Breakers and Switches

Switches
Automatic Transfer Switches

Power and productivity
for a better world™

Growing importance of a secure power supply

ABB's range of automatic transfer switches goes from 160 to 1600 Amperes. There are three types of ATSs with three different OMD control units: OMD200, OMD300 and OM800. ABB's ATSs have the features and functionality that makes them suitable for diverse applications: industrial plants, docks, airports and data centers.

Safe and reliable operation

The change-over mechanism has three stable positions, which ensure isolation of the two asynchronous power supplies.

- No risk of short circuit between the sources, even in the presence of transient voltages

The switch has a selector to choose between manual and automatic operation. Automatic operation is disabled by padlocking the latch or by fitting the handle. Both manual and automatic operation can be prevented by padlocking the handle in O position.

- Unwanted operation prevented

Manual operation is always possible in emergency situations, even without electricity.

- All-time safe and reliable operation

Easy installation

The design of ABB automatic transfer switch is advanced and compact. The OMD control unit can be adjusted according to the depth of the panel and the voltage sensing kit is installed at the factory.

- Reduce installation cost and time

The motor operator of the ATS is protected by a fuse. If the operation frequency is exceeded, the fuse protects the motor.

- No more expensive repair work

It is also possible to purchase the control units and motorized change-over switches as separate components, so the users can build the automatic transfer switch by themselves if desired.

User friendly interface

The panels of the OMD control units show the status of the system clearly: line status, switch position, alarms and operation mode (manual or automatic). The OMD can be configured in an easy way.

OMD800 shows the information on a LCD display, with menus available in eight languages.

- Simplicity of usage

Fully automatic solution. Our ATS range includes sophisticated features in extremely compact footprint area without neglecting features that makes assembly easy and safe, every time.

Technical data
Automatic transfer switches
OTM160...1600_C_D

Automatic transfer switches

Data according to IEC 60947-3		Switch size		OTM160_
Rated insulation voltage and rated		Pollution		
operational voltage AC20		degree 2	V	415
Dielectric strength		50 Hz 1min.	kV	10
Rated impulse withstand voltage			kV	6
Rated thermal current and rated operational	/ ambient 40°C	In open air	A	160
current AC20	/ ambient 40°C	In enclosure	A	160
..with minimum conductor cross section		Cu	mm^2	70
Rated operational current, AC-21A		up to 415 V	A	160
Rated operational current, AC-22A		up to 415 V	A	160
Rated operational current, AC-23A		up to 415 V	A	160
Rated operational power, AC-23A[1]		230 V	kW	45
The kW-ratings are accurate for 3-phase 1500		400 V	kW	90
R.P.M. standard asychronous motors		415 V	kW	90
Rated breaking capacity in category AC-23		up to 415 V	A	1 280
Rated conditional short-circuit current I_p (r.m.s.) and	I_p (r.m.s.) 80 kA, 415 V	$\hat{i}_c$ (peak)	kA	40.5
cut-off current $\hat{i}_c$ (peak) value. The cut-off current $\hat{i}_c$	Max. OFA_ fuse size	gG/aM	A/A	355/315
refers to values listed by fuse manufacturers				
(single phase test acc. to IEC60269).				
Rated short-time withstand current	I_{cw} (r.m.s.)	415 V 0.15s	kA	15
		415 V 0.25s	kA	15
		415 V 1s	kA	8
Rated short-time making capacity[2]	I_{cm} (peak)[3]	415 V	kA	30
Power loss / pole	With rated current		W	2.4
Mechanical endurance	Number of oper. cycles[4]		Cycles	8 000
Mechanical endurance / switch	Number of operations		Oper.	16 000
Terminal bolt size	Metric thread diameter x length		mm	M8x25
Terminal tightening torque	Counter torque required		Nm	15-22
Operating torque	Typical for 3-pole switches		Nm	7
Weight without accessories		3-pole switch	kg	5.7
		4-pole switch	kg	6.4
Data according to IEC 60947-6-1				
Class of equipment				PC
Rated short-time withstand current	I_{cw} (r.m.s.)	415 V 0.1s	kA	15
Rated operational current, AC-31B		up to 415 V	A	160
Rated operational current, AC-33B		up to 415 V	A	160

[1] These values are given for guidance and may vary acc. to the motor manufacturer
[2] Short circuit duration > 50 ms, without fuse protection
[3] Max. distance from switch frame to nearest busbar / cable support 150 mm
[4] Operating cycle: O - I - O - II - O

OTM200_	OTM250_	OTM315_	OTM400_	OTM630_	OTM800_	OTM1000_	OTM1250_	OTM1600_
415	415	415	415	415	415	415	415	415
10	10	10	10	10	10	10	10	10
6	6	6	6	6	6	6	6	6
200	250	315	400	630	800	1 000	1 250	1 600
200	250	315	400	630	800			
95	120	185	240	2x185	2x240	2x300	2x400	2x500
200	250	315	400	630	800	1 000	1 250	1 600
200	250	315	400	630	800	1 000	1 250	1 600
200	250	315	400	630	800	1 000	1 250	1 250
60	75	100	132	200	250	315	400	400
110	140	160	220	355	450	560	710	710
110	145	180	230	355	450	560	710	710
1 600	2 000	2 520	3 200	5 040	6 400	10 000	10 000	10 000
40.5	40.5	59	59	83.5	83.5	100	100	100
355/315	355/315	500/500	500/500	800/1 000	800/1 000	1 250/1 250	1 250/1 250	1 250/1 250
15	15	31	31	38	38	50	50	50
15	15	24	24	36	36	50	50	50
8	8	15	15	20	20	50	50	50
30	30	65	65	80	80	92	92	92
4	6.5	6.5	10	25	40	19	29	48
8 000	8 000	8 000	8 000	5 000	5 000	3 000	3 000	3 000
16 000	16 000	16 000	16 000	10 000	10 000	6 000	6 000	6 000
M8x25	M8x25	M10x30	M10x30	M12x40	M12x40	M12x60	M12x60	M12x60
15-22	15-22	30-44	30-44	50-75	50-75	50-75	50-75	50-75
7	7	16	16	27	27	78	78	78
5.7	5.7	10.2	10.2	17.5	17.5	42	42	44
6.4	6.4	11.4	11.4	20.4	20.4	50	50	52
PC	PC	PC	PC	PC	PC	PC	PC	PC
15	15	25	25	38	38	50	50	50
200	250	315	400	650	720	1 000	1 250	1 600
200	250	315	400	650	650	1 000	1 000	1 000

Technical data
Automatic transfer switches/power circuit and dual power source

Technical data for automatic transfer switches, power circuit

OTM_C2D_ (OMD200)	
Rated operational voltage U_e	208 - 415 V AC +/- 20 % + N
Phase - Neutral	120 - 240 V AC +/- 20 %
Rated frequency	50 / 60 Hz +/- 10 %
Rated impulse withstand voltage U_{imp}	6 kV
OTM_C3D_ (OMD300)	
Rated operational voltage U_e	208 - 415 V AC +/- 20 % + N
Phase - Neutral	120 - 240 V AC +/- 20 %
Rated frequency	50 / 60 Hz +/- 10 %
Rated impulse withstand voltage U_{imp}	6 kV
OTM_C8D_ (OMD800)	
Rated operational voltage U_e on 3 phase system	100 - 415 V AC +/- 20 %
Phase - Neutral	57,7 - 240 V AC +/- 20 %
Rated operational voltage U_e on 1 phase system[1)]	57,7 - 240 V AC +/- 20 %
Rated frequency	50 / 60 Hz +/- 10 %
Rated impulse withstand voltage U_{imp}	6 kV
AUX voltage[1)]	24 V DC - 110 V DC (-10 to 15 %)
Operating temperature	-5…+40°C
Transportation and storage temperature	-25…+70°C
Altitude	Max.2000m

[1)] If on 1 phase system the voltage level is between 57,7 – 109 V AC, AUX voltage supply must be used

Technical data for dual power source ODPSE230C

Dual power source ODPSE230C	
Rated operational voltage U [V]	220…240 V AC +/- 20%
Rated frequency	50 / 60 Hz +/- 10%
Short-circuit protection device	Max. MCB 4 A
Nominal output current I_n [A]	4 A
Startup time	Max. 1.0 s (with 230 V AC)
Operating transfer time LN1 - LN2 or LN2 - LN1	Max. 0.5 s (with 230 V AC)
Cable size	0,2…2,5 mm^2
Rated impulse withstand voltage, U_{imp}	4 kV
Overvoltage category	III
Pollution degree	3
Protection rating for the front panel	IP20
Operating temperature	– 25...+ 60 °C
Transportation and storage temperature	– 40...+ 70 °C
Altitude	Max. 2000m

