P	n)20

● Dimension

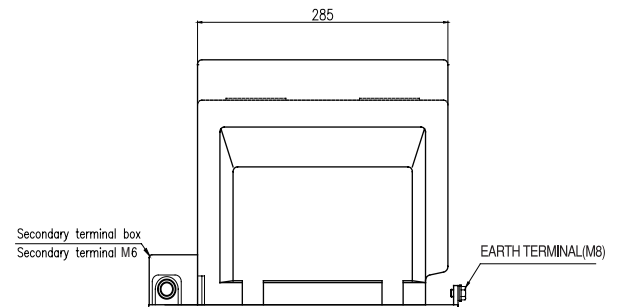
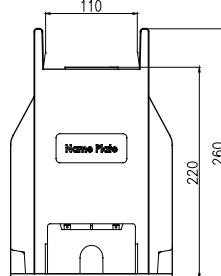
* Primary Terminal



General Type



Rib Type



HV / CT
고압변류기

HV / VIT : MOF
고압변압기

LV / CT
저압변류기

LV / VIT
저압변압기

RELA Y
보호계전기

ELD
누전검보기

GF R
지락계전기

ZCT
영장변류기

METE R
지시전기계기

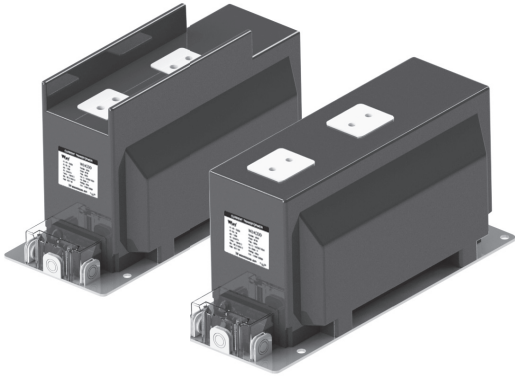
SPD
서지보호기

SHUNT
센트

DIN - WINDING TYPE (권선형) CURRENT TRANSFORMER

3.6~12kV (75~3200A / 12.5~40kA)

W12CDE(R) / W12CDE



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 12kV

W12CDE(R)/W12CDE 변류기는 최고 회로전압 12kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(3.6kV, 7.2kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 국제규격 DIN42600(Part 8)에 따라 설계된 Support-type 형태의 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core 및 2 core, 3 core의 단일 비 또는 다중비 형태의 제품으로 설계 및 제작이 가능합니다.

The W12CDE(R)/W12CDE current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 12kV-class insulation performance, and the less voltage(3.6kV, 7.2kV) product has the same dimensions. This product has a miniature light-weight compact structure of support type designed according to the international standard DIN42600(Part 8) to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core, 2 cores and 3 cores.

● Feature

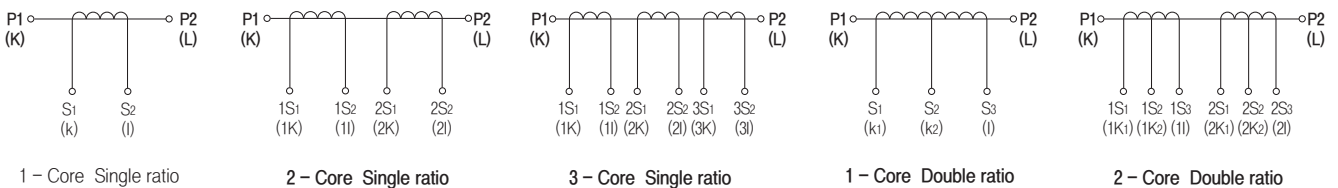
규격 Standard	IEC - IEEE - CSA - DIN etc.
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/ or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W12CDE(R) / W12CDE		
Highest voltage for equipment (Um)	3.6kV	7.2kV	12kV
Rated power-frequency withstand voltage (60sec)	10kV	20kV	28kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave	40kV	60kV	75kV
Rated frequency	50 / 60Hz		
Rated primary current(Ipr)	75 to 3200A		
Rated secondary current(Isr)	5 or 1A		
Rated continuous thermal current	120%		
Rated short-time thermal current Ith (1sec)	12.5~40kA		
Rated dynamic current Idyn (2.5×Ith)	100kA		
Insulation class (according to 60085)	E		
Standard	According to customer requirements		
Weight (approx.)	40kg		

※ "R" : Rib type (날개형)

● Connection Diagram



DIN - WINDING TYPE (권선형) CURRENT TRANSFORMER



고압계기용변성기

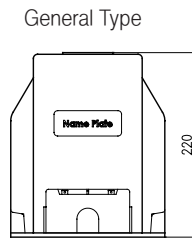
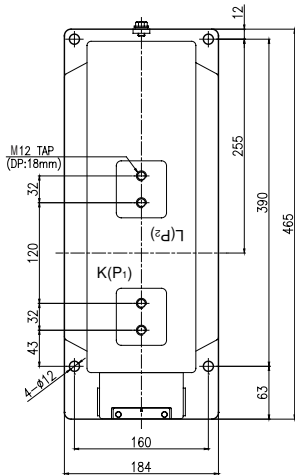
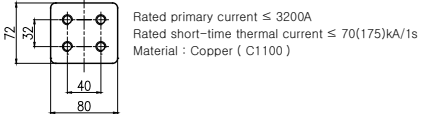
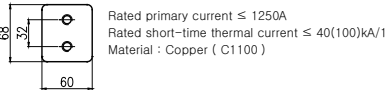
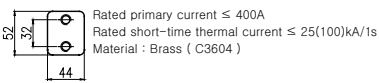
3.6~12kV (75~3200A / 12.5~40kA)

● Specification

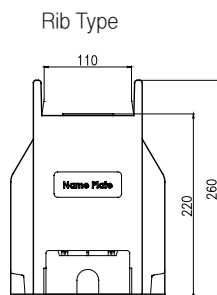
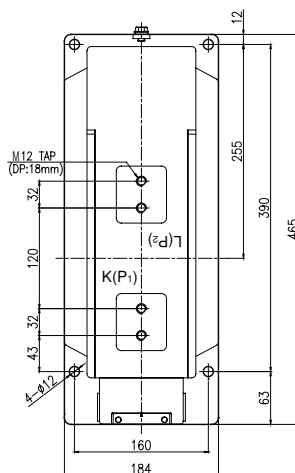
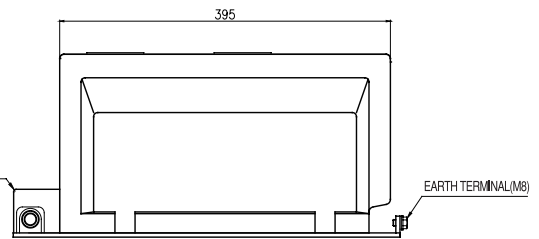
ITEM	Rated short time current	Current Ratio	Service	IEC 61869-2			IEEE C57.13			KSC 1706		
				Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor
Single Ratio CT	12.5kA	30/5A~3200/5A	Metering	15VA	0.5 1.0	FS5,10	12.5VA (B-0.5)	0.6 1.2	-	15VA	0.5 1.0	-
				30VA	1.0	FS5,10	22.5VA (B-0.9)	0.6 1.2	-	25VA	0.5 1.0	-
		45VA (B-1.8)	1.2	-	40VA	1.0	-					
	25kA	50/5A~3200/5A	Protection	15VA	5P10	30	25VA (B-1)	T-100	-	15VA	1P	n>40
				30VA	5P20	20	50VA (B-2)	T-200	-	25VA	1P	n>30
				40VA	1P	n>20						
2-core Single Ratio CT	12.5kA	30/5-5A~3200/5-5A	Metering (1st core)	15VA	0.5 1.0	FS5,10	-	-	-	15VA	0.5 1.0	-
				30VA	1.0	FS5,10	-	-	-	30VA	1.0	-
		15VA	5P10	20	-	-	-	15VA	1P	n>30		
	25kA	50/5-5A~3200/5-5A	Protection (2nd core)	30VA	5P10	10	-	-	-	30VA	1P	n>10
				15VA	5P10	20	-	-	-	15VA	1P	n>30
				30VA	5P10	10	-	-	-	30VA	1P	n>10

● Dimension

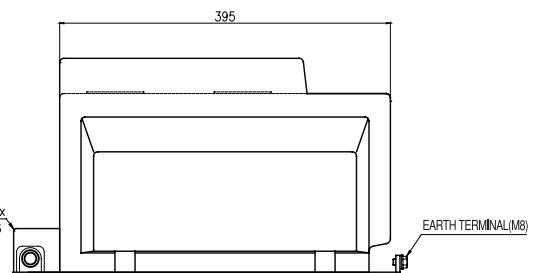
* Primary Terminal



Secondary terminal box
Secondary terminal M6



Secondary terminal box
Secondary terminal M6



HV/CT 고압변류기

HV/VT:MOF 고압변압기

LV/CT 저압변류기

LV/VT 저압변압기

RELA 보호계전기

ELD 누전경보기

GFR 지락계전기

ZCT 영용변류기

METER 지시전계기

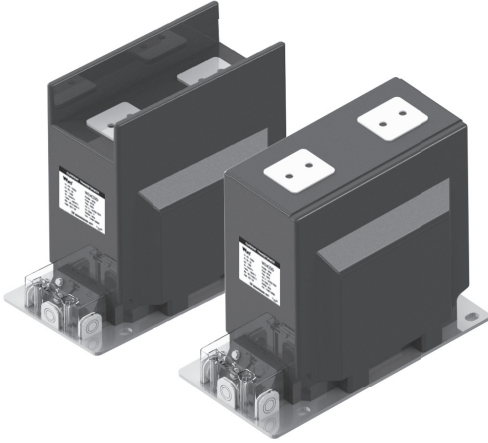
SPD 서지보호기

SHUNT 셉트

DIN - WINDING TYPE (권선형) CURRENT TRANSFORMER

17.5~24kV (20~3200A / 75In~40kA)

W24CDA(R) / W24CDA



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 24kV

W24CDA(R)/W24CDA 변류기는 최고 회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 국제규격 DIN42600(Part 8)에 따라 설계된 Support-type 형태의 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core 및 2core 의 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능합니다.

The W24CDA(R)/W24CDA current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and the less voltage(17.5kV) product has the same dimensions. This product has a miniature light-weight compact structure of support type designed according to the international standard DIN42600(Part 8) to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

● Feature

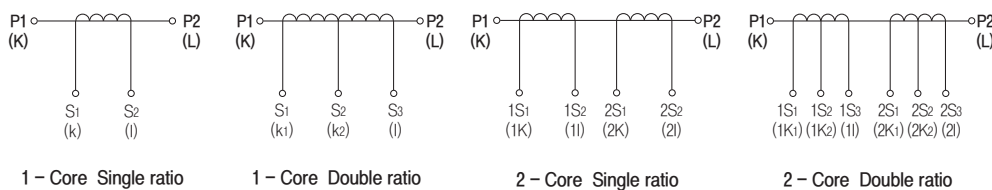
규격 Standard	IEC - IEEE - CSA - DIN etc.
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL	
	W24CDA(R) / W24CDA	
Highest voltage for equipment (Um)	17.5kV	24kV
Rated power-frequency withstand voltage (60sec)	38kV	50kV
Rated lighting impulse withstand voltage (1.2/50μs/full wave)	95kV	125kV
Rated frequency	50 / 60Hz	
Rated primary current(Ipr)	20 to 3200A	
Rated secondary current(Isr)	5 or 1A	
Rated continuous thermal current	120%	
Rated short-time thermal current Ith (1sec)	75In~40kA	
Rated dynamic current Idyn (2.5×Ith)	100kA	
Insulation class (according to 60085)	E	
Standard	According to customer requirements	
Weight (approx.)	30kg	

*"R" : Rib type (날개형)

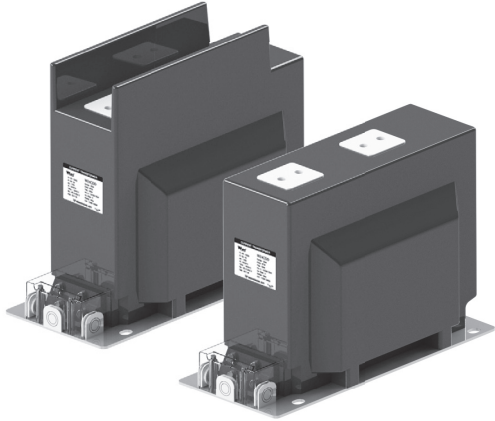
● Connection Diagram



DIN - WINDING TYPE (권선형) CURRENT TRANSFORMER

17.5~24kV (40~3200A / 12.5~40kA)

W24CDB(R) / W24CDB



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 24kV

W24CDB(R)/W24CDB 변류기는 최고 회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 국제규격 DIN42600(Part 8)에 따라 설계된 Support-type 형태의 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core 및 2core 의 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능합니다.

The W24CDB(R)/W24CDB current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and the less voltage(17.5kV) product has the same dimensions. This product has a miniature light-weight compact structure of support type designed according to the international standard DIN42600(Part 8) to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

● Feature

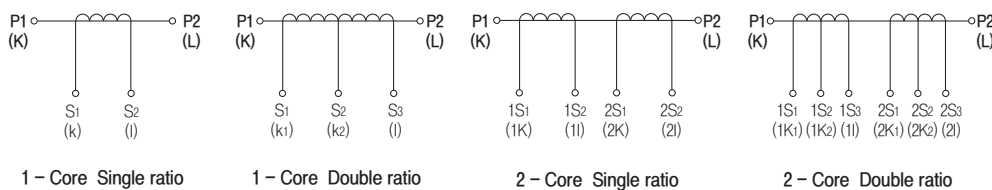
규격 Standard	IEC - IEEE - CSA - DIN etc
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL	
	W24CDB(R)	W24CDB
Highest voltage for equipment (Um)	17.5kV	24kV
Rated power-frequency withstand voltage (60sec)	38kV	50kV
Rated lighting impulse withstand voltage (1.2/50μs/full wave)	95kV	125kV
Rated frequency	50 / 60Hz	
Rated primary current(Ipr)	40 to 3200A	
Rated secondary current(Isr)	5 or 1A	
Rated continuous thermal current	120%	
Rated short-time thermal current Ith (1sec)	12.5~40kA	
Rated dynamic current Idyn (2.5×Ith)	100kA	
Insulation class (according to 60085)	E	
Standard	According to customer requirements	
Weight (approx.)	30kg	

※ "R" : Rib type (날개형)

● Connection Diagram



DIN - WINDING TYPE (권선형) CURRENT TRANSFORMER

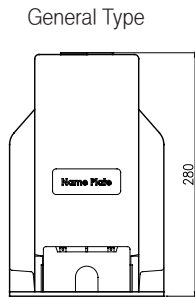
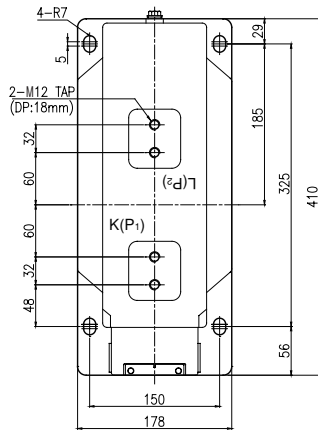
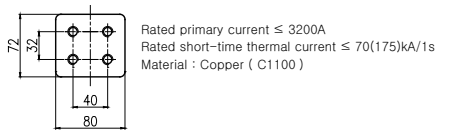
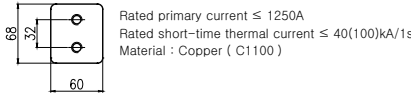
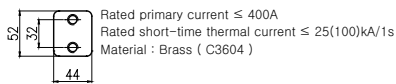
17.5~24kV (40~3200A / 12.5~40kA)

● Specification

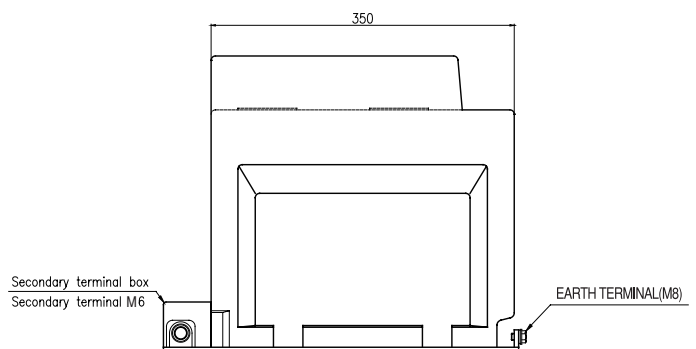
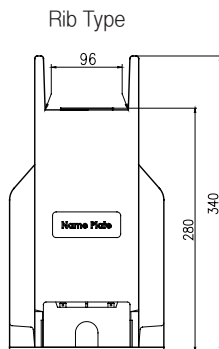
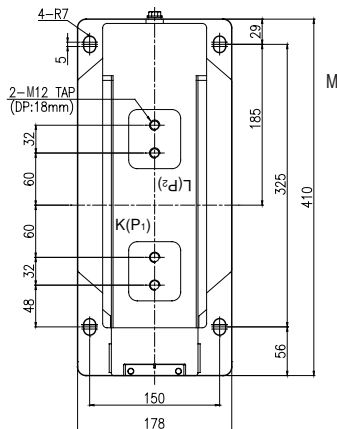
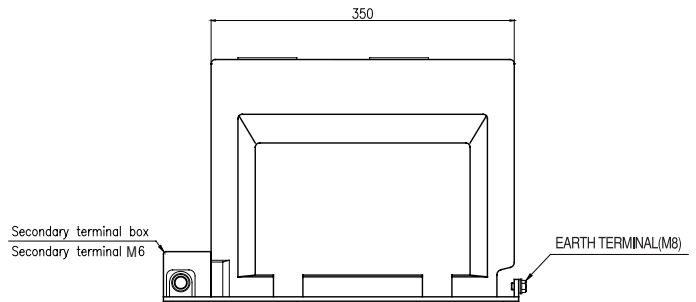
ITEM	Rated short time current	Current Ratio	Service	IEC 61869-2			IEEE C57.13			KSC 1706		
				Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor
Single Ratio CT	12.5kA	30/5A~3200/5A	Metering	15VA	0.5 1.0	FS5,10	12.5VA (B-0.5)	0.6 1.2	-	15VA	0.5 1.0	-
				30VA	1.0	FS5,10	22.5VA (B-0.9)	0.6 1.2	-	25VA	0.5 1.0	-
		15VA	5P10	30	45VA (B-1.8)	1.2	-	40VA	1.0	-		
	25kA	50/5A~3200/5A	Protection	15VA	5P10	30	25VA (B-1)	T-100	-	15VA	1P	n)40
				30VA	5P10	20	50VA (B-2)	T-200	-	25VA	1P	n)30
				30VA	5P10	20	60VA	1P	n)20			
2-core Single Ratio CT	12.5kA	100-50/5A~3200/5-5A	Metering (1st core)	15VA	0.5 1.0	FS5,10	12.5VA (B-0.5)	0.6 1.2	-	15VA	0.5 1.0	-
				30VA	1.0	FS5,10	22.5VA (B-0.9)	0.6 1.2	-	25VA	0.5 1.0	-
		15VA	5P10	20	25VA (B-1)	T-100	-	40VA	1P	n)30		
	25kA	100/5-5A~3200/5-5A	Protection (2nd core)	30VA	5P10	10	40VA	1P	n)20			
				30VA	5P10	10	60VA	1P	n)20			
				30VA	5P10	10	60VA	1P	n)20			

● Dimension

* Primary Terminal



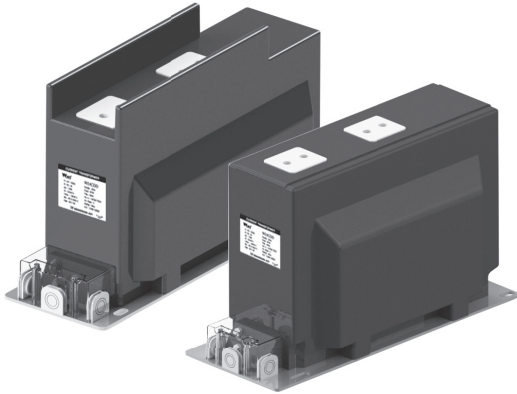
EARTH TERMINAL(M8)



DIN - WINDING TYPE (권선형) CURRENT TRANSFORMER

17.5~24kV (40~3200A / 12.5~40kA)

W24CDC(R) / W24CDC



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 24kV

W24CDC(R)/W24CDC 변류기는 최고 회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 국제규격 DIN42600(Part 8)에 따라 설계된 Support-type 형태의 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core 및 2core 의 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능합니다.

The W24CDC(R)/W24CDC current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and the less voltage(17.5kV) product has the same dimensions. This product has a miniature light-weight compact structure of support type designed according to the international standard DIN42600(Part 8) to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

● Feature

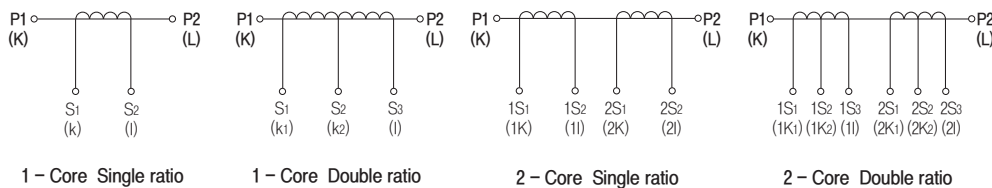
규격 Standard	IEC - IEEE - CSA - DIN etc
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL	
	W24CDC(R) / W24CDC	
Highest voltage for equipment (Um)	17.5kV	24kV
Rated power-frequency withstand voltage (60sec)	38kV	50kV
Rated lighting impulse withstand voltage (1.2/50μs/full wave)	95kV	125kV
Rated frequency	50 / 60Hz	
Rated primary current(Ipr)	40 to 3200A	
Rated secondary current(Isr)	5 or 1A	
Rated continuous thermal current	120%	
Rated short-time thermal current Ith (1sec)	12.5~40kA	
Rated dynamic current Idyn (2.5×Ith)	100kA	
Insulation class (according to 60085)	E	
Standard	According to customer requirements	
Weight (approx.)	30kg	

※ "R" : Rib type (날개형)

● Connection Diagram



DIN - WINDING TYPE (권선형) CURRENT TRANSFORMER



고압계기용변성기

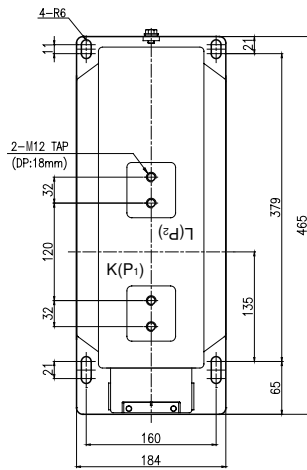
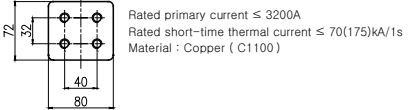
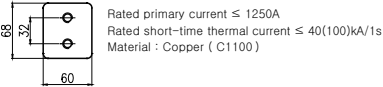
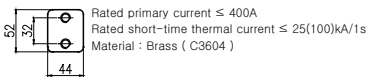
17.5~24kV (40~3200A / 12.5~40kA)

● Specification

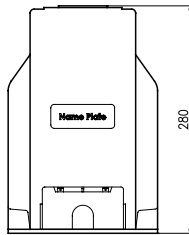
ITEM	Rated short time current	Current Ratio	Service	IEC 61869-2			IEEE C57.13			KSC 1706		
				Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor
Single Ratio CT	12.5kA	30/5A~3200/5A	Metering	15VA	0.5 1.0	FS5,10	12.5VA (B-0.5)	0.6 1.2	-	15VA	0.5 1.0	-
				30VA	1.0	FS5,10	22.5VA (B-0.9)	0.6 1.2	-	25VA	0.5 1.0	-
				30VA	1.0	FS5,10	45VA (B-1.8)	14.2	-	40VA	1.0	-
	40kA	100/5A~3200/5A	Protection	15VA	5P10	30	25VA (B-1)	T-100	-	15VA	1P	n>40
				30VA	5P10	20	50VA (B-2)	T-200	-	25VA	1P	n>30
				30VA	5P10	20	50VA (B-2)	T-200	-	40VA	1P	n>20
2-core Single Ratio CT	12.5kA	100-50/5A~3200/5-5A	Metering (1st core)	15VA	0.5 1.0	FS5,10	12.5VA (B-0.5)	0.6 1.2	-	15VA	0.5 1.0	-
				30VA	1.0	FS5,10	22.5VA (B-0.9)	0.6 1.2	-	25VA	0.5 1.0	-
				30VA	1.0	FS5,10	40VA	1.0	-	40VA	1.0	-
	25kA	100/5-5A~3200/5-5A	Protection (2nd core)	15VA	5P10	20	25VA (B-1)	T-100	-	15VA	1P	n>30
				30VA	5P10	10	25VA (B-1)	T-100	-	25VA	1P	n>20
				30VA	5P10	10	25VA (B-1)	T-100	-	40VA	1P	n>20

● Dimension

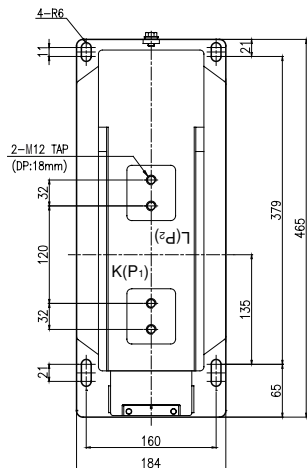
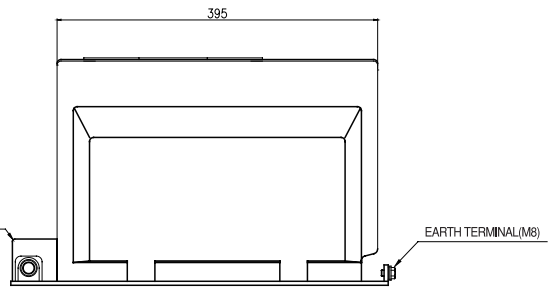
* Primary Terminal



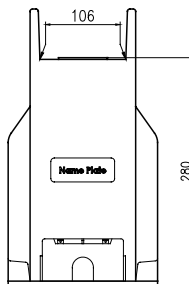
General Type



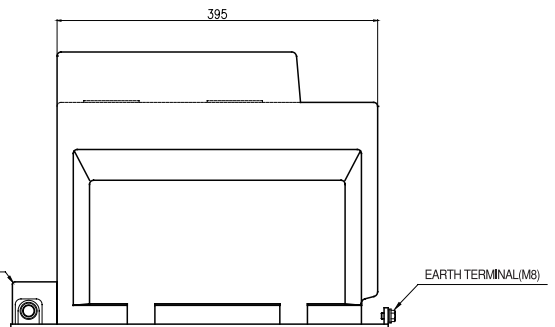
Secondary terminal box
Secondary terminal M6



Rib Type



Secondary terminal box
Secondary terminal M6



HV/CT 고압변류기

HV/VT-MOF 고압변압기

LV/CT 저압변류기

LV/VT 저압변압기

RELA 보호계전기

ELD 누전경보기

GFBR 지락계전기

ZCT 영압변류기

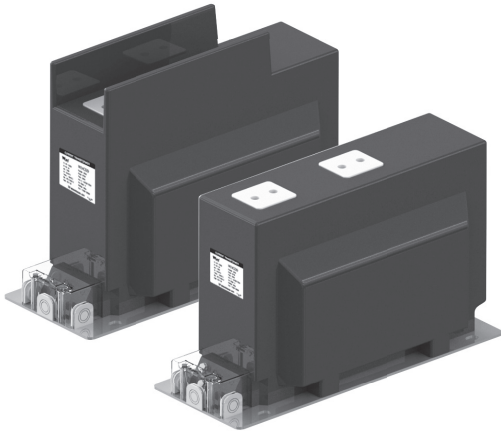
METER 지시전기계기

SPD 서지보호기

SHUNT 셉트

17.5~24kV (40~3200A / 12.5~40kA)

W24CDD(R) / W24CDD



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 24kV

W24CDD(R)/W24CDD 변류기는 최고 회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 국제규격 DIN42600(Part 8)에 따라 설계된 Support-type 형태의 소형경량의 Compact한 변류기 구조를 가짐으로서, 설치공간이 협소한 표준배전반에 매우 적합한 제품이다. 또한 1core 및 2core 의 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능합니다.

