04

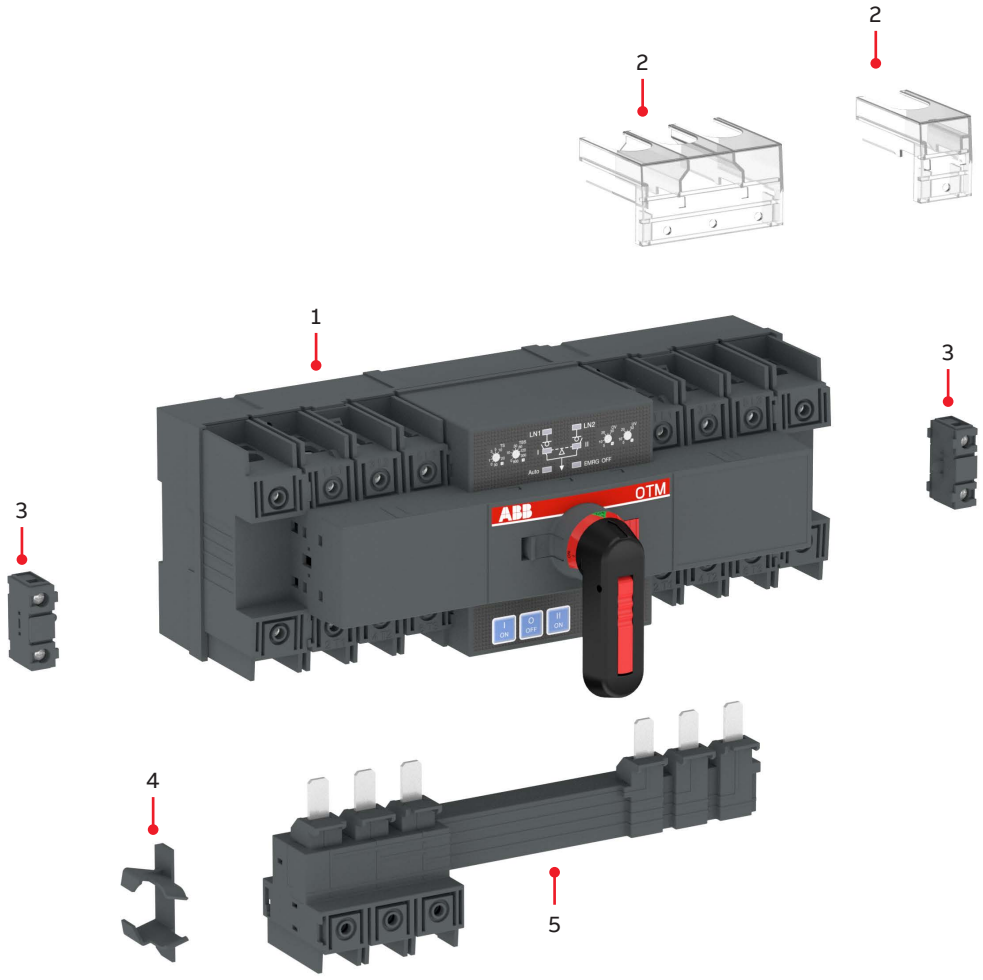
Compact ATS

Compact ATS

Automatic transfer switches

Compact ATS

Compact without compromise



Motorized change-over switch accessory guide

1. Compact ATS
2. Terminal shroud
3. Auxiliary contact
4. Storage clip
5. Bridging bar

To learn how to install the key accessories, watch the video

Compact ATS – Range and installation of accessories

Please note that not all listed accessories are automatically included in your order.
See next page for recommendations.

Compact ATS

Compact without compromise

The new Compact ATS by ABB is just that – It's a compact, economical and innovative all-in-one solution that delivers all the safety and performance you would expect from a product supplying your most valuable assets. An automatic transfer switch does not need to be complex and difficult to use. Compared to conventional solutions, the ABB Compact ATS offers 100% easier and simpler operation in a 40% more compact package.

OTM_C20D, for Network/Network applications.

The Compact ATS is an ideal device for securing the availability of stand-by power in a wide variety of residential, commercial, industrial and agricultural structures. The IEC 60947-6-1 tested devices fulfil the requirements of Part 6-1, making them multiple function apparatus. ABB Compact ATS is a safe and approved solution for any application where a reliable and complete source transfer device is required.