Technical data, motor operator
Automatic transfer switches

Technical data for motor operator, control circuit

Motor operator, control circuit				OTM160...250	OTM315...400	OTM630...800	OTM1000...1600
Rated operational voltage U [V]	Pollution degree 3	50/60 Hz			220 - 240 V AC		
Operating voltage range					0,8…1,2 x U_e		
Operating times					See the table below		
Nominal current I_n[a]			A	0.2	0.5	0.7	1.8
Current Inrush[a]			A	1.3	2.1	2.8	7.7
Overload fuse	Type / In / Capacity		mA	T/315/H	T/500/H	T/1000/H	T/2000/H
	Size		mm	5x20	5x20	5x20	5x20
Operating rate	Cycle 0 - I - 0 - II - 0						
	Max. continuous		cycles / min	1	1	1	0.5
Max. short-time ≤ 10 cycles			cycles / min	10	10	10	5
Overvoltage category					III		
Rated impulse withstand voltage U_{imp}			kV		4		
Dielectric strength		50 Hz 1 min.	kV		1.5		
Terminals							
Voltage supply wiring for U					PE - N - L		
Cross section		solid/stranded	mm^2		1.5 - 2.5		
Short-circuit protection device		max. MCB	A		C16		
State information of locking (no SELV)							
Cross section		solid/stranded	mm^2		1.5 - 2.5		
Locking motor operator		23-24 (NO)			5A/250V/cosφ=1		
Short-circuit protection device		Max. MCB	A		C2		
Protection degree					IP20		
Operating temperature			°C		-25…+55		
Transportation and storage temperature			°C		-40…+70		
Max. altitude			m		2000		

Operating times

	Operating transfer time[a]	OFF-time when operating[a]
Type	I - II, II - I [s]	I - II, II - I [s]
OTM160…250_C2D_	2.0 - 4.0	0.4 - 1.0
OTM160…250_C3D_	2.0 - 4.0	0.4 - 1.0
OTM160…250_C8D_	1.5 - 3.0	0.4 - 1.0
OTM315…400_C2D_	2.0 - 5.0	0.4 - 1.0
OTM315…400_C3D_	2.0 - 5.0	0.4 - 1.0
OTM315…400_C8D_	1.5 - 3.0	0.4 - 1.0
OTM630…800_C2D_	2.0 - 5.0	0.4 - 1.0
OTM630…800_C3D_	2.0 - 5.0	0.4 - 1.0
OTM630…800_C8D_	1.5 - 3.0	0.4 - 1.0
OTM1000…1600_C2D_	3.0 - 6.0	0.6 - 1.5
OTM1000…1600_C3D_	3.0 - 6.0	0.6 - 1.5
OTM1000…1600_C8D_	2.5 - 4.0	0.6 - 1.5

[a] Under nominal conditions

Ordering information
Automatic transfer switches

Automatic transfer switches functionality

	OTM_C2D_	OTM_C3D_	OTM_C8D_
OTM_C_D products overview			
Includes automatic control unit	OMD200_	OMD300_	OMD800_
Manual operation with handle	x	x	x
Local operation with front panel keypad	x	x	x
Automatic transfer switching equipment (ATSE)	x	x	x
Dual power source for the motor operator[1)]	o	x	o
Measurements			
Three phase voltage measurement on LINE 1	x	x	x
Single phase voltage measurement on LINE 1	x	x	x
Three phase voltage measurement on LINE 2	x	x	x
Single phase voltage measurement on LINE 2	x	x	x
Frequency on LINE 1	x	x	x
Frequency on LINE 2	x	x	x
Possibility to check the measurements via LCD			x
Source failure detections			
No voltage	x	x	x
Undervoltage	x	x	x
Overvoltage	x	x	x
Phase missing	x	x	x
Voltage unbalance	x	x	x
Invalid frequency	x	x	x
Incorrect phase sequence			x
Configuration			
By DIP switches	x	x	
By rotary switches	x	x	
By keypad and LCD			x
Voltage threshold setting	x	x	x
Voltage hysteresis setting			x
Frequency threshold setting			x
Frequency hysteresis setting			x
Time delays			
Switching delay	x[2)]	x[2)]	x
Delay on transfer[3)]			x
Dead band time I-II (stop switching to position O)			x
Back-switching delay	x[4)]	x[4)]	x
Dead band time II-I (stop switching to position O)			x
Generator stop delay	x[5)]	x[5)]	x
Status of time delays on the LCD			x

[1)] Dual power source allows the motor operator to be supplied by two separate voltage supplies. This way the motor operator is always energized from the available line.
[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 warmed 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 5 min
[5)] Two options: the duration of generator stop delay is the same as Switching delay or fixed 5 min

x = included as standard
o = as an accessory

Ordering information
Automatic transfer switches

Automatic transfer switches functionality

	OTM_C2D_	OTM_C3D_	OTM_C8D_
Features			
Generator start and stop	x	x	x
Off-load test sequence	x	x	x
On-load test sequence	x	x	x
Source status via front panel	x	x	x
Source status via digital outputs			x
Switch position via front panel	x	x	x
LCD[6]			x
Fieldbus interface[7]			x
Event/alarm log			x
Counter for number of operations			x
Auxiliary voltage supply[8]			x
Programmable digital inputs (eight) and digital outputs (six)			x
Secondary load control (load shedding)			x
Digital input - Allow transfer to secondary[9]			x
Digital input - Generator alarm[10]			x
Digital input - Remote control to positions I, O and II			x
Operating mode			
Line priority	x[11]	x[11]	x[12]
Manual back-switching[13]	x	x	x
Automatic operation to position O, in case of source failure[14]			x
Applications			
Transfer between two transformers	x	x	x
Transfer between a transformer and a generator	x	x	x

[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 control unit can be supplied with an external auxiliary supply with 24…110 V DC
[9] 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 O
[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] Control unit and motor operator must be energized

x = included as standard
o = as an accessory

Ordering information
Automatic transfer switches, IEC-types

OTM160...250E4WC3D_

OTM630...800E4C2D_

OTM1000...1250E4C3D_

Automatic transfer switches, I-O-II operation, open transition

Including a handle for manual operation, PCB connectors, bolt kit with nuts and washers for all terminals. Types OTM160…1600_C_D_, including a voltage sensing kit on the top of the switch. Voltage sensing kit on the bottom on the switch, available on request, please add letter “B” to the type code. For example, OTM160E4C2D230C ▸ OTM160E4C**B**2D230C. Types OTM160...1600E_ include a storage clip for the handle and spare fuses. Types OTM160...250_ WC_D_ are equipped with extended phase distance.

No. of poles	Rated current AC-21A, AC-22A ≤ 415V, I[A]	Rated power 400V S[kVA]	Rated current AC-31B/ AC-33B 415V, I[A]	Type	Order number	Units/ type [pcs]	Weight/ unit [kg]
Automatic operation, OTM_C2D_ types, voltage sensing on the top							
Motor operator voltage U_e = 220...240 V AC[1)]							
4	160	110	160/160	OTM160E4C2D230C	1SCA106230R1001	1	11
4	160	110	160/160	OTM160E4WC2D230C	1SCA101033R1001	1	11
4	200	135	200/200	OTM200E4C2D230C	1SCA106671R1001	1	11
4	200	135	200/200	OTM200E4WC2D230C	1SCA101034R1001	1	11
4	250	170	250/250	OTM250E4C2D230C	1SCA101016R1001	1	11
4	250	170	250/250	OTM250E4WC2D230C	1SCA101035R1001	1	11
4	315	215	315/315	OTM315E4C2D230C	1SCA101059R1001	1	15
4	400	275	400/400	OTM400E4C2D230C	1SCA101060R1001	1	15
4	630	435	650/650	OTM630E4C2D230C	1SCA108434R1001	1	37
4	800	550	720/650	OTM800E4C2D230C	1SCA108439R1001	1	37
4	1000	680	1000/1000	OTM1000E4C2D230C	1SCA112858R1001	1	66
4	1250	850	1250/1000	OTM1250E4C2D230C	1SCA112857R1001	1	66
4	1600	1000	1600/1000	OTM1600E4C2D230C	1SCA112854R1001	1	70
Automatic operation, OTM_C3D_ types, voltage sensing on the top							
Including in-built dual power source for the motor operator. Motor operator voltage Ue = 220...240 V AC[1)]							
4	160	110	160/160	OTM160E4C3D230C	1SCA106305R1001	1	11
4	160	110	160/160	OTM160E4WC3D230C	1SCA106306R1001	1	11
4	200	135	200/200	OTM200E4C3D230C	1SCA106309R1001	1	11
4	200	135	200/200	OTM200E4WC3D230C	1SCA106310R1001	1	11
4	250	170	250/250	OTM250E4C3D230C	1SCA106313R1001	1	11
4	250	170	250/250	OTM250E4WC3D230C	1SCA106314R1001	1	11
4	315	215	315/315	OTM315E4C3D230C	1SCA106317R1001	1	15
4	400	275	400/400	OTM400E4C3D230C	1SCA106318R1001	1	15
4	630	435	650/650	OTM630E4C3D230C	1SCA108726R1001	1	37
4	800	550	720/650	OTM800E4C3D230C	1SCA108728R1001	1	37
4	1000	680	1000/1000	OTM1000E4C3D230C	1SCA112852R1001	1	66
4	1250	850	1250/1000	OTM1250E4C3D230C	1SCA112851R1001	1	66
4	1600	1000	1600/1000	OTM1600E4C3D230C	1SCA112848R1001	1	70