The W24CDD(R)/W24CDD current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and the less voltage(17.5kV) product has the same dimensions. This product has a miniature light-weight compact structure of support type designed according to the international standard DIN42600(Part 8) to be very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

● Feature

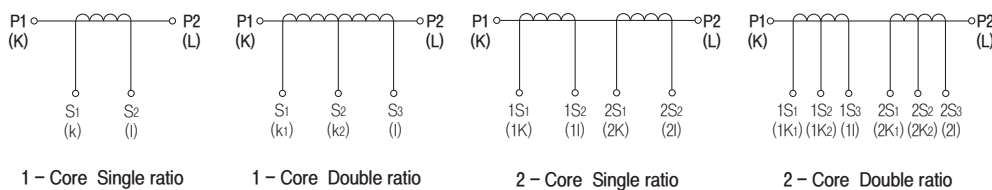
규격 Standard	IEC - IEEE - CSA - DIN etc
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL	
	W24CDD(R) / W24CDD	
Highest voltage for equipment (Um)	17.5kV	24kV
Rated power-frequency withstand voltage (60sec)	38kV	50kV
Rated lighting impulse withstand voltage (1.2/50μs/full wave)	95kV	125kV
Rated frequency	50 / 60Hz	
Rated primary current(Ipr)	40 to 3200A	
Rated secondary current(Isr)	5 or 1A	
Rated continuous thermal current	120%	
Rated short-time thermal current Ith (1sec)	12.5~40kA	
Rated dynamic current Idyn (2.5×Ith)	100kA	
Insulation class (according to 60085)	E	
Standard	According to customer requirements	
Weight (approx.)	30kg	

※ "R" : Rib type (날개형)

● Connection Diagram



DIN - WINDING TYPE (권선형) CURRENT TRANSFORMER

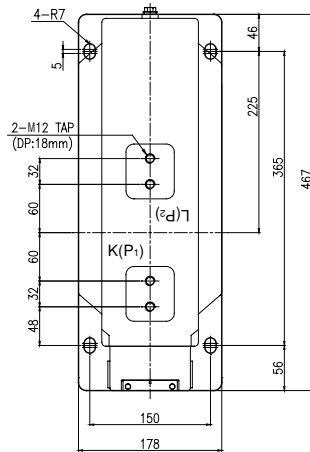
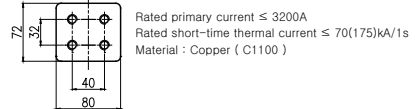
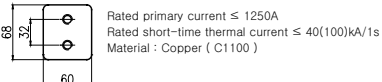
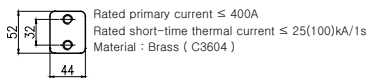
17.5~24kV (40~3200A / 12.5~40kA)

● Specification

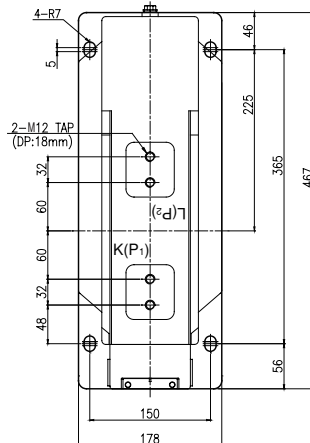
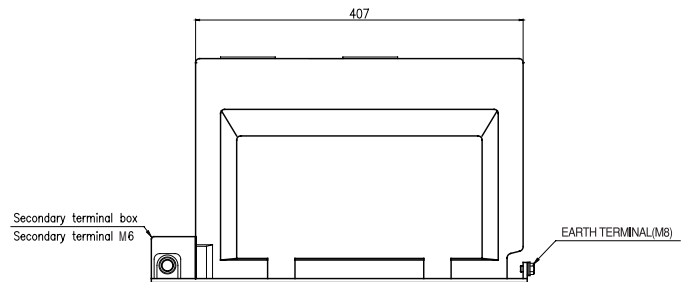
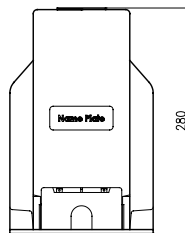
ITEM	Rated short time current	Current Ratio	Service	IEC 61869-2			IEEE C57.13			KSC 1706		
				Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor
Single Ratio CT	12.5kA	30/5A~3200/5A	Metering	15VA	0.5 1.0	FS5,10	12.5VA (B-0.5)	0.6 1.2	-	15VA	0.5 1.0	-
				30VA	1.0	FS5,10	22.5VA (B-0.9)	0.6 1.2	-	25VA	0.5 1.0	-
	25kA	50/5A~3200/5A	Protection	15VA	5P10	30	45VA (B-1.8)	14.2	-	40VA	1.0	-
				30VA	5P10	20	25VA (B-1)	T-100	-	25VA	1P	n)40
	40kA	100/5A~3200/5A	Protection	15VA	5P10	20	50VA (B-2)	T-200	-	40VA	1P	n)20
				30VA	5P10	10	25VA (B-1)	T-100	-	25VA	1P	n)30
2-core Single Ratio CT	12.5kA	100-50/5A~3200/5-5A	Metering (1st core)	15VA	0.5 1.0	FS5,10	12.5VA (B-0.5)	0.6 1.2	-	15VA	0.5 1.0	-
				30VA	1.0	FS5,10	22.5VA (B-0.9)	0.6 1.2	-	25VA	0.5 1.0	-
	25kA	100/5-5A~3200/5-5A	Protection (2nd core)	15VA	5P10	20	25VA (B-1)	T-100	-	15VA	1P	n)30
				30VA	5P10	10	25VA (B-1)	T-100	-	25VA	1P	n)20
	40kA	150/5-5A~3200/5-5A	Protection (2nd core)	15VA	5P10	20	25VA (B-1)	T-100	-	40VA	1P	n)20
				30VA	5P10	10	25VA (B-1)	T-100	-	40VA	1P	n)20

● Dimension

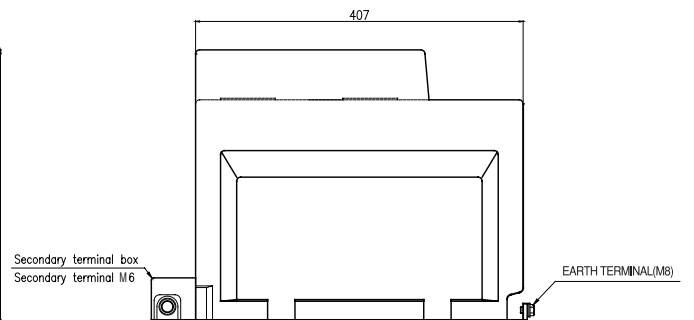
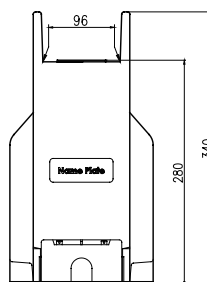
* Primary Terminal



General Type



Rib Type



POST BUSBAR TYPE (부스바 관통형) CURRENT TRANSFORMER

3.6~7.2kV (50~1200A / 40kA)

W07CPA



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 7.2kV

W07CPA 변류기는 최고 회로전압 7.2kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(3.6kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 설치공간이 협소한 고압배전반에 매우 적합한 제품이다. 또한 1core 및 2 core의 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능합니다.

The W07CPA current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 7.2kV-class insulation performance, and the less voltage(3.6kV) product has the same dimensions. This product is very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

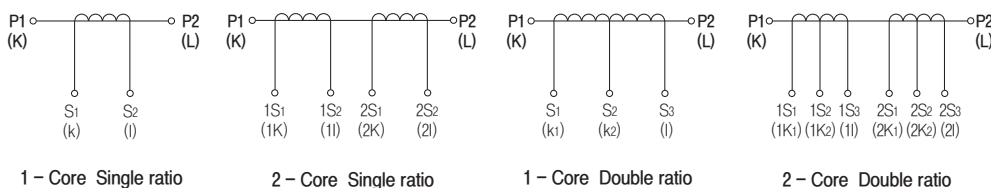
● Feature

규격 Standard	IEC - IEEE - KS
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL	
	W07CPA	
Highest voltage for equipment (Um)	3.6kV	7.2kV
Rated power-frequency withstand voltage (60sec)	10kV	20kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave	40kV	60kV
Rated frequency	50 / 60Hz	
Rated primary current(Ipr)	50 to 1200A	
Rated secondary current(Isr)	5 or 1A	
Rated continuous thermal current	120%	
Rated short-time thermal current Ith (1sec)	40kA	
Rated dynamic current Idyn (2.5×Ith)	100kA	
Insulation class (according to 60085)	E	
Standard	According to customer requirements	
Weight (approx.)	20kg	

● Connection Diagram



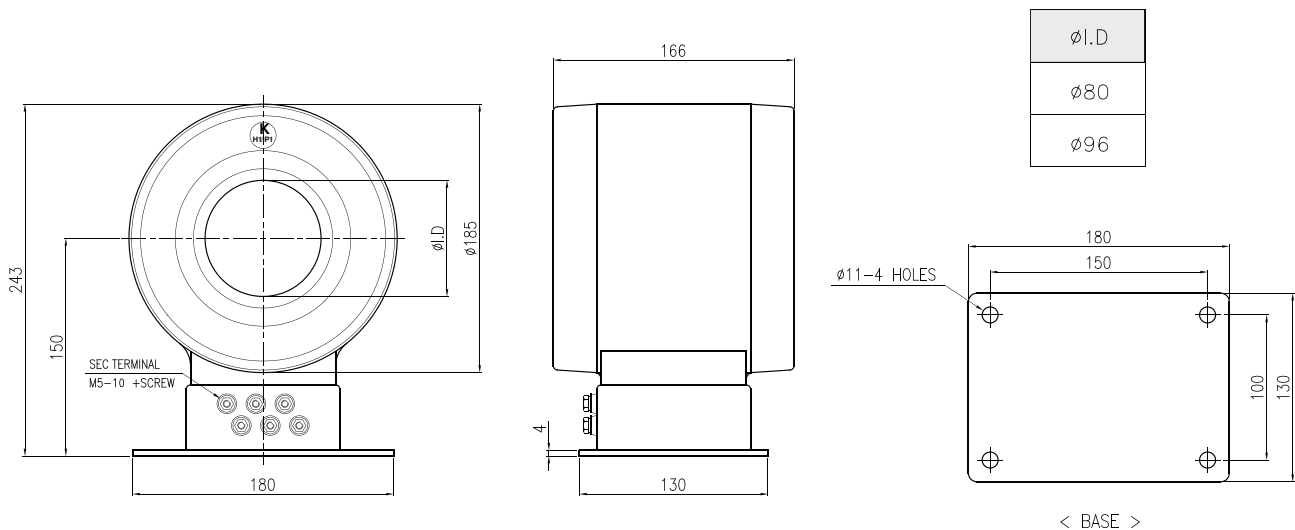
POST BUSBAR TYPE (부스바 관통형) CURRENT TRANSFORMER

3.6~7.2kV (50~1200A / 40kA)

● Specification

ITEM	Rated short time current	Service	Current Ratio	IEC 61869-2			IEEE C57.13			KSC 1706		
				Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor
07C-PA	40kA	Metering	150/5A	15VA	3.0	-	12.5VA(B-0.5)	2.4	-	15VA	3.0	-
			200/5A	15VA	1.0	-	12.5VA(B-0.5)	1.2	-	15VA	1.0	-
			300/5A	30VA	1.0	-	22.5VA(B-0.9)	1.2	-	30VA	1.0	-
			400/5A~1200/5A	40VA	1.0	-	45VA(B-1.8)	1.2	-	40VA	1.0	-
		Protection	50/5A~75/5A	5VA	10P	5	2.5VA	C-10	-	-	-	-
			100/5A~150/5A	15VA	10P	5	5VA	C-20	-	15VA	3P	n)5
			200/5A	15VA	5P,10P	10	7.5VA	C-30	-	15VA	1P	n)10
			250/5A~300/5A	15VA	5P,10P	20	12.5VA	C-50	-	15VA	1P	n)20
			400/5A~600/5A	30VA	5P,10P	10	25VA	C-100	-	40VA	1P	n)10
			750/5A~1000/5A	30VA	5P,10P	20	25VA	C-100	-	40VA	1P	n)20
1200/5A	30VA	5P,10P	20	50VA	C-200	-	40VA	1P	n)20			

● Dimension



HV / C T
고압변류기

HV / V T : M O F
고압변압기

LV / C T
저압변류기

LV / V T
저압변압기

R E L A Y
보호계전기

E L D
누전경보기

G F R
지락계전기

Z C T
영압변류기

M E T E R
지시전계기

S P D
서지보호기

S H U N T
셔트

POST BUSBAR TYPE (부스바 관통형) CURRENT TRANSFORMER

7.2~12kV (400~4000A / 100In)

W12CPA



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 12kV

W12CPA 변류기는 최고 회로전압 12kV급 절연성능으로 설계되어진 옥내용 에폭시물드 제품으로 그 이하 전압(7.2kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 설치공간이 협소한 고압배전반에 매우 적합한 제품이다. 또한 1core 및 2 core의 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능합니다.

The W12CPA current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 12kV-class insulation performance, and the less voltage(7.2kV) product has the same dimensions. This product is very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

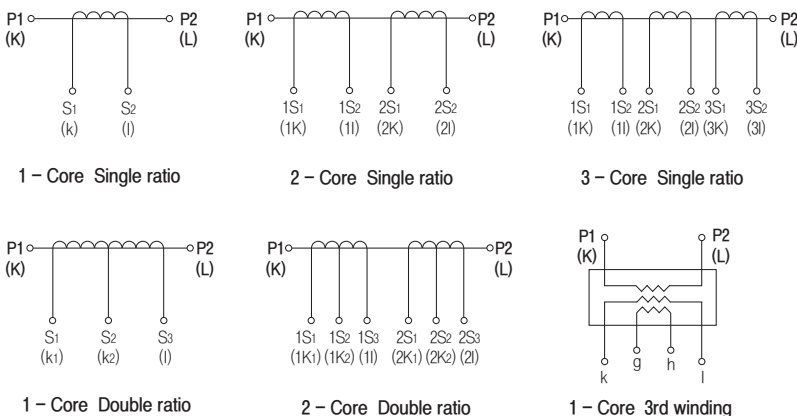
● Feature

규격 Standard	IEC - IEEE - KS
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL	
	W12CPA	
Highest voltage for equipment (Um)	7.2kV	12kV
Rated power-frequency withstand voltage (60sec)	20kV	28kV
Rated lighting impulse withstand voltage (1.2/50μs)full wave	60kV	75kV
Rated frequency	50 / 60Hz	
Rated primary current(Ipr)	400 to 4000A	
Rated secondary current(Isr)	5 or 1A	
Rated continuous thermal current	120%	
Rated short-time thermal current Ith (1sec)	100In	
Rated dynamic current Idyn (2.5×Ith)	100kA	
Insulation class (according to 60085)	E	
Standard	According to customer requirements	
Weight (approx.)	24kg	

● Connection Diagram



POST BUSBAR TYPE (부스바 관통형) CURRENT TRANSFORMER



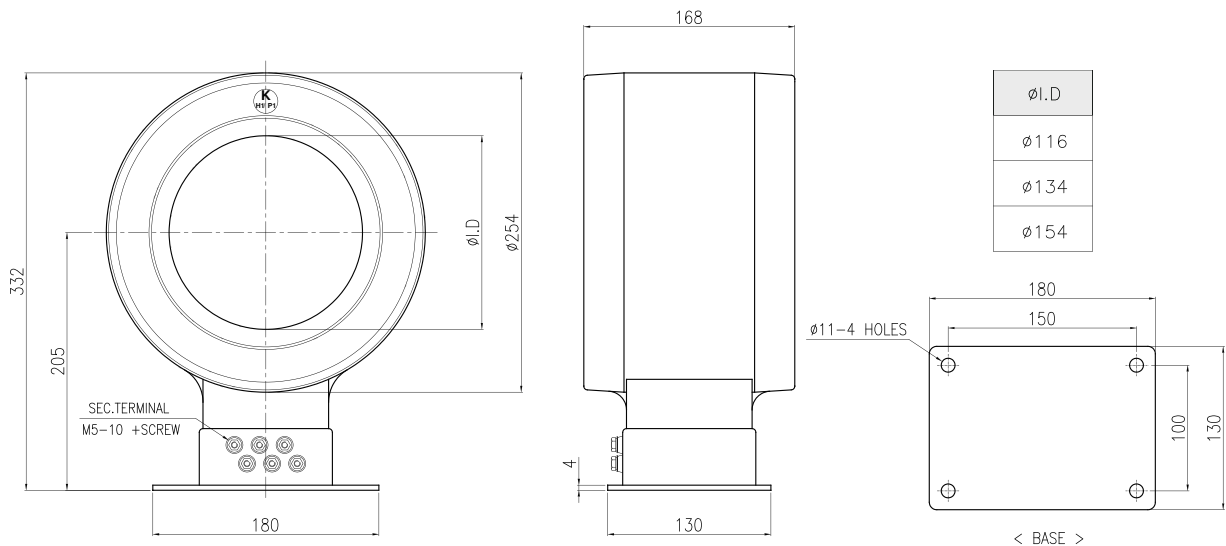
고압계기용변성기

7.2~12kV (400~4000A / 100In)

● Specification

ITEM	Rated short time current	Current Ratio	Service	IEC 61869-2			IEEE C57.13			KSC 1706		
				Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor
12C-PA 1-Core Single Ratio CT	100In	400/5A~1500/5A	Metering	15VA	1.0	FS10	12.5VA (B-0.5)	1.2	-	15VA	1.0	-
		1600/5A~2000/5A		30VA	1.0	FS10	22.5VA (B-0.9)	1.2	-	25VA	0.5,1.0	-
		2500/5A~4000/5A	Protection	15VA	5P10	30	25VA (B-1)	C-100	-	15VA	1P	n)30
	30VA	5P10		20	50VA (B-2)	C-200	-	25VA	1P	n)20		
12C-PA 1-Core Double Ratio CT	100In	700-350/5A~1600-800/5A	Metering	15VA	1.0	FS10	12.5VA (B-0.5)	1.2	-	15VA	1.0	-
		2000-1000/5A		30VA	1.0	FS10	22.5VA (B-0.9)	1.2	-	25VA	1.0	-
		2500-1250/5A~4000-2500/5A	Protection	15VA	5P, 10P	30	25VA (B-1)	C-100	-	15VA	1P	n)30
	30VA	5P, 10P		20	50VA (B-2)	C-200	-	25VA	1P	n)20		
12C-PA 2-Core Single Ratio CT	100In	1000/5-5A~3000/5-5A	Metering (1st core)	15VA	1.0	FS10	12.5VA (B-0.5)	1.2	-	15VA	1.0	-
				30VA	1.0	FS10	22.5VA (B-0.9)	1.2	-	25VA	1.0	-
			Protection (2nd core)	15VA	5P, 10P	20	25VA (B-1)	C-100	-	15VA	1P	n)30
30VA	5P, 10P	20				-	25VA	1P	n)20			
12C-PA 3rd Winding CT	100In	1000/5A 100/5A ~ 4000/5A 100/5A	Protection (3rd Winding)	-	-	-	-	-	15/15VA 40/15VA	1P/5G	n)30 n)20	

● Dimension



HV / CT
고압변류기

HV / V-T : MOF
고압변압기

LV / CT
저압변류기

LV / V-T
저압변압기

RELA Y
보호계전기

ELD
누전경보기

GFR
지락계전기

ZCT
영상변류기

METER
지시전계기

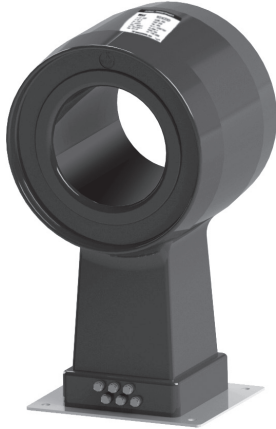
SPD
서지보호기

SHUNT
센트

POST BUSBAR TYPE (부스바 관통형) CURRENT TRANSFORMER

17.5~24kV (1000~4000A / 100In)

W24CPA



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 24kV

W24CPA 변류기는 최고 회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 설치공간이 협소한 고압배전반에 매우 적합한 제품이다. 또한 1core 및 2 core의 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능합니다.

The W24CPA current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and the less voltage(17.5kV) product has the same dimensions. This product is very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core and 2 cores.

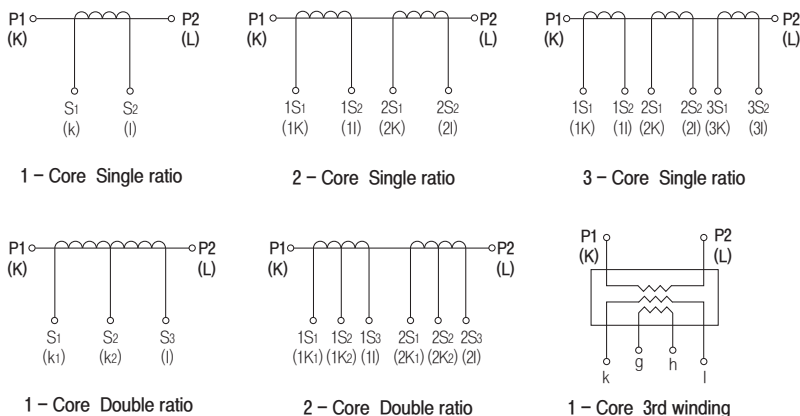
● Feature

규격 Standard	IEC - IEEE - KS
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	자동진공주형방식 Automatic vacuum casting method

● Electrical characteristic

ITEM	MODEL	
	W24CPA	
Highest voltage for equipment (Um)	17.5kV	24kV
Rated power-frequency withstand voltage (60sec)	38kV	50kV
Rated lightning impulse withstand voltage (1.2/50μs)full wave	95kV	125kV
Rated frequency	50 / 60Hz	
Rated primary current(Ipr)	1000 to 4000A	
Rated secondary current(Isr)	5 or 1A	
Rated continuous thermal current	120%	
Rated short-time thermal current Ith (1sec)	100In	
Rated dynamic current Idyn (2.5×Ith)	100kA	
Insulation class (according to 60085)	E	
Standard	According to customer requirements	
Weight (approx.)	27kg	

● Connection Diagram



POST BUSBAR TYPE (부스바 관통형) CURRENT TRANSFORMER



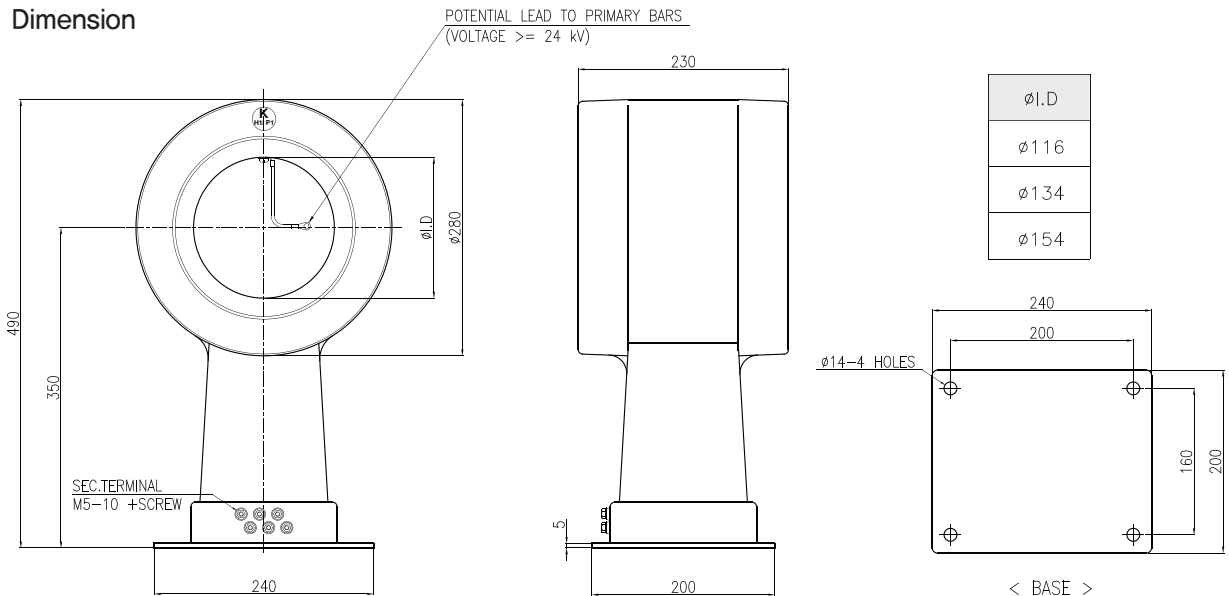
고압계기용변성기

17.5~24kV (1000~4000A / 100In)

● Specification

ITEM	Rated short time current	Current Ratio	Service	IEC 61869-2			IEEE C57.13			KSC 1706		
				Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor
24C-PA 1-Core Single Ratio CT	100In	1000/5A~1500/5A	Metering	15VA 30VA	1.0 1.0	FS10 FS10	12.5VA (B-0.5)	0.6,1.2	-	15VA 25VA 40VA	0.5,1.0 0.5,1.0 1.0	-
		1600/5A~2500/5A					22.5VA (B-0.9)					
		3000/5A~4000/5A	Protection	15VA 30VA	5P,10P 5P,10P	30 20	25VA (B-1) 50VA (B-2)	C-100 C-200	-	15VA 25VA 40VA	1P 1P 1P	n>30 n>20 n>20
24C-PA 1-Core Double Ratio CT	100In	1500~750/5A	Metering	15VA 30VA	0.5,1.0 0.5,1.0	FS10 FS10	12.5VA (B-0.5)	0.6,1.2	-	15VA 25VA 40VA	0.5,1.0 1.0 1.0	-
		1600~800/5A~2500~1250/5A					22.5VA (B-0.9)					
		3000~1500/5A~ 4000~2000/5A	Protection	15VA 30VA	5P,10P 5P,10P	30 20	25VA (B-1) 50VA (B-2)	C-100 C-200	-	15VA 25VA 40VA	1P 1P 1P	n>30 n>20 n>20
24C-PA 2-Core Single Ratio CT	100In	1000/5-5A~ 2000/5-5A	Metering (1st core)	15VA 30VA	0.5,1.0 0.5,1.0	FS10 FS10	12.5VA (B-0.5)	1.2	-	15VA 25VA 40VA	1.0 1.0 1.0	-
		2500/5-5A~ 4000/5-5A	Protection (2nd core)				15VA 30VA					
24C-PA 3-Core Single Ratio CT	100In	1500/5-5-5A~2000/5-5-5A	Metering (1st core)	15VA 30VA	0.5,1.0 0.5,1.0	FS10 FS10	12.5VA (B-0.5)	1.2	-	15VA 25VA 40VA	1.0 1.0 1.0	-
			Protection (2nd core)				15VA 30VA					
		2500/5-5-5A~4000/5-5-5A	Protection (3rd core)	15VA 30VA	5P,10P 5P,10P	20 10	12.5VA (B-0.5) 25VA (B-1)	C-50 C-100	-	15VA 25VA 40VA	1P 1P 1P	n>20 n>10 n>10
24C-PA 3rd Winding CT	100In	1000/5A 100/5A~4000/5A 100/5A	Protection (3rd Winding)	-	-	-	-	-	-	15/15VA 40/15VA	1P/5G	n>30 n>20

● Dimension



HV / CT
고압변류기

HV / VT · MOF
고압변압기

LV / CT
저압변류기

LV / VT
저압변압기

RELA Y
보호계전기

ELD
누전경보기

GFR
지락계전기

ZCT
영장변류기

METER
지시전기계기

SPD
서지보호기

SHUNT
셴트

POST BUSBAR TYPE (부스바 관통형) CURRENT TRANSFORMER

24~36kV (1000~4000A / 100In)

W36CPA



EPOXY RESIN CASTING CURRENT TRANSFORMERS for highest voltage of equipment up to 36kV

W36CPA 변류기는 최고 회로전압 36kV급 절연성능으로 설계되어진 옥내용 에폭시물드 제품으로 그 이하 전압(24kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 본 제품은 설치공간이 협소한 고압배전반에 매우 적합한 제품이다. 또한 1core 및 2 core, 3core 의 단일 비 또는 다중 비 형태의 제품으로 설계 및 제작이 가능합니다.

The W36CPA current transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 36kV-class insulation performance, and the less voltage(24kV) product has the same dimensions. This product is very suitable for standard switchboards installed in a narrow space. In addition, this can be designed and fabricated in a single or multiple ratio type such as 1 core, 2 cores and 3cores.