To learn how Compact ATS works, watch the video

Compact ATS – Operation and functionality

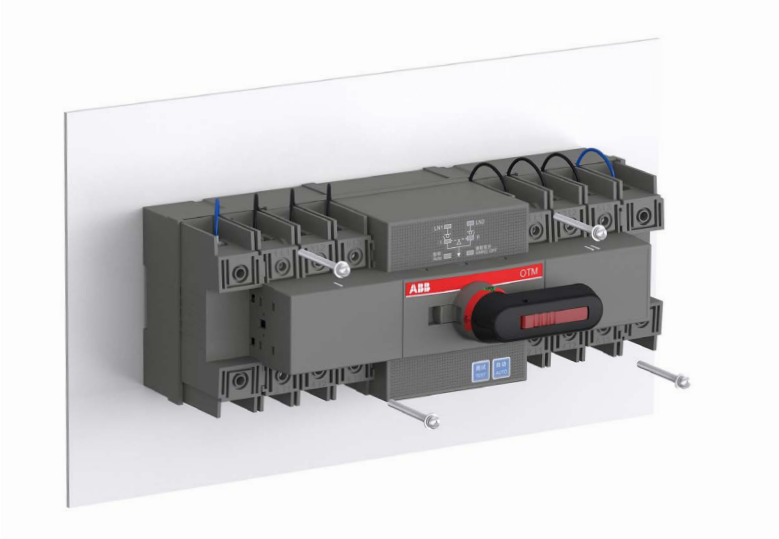
OTM_C21D, for Network/Network and Network/Genset applications.

Compact ATS

Compact without compromise

DIN- rail mounting

Easy manual operation with the handle in case of emergency



Base mounting with screws

Safety and protection
All current-carrying parts of the device are fully enclosed without exposed wiring, providing protection against direct contact. In case of an emergency or testing event, an external, easily accessible manual handle provides a safe and easy (electrical or non-electrical) source transfer.

Space saving
The device has been designed to be extremely compact and fully enclosed. Compared to a conventional solution, the Compact ATS takes up approximately 40% less cabinet space. The all-in-one design means that no additional accessories are needed. You don't even need an extra external power source.

Affordable range
Affordability has been one of the key objectives for this device. The available functionalities have been carefully selected to meet market requirements without added niche features that would elevate price. It is simple, reliable and functional.

Ordering information

OTM_C_D products overview

Fixed version

OTM_C20D

For Network/Network application

Fixed version with pre-defined delay times and voltage thresholds

Number of poles	Rated current A	Rated voltage V	Voltage sensing	Type	Ordering code	Weight kg
2	63	230:220-240	Top in	OTM63F2C20D230C	1SCA151421R1001	1.75
2	125	230:220-240	Top in	OTM125F2C20D230C	1SCA151417R1001	1.75
3	63	400:380-415	Top in	OTM63F3C20D400C	1SCA151423R1001	1.75
3	125	400:380-415	Top in	OTM125F3C20D400C	1SCA151419R1001	1.75
4	40	400:380-415	Top in	OTM40F4C20D400C	1SCA151252R1001	2.00
4	63	400:380-415	Top in	OTM63F4C20D400C	1SCA151254R1001	2.00
4	125	400:380-415	Top in	OTM125F4C20D400C	1SCA151250R1001	2.00

Adjustable version

OTM_C21D

For Network/Network and Network/Genset applications

Adjustable version with configurable transfer and back-switching delays

Adjustable over and under-voltage thresholds

Number of poles	Rated current A	Rated voltage V	Voltage sensing	Type	Ordering code	Weight kg
2	63	230:220-240	Top in	OTM63F2C21D230C	1SCA151422R1001	1.75
2	125	230:220-240	Top in	OTM125F2C21D230C	1SCA151418R1001	1.75
3	63	400:380-415	Top in	OTM63F3C21D400C	1SCA151424R1001	1.75
3	125	400:380-415	Top in	OTM125F3C21D400C	1SCA151420R1001	1.75
4	40	400:380-415	Top in	OTM40F4C21D400C	1SCA151253R1001	2.00
4	63	400:380-415	Top in	OTM63F4C21D400C	1SCA151255R1001	2.00
4	125	400:380-415	Top in	OTM125F4C21D400C	1SCA151251R1001	2.00
4	40	400:380-415	Bottom in	OTM40F4CB21D400C	1SCA150580R1001	2.00
4	63	400:380-415	Bottom in	OTM63F4CB21D400C	1SCA150586R1001	2.00
4	125	400:380-415	Bottom in	OTM125F4CB21D400C	1SCA150574R1001	2.00

Ordering information
Accessories

OTVS0

Handles, direct mounting

Plastic I - O - II handle.

Suitable for switches	Colour	Installation side	Type	Order number	Units/type	Weight/ unit
					pcs	kg
OTM40…125F_CM	Black	Shaft incl.	OHB65D6CM	1SCA022807R9430	1	0.12

OA1G01
OA7G10

Handle storage clip

The handle can be stored in the handle storage clip OTVS0. The handle storage clip can be fixed to a panel frame using the included adhesive tape.

