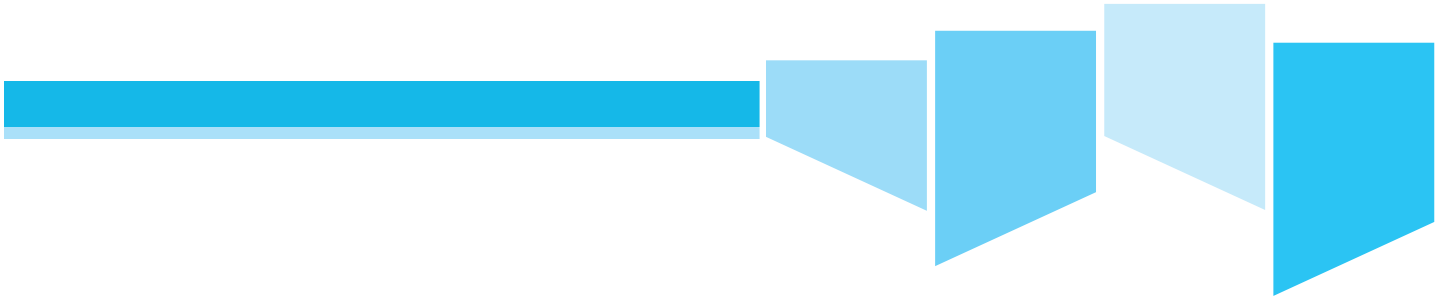


New Products

Cam Switch (10A) · Floatless (4Pole, 5Pole)
CB External Operating Handle · Double Ends LED Panel Light



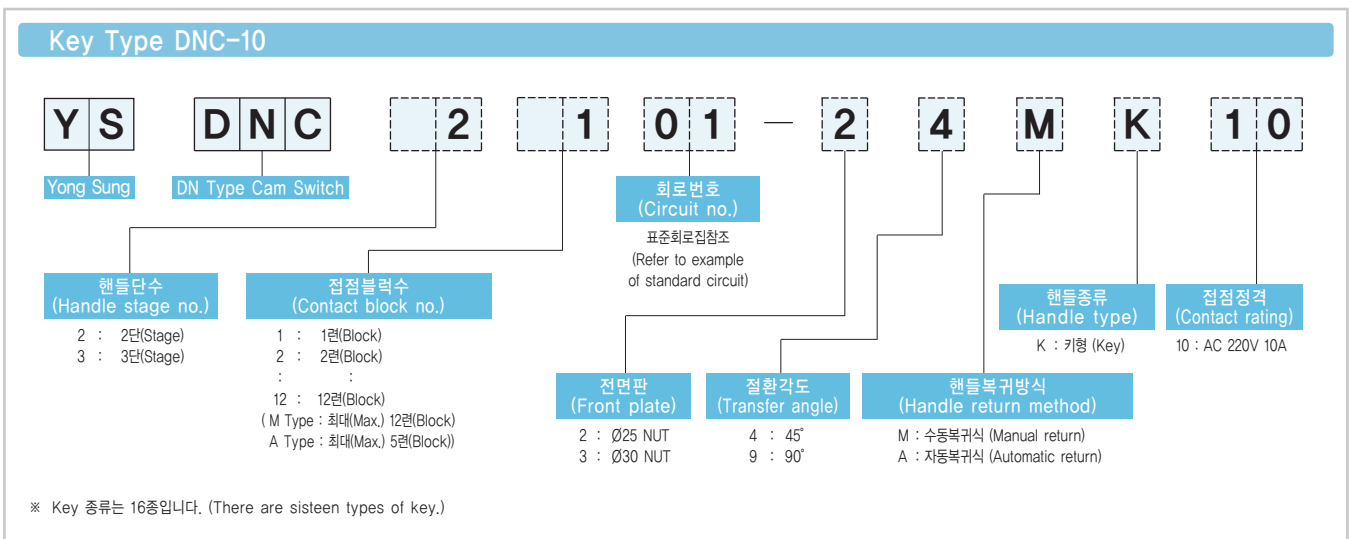
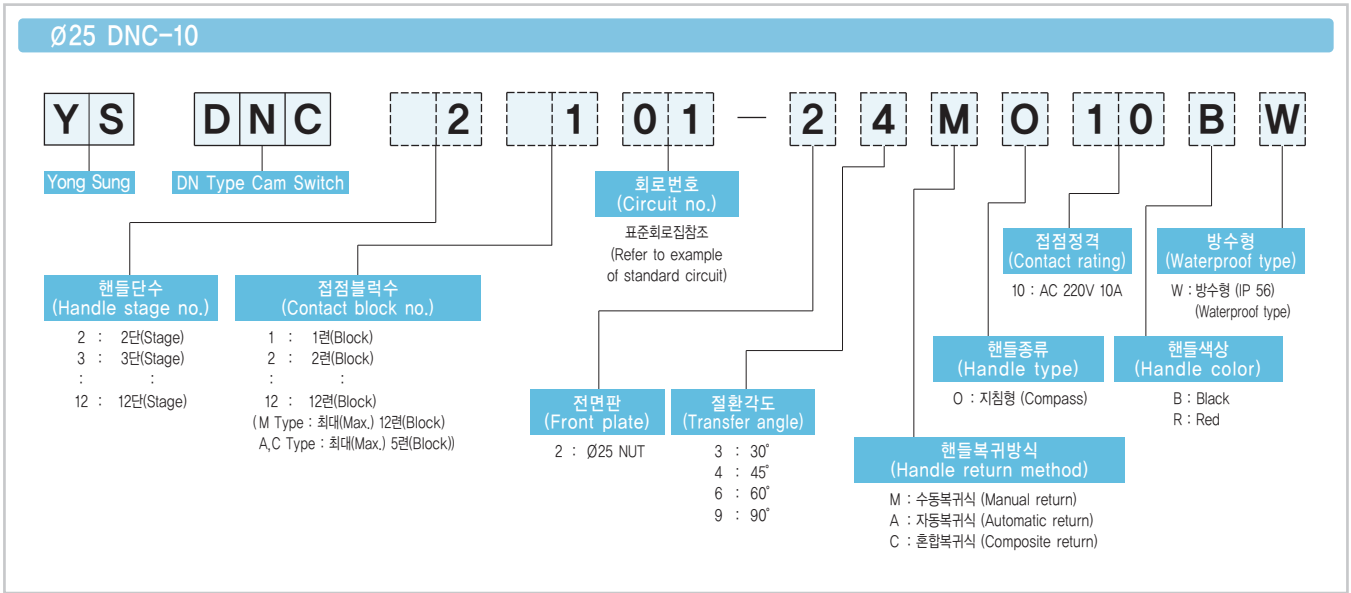


Contents

1. 캠 스위치 (10A) CAM SWITCH (10A)	03 - 04
2. 후로드레스 (4극, 5극) FLOATLESS (4POLE, 5POLE)	05 - 12
전극봉 홀더 ELECTRODE BAR HOLDER	13 - 14
3. 차단기 외부조작 핸들 CB EXTERNAL OPERATING HANDLE	15 - 22
4. 배전반용 LED 직부등 DOUBLE ENDS LED PANEL LIGHT	23 - 25

1. 캠 스위치(10A)

형식 구분도 | Type Classification Diagram |



접점 정격 | Contact Rating (DNC-10) |

정격절연전압(Ui) (Rating insulation voltage)		AC600V, DC250V		
정격통전전류(Ith) (Rating conductive current)		20A		
AC	정격전압(Ue) (Rating voltage)	110~120V	220~240V	380~440V
	정격전류(Ie) (Rating current)	저항부하(AC12) (Resistance load)	20A	10A
		유도부하(AC15) (Inductive load)	6.6A	3.3A
DC	정격전압(Ue) (Rating voltage)	110V	125V	220V
	정격전류(Ie) (Rating current)	저항부하(DC12) (Resistance load)	5A	4.4A
		유도부하(DC13) (Inductive load)	1A	0.9A

유도부하 (Inductive load) ----- COSØ=0.4, T_{0.95} = 300ms

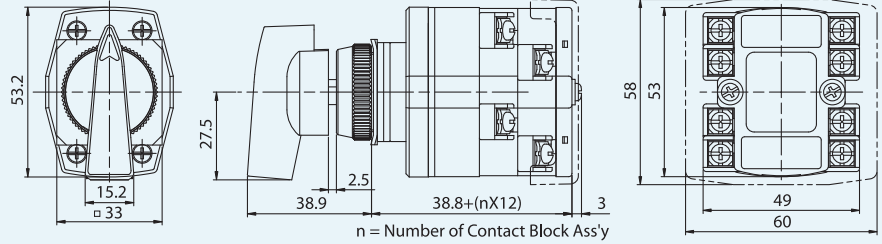
적용규격 (Applied standard) ----- KSC 4519, IEC 60947-5-1

CAM SWITCH (10A)

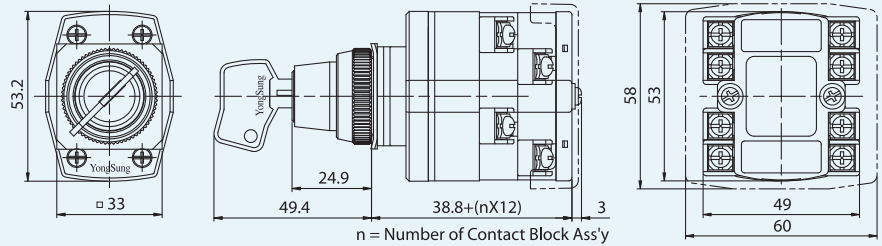
외형 치수도 | Shape / Dimension Drawing |

(unit: mm)

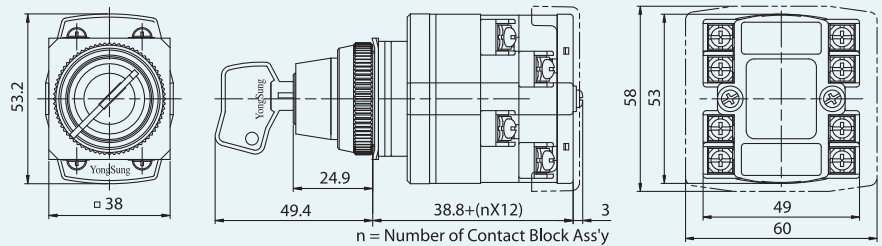
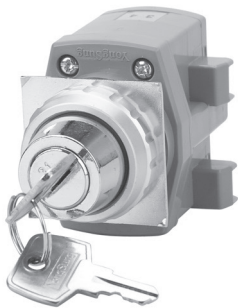
∅25 (2 Type)



∅25 (Key Type)

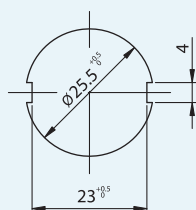


∅30 (Key Type)