[1)] Under nominal conditions

Handles and bolt kits included as standard

Suitable for switches	Handle	Bolt kit
OTM160...250	OTV250ECMK	M8x25
OTM315...400	OTV400ECMK	M10x30
OTM630...800	OTV800ECMK	M12x40
OTM1000...1600	OTV1000ECMK	M12x60

Ordering information
Automatic transfer switches, IEC-types

OTM160...250E3C8D_

OTM315...400E4C8D_

OTM1600E3C8D_

Automatic transfer switches, I-O-II operation, open transition

Including a handle for manual operation, PCB connectors, bolt kit with nuts and washers for all terminals. Types OTM160…1600_C_D_, including a voltage sensing kit on the top of the switch. Voltage sensing kit on the bottom on the switch, available on request, please add letter “B” to the type code. For example, OTM160E4C8D230C ▸ OTM160E4C**B**8D230C. Types OTM160...1600E_ include a storage clip for the handle and spare fuses. Types OTM160...250_WC_D_ are equipped with extended phase distance.

No. of poles	Rated current AC-21A, AC-22A ≤ 415V, I[A]	Rated power 400V S[kVA]	Rated current AC-31B/ AC-33B 415V, I[A]	Type	Order number	Units/ type [pcs]	Weight/ unit [kg]
Automatic operation, OTM_C8D_ types, voltage sensing on the top							
Motor operator voltage U_s = 220...240 V AC[1]							
3	160	110	160/160	OTM160E3C8D230C	1SCA101017R1001	1	10
3	160	110	160/160	OTM160E3WC8D230C	1SCA101036R1001	1	10
4	160	110	160/160	OTM160E4C8D230C	1SCA101020R1001	1	11
4	160	110	160/160	OTM160E4WC8D230C	1SCA101039R1001	1	11
3	200	135	200/200	OTM200E3C8D230C	1SCA101018R1001	1	10
3	200	135	200/200	OTM200E3WC8D230C	1SCA101037R1001	1	10
4	200	135	200/200	OTM200E4C8D230C	1SCA101021R1001	1	11
4	200	135	200/200	OTM200E4WC8D230C	1SCA101040R1001	1	11
3	250	170	250/250	OTM250E3C8D230C	1SCA101019R1001	1	10
3	250	170	250/250	OTM250E3WC8D230C	1SCA101038R1001	1	10
4	250	170	250/250	OTM250E4C8D230C	1SCA101022R1001	1	11
4	250	170	250/250	OTM250E4WC8D230C	1SCA101041R1001	1	11
3	315	215	315/315	OTM315E3C8D230C	1SCA101062R1001	1	14
4	315	215	315/315	OTM315E4C8D230C	1SCA101063R1001	1	15
3	400	275	400/400	OTM400E3C8D230C	1SCA101061R1001	1	14
4	400	275	400/400	OTM400E4C8D230C	1SCA101064R1001	1	15
3	630	435	650/650	OTM630E3C8D230C	1SCA108452R1001	1	34
4	630	435	650/650	OTM630E4C8D230C	1SCA108453R1001	1	37
3	800	550	720/650	OTM800E3C8D230C	1SCA108454R1001	1	34
4	800	550	720/650	OTM800E4C8D230C	1SCA108455R1001	1	37
3	1000	680	1000/1000	OTM1000E3C8D230C	1SCA112868R1001	1	57
4	1000	680	1000/1000	OTM1000E4C8D230C	1SCA112861R1001	1	66
3	1250	850	1250/1000	OTM1250E3C8D230C	1SCA112862R1001	1	57
4	1250	850	1250/1000	OTM1250E4C8D230C	1SCA112864R1001	1	66
3	1600	1000	1600/1000	OTM1600E3C8D230C	1SCA112866R1001	1	60
4	1600	1000	1600/1000	OTM1600E4C8D230C	1SCA112867R1001	1	70

[1] Under nominal conditions

Handles and bolt kits included as standard

Suitable for switches	Handle	Bolt kit
OTM160...250	OTV250ECMK	M8x25
OTM315...400	OTV400ECMK	M10x30
OTM630...800	OTV800ECMK	M12x40
OTM1000...1600	OTV1000ECMK	M12x60

Ordering information
Accessories

OTV_

Handles, direct mounting

Includes a shaft and a mechanism cover. The type and ordering numbers are for one piece.

Suitable for switches	Colour	Type	Order number	Units/ type [pcs]	Weight/ unit [kg]
Padlockable with three padlocks in 0-position					
OTM160…250	Black	OTV250ECMK	1SCA022804R0570	1	0.10
OTM315…400	Black	OTV400ECMK	1SCA022843R2900	1	0.28
OTM630…800	Black	OTV800ECMK	1SCA022804R3410	1	0.32
OTM1000…2500	Black	OTV1000ECMK	1SCA111301R1001	1	0.77

OTVS1

Handle and spare fuse storage clip

OTM160…1600, the handle and two spare fuses can be stored in the OTVS1 and OTVS2. OTVS1 and OTVS2 can be installed onto the left side of the switch. Snap-on mounting, no tools required. On OTM1000...1600, the size of the handle prevents the installation onto the switch frame. However, the handle clip can be installed separately onto the panel frame and the fuse holder clip onto the switch frame.

Suitable for switches	Type	Order number	Units/ type [pcs]	Weight/ unit [kg]
OTM160…250	OTVS1	1SCA111413R1001	1	0.02
OTM315…1600	OTVS2	1SCA111414R1001	1	0.04

Ordering information
Accessories

OA1G10
OA8G01
OA3G10
S00261A

OA2G11
S01025A

Auxiliary contacts

The type and ordering numbers are for one piece.

Auxiliary contact blocks for OTM160...1600

Mounting on the right side of the switch: Max. 4 auxiliary contact blocks/switch (totally 8 blocks). Types _AU have gold plated contacts for harsh environments and low operating voltages. Simultaneous action with the main contacts, IP20.

Suitable for switches	Contact functions	Installation side	Type	Order number	Delivery batch [pcs]	Weight/ unit [kg]
OTM160...1600	1NO	Right	OA1G10	1SCA022353R4970	10	0.03
OTM160...1600	1NC	Right	OA3G01	1SCA022456R7410	10	0.03
OTM160...1600	1NO	Right	OA1G10AU	1SCA022436R7910	10	0.03
OTM160...1600	1NC	Right	OA3G01AU	1SCA022819R5260	10	0.03

Function tables

Function table of OTM160...1600 auxiliary contacts / Switch I (max. 2+2)

Handle position	Main contacts	OA1G10 NO	OA3G01 NC
I	closed	closed	open
0	open	open	closed
II	closed	open	closed

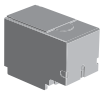
Function table of OTM160...1600 auxiliary contacts / Switch II (max. 2+2)

Handle position	Main contacts	OA1G10 NO	OA3G01 NC
I	closed	open	closed
0	open	open	closed
II	closed	closed	open

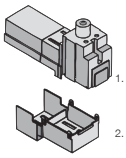
Ordering information
Accessories

OTS_L_
S01638A

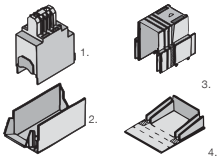
OTS_S_
S01637A



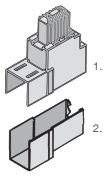
OZXB2K
1. S00215A, 2. S00216A



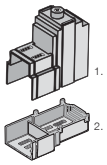
OZXB3K
1. S00218A, 2. S00219A, 3. S00217A, 4. S00220A



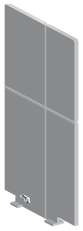
OZXB4K
1. S00221A, 2. S00222A



OZXB5K
1. S00223A, 2. S00224A



OTB_
KE00052A



Terminal shrouds

Terminal shrouds, grey plastic

Snap-on mounting to the switches, IP20. A kit includes three or four shrouds which can be used on either side of the switch. Suitable for the upperswitch. Transparent shrouds for OTM160…1600 available on request, please replace the letter “G” with “T”.

