

Short form catalogue

Switchgear
Enclosed switch disconnectors, switch fuses and transfer switches

Power and productivity
for a better world™

Switchgear
Enclosed OT switch disconnectors, OS switch fuses, Manual & automatic transfer switches










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Switchgear - Loadbreak & safety switches
IP65 Double insulated enclosure



Load Break Switches 3 - 4 pole 9...37kW

Description

- IP65 three and four-pole switch disconnectors suitable for load break switching or isolation.
- Polycarbonate enclosure. IEC 60947-3

Polycarbonate Enclosure 9kW ... 11kW 3 pole

Rating@415v			Dimensions mm				Product Hierarchy 4000002
1th A	AC22	kW	H	W	D	Part Number	Order Code
32	25	9	125	100	107	S37K5N-A	S37K5N-A
40	40	11				S315KN-A	S315KN-A

Polycarbonate Enclosure 9kW ... 37kW 4 pole

32	25	9	125	100	107	S47K5N-A	S47K5N-A
40	40	11				S415KN-A	S415KN-A
63	63	22	170	140	108	S418KN-A	S418KN-A
80	80	37				S426KN-A	S426KN-A



Load Break Switches 3 - 4 - 6 pole 16...125 amps

Description

- IP65 rated
- Grey plastic enclosure
- Standard handle - Red/Yellow (padlockable in the off position)
- Cable entries top and bottom
- All OTP16 (excluding 3p) /25/32 all have 25/20mm reducers







Rating@415v					Dimensions mm				Product Hierarchy 4000002
1th A	AC22	AC23	kW	No. Poles	H	W	D	Part Number	Order Code
25	16	16	7.5	3 + solid neutral	150	130	60	OTP16BA3M	OTP16BA3M
				4				OTP16BA4MS	OTP16BA4MS
				6				OTP16BA6M	OTP16BA6M
32	25	20	9	3+ solid neutral	150	130	60	OTP25BA3M	OTP25BA3M
				4				OTP25BA4M	OTP25BA4M
				6				OTP25BA6M	OTP25BA6M
40	40	23	11	3+ neutral	150	130	60	OTP32BA3M	OTP32BA3M
				4				OTP32BA4M	OTP32BA4M
				6				OTP32BA6M	OTP32BA6M
63	63	45	22	3+ solid neutral	200	145	90	OTP45BA3M	OTP45BA3M
				4				OTP45BA4M	OTP45BA4M
				6				OTP45BA6M	OTP45BA6M
80	80	75	37	3+ solid neutral	200	145	90	OTP63BA3M	OTP63BA3M
				4				OTP63BA4M	OTP63BA4M
				6				OTP63BA6M	OTP63BA6M
125	125	90	45	3+ solid neutral	400	200	140	OTP125BA3U	OTP125BA3U
				4				OTP125BA4U	OTP125BA4U
				6				OTP125BA6U	OTP125BA6U

Safety Switches 3 pole 16...40 amps

Rating@415v					Dimensions mm				Product Hierarchy 4000002
1th A	AC22	AC23	kW	No. Poles	H	W	D	Part Number	Order Code
25	16	16	7.5	3	150	130	60	OTP16B3M	OTP16B3M
32	25	20	9	3	150	130	60	OTP16B3M	OTP16B3M
40	40	23	11	3	150	130	60	OTP32B3U	OTP32B3U

Switchgear - Loadbreak switches
IP65 Steel enclosure



Load Break Switches 3 - 4 pole 20 ... 800A

- IP65 rated (not suitable for external installation)
- Powder coated textured finish (RAL 7035)
- All 3 pole switches include detachable neutral link (OT160 solid link)
- Hinged lid complete with lock
- Padlockable pistol grip handle as standard
- Removable gland plates fitted top and bottom (see below for knockout configurations)
- Spreader boxes available see below

Rating@415v [A]			Dimensions					Product Hierarchy 4000003
1th A	AC22	AC23	H	W	D	No. Poles	Part Number	Order Code
32	25	20	300	200	150	3 + solid neutral	OT20TPN-A	OT20TPN-A
						4	OT20FP-A	OT20FP-A
40	40	23	300	200	150	3+ solid neutral	OT32TPN-A	OT32TPN-A
						4	OT32FP-A	OT32FP-A
80	80	75	300	300	150	3+ solid neutral	OT63TPN-A	OT63TPN-A
						4	OT63FP-A	OT63FP-A
115	100	80	400	300	150	3+ solid neutral	OT100TPN-A	OT100TPN-A
						4	OT100FP-A	OT100FP-A
125	125	90	400	300	150	3+ solid neutral	OT125TPN-A	OT125TPN-A
						4	OT125FP-A	OT125FP-A
160	160	135	500	400	200	3 + solid neutral	OT160TPN-A	OT160TPN-A
						4	OT160FP-A	OT160FP-A
200	200	200	500	400	200	3+ solid neutral	OT200TPN-A	OT200TPN-A
						4	OT200FP-A	OT200FP-A
315	315	315	500	400	200	3+ solid neutral	OT315TPN-A	OT315TPN-A
						4	OT400FP-A	OT400FP-A
500	500	500	500	400	200	3+ solid neutral	OT400TPN-A	OT400TPN-A
						4	OT400TPN-A	OT400TPN-A
630	630	630	600	400	250	3+ solid neutral	OT630TPN-A	OT630TPN-A
						4	OT630FP-A	OT630FP-A
800	800	800	600	400	250	3+ solid neutral	OT800TPN-A	OT800TPN-A
						4	OT800TPN-A	OT800TPN-A

Spreader Boxes
Suitable for Loadbreak Switches

	Product Hierarchy 3200003	
	Spreader Box Order Code	Spreader Box Gasket Order Code
OT20, OT32, OT63, OT100, OT125	Not Required	
OT160, OT200, OT315, OT400	SRN5420K	GZ4020
OT630, OT800	SRN6425K	GZ4025
Wall Mounting Brackets (Pack of 4)		AA1206



Auxiliary Contacts

1 N/O	OA1G10	OA1G10
1 N/C - only for OT20-125_	OA1G01	OA1G01
1 N/C - only for OT200 and above	OA3G01	OA3G01
1 N/O - 1 N/C - OT20-125 and OT160 only	OA2G11	OA2G11
Mounting module for OA2G11 - for OT160 only	OAZX1	OAZX1