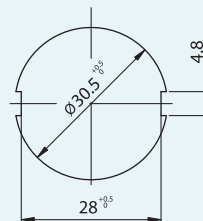


판넬 가공 치수 | Cut-out Dimension |

(unit: mm)



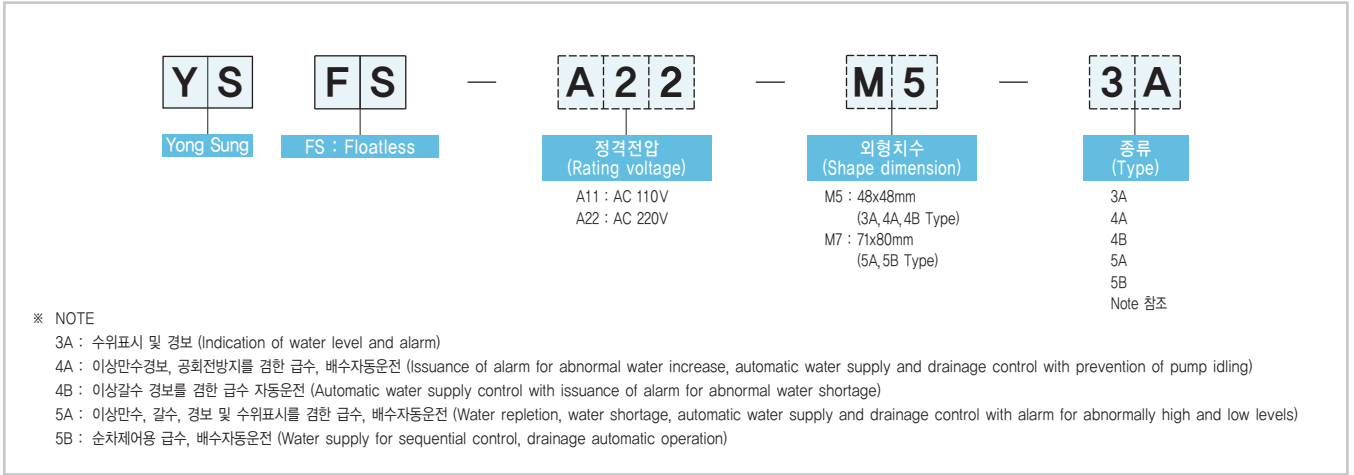
∅25 (2 type), ∅25 (Key type)



∅30 (Key type)

2. 후로드레스 (4극, 5극)

형식 구분도 | Type Classification Diagram |



특징 | Features |

- 11P 소켓방식(3A,4A,4B), 14P 소켓방식(5A,5B) 사용으로 보수점검 용이
- 소형으로 제작하여 설치 용이
- 공회전 방지 및 배수 및 급수 자동 운전
- 배수/급수/경보 램프 표시
- Using 11Pin socket type (3A,4A,4B), and 14 Pin socket type (5A,5B), therefore, easy to repair and maintain
- Manufactured in small size therefore, easy to install
- Prevention of idling and Automatic operation for water supply and drainage
- Indicating lamps for water drainage/water supply/alarm

성능 개요 | Performance Summary |

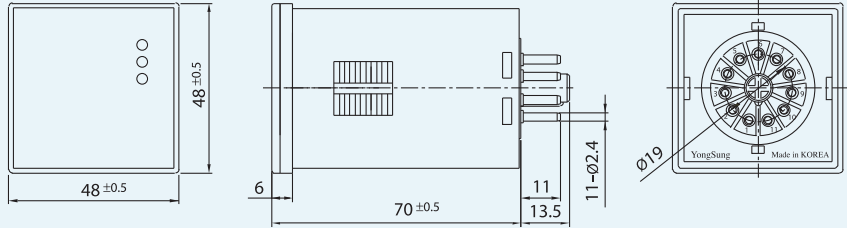
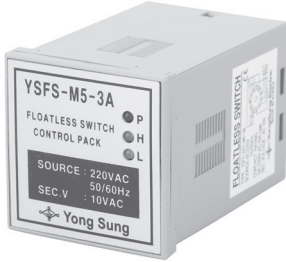
형 식 (Type)	FS-3A	FS-4A	FS-4B	FS-5A	FS-5B
정격전압 (Rating voltage)	AC110V, AC220V 50/60Hz				
허용전압변동범위 (Allowable voltage variable range)	정격전압의 ±10% (Rating voltage ±10%)				
전극간전압(2차전압) (Voltage between electrodes)	AC10V				
동작저항 (Operating resistance)	10kΩ				
복귀저항 (Returning resistance)	15kΩ				
최대감지거리 (Max sense distance)	Below 400m				
소비전력 (Power consumption)	Below 2.2VA			Below 5.5VA	
릴레이 출력접점정격 (Relay output contact rating)	AC250V 5A (Resistance load)				
내전압 (Withstand voltage)	전기회로대지 (Electric circuit earth)		AC2,000V/min		
	독립회로상호간 (Between each circuits)		AC1,500V/min		
절연저항 (Insulation resistance)	Above 100MΩ (DC500V, Meg)				
사용주위온도 (Ambient temperature)	-10℃ ~ 55℃				
허용주위습도 (Ambient humidity)	45 ~ 80%				
취부형태 (Mounting)	Socket YS SK11			Socket YS SK14-K	

FLOATLESS (4POLE, 5POLE)

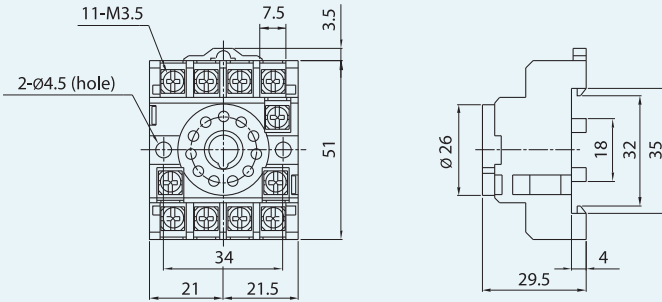
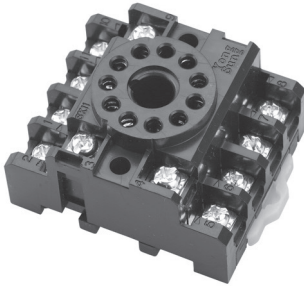
외형 치수도 | Shape / Dimension Drawing |

(unit: mm)

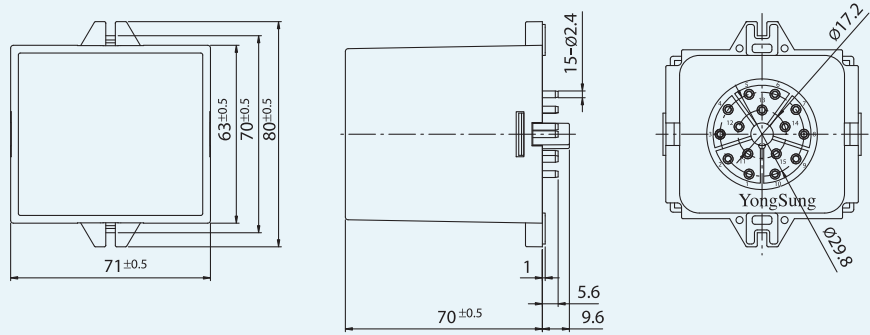
FS - 3A / 4A / 4B



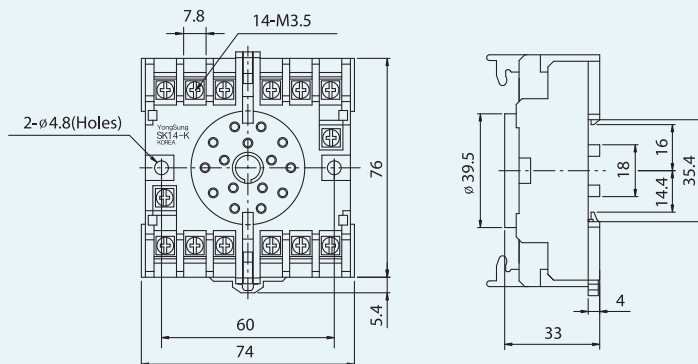
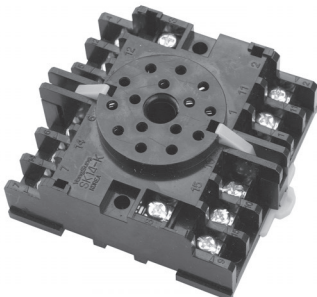
적용소켓(Applied Socket) : YS SK11



FS - 5A / 5B



적용소켓(Applied Socket) : YS SK14-K

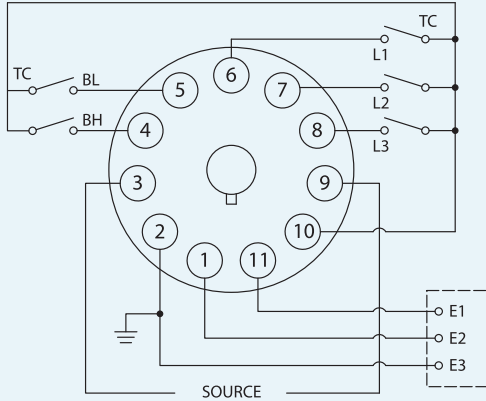


후로드레스 (4극, 5극)

접속도 / 동작상태 | Connection Diagram / Operating state |

· YS FS-3A : 수위표시 및 경보 (Indication of water level and alarm)

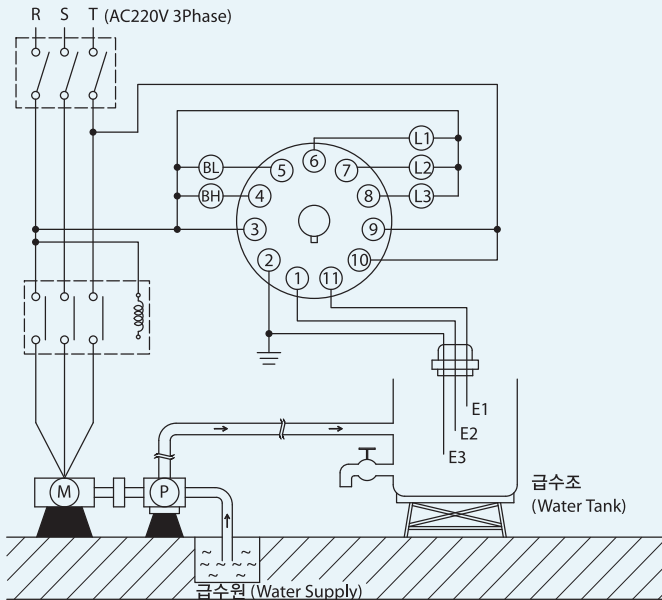
▶ 접속도 (Connection diagram)



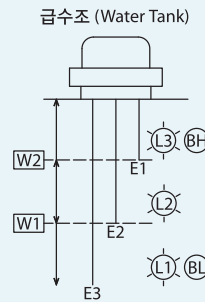
▶ 단자용어 (Terminal terms)

