OSS - TN, TBN Type

ATS(60~600A)

Information to Order (주문정보)

OSS - 6□-□-□P-□
A B C D

A Rated Current

06	1	2	4	6
60A	100A	200A	400A	600A

B Type
- TN : TN-Type
- TBN : TBN-Type

C Number of Poles
- 2 : 2P
- 3 : 3P
- 4 : 4P

D Operating Voltage
- A1 : AC 110V
- A2 : AC 220V
- D1 : DC 110V
- D2 : DC 125V

Features (특징)

■ **Off position stop method**
In case with the uninterrupted power system, it is recommended to stop at the OFF position set by tripping mechanism for the stable power. Instantaneous transfer without stop can be also performed by operating signal.
A⇒Off⇒B, B⇒Off⇒A, and A⇒Off⇒A, B⇒Off⇒B
And also, instantaneous transfer can be performed by operating signal.

■ **One-Coil Application**
One-coil is employed for the transfer to normal power source and emergency power source.

■ **Compact & Lightweight Design**
Compact & lightweight design makes the minimized mounting space and convenient installation.

■ **Excellent Breaking Capacity**
Designed for suffciently large chamber to extinguish the arc when transferred. Arc-extinguishing area is designed for convenient inspection and maintenance.

■ **Protection against the remaining power source**
Time delay to transfer is available so that the remaining power can not be induced to the main power to protect the load.

■ **Construction for Safety**
For safe operation, molded construction is employed on breaking parts. And also, latching indicator is prepared to indicate the operating condition.

■ **중간정지 방식**
무정전 전원장치가 있는 경우 정전 또는 복전시 긴급 절체 되는것 보다는 회로의 안정 및 안전을 확인한 후 절체할 수 있는 방식으로 트립장치에 의해 중간위치(off)가 가능합니다.
A⇒Off⇒B, B⇒Off⇒A, and A⇒Off⇒A, B⇒Off⇒B
또한 조작 지령에 의해 종전품과 동일하게 긴급절체도 가능합니다.
A⇒B , B⇒A

■ **단일코일 방식**
한개의 코일로 절체하는 방식입니다.

■ **소형 경량**
작고 가벼워 공간 활용 및 작업자 능률이 높아집니다.

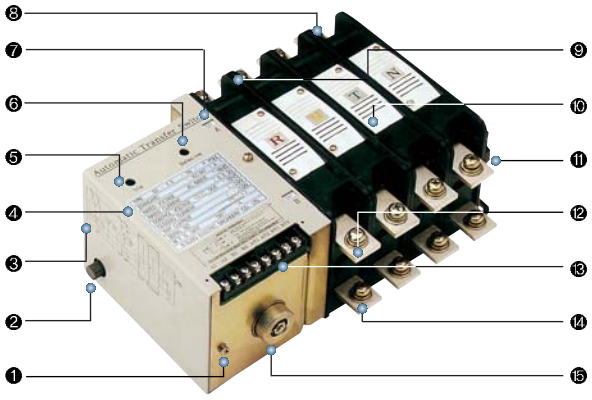
■ **강력한 차단 능력**
독특한 구조의 소호실 설계로 아크차단이 짧고 접점의 소모가 작아 장기간 사용 가능하며 전면에서 소호실을 열수있어 내부 접점의 점검이 편리합니다.

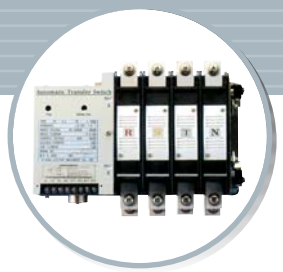
■ **부하측 잔류전원 혼촉 방지**
Neutral(OFF)부의 TN형은 외부시퀀스에 의해 절체시간을 임의설정하여 전원과 부하측 잔류 전압과의 혼촉을 확실하게 방지할 수 있습니다.

■ **안전 구조 설계**
차단부가 분진방지형 몰드구조로 설계되었고, 동작 위치 표시기가 있어 수명이 길고 사용자가 안전합니다.

External View (외관명칭)

❶ Earthing Terminal (접지단자)
❷ Manual Operating Shaft (Anti-Clockwise) (수동조작 바)
❸ Circuit Diagram (회로도)
❹ Name Plate (명판)
❺ Trip Button (트립 버튼)
❻ Selective Button for "B" Power-Closing (선택 버튼)
❼ On/Off Indicator (동작표시기)
❽ Circuit Terminal for "A" Power (A전원측 주회로 단자)
❾ Contacts (접점부)
❿ Arc-Extinguishing Chamber (소호실)
⓫ Aux Switch (보조스위치)
⓬ Circuit Terminal for "B" Power (B전원측 주회로 단자)
⓭ Control Circuit Terminal Block (조작전원 단자대)
⓮ Main Circuit Terminal for Load (부하측 주회로 단자)
⓯ Amateur for Closing Coil (투입 코일)





OSS - TN, TBN Type

ATS(60~600A)

Application and Selection (적용과 선정)

■ **Applicable Standards**

· IEC 60947-6-1 · JEM 1038 · UL 1008
· KSC 4504 · KSC 0703

■ **Control Order**

It is recommended to give more than 0.5 sec for operation, though transfer time is completed within 0.3 sec.