Suitable for switches	No. of poles	Description	Type	Order number	Units/ type [pcs]	Weight/ unit [kg]
OTM160…250	3	Long type	OTS250G1L/3	1SCA022731R8150	3	0.09
OTM160…250	3	Short type	OTS250G1S/3	1SCA022731R8310	3	0.06
OTM160…250	4	Long type	OTS250G1L/4	1SCA022731R8230	4	0.12
OTM160…250	4	Short type	OTS250G1S/4	1SCA022731R8400	4	0.08
OTM315…400	3	Long type	OTS400G1L/3	1SCA022736R8840	3	0.15
OTM315…400	3	Short type	OTS400G1S/3	1SCA022736R9060	3	0.09
OTM315…400	4	Long type	OTS400G1L/4	1SCA022736R9490	4	0.20
OTM315…400	4	Short type	OTS400G1S/4	1SCA022736R9650	4	0.12
OTM600…800	3	Long type	OTS800G1L/3	1SCA022776R7890	3	0.32
OTM600…800	3	Short type	OTS800G1S/3	1SCA022776R8190	3	0.17
OTM600…800	4	Long type	OTS800G1L/4	1SCA022776R7970	4	0.42
OTM600…800	4	Short type	OTS800G1S/4	1SCA022776R8270	4	0.26
OTM1000…1600	3	Long type	OTS1600G1L/3	1SCA022871R9510	3	0.64
OTM1000…1600	3	Short type	OTS1600G1S/3	1SCA022871R9600	3	0.37
OTM1000…1600	4	Long type	OTS1600G1L/4	1SCA022871R9780	4	0.85
OTM1000…1600	4	Short type	OTS1600G1S/4	1SCA022871R9860	4	0.49

Terminal shrouds for terminal clamps

Snap-on mounting to the terminal clamps, transparent plastic, IP 2X

Suitable for switches	No. of poles	Type	Order number	Units/ type [pcs]	Weight/ unit [kg]
OZXB2, 2L	3	OZXB2K	1SCA022264R0010	3	0.05
OZXB3, 4	3	OZXB3K	1SCA022264R0440	3	0.20
OZXB5, 6	3	OZXB4K	1SCA022199R2850	3	0.24
OZXB7, 7L	3	OZXB5K	1SCA022283R8040	3	0.13

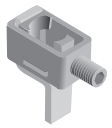
Phase separators

Grey plastic plate for maintaining clearance between the phases without terminal shrouds. Snap-on mounting. The package includes 12 plates and 6 filling plates.

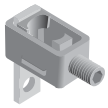
Suitable for switches	Type	Order number	Units/ type [pcs]	Weight/ unit [kg]
OTM630...800, 3- and 4-pole	OTB800/6C	1SCA107272R1001	12	0.55
OTM1000...1600, 3- and 4-pole	OTB1600/6C	1SCA104661R1001	12	0.74

Ordering information
Accessories

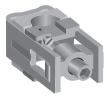
OZXL1
S01361A



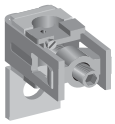
OZXB1L
S00177A



OZXB2
S00179A

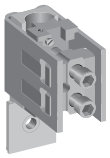


OZXB2L, 7L
S00182A

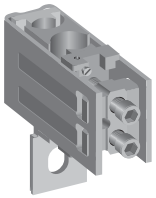


OZXB8, 9
S01806A

OZXB3, 5
S00186A



OZXB4, 6
S00188A



Terminal clamps

Terminal clamp sets for Al- and Cu-cables

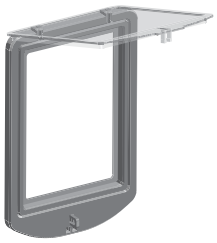
Suitable for switches	Suitable shroud	Cable cross section [mm²]	Type	Order number	Units/ type [pcs]	Delivery batch [pcs]	Weight/ unit [kg]
OTM160...250	OTS250_L	10...70	OZXB1L	1SCA022169R2030	3	1	0.15
OTM160...250	OTS250_L	10...70	OZXB1L/1	1SCA022194R0030	1	50	0.05
OTM160...250	OZXB2K	25...120	OZXB2	1SCA022119R7610	3	1	0.34
OTM160...250	OZXB2K	25...120	OZXB2/1	1SCA022194R0200	1	50	0.12
OTM160...250	OZXB2K	25...120	OZXB2L	1SCA022158R7750	3	1	0.43
OTM160...250	OZXB2K	25...120	OZXB2L/1	1SCA022194R0460	1	50	0.15
OTM160...250	OTS250_L	95...185	OZXB8	1SCA022744R1510	3	1	0.50
OTM160...250	OTS250_L	95...185	OZXB8/1	1SCA022744R1600	1	20	0.15
OTM160...250	OTS250_L	95...240	OZXB9	1SCA022750R3210	3	1	0.50
OTM160...250	OTS250_L	95...240	OZXB9/1	1SCA022750R3300	1	20	0.15
OTM315...400	OZXB2K	25...120	OZXB2L	1SCA022158R7750	3	1	0.43
OTM315...400	OZXB2K	25...120	OZXB2L/1	1SCA022194R0460	1	50	0.15
OTM315...400	OZXB3K	95...185	OZXB3	1SCA022136R8100	3	1	1.28
OTM315...400	OZXB3K	95...185	OZXB3/1	1SCA022194R0620	1	20	0.43
OTM315...400	OZXB3K	2x(95...185)	OZXB4	1SCA022137R4760	3	1	1.71
OTM315...400	OZXB3K	2x(95...185)	OZXB4/1	1SCA022194R0890	1	20	0.57
OTM315...400	OZXB5K	120...240	OZXB7	1SCA022185R0040	3	1	1.00
OTM315...400	OZXB5K	120...240	OZXB7/1	1SCA022194R1430	1	20	0.34
OTM315...400	OZXB5K	120...240	OZXB7L	1SCA022185R7130	3	1	1.17
OTM315...400	OZXB5K	120...240	OZXB7L/1	1SCA022194R1600	1	20	0.40
OTM315...400	OTS400_L	95...185	OZXB8	1SCA022744R1510	3	1	0.50
OTM315...400	OTS400_L	95...185	OZXB8/1	1SCA022744R1600	1	20	0.15
OTM315...400	OTS400_L	95...240	OZXB9	1SCA022750R3210	3	1	0.50
OTM315...400	OTS400_L	95...240	OZXB9/1	1SCA022750R3300	1	20	0.15
OTM630...800	120...300	OZXB4K	OZXB5	1SCA022137R2470	3	1	2.28
OTM630...800	120...300	OZXB4K	OZXB5/1	1SCA022194R1010	1	20	0.76
OTM630...800	2x(120...300)	OZXB4K	OZXB6	1SCA022137R4920	3	1	3.12
OTM630...800	2x(120...300)	OZXB4K	OZXB6/1	1SCA022194R1270	1	20	1.04
OTM1000...1600	95...185	OTS1600_L	OZXB3	1SCA022136R8100	3	1	1.28
OTM1000...1600	95...185	OTS1600_L	OZXB3/1	1SCA022194R0620	1	20	0.13
OTM1000...1600	2x(95...185)	OTS1600_L	OZXB4	1SCA022137R4760	3	1	1.71
OTM1000...1600	2x(95...185)	OTS1600_L	OZXB4/1	1SCA022194R0890	1	20	0.60
OTM1000...1600	120...300	OTS1600_L	OZXB5	1SCA022137R2470	3	1	2.22
OTM1000...1600	120...300	OTS1600_L	OZXB5/1	1SCA022194R1010	1	20	0.80
OTM1000...1600	2x(120...300)	OTS1600_L	OZXB6	1SCA022137R4920	3	1	3.03
OTM1000...1600	2x(120...300)	OTS1600_L	OZXB6/1	1SCA022194R1270	1	20	1.00
OTM1000...1600	120...240	OTS1600_L	OZXB7L	1SCA022185R7130	3	1	1.20
OTM1000...1600	120...240	OTS1600_L	OZXB7L/1	1SCA022194R1600	1	20	0.39

Ordering information
Accessories

OTZC13...34

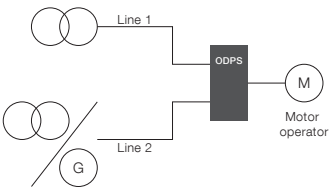
OTZC43...44
OTZC53...54

OMZC2
A07207



ODPSE230C
A07078

Connection diagram
S07186



Bridging bars

The bridging bars provide a connection link on the outcoming side of the switch.