- 1 : E2
- 2 : E3
- 3 : 0V
- 4 : BH(고수위경보) (High-water level alarm)
- 5 : BL(저수위경보) (Low-water level alarm)
- 6 : L1(하한램프) (Lower limit indicator lamp)
- 7 : L2(중간램프) (Middle lamp)
- 8 : L3(상한램프) (Upper limit indicator lamp)
- 9 : AC220V
- 10 : Tc(COM) (Common)
- 11 : E1

▶ 결선도 (Connection wiring diagram) - 급수 시 (When water is supplied)



[LED indicator]



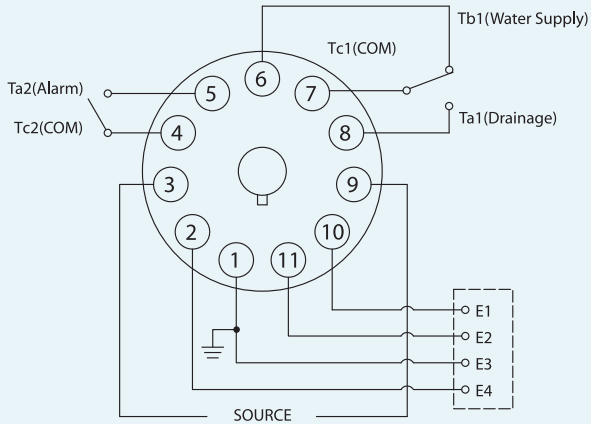
		○ P	
		○ H	
		○ L	
	POWER ON	W1	W2
P	O	O	O
H	X	X	O
L	X	O	O

▶ 동작 (Operating) - 급수 시 (When water is supplied)

1. 수면이 E2 이하이면 하한램프 지시 및 저수위 경보가 발신을 합니다.
(When the water level drops below E2, the lower limit indicator lamp lights and an alarm is sounded.)
2. 수면이 E2에 도달하면 저수위 경보는 꺼지고 중간 램프가 켜집니다.
(When the level reaches E2, the alarm stops and the middle lamp lights.)
3. 수면이 E1에 도달하면 상한램프 지시 및 고수위 경보가 발신을 합니다.
(When the water level reaches E1, the upper limit indicator lamp lights and an alarm is sounded.)

- **YS FS-4A** : 이상만수 경보, 공회전 방지를 겸한 급수, 배수자동운전
(Alarm for water overflow, automatic water supply and drainage control with prevention of pump idling)

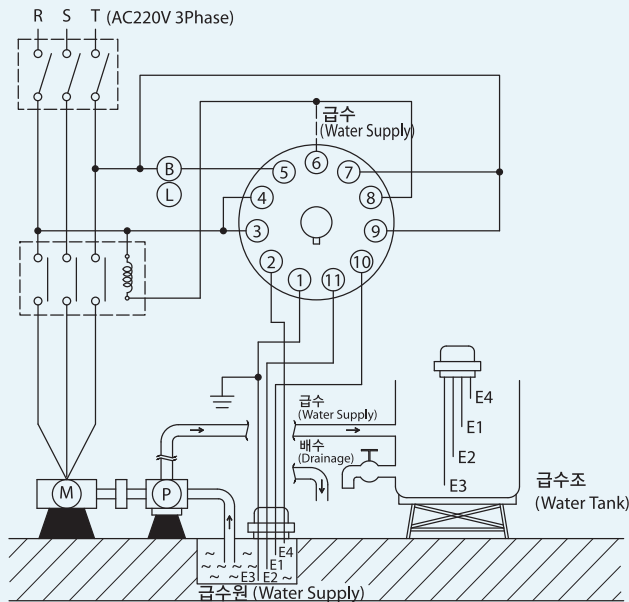
▶ 접속도 (Connection diagram)



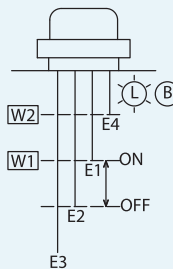
▶ 단자용어 (Terminal terms)

- 1 : E3
- 2 : E4
- 3 : 0V
- 4 : Tc2(만수램프/경보 COM)
- 5 : Ta2(만수램프/경보)
- 6 : Tb1(급수) (Water supply)
- 7 : Tc1(급수/배수 COM) (Water supply/Drainage common)
- 8 : Ta1(배수) (Drainage)
- 9 : AC220V
- 10 : E1
- 11 : E2

▶ 결선도 (Connection wiring diagram) - 배수 시 (Drainage)



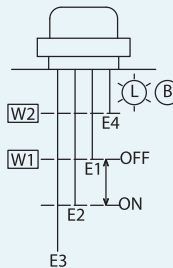
배수시 (Drainage)



[LED indicator]

		○ P
		○ W
		○ E

급수시 (Water Tank)



	POWER ON	W1	W2
P	O	O	O
W	X	X	O
E	X	O	O

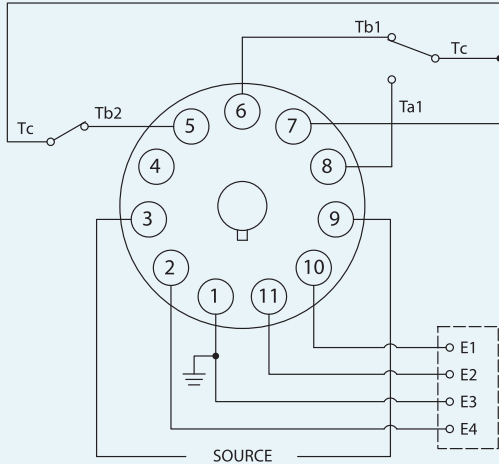
▶ 동작 (Operating) - 배수 시 (Drainage)

1. 수면이 E1에 도달하면 펌프가 시동합니다. (급수 시 : 펌프정지)
(The pump operates when water level reaches E1. (When water supplied : Pump stops))
2. 수면이 E2 이하가 되면 펌프는 정지합니다. (급수 시 : 펌프시동)
(The pump stops when water level is under E2. (When water supplied : Pump operates))
3. 수면이 E4에 도달하면 경보음(표시램프)이 발생합니다.
(Alarming(indicating lamp)when water level reaches E4.)
4. 급수인 경우 Ta1단자를 Tb1단자로 전환시켜 주세요.
(When the water is supplied from the water supply source, change the terminal Ta1 into Tb1.)
5. E3 단자는 반드시 접지시켜 주세요.
(Be sure to ground terminal E3.)

후로드레스 (4극, 5극)

- **YS FS-4B** : 이상갈수 경보를 겸한 급수 자동운전
(Automatic water supply control with alarm for abnormal water shortage)

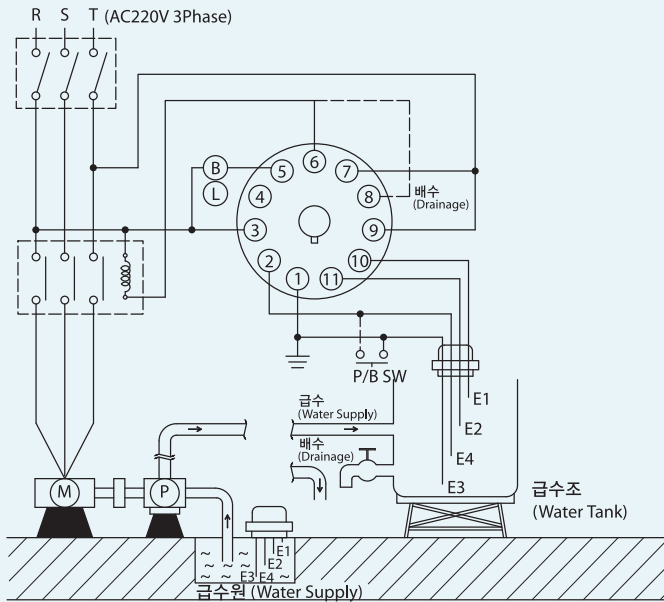
▶ 접속도 (Connection diagram)



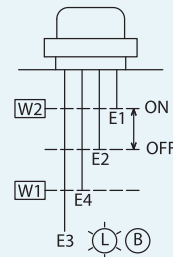
▶ 단자용어 (Terminal terms)

- 1 : E3
- 2 : E4
- 3 : 0V
- 4 : -
- 5 : Tb2(갈수경보) (Alarm for abnormal water shortage)
- 6 : Tb1(급수) (Water supply)
- 7 : Tc(급수/배수 COM) (Water supply/Drainage common)
- 8 : Ta1(배수) (Drainage)
- 9 : AC220V
- 10 : E1
- 11 : E2

▶ 결선도 (Connection wiring diagram) – 급수 시 (When water is supplied)



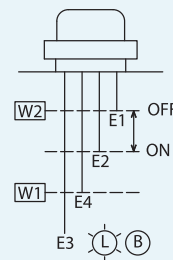
배수시 (Drainage)



[LED indicator]

	○ P
	○ W
	○ E

급수시 (Water Tank)



	POWER ON	W1	W2
P	○	○	○
W	X	○	○
E	X	X	○

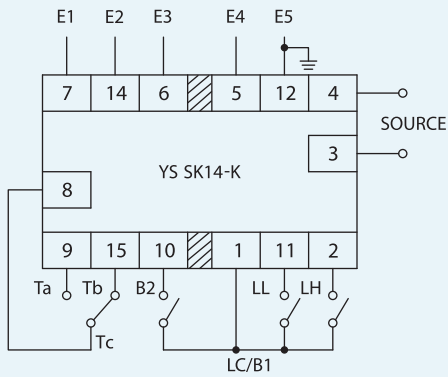
▶ 동작 (Operating) – 급수 시 (When water is supplied)

1. 수면이 E1에 도달하면 펌프는 정지합니다. (배수시 : 펌프시동)
(The pump stops when water level reaches E1. (When water drained : pump operates))
2. 수면이 E2 이하가 되면 펌프는 시동합니다. (배수시 : 펌프정지)
(The pump operates when water level is under E2. (When water drained : pump stops))
3. 수면이 E4 이하가 되면 경보음(표시램프)이 발생합니다. (Alarming(indicating lamp) when water level is under E4.)
4. 시동 및 정전복귀 시 수면이 E4에 도달하지 않는 경우 누름 S/W 를 눌러 E4에 도달할 때까지 눌러주세요.
(If water level has not yet reached E4, When turning on or after recovery from power failure, keep depressing the pushbutton switch until it reaches E4.)
5. 배수인 경우 Tb1단자를 Ta1단자로 전환시켜 주세요. (For the water drainage, change terminal Tb1 into Ta1.)
6. E3 단자는 반드시 접지시켜 주세요. (Be sure to ground terminal E3.)