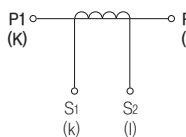
● Feature

규격 Standard	IEC - IEEE - KS
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	자동진공주형방식 Automatic vacuum casting method

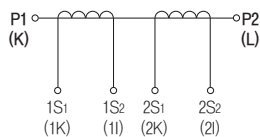
● Electrical characteristic

ITEM	MODEL	
	W36CPA	
Highest voltage for equipment (Um)	24kV	36kV
Rated power-frequency withstand voltage (60sec)	50kV	70kV
Rated lightning impulse withstand voltage (1.2/50μs)full wave	125kV	170kV
Rated frequency	50 / 60Hz	
Rated primary current(Ipr)	1000 to 4000A	
Rated secondary current(Isr)	5 or 1A	
Rated continuous thermal current	120%	
Rated short-time thermal current Ith (1sec)	40kA	
Rated dynamic current Idyn (2.5×Ith)	100kA	
Insulation class (according to 60085)	E	
Standard	According to customer requirements	
Weight (approx.)	30kg	

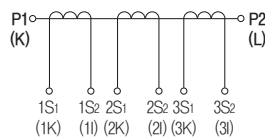
● Connection Diagram



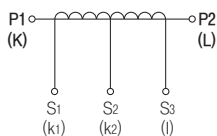
1 - Core Single ratio



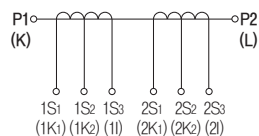
2 - Core Single ratio



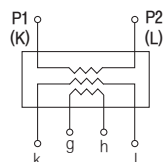
3 - Core Single ratio



1 - Core Double ratio



2 - Core Double ratio



1 - Core 3rd winding

POST BUSBAR TYPE (부스바 관통형) CURRENT TRANSFORMER



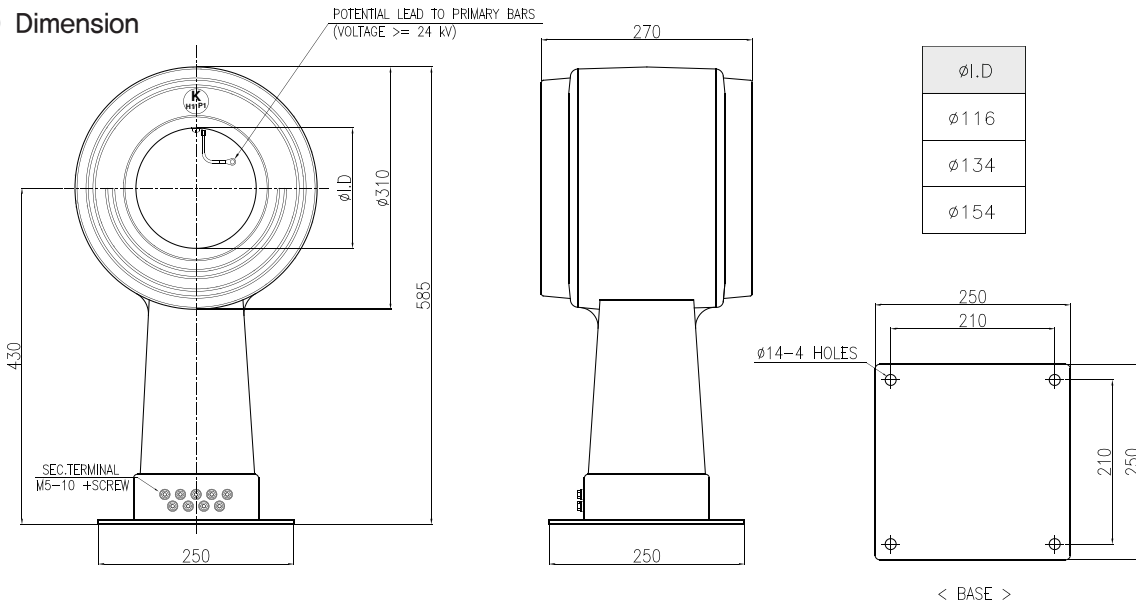
고압계기용변성기

24~36kV (1000~4000A / 100In)

● Specification

ITEM	Rated short time current	Current Ratio	Service	IEC 61869-2			IEEE C57.13			KSC 1706		
				Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor	Burden	Accuracy Class	Over Current Factor
36C-PA 1-Core Single Ratio CT	100In	1000/5A~1500/5A	Metering	15VA 30VA	1.0 1.0	FS10 FS10	12.5VA (B-0.5) 22.5VA (B-0.9) 45VA (B-1.8)	0.6,1.2 0.6,1.2 1.2	-	15VA 25VA 40VA	0.5,1.0 0.5,1.0 1.0	-
		1600/5A~2500/5A		Protection	15VA 30VA	5P,10P 5P,10P	30 20	25VA (B-1) 50VA (B-2)	C-100 C-200	-	15VA 25VA 40VA	1P 1P 1P
		3000/5A~4000/5A										
36C-PA 1-Core Double Ratio CT	100In	1500~750/5A	Metering	15VA 30VA	0.5,1.0 0.5,1.0	FS10 FS10	12.5VA (B-0.5) 22.5VA (B-0.9) 45VA (B-1.8)	0.6,1.2 0.6,1.2 1.2	-	15VA 25VA 40VA	0.5,1.0 1.0 1.0	-
		1600~800/5A~2500~1250/5A		Protection	15VA 30VA	5P,10P 5P,10P	30 20	25VA (B-1) 50VA (B-2)	C-100 C-200	-	15VA 25VA 40VA	1P 1P 1P
		3000~1500/5A~4000~2000/5A										
36C-PA 2-Core Single Ratio CT	100In	1000/5~5A~2000/5~5A	Metering (1st core)	15VA 30VA	0.5,1.0 0.5,1.0	FS10 FS10	12.5VA (B-0.5) 22.5VA (B-0.9)	1.2 1.2	-	15VA 25VA 40VA	1.0 1.0 1.0	-
		2500/5~5A~4000/5~5A	Protection (2nd core)	15VA 30VA	5P,10P 5P,10P	30 20	25VA (B-1)	C-100	-	15VA 25VA 40VA	1P 1P 1P	n)30 n)20 n)20
36C-PA 3-Core Single Ratio CT	100In	1500/5~5~5A~2000/5~5~5A	Metering (1st core)	15VA 30VA	0.5,1.0 0.5,1.0	FS10 FS10	12.5VA (B-0.5) 22.5VA (B-0.9)	1.2 1.2	-	15VA 25VA 40VA	1.0 1.0 1.0	-
			Protection (2nd core)	15VA 30VA	5P,10P 5P,10P	20 10	12.5VA (B-0.5) 25VA (B-1)	C-50 C-100	-	15VA 25VA 40VA	1P 1P 1P	n)20 n)10 n)10
		2500/5~5~5A~4000/5~5~5A	Protection (3rd core)	15VA 30VA	5P,10P 5P,10P	20 10	12.5VA (B-0.5) 25VA (B-1)	C-50 C-100	-	15VA 25VA 40VA	1P 1P 1P	n)20 n)10 n)10
36C-PA 3rd Winding CT	100In	1000/5A 100/5A~4000/5A 100/5A	Protection (3rd Winding)	-	-	-	-	-	-	15/15VA 40/15VA	1P/5G	n)30 n)20

● Dimension



HV / CT
고압변류기

HV / VT · MOF
고압변압기

LV / CT
저압변류기

LV / VT
저압변압기

RELA Y
보호계전기

ELD
누전경보기

GFR
지락계전기

ZCT
영상변류기

METER
지시전기계기

SPD
서지보호기

SHUNT
센트

BUSHING TYPE (B.C.T) CURRENT TRANSFORMER

0.72kV (200~2000A / 25kA)

W01CBA/W01CBB/W01CBC

EPOXY RESIN CURRENT TRANSFORMERS



● Feature

- 규격(Standard) : IEC - IEEE
- 설계 및 적용(Design and Application)
 - 계기 및 보호용(Designed for measuring and protection)
- 사용조건(Service condition) : 옥내(Valid for indoor service)
- FREQUENCY : 50/60Hz
- INSULATION CLASS : 0.72kV
- INSULATION : Epoxy Mold

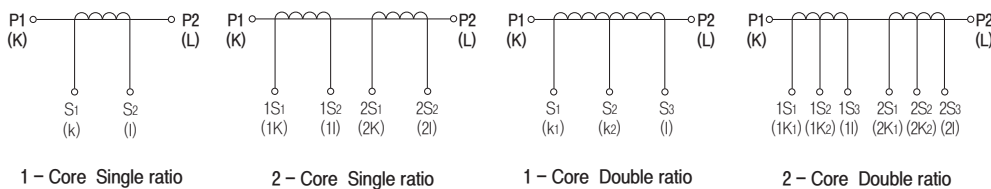
● Standard Specification

MODEL	Highest voltage for equipment (kV)	Rated Current	Class	Rated short-time thermal current
W01CBA	0.72kV	200~2000/5A	1.2(12.5VA)	25kA/1sec
W01CBB	0.72kV	600~2000/5A	C-200	25kA/1sec
W01CBC	0.72kV	500~2000/5A	C-200	25kA/3sec

● Specification

변류비	계전기용 Relay Class	계기용(Metering Class)Class				
		B-0.1	B-0.2	B-0.5	B-0.9	B-1.8
30/5A	C-10	-	-	-	-	-
40/5A	C-10	-	-	-	-	-
50/5A	C-20	-	-	-	-	-
60/5A	C-20	1.2	-	-	-	-
75/5A	C-20	1.2	1.2	-	-	-
100/5A	C-20	1.2	1.2	1.2	-	-
120/5A	C-50	0.6	0.	1.2	1.2	-
150/5A	C-50	0.6	0.6	1.2	1.2	1.2
200/5A	C-50	0.3	0.6	0.6	1.2	1.2
250/5A	C-100	0.3	0.3	0.6	1.2	1.2
300/5A	C-100	0.3	0.3	0.6	0.6	1.2
400/5A	C-100	0.3	0.3	0.3	0.6	0.6
500/5A	C-200	0.3	0.3	0.3	0.6	0.6
600/5A	C-200	0.3	0.3	0.3	0.3	0.3
750/5A	C-200	0.3	0.3	0.3	0.3	0.3
1000/5A	C-400	0.3	0.3	0.3	0.3	0.3
1500/5A	C-400	0.3	0.3	0.3	0.3	0.3
2000/5A	C-400	0.3	0.3	0.3	0.3	0.3

● Connection Diagram



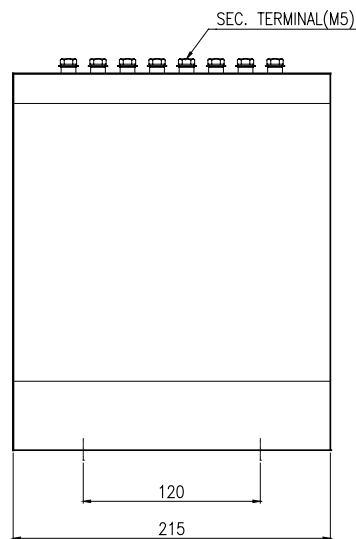
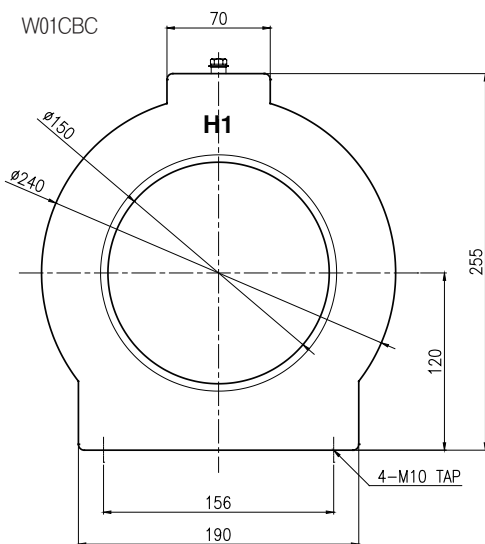
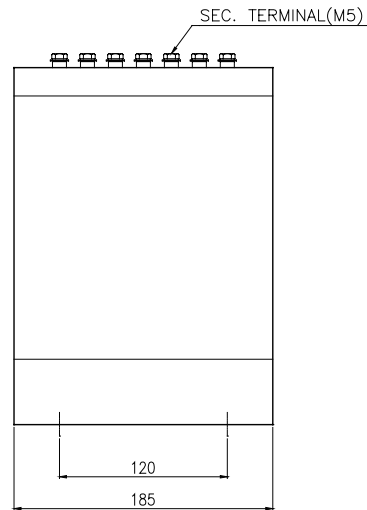
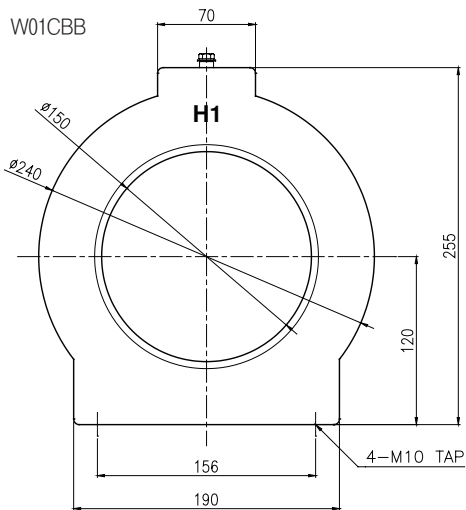
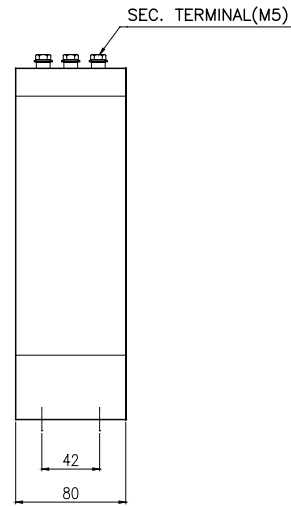
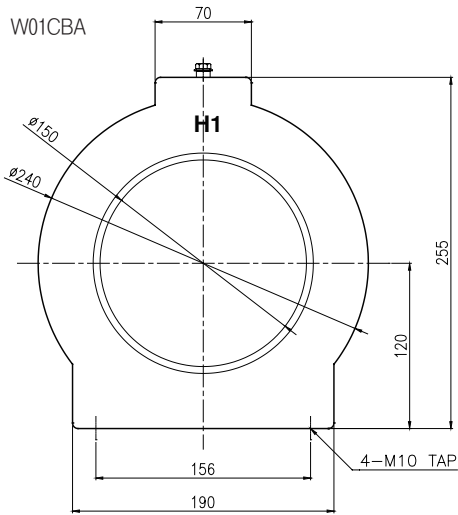
BUSHING TYPE (B.C.T) CURRENT TRANSFORMER



고압계기용변성기

0.72kV (200~2000A / 25kA)

● Dimension



HV / CT
고압변류기

HV / VTF : MOF
고압변압기

LV / CT
저압변류기

LV / VTF
저압변압기

RELA Y
보호계전기

ELD
누전경보기

GFR
지락계전기

ZCT
영상변류기

METER
지시전계기

SPD
서지보호기

SHUNT
센트

BUSHING TYPE (B.C.T) CURRENT TRANSFORMER

0.72kV (200~2000A / 25kA)

W01CBD



EPOXY RESIN CURRENT TRANSFORMERS

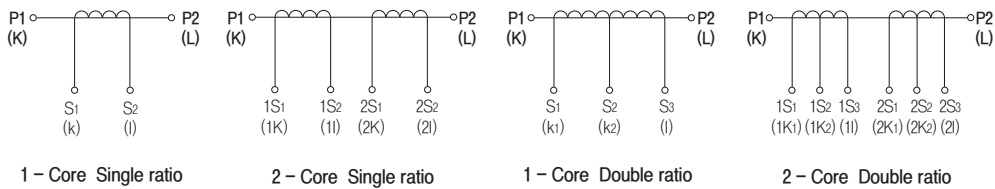
● Feature

- 규격(Standard) : IEC - IEEE
- 설계 및 적용(Design and Application)
- 계기 및 보호용(Designed for measuring and protection)
- 사용조건(Service condition) : 옥내(Valid for indoor service)
- FREQUENCY : 50/60Hz
- INSULATION CLASS : 0.72kV
- INSULATION : Epoxy Mold

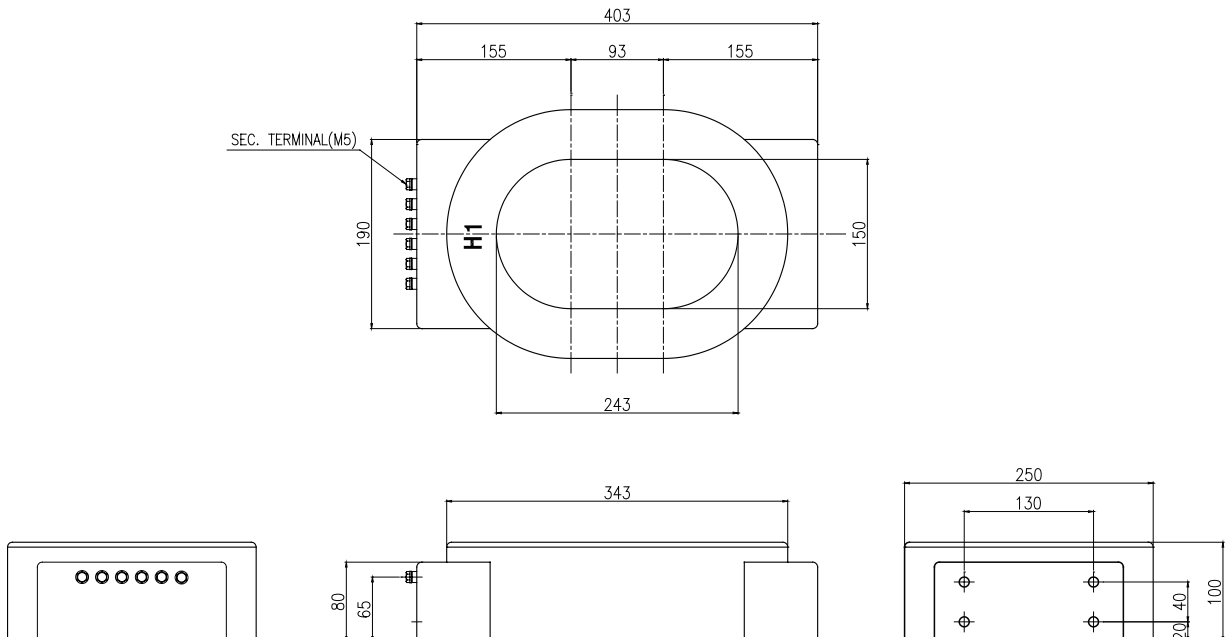
● Standard Specification

MODEL	Highest voltage for equipment (kV)	Rated Current	Class	Rated short-time thermal current	Burden
W01CBD	0.72kV	2000-1000/5A	1.2	25kA/1sec	B-0.5(12.5VA)
	0.72kV	2000-1500-1200-800/5A/5A	C-200 / X-200	25kA/1sec	50VA

● Connection Diagram



● Dimension



BUSHING TYPE (B.C.T) CURRENT TRANSFORMER



고압계기용변성기

0.72kV (200~400A / 25kA)

W01CBE



EPOXY RESIN CURRENT TRANSFORMERS

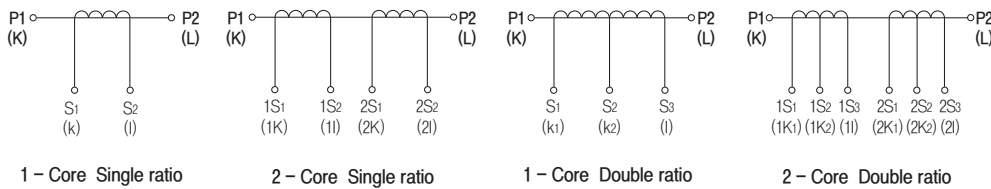
● Feature

- 규격(Standard) : IEC - IEEE
- 설계 및 적용(Design and Application)
 - 계기 및 보호용(Designed for measuring and protection)
- 사용조건(Service condition) : 옥내(Valid for indoor service)
- FREQUENCY : 50/60Hz
- INSULATION CLASS : 0.72kV
- INSULATION : Epoxy Mold

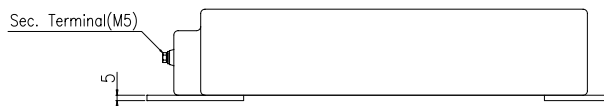
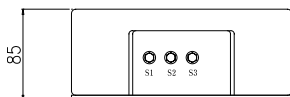
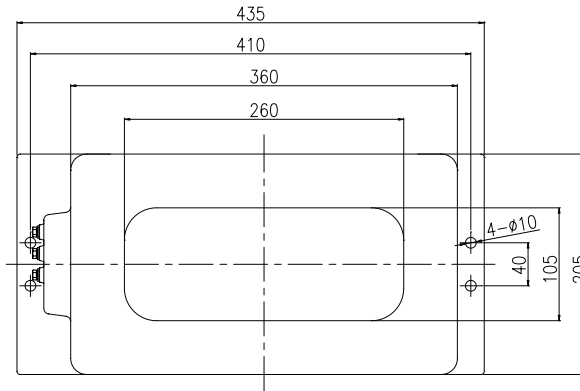
● Standard Specification

MODEL	Highest voltage for equipment (kV)	Rated Current	Class	Rated short-time thermal current	Burden
W01CBE	0.72kV	600-400/5A	5P10	25kA/1sec	5VA
	0.72kV	400-200/5A	5P10	25kA/1sec	5VA

● Connection Diagram



● Dimension



HV / C T

HV / VT : MOF

LV / C T

LV / VT

RELA Y

ELD

GF R

ZCT

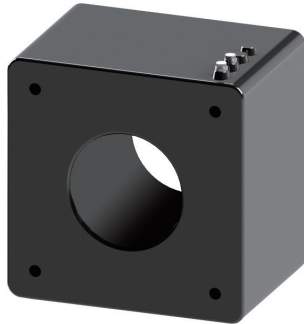
METE R

SPD

SHUNT

0.72kV (100~4000A / 25kA)

W01CBF



EPOXY RESIN CURRENT TRANSFORMERS

● Feature

- 규격(Standard) : IEC - IEEE
- 설계 및 적용(Design and Application)
 - 계기 및 보호용(Designed for measuring and protection)
- 사용조건(Service condition) : 옥내(Valid for indoor service)
- FREQUENCY : 50/60Hz
- INSULATION CLASS : 0.72kV
- INSULATION : Epoxy Mold

● Standard Specification

Current Ratio	Relay Class	Metering Class				
		B-0.1	B-0.2	B-0.5	B-0.9	B-1.8
50/5A	C-20	2.4	4.8	-	-	-
75/5A	C-30	1.2	2.4	4.8	4.8	-
100/5A	C-50	0.6	1.2	2.4	4.8	4.8
150/5A	C-50	0.6	0.6	1.2	2.4	4.8
200/5A	C-100	0.3	0.6	1.2	1.2	2.4
300/5A	C-100	0.3	0.3	0.6	0.6	1.2
400/5A	C-200	0.3	0.3	0.3	0.3	0.6
500/5A	C-200	0.3	0.3	0.3	0.3	0.6
600/5A	C-200	0.3	0.3	0.3	0.3	0.3
800/5A	C-400	0.3	0.3	0.3	0.3	0.3
1000/5A	C-400	0.3	0.3	0.3	0.3	0.3
1200/5A	C-400	0.3	0.3	0.3	0.3	0.3
1500/5A	C-400	0.3	0.3	0.3	0.3	0.3
2000/5A	C-400	0.3	0.3	0.3	0.3	0.3
2500/5A	C-400	0.3	0.3	0.3	0.3	0.3
3000/5A	C-400	0.3	0.3	0.3	0.3	0.3
4000/5A	C-400	0.3	0.3	0.3	0.3	0.3
5000/5A	C-400	0.3	0.3	0.3	0.3	0.3

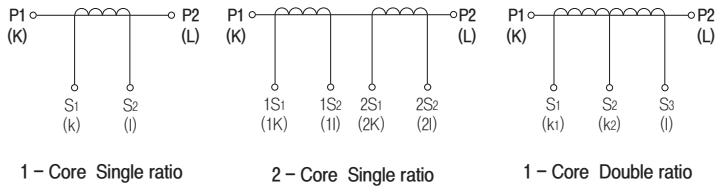
BUSHING TYPE (B.C.T) CURRENT TRANSFORMER



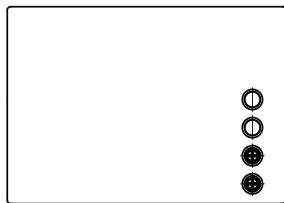
고압계기용변성기

0.72kV (100~4000A / 25kA)

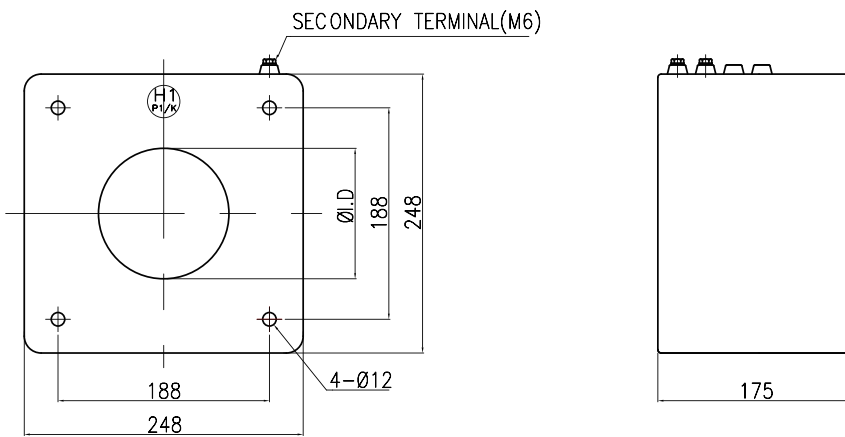
● Connection Diagram



● Dimension



ØI.D
Ø65
Ø96
Ø116
Ø134
Ø154



HV / C T
고압변류기

HV / VT : MOF
고압변압기

LV / C T
저압변류기

LV / VT
저압변압기

RELA Y
보호계전기

ELD
누전경보기

GFR
지락계전기

ZCT
영상변류기

METER
지시계전기

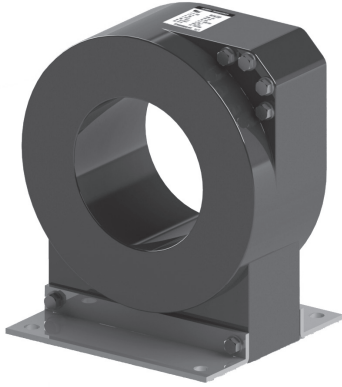
SPD
서지보호기

SHUNT
센트

ZERO PHASE SEQUENCE CURRENT TRANSFORMER (ZCT)

선택지락 계전기용 (SGR TYPE)

WCZA/WCZB/WCZC



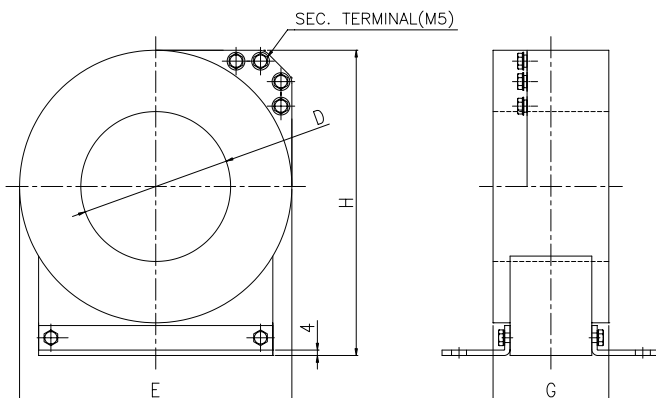
● Feature

- 규격(Standard) : JEC 1201
- 정격(Rated Current)
 - Primary : 200mA, Secondary : 1.5mA
- 오차(Accuracy Class)
 - L Class(1.0 mA ~ 2.0 mA), H Class(1.2 mA ~ 1.8 mA)
- 부담(Rated Burden) : 10Ω (P.F 0.5 Lag Current)
- 절연계급(Insulation Level) : For Cable through type
- FREQUENCY : 60Hz (50Hz Option)
- INSULATION : Epoxy Mold

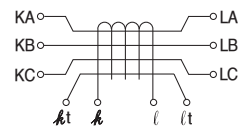
● Specification

MODEL	In Dia(∅)	Dimension (mm)						
		A	B	C	E	F	G	H
WCZA	∅110	145	135	172	200	160	85	224
WCZB	∅180	150	130	200	280	160	120	350
WCZC	∅110	150	130	200	300	160	120	350
	∅135	150	130	200	300	160	120	350
	∅150	150	130	200	300	160	120	350
	∅200	150	130	200	300	160	120	350

● Dimension



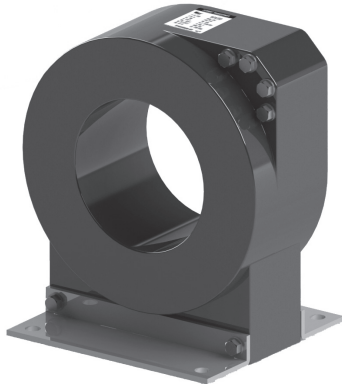
● Connection Diagram



ZERO PHASE SEQUENCE CURRENT TRANSFORMER (ZCT)

CURRENT TRANSFORMER (CT)

WCZA/WCZB/WCZC



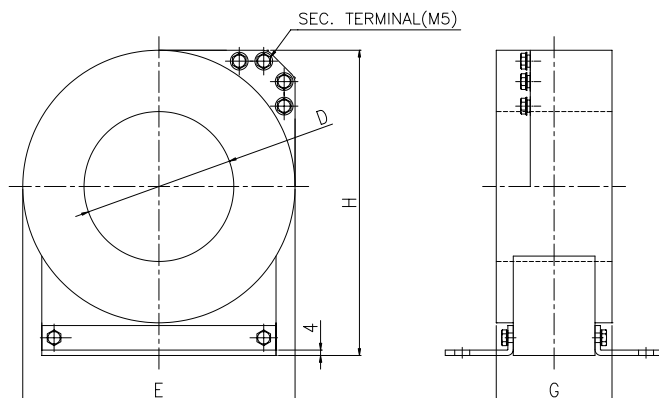
● Feature

- 규격(Standard) : IEC 61869-2
- 정격(Rated Current)
 - Primary : 50~100A, Secondary : 5 or 1A
- 오차(Accuracy Class) : 5P or 10P
- 과전류정수(Rated Over Current Factor) : $n > 5$ or 10
- 부담(Rated Burden) : 10Ω (P.F 0.5 Lag Current)
- 절연계급(Insulation Level) : For Cable through type
- FREQUENCY : 60Hz (50Hz Option)
- INSULATION : Epoxy Mold

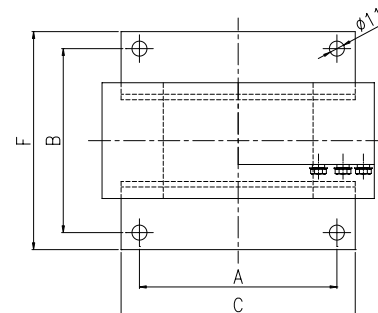
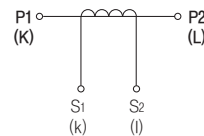
● Specification

MODEL	In Dia(∅)	Dimension (mm)						
		A	B	C	E	F	G	H
WCZA	∅110	145	135	172	200	160	85	224
WCZB	∅180	150	130	200	280	160	120	350
WCZC	∅110	150	130	200	300	160	120	350
	∅135	150	130	200	300	160	120	350
	∅150	150	130	200	300	160	120	350
	∅200	150	130	200	300	160	120	350

● Dimension



● Connection Diagram



HV / CT
고압변류기

HV / V T
고압변압기

LV / CT
저압변류기

LV / V T
저압변압기

RELA Y
보호계전기

ELD
누전경보기

GF R
지락계전기

ZCT
영상변류기

METE R
지시계기

SPD
서지보호기

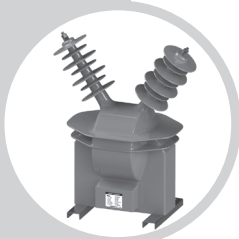
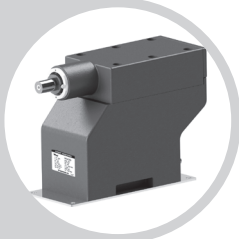
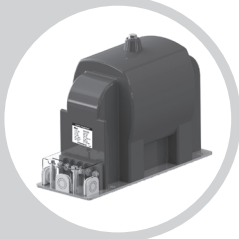
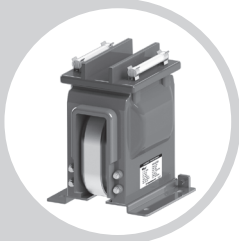
SHUNT
센트

고압 계기용 변압기

Medium Voltage Transformer

변압기(VT)

Voltage Transformer(3.6~7.2kV)	96
Voltage Transformer(12kV)	100
Voltage Transformer(17.5~25.8kV)	104
Voltage Transformer(36kV)	124
Voltage Transformer(outdoor 36kV)	126



VOLTAGE TRANSFORMER

기술적 설명 Technical Description

● 개요

- 변압기는 전자력을 매개로 하여 전자유도작용에 의해 1차측 권선의 유입교류전력을 다른 2차측권선에 동일주파수의 교류전력으로 변환하는 정지형 유도장치이며, 고전압 1차 전기량을 측정계기, 또는 보호계전기 등의 접속장치에 적합한 2차 전압 및 전류로 바꾸어 주는 전기기기입니다.

● Outline

- The voltage transformer is a stationary induction device to convert the AC power in the primary coil into AC power of the same frequency in the other secondary coil via electromagnetic induction actions using electromagnetic forces, and is an electric device to convert the primary power of high voltage into a secondary voltage and current suitable for interface devices such as measuring instruments or protective relays.