Suitable for switches	No. of poles	Type	Order number	Units/ type [pcs]	Weight/ unit [kg]
OTM160…250	3	OTZC13	1SCA022767R6910	3	0.6
OTM160…250	4	OTZC14	1SCA022767R7040	4	0.8
OTM315…400	3	OTZC23	1SCA022767R7120	3	0.6
OTM315…400	4	OTZC24	1SCA022767R7210	4	0.8
OTM630…800	3	OTZC33	1SCA022785R7020	3	1.0
OTM630…800	4	OTZC34	1SCA022785R7110	4	1.3
OTM1000…1250	3	OTZC43	1SCA022868R0710	3	4.2
OTM1000…1250	4	OTZC44	1SCA022868R0800	4	5.6
OTM1600	3	OTZC53	1SCA022868R0980	3	5.6
OTM1600	4	OTZC54	1SCA022868R1010	4	7.4

Cover plate

Providing protection against accidental contact. Padlockable transparent cover.

Suitable for OMD control unit	Type	Order number	Units/ type [pcs]	Weight/ unit [kg]
OMD200_, OMD300_, OMD800_	OMZC2	1SCA101001R1001	1	

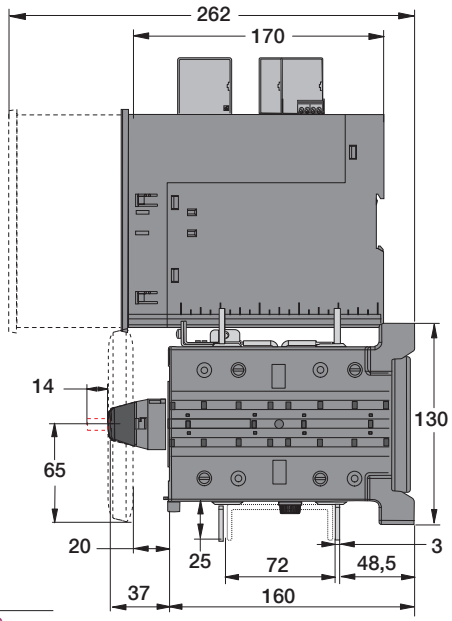
Dual power source

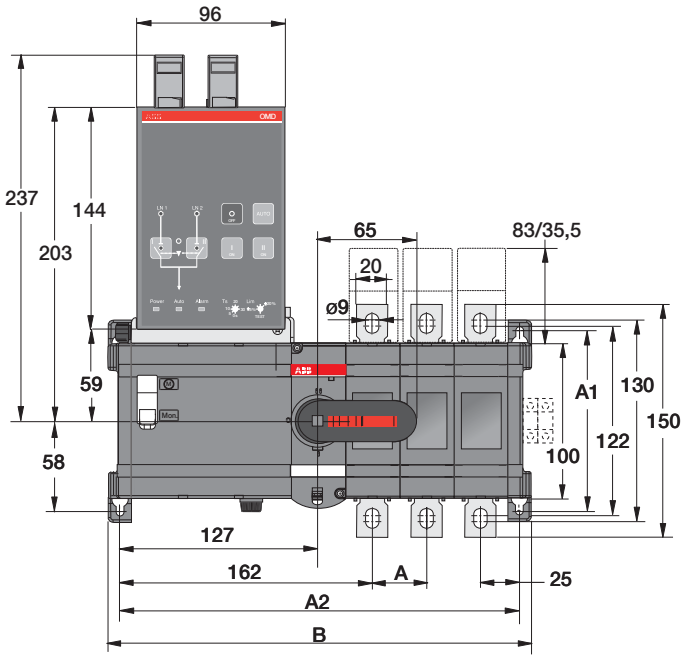
Provides power supply to the motor operator by using two lines. The device has two inputs, from line I (LN I) and line II (LN II), and one output for the motor operator. The motor operator is automatically energized whenever power is available in one of the lines. Can be used with 230 VAC motor operators. Snap-on mounted PCB connectors are included in the delivery. The device can be DIN-rail or screw mounted. Dimension drawings on page 25.

Suitable for switches	Type	Order number	Units/ type [pcs]	Weight/ unit [kg]
OTM160…1600	ODPSE230C	1SCA116892R1001	1	0.3