FLOATLESS (4POLE, 5POLE)

- **YS FS-5A** : 이상만수 경보, 갈수, 경보 및 수위표시를 겸한 급수, 배수자동운전
(Water supply and drainage automatic control with Alarm for water overflow & water shortage and water levels indicator)

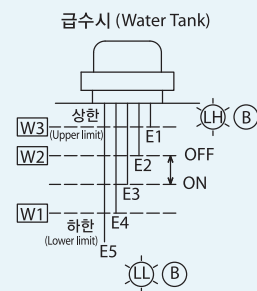
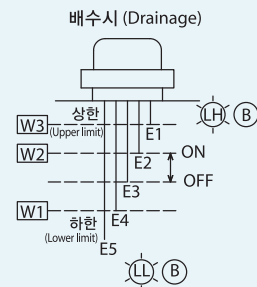
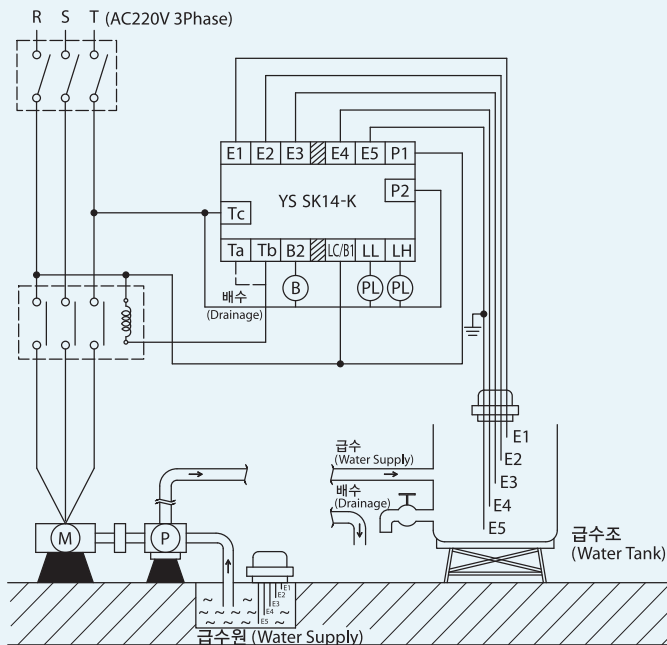
▶ 접속도 (Connection diagram)



▶ 단자용어 (Terminal terms)

- 1 : LC/B1(램프/경보COM) (Lamp/Alarm common)
- 2 : LH(상한램프) (Upper limit lamp)
- 3 : 0V
- 4 : AC220V
- 5 : E4
- 6 : E3
- 7 : E1
- 8 : Tc(급수,배수 COM) (Water supply/Drainage common)
- 9 : Ta(배수) (Drainage)
- 10 : B2(경보) (Alarm)
- 11 : LL(하한램프) (Lower limit lamp)
- 12 : E5
- 14 : E2
- 15 : Tb(급수) (Water supply)

▶ 결선도 (Connection wiring diagram) - 급수 시 (When water is supplied)



[LED indicator]



	POWER ON	W1	W2	W3
PW	○	○	○	○
HW	X	X	X	○
D.E	X	X	○	○
LW	○	X	X	X
S.E	○	○	X	X

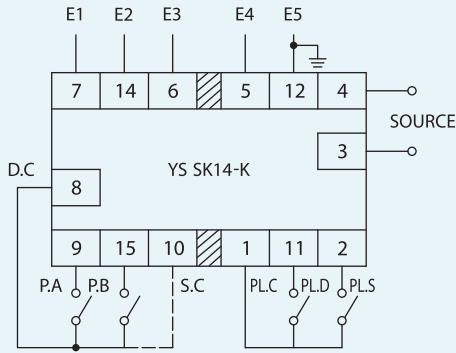
▶ 동작 (Operating) - 급수 시 (When water is supplied)

1. 수면이 E2에 도달하면 펌프는 정지합니다. (배수시 : 펌프시동)
(The pump stops when water level reaches E2. (When water drained : pump operates))
2. 수면이 E3 이하가 되면 펌프는 시동합니다. (배수시 : 펌프정지)
(The pump operates when water level is under E3. (When water drained : pump stops))
3. 사고로 수면이 E1 까지 도달하면 상한램프가 켜지고 E4 이하가 되면 하한램프가 켜져 각각 경보를 울립니다.
(Alarm for abnormally high and low levels : When the liquid level reaches E1, the upper limit indicator lamp lights and an alarm is sounded. When the liquid level drops under E4, the lower limit indicator lamp lights and an alarm is sounded.)
4. 배수인 경우 Tb 단자를 Ta 단자로 전환시켜 주세요. (For water drainage, change terminal Tb into Ta.)
5. E5 단자는 반드시 접지시켜 주세요. (Be sure to ground terminal E5.)

후로드레스 (4극, 5극)

· YS FS-5B : 순차제어용 (Sequential control)

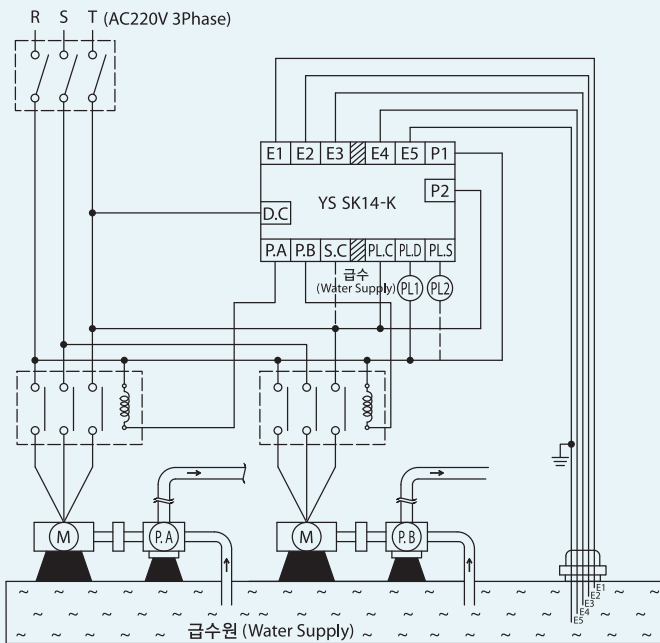
▶ 접속도 (Connection diagram)



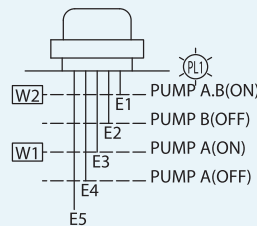
▶ 단자용어 (Terminal terms)

- 1 : P.L.C(램프 COM) (Lamp common)
- 2 : P.L.S(급수램프) (Water supply lamp)
- 3 : 0V
- 4 : AC220V
- 5 : E4
- 6 : E3
- 7 : E1
- 8 : D.C(배수 COM) (Drainage common)
- 9 : P.A(펌프 A) (Pump A)
- 10 : S.C(급수 COM) (Water supply common)
- 11 : P.L.D(배수램프) (Drainage lamp)
- 12 : E5
- 14 : E2
- 15 : P.B(펌프 B) (Pump B)

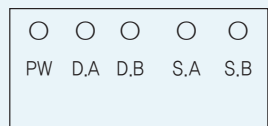
▶ 결선도 (Connection wiring diagram) - 배수 시 (Drainage)



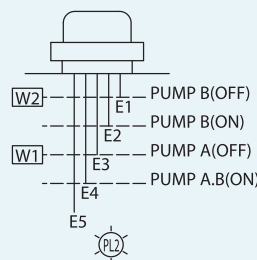
배수시 (Drainage)



[LED indicator]



급수시 (Water Tank)



	POWER ON	W1	W2
PW	O	O	O
D.A	X	O	O
D.B	X	X	O
S.A	O	X	X
S.B	O	O	X

▶ 동작 (Operating) - 배수 시 (Drainage)

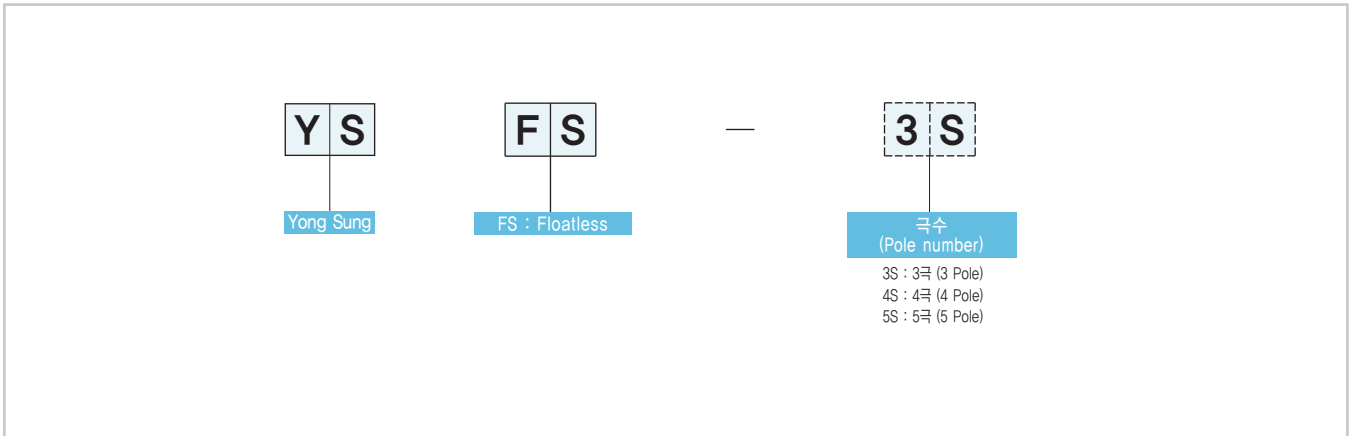
1. 수면이 E3에 도달하면 펌프 A가 시동합니다. (급수시 : 펌프 A 정지)
(The pump A operates when water level reaches E3. (When water supplied : Pump A stops))
2. 수면이 E1에 도달하면 펌프 A, B가 시동하고 PL1 램프가 켜집니다. (급수시 : 펌프 A, B 정지)
(The pump A and B operate and PL1 lamp turns on when the water level reaches E1. (When water supplied : pump A and B stops))
3. 수면이 E2 이하가 되면 펌프 B가 정지, 펌프 A만 동작하고 PL1 램프는 꺼집니다.
(When the water level is under E2, pump B stops and only pump A operates and PL1 lamp turns off.)
4. 수면이 E4 이하로 내려가면 펌프 A도 정지하고 PL2 램프가 켜집니다. (급수시 : 펌프 A, B 시동, PL2 램프 켜짐)
(When the water level is under E4, pump A also stops and PL2 lamp turns on. (When water supplied : Pump A and B operate and PL2 lamp turns on))
5. 급수인 경우 D.C 단자를 S.C 단자로 전환시켜 주세요. (For water supply, change terminal D.C into S.C)
6. E5 단자는 반드시 접지시켜 주세요. (Be sure to ground terminal E5.)