Switchgear - Switch fuses
IP65 Steel enclosure





3 - 4 pole 20 ... 800A

- IP65 rated (not suitable for external installation)
- Powder coated textured finish (RAL 7035)
- All switches are supplied with fuses and removable gland plates
- All 3 pole switches include detachable neutral link (OT160 solid link)
- Switch Fuses are internally rated IP20 on incoming terminals up to 63A
- Hinged lid complete with lock
- Padlockable pistol grip handle as standard
- Switch Fuses 100A are supplied with incoming terminal shrouds (NOT FITTED) to allow customer connections
- Spreader boxes available see below

	AC23 [kW]			Dimensions					Product Hierarchy 4000003
1^{th}A	400V	500V	690V	H	W	D	No. Poles	Fuse Type	Part Number	Order Code
20	7.5	11	15	300	300	150	3+detach neutral	A1	OS20TPN-A	OS20TPN-A
							4		OS20FP-A	OS20FP-A
32	15	18	25	300	300	150	3+detach neutral	A2	OS32TPN-A	OS32TPN-A
							4		OS32FP-A	OS32FP-A
63	30	37	55	400	300	150	3+detach neutral	A2/A3	OS63TPN-A	OS63TPN-A
							4		OS63FP-A	OS63FP-A
100	55	55	90	400	300	150	3+detach neutral	A2/A3	OS100TPN-A	OS100TPN-A
							4		OS100FP-A	OS100FP-A
125	55	75	110	400	300	150	3+detach neutral	A2/A3	OS125TPN-A	OS125TPN-A
							4		OS125FP-A	OS125FP-A
160	75	90	132	500	400	200	3+solid neutral	A3/A4	OS160TPN-A	OS160TPN-A
							4		OS160FP-A	OS160FP-A
200	110	132	200	600	400	250	3+detach neutral	B1/B2	OS200TPN-A	OS200TPN-A
							4		OS200FP-A	OS200FP-A
315	160	220	220	600	400	250	3+detach neutral	B1/B4	OS315TPN-A	OS315TPN-A
							4		OS315FP-A	OS315FP-A
400	220	280	400	600	400	250	3+detach neutral	B1/B4	OS400TPN-A	OS400TPN-A
							4		OS400FP-A	OS400FP-A
630	355	450	560	600	600	300	3+detach neutral	C1/C2	OS630TPN-A	OS630TPN-A
							4		OS630FP-A	OS630FP-A
800	450	560	710	800	600	300	3+detach neutral	C1/C2	OS800TPN-A	OS800TPN-A
							4		OS800FP-A	OS800FP-A

Note: OT630 & OT800 TPN/FP products are made to order and are non-stock items

Spreader Boxes



	Spreader Box		Spreader Box Gasket	
Suitable for Loadbreak Switches	Part Number	Product Hierarchy 3200003 Order Code	Part Number	Product Hierarchy 3200003 Order Code
OS20 - OS125	Not Required	-	Not Required	-
OS160	SRN5420K	SRN5420K	GZ4020	GZ4020
OS200 - OS400	SRN6425K	SRN6425K	GZ4025	GZ4025
OS630 - OS800	SRN8530K	SRN8530K	GZ6030	GZ6030

Wall Mounting Brackets (Pack of 4)	AA1206	AA1206

Auxiliary Contacts

1 N/O	OA1G10	OA1G10
1 N/C	OA3G01	OA3G01
1 N/O - 1 N/C	OA2G11	OA2G11
1 x CO contact - only for products OS20_/OS32_	OA4B1C	OA4B1C
Mounting frame to fit OA1/OA3 aux on left side of OS20/OS32 switch fuse (only for OS20_/OS32_	OSZ4	OSZ4