Dimension drawings
Automatic transfer switches

OTM160...250E_C_2D_, OTM160...250E_C_3D_

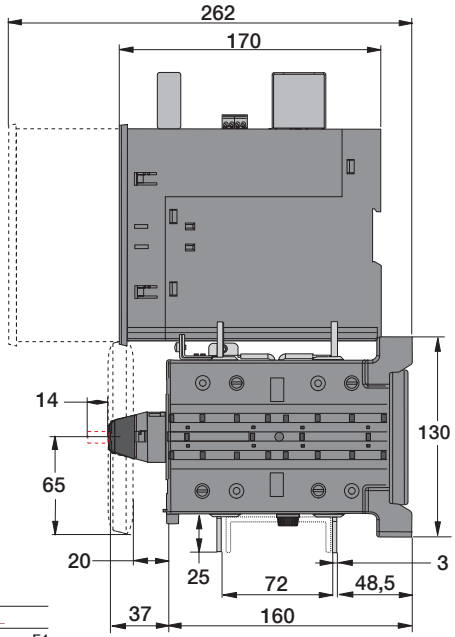


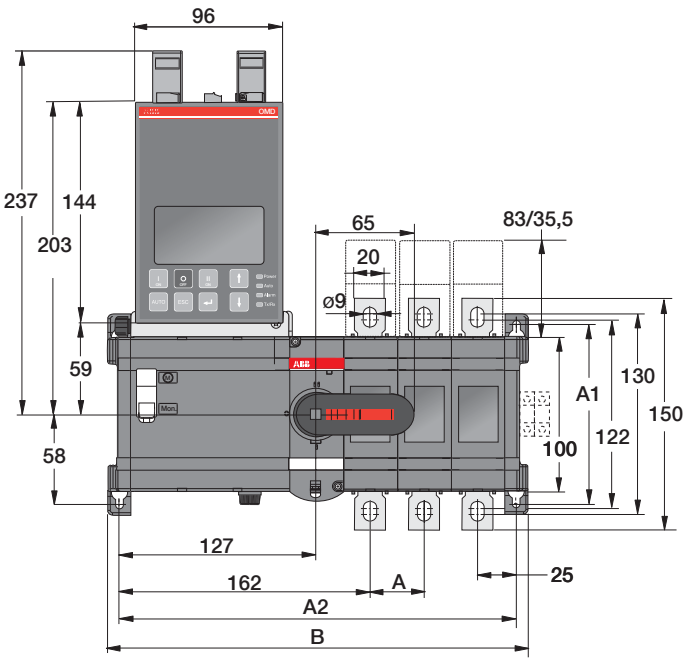


13/OTM160-250E_C_2D_ C

OTM160-250_C_D_		
[mm]	E3	E4
A	35	35
A1	116	116
A2	257	292
B	272	307

OTM160...250E_C_8D_



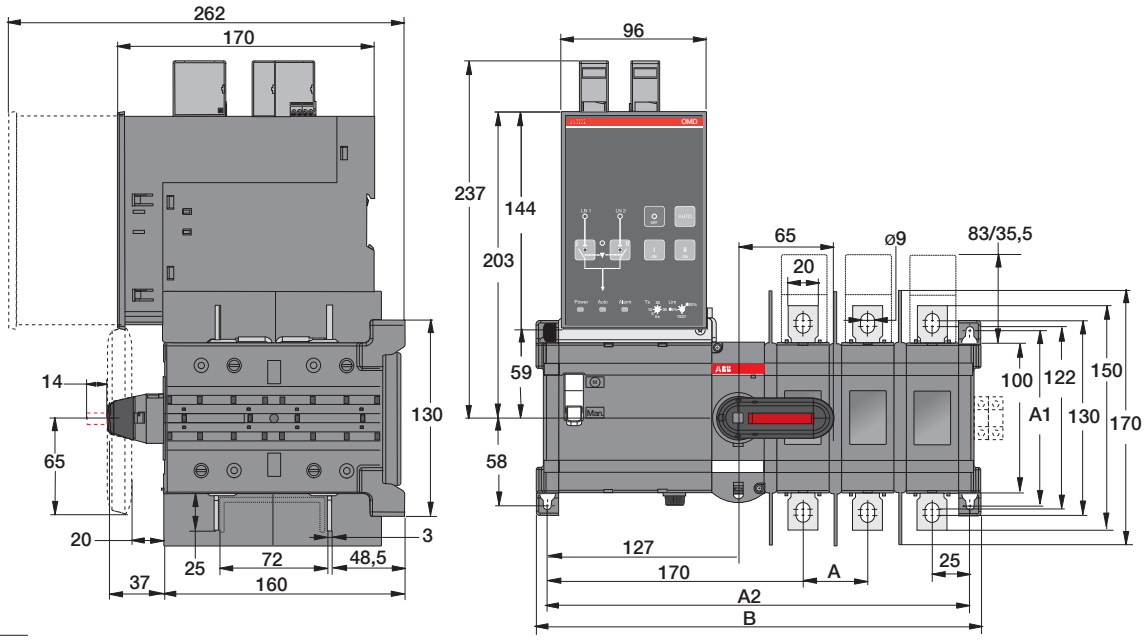


M00184/ OTM160-250E_C_8D_ C

OTM160-250_C_D_		
[mm]	E3	E4
A	35	35
A1	116	116
A2	257	292
B	272	307

Dimension drawings
Automatic transfer switches

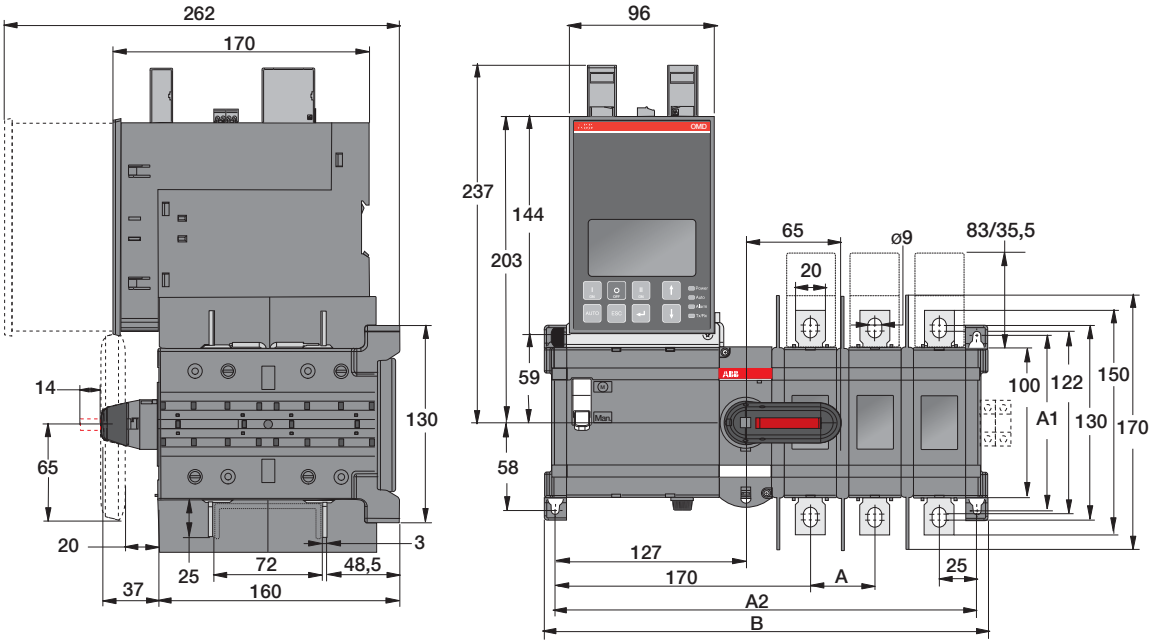
OTM160...250E_WC_2D_, OTM160...250E_WC_3D_