사용상의 주의사항 | Remark in Use |

1. 동작전원은 정격사양에 맞도록 사용하여 주십시오.
정격사양 이상 또는 이하 시에는 고장 및 오동작 원인이 될 수 있으므로 사용을 피하여 주십시오.
 2. 단자결선은 접속도에 따라 바르게 연결하여 주십시오.
 3. 전원스위치를 OFF 한 후 후로드레스 전원단자 간에 유도전압, 잔류전압이 인가되지 않도록 주의하여 주십시오.
 4. 전원전압은 허용범동범위 내에서 사용하여 주십시오.
 5. 전원전압은 스위치, 릴레이 등의 접점을 사용하여 단번에 인가하도록 하여 주십시오.
서서히 전원을 인가하면 오동작 할 수 있습니다.
 6. 릴레이접점 부하는 정격 부하용량 이하로 사용하여 주십시오.
 7. 다음과 같은 장소에서는 사용을 피하여 주십시오.
 - 온도 또는 습도의 정격을 벗어나는 장소
 - 온도변화에 의하여 결로현상이 발생하는 장소
 - 먼지나 기름이 많은 장소
 - 강 알카리, 강 산성 물질을 사용하는 장소
 - 직사광선이 쬐이는 장소
 - 강한 자기력이나 전기적인 노이즈가 발생하는 기기의 근접 장소
-
1. Please use the operating power according to the rating specification.
When the power is below or over the rating specification, please don't use the device in order to avoid any possible malfunction or error.
 2. Please wire contacts according to the Wiring Connection Drawing.
 3. After turning off the power, please prevent induced voltage and residual voltage from getting into the power terminals.
 4. Power supply voltage should be used within the allowable range.
 5. Please connect the power supply voltage at once by using switches, relays etc.
When the power is connected gradually, it can cause malfunction.
 6. The contact load should be less than the rating load capacity.
 7. Please avoid using the Floatless in the following places.
 - Places where the temperature and the humidity are out of the permissible range.
 - Places where there is dew condensation from changing temperature.
 - Places that contain much dust or oil.
 - Places where strong alkalinity and acidity are used.
 - Places exposed to direct sunlight.
 - Places where equipments are making strong magnetism and electric noise.

전극봉 홀더

형식 구분도 | Type Classification Diagram |



성능 개요 | Performance Summary |

형 식 (Type)	YS FS-3S	YS FS-4S	YS FS-5S
사용액 (Used liquid)	일반액 (General Liquid)		
사용주위온도 (Ambient temperature)	MAX +70°C		
사용압력 (Work pressure)	Below 1.2kg/cm ²		
사용전극봉 (Used electrode bar)	SUS(304) Ø5.5		

사용상의 주의사항 | Remark in Use |

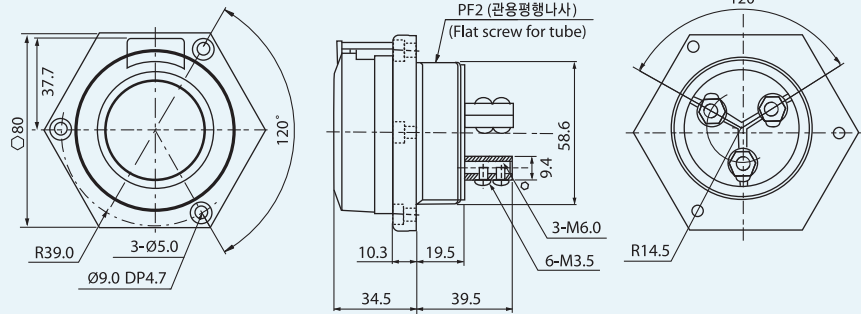
- 전극봉은 스테인레스봉을 사용하며 Ø5.5가 적합합니다.
 - 전극봉의 TIP부는 장시간 사용하면 이물질이 생겨 도전성이 떨어질 우려가 있으므로 6개월에 1회 정도 닦아 주십시오.
 - 접지단자 전극봉은 피복 전체를 제거하여 주십시오.
 - 전극봉의 길이는 상한, 하한위치를 선정하여 설정하십시오.
- The electrode bar is made of stainless steel, so it is suitable for Ø5.5.
 - Using the tip part of the electrode bar for a long period can create foreign substance on the surface which would lower its conductivity, so clean the tip part every 6months.
 - Eliminate the whole covering from the electrode bar for grounding terminal.
 - As to the length of electrode bar, choose the upper limit and the lowest limit and set it accordingly.

ELECTRODE BAR HOLDER

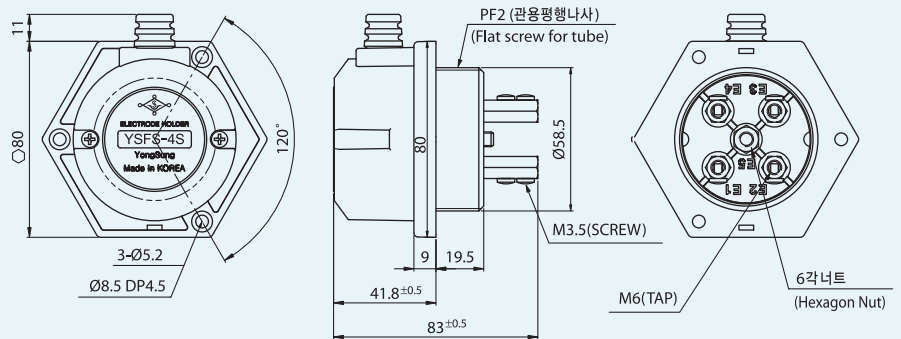
외형 치수도 | Shape / Dimension Drawing |

(unit: mm)