Switchgear - BS fuses
HRC fuse links, BS-type


OFFNF1


OFFNA1


OFFNA2


OFFNA3


OFFNA4


OFFNB1


OFFNB2


OFFNB3


OFFNB4


OFFNC2

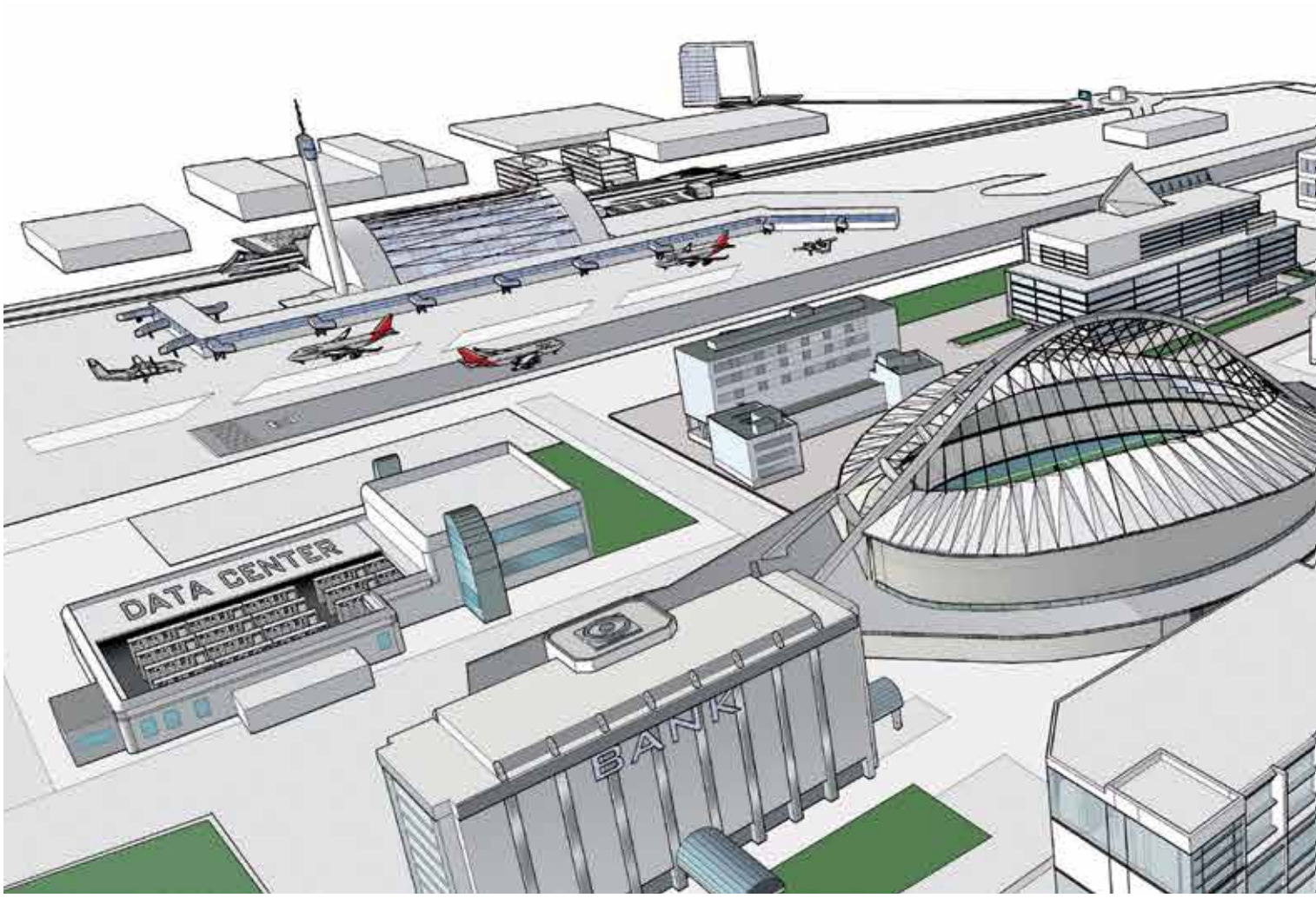
BS Fuses

BS-fuse type	In [A]	Ph [W]	Part Number	Product Hierarchy 0002100007 Order Code
Tag type: Offset				
F1	2	0.9	OFFNF1GG2	1SCA107786R1001
	4	1.5	OFFNF1GG4	1SCA107787R1001
	6	1.5	OFFNF1GG6	1SCA107788R1001
	10	1.2	OFFNF1GG10	1SCA107789R1001
	16	1.6	OFFNF1GG16	1SCA107790R1001
	20	1.7	OFFNF1GG20	1SCA107791R1001
	25	2.0	OFFNF1GG25	1SCA107792R1001
	32	2.9	OFFNF1GG32	1SCA107793R1001
Tag type: Offset, two holes fixing 20				
A1	2	0.9	OFFNA1GG2	1SCN833065R2012
	4	1.5	OFFNA1GG4	1SCN833066R2012
	6	1.5	OFFNA1GG6	1SCN833067R2012
	10	1.2	OFFNA1GG10	1SCN833068R2012
	16	1.6	OFFNA1GG16	1SCN833069R2012
	20	1.7	OFFNA1GG20	1SCN833061R2012
	25	2.0	OFFNA1GG25	1SCN833070R2012
	32	2.9	OFFNA1GG32	1SCN833062R2012
A2	6	1.5	OFFNA2GG6	1SCA107795R1001
	10	1.2	OFFNA2GG10	1SCA107796R1001
	16	1.6	OFFNA2GG16	1SCA107798R1001
	20	1.7	OFFNA2GG20	1SCA107827R1001
	25	2.0	OFFNA2GG25	1SCA107800R1001
	32	2.9	OFFNA2GG32	1SCA107801R1001
A3	40	3.0	OFFNA3GG40	1SCA107803R1001
	50	3.6	OFFNA3GG50	1SCA107804R1001
	63	4.7	OFFNA3GG63	1SCA107805R1001
A4	50	3.6	OFFNA4GG50	1SCA107806R1001
	63	4.7	OFFNA4GG63	1SCA107807R1001
	80	6.5	OFFNA4GG80	1SCA107808R1001
	100	7.5	OFFNA4GG100	1SCA107809R1001
	125	11.5	OFFNA4GG125	1SCA107810R1001
	160	14.5	OFFNA4GG160	1SCN833063R2012
	200	16.2	OFFNA4GG200	1SCN833064R2012
B1	50	4.8	OFFNB1GG50	1SCA107811R1001
	63	5.9	OFFNB1GG63	1SCA107812R1001
	80	6.5	OFFNB1GG80	1SCA107813R1001
	100	7.5	OFFNB1GG100	1SCA107814R1001
B2	125	11.5	OFFNB2GG125	1SCA107816R1001
	160	14.5	OFFNB2GG160	1SCA107817R1001
	200	16.2	OFFNB2GG200	1SCA107818R1001
Tag type: Central, two holes fixing 10				
B3	250	24.0	OFFNB3GG250	1SCA107819R1001
	315	31.0	OFFNB3GG315	1SCA107820R1001
	400	38.0	OFFNB4GG400	1SCA107822R1001
Tag type: Central, four holes fixing				
C1	400	38.0	OFFNC1GG400	1SCA107823R1001
C2	500	48.0	OFFNC2GG500	1SCA107824R1001
	630	54.0	OFFNC2GG630	1SCA107825R1001
C3	800	68.0	OFFNC3GG800	1SCA107826R1001

Enclosed manual and automatic transfer switches
ABB low voltage component capabilities for critical power applications

Critical power applications require a constant and reliable power supply to keep fundamental services running and prevent serious consequences caused by the interruption or absence of the electrical grid.

Selection of a source of switching, control and protection capable of sustaining the needs of a critical power application is paramount, ABB has a well proven track record within this environment.