● Technical Data

ITEM	RANGE					
Highest voltage for equipment	3.6kV	7.2kV	12kV	17.5kV	24kV	36kV
Rated power-frequency withstand voltage (1.2 x 50 μs)	10kV	20kV	28kV	38kV	50kV	70kV
Rated lightning impulse withstand voltage	40kV	75kV	170kV	95kV	125kV	170kV
Rated frequency	50Hz, 60Hz, others on request					
Rated primary voltage	380/√3 V to 33000/√3 V 380 V to 33000 V					
Rated secondary voltage	100/√3 V to 380/√3 V 110V to 220 V, others on request					
Accuracy Class	0.2, 0.5, 1.0 3.0 for measuring 3P 6P for protection, others on request					
Rated Voltage factor	1.2Con't, 1.5/30s, 1.9/30s, 1.9/8h					
Temperature Category	According to customer requirements					

● Mechanical characteristic

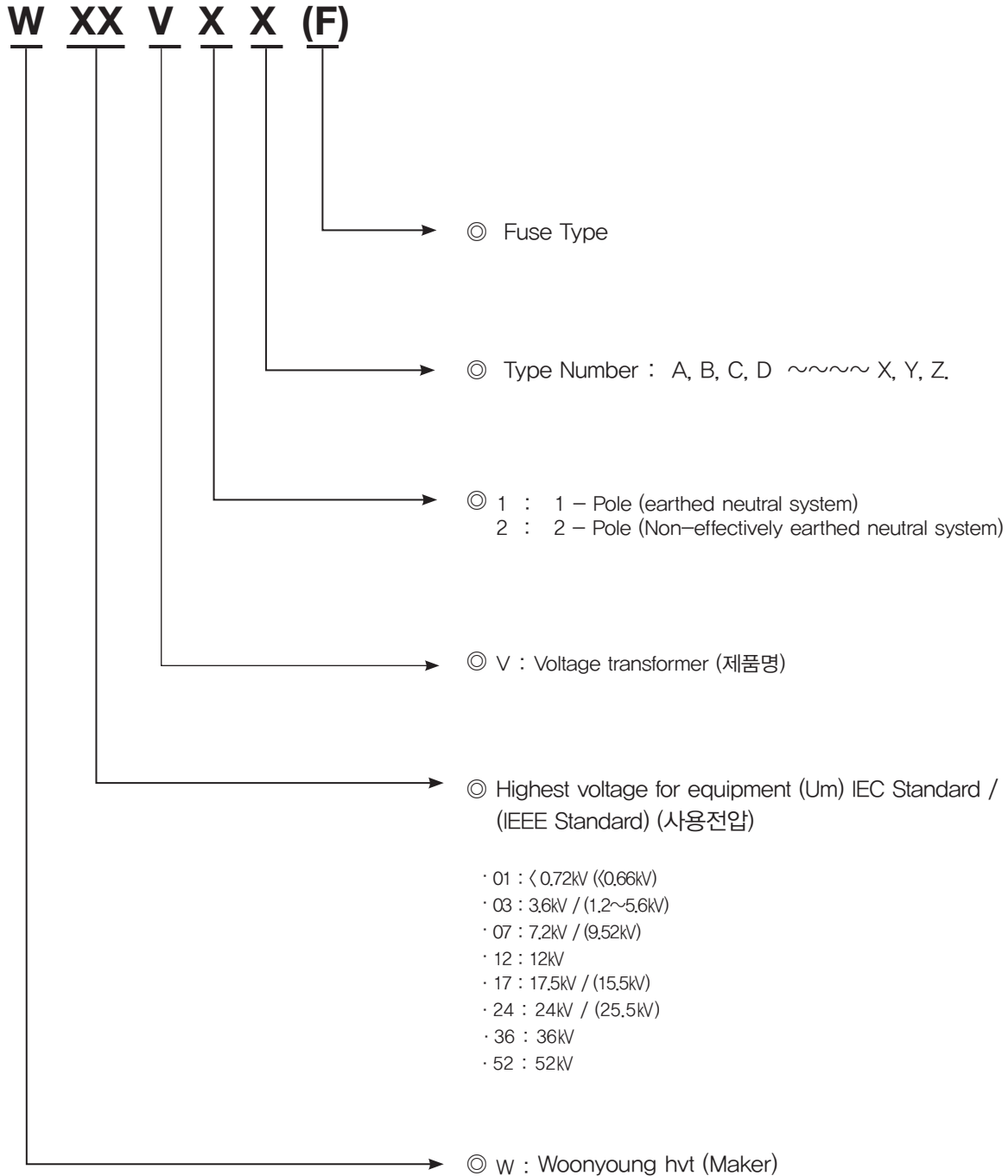
Permissible torque for screw connections

- M6 (Secondary terminal) : 2.6 ~ 5.2 Nm
- M8 (Ground terminal) : 6.2 ~ 12.5 Nm
- M12 (Primary terminal) : 21 ~ 42 Nm
- Secondary terminal made of stainless-steel
- Primary terminal made of brass or copper (silver-plate on request)
- Ground terminal made of stainless-steel
- The material of the base steel (Natural zinc plated)

VOLTAGE TRANSFORMER

모델구분표 Model Description

● Type Description



HV / CT
고압 변류기

HV / VTT · MOF
고압 변압기 절연물

LV / CT
저압 변류기

LV / VT
저압 변압기

RELA
보호 계전기

ELD
누전경보기

GF
지락 계전기

ZCT
영상 변류기

METER
지시 전기 계기

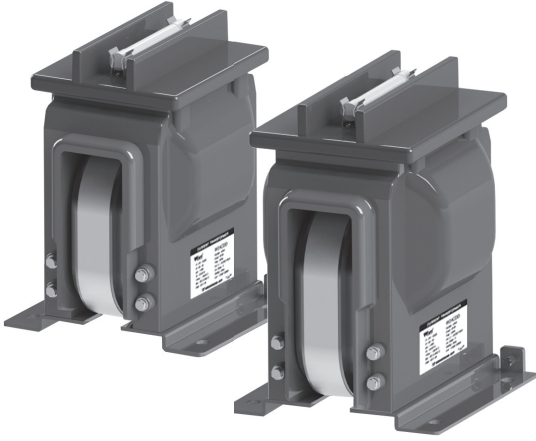
SPD
서지 보호기

SHUNT
센트

EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

3.6~7.2kV (0~200VA)

W07V1A / W07V1B



EPOXY RESIN CASTING VOLTAGE TRANSFORMERS for highest voltage of equipment up to 7.2kV

W07V1A, W07V1B 변압기는 최고회로전압 7.2kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(3.6kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 안정적인 절연능력 및 전기적 특성을 갖으며, 기계적 안전성과 유지보수의 용이성이 우수한 제품이다. 또한 단일 또는 다중 탭을 갖는 제품으로 설계 가능합니다.

The W07V1A, W07V1B voltage transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 7.2kV-class insulation performance, and has the same dimensions for the less voltage(3.6kV) product. This has a stable insulation capacity and electrical property, has excellent mechanical safety, and is easy to maintain. In addition, this can be designed in products with single of multiple taps.

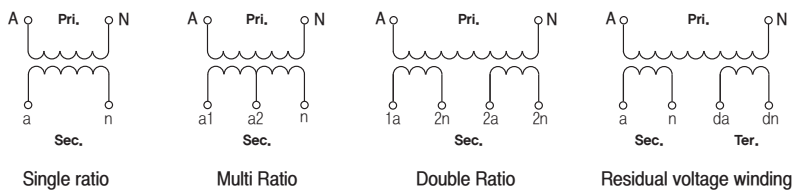
● Feature

규격 Standard	IEC - IEEE - KS etc.
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL	
	W07V1A / W07V1B	
Highest voltage for equipment (Um)	3.6kV	7.2kV
Rated power-frequency withstand voltage (60sec)	10kV	20kV
Rated lighting Impulse withstand voltage (1.2/50μs)/full wave	40kV	60kV
Rated frequency	50Hz, 60Hz, others on request	
Rated Primary Voltage	3300/√3 V, 6600/√3 V	
Rated Secondary Voltage	110/√3 V, 190/√3 V	
Rated Voltage factor	1.2Cont, 1.5/30s, 1.9/30s, 1.9/8h	
Thermal Limit Burden	700VA	
Insulation class (according to IEC 60085)	E	
Standard	According to customer requirements	
Temperature Category	According to customer requirements	
Weight (approx.)	16kg	

● Connection Diagram



EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)



고압계기용변성기

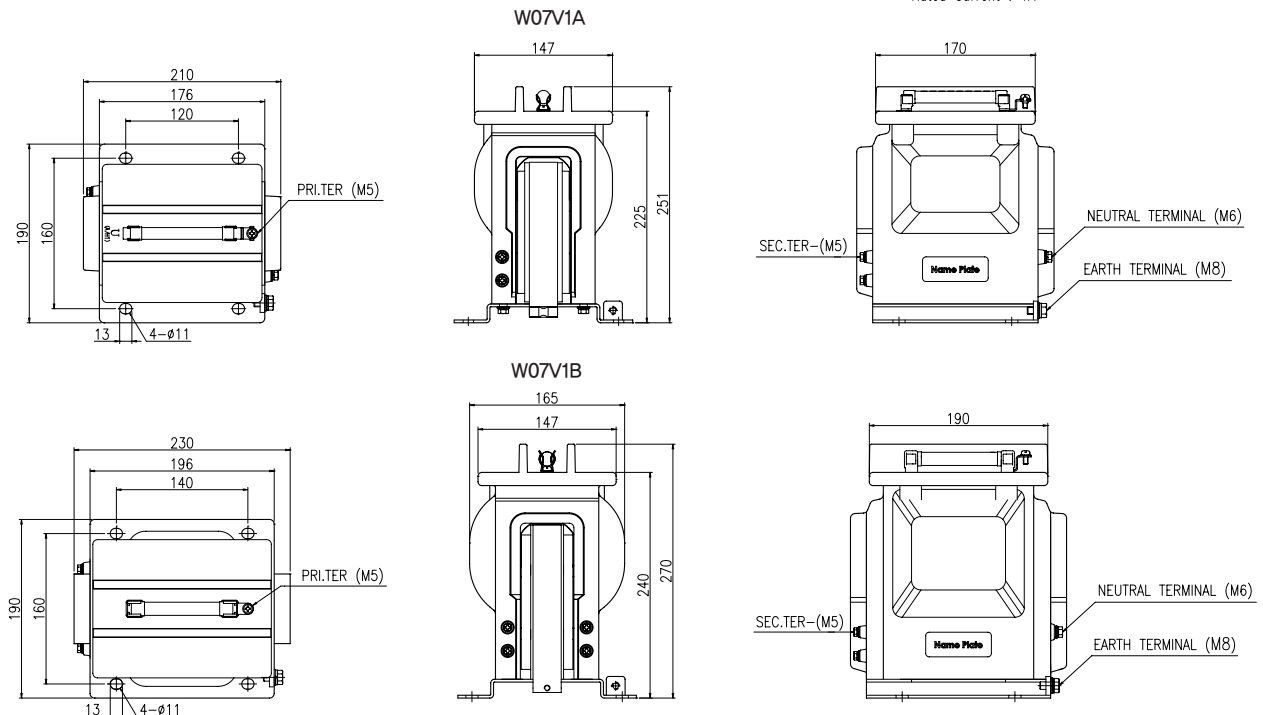
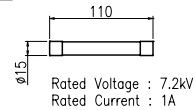
3.6~7.2kV (0~200VA)

● Specification

ITEM	Highest voltage for equipment (Um)	Voltage Ratio (V)	IEC 61869-3			IEEE C57.13		
			Accuracy Class	Burden (VA)	Voltage Factor	Accuracy Class	Burden (VA)	
W07V1A	3.6kV	$\frac{3300}{\sqrt{3}} / \frac{110}{\sqrt{3}}$	0.2	20	1.2Con't	0.3	M	
			0.5	50	1.5/30s			
			1.0	100				
	7.2kV	$\frac{6600}{\sqrt{3}} / \frac{110}{\sqrt{3}}$	0.2	15	1.2Con't	0.6	Y	
			0.5	50	1.9/8h			
			1.0	100				
W07V1A	3.6kV	$\frac{3300}{\sqrt{3}} / \frac{110}{\sqrt{3}} / \frac{190}{3}$	0.2/3P	20/200	1.2Con't	-	-	
			0.5/3P	50/200	1.5/30s			
			1.0/3P	100/200				
	7.2kV	$\frac{6600}{\sqrt{3}} / \frac{110}{\sqrt{3}} / \frac{190}{3}$	0.2/3P	15/200	1.2Con't	-	-	
			0.5/3P	50/200	1.9/8h			
			1.0/3P	100/200				
W07V1B	3.6kV	$\frac{3300}{\sqrt{3}} / \frac{110}{\sqrt{3}}$	0.2	30	1.2Con't	0.3	M	
			0.5	100	1.5/30s			
			1.0	200				
	7.2kV	$\frac{6600}{\sqrt{3}} / \frac{110}{\sqrt{3}}$	0.2	25	1.2Con't	0.6	Y	
			0.5	100	1.9/8h			
			1.0	200				
	W07V1B	3.6kV	$\frac{3300}{\sqrt{3}} / \frac{110}{\sqrt{3}} / \frac{190}{3}$	0.2/3P	30/200	1.2Con't	-	-
				0.5/3P	100/500	1.5/30s		
				1.0/3P	200/500			
		7.2kV	$\frac{6600}{\sqrt{3}} / \frac{110}{\sqrt{3}} / \frac{190}{3}$	0.2/3P	25/200	1.2Con't	-	-
				0.5/3P	100/500	1.9/8h		
				1.0/3P	200/500			

● Dimension

* FUSE



HV/CT
고압 변류기

HV/VT·MOF
고압 변압기 접연물

LV/CT
저압 변류기

LV/VT
저압 변압기

RELA
보호 계전기

ELD
누전경보기

GFBR
지락 계전기

ZCT
영용 변류기

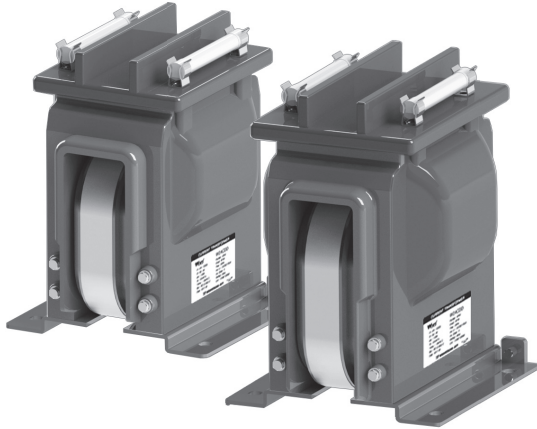
METER
지시 계전기

SPD
서지 보호기

SHUNT
센트

3.6~7.2kV (0~100VA)

W07V2A / W07V2B



EPOXY RESIN CASTING VOLTAGE TRANSFORMERS for highest voltage of equipment up to 7.2kV

W07V2A, W07V2B 변압기는 최고회로전압 7.2kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(3.6kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 안정적인 절연능력 및 전기적 특성을 갖으며, 기계적 안전성과 유지보수의 용이성이 우수한 제품이다. 또한 단일 또는 다중 탭을 갖는 제품으로 설계 가능합니다.

The W07V2A, W07V2B voltage transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 7.2kV-class insulation performance, and has the same dimensions for the less voltage(3.6kV) product. This has a stable insulation capacity and electrical property, has excellent mechanical safety, and is easy to maintain. In addition, this can be designed in products with single of multiple taps.

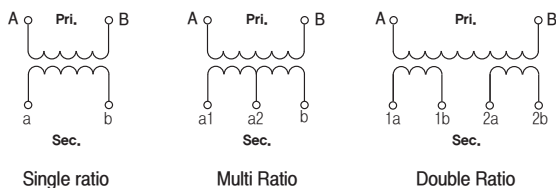
● Feature

규격 Standard	IEC - IEEE - KS etc.
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL	
	W07V2A / W07V2B	
Highest voltage for equipment (Um)	3.6kV	7.2kV
Rated power-frequency withstand voltage (60sec)	10kV	20kV
Rated lighting Impulse withstand voltage (1.2/50μs)/full wave	40kV	60kV
Rated frequency	50Hz, 60Hz, others on request	
Rated Primary Voltage	3300V, 6600V	
Rated Secondary Voltage	110V, 120V, 220V	
Rated Voltage factor	1.2Con't	
Thermal Limit Burden	700VA	
Insulation class (according to IEC 60085)	E	
Standard	According to customer requirements	
Temperature Category	According to customer requirements	
Weight (approx.)	18kg	

● Connection Diagram

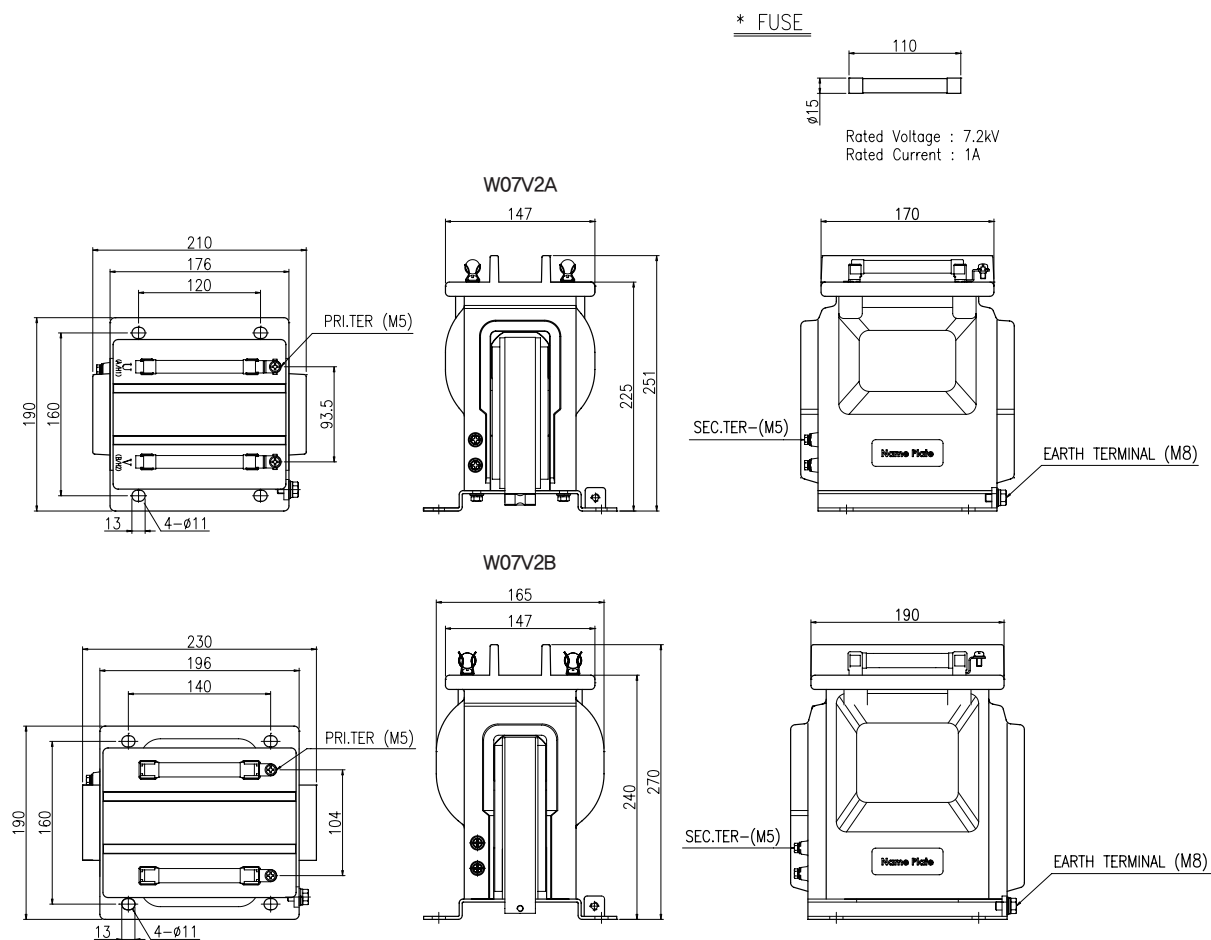


3.6~7.2kV (0~100VA)

● Specification

ITEM	Highest voltage for equipment (Um)	Voltage Ratio (V)	IEC 61869-3			IEEE C57.13	
			Accuracy Class	Burden (VA)	Voltage Factor	Accuracy Class	Burden (VA)
W07V2A	3.6kV	3300/110	0.2	15	1.2Con't	0.3	M
			0.5	50			
			1.0	100			
W07V2A	7.2kV	6600/110	0.2	10	1.2Con't	0.3	M
			0.5	50			
			1.0	100			
W07V2B	3.6kV	3300/110	0.2	20	1.2Con't	0.3	M
			0.5	100			
			1.0	200			
W07V2B	7.2kV	6600/110	0.2	20	1.2Con't	0.3	M
			0.5	100			
			1.0	200			

● Dimension



HV / CT
고압 변류기

HV / VT · MOF
고압 변압기 절연물

LV / CT
저압 변류기

LV / VT
저압 변압기

RELA
보호 계전기

ELD
누전경보기

GF
지락 계전기

ZCT
영상 변류기

METER
지시 전기 계기

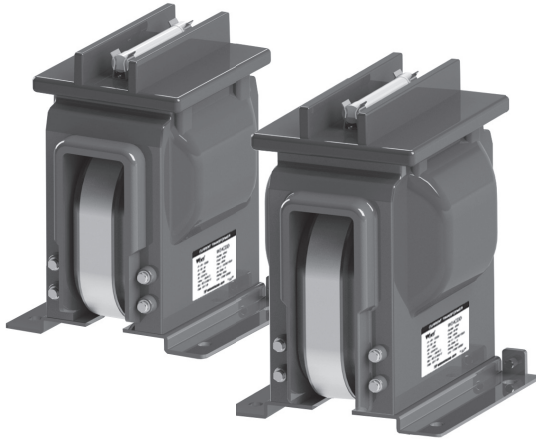
SPD
서지 보호기

SHUNT
센트

EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

3.6~12kV (0~200VA)

W12V1A/W12V1B



EPOXY RESIN CASTING VOLTAGE TRANSFORMERS for highest voltage of equipment up to 12kV

W12V1A, W12V1B 변압기는 최고회로전압 12kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(3.6, 7.2kV) 제품에 대해서는 동일한 치수 (DIMENSION)를 가진다. 안정적인 절연능력 및 전기적 특성을 갖으며, 기계적 안전성과 유지보수의 용이성이 우수한 제품이다. 또한 단일 또는 다중 탭을 갖는 제품으로 설계 가능합니다.

The W12V1A, W12V1B voltage transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 12kV-class insulation performance, and has the same dimensions for the less voltage(3.6, 7.2kV) product. This has a stable insulation capacity and electrical property, has excellent mechanical safety, and is easy to maintain.

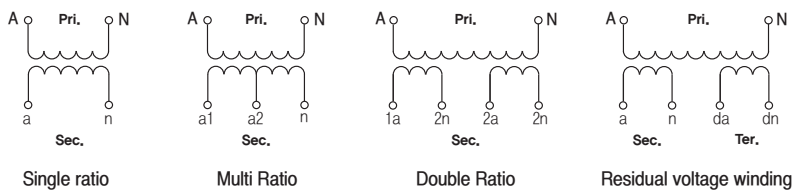
● Feature

규격 Standard	IEC - IEEE - KS etc.
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W12V1A / W12V1B		
Highest voltage for equipment (Um)	3.6kV	7.2kV	12kV
Rated power-frequency withstand voltage (60sec)	10kV	20kV	28kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave	40kV	60kV	75kV
Rated frequency	50Hz, 60Hz, others on request		
Rated Primary Voltage	$11000/\sqrt{3}V$		
Rated Secondary Voltage	$110/\sqrt{3}V, 190/\sqrt{3}V$		
Rated Voltage factor	1.2Cont, 1.5/30s, 1.9/30s, 1.9/8h		
Thermal Limit Burden	700VA		
Insulation class (according to IEC 60085)	E		
Standard	According to customer requirements		
Temperature Category	According to customer requirements		
Weight (approx.)	22kg		

● Connection Diagram



EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)



고압계기용변성기

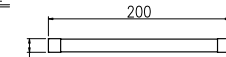
3.6~12kV (0~200VA)

● Specification

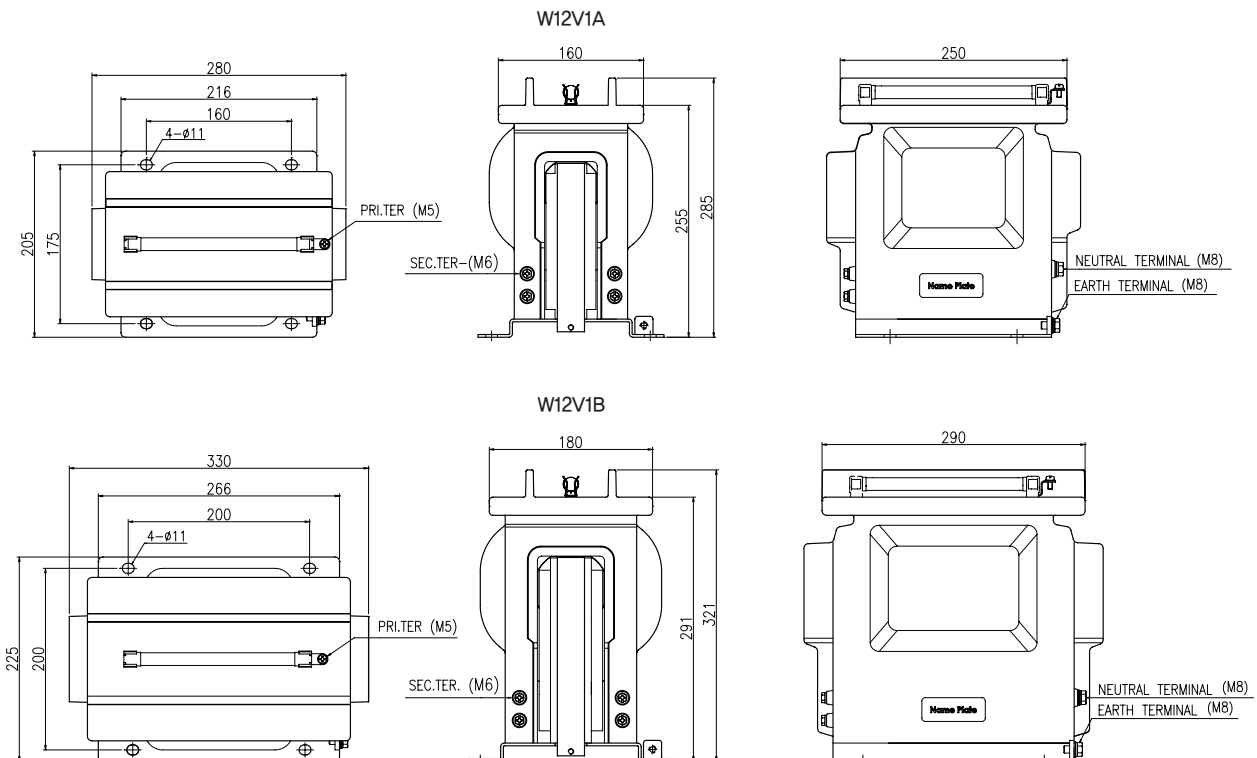
ITEM	Highest voltage for equipment (Um)	Voltage Ratio (V)	IEC 61869-3			IEEE C57.13			
			Accuracy Class	Burden (VA)	Voltage Factor	Accuracy Class	Burden (VA)		
W12V1A	12kV	$\frac{11000}{\sqrt{3}} / \frac{110}{\sqrt{3}}$	0.2	50	1.2Con't 1.5/30s	0.3	M		
			0.5	100					
			1.0	200					
			0.2	30	1.2Con't 1.9/8h	0.6	Y		
			0.5	100					
			1.0	200					
12kV	$\frac{11000}{\sqrt{3}} / \frac{110}{\sqrt{3}} / \frac{190}{3}$	0.2/3P	30/100	1.2Con't 1.9/8h	-	-			
		0.5/3P	100/100						
		1.0/3P	200/100						
W12V1B	12kV	$\frac{11000}{\sqrt{3}} / \frac{110}{\sqrt{3}}$	0.2	75	1.2Con't 1.5/30s	0.3	Y		
			0.5	200					
			0.2	50				1.2Con't 1.9/8h	0.6
			0.5	200					
			12kV	$\frac{11000}{\sqrt{3}} / \frac{110}{\sqrt{3}} / \frac{190}{3}$	0.2/3P	50/200	1.2Con't 1.9/8h		
					0.5/3P	200/200			

● Dimension

* FUSE



Rated Voltage : 12.5kV
Rated Current : 1A



HV/CT
고압 변류기

HV/VT·MOF
고압 변압기 절연물

LV/CT
저압 변류기

LV/VT
저압 변압기

RELA
보호 계전기

ELD
누전 경보기

GFR
지락 계전기

ZCT
영용 변류기

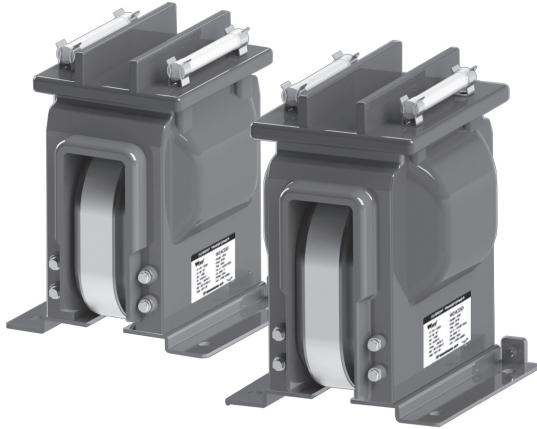
METER
지시 전기 계기

SPD
서지 보호기

SHUNT
센트

3.6~12kV (0~200VA)

W12V2A / W12V2B



EPOXY RESIN CASTING VOLTAGE TRANSFORMERS for highest voltage of equipment up to 12kV

W12V2A, W12V2B 변압기는 최고회로전압 12kV급 절연성능으로 설계되어진 옥내용 에폭시물드 제품으로 그 이하 전압(3.6, 7.2kV) 제품에 대해서는 동일한 치수 (DIMENSION)를 가진다. 안정적인 절연능력 및 전기적 특성을 갖으며, 기계적 안전성과 유지보수의 용이성이 우수한 제품이다. 또한 단일 또는 다중 탭을 갖는 제품으로 설계 가능합니다.

The W12V2A, W12V2B voltage transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 12kV-class insulation performance, and has the same dimensions for the less voltage(3.6, 7.2kV) product. This has a stable insulation capacity and electrical property, has excellent mechanical safety, and is easy to maintain.