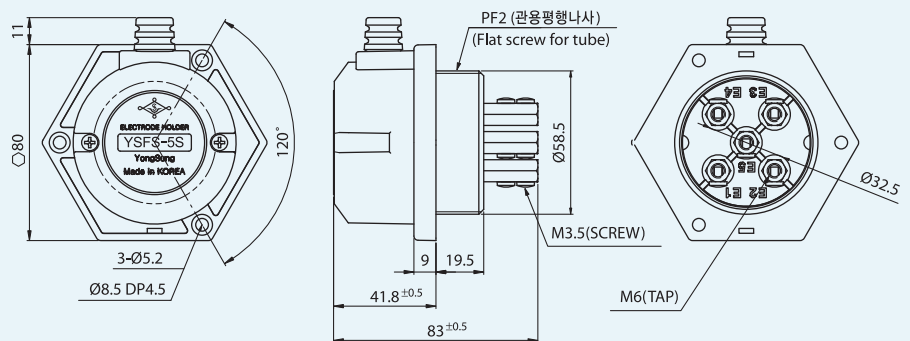
YS FS-3S



YS FS-4S

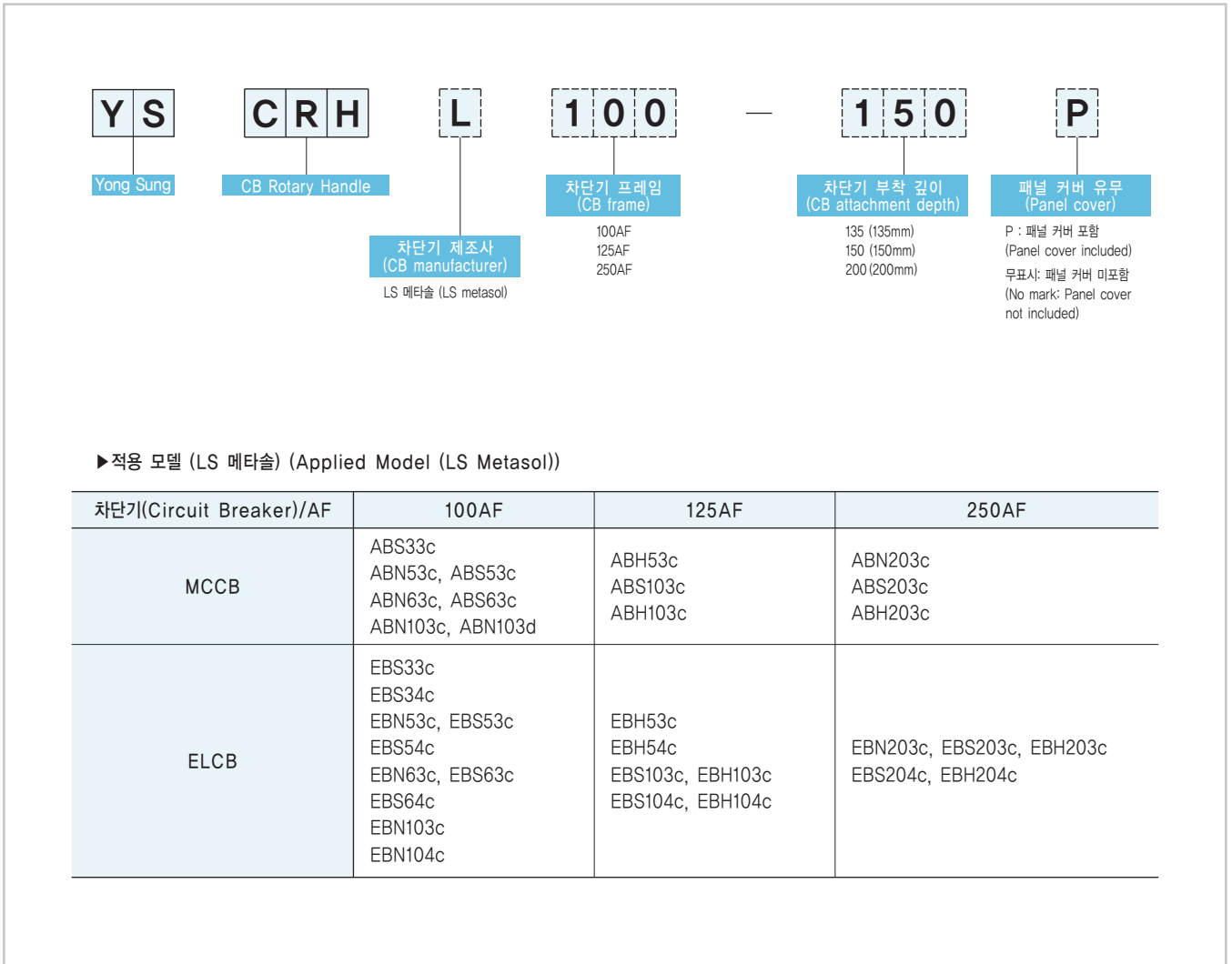


YS FS-5S



3. 차단기 외부조작 핸들

형식 구분도 | Type Classification Diagram |

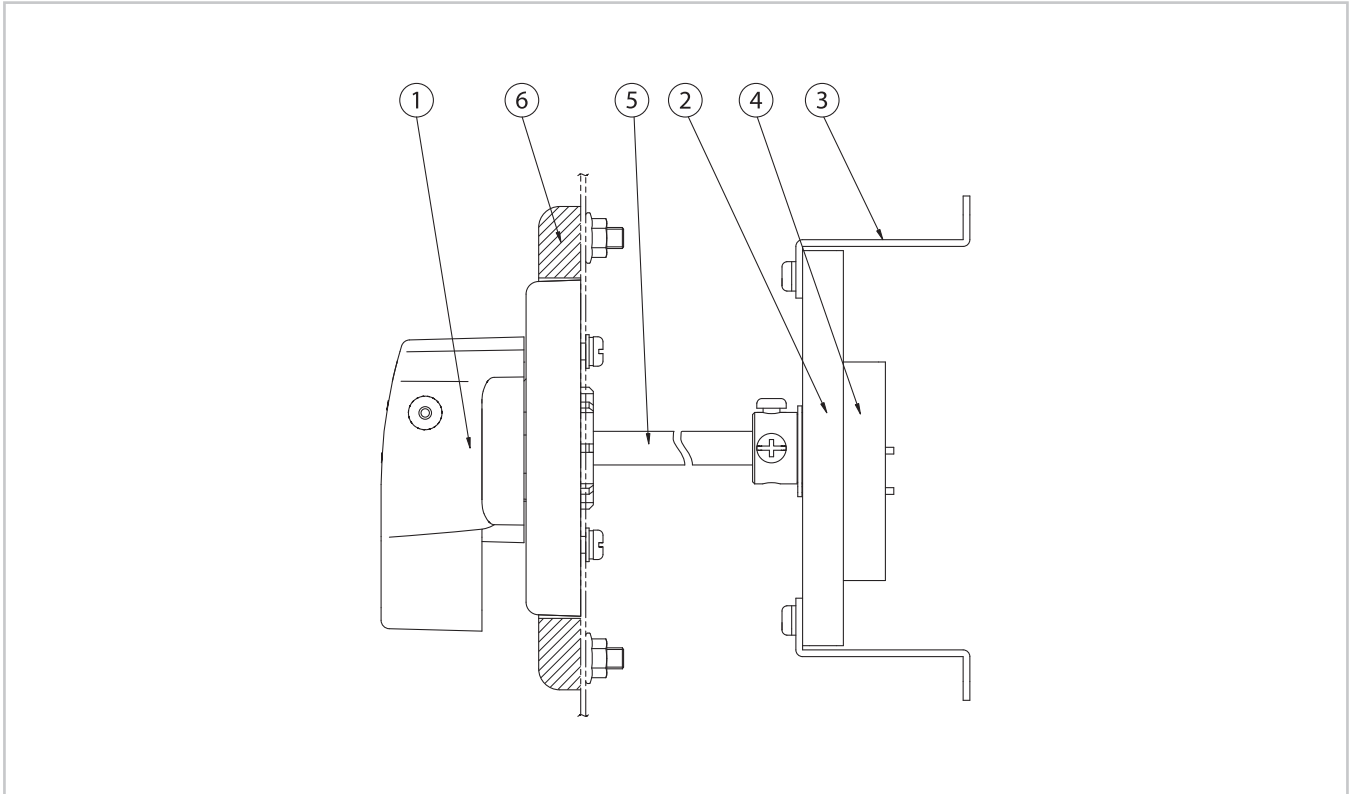


제품 특징 및 구조 | Product Features and Structure |

1. 패널 유닛 도어를 열지 않고 외부에서 차단기를 안전하게 조작할 수 있습니다.
 2. 패널 외부에서 차단기의 상태(ON, OFF, TRIP, RESET)를 확인할 수 있습니다.
 3. 차단기가 ON 상태에서 패널 유닛 도어가 잠금상태로 되어 패널 유닛 도어는 열리지 않습니다
 4. 차단기가 ON 상태에서 패널 유닛 도어를 열고자 할때는 RELEASE 나사를 회전하여 패널 유닛 도어 락을 해제할 수 있습니다.
 5. 안전을 위해 핸들이 OFF 상태일 때 자물쇠를 사용하여 핸들을 고정시킬 수 있는 락 기능이있습니다.
1. You can operate the circuit breaker outside safely without opening panel unit door.
 2. You can check the condition(ON, OFF, TRIP, RESET) of circuit breaker outside the panel.
 3. When a circuit breaker is on ON condition, the panel unit door turns locked and unopenable.
 4. When you want to open the panel unit door while the circuit breaker is on ON condition, you should unlock the panel unit door by rotating 'RELEASE' screw.
 5. For safety reason, there is a lock function that you can fix the handle by using a lock while the handle is on OFF condition.

CIRCUIT BREAKER EXTERNAL OPERATING HANDLE

부품 재질 | Part Materials |



No.	부 품 (Part)	재 질 (Material)
1	핸들 (Handle)	나일론 (Nylon)
2	메인 플레이트 (Main plate)	냉간압연 강판, 3가 Zn 도금 (Cold-formed Steel Sheet, Trivalent Zn Plating)
3	사이드 플레이트 (Side plate)	냉간압연 강판, 3가 Zn 도금 (Cold-formed Steel Sheet, Trivalent Zn Plating)
4	피니언 (Pinion)	냉간압연 강판, 3가 Zn 도금 (Cold-formed Steel Sheet, Trivalent Zn Plating)
5	샤프트 (Shaft)	괘삭강, 3가 Zn 도금 (Free Cutting Steel, Trivalent Zn Plating)
6	패널 커버 (Panel cover)	ABS 내열 수지 (ABS Heat-resistant Resin)

사용 환경 | Usage Environment |

사용주위온도 (Ambient temperature)	-5°C ~ 40°C
상대 습도 (Relative humidity)	85% 이하 (Below 85%)

차단기 외부조작 핸들

설치 방법 | Installation |

1) 메인플레이트를 부착 (Attachment of main plate)

※ 주의 : 감전에 주의하여 차단기를 OFF로 하고 설치를 하십시오.

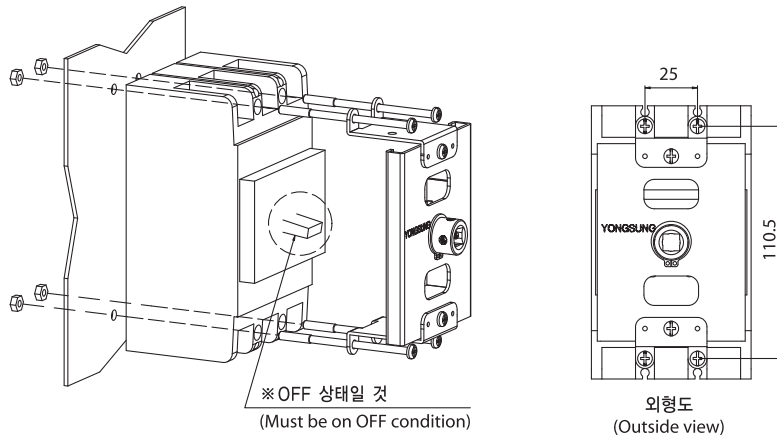
(Caution : Install it while turning the circuit breaker on OFF condition being cautious of electric shock.)

① 사이드 플레이트는 [그림 1]과 같이 차단기와 같이 패널에 부착합니다.

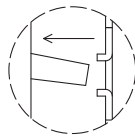
(Attach the side plate on panel with circuit breaker like [Fig. 1].)

② 피니언은 [그림 2]와 같이 차단기의 레버에 삽입합니다.

(Insert the pinion in the lever of the circuit breaker like [Fig. 2].)



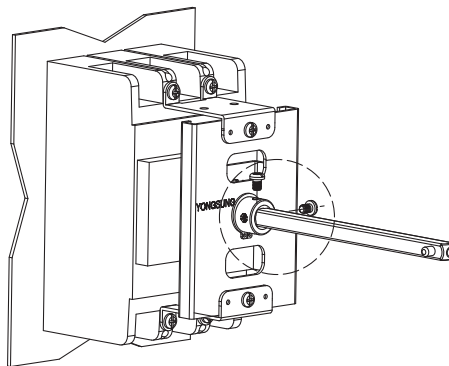
[그림 1 (Fig.1)]



[그림 2 (Fig.2)]

2) [그림 3]과 같이 샤프트 핀이 수평이 되도록 하여 샤프트를 고정합니다.

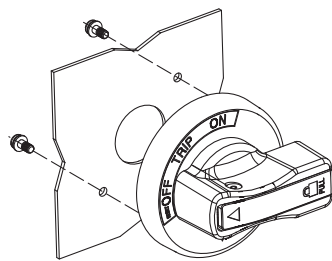
(Fix the shaft having the shaft pin in horizontal way like [Fig. 3].)



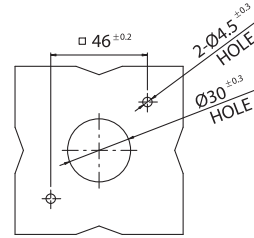
[그림 3 (Fig.3)]



3) [그림 4]와 같이 패널 도어에 핸들을 부착합니다. (Attach the handle on the panel door like [Fig. 4].)



[그림 4 (Fig.4)]

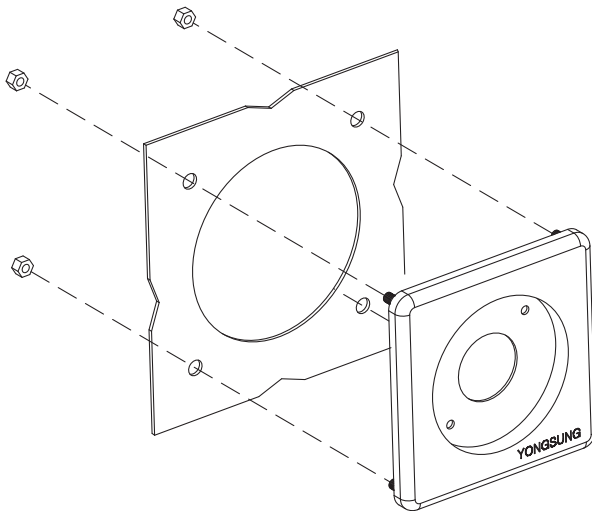


핸들 부착 치수
(Handle attachment measurement)

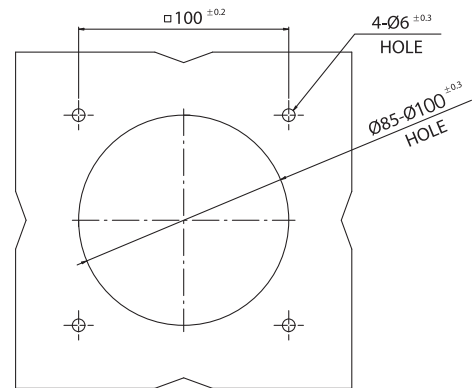
※ 참고 : 패널 도어에 직접 핸들을 부착 할 수 없는 경우

(Reference : For a case when you are not able to directly attach a handle on a panel door)