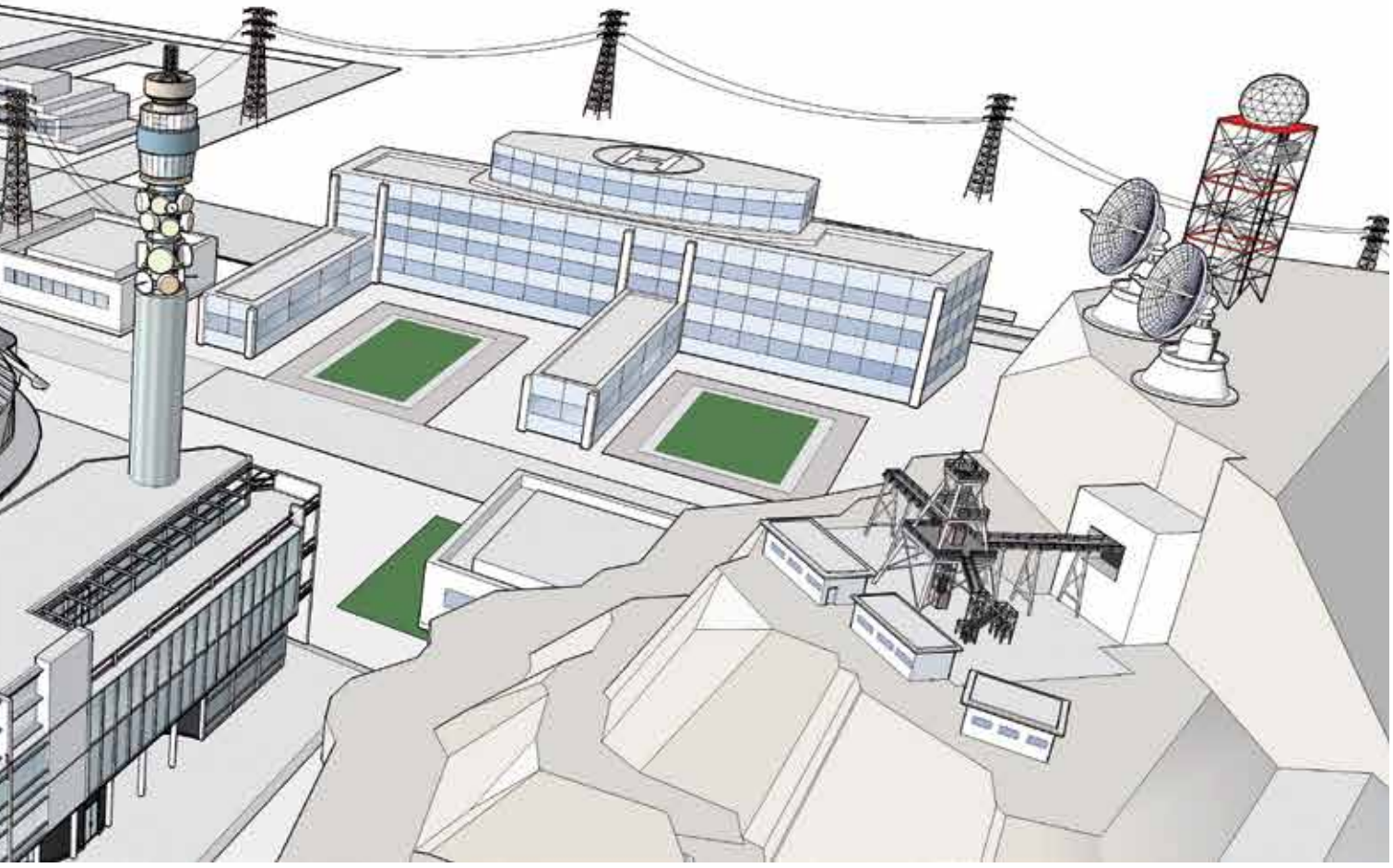


In today's world, electrical power plays a key role in almost every activity of our life. For some equipment a reliable, uninterruptible and free of disturbance power supply is an absolute essential. From this point of view, a fault in the power supply of communications systems, hospital apparatus, security systems, water and gas distribution devices, banking computers and many other crucial applications may bring about serious problems, with consequences that can be devastating.

All these applications can be identified as "Critical Power" applications: ABB can offer a wide range of components for on board installation and complete power distribution systems.

These products include:- automatic transfer switches (ATS) and automatic control units (ACU), manual and motorised change-over switches, isolators, switch-disconnectors, Air and moulded-case circuit breakeres and miniature circuit breakers, protection devices against overvoltages, contactors, current sensors and many other devices.

ABB products comply with the most important international standards and European or North American - and with the requirements of the Navy Registry; they are also designed and built on the basis of the most modern and advanced environmental standards. ABB products are backed by a consolidated experience in power and automation technologies. They are supported through a global assistance and service network which covers more than 100 countries all over the world.



Enclosed manual & automatic transfer switches
Functionality & features

As industrial processes and IT applications diversify, a secure power supply is becoming an increasingly important asset in the drive to cut production and maintenance costs. In emergency situations, the system logic of power distribution can become complex with mechanical devices looking after the making, breaking, conducting and isolating of power. Loads may sometimes need to be transferred from one supply to another — this will be the case when energy use is restricted or when the supply source is overloaded.

ATS isolator

Bypass supply selection switch

Closed transition ATS bypass switch

Automatic transfer controller

Automatic transfer switch

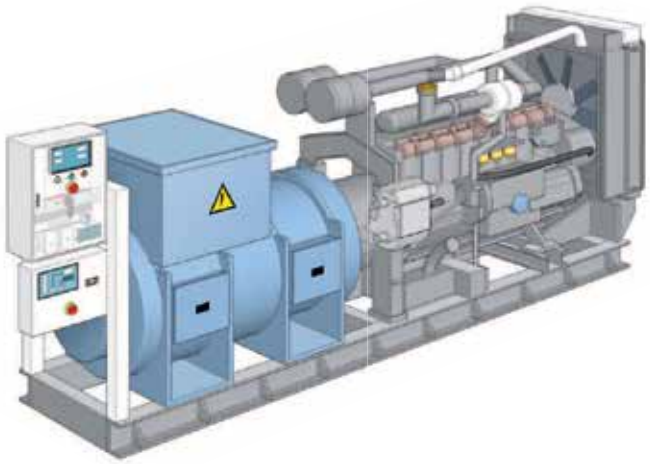


High performance level

In change-over applications where the loaded switch may need to be operated remotely, adequate durability has been ensured by testing against the IEC 60947-6-1 standard in the specification of endurance requirements.

Utillisation categories:

– AC-31 for non-inductive or slightly inductive load
– AC-33 for motor loads or mixed loads including motors
ABB change-over switches are rated according to IEC 60947-6-1 standard.