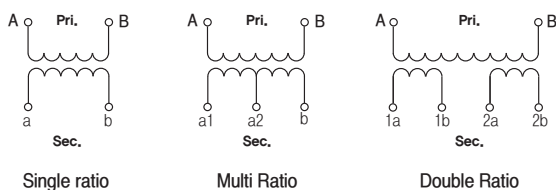
● Feature

규격 Standard	IEC - IEEE - KS etc.
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL		
	W12V2A / W12V2B		
Highest voltage for equipment (Um)	3.6kV	7.2kV	12kV
Rated power-frequency withstand voltage (60sec)	10kV	20kV	28kV
Rated lighting Impulse withstand voltage (1.2/50μs)/full wave	40kV	60kV	75kV
Rated frequency	50Hz, 60Hz, others on request		
Rated Primary Voltage	11000V		
Rated Secondary Voltage	110V, 220V		
Rated Voltage factor	1.2Con't		
Thermal Limit Burden	700VA		
Insulation class (according to IEC 60085)	E		
Standard	According to customer requirements		
Temperature Category	According to customer requirements		
Weight (approx.)	24kg		

● Connection Diagram

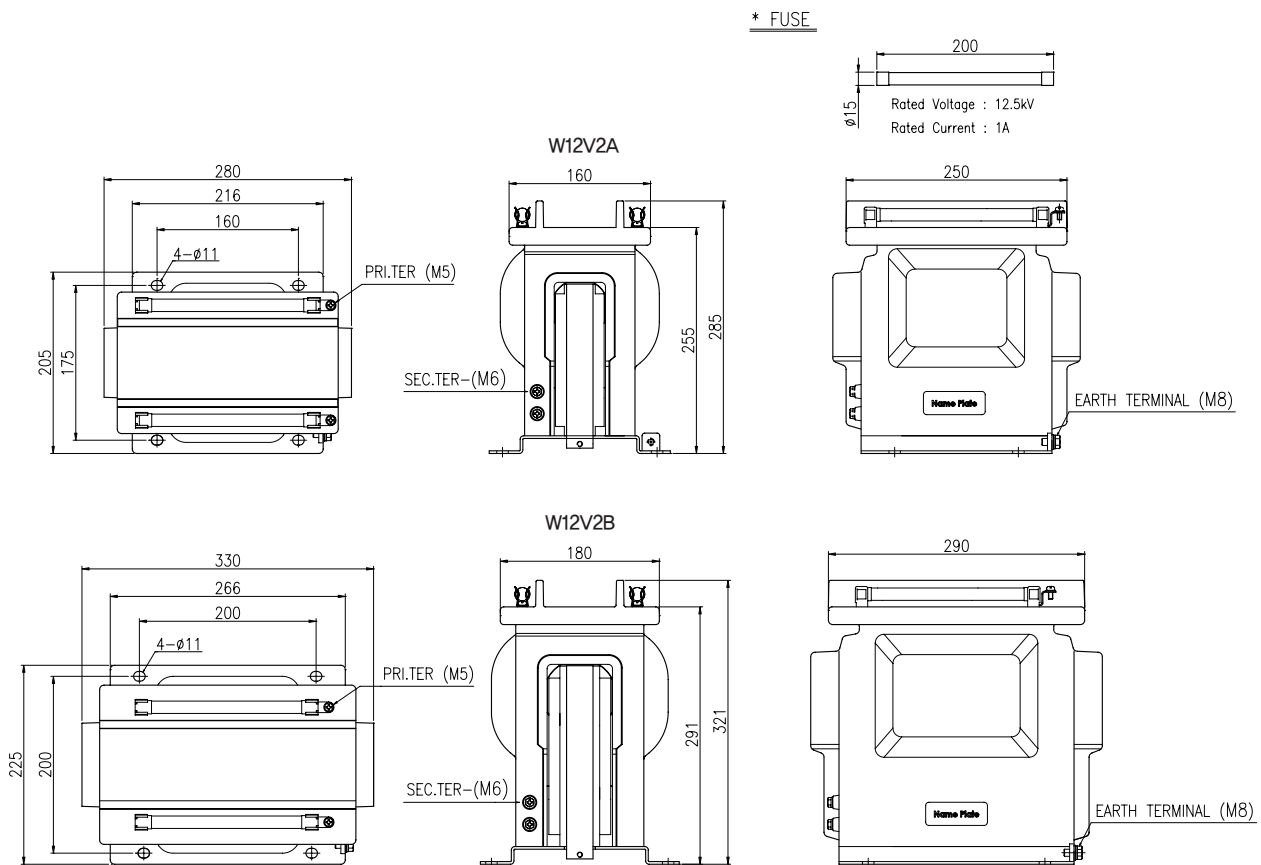


3.6~12kV (0~200VA)

● Specification

ITEM	Highest voltage for equipment (Um)	Voltage Ratio (V)	IEC 61869-3			IEEE C57.13	
			Accuracy Class	Burden (VA)	Voltage Factor	Accuracy Class	Burden (VA)
W12V2A	12kV	11000/110, 220	0.2	40	1.2Con't	0.3	M
			0.5	100		0.6	Y
			1.0	200		1.2	Z
W12V2B	12kV	11000/110, 220	0.2	50	1.2Con't	0.3	Y
			0.5	200		0.6	Z

● Dimension



HV / CT
고압 변류기

HV / VT · MOF
고압 변압기 절연물

LV / CT
저압 변류기

LV / VT
저압 변압기

RELAY
보호 계전기

ELD
누전경보기

GFRR
지락 계전기

ZCT
영용 변류기

METER
지시 전기계기

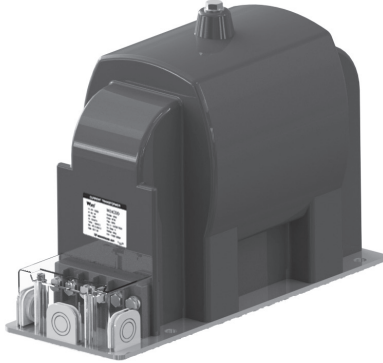
SPD
서지 보호기

SHUNT
센트

EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

17.5~24(25.8)kV (0~200VA)

W24V1A



EPOXY RESIN CASTING VOLTAGE TRANSFORMERS for highest voltage of equipment up to 24kV

W24V1A 변압기는 최고회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 안정적인 절연능력 및 전기적 특성을 갖으며, 기계적 안전성과 유지보수의 용이성이 우수한 제품이다. 또한 단일 또는 다중 탭을 갖는 제품으로 설계 가능합니다.

The W24V1A voltage transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and has the same dimensions for the less voltage(17.5kV) product. This has a stable insulation capacity and electrical property, has excellent mechanical safety, and is easy to maintain. In addition, this can be designed in products with single of multiple taps.

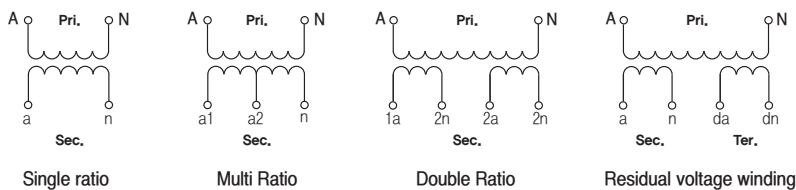
● Feature

규격 Standard	IEC - IEEE - KS - JEC etc.
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL	
	W24V1A	
Highest voltage for equipment (Um)	17.5kV	24(25.8)kV
Rated power-frequency withstand voltage (60sec)	38kV	50kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave	95kV	125kV
Rated frequency	50Hz, 60Hz, others on request	
Rated Primary Voltage	13800/√3 V, 22000/√3 V, 22900/√3 V	
Rated Secondary Voltage	110/√3 V, 190/√3 V, 380/√3 V	
Rated Voltage factor	1.2Cont, 1.5/30s, 1.9/30s, 1.9/8h	
Thermal Limit Burden	800VA	
Insulation class (according to IEC 60085)	E	
Standard	According to customer requirements	
Temperature Category	According to customer requirements	
Weight (approx.)	22kg	

● Connection Diagram



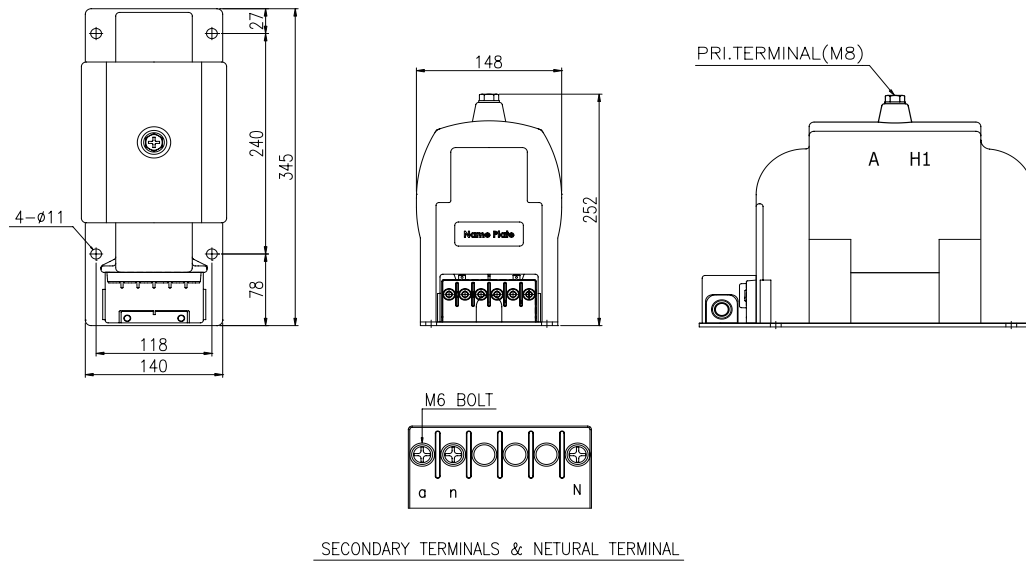
EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

17.5~24(25.8)kV (0~200VA)

● Specification

Highest voltage for equipment (Um)	Voltage Ratio (V)	IEC 61869-3			IEEE C57.13		JEC 1201		
		Voltage Factor	Accuracy Class	Burden (VA)	Burden (VA)	Voltage Factor	Voltage Factor	Accuracy Class	Burden (VA)
24kV	$\frac{22900}{\sqrt{3}} / \frac{110}{\sqrt{3}} (\frac{190}{\sqrt{3}}) V$	1.2cont 1.9/8h	0.5	50	-	-	1.1cont 1.9/30min	1P	200
			1.0	100					
		200							

● Dimension



HV / CT
고압 변류기

HV / VT · MOF
고압 변압기 절연물

LV / CT
저압 변류기

LV / VT
저압 변압기

RELA
보호 계전기

ELD
누전경보기

GFR
지락 계전기

ZCT
영상 변류기

METER
지시 계전기

SPD
서지 보호기

SHUNT
센트

EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

17.5~24(25.8)kV (0~200VA)

W24V1B



EPOXY RESIN CASTING VOLTAGE TRANSFORMERS for highest voltage of equipment up to 24kV

W24V1B 변압기는 최고회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 안정적인 절연능력 및 전기적 특성을 갖으며, 기계적 안전성과 유지보수의 용이성이 우수한 제품이다. 또한 단일 또는 다중 탭을 갖는 제품으로 설계 가능합니다.

The W24V1B voltage transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and has the same dimensions for the less voltage(17.5kV) product. This has a stable insulation capacity and electrical property, has excellent mechanical safety, and is easy to maintain.

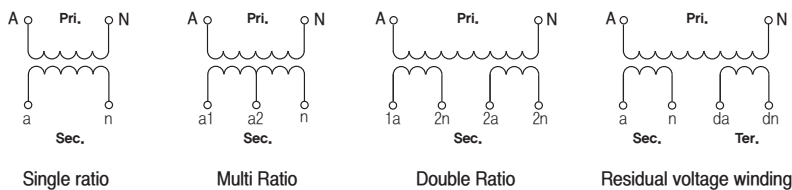
● Feature

규격 Standard	IEC - IEEE - KS etc.
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL	
	W24V1B	
Highest voltage for equipment (Um)	17.5kV	24(25.8)kV
Rated power-frequency withstand voltage (60sec)	38kV	50kV
Rated lighting Impulse withstand voltage (1.2/50 μ s)/full wave	95kV	125kV
Rated frequency	50Hz, 60Hz, others on request	
Rated Primary Voltage	11000/ $\sqrt{3}$ V, 22000/ $\sqrt{3}$ V, 22900/ $\sqrt{3}$ V	
Rated Secondary Voltage	110/ $\sqrt{3}$ V, 190/ $\sqrt{3}$ V	
Rated Voltage factor	1.2Cont, 1.5/30s, 1.9/30s, 1.9/8h	
Thermal Limit Burden	800VA	
Insulation class (according to IEC 60085)	E	
Standard	According to customer requirements	
Temperature Category	According to customer requirements	
Weight (approx.)	30kg	

● Connection Diagram



EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)



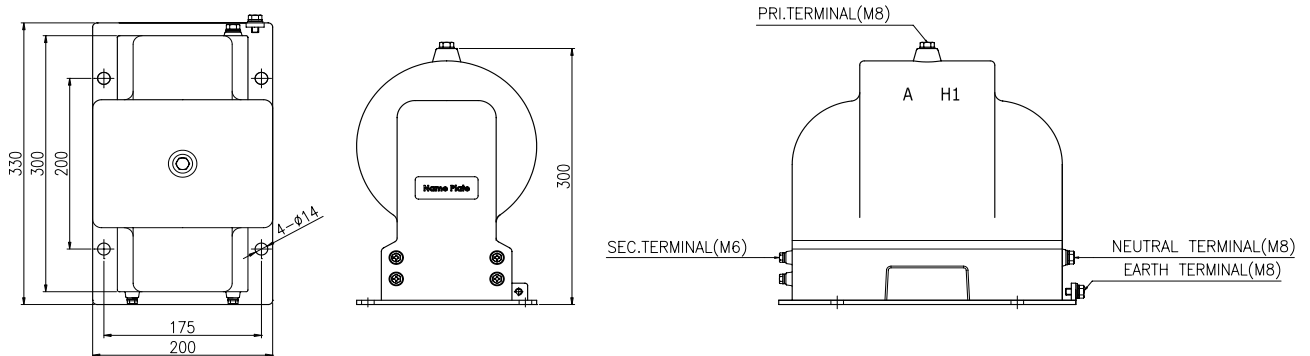
고압계기용변성기

3.6~12kV (0~200VA)

● Specification

Highest voltage for equipment (Um)	Voltage Ratio (V)	IEC 61869-3			IEEE C57.13	
		Accuracy Class	Burden (VA)	Voltage Factor	Accuracy Class	Burden (VA)
12kV	$\frac{11000}{\sqrt{3}} / \frac{110}{\sqrt{3}} / \frac{190}{3}$	0.2 0.5	75/200 200/200	1.2Con't 1.5/30s		
		0.2/3P 0.5/3P	50/200 200/200	1.2Con't 1.9/8h		
24kV	$\frac{22900}{\sqrt{3}} / \frac{110}{\sqrt{3}} (\frac{190}{3})$	0.2 0.5	75 200	1.2Con't 1.5/30s	0.3	Y
		0.2 0.5	50 200	1.2Con't 1.9/8h	0.6	Z

● Dimension



HV / CT
고압 변류기

HV / VT · MOF
고압 변압기 접연물

LV / CT
저압 변류기

LV / VT
저압 변압기

RELA Y
보호 계전기

ELD
누전경보기

GF R
지락 계전기

ZCT
영상 변류기

METER
지시 전기 계기

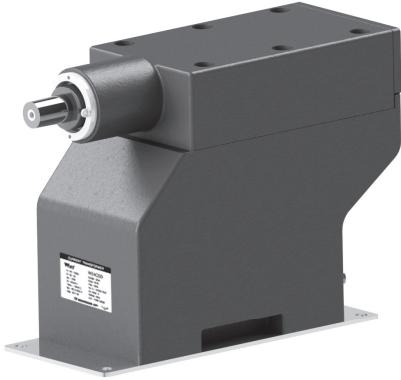
SPD
서지 보호기

SHUNT
센트

EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

24(25.8)kV (0~200VA)

W24V1C



EPOXY RESIN CASTING VOLTAGE TRANSFORMERS for highest voltage of equipment up to 24kV

W24V1C 변압기는 최고회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(3.6, 7.2, 12kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 안정적인 절연능력 및 전기적 특성을 갖으며, 기계적 안전성과 유지보수의 용이성이 우수한 제품입니다.

The W24V1C voltage transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and has the same dimensions for the less voltage(3.6, 7.2, 12kV) product. This has a stable insulation capacity and electrical property, has excellent mechanical safety, and is easy to maintain.

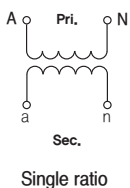
● Feature

규격 Standard	IEC - IEEE - KS etc.
설계 및 적용 Design and Application	- 계기 및 보호용 Designed for measuring and/or protection - 퓨즈 내장형 Support Type with Fuse
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	자동진공주형방식 Automatic vacuum casting method

● Electrical characteristic

ITEM	MODEL	W24V1C
Highest voltage for equipment (Um)		24kV
Rated power-frequency withstand voltage (60sec)		50kV
Rated lightning impulse withstand voltage (1.2/50μs)full wave		125kV
Rated frequency		50Hz, 60Hz, others on request
Rated Primary Voltage		22900/√3 V
Rated Secondary Voltage		110/√3 V, 190/√3 V, 380/√3 V
Rated Voltage factor		1.2Cont, 1.5/30s, 1.9/30s, 1.9/8h
Thermal Limit Burden		700VA
Insulation class (according to IEC 60085)		E
Standard		According to customer requirements
Temperature Category		According to customer requirements
Weight (approx.)		40kg

● Connection Diagram



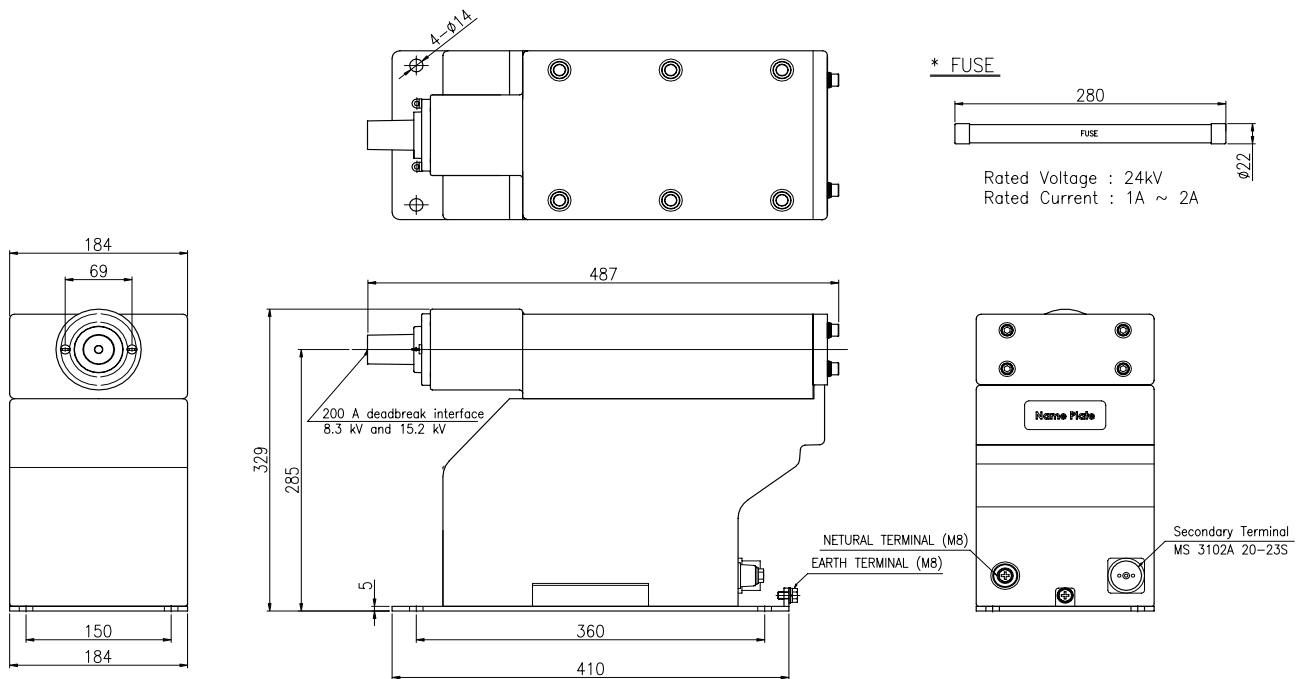
EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

24(25.8)kV (0~200VA)

● Specification

Highest voltage for equipment (Um)	Voltage Ratio (V)	IEC 61869-3			IEEE C57.13	
		Accuracy Class	Burden (VA)	Voltage Factor	Accuracy Class	Burden (VA)
24kV	$\frac{22900}{\sqrt{3}} / \frac{380}{\sqrt{3}}$	1.0	200	1.2Cont 1.5/30s	1.2	Z
		1.0	100	1.2Cont 1.9/30s		

● Dimension



HV / CT
고압 변류기

HV / VT · MOF
고압 변압기 접연물

LV / CT
저압 변류기

LV / VT
저압 변압기

RELA
보호 계전기

ELD
누전경보기

GF
지락 계전기

ZCT
영상 변류기

METER
지시 전기 계기

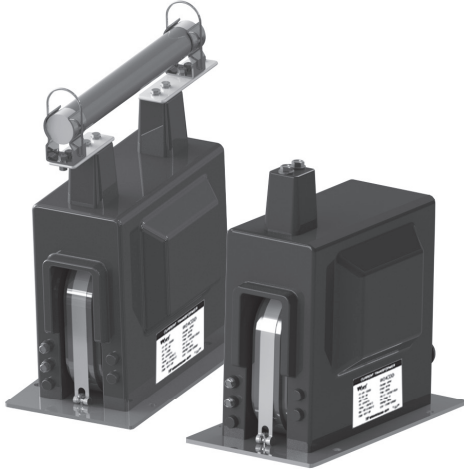
SPD
서지 보호기

SHUNT
센트

EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

17.5~24(25.8)kV (0~200VA)

W24V1D(F) / W24V1D



EPOXY RESIN CASTING VOLTAGE TRANSFORMERS for highest voltage of equipment up to 24kV

W24V1D/W24V1D(F) 변압기는 최고회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 안정적인 절연능력 및 전기적 특성을 갖으며, 기계적 안전성과 유지보수의 용이성이 우수한 제품이다. 또한 단일 또는 다중 탭을 갖는 제품으로 설계 가능합니다.

The W24V1D/W24V1D(F) voltage transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and has the same dimensions for the less voltage(17.5kV) product. This has a stable insulation capacity and electrical property, has excellent mechanical safety, and is easy to maintain. In addition, this can be designed in products with single of multiple taps.

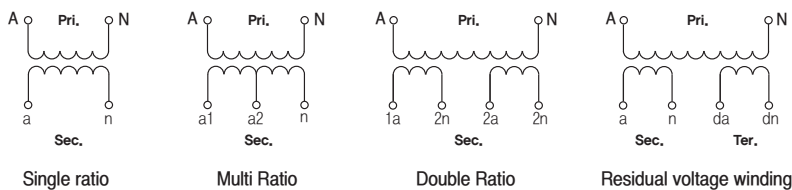
● Feature

규격 Standard	IEC - IEEE - KS - JEC etc.
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL	
	W24V1D / W24V1D(F)	
Highest voltage for equipment (Um)	17.5kV	24(25.8)kV
Rated power-frequency withstand voltage (60sec)	38kV	50kV
Rated lighting Impulse withstand voltage (1.2/50μs)/full wave	95kV	125kV
Rated frequency	50Hz, 60Hz, others on request	
Rated Primary Voltage	13800/√3V, 22000/√3V, 22900/√3V	
Rated Secondary Voltage	110/√3V, 190/√3V, 380/√3V	
Rated Voltage factor	1.2Cont, 1.5/30s, 1.9/30s, 1.9/8h	
Thermal Limit Burden	800VA	
Insulation class (according to IEC 60085)	E	
Standard	According to customer requirements	
Temperature Category	According to customer requirements	
Weight (approx.)	30kg	

● Connection Diagram



EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)



고압계기용변성기

17.5~24(25.8)kV (0~200VA)

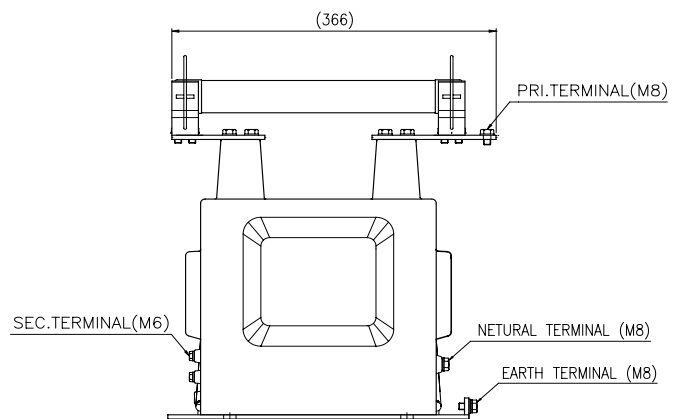
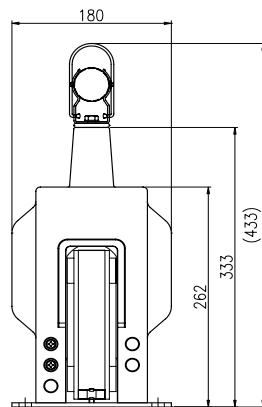
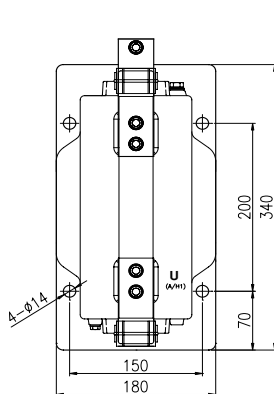
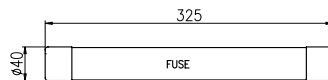
● Specification

Highest voltage for equipment (Um)	Voltage Ratio (V)	IEC 61869-3			IEEE C57.13	
		Voltage Factor	Accuracy Class	Burden (VA)	Voltage Factor	Burden (VA)
17.5kV	$\frac{13800}{\sqrt{3}} / \frac{110}{\sqrt{3}} V$	1.2cont 1.9/8h	0.5, 1.0	50	0.3, 1.2	WX
			1.0	100		WY
24kV	$\frac{22000}{\sqrt{3}} / \frac{110}{\sqrt{3}} V$	1.2cont 1.9/8h	0.5, 1.0	50	0.3, 1.2	WX
			1.0	100		WY
25.8kV	$\frac{22900}{\sqrt{3}} / \frac{110}{\sqrt{3}} (-\frac{190}{\sqrt{3}}) V$	1.2cont 1.5/30sec	0.5, 1.0	50	0.3, 1.2	M
			1.0	100		
			1.0	200		
		1.2cont 1.9/30sec	0.5, 1.0	50	0.6, 1.2	Y
			1.0	100		
			1.0	200		
17.5kV	$\frac{13800}{\sqrt{3}} / \frac{110}{\sqrt{3}} / \frac{190}{3} V$	1.2cont 1.9/8h	0.5/3P	100/200	-	-
			1.0/3P	200/200		
24kV	$\frac{22900}{\sqrt{3}} / \frac{110}{\sqrt{3}} / \frac{110}{3} V$	1.2cont 1.9/8h	1.0/3P	100/200	-	-
				200/200		
25.8kV	$\frac{22900}{\sqrt{3}} / \frac{110}{\sqrt{3}} (-\frac{190}{\sqrt{3}}) / \frac{110}{3} V$	1.2cont 1.5/30sec	1.0/3P	100/100	-	-
				100/200		
				50/100		
		1.2cont 1.9/30sec	1.0/3P	100/100		
				100/200		
				50/100		
1.2cont 1.9/8h	1.0/3P	100/100				
		100/100				

● Dimension

* FUSE

Rated Voltage : 24kV
Rated Current : 1A



HV/CT 고압변류기

HV/VT·MOF 고압변압기 절연물

LV/CT 저압변류기

LV/VT 저압변압기

RELA 보호계전기

ELD 누전경보기

GFR 지락계전기

ZCT 영상변류기

METER 지시계기

SPD 서지보호기

SHUNT 셉트

EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

24(25.8)kV (0~200VA)

W24V1DA



EPOXY RESIN CASTING VOLTAGE TRANSFORMERS for highest voltage of equipment up to 25.8kV

W24V1H 변압기는 최고회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(12kV, 17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 안정적인 절연능력 및 전기적 특성을 갖으며, 기계적 안전성과 유지보수의 용이성이 우수한 제품이다. 또한 단일 또는 다중 탭을 갖는 제품으로 설계 가능하다.

The W24V1H voltage transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and has the same dimensions for the less voltage (12kV, 17.5kV) product. This has a stable insulation capacity and electrical property, has excellent mechanical safety, and is easy to maintain. It is also possible to design products with single or multiple taps.