① [그림 5]와 같이 패널 도어에 패널 커버를 부착합니다. (Attach the panel cover on panel door like [Fig. 5])

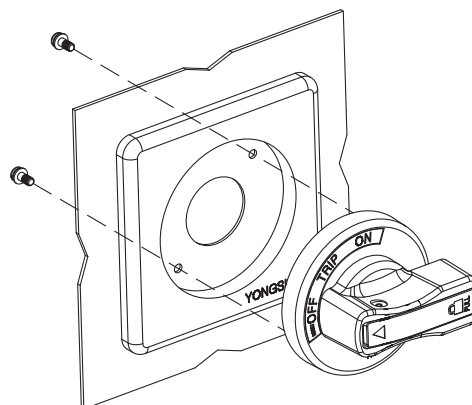


[그림 5 (Fig.5)]



핸들 부착 치수
(Handle attachment measurement)

② [그림 6]과 같이 패널 커버에 핸들을 부착합니다. (Attach the handle on panel cover like [Fig. 6])

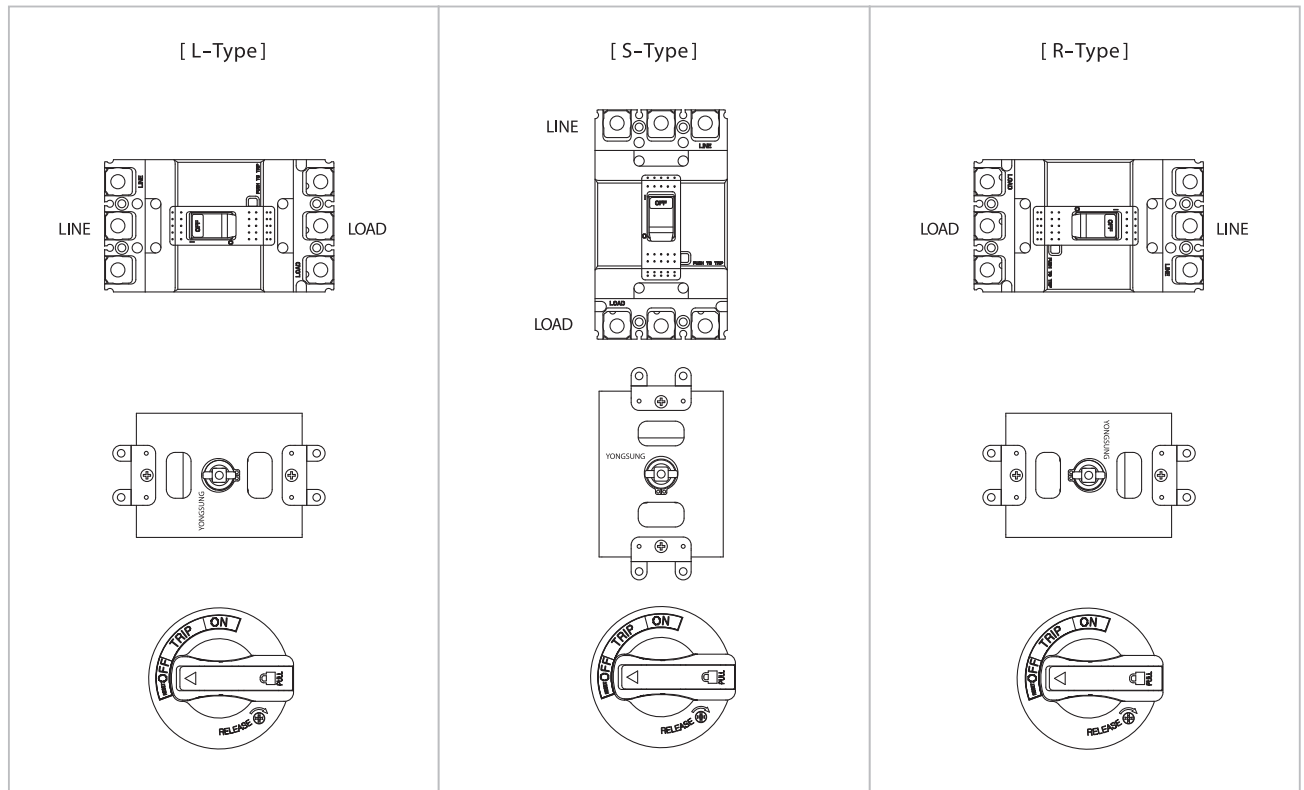


[그림 6 (Fig.6)]

차단기 외부조작 핸들

4) 차단기 설치에 따른 외부조작핸들 장착 방향

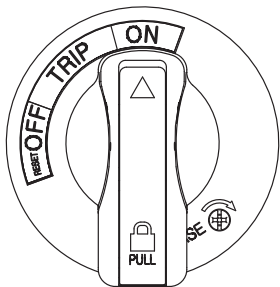
(Installation direction of external operating handle according to the installation of circuit breaker)



조작 방법 | Handling Method |

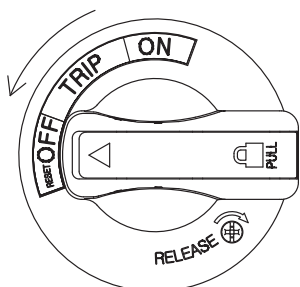
1) 패널 도어를 닫은 상태에서 차단기의 조작

(Operation of circuit breaker while a panel door is closed)



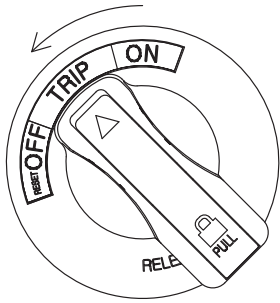
① 핸들을 수직으로 되게 하면 차단기는 ON상태로 됩니다.

(A circuit breaker indicates ON condition when you have a handle vertical way.)



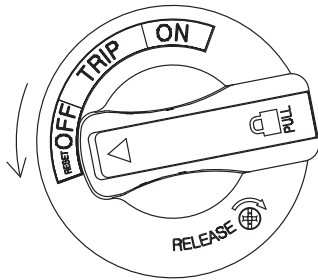
② 핸들을 수평으로 되게 하면 차단기는 OFF상태로 됩니다.

(Circuit breaker indicates OFF condition when you have a handle horizontal way.)



- ③ 차단기가 과부하나 누설등으로 차단된 경우는 핸들은 TRIP 위치를 가리키게 됩니다.

(The handle will indicate TRIP condition when the circuit breaker is shut off due to overload or leakage.)



- ④ 차단기는 TRIP 시 ON으로 핸들 회전되지 않는 락 기능이 있으므로 핸들을 RESET방향으로 회전하여 락기능을 해제하고 사용하십시오.

(Circuit breaker has a lock function that prevents it from rotating to ON condition while on TRIP condition, therefore, use it after clearing lock function by rotating the handle to RESET direction.)

2) 패널 도어의 잠금해제 (Unlocking of panel door)

- ※ 주의 : 통전 중 도어 락을 해제시에는 감전에 특별히 주의하십시오.

(Caution : Be extra cautious when you clear a door lock while applying an electric current.)

- ① 핸들이 OFF, TRIP 상태에서 RESET 위치로 회전시키면 도어 락이 해제됩니다.

(A door lock will be unlocked when you turn a handle from OFF, TRIP condition to RESET position.)

- ② 차단기가 ON 상태에서는 잠금상태가 되어 도어는 열리지 않습니다.

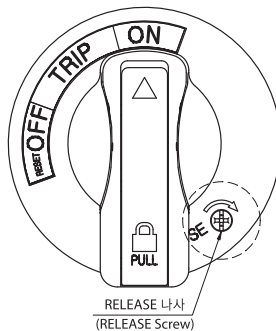
(When a circuit breaker is on ON condition, it becomes unlocked-condition, therefore the door will not be openable.)

- ③ 차단기가 ON 상태에서 패널 도어를 열고자 할때는 RELEASE 나사를 시계방향으로 회전시 키면 도어 락이 해제됩니다.

(When you want to open the panel door while the circuit breaker is on ON condition, clear the door lock by rotating RELEASE screw in clock-wise.)

- ※ 주의 : RELEASE 나사를 과도한 힘으로 15° 도 이상 회전시킬 경우 나사부가 파손될 수 있습니다.

(Caution : Thread can be damaged if the RELEASE screw is excessively rotated at over 15° degrees.)

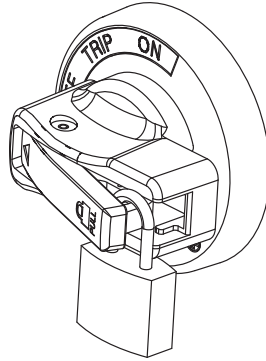


차단기 외부조작 핸들

3) OFF 상태의 핸들 락 기능(사용자 외 핸들 조작 방지)

(Lock function of the handle while on OFF condition(Prevention of usage from unrelated person))

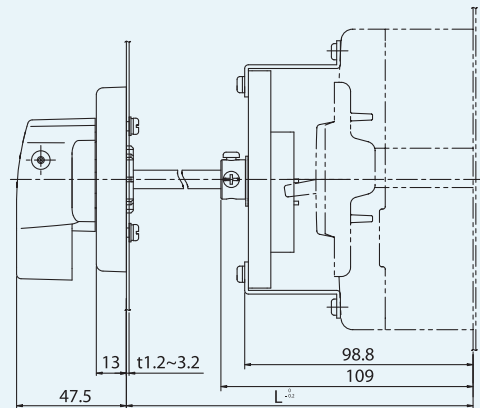
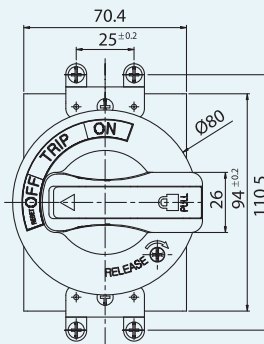
- 자물쇠 고리의 굵기는 $\varnothing 3\sim 5$ 로 사용하여 주십시오. (Please use $\varnothing 3\sim 5$ thick ring of the lock)



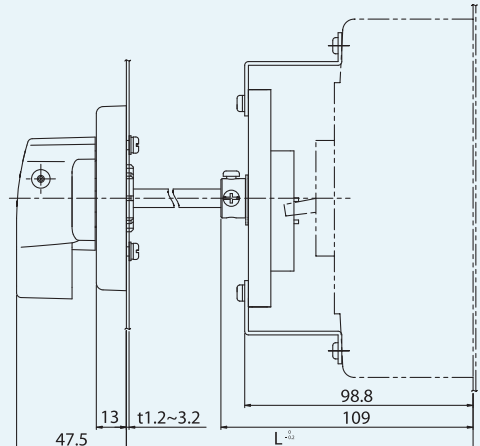
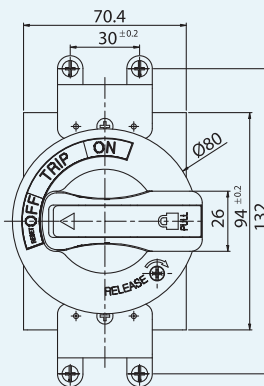
외형 치수도 | Shape / Dimension Drawing |