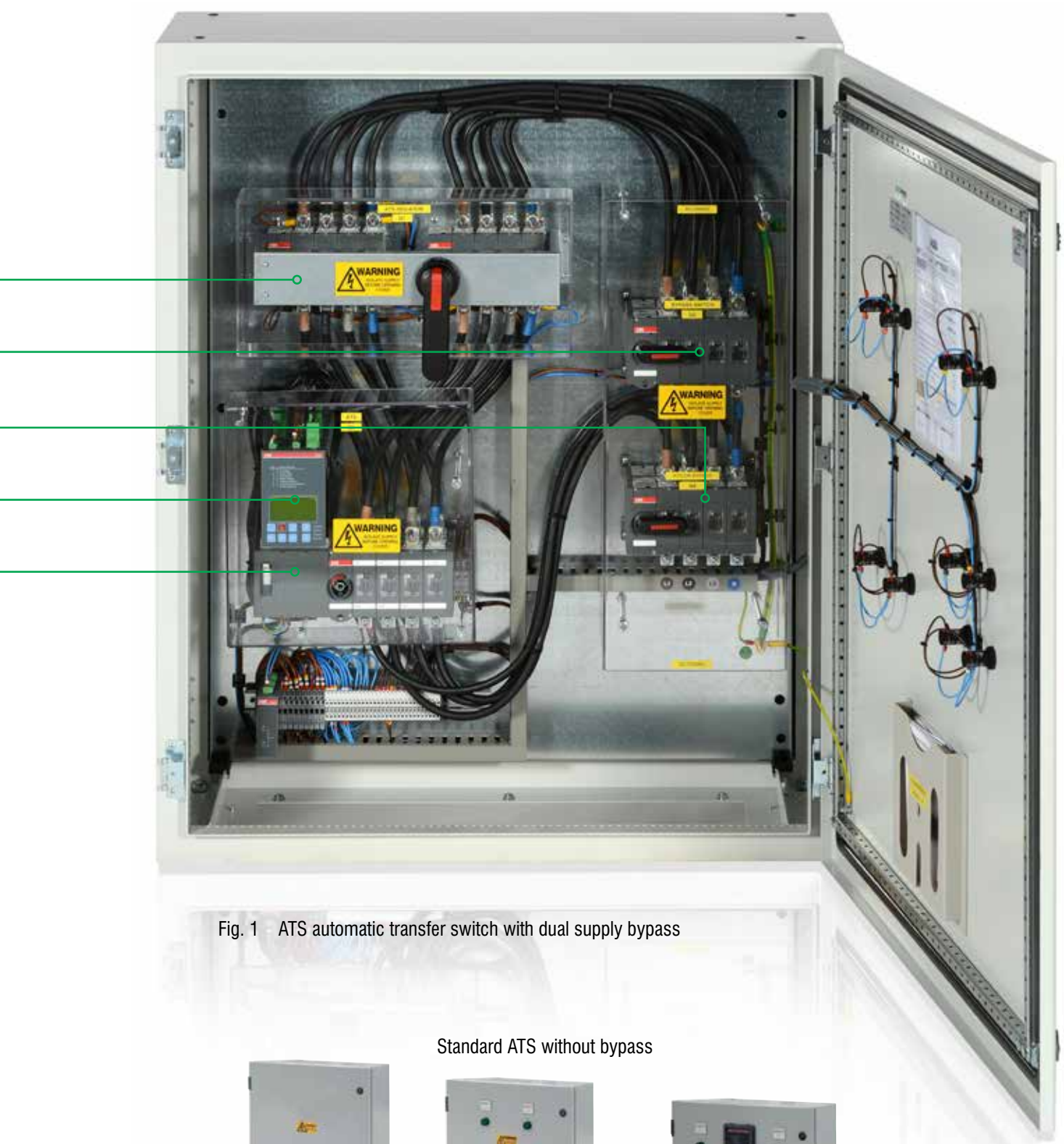


Fig. 1 ATS automatic transfer switch with dual supply bypass

Standard ATS without bypass

with blank door



with pilot lights showing healthy supplies



ATS controller mounted on door



OMD300 controller



OMD800 controller

Enclosed automatic transfer switches
General information



Enclosed automatic transfer switches with current ratings 40A … 1600A. The enclosure complies with IP65 EN 60529 and finished in a RAL 7035 colour.
The ATS enclosures are designed to allow adequate cabling space to allow installers to terminate oversized cables.

Automatic transfer switches

Automatic transfer switches comply with the standards listed below.

- IEC 60947-1:
  Low voltage switchgear and control gear Part 1: General rules
- IEC 60947-3:
  Low voltage switchgear and control gear Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination
- IEC 60947-6-1-PC: Low voltage switchgear and control gear Part 6: Multiple function equipment – Transfer switching equipment

Application

The automatic transfer switch is managing different power supplies to one or more load circuits and guarantees the continuity of performance. The automatic transfer switch ensures the switching and isolation between the primary network supply and the alternate network supply or a standby generator. Type of operation is open transition, i.e. break-before-make.

The automatic transfer switches can be operated in three ways, local manual operation with handle, local manual operation with the automatic control unit or full automatic operation done by the automatic control unit. Manual operation, using a handle is the simplest type of operation. Local manual operation with the control unit enables to operate the switch electrically. Full automatic operation ensures that loads are transferred automatically to the secondary source in case of mains failure. Both local operation with the control unit and full automatic operation enables a short switch-off time between the normal and the alternative supply.

Automatic transfer switches shall be used for switching I, 0 and II positions following types of loads:

- Off load application (AC 20A)
- Resistive loads (AC 21 or AC31)
- Mixed resistive and inductive loads (AC 22)
- Motor loads

Design & safety

Automatic transfer switches are available as 3 or 4 pole versions. All three positions I, 0 and II shall be stable and keep its positions in case of supply failure or mechanical shocks.
The switch mechanism is located on the left hand side to the switch's power poles. The operating mechanism is of "quick make / quick break" construction. The position indication markings on the mechanism shall always show reliably the true position of the main contacts. Automatic transfer switchs can be operated by direct mounted handle and the handle shall be showing reliably the real position of the main contacts of the transfer switch. The handle will allow the switch to be padlocked in the off position.

The automatic transfer switch is constructed with a motor operator. The motor operator is protected against overloads with a separate overload fuse (160A to 1600A). The fuse is situated at the bottom of the Motor. The 40A to 125A motor is protected by a resettable overload button.