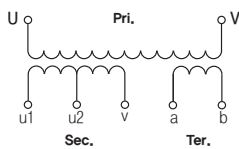
● Feature

규격 Standard	ES-5950-0005
설계 및 적용 Design and Application	- 계기 및 보호용 Designed for measuring and/ or protection - For GIS
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 진공주형방식 Vacuum casting method

● Electrical characteristic

ITEM	MODEL	W24V1DA
Highest voltage for equipment (Um)		25.8kV
Rated power-frequency withstand voltage (60sec)		70kV
Rated lightning impulse withstand voltage (1,2/50μs)full wave		150kV
Rated frequency		60Hz, others on request
Rated Primary Voltage		13200V
Rated Secondary Voltage		110V, 110/√3 V, 190/√3 V
Rated Voltage factor		1,2Cont, 1,5/30s
Insulation class (according to IEC 60085)		E
Standard		ES-5950-0005
Weight (approx.)		30kg

● Connection Diagram



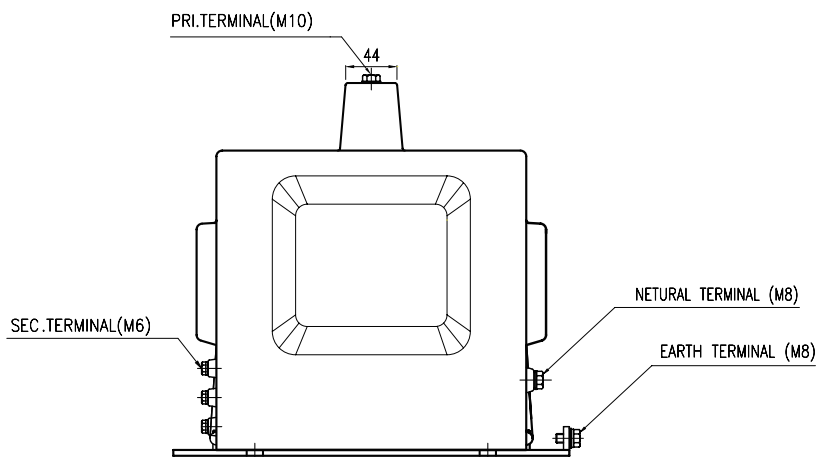
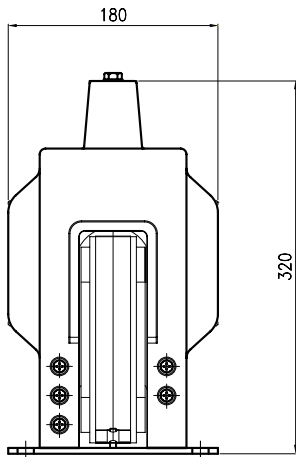
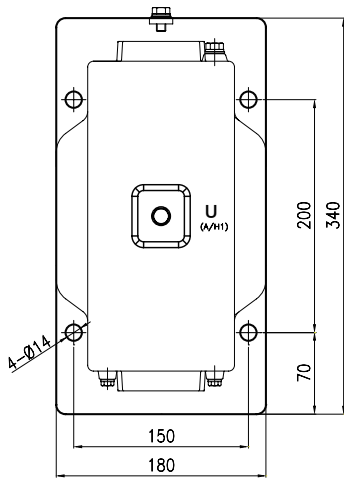
EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

24(25.8)kV (0~200VA)

● Specification

Highest voltage for equipment (Um)	Voltage Ratio (V)	ES-5950-0005		
		Voltage Factor	Accuracy Class	Burden (VA)
25.8kV	13200V/110 - 110/√3/190/3V	1.2Cont, 1.5/30s	1.0	200
			3P	200

● Dimension



HV / CT
고압 변류기

HV / VVT · MOF
고압 변압기 접연물

LV / CT
저압 변류기

LV / VVT
저압 변압기

RELA Y
보호 계전기

ELD
누전경보기

GF R
지락 계전기

ZCT
영상 변류기

METER
지시 전기 계기

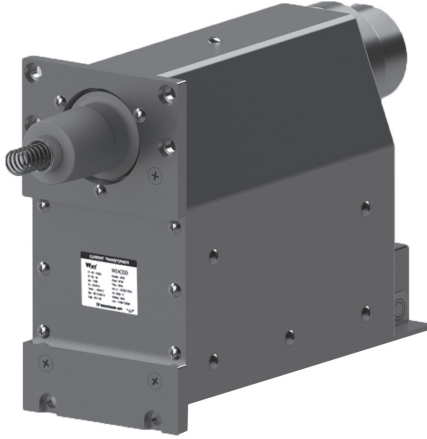
SPD
서지 보호기

SHUNT
센트

EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

12~24(25.8)kV (0~200VA)

W24V1E



EPOXY RESIN CASTING VOLTAGE TRANSFORMERS for highest voltage of equipment up to 24kV

W24V1E 변압기는 최고회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(12kV, 17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 안정적인 절연능력 및 전기적 특성을 갖으며, 기계적 안전성과 유지보수의 용이성이 우수한 제품이다.

The W24V1E voltage transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and has the same dimensions for the less voltage(12.5kV, 17.5kV) product. This has a stable insulation capacity and electrical property, has excellent mechanical safety, and is easy to maintain.

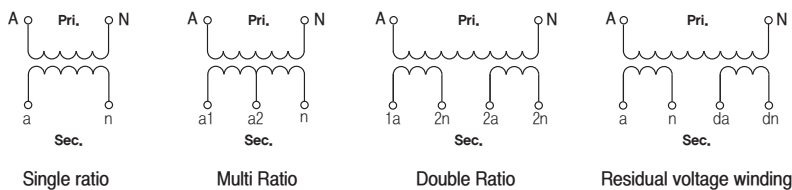
● Feature

규격 Standard	IEC - IEEE - KS etc.
설계 및 적용 Design and Application	- 계기 및 보호용 Designed for measuring and/or protection - 퓨즈 내장형 Support Type with Fuse - For GIS
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method

● Electrical characteristic

ITEM	MODEL		
	W24V1E		
Highest voltage for equipment (Um)	12kV	17.5kV	24kV
Rated power-frequency withstand voltage (60sec)	28kV	38kV	50kV
Rated lighting Impulse withstand voltage (1.2/50μs)full wave	75kV	95kV	125kV(150)
Rated frequency	50Hz, 60Hz, others on request		
Rated Primary Voltage	22900/√3 V		
Rated Secondary Voltage	110/√3 V, 190/√3 V, 380/√3 V		
Rated Voltage factor	1.2Cont, 1.5/30s, 1.9/30s, 1.9/8h		
Thermal Limit Burden	700VA		
Insulation class (according to IEC 60085)	E		
Standard	According to customer requirements		
Temperature Category	According to customer requirements		
Weight (approx.)	40kg		

● Connection Diagram



EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)



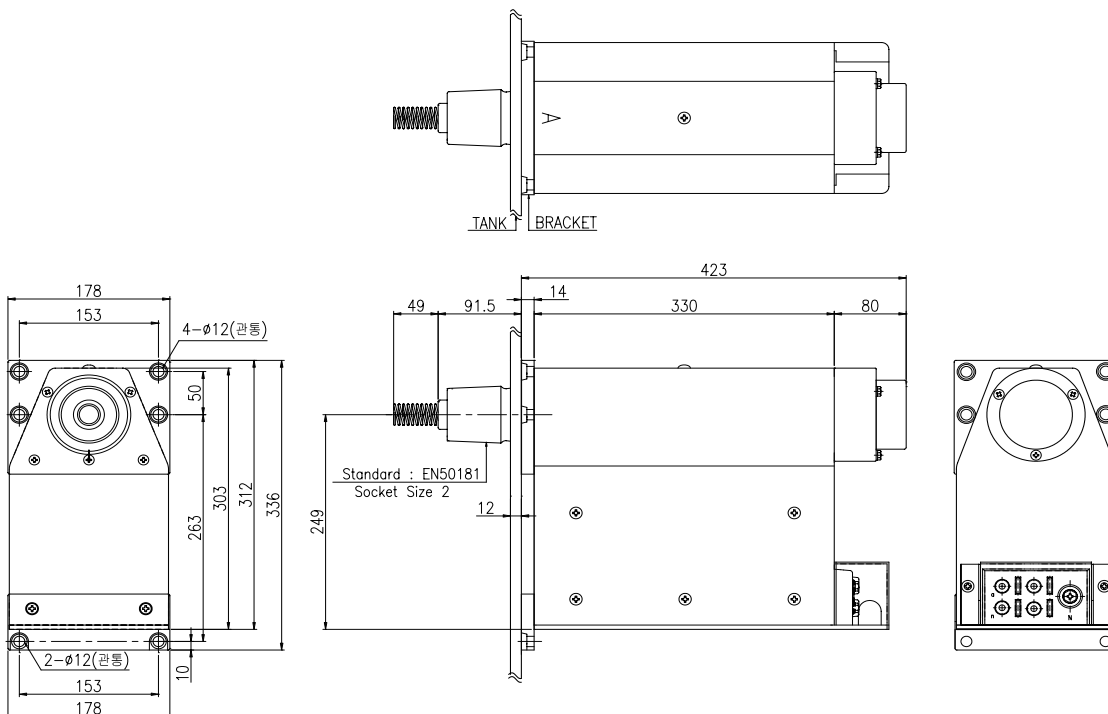
고압계기용변성기

12~24(25.8)kV (0~200VA)

● Specification

Highest voltage for equipment (Um)	Voltage Ratio (V)	IEC 61869-3			IEEE C57.13	
		Voltage Factor	Accuracy Class	Burden (VA)	Burden (VA)	Voltage Factor
24kV	$\frac{22900}{\sqrt{3}} / \frac{190}{\sqrt{3}} (\frac{100}{\sqrt{3}}) V$	1.2Con't 1.9/8h	0.5	50	-	-
				100		
		1	200			

● Dimension



HV / CT
고압 변류기

HV / VT · MOF
고압 변압기 접연물

LV / CT
저압 변류기

LV / VT
저압 변압기

RELA
보호 계전기

ELD
누전경보기

GF
지락 계전기

ZCT
영상 변류기

METER
지시 계전기

SPD
서지 보호기

SHUNT
센트

EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

12~24(25.8)kV (0~200VA)

W24V1EH



EPOXY RESIN CASTING VOLTAGE TRANSFORMERS for highest voltage of equipment up to 24kV

W24V1EH 변압기는 최고회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(12kV, 17.5kV) 제품에 대해서는 동일한 치수 (DIMENSION)를 가진다. 안정적인 절연능력 및 전기적 특성을 갖으며, 기계적 안전성과 유지보수의 용이성이 우수한 제품이다. 또한 단일 또는 다중 탭을 갖는 제품으로 설계 가능하다.

The W24V1EH voltage transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and has the same dimensions for the less voltage (12kV, 17.5kV) product. This has a stable insulation capacity and electrical property, has excellent mechanical safety, and is easy to maintain. It is also possible to design products with single or multiple taps.

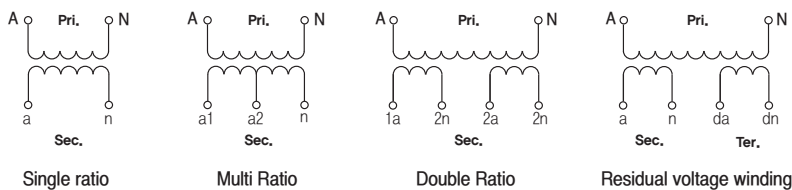
● Feature

규격 Standard	IEC - IEEE - KS etc.
설계 및 적용 Design and Application	- 계기 및 보호용 Designed for measuring and/or protection - 퓨즈 내장형 Support Type with Fuse - For GIS
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	진공주형방식 Vacuum casting method

● Electrical characteristic

ITEM	MODEL		
	W24V1EH		
Highest voltage for equipment (Um)	12kV	17.5kV	24kV
Rated power-frequency withstand voltage (60sec)	28kV	38kV	50kV
Rated lighting Impulse withstand voltage (1.2/50μs)full wave	75kV	95kV	125kV(150)
Rated frequency	50Hz, 60Hz, others on request		
Rated Primary Voltage	22900/√3 V		
Rated Secondary Voltage	110/√3 V, 190/√3 V, 380/√3 V		
Rated Voltage factor	1.2Cont, 1.5/30s, 1.9/30s, 1.9/8h		
Thermal Limit Burden	700VA		
Insulation class (according to IEC 60085)	E		
Standard	According to customer requirements		
Temperature Category	According to customer requirements		
Weight (approx.)	40kg		

● Connection Diagram



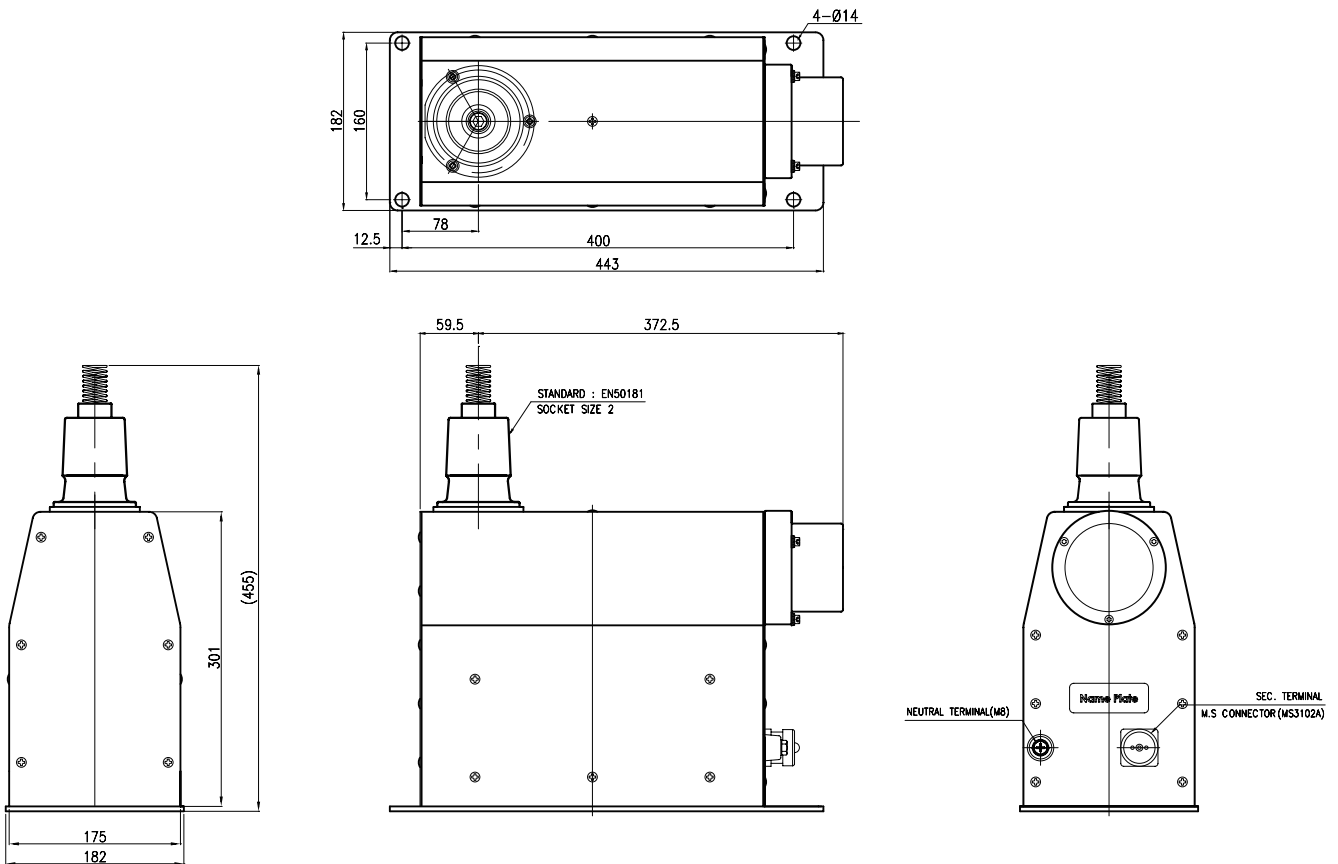
EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

12~24(25.8)kV (0~200VA)

● Specification

Highest voltage for equipment (Um)	Voltage Ratio (V)	IEC 61869-3		
		Voltage Factor	Accuracy Class	Burden (VA)
24kV	$\frac{22900}{\sqrt{3}} / \frac{190}{\sqrt{3}} (\frac{100}{\sqrt{3}}) V$	1.2Con't 1.9/8h	0.5	50
			1	100
	$\frac{22900}{\sqrt{3}} / (\frac{100}{\sqrt{3}})$	1.2Con't 1.9/8h	0.5	50
			1	100

● Dimension



HV / CT
고압 변류기

HV / VT · MOF
고압 변압기 접연물

LV / CT
저압 변류기

LV / VT
저압 변압기

RELA
보호 계전기

ELD
누전경보기

GFR
지락 계전기

ZCT
영상 변류기

METER
지시 계기

SPD
서지 보호기

SHUNT
센트

EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

24(25.8)kV (0~200VA)

W24V1F



EPOXY RESIN CASTING VOLTAGE TRANSFORMERS for highest voltage of equipment up to 24kV

W24V1F 변압기는 최고회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품 및 퓨즈내장형으로 안정적인 절연능력 및 전기적 특성을 갖으며, 기계적 안전성과 유지보수의 용이성이 우수한 제품이다. 또한 단일 또는 다중 탭을 갖는 제품으로 설계 가능합니다.

The W24V1F voltage transformer is an indoor epoxy resin cast product with fuses, designed in a maximum circuit voltage 24kV-class insulation performance, that has a stable insulation capacity and electrical property, has excellent mechanical safety, and is easy to maintain. In addition, this can be designed in products with single of multiple taps.

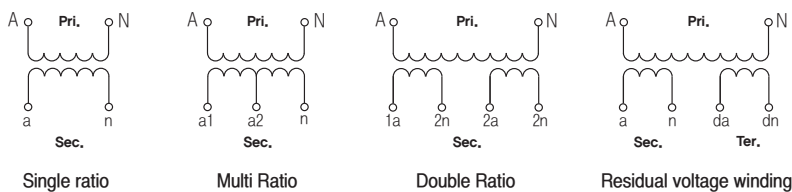
● Feature

규격 Standard	IEC - IEEE - KS etc.
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method - APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL	W24V1F
Highest voltage for equipment (Um)		24(25.8)kV
Rated power-frequency withstand voltage (60sec)		50kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave		125kV
Rated frequency		50Hz, 60Hz, others on request
Rated Primary Voltage		22000/√3 V, 22900/√3 V
Rated Secondary Voltage		110/√3 V, 190/√3 V
Rated Voltage factor		1.2Cont, 1.5/30s, 1.9/30s, 1.9/8h
Thermal Limit Burden		600VA
Insulation class (according to IEC 60085)		E
Standard		According to customer requirements
Temperature Category		According to customer requirements
Weight (approx.)		25kg

● Connection Diagram



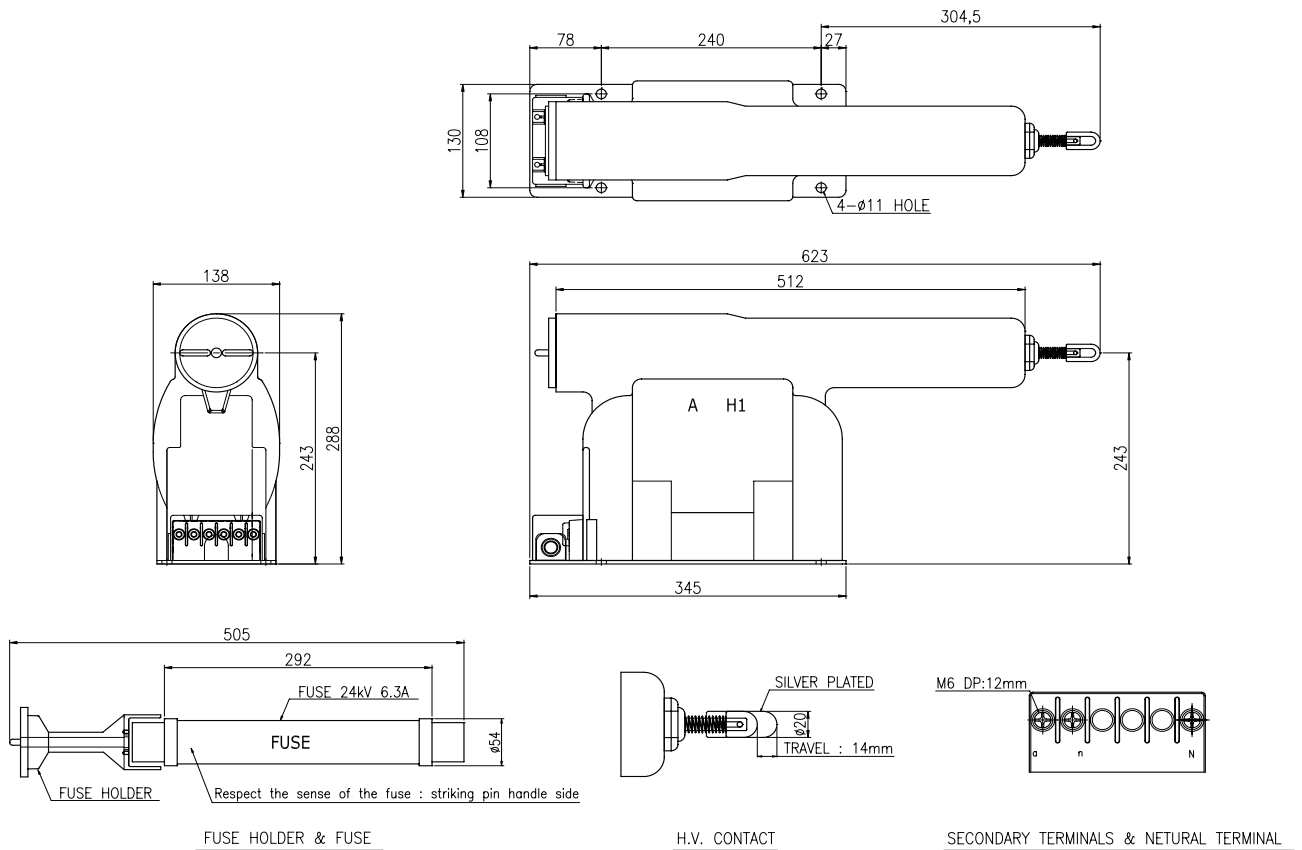
EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

24(25.8)kV (0~200VA)

● Specification

Highest voltage for equipment (Um)	Voltage Ratio (V)	IEC 61869-3			IEEE C57.13	
		Voltage Factor	Accuracy Class	Burden (VA)	Burden (VA)	Voltage Factor
24kV	$\frac{22900}{\sqrt{3}} / \frac{110}{\sqrt{3}} / (\frac{190}{3})$ V	1.2cont	0.5	50	-	-
			1.0	100		
		1.9/8h		200		

● Dimension



HV / CT
고압 변류기

HV / VT · MOF
고압 변압기 접연물

LV / CT
저압 변류기

LV / VT
저압 변압기

RELA
보호 계전기

ELD
누전경보기

GFR
지락 계전기

ZCT
영상 변류기

METER
지시 전기 계기

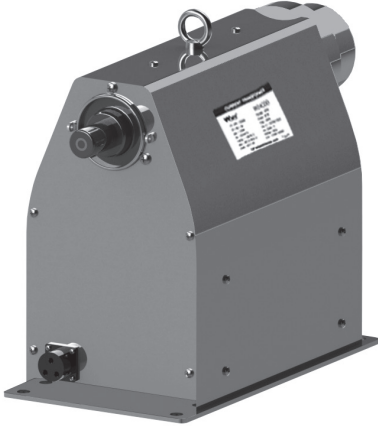
SPD
서지 보호기

SHUNT
센트

EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

24(25.8)kV (0~200VA)

W24V1G



EPOXY RESIN CASTING VOLTAGE TRANSFORMERS for highest voltage of equipment up to 24kV

W24V1G 변압기는 최고회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(12kV, 17.5kV, 24kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 안정적인 절연능력 및 전기적 특성을 갖추고, 기계적 안전성과 유지보수의 용이성이 우수한 제품이다.

The W24V1G voltage transformer is an indoor epoxy resin cast product with fuses, designed in a maximum circuit voltage 24kV-class insulation performance, that has a stable insulation capacity and electrical property, has excellent mechanical safety, and is easy to maintain. In addition, this can be designed in products with single of multiple taps.

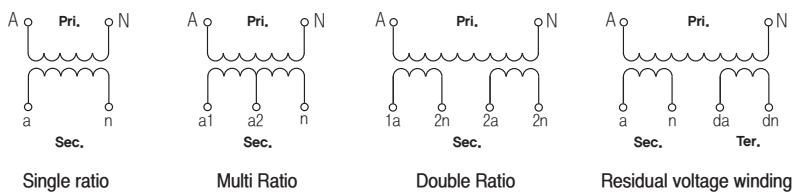
● Feature

규격 Standard	IEC - IEEE - KS etc.
설계 및 적용 Design and Application	- 계기 및 보호용 Designed for measuring and/ or protection - 퓨즈 내장형 Support Type with Fuse
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method

● Electrical characteristic

ITEM	MODEL		
	W24V1G		
Highest voltage for equipment (Um)	12kV	17.5kV	24kV
Rated power-frequency withstand voltage (60sec)	28kV	38kV	50kV
Rated lighting impulse withstand voltage (1.2/50μs)/full wave	75kV	95kV	125kV
Rated frequency	50Hz, 60Hz, others on request		
Rated Primary Voltage	13200V, 22900/√3 V		
Rated Secondary Voltage	110V, 110/√3 V, 190/√3 V, 220V, 380/√3		
Rated Voltage factor	1.2Cont, 1.5/30s, 1.9/30s, 1.9/8h		
Thermal Limit Burden	1600VA		
Insulation class (according to IEC 60085)	E		
Standard	According to customer requirements		
Temperature Category	According to customer requirements		
Weight (approx.)	58kg		

● Connection Diagram



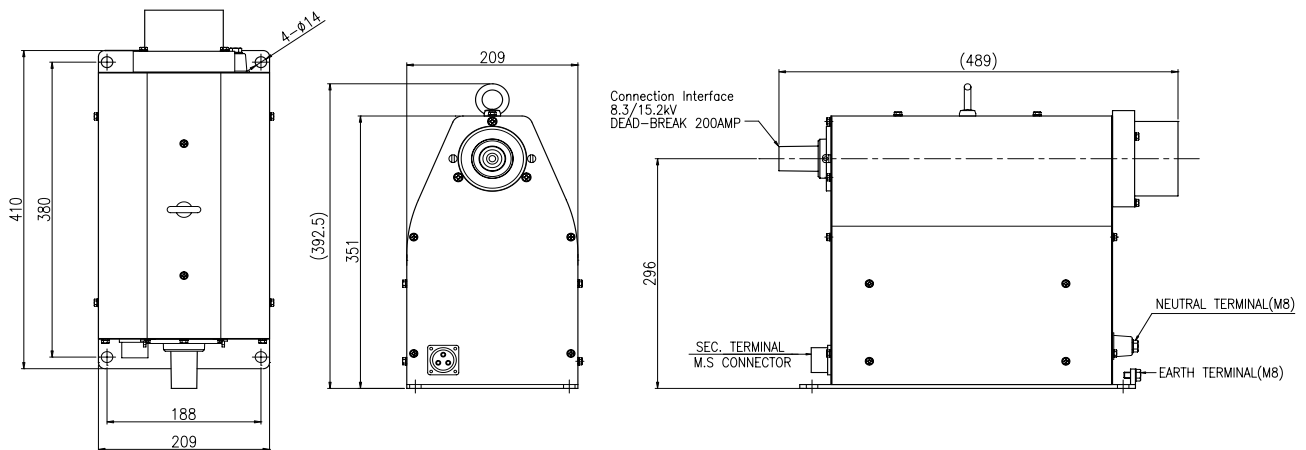
EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

24(25.8)kV (0~200VA)

● Specification

Highest voltage for equipment (Um)	Voltage Ratio (V)	IEC 61869-3		
		Voltage Factor	Accuracy Class	Burden (VA)
24kV	13200 / 220-110V	1.2cont 1.5/30s	3.0	800
	$\frac{22900}{\sqrt{3}} / \frac{110}{\sqrt{3}} \left(\frac{190}{3} \right) V$	1.2cont 1.5/30s	3.0	800

● Dimension



HV / CT
고압 변류기

HV / VT · MOF
고압 변압기 절연물

LV / CT
저압 변류기

LV / VT
저압 변압기

RELA
보호 계전기

ELD
누전경보기

GF
지락 계전기

ZCT
영상 변류기

METER
지시 전기 계기

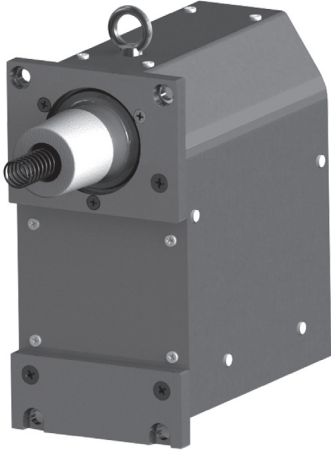
SPD
서지 보호기

SHUNT
센트

EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

24(25.8)kV (0~200VA)

W24V1H



EPOXY RESIN CASTING VOLTAGE TRANSFORMERS for highest voltage of equipment up to 24kV

W24V1H 변압기는 최고회로전압 24kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(12kV, 17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 안정적인 절연능력 및 전기적 특성을 갖추고, 기계적 안전성과 유지보수의 용이성이 우수한 제품이다. 또한 단일 또는 다중 탭을 갖는 제품으로 설계 가능하다.

The W24V1H voltage transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and has the same dimensions for the less voltage (12kV, 17.5kV) product. This has a stable insulation capacity and electrical property, has excellent mechanical safety, and is easy to maintain. It is also possible to design products with single or multiple taps.