(unit : mm)

100AF

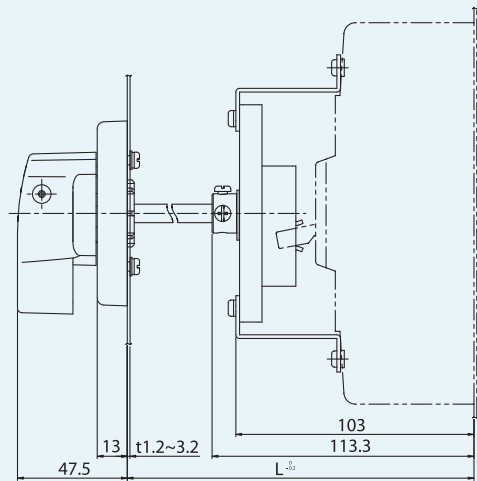
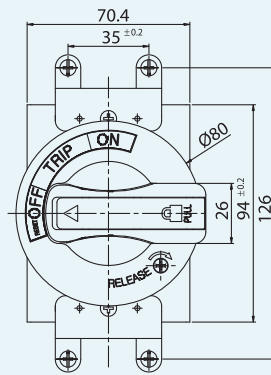


125AF

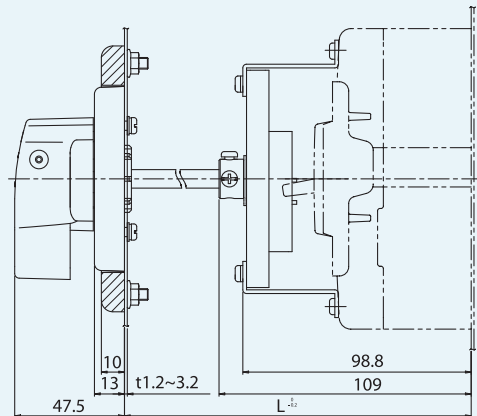
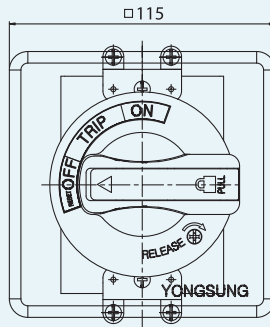


CIRCUIT BREAKER EXTERNAL OPERATING HANDLE

250AF



패널 커버 적용 (100AF 기준)
Application of panel cover
(100AF standard)



▶ 차단기 외부조작핸들 부착 깊이 치수
(Attachment depth measurement of Circuit Breaker External Operating Handle)

NO.	부착 깊이 (L) (Attachment depth (L))	샤프트 길이 (Shaft length)	차단기 프레임 (LS 메타솔) (CB frame (LS metasol))
P1	135	67	100AF, 125AF
P2	150	82	
P3	200	132	
P4	135	63	250AF
P5	150	78	
P6	200	128	

4. 배전반용 LED 직부등

용도 | Application |

- LED직부등은 높은 조명효율과 뛰어난 연색성을 가진 제품으로서 긴수명과 일정한 광속이상을 가진 LED 조명등으로서 Switchgear Panel 내부에 적합한 led직부등.
- It is appropriate to use inside Switchgear Panels due to its high lighting efficiency, great color rendering and long life expectancy.

특징 | Features |

- 고휘도 led칩 채용하여 기존 직부등 led 제품에 비해 매우 밝음
- 장 수명 낮은 소비전력
- 전원 단자대 구조와 충전부 커버 일체화 (배선부 작업성 및 안정성을 향상)
- 부착 취부에 대한 최적조건 (브라켓트 부착방식)
- 유백색 색감이므로 높고 산뜻하여 밝게 보임
- 전원공급장치 내장 Type
- By using high luminance LED chip, it is greatly brighter than the existing LED panel light products.
- By long life expectancy and low electrical power consumption, you can save electric cost.
- Integration of structure of terminal block and live part cover. (Increases usability of wiring work and stability)
- Optimum condition for attachment (Bracket attachment method)
- It has sense of ivory white color, therefore, it looks neat and bright.
- Power supply device built-in type.

정격 사양 | Specifications |

형 식 (Type)		YS T8-30-5W	YS T8-35-10W
정격 (Rating)	전압(V) (Voltage)	85~260VAC 47~65Hz	
	전류(mA) (Current)	34 ±5%	41 ±5%
	전력(W) (Power)	5	10
CIE색도 (CIE Chromaticity)	전광속(lm) (Total luminous flux)	≥540	≥900
	색온도(K) (Color temperature)	6,500K	6,500K
	연색성(Ra) (Color rendering)	≥80	≥80
내전압 (Withstanding voltage)		AC2,000V 1분간 (For one minute)	
절연저항 (Insulation resistance)		충전부대 어스간 : 100MΩ이상 (500V메가에서) Above 100MΩ (Under the value of 500V)	
수명(Hrs) (Life time)		≥ 50,000	
사용주위온도 (Ambient temperature)		-20 ~ +50℃ (다만, 결빙·결로가 없는 곳) (At the place with no freezing and condensation)	
보존온도 (Preserving temperature)		-25 ~ +85℃ 및 24시간을 넘지않는 단기간으로 +70℃ 이하 (-25 ~ +85℃ and below +70℃ for less than 24 hrs)	
상대습도 (Relative humidity)		45 ~ 85% (다만, 결빙·결로가 없는 곳) (At the place with no freezing and condensation)	
표고 (Altitude)		2,000m 이하 (Below 2,000m)	
보호구조 (Protection rating)		IP20 (폐쇄형 (Closed type))	
단자나사 (Terminal screw)		3.5mm : 0.8 ~ 1.0 N.m	
제품크기(W×H×D:mm) (Size)		318×35.2×34	367×35.2×34

DOUBLE ENDS LED PANEL LIGHT

부품 재질 | Part Materials |

부 품 (Part)	재 질 (Material)
몸체 (Body)	알루미늄(A0) (Aluminium)
반사판 (Reflecting plate)	고순도 알루미늄 (High Purity Aluminium)
커버 (Cover)	백색 PC 수지 (White PC resin)
부착판 (브라켓) (Attachment (Bracket))	스테인레스 (Stainless Steel)

외형 치수도 | Shape / Dimension Drawing |

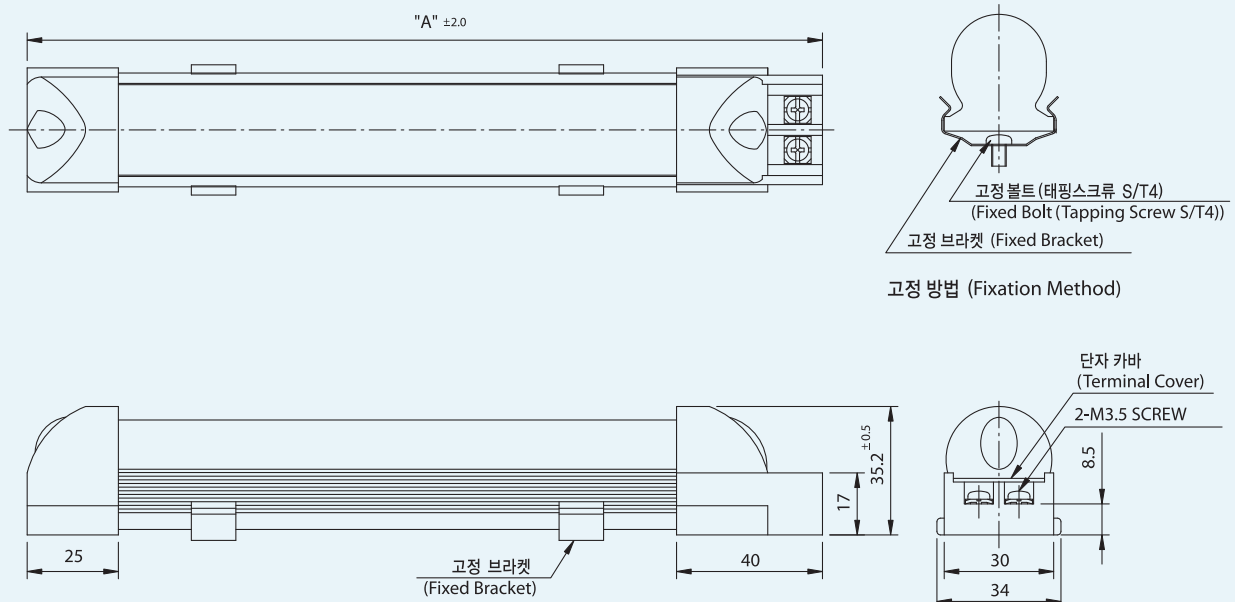
(unit : mm)

YS T8-30-5W / YS T8-35-10W



▶ 치수 구분표 (Size)

Model No.	"A" ±2.0
YS T8-30-5W	318
YS T8-35-10W	367



배전반용 LED 직부등

CIE 색도좌표 | CIE Chromaticity Coordinate |

▶ YS T8-30-5W

CIE 색도좌표 (CIE Chromaticity Coordinate)	X = 0.3145 Y = 0.3283 / U = 0.1994 V = 0.3122
연색목록 (Color rendering)	Ra = 73.0
색온도 (Color temperature)	Tc = 6356K
광속 (Speed of light)	Q = 441.63(lm) η = 72.66(lm/W) P = 1.377(w)
램프정격효율 (Lamp rating efficiency)	U = 221.3V I = 0.0259A P = 5.139W PF = 0.722

▶ YS T8-35-10W

CIE 색도좌표 (CIE Chromaticity Coordinate)	X = 0.3145 Y = 0.3283 / U = 0.1994 V = 0.3122
연색목록 (Color rendering)	Ra = 75.2
색온도 (Color temperature)	Tc = 6230K
광속 (Speed of light)	Q = 880.69(lm) η = 82.73(lm/W) P = 2.743(w)
램프정격효율 (Lamp rating efficiency)	U = 221.3V I = 0.0539A P = 10.64W PF = 0.893



용성전기주식회사
YongSung Electric Co.,Ltd.

서울사무소 (Seoul Office)

서울시 동대문구 황물로 87
87, Hwangmul-ro, Dongdaemun-gu, Seoul, Korea.

국내 영업부 (Domestic Sales Dept)
Tel. 82-2-2244-5478 Fax. 82-2-2249-2248

해외 영업부 (Oversease Sales Dept)
Tel. 82-2-2212-7324 Fax. 82-2-2244-6733

본사 (Head Office)

경기도 광주시 곤지암읍 백고개길 194
194, Baekgogae-gil, Gonjam-eup, Gwangju-si, Gyeonggi-do, Korea.

Tel. 82-31-762-8920 Fax. 82-31-762-8967