The accessories, i.e. terminal shrouds and auxiliary contacts shall be mountable without any special tools (i.e. snap on mounting).

The terminals of the 160A to 1600A automatic transfer switch it is possible to connect two parallel cables for easier installation and space saving. All the terminals shall be finger protected with or without separate terminal shrouds. All the metal parts shall be protected against corrosion. The contact surfaces shall be silver-plated to minimise contact resistance. The automatic transfer switches meet the ROHS requirements and only recyclable material is used. The current carrying plastic parts shall have high thermal, mechanical and electrical properties and have V0 classification.

The voltage sensing wiring from the switch's power poles to the automatic control unit is done by the automatic transfer switch manufacturer. Voltage sensing wires are double insulated.

Enclosed automatic transfer switches
General & technical specification

The handle is a direct mounted type, and it shall be padlockable in the “0” position with three padlocks with 5 …6 mm. It is possible to operate switch with the manual handle in case of emergency, regardless of the position of switch and without any supply power.

Technical specifications according to IEC 60947-3 and IEC 60947-6-1

- Type of equipment ATSE
- Class of equipment PC
- Rated operational voltage, Ue Max. 415 V
- Rated impulse withstand voltage, Uimp 6 kV
- Rated frequency 50 - 60 Hz
- EMC environment A and B

Bypass Requirement

In order to comply with BS8519 which states “Where the availability of the life safety and fire-fighting equipment is conditional to the occupation of the building, a bypass arrangement should be incorporated to enable the changeover device to be maintained without loss of service from the critical plant”.

The bypass switches consist of the following;

Single or mains bypass

A closed transition manual changeover switch is included to allow for the seamless (no 0 position giving no break in supply when moving to bypass) transition to bypass. The front of the panel should indicate that the ATS has been bypassed and is safe to carry out maintenance.

Dual Bypass

A closed transition manual changeover switch is included to allow for the seamless (no 0 position giving no break in supply when moving to bypass) transition to bypass. Together with a standard manual changeover switch to allow you to choose between supply 1 or supply 2. The front of the panel should indicate that the ATS has been bypassed and which supply is feeding the load and is safe to carry out maintenance.

Specific ratings according to IEC 60947-3 40A to 125A

Rated free air thermal current (Ith) and operational current in AC20 at 40°C ambient temperature	A	40	63	80	115	125
Rated enclosed thermal current (Ith) and operational current in AC20 at 40°C ambient temperature	A	40	63	80	115	125
Rated operational current AC 21A and AC 22A at voltages up to 500V	A	40	63	80	100	125
Rated operational current AC23A at voltages up to 415V	A	40	63	80	80	90
Rated AC 23 breaking capacity at 415V	A	320	504	640	640	720
Rated conditional short circuit current Ip (r.m.s.) at 415V, 50kA net	kA	16.5	16.5	16.5	16.5	16.5
and corresponding max. allowed cut-off current of gG	A	125	125	125	125	125
Rated short time withstand current Icw 690v (1sec), (r.m.s. value)	kA	2.5	2.5	2.5	2.5	2.5
Rated short time making capacity Icm, peak value 690v	kA	3.6	3.6	3.6	3.6	3.6
Mechanical endurance / switch	Oper	20000	20000	20000	20000	20000
Rated short-time withstand current Icw (r.m.s.) 690V, 0,1 sec	kA	5	5	5	5	5
Rated operational current, AC-31B, up to 415V	A	40	63	80	100	125
Rated operational current, AC-33B, up to 415V	A	40	63	80	80	80

Specific ratings according to IEC 60947-3 160A to 1600A

Rated free air thermal current (Ith) and operational current in AC20 at 40°C ambient temperature	A	160	200	250	315	400	630	800	1000	1250	1600
Rated enclosed thermal current (Ith) and operational current in AC20 at 40°C ambient temperature	A	160	200	250	315	400	630	800	1000	120	1600
Rated operational current AC 21A and AC 22A at voltages up to 415V	A	160	200	250	315	400	630	800	1000	1250	1600
Rated operational current AC23A at voltages up to 415V	A	160	200	250	315	400	630	800	1000	1250	1250
Rated AC 23 breaking capacity at 415V	A	1280	1600	2000	2520	3200	5040	6400	10000	10000	10000
Rated conditional short circuit current Ip (r.m.s.) at 415V, 50kA net	kA	40.5	40.5	40.5	59	59	83.5	83.5	100	100	100
and corresponding max. allowed cut-off current of gG	A	355	355	355	500	500	800	800	1250	1250	1250
Rated short time withstand current Icw 690v (1sec), (r.m.s. value)	kA	8	8	8	15	15	20	20	50	50	50
Rated short time making capacity Icm, peak value 690v	kA	30	30	30	65	65	80	80	92	92	92
Mechanical endurance / switch	Oper	16000	16000	16000	16000	16000	10000	10000	6000	6000	6000
Rated short-time withstand current Icw (r.m.s.) 690V, 0,1 sec	kA	15	15	15	25	25	38	38	50	50	50
Rated operational current, AC-31B, up to 415V	A	160	200	250	315	400	650	720	1000	1250	1600
Rated operational current, AC-33B, up to 415V	A	160	200	250	315	400	650	650	1000	1000	1000

Enclosed automatic transfer switches
Controllers technical specification





Comments

1) Dual power source allows the motor operator to be supplied by two separate voltage supplies. This way the motor operator is always energized.
2) Four options: 0, 5, 10 or 30 seconds.
3) Delaying the switching sequence before transferring to generator, guaranteeing that in cold locations the generator is properly heated up.
4) Two options: the duration of back-switching delay is the same as switching delay, i.e. the time delay is same for I - II and II - I, or the back-switching delay is fixed 300 seconds.
5) Two options: the duration of generator stop delay is the same as Switching delay or fixed 5 min.
6) Menus available in eight languages; English, French, German, Italian, Spanish, Russian, Chinese and Finnish.
7) Two-way communication, bus communication protocol is Modbus
8) In case of source failure, the controller can be supplied with an external auxiliary supply with 24…110 V DC.
9) Automatic control unit requires an external signal before allowing the transfer to secondary.
10) Two options for the operating mode after receiving the alarm: control unit either works normally, or initiates generator stop with operation to position 0.
11) Two options: No line priority, or Source 1 is the priority source.
12) Three options: No line priority, Source 1 or Source 2 is the priority source.
13) Automatic back-switching to primary source is prevented.
14) Automatic control unit and motor operator must be energized.