■ **Interlock**

Interlocking is required for control circuit so that control order should not suppy to both A power source side and B power source side simultaneously. For TN type ATS, Sequence setting is required so that closing or tripping order should not supply in the same direction.

■ **Control Circuit**

ATS is designed so that operation current should be off by internal switch after completion of operation. If operation current is off with auxiliary switch of the unit, it may cause a malfunction.

■ **관련규격**

· IEC 60947-6-1 · JEM 1038 · UL 1008
· KSC 4504 · KSC 0703

■ **제어지령**

투입 및 트립 절제동작은 0.3초이내에 완료되지만 0.5초 이상의 제어지령으로 동작될 수 있도록 Sequence를 설정하여 주십시오.

■ **인터록**

조작회로에는 A전원측과 B전원측에 동시지령이 되지 않도록 인터록(전기적)을 설치하여 주십시오. TN형의 경우 동일방향으로 투입, 트립 지령이 되지 않도록 Sequence를 설정 하여 주십시오.

■ **제어회로**

ATS는 동작완료 후 내부 SW에 의해 조작전류를 OFF하도록 설계되어 있습니다. 본체의 보조 SW로 조작전류를 OFF하면 오동작의 원인이 됩니다.

Specification(정격사양)

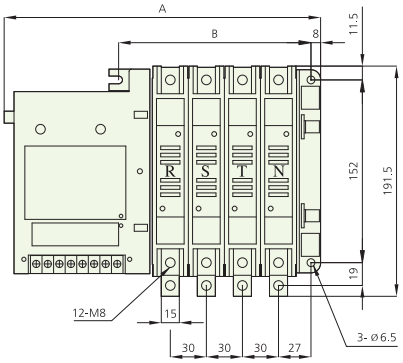
TYPE			606-TN, TBN 61-TN, TBN			62-TN, TBN			64-TN, TBN 66-TN, TBN		
Rated Operational Voltage (정격사용전압) Ue			AC 600V, DC 125V								
Rated Current (정격전류) Ie			60A, 100A			200A			400A, 600A		
Neutral Phase Current (중성극전류)			60A, 100A			200A			400A, 600A		
Kind of Throw (투수)			Double Throw (쌍투)								
Connection (접속방식)			Front(TN), Back(TBN) (표면, 배면)								
Number of poles (극수)			2P	3P	4P	2P	3P	4P	2P	3P	4P
Weight (중량)			7kg	8kg	9kg	9kg	10kg	12kg	16kg	19kg	22kg
Rated Short-Time Withstand Current (1sec) (정격 단시간 전류) Icw			5kA			10kA			12kA		
Short-Circuit Making Capacity (단락 피크 전류) Icm			7.65kA			17kA			24kA		
Switching Capacity (개폐 용량)			AC-33B (6Ie making / 6Ie breaking cos Ø= 0.5) DC-31B (1.5Ie making / 1.5Ie breaking L/R = 1ms)								
Switching Frequency (개폐빈도)			60Time / Hour								
Operating Current (조작전류) rms/pick	DC 110V ~ 125V		6A			6A			7A		
	AC 100V ~ 110V		3A/6A			3A/6A			3.5A/7A		
	AC 200V ~ 240V		1.5A/3A			1.5A/3A			2A/3.5A		
	Trip Coil Current		DC 110V = 2.5A, AC 110A = 2.5A, AC 220V = 1.5A								
Operating Time (동작시간)	"A" POWER	Making	≤ 55 ms			≤ 55 ms			≤ 60 ms		
		Breaking	≤ 20 ms			≤ 20 ms			≤ 25 ms		
	"B" POWER	Making	≤ 80 ms			≤ 80 ms			≤ 90 ms		
		Breaking	≤ 20 ms			≤ 20 ms			≤ 25 ms		
Number of Operating Cycles (정격개폐수명)	Without Current (무통전)		10,000								
	With Current (통전)		5,000								
Cautions (주의사항)	1. For complete operation, Be sure to provide control source for more than 0.5sec. 2. When control source will be provided to A side and B side simultaneously, Coil may be damaged. 3. Control Relay should be selected considering sufficient contact capacity to withstand against more than control current. 1. 조작지령은 0.5sec이상으로 하여 확실한 동작을 할 수 있도록 하여 주십시오. 2. A측, B측 동시 조작지령시 코일 소손의 원인이 됩니다. 3. 조작 Relay는 조작전류 이상의 충분한 접점용량을 선정하여 주십시오.										