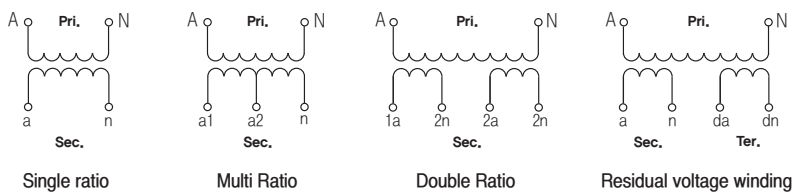
● Feature

규격 Standard	IEC - IEEE - KS etc.
설계 및 적용 Design and Application	- 계기 및 보호용 Designed for measuring and/or protection - For GIS
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	진공주형방식 Vacuum casting method

● Electrical characteristic

ITEM	MODEL		
	W24V1H		
Highest voltage for equipment (Um)	12kV	17,5kV	24kV
Rated power-frequency withstand voltage (60sec)	28kV	38kV	50kV
Rated lighting impulse withstand voltage (1.2/50μs)full wave	75kV	95kV	125kV
Rated frequency	50Hz, 60Hz, others on request		
Rated Primary Voltage	13800V/√3V, 22000/√3V, 22900/√3V		
Rated Secondary Voltage	110/√3V, 190/√3V		
Rated Voltage factor	1,2Cont, 1,5/30s		
Thermal Limit Burden	600VA		
Insulation class (according to IEC 60085)	E		
Standard	According to customer requirements		
Temperature Category	According to customer requirements		
Weight (approx.)	25kg		

● Connection Diagram



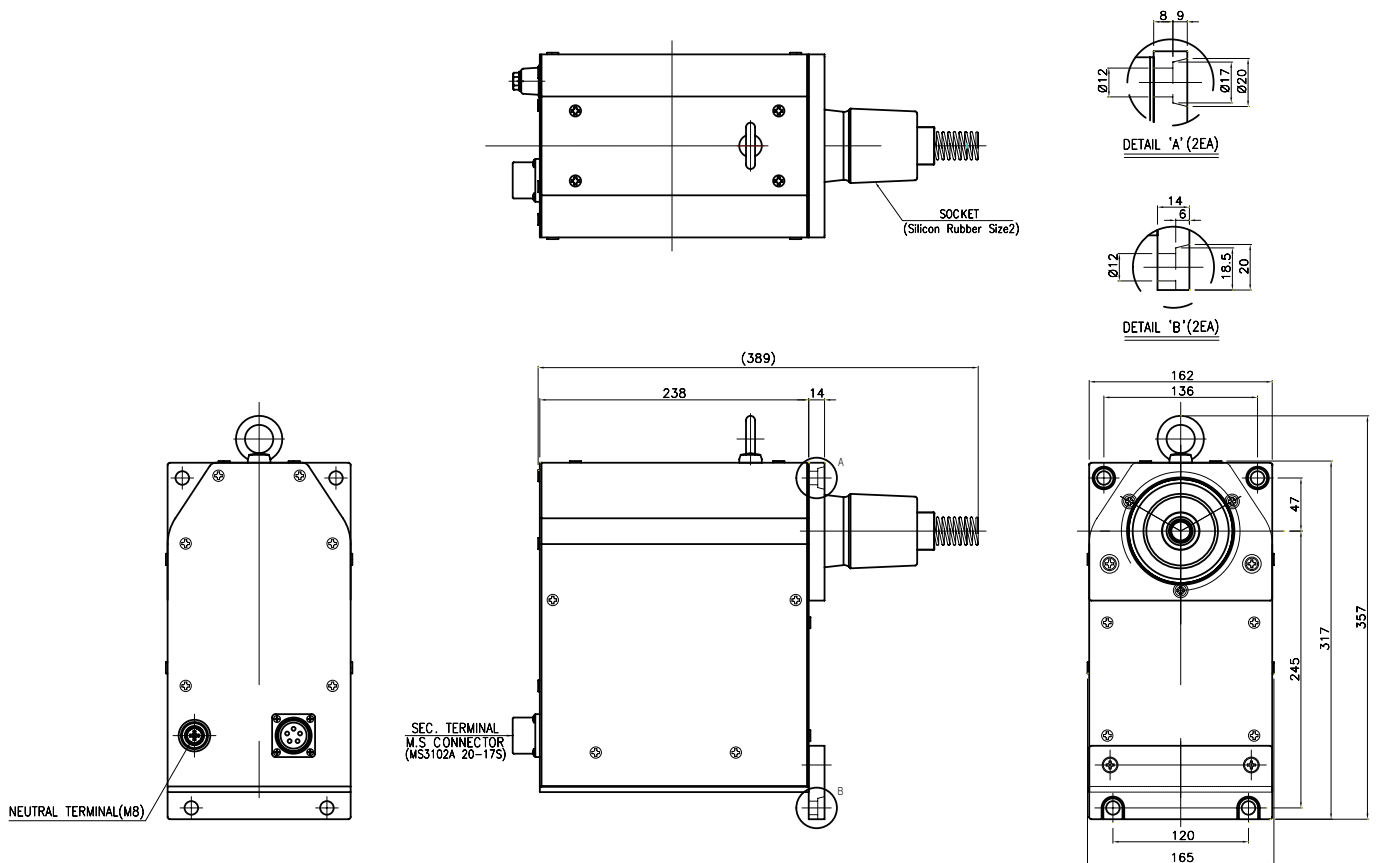
EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

24(25.8)kV (0~200VA)

● Specification

Highest voltage for equipment (Um)	Voltage Ratio (V)	IEC 61869-3		
		Voltage Factor	Accuracy Class	Burden (VA)
24kV	$\frac{22900}{\sqrt{3}} / \frac{110}{\sqrt{3}} \left(\frac{190}{3} \right) V$	1.2cont 1.5/30s	0.5	50
			1.0	100
				200

● Dimension



HV / CT
고압변류기

HV / V.T · MOF
고압변압기 절연물

LV / CT
저압변류기

LV / V.T
저압변압기

RELA Y
보호계전기

ELD
누전경보기

GFR
지락계전기

ZCT
영장변류기

METER
지시계기

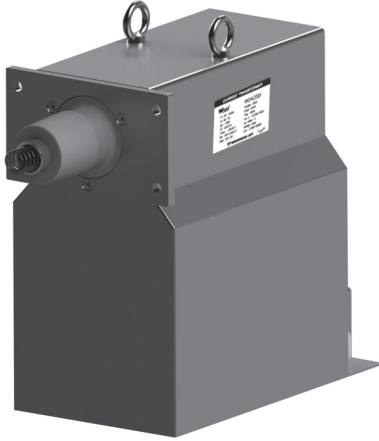
SPD
서지보호기

SHUNT
센트

EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)

36kV (0~200VA)

W36V1A



EPOXY RESIN CASTING VOLTAGE TRANSFORMERS for highest voltage of equipment up to 36kV

W36V1A 변압기는 최고회로전압 36kV급 절연성능으로 설계되어진 옥내용 에폭시몰드 제품으로 그 이하 전압(24kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 안정적인 절연능력 및 전기적 특성을 갖으며, 기계적 안전성과 유지보수의 용이성이 우수한 제품이다. 또한 단일 또는 다중 탭을 갖는 제품으로 설계 가능하다.

The W36V1A voltage transformer is an indoor epoxy resin cast product designed in a maximum circuit voltage 36kV-class insulation performance, and has the same dimensions for the less voltage(24kV) product. This has a stable insulation capacity and electrical property, has excellent mechanical safety, and is easy to maintain. It is also possible to design products with single or multiple taps.

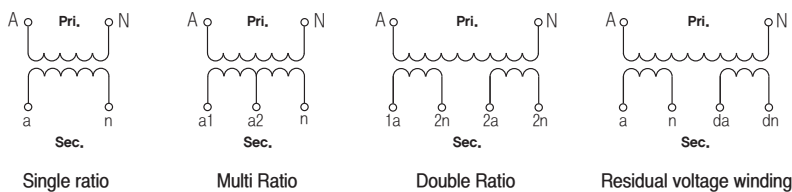
● Feature

규격 Standard	IEC - IEEE - KS etc.
설계 및 적용 Design and Application	- 계기 및 보호용 Designed for measuring and/ or protection - For GIS
사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	- 자동진공주형방식 Automatic vacuum casting method

● Electrical characteristic

ITEM	MODEL	W36V1A
Highest voltage for equipment (Um)		36kV
Rated power-frequency withstand voltage (60sec)		90kV
Rated lighting impulse withstand voltage (1.2/50μs)full wave		170kV
Rated frequency		50Hz, 60Hz
Rated Primary Voltage		$33000/\sqrt{3}$ v
Rated Secondary Voltage		$110/\sqrt{3}$ v
Accuracy class		0.2 ~ 1.0
Rated Burden		5 ~ 200VA
Rated Voltage factor		1.2Cont, 1.5/30s, 1.9/30s, 1.9/8h
Thermal Limit Burden		800VA
Insulation class (according to IEC 60085)		E
Standard		According to customer requirements
Weight (approx.)		45kg

● Connection Diagram



EARTHED TYPE (계기용변압기 / 접지형) VOLTAGE TRANSFORMER (EVT)



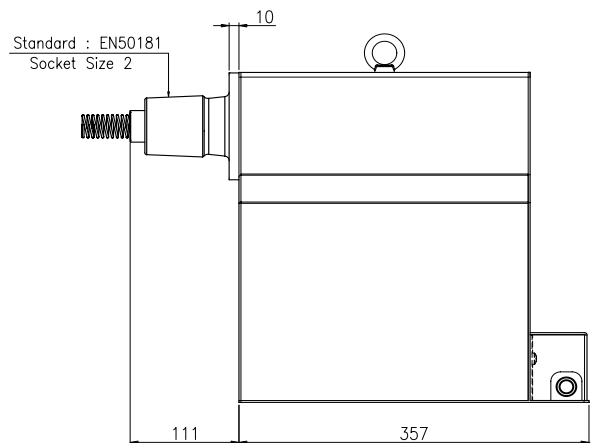
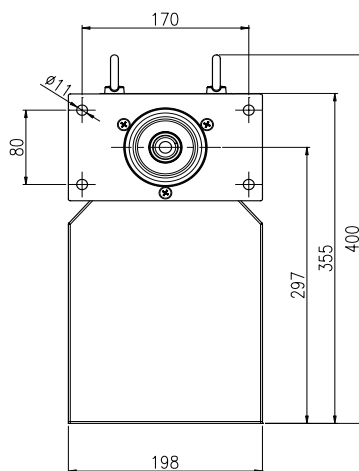
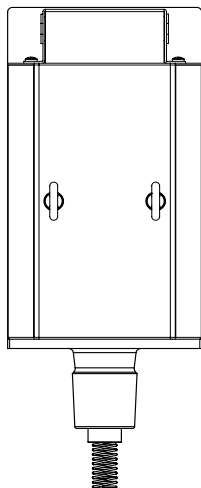
고압계기용변성기

36kV (0~200VA)

● Specification

ITEM	Highest voltage for equipment (Um)	Voltage Ratio (V)	IEC 61869-3			IEEE C57.13	
			Accuracy Class	Burden (VA)	Voltage Factor	Accuracy Class	Burden (VA)
Single Ratio VT	36kV	$\frac{33000}{\sqrt{3}} / \frac{110}{\sqrt{3}} (\frac{190}{\sqrt{3}}) V$	0.2	30	1.2Con't 1.5/30s	0.3	W
			0.5	100			
			1.0	200			
			0.2	30	1.2Con't 1.9/8h	1.2	Y
			0.5	100			
			1.0	200			
Double Ratio VT	36kV	$\frac{33000}{\sqrt{3}} / \frac{110}{\sqrt{3}} (\frac{190}{\sqrt{3}}) V$	0.2/3P	30/200	1.2Con't 1.5/30s		
			0.5/3P	50/200			
			1.0/3P	100/200			
			0.2/3P	30/200	1.2Con't 1.9/8h		
			0.5/3P	50/200			
			1.0/3P	100/200			

● Dimension



HV / CT
고압 변류기

HV / VT · MOF
고압 변압기 절연물

LV / CT
저압 변류기

LV / VT
저압 변압기

RELA Y
보호 계전기

ELD
누전경보기

GFR
지락 계전기

ZCT
영상 변류기

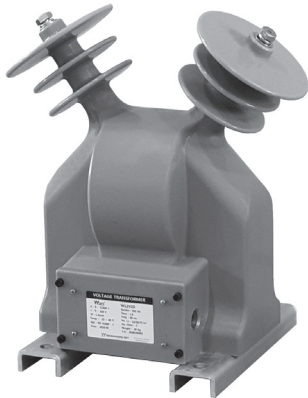
METER
지시 계전기

SPD
서지 보호기

SHUNT
선택

12kV (0~500VA)

W12V2G



EPOXY RESIN CAST VOLTAGE TRANSFORMERS for highest voltage of equipment up to 12kV

W12V2G 변압기는 최고회로전압 12kV급 절연성능으로 설계되어진 옥외용 에폭시물드 제품으로 그 이하 전압(7.2kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 안정적인 절연능력 및 전기적 특성을 갖추고, 기계적 안전성과 유지보수의 용이성이 우수한 제품이다. 또한 단일 또는 다중 탭을 갖는 제품으로 설계 가능하다.

The W12V2G voltage transformer is an outdoor epoxy resin cast product designed in a maximum circuit voltage 12kV-class insulation performance, and has the same dimensions for the less voltage (7.2kV) product. This has a stable insulation capacity and electrical property, has excellent mechanical safety, and is easy to maintain. It is also possible to design products with single or multiple taps.

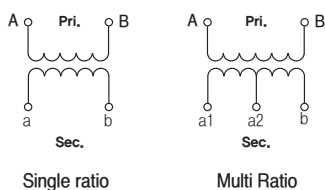
● Feature

규격 Standard	IEC - IEEE - KS etc.
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥외 Valid for outdoor service
작업공정 Working process	진공주형방식 Vacuum casting method

● Electrical characteristic

ITEM	MODEL	W12V2G
Highest voltage for equipment (Um)		12kV
Rated power-frequency withstand voltage (60sec)		28kV
Rated lighting impulse withstand voltage (1,2/50μs)full wave		75kV
Rated frequency		50Hz, 60Hz, others on request
Rated Primary Voltage		11000V
Rated Secondary Voltage		110V, 220V
Rated Voltage factor		1,2Vn cont.
Insulation class (according to IEC 60085)		E
Standard		According to customer requirements
Temperature Category		According to customer requirements
Weight (approx.)		30kg

● Connection Diagram

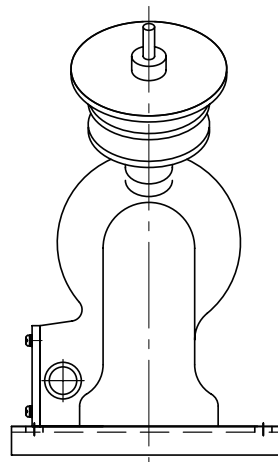
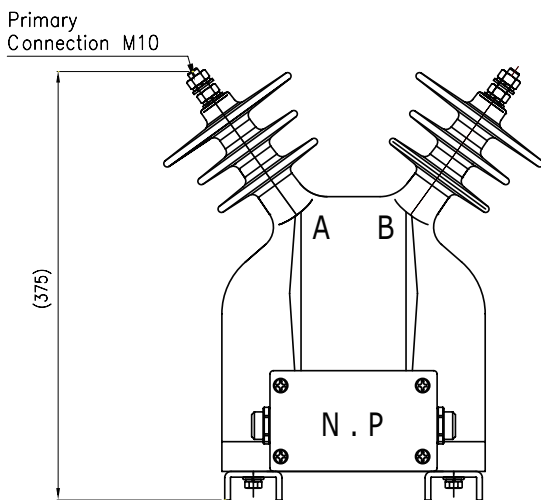
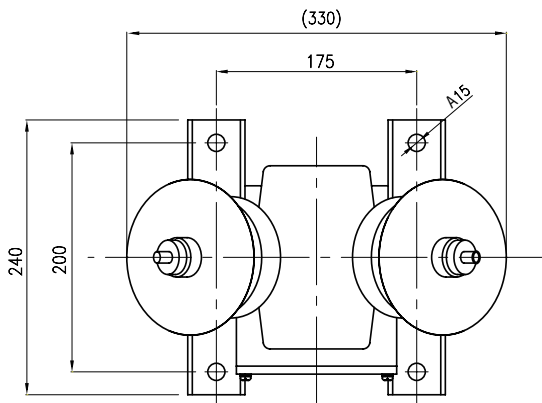


36kV (0~500VA)

● Specification

ITEM	Highest voltage for equipment (Um)	Voltage Ratio (V)	IEC 61869-3		
			Accuracy Class	Burden (VA)	Voltage Factor
W12V2G	12kV	11000/110V	1,0	200	1,2 Cont
		11000/220V	3,0	300 500	

● Dimension



HV / CT
고압 변류기

HV / VT · MOF
고압 변압기 절연물

LV / CT
저압 변류기

LV / VT
저압 변압기

RELA Y
보호 계전기

ELD
누전경보기

GF R
지락 계전기

ZCT
영상 변류기

METER
지시 전기 계기

SPD
서지 보호기

SHUNT
센트

24kV (0~500VA)

W24V2G



EPOXY RESIN CAST VOLTAGE TRANSFORMERS for highest voltage of equipment up to 24kV

W24V2G 변압기는 최고회로전압 24kV급 절연성능으로 설계되어진 옥외용 에폭시몰드 제품으로 그 이하 전압(17.5kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 안정적인 절연능력 및 전기적 특성을 갖추고, 기계적 안전성과 유지보수의 용이성이 우수한 제품이다. 또한 단일 또는 다중 탭을 갖는 제품으로 설계 가능하다.

The W24V2G voltage transformer is an outdoor epoxy resin cast product designed in a maximum circuit voltage 24kV-class insulation performance, and has the same dimensions for the less voltage (17.5kV) product. This has a stable insulation capacity and electrical property, has excellent mechanical safety, and is easy to maintain. It is also possible to design products with single or multiple taps.

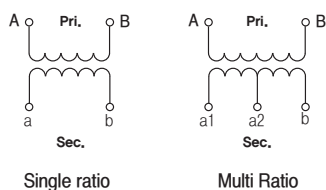
● Feature

규격 Standard	IEC - IEEE - KS etc.
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥외 Valid for outdoor service
작업공정 Working process	진공주형방식 Vacuum casting method

● Electrical characteristic

ITEM	MODEL	W24V2G
Highest voltage for equipment (Um)		24kV
Rated power-frequency withstand voltage (60sec)		50kV
Rated lightning impulse withstand voltage (1,2/50μs)full wave		125kV
Rated frequency		50Hz, 60Hz, others on request
Rated Primary Voltage		22000v
Rated Secondary Voltage		110V, 220v
Rated Voltage factor		1,2Vn cont.
Insulation class (according to IEC 60085)		E
Standard		According to customer requirements
Temperature Category		According to customer requirements
Weight (approx.)		45kg

● Connection Diagram

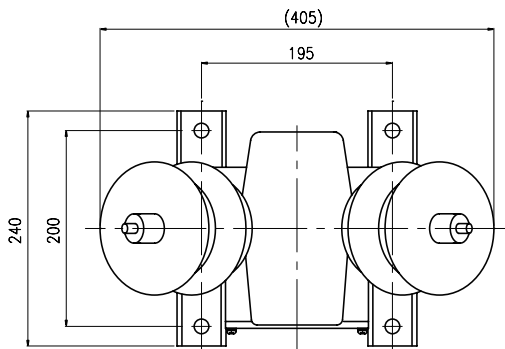


36kV (0~500VA)

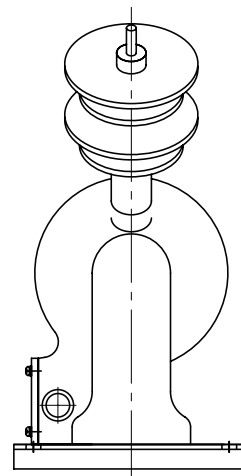
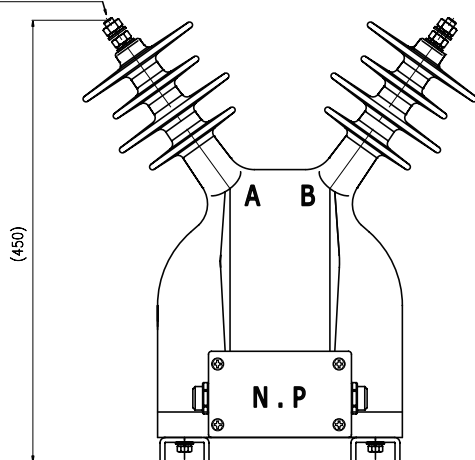
● Specification

ITEM	Highest voltage for equipment (Um)	Voltage Ratio (V)	IEC 61869-3		
			Accuracy Class	Burden (VA)	Voltage Factor
W24V2G	24kV	22000/110V	1,0	200	1,2 Cont
		22000/220V	3,0	300 500	

● Dimension



Primary Connection M10



HV / CT
고압 변류기

HV / VT · MOF
고압 변압기 절연물

LV / CT
저압 변류기

LV / VT
저압 변압기

RELA
보호 계전기

ELD
누전경보기

GF
지락 계전기

ZCT
영상 변류기

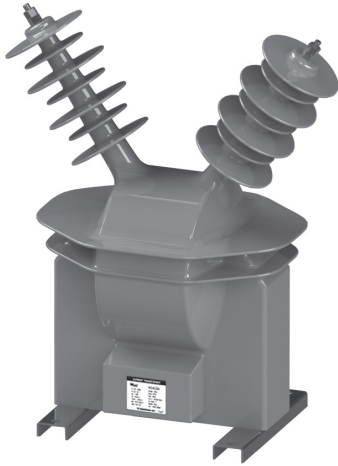
METER
지시 전기 계기

SPD
서지 보호기

SHUNT
센트

36kV (0~500VA)

W36V2G



EPOXY RESIN CAST VOLTAGE TRANSFORMERS for highest voltage of equipment up to 36kV

W36V2G 변압기는 최고회로전압 36kV급 절연성능으로 설계되어진 옥외용 에폭시몰드 제품으로 그 이하 전압(24kV) 제품에 대해서는 동일한 치수(DIMENSION)를 가진다. 안정적인 절연능력 및 전기적 특성을 갖으며, 기계적 안전성과 유지보수의 용이성이 우수한 제품이다. 또한 단일 또는 다중 탭을 갖는 제품으로 설계 가능하다.

The W36V2G voltage transformer is an outdoor epoxy resin cast product designed in a maximum circuit voltage 36kV-class insulation performance, and has the same dimensions for the less voltage (24kV) product. This has a stable insulation capacity and electrical property, has excellent mechanical safety, and is easy to maintain. It is also possible to design products with single or multiple taps.

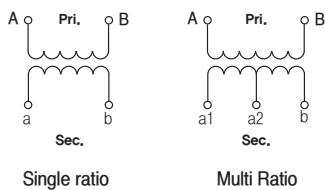
● Feature

규격 Standard	IEC - IEEE - KS etc.
설계 및 적용 Design and Application	계기 및 보호용 Designed for measuring and/or protection
사용조건 Service condition	옥외 Valid for outdoor service
작업공정 Working process	진공주형방식 vacuum casting method

● Electrical characteristic

ITEM	MODEL	W36V2G
Highest voltage for equipment (Um)		36kV
Rated power-frequency withstand voltage (60sec)		70(80)kV
Rated lightning impulse withstand voltage (1,2/50μs)full wave		170(200)kV
Rated frequency		50Hz, 60Hz, others on request
Rated Primary Voltage		33000v
Rated Secondary Voltage		110V, 220V
Rated Voltage factor		1,2Vn cont.
Insulation class (according to IEC 60085)		E
Standard		According to customer requirements
Temperature Category		According to customer requirements
Weight (approx.)		55kg

● Connection Diagram

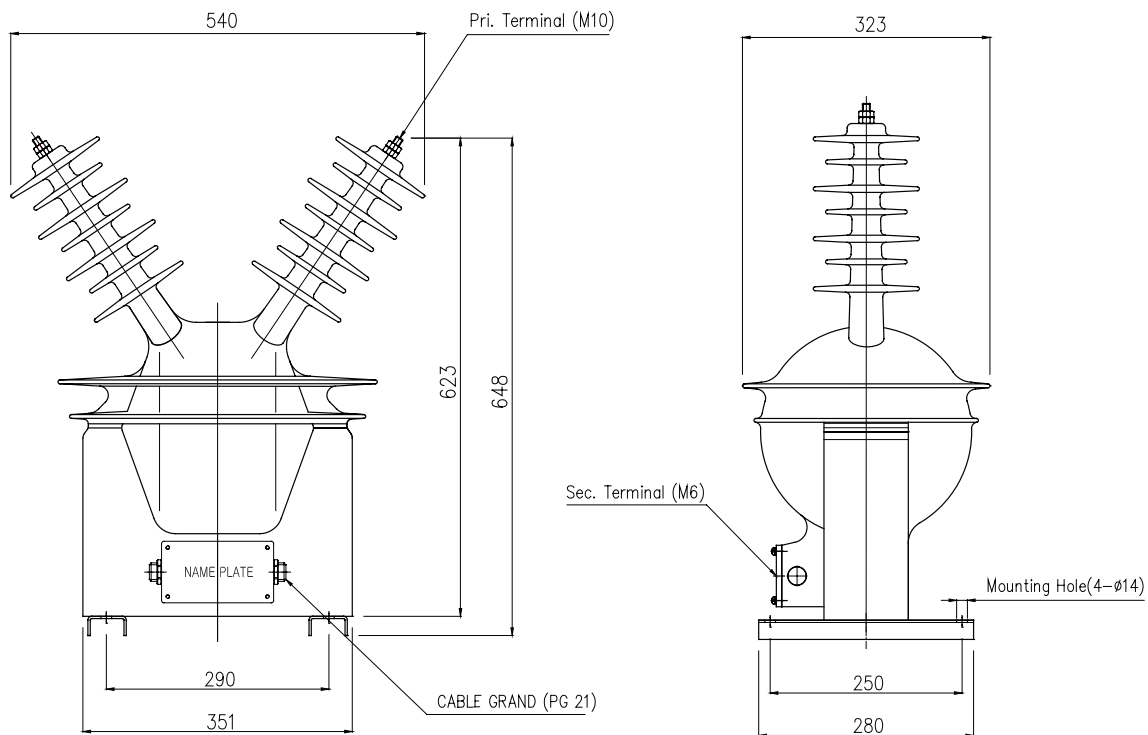


36kV (0~500VA)

● Specification

ITEM	Highest voltage for equipment (Um)	Voltage Ratio (V)	IEC 61869-3		
			Accuracy Class	Burden (VA)	Voltage Factor
W36V2G	36kV	33000/110V	1.0	200	1.2 Cont
		33000/220V	3.0	300 500	

● Dimension



- * Creepage distance (Line to Line) : 1730mm
- * Creepage distance (Line to Ground) : 1387mm

HV / CT
고압 변류기

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저압 변류기

LV / VT
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RELA
보호 계전기

ELD
누전경보기

GFR
지락 계전기

ZCT
영상 변류기

METER
지시 전기 계기

SPD
서지 보호기

SHUNT
센트

M.O.F

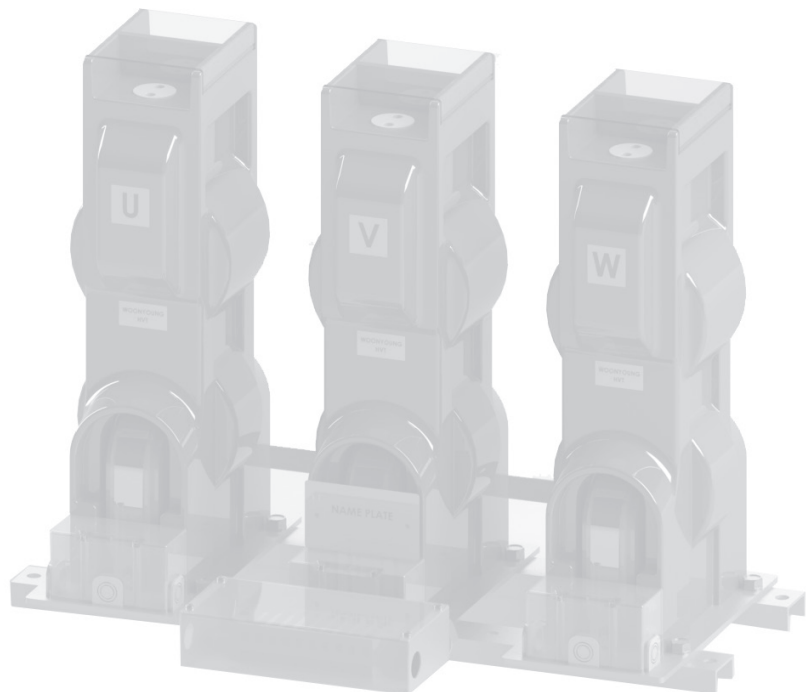
전력수급용 변압 · 변류기

Combined Current & Voltage Transformer



Mold MOF

Combined Current & Voltage Transformer(25,8kV) ···· 134



COMBINED INSTRUMENT TRANSFORMER

25.8kV 전력수급용 계기용 변성기 (M.O.F)

25.8kV (25VA x 3)

W24M1A

EPOXY RESIN CASTING COMBINED CT & VT
for highest voltage of equipment up to 25.8kV

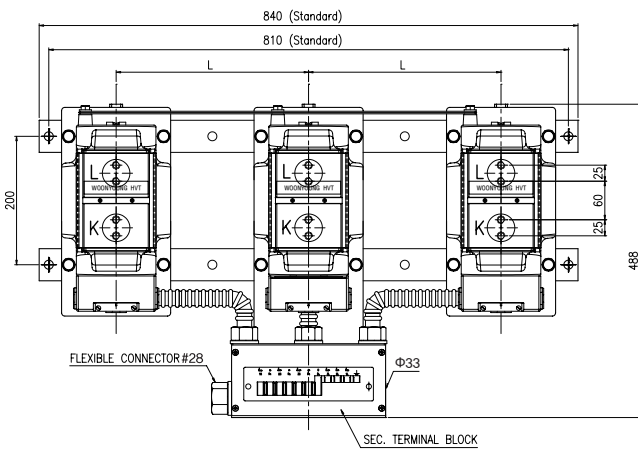


- 규격 (Standard) : KSC1707 – IEC etc.
- 3상 4선식 중심적 접지방식(3P4W, Earthed Neutral System)
 - 계기용(Designed for measuring)
- 사용조건(Service condition) : 옥내(Valid for indoor service)
- 작업공정(Working process)
 - 자동진공주형방식(Automatic vacuum casting method)

● Specification

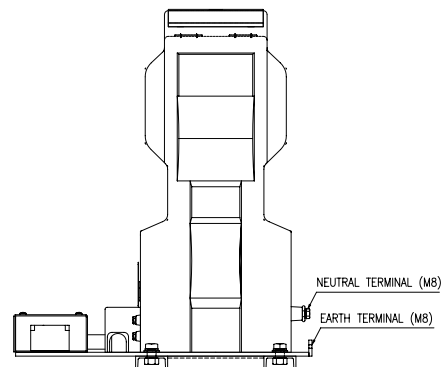
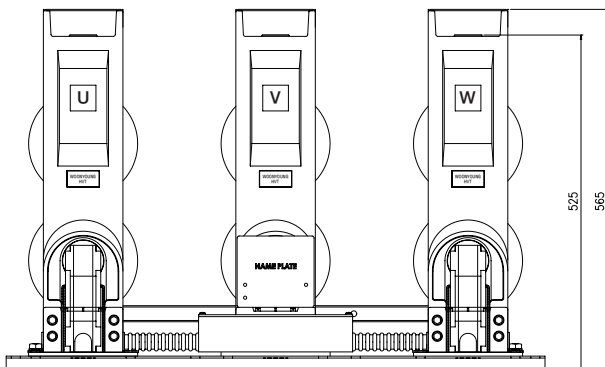
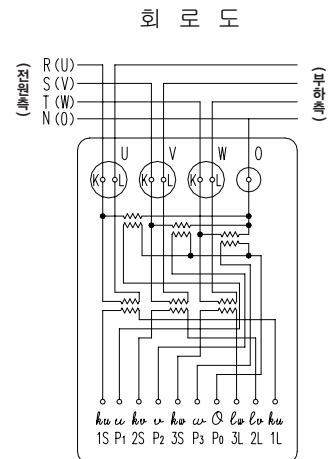
Highest voltage for equipment (Um)	Phase	Ratio		Burden (VA)	Accuracy Class	Rated Voltage Factor	Over Current Factor	Insulation level	Weight (approx.)
		Voltage	Current						
25.8kV	3P 4W	$\frac{22900}{\sqrt{3}} / \frac{190}{\sqrt{3}} V$	5/5A ~ 15/5A	25VA x 3	0.5W	1.2Vn/cont 1.5Vn/30sec	150In	50/125kV	125kg
			20/5A ~ 50/5A				75In		
			75/5A ~ 250/5A				40In		
			300/5A ~ 1200/5A				40In		

● Dimension



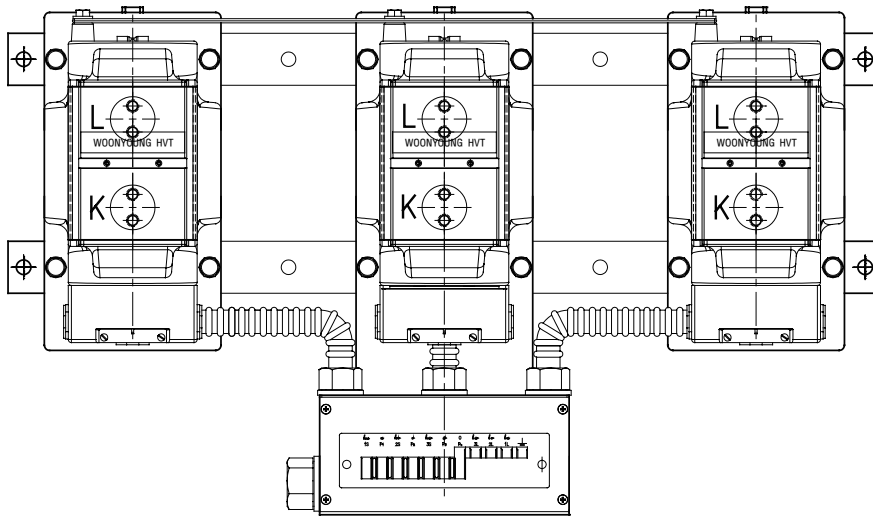
L	200mm	Request
	250mm	Request
	300mm	Standard

● Connection Diagram

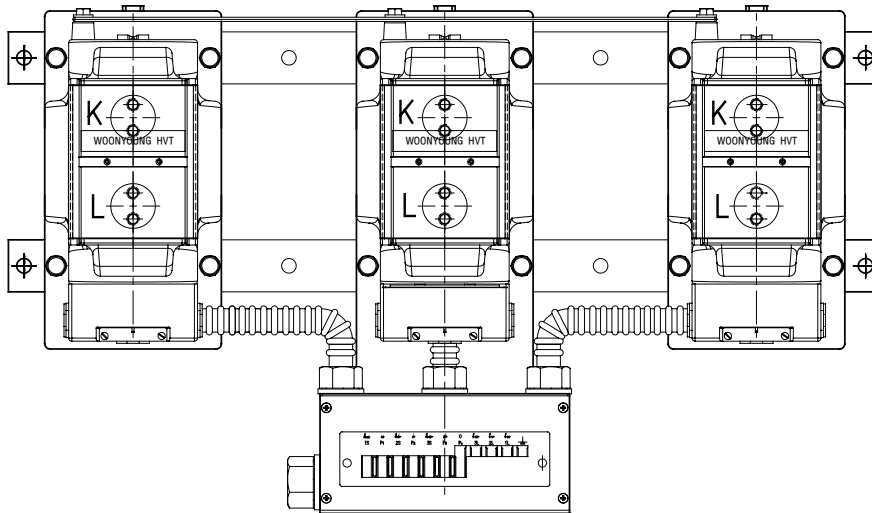


25.8kV (25VA x 3)

W24M1A-K Side (Standard)



W24M1A-L Side (Request)



● Voltage & Current Ratio

Voltage Ratio(V)	$22900 / \sqrt{3} / 190 / \sqrt{3} (3P4W)$									
Current Ratio(A)	5/5	10/5	15/5	20/5	30/5	40/5	50/5	75/5	100/5	
	150/5	200/5	300/5	400/5	500/5	600/5	750/5	1000/5	1200/5	

● S

Terminal	1S	P1	2S	P2	3S	P3	P0	3L	2L	1L	E
Ter. Color	황색 Yellow	적색 Red	갈색 Brown	백색 White	흑색 Black	청색 Blue	녹색 Green	녹색 Green	녹색 Green	녹색 Green	녹색 Green

- 1S, 2S, 3S 단자는 개방(Open)하지 마십시오. (Do not open the 1S, 2S, and 3S terminals.)
- P1, P2, P3 단자는 단락(Short)을 하지 마십시오. (Do not short the P1, P2, and P3 terminals.)