X = includes as standard

O = as an accessory

Functionality

	OTM_C3D	OTM_C8D
1. Automatic transfer switch products overview		
1.1. Automatic control unit	OMD300	OMD800
1.1. Manual operation with handle	X	X
1.2. Local operation with front panel keypad	X	X
1.3. Automatic transfer switching equipment (ATSE)	X	X
1.4. Dual power source for the motor operator [1]	X	O
2. Measurements		
2.1. Three phase voltage measurement on LINE1	X	X
2.2. Single phase voltage measurement on LINE1	X	X
2.3. Three phase voltage measurement on LINE2	X	X
2.4. Single phase voltage measurement on LINE2	X	X
2.5. Frequency on LINE1	X	X
2.6. Frequency on LINE2	X	X
2.7. Possibility to check measurements on LCD		X
3. Source failure detections		
3.1. No voltage	X	X
3.2. Undervoltage	X	X
3.3. Overvoltage	X	X
3.4. Phase missing	X	X
3.5. Voltage unbalance	X	X
3.6. Invalid frequency	X	X
3.7. Incorrect phase sequence		X
4. Configuration		
4.1. By DIP switches	X	
4.2. By rotary switches	X	
4.3. By keypad and LCD		X
4.4. Voltage threshold setting	X	X
4.5. Voltage hysteresis setting		X
4.6. Frequency threshold setting		X
4.7. Frequency hysteresis setting		X
5. Time delays		
5.1. Switching delay	X [2]	X
5.2. Delay on transfer [3]		X
5.3. Dead band time I-II (stop switching to position 0)		X
5.4. Back-switching delay	X [4]	X
5.5. Dead band time II-I (stop switching to position 0)		X
5.6. Generator stop delay	X [5]	X
5.7. Status of time delays on the LCD		X

In the enclosed ATS the dual power source is included

Enclosed automatic transfer switches
Controllers technical specification





Comments

1) Dual power source allows the motor operator to be supplied by two separate voltage supplies. This way the motor operator is always energized.
2) Four options: 0, 5, 10 or 30 seconds.
3) Delaying the switching sequence before transferring to generator, guaranteeing that in cold locations the generator is properly heated up.
4) Two options: the duration of back-switching delay is the same as switching delay, i.e. the time delay is same for I - II and II - I, or the back-switching delay is fixed 300 seconds.
5) Two options: the duration of generator stop delay is the same as Switching delay or fixed 5 min.
6) Menus available in eight languages; English, French, German, Italian, Spanish, Russian, Chinese and Finnish.
7) Two-way communication, bus communication protocol is Modbus
8) In case of source failure, the controller can be supplied with an external auxiliary supply with 24…110 V DC.
9) Automatic control unit requires an external signal before allowing the transfer to secondary.
10) Two options for the operating mode after receiving the alarm: control unit either works normally, or initiates generator stop with operation to position 0.
11) Two options: No line priority, or Source 1 is the priority source.
12) Three options: No line priority, Source 1 or Source 2 is the priority source.
13) Automatic back-switching to primary source is prevented.
14) Automatic control unit and motor operator must be energized.

X = includes as standard

0 = as an accessory

Functionality

	OTM_C3D	OTM_C8D
6.1. Features		
6.2. Generator start and stop	X	X
6.3. OFF-load test sequence	X	X
6.4. ON-load test sequence	X	X
6.5. Source status via front panel	X	X
6.6. Source status via digital outputs		X
6.7. Switch position via front panel	X	X
6.8. LCD [6]		X
6.9. Fieldbus interface [7]		X
6.10. Event/alarm log		X
6.11. Counter for number of operations		X
6.12. Auxiliary voltage supply [8]		X
6.13. Programmable digital inputs (eight) and digital outputs (six)		X
6.14. Secondary load control (load shedding)		X
6.15. Digital input – Allow transfer to secondary [9]		X
6.16. Digital input - Generator alarm [10]		X
6.17. Digital input - Remote control to positions I, 0 and II		X
7. Operating mode		
7.1. Line priority	X [11]	X [12]
7.2. Manual back-switching [13]	X	X
7.3. Automatic operation to position 0, in case of source failure [14]		X
8. Applications		
8.1. Transfer between two transformers	X	X
8.2. Transfer between a transformer and a generator	X	X

In the enclosed ATS the dual power source is included

Enclosed manual & automatic transfer switches
Selection



Enclosed manual transfer switches, I-O-II operation, open transition

• MTS 4 pole 40 to 800A with blank door, wall mountable

Description	Rated Current (A)	Enclosure Size (mm)			Order Code
		H	W	D	
MTS 40A	40	400	300	150	OT40FPC-B
MTS 63A	63	400	300	150	OT63FPC-B
MTS 80A	80	400	300	150	OT80FPC-B
MTS 100A	100	500	400	250	OT100FPC-B
MTS 125A	125	500	400	250	OT125FPC-B
MTS 160A	160	600	400	250	OT160FPC-B
MTS 200A	200	600	400	250	OT200FPC-B
MTS 250A	250	600	400	250	OT250FPC-B
MTS 315A	315	800	600	300	OT315FPC-B
MTS 400A	400	800	600	300	OT400FPC-B
MTS 630A	630	1000	600	400	OT630FPC-B
MTS 800A	800	1000	600	400	OT800FPC-B





Enclosed automatic transfer switches, I-O-II operation, open transition

• ATS 4 pole 40 to 1600A with OMD300 & OMD800 controller, blank door, wall mountable