M00186/ OTM160-250E_WC_2D_ C

OTM160-250_WC_D_		
[mm]	E3	E4
A	43	43
A1	116	116
A2	281	324
B	296	339

OTM160...250E_WC_8D_

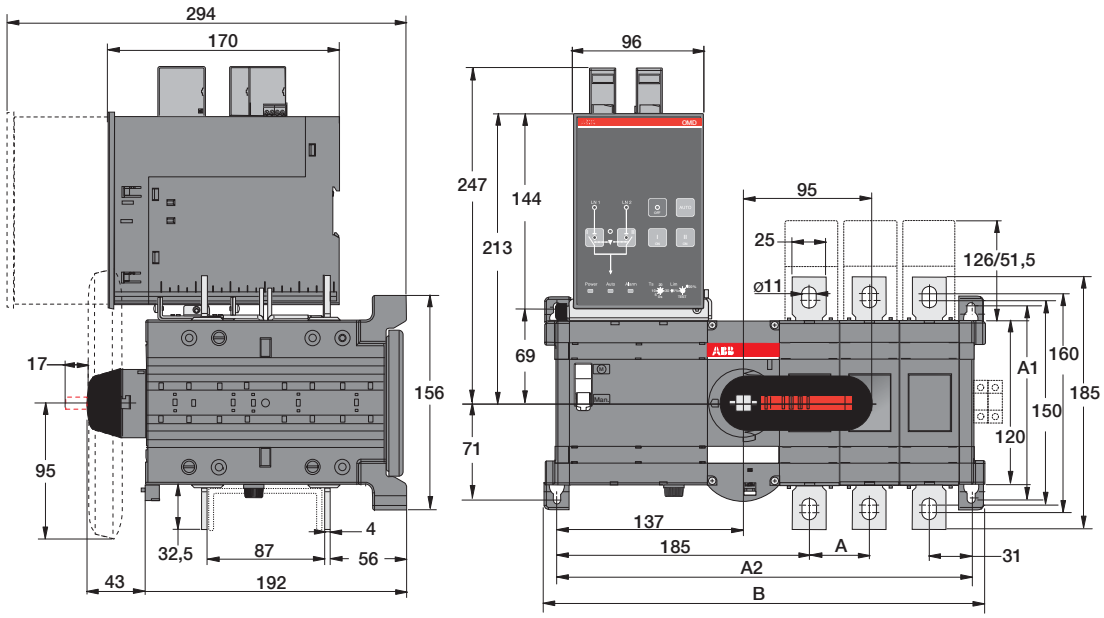


M00187/ OTM160-250E_WC_8D_ C

OTM160-250_WC_D_		
[mm]	E3	E4
A	43	43
A1	116	116
A2	281	324
B	296	339

Dimension drawings
Automatic transfer switches

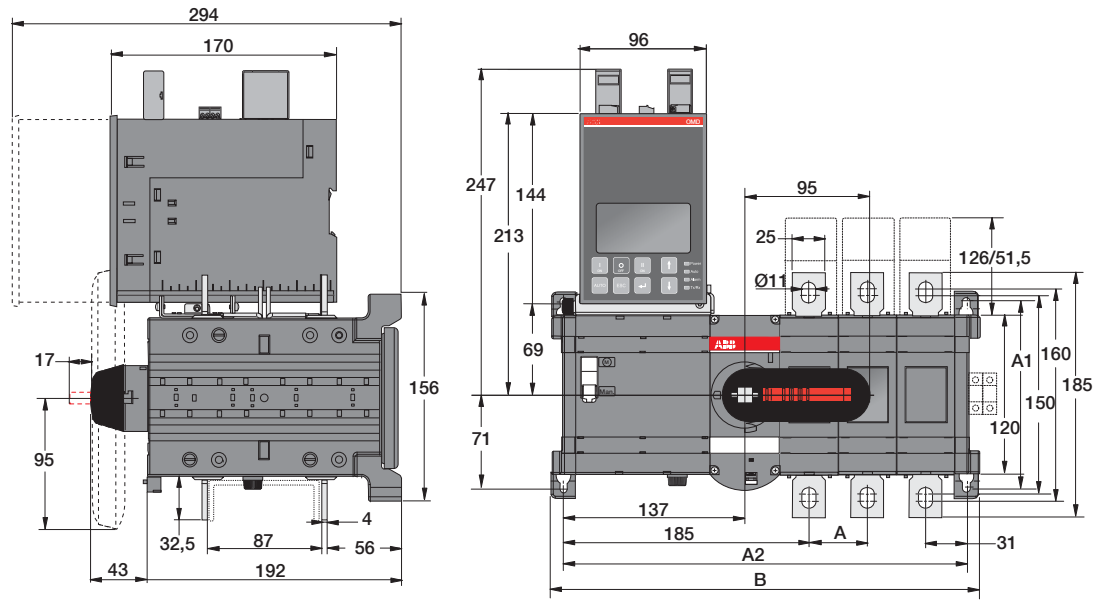
OTM315...400E_C_2D_, OTM315...400E_C_3D



M00192/ OTM315-400E_C_2D_ C

OTM315-400_C_D_		
[mm]	E3	E4
A	44	44
A1	142	142
A2	304,5	348,5
B	323	367

OTM315...400E_C_8D_

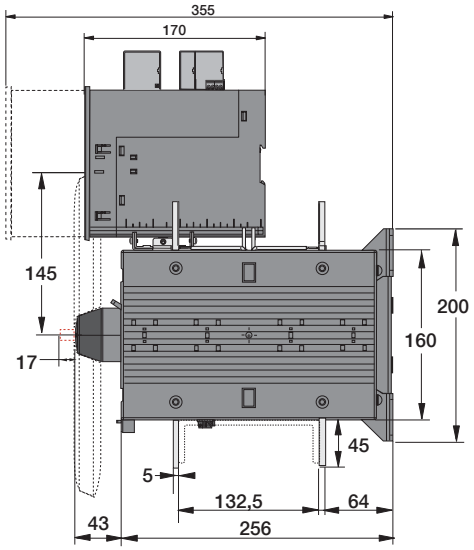


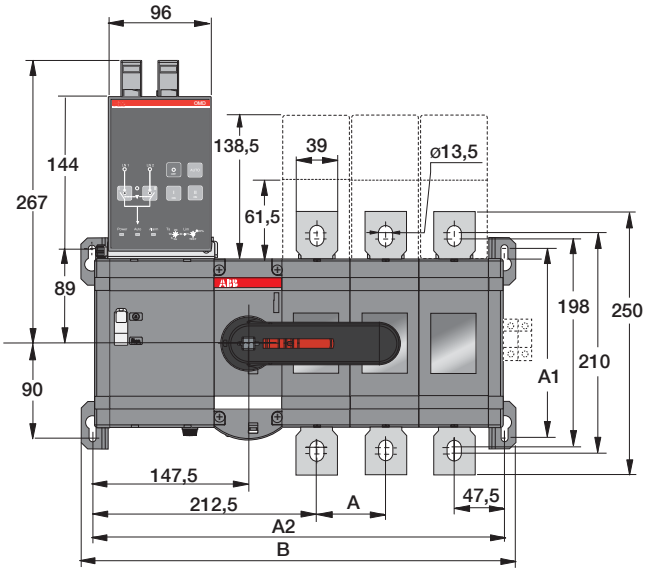
M00193/ OTM315-400E_C_8D_ C

OTM315-400_C_D_		
[mm]	E3	E4
A	44	44
A1	142	142
A2	304,5	348,5
B	323	367

Dimension drawings
Automatic transfer switches

OTM630...800E_C_2D_, OTM630...800E_C_3D_



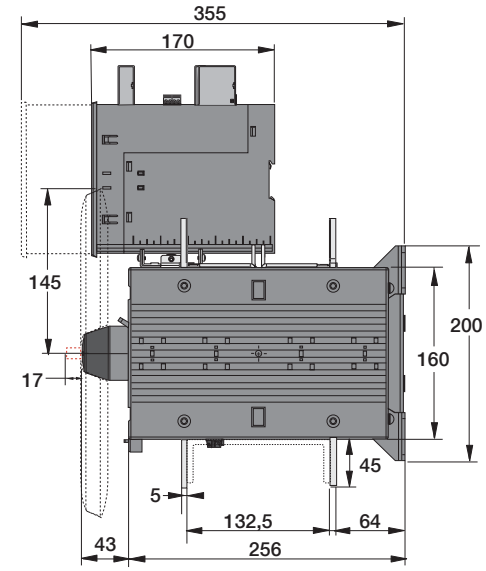


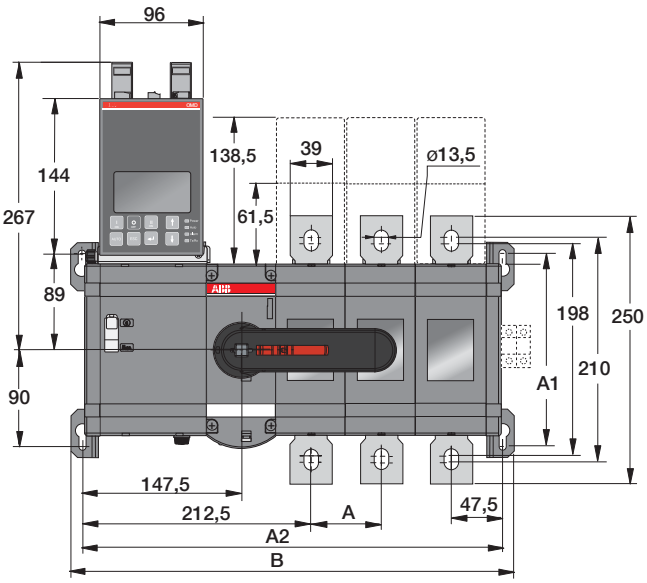
M00204/ OTM630-800E_C_2D_ C

OTM630-800_C_D_

[mm]	E2	E3	E4
A	65	65	65
A1	180	180	180
A2	325	390	455
B	346	411	476

OTM630...800E_C_8D_





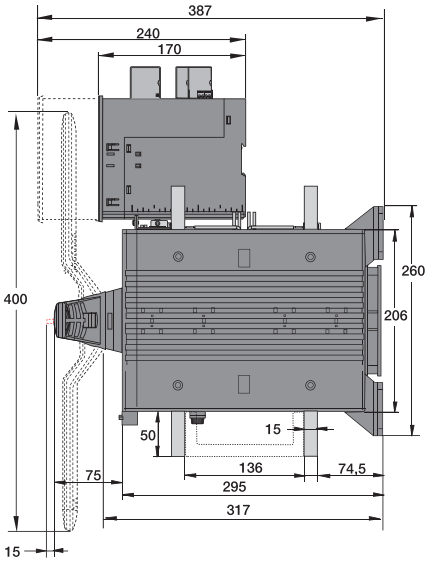
M00205/OTM630-800E_C_8D_ C

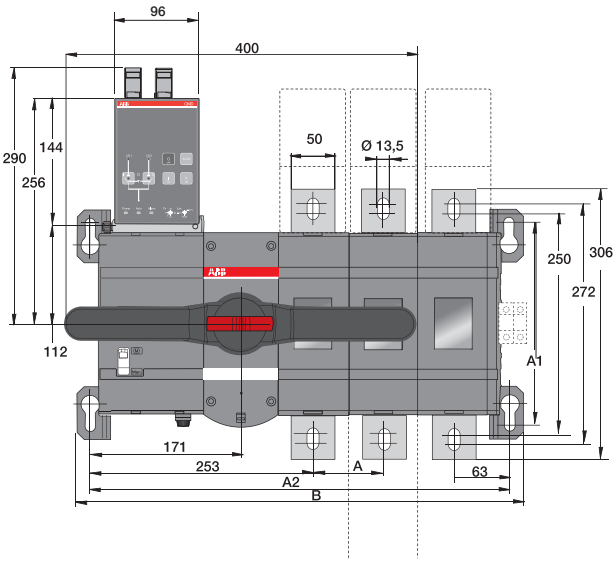
OTM630-800_C_D_

[mm]	E2	E3	E4
A	65	65	65
A1	180	180	180