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ZCT
영상 변류기

METER
지시 계전기

SPD
서지 보호기

SHUNT
센트

고압 절연물

Epoxy Insulator Medium Voltage



Epoxy Insulator

Epoxy Mold VI Pole For VCB	138
Epoxy Mold Power Fuse Holder	139
Epoxy Mold Bushing For Indoor USE ..	141
GIS Epoxy Insulator	142
Epoxy Mold VI Housing	143

W241A



EPOXY MOLD VI POLE FOR VCB

W241A 은 최고 회로전압 24kV급 절연성능으로 설계되어진 에폭시 몰드 제품이다. APG 방식(자동가압 성형방식)으로 제작되며, 제품의 치수 및 절연성, 내구성이 뛰어난 제품이다.

W241A is an epoxy mold product designed with the highest circuit voltage 24kV class insulation performance. It is manufactured by APG method (Automatic Pressure Gelation method) under high vacuum, and it is a product with excellent dimensions, insulation and durability.

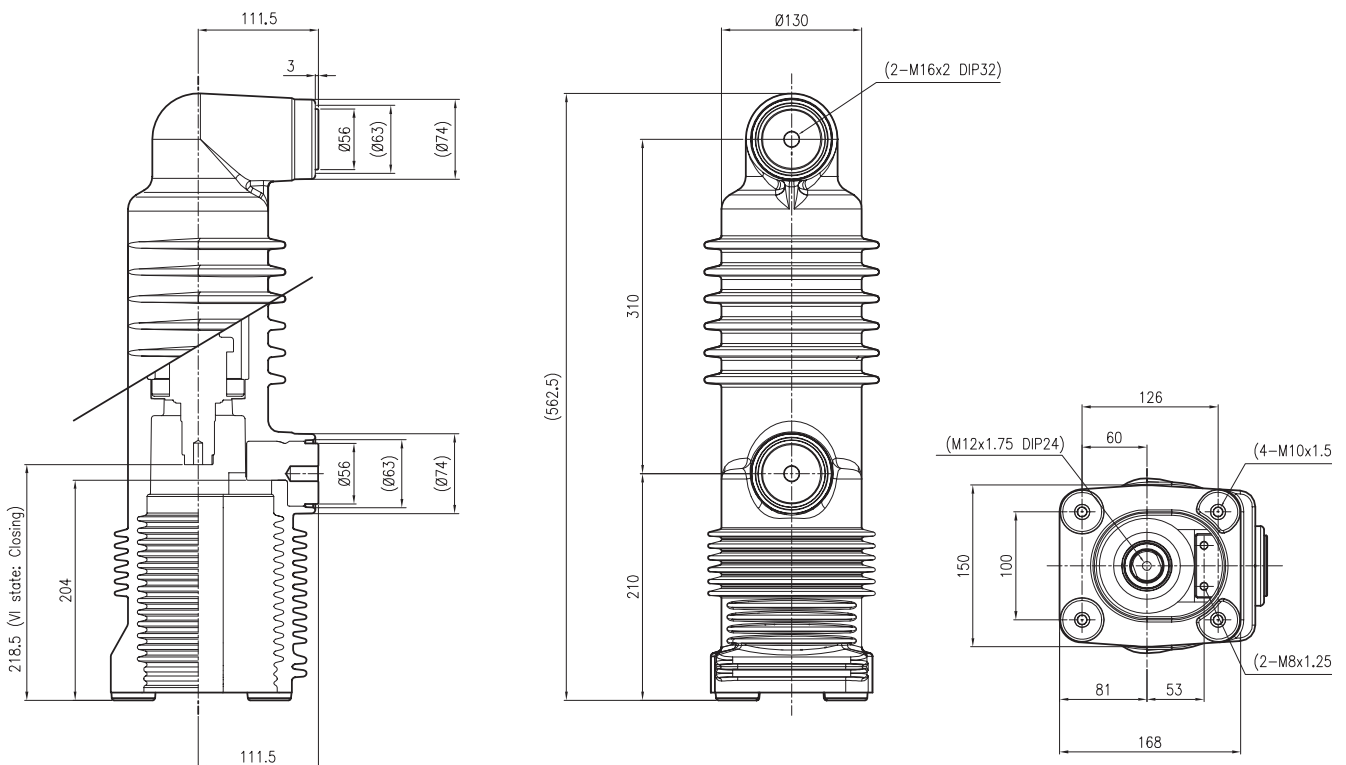
● Feature

사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL	W241A
Highest voltage for equipment (Um)		24kV
Rated power-frequency withstand voltage (60sec)		50kV
Rated lightning Impulse withstand voltage (1.2/50μs)full wave		125kV
PD Extinguish Level		26,5kV
Weight (approx.)		13kg

● Dimension



W24I5A



EPOXY MOLD POWER FUSE HOLDER

W24I5A 퓨즈홀더는 최고 회로전압 24kV급 절연성능으로 설계되어진 에폭시 몰드 제품으로 계기용 변압기 보호용으로 사용된다. 파워퓨즈를 외부에서 교체가 용이하도록 설계가 되어 있으며, 전압감지센서가 내장되어 있어 퓨즈용단 유무를 알 수 있도록 되어있다. 부하상승으로 퓨즈의 온도상승을 막아줄 수 있고, 전기적 특성 및 열적 특성이 우수하여 내구성이 뛰어난 제품이다.

W24I5A fuse holder is an epoxy molded product designed with the highest circuit voltage 24kV class insulation performance and is used to protect instrument transformers. It is designed to be easy to replace the power fuse from the outside, and it has a built-in voltage sensor so that you can know whether the fuse is blown or not. It can prevent the temperature rise of the fuse due to increase in load, and it is a durable product with excellent electrical and thermal characteristics.

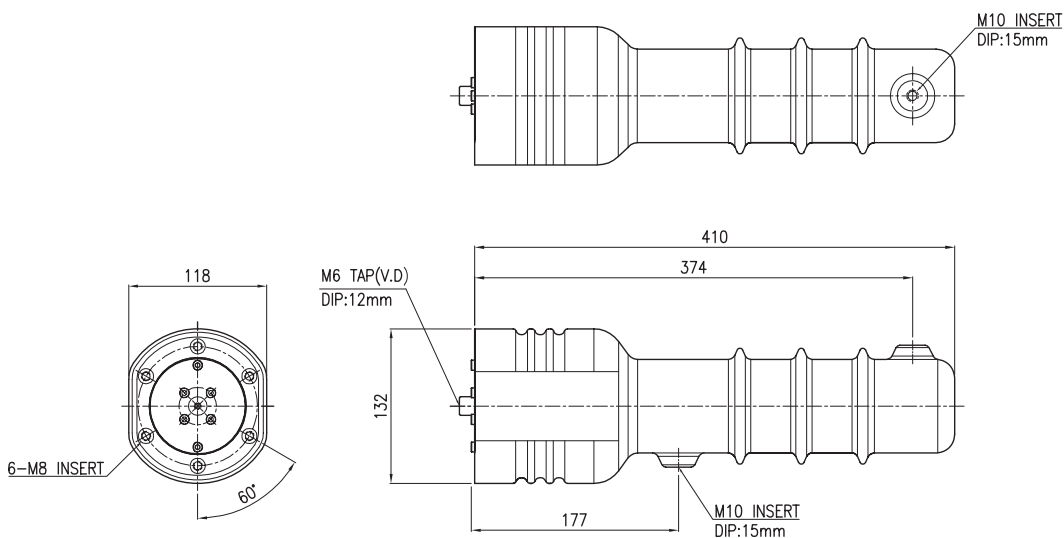
● Feature

사용조건 Service condition	SF6 Gas
작업공정 Working process	APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL	W24I5A
Highest voltage for equipment (Um)		24kV
Rated power-frequency withstand voltage (60sec)		50kV
Rated lighting Impulse withstand voltage (1.2/50μs)full wave		125kV
Voltage detecting sensor capacitance		15~30pF
Power fuse	Current (A)	1~2
	Size (mm)	22Φ x 280
Weight (approx.)		7kg

● Dimension



HV / CT
고압 변류기

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저압 변압기

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ELD
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GFR
지락 계전기

ZCT
영상 변류기

METER
지시 전기 계기

SPD
서지 보호기

SHUNT
센트

W24I6A



PLUG IN SOCKET

W24I6A SOCKET SIZE-2는 GIS 및 Ring main units, HV motors transformers, Capacitors 등의 케이블 프러그 연결용 소켓이며, EN50181 S1, DIN47637 규격에 맞게 설계되어 있습니다. 고진공하에서 배합된 Epoxy를 자동가압 성형방식으로 성형되어 제품의 형상이 안정되고 강도가 우수하며 케이블 프러그와 연결사용시 내구성이 뛰어난 제품입니다.

W24I6A(SOCKET SIZE-2) is a socket for cable plug connection of GIS and Ring Main Units, H.V Motors Transformers, Capacitors, etc., and is designed to comply with EN50181 S1, DIN47637 standards. Epoxy mixed under high vacuum is molded with APG, so the shape of the product is stable, the product has excellent strength, and it is a product with excellent durability when used in connected with a cable plug.

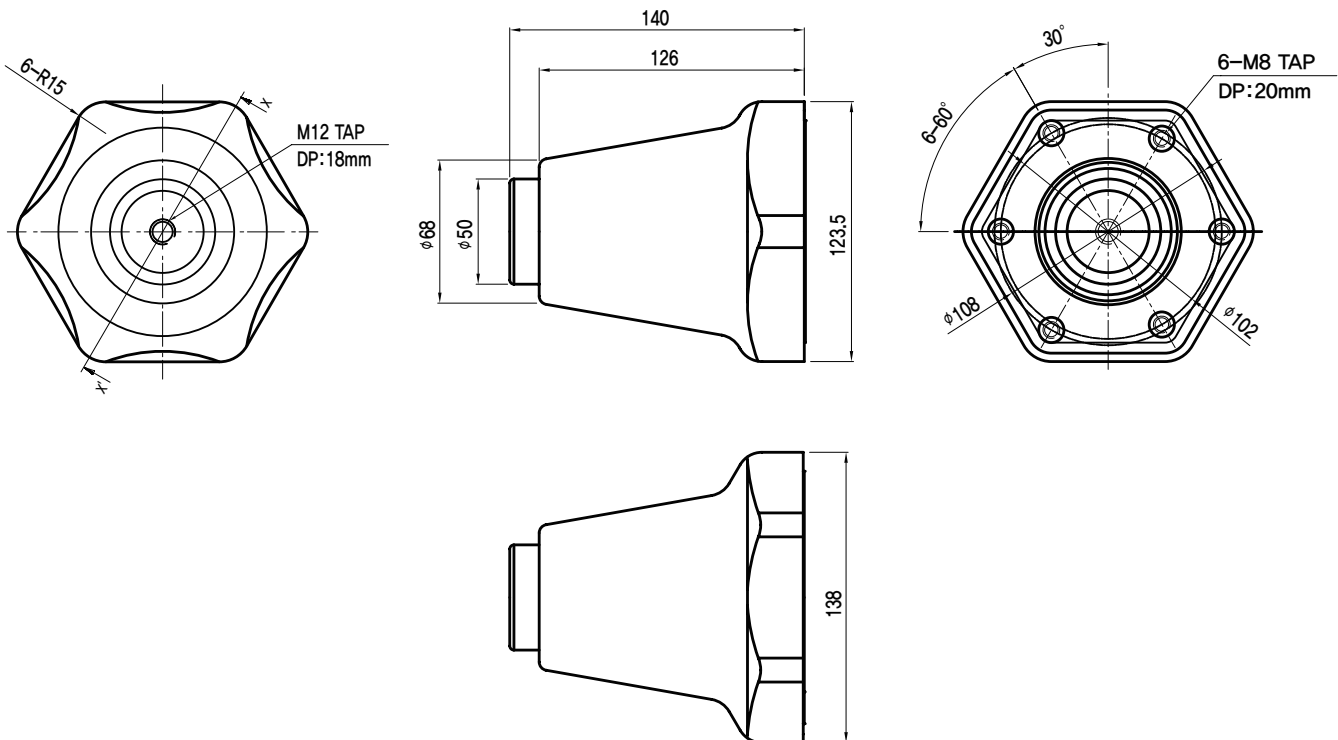
● Feature

사용조건 Service condition	CABLE SOCKET SIZE-2
작업공정 Working process	APG방식 Automatic Pressure Gelation method

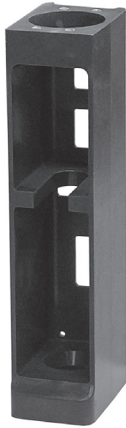
● Electrical characteristic

ITEM	MODEL	W24I6A
Operating voltage (Maximum)		24kV/36kV
Rated lightning impulse withstand voltage		125kV/170kV
Power frequency withstand voltage (1min)		50kV/70kV
Maximum system current		800A
Over current strength (1sec)		25kA
Weight		2,1kg

● Dimension



W24I9A



EPOXY MOLD POWER FUSE HOLDER

W24I9A 차단기 내부의 VI를 지지하고, 절연베리어 역할을 하며, VI동작에 대한 충격을 견딜 수 있도록 설계되어 있다. APG방식(자동가압 성형방식)으로 제작되어 치수 및 절연성, 내구성이 뛰어난 제품이다.

It is designed to support VI inside the W24I9A circuit breaker, act as an insulating barrier, and withstand the impact of VI operation. It is manufactured by APG method (Automatic Pressure Gelation method) and has excellent dimensions, insulation and durability.

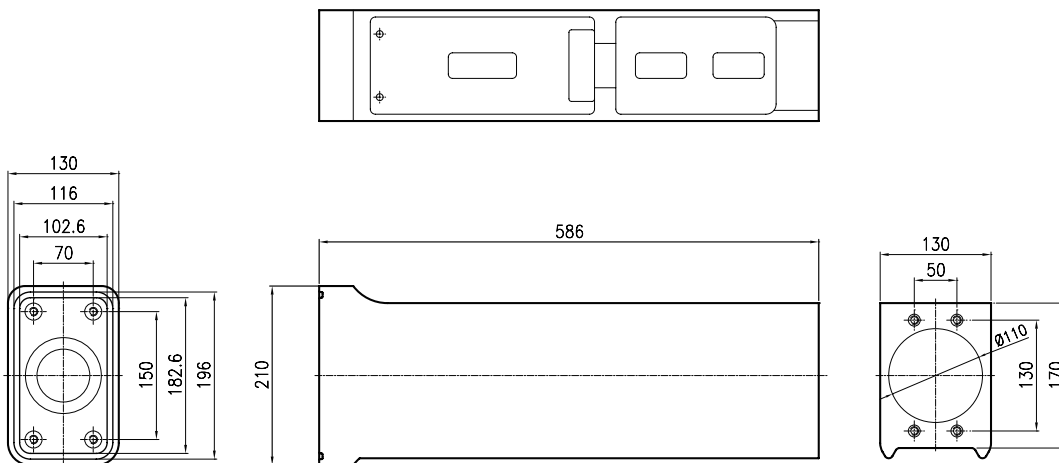
● Feature

사용조건 Service condition	옥내 Valid for indoor service
작업공정 Working process	APG방식 Automatic Pressure Gelation method

● Electrical characteristic

ITEM	MODEL	W24I9A
Operating Voltage (Maximum)		25,8kV
Rated lightning Impulse withstand voltage		60kV
Rated lightning Impulse withstand voltage		150kV
Over current strength (3/sec)		25kA
Weight (approx.)		9kg

● Dimension



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W29I2A / W29I2B



EPOXY MOLD BUSHING FOR INDOOR USE

W29I2A / W29I2B는 APG방식(자동가압 성형방식)으로 생산되는 에폭시 몰드 제품이다. 전압검출용 Shield를 내장하고 있으며 SF6 가스중, 유중에서 사용가능하도록 되어있다.

W29I2A / W29I2B is an epoxy mold product produced by APG method (Automatic Pressure Gelation method). It has a built-in shield for voltage detection and can be used in SF6 gas or oil.

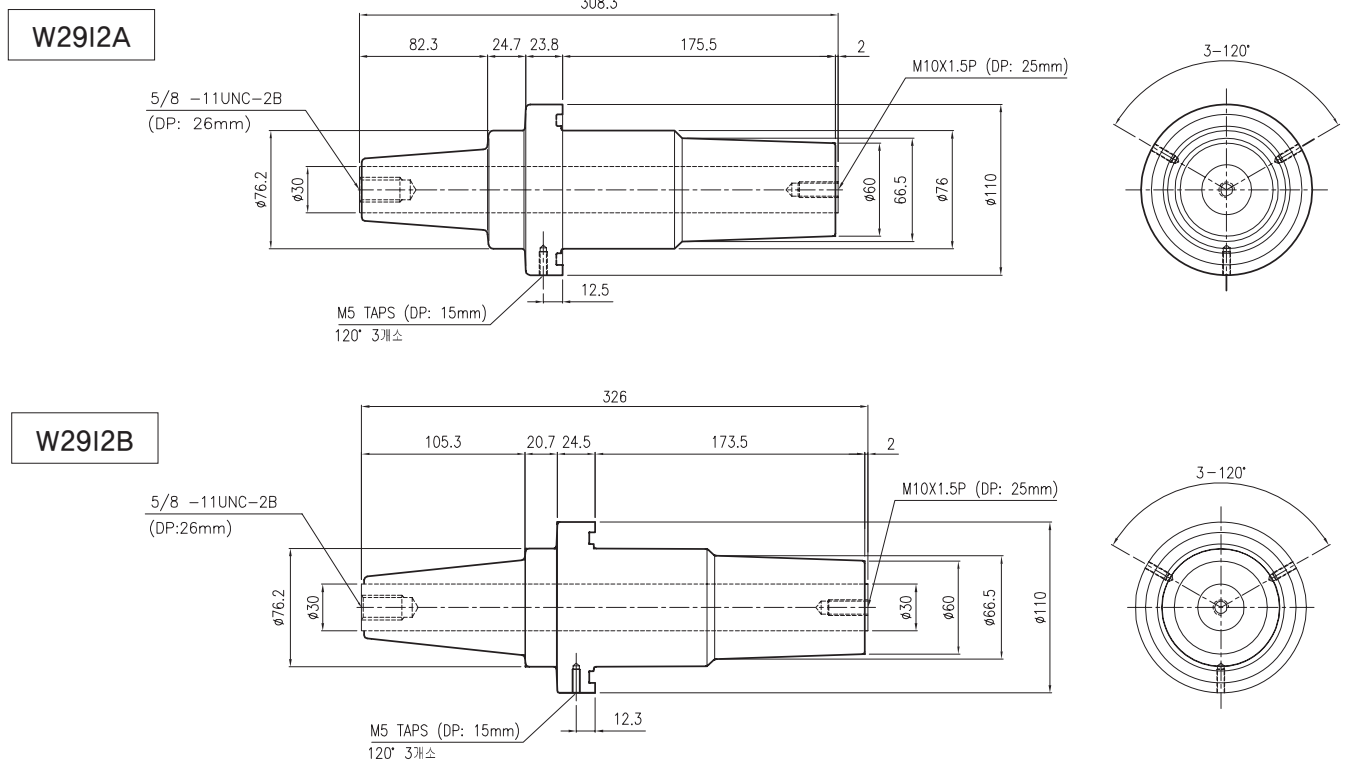
● Feature

규격 Standard	IEEE std 386
사용조건 Service condition	SF6 Gas, Oil
작업공정 Working process	APG방식 Automatic Pressure Gelation method

● Electrical characteristic

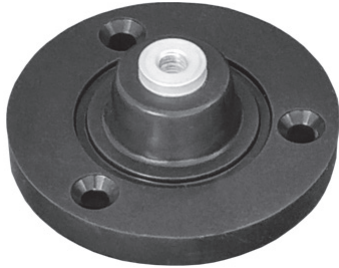
ITEM	MODEL	
	W29I2A	W29I2B
Maximum voltage rating	29kV	
AC 60Hz for 1min	40kV	
Rated lighting Impulse withstand voltage (1.2/50 μ s)/full wave	125kV	150kV
Continuous current	630A	
PD Extinguish Level	19kV	
Weight (approx.)	3kg	4kg

● Dimension



W0012A

CT&VT SEC. TERMINAL PLATE



W0012A EARTH BUSHING은 GIS 및 CGIS등의 접지형 터미널로 취부가 용이하고, 도체와 EPOXY수지와 계면처리를 특수하게 하여 GAS기밀방지가 완벽한 제품입니다.

W0012A(EARTH BUSHING) is a earth terminal such as GIS and CGIS, so it is easily to install, and it is a perfect product to prevent gas leakage by special interfacial treatment with conductor and EPOXY resin.

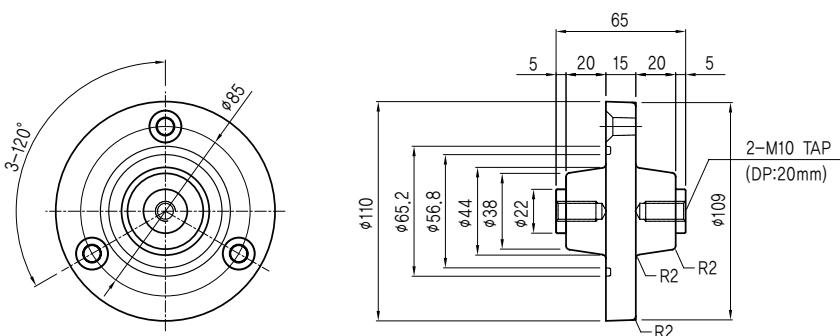
● Feature

사용조건 Service condition	EARTH BUSHING
작업공정 Working process	자동진동주형방식 Automatic vacuum casting method

● Electrical characteristic

ITEM	MODEL	W0012A
Operating voltage (Maximum)		25,8kV
AC 60Hz for 1min		60kV
Rated lightning impulse withstand voltage		150kV
Maximum system current		600A 200A

● Dimension



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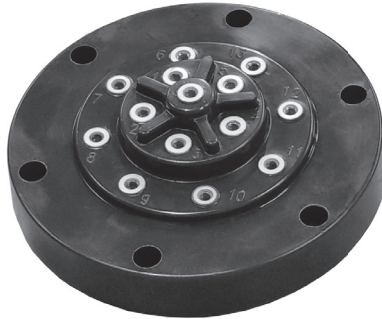
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TERMINAL BLOCK

W6PTB



W14PTB

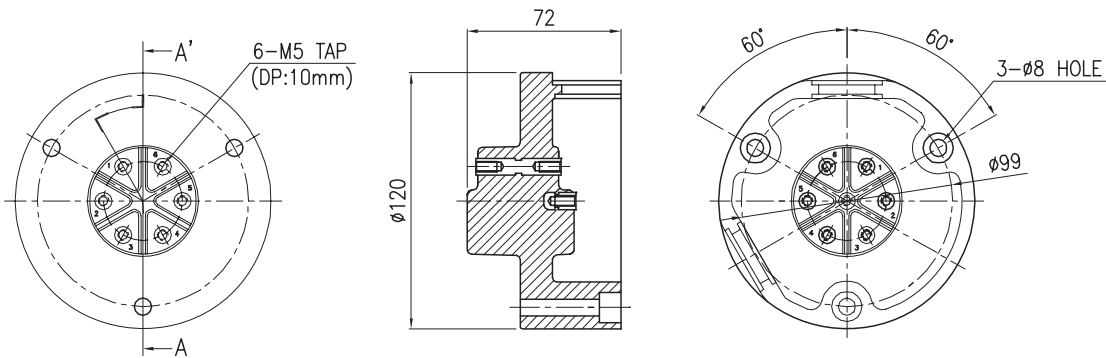


● Feature

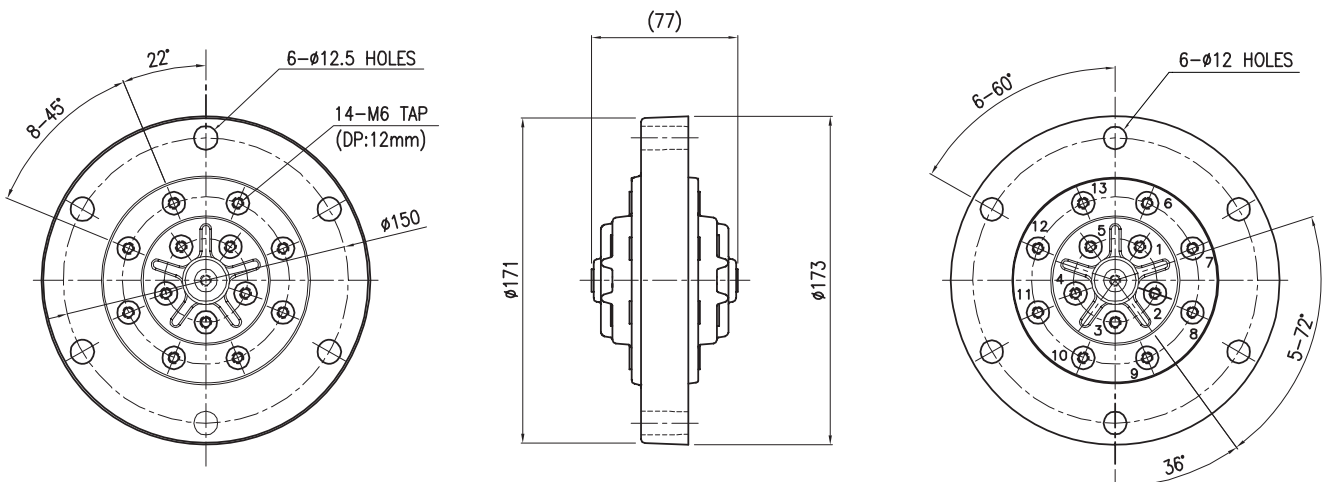
사용조건 Service condition	육내 Valid for indoor service
작업공정 Working process	자동진공주형방식 Automatic vacuum casting method

● Dimension

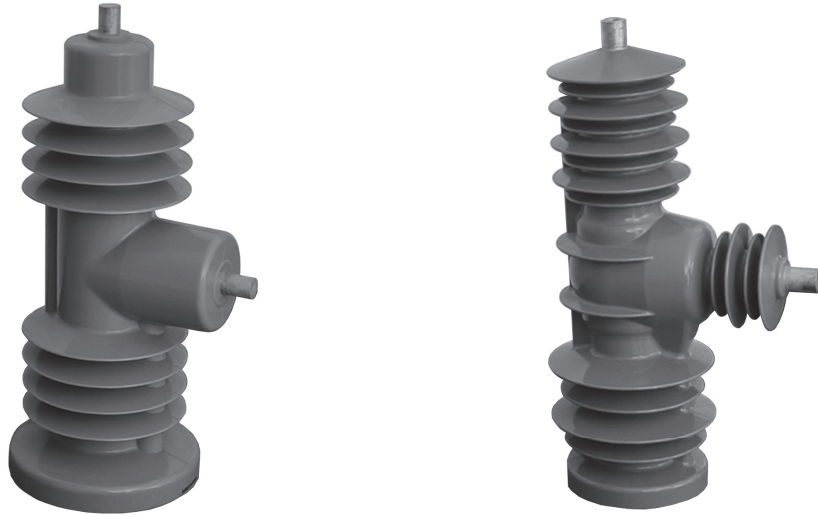
W6PTB



W14PTB



24kV HOUSING



29kV HOUSING



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