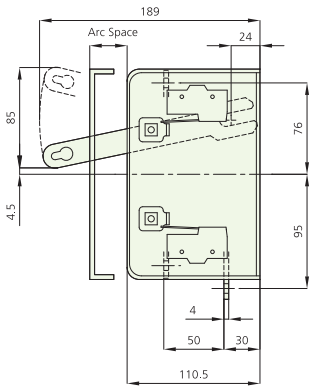
OSS - TN, TBN Type

Outline Dimension (외형도)

60A, 100A

606-TN, 61-TN

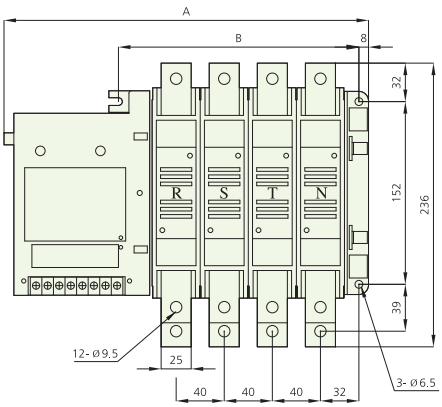


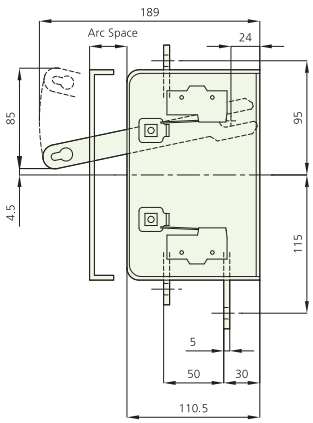


	Dimension (mm)	
Pole	A	B
2 P	204	100
3 P	234	130
4 P	264	160

200A

62-TN

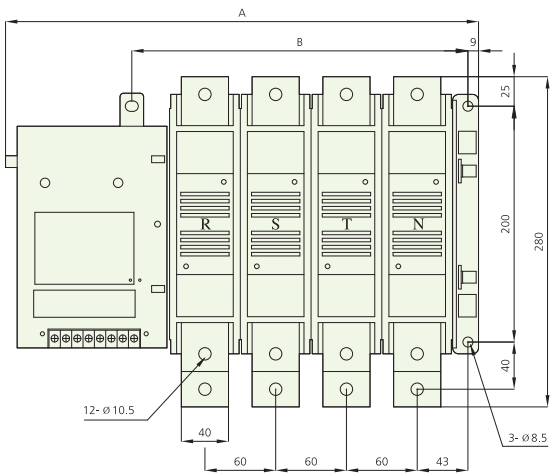


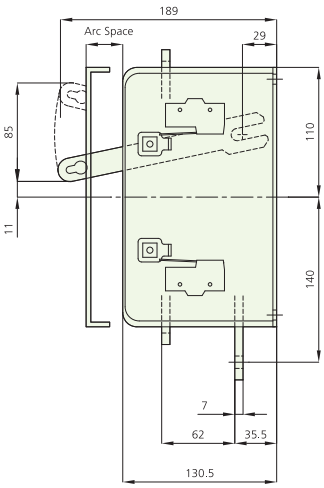


	Dimension (mm)	
Pole	A	B
2 P	224	120
3 P	264	160
4 P	304	200

400A, 600A

64-TN, 66-TN



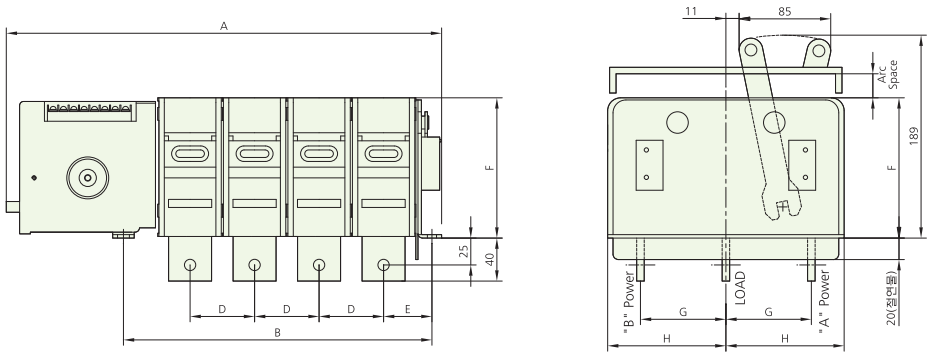


* Arc space for main circuit
- 30mm for AC 220V
- 60mm for AC 660V

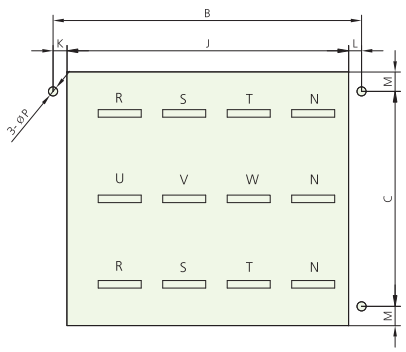
	Dimension (mm)	
Pole	A	B
2 P	283	165
3 P	343	225
4 P	403	285