Description	Rated Current (A)	Enclosure Size (mm)			Controller OMD300	
		H	W	D	Part Number	Order Code
ATS 40A	40	600	600	250	OTA40E4C3SR	1TVC004014S3000
ATS 63A	63	600	600	250	OTA63E4C3SR	1TVC006314S3000
ATS 125A	125	600	600	250	OTA125E4C3SR	1TVC012514S3000
ATS 160A	160	600	600	250	OTA160E4C3SR	1TVC016014S3000
ATS 250A	250	600	600	250	OTA250E4C3SR	1TVC025014S3000
ATS 400A	400	800	600	300	OTA400E4C3SR	1TVC040014S3000
ATS 630A*	630	1000	800	400	OTA630E4C3AM	1TVC063024S3000
ATS 800A*	800	1000	800	400	OTA800E4C3AM	1TVC080024S3000
ATS 1000A*	1000	1400	800	500	OTA1000E4C3AM	1TVC100024S3000
ATS 1250A*	1250	1400	800	500	OTA1250E4C3AM	1TVC125024S3000
ATS 1600A*	1600	1400	800	500	OTA1600E4C3AM	1TVC160024S3000



Description	Rated Current (A)	Enclosure Size (mm)			Controller OMD800	
		H	W	D	Part Number	Order Code
ATS 40A	40	600	600	250	OTA40E4C8SR	1TVC004014S8000
ATS 63A	63	600	600	250	OTA63E4C8SR	1TVC006314S8000
ATS 125A	125	600	600	250	OTA125E4C8SR	1TVC012514S8000
ATS 160A	160	600	600	250	OTA160E4C8SR	1TVC016014S8000
ATS 250A	250	600	600	250	OTA250E4C8SR	1TVC025014S8000
ATS 400A	400	800	600	300	OTA400E4C8SR	1TVC040014S8000
ATS 630A*	630	1000	800	400	OTA630E4C8AM	1TVC063024S8000
ATS 800A*	800	1000	800	400	OTA800E4C8AM	1TVC080024S8000
ATS 1000A*	1000	1400	800	500	OTA1000E4C8AM	1TVC100024S8000
ATS 1250A*	1250	1400	800	500	OTA1250E4C8AM	1TVC125024S8000
ATS 1600A*	1600	1400	800	500	OTA1600E4C8AM	1TVC160024S8000

* Floor standing - plinths from accessories below.
Bypass options are available on request.
Other wall mounting and floor standing versions available on request.

Enclosed manual & automatic transfer switches
Selection



Enclosed single bypass switches, I-O-II operation, open transition

• BPS 4 pole 40 to 630A with OMD800 controller, blank door, wall mountable

Description	Rated Current (A)	Enclosure Size (mm)			Single Bypass Controller OMD800
		H	W	D	Order Code
BPS 40A	40	1000	800	300	OTA40E4C8SBSR
BPS 63A	63	1000	800	300	OTA63E4C8SBSR
BPS 100A	100	1000	800	300	OTA100E4C8SBSR
BPS 125A	125	1000	800	300	OTA125E4C8SBSR
BPS 160A	160	1200	1000	400	OTA160E4C8SBSR
BPS 250A	250	1200	1000	400	OTA250E4C8SBSR
BPS 400A	400	1200	1000	400	OTA400E4C8SBSR
BPS 630A	630	1600	1200	600	OTA630E4C8DBAM



Enclosed dual bypass switches, I-O-II operation, open transition

• BPS 4 pole 40 to 630A with OMD800 controller, blank door, wall mountable

Description	Rated Current (A)	Enclosure Size (mm)			Dual Bypass Controller OMD800
		H	W	D	Order Code
BPS 40A	40	1000	800	300	OTA40E4C8DBSR
BPS 63A	63	1000	800	300	OTA63E4C8DBSR
BPS 100A	100	1000	800	300	OTA100E4C8DBSR
BPS 125A	125	1000	800	300	OTA125E4C8DBSR
BPS 160A	160	1200	1000	400	OTA160E4C8DBSR
BPS 250A	250	1200	1000	400	OTA250E4C8DBSR
BPS 400A	400	1200	1000	400	OTA400E4C8DBSR
BPS 630A	630	1600	1200	600	OTA630E4C8DBAM

Enclosed manual & automatic transfer switches
Accessories



Enclosed Automatic Transfer Switch with ATS2PL & ATSDMC optional extras

Optional extras

Description	Part Number	Order Code
2 pilot lights	ATS2PL	1TVC151800S2311
Door mounted controller complete with IP54 cover plate	ATSDMC	1TVC151800S2312
Energy meter	ATSEM	1TVC151800S2313
Aniti-condensation heater with thermostat	ATSHT	1TVC151800S2314

Accessories

Description	Suitable switch	Part Number	Order Code
N/O auxiliary for on right hand side of switch	OTA40-1600	OA1G10	1SCA022673R1140
N/O auxiliary for on left hand side of switch	OTA40-125	OA7G10	1SCA022744R2240
N/C auxiliary for on right hand side of switch		OA8G01	1SCA022353R4890
N/C auxiliary for on left hand side of switch		OA1G01	1SCA022456R1710
N/C auxiliary for on right hand side of switch	OTA160-1600	OA3G01	1SCA022456R7410
Direct mounting handle, padlockable with 3 padlocks in '0' position. Includes shaft and mech cover	OTA40-125	OHB65D6CM	1SCA022870R9430
	OTA160-250	OTV250ECMK	1SCA022804R0570
	OTA400	OTV400ECMK	1SCA022843R2900
	OTA630-800	OTV800ECMK	1SCA022804R3410
	OTA1000-1600	OTV1000ECMK	1SCA111301R1001
Handle and spare fuse storage clip	OTA40-125	OTVS0	1SCA117524R1001
	OTA160-250	OTVS1	1SCA111413R1001
	OTA400-1600	OTVS2	1SCA111414R1001
IP54 cover plate for door mounting ATS controller	All	OMZC2	1SCA101001R1001
Yale type key, 19mm dia box with security insert	OTA40-400	AA8002	AA8002
Unique coded Yale insert lock	OTA630-1600	EV1036	EV1036
A4 Document pocket	All	EV1075K	EV1075K
Blind plinth flanges (pair) H100 x W800mm	OTA630-1600	ZN8000	ZN8000
Blind plinth flanges (pair) H100 x D400mm	OTA630-800	ZN4011	ZN4011
Blind plinth flanges (pair) H100 x D500mm	OTA1000-1600	ZN5011	ZN5011
Wall mounting brackets (4 off)	OTA40-400	AA1206	AA1206
Anti tilting brackets (pair)	OTA630-1600	TA1207	TA1207

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