A2	325	390	455
B	346	411	476

Dimension drawings
Automatic transfer switches

OTM1000...1250E_C2D_, OTM1000...1250E_C3D_



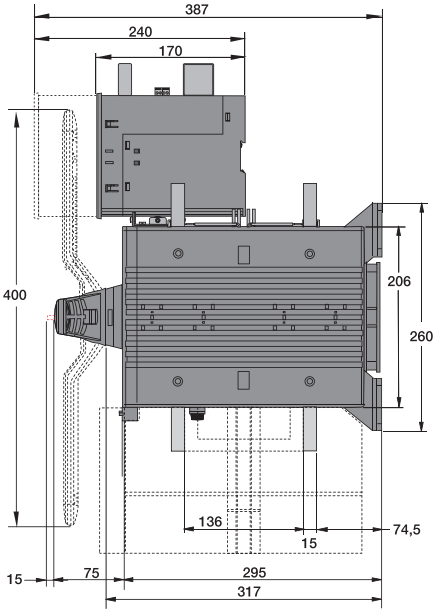


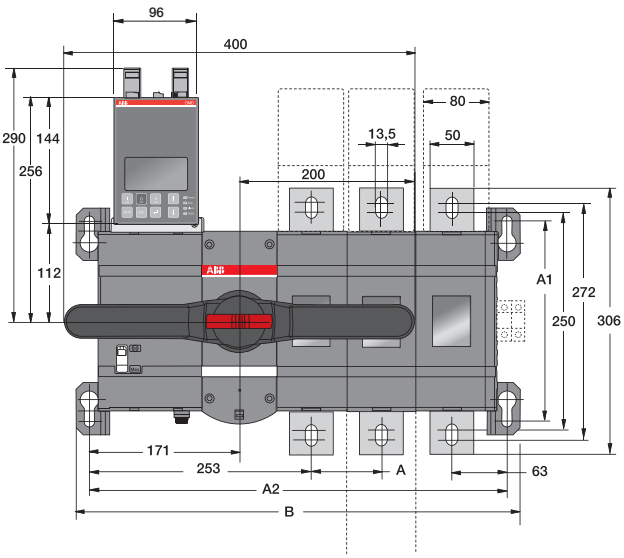
M00262/OTM1000_1250E2_4C2 B

OTM1000-1250E_C_D

[mm]	E2	E3	E4
A	80	80	80
A1	230	230	230
A2	396	476	556
B	426	506	586

OTM1000...1250E_C_8D





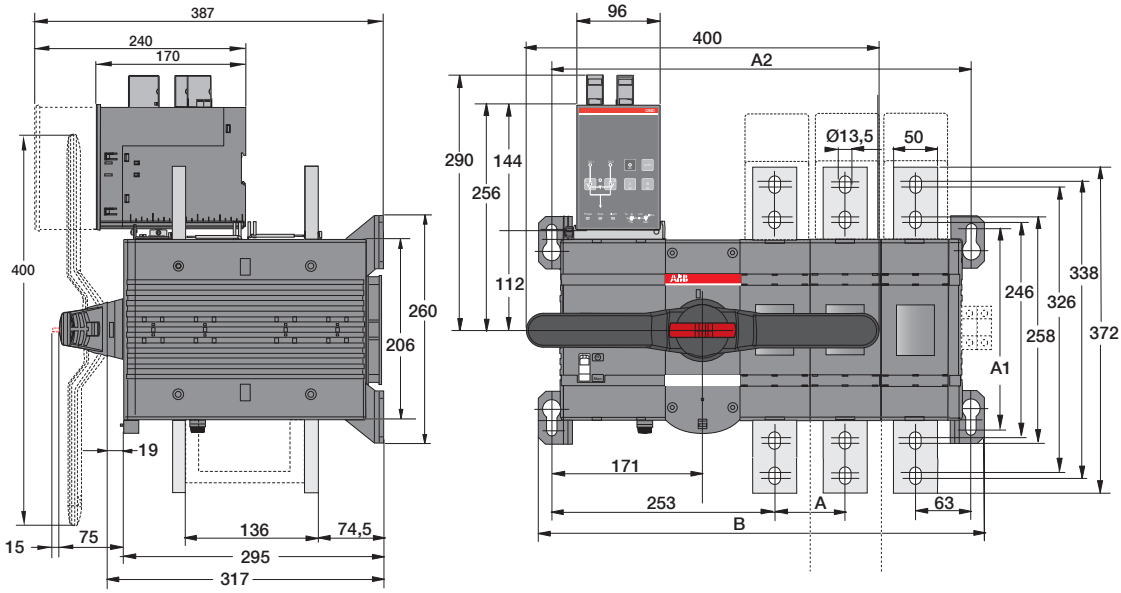
M00264/OTM1000_1250E2_4C8 B

OTM1000-1250E_C_D

[mm]	E2	E3	E4
A	80	80	80
A1	230	230	230
A2	396	476	556
B	426	506	586

Dimension drawings
Automatic transfer switches

OTM1600E_C2D_, OTM1600E_C3D_

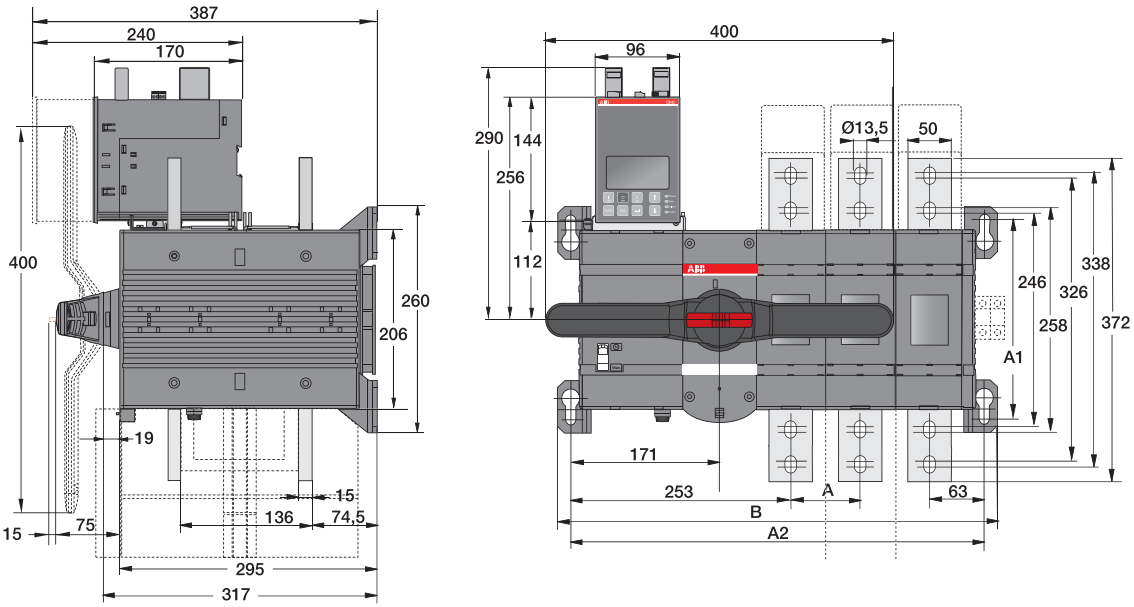


M00268/OTM1600E2-4C2D_ C

OTM1600_C_D_

[mm]	E2	E3	E4
A	80	80	80
A1	230	230	230
A2	396	476	556
B	426	506	586

OTM1600E_C8D_



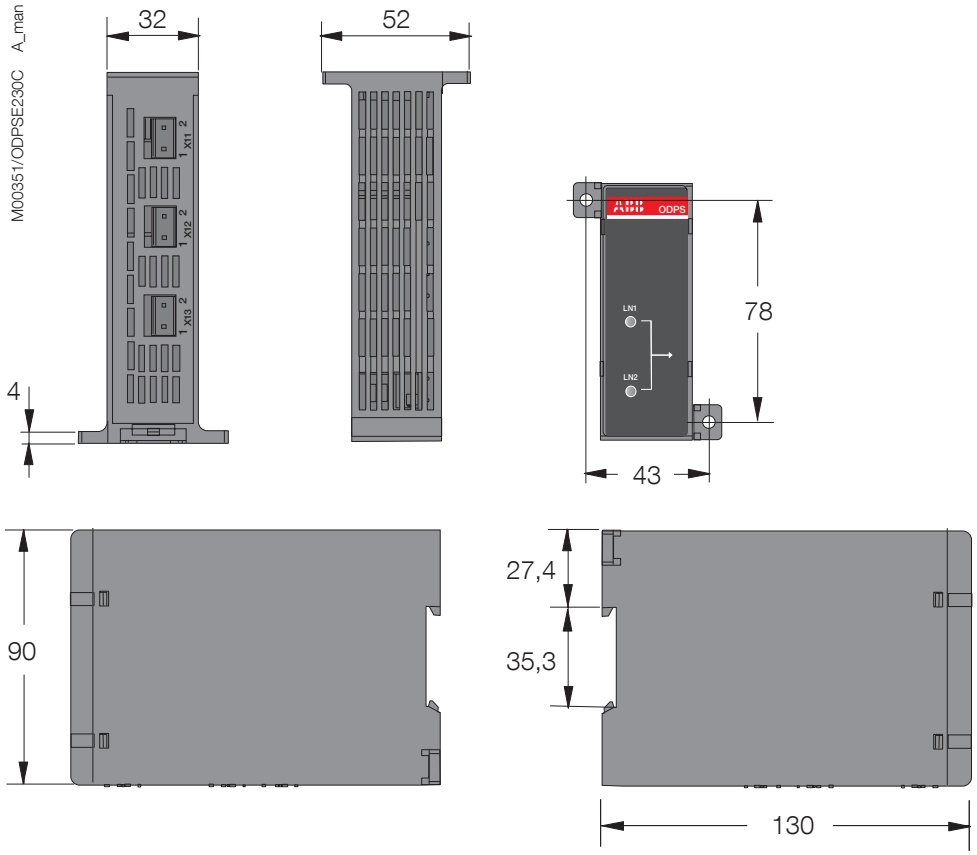
M00269/OTM1600E2_4C8_ B

OTM1600E_C_D

[mm]	E2	E3	E4
A	80	80	80
A1	230	230	230
A2	396	476	556
B	426	506	586

Dimension drawings
Automatic control units and dual power source

ODPSE230C



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Catalogue OTC2GB 12-07, 1SCC303001B0201

Producted by A&V Insinöörit Oy / Tekninen viestintä, Vaasa, Finland

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