Outline Dimension (외형도)

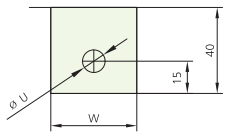
606-TBN~66-TBN



* Arc space for main circuit
- 30mm for AC 220V
- 60mm for AC 600V



PANEL CUTTING



	606-TBN 61-TBN	62-TBN	64-TBN	66-TBN
W	15	25	40	
U	Ø 8.5		Ø 10.5	
t	4	5	7	

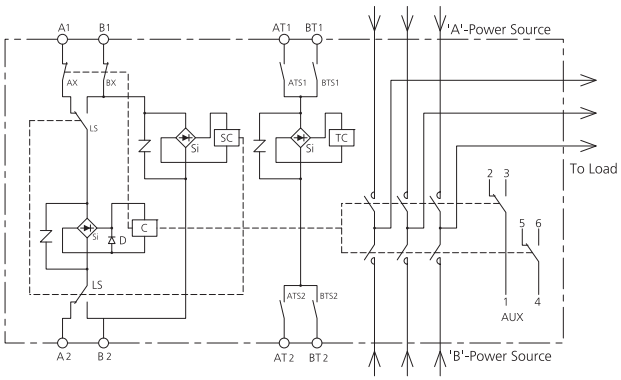
TERMINAL THICKNESS

unit : mm

		A	B	C	D	E	F	G	H	J	K	L	M	P
606-TBN 61-TBN	2 P	206	102	152	30	29	110.5	62.5	87.5	82	9	11	19	Ø 6.5
	3 P	236	132							112				
	4 P	266	162							142				
62-TBN	2 P	226	122	152	40	34	110.5	63	87.5	102	9	11	19	Ø 6.5
	3 P	266	162							142				
	4 P	306	202							182				
64-TBN 66-TBN	2 P	285	167	200	60	45	130.5	79.5	110	142	13	12	18	Ø 8.5
	3 P	345	227							202				
	4 P	405	287							262				

OSS - TN, TBN Type

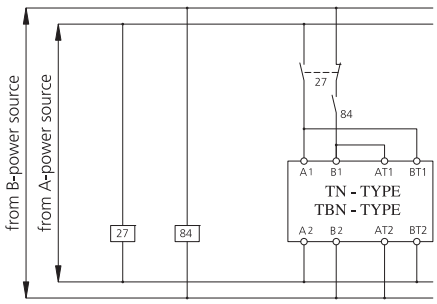
Wiring Diagram (결선도)



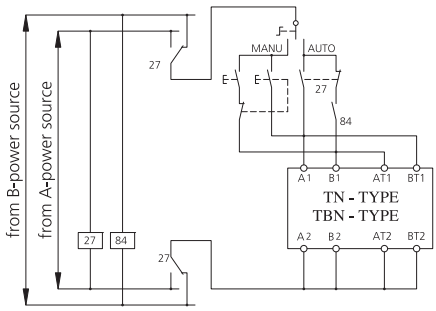
A1 , A2	A-Power Closing Terminal	C	Closing Coil
B1 , B2	B-Power Closing Terminal	SC	Selective Coil
AT1 , AT2	A-Power Tripping Terminal	TC	Tripping Coil
BT1 , BT2	B-Power Tripping Terminal	AX , BX	Control Switch
AUX	Aux Switch	ATS1 , ATS2 BTS1 , BTS2	Trip Control Switch
Si	Silicon Rectifier	LS	Selective Switch

Typical Operating Circuit (대표적 조작회로 예)

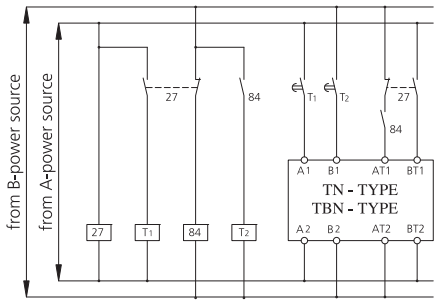
Standard
(일반적인 절체)



Using a changeover switch
(수동–자동 절체)



Using a timer
(타이머를 이용한 절체)



Using a condensor tripping device
(콘덴서 트립)