Suitable for switches	Type	Order number	Units/type	Weight/ unit
			pcs	kg
OTM40…125F_CM	OTVS0	1SCA117524R1001	1	0.02

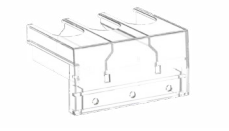
OA1G10
OA8G01

Auxiliary contacts

Snap-on mounting to the switch, IP 20, max. 2 blocks/ side. I_{th} = 16 A, suitable for cable cross sections max. 2 x 2.5 mm^2. Simultaneous action with the main contacts. The type and ordering number is for one piece.

Suitable for switches	Contact function	Installation side	Type	Order number	Units/type	Weight/ unit
					pcs	kg
OTM40...125F_CM	1NO	Right	OA1G10	1SCA022353R4970	1	0.03
OTM40...125F_CM	1NC	Right	OA8G01	1SCA022744R2240	1	0.03
OTM40...125F_CM	1NO	Left	OA7G10	1SCA022673R1140	1	0.03
OTM40...125F_CM	1NC	Left	OA1G01	1SCA022353R4890	1	0.03

Ordering information
Accessories


OTS_T3


OTS_T1


OZXT1


OZXT2...3


OZXT6


OMZC_

Terminal shrouds

Transparent plastic, snap-on mounting to the switches, IP20. The full shrouding of a 3-pole change-over switch is achieved with four 3-pole shrouds.*

Suitable for switches	Type	Order number	Units/type	Weight/ unit
			pcs	kg
For three pole switches				
OTM40...125F_CM	OTS125T3	1SCA022379R9680	1	0.03
For fourth pole				
OTPS60FP, OTPS125FP	OTS125T1	1SCA022379R9760	1	0.03

Terminal clamp sets

Suitable for switches	Contact function	Type	Order number	Units/type	Weight/ unit
				pcs	kg
Terminal clamp sets for Al- and Cu-cables insulated versions					
OTM40...125F_CM	16...50 Al / 2.5...50 Cu	OZXT1	1SCA022469R6310	3	0.06
OTM63...125F_CM	16...120 Al/Cu	OZXT2	1SCA022620R7200	3	0.21
OTM63...125F_CM	2x(16...50) Al/Cu	OZXT3	1SCA022639R0720	3	0.21
Including 0.75...2.5 mm2 voltage sensing connection. Voltage sensing wires are not included in the delivery					
OTM40...125F_CM	16...50 Al/2.5...50 Cu	OZXT6	1SCA122537R1001	3	0.06
Terminal clamp sets for Al- and Cu-cables					
OTM40...125F_CM	10...70 Al/Cu	OZXL1	1SCA022439R6770	3	0.14

Parallel connection kits

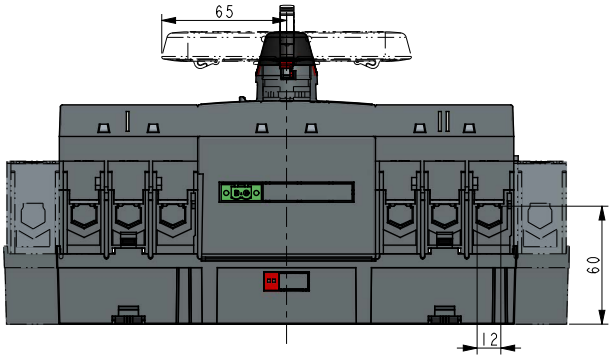
Finger protected connection bars for parallel connection of the upper or lower terminals. The bars accept additional cables, the maximum size is stated below.

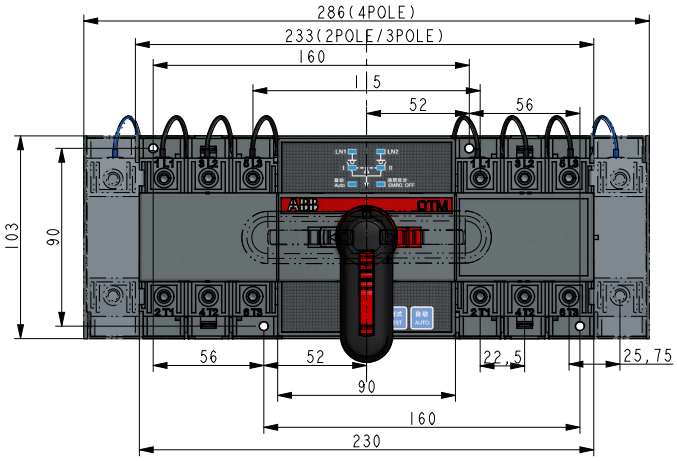
Suitable for switches	Cable crosssection	Type	Order number	Units/type	Weight/ unit
	mm^2			pcs	kg
OTM40F3CM_	2.5...25/2x2.5...16	OMZC003	1SCA121324R1001	1	0.5
OTM40F4CM_	2.5...25/2x2.5...16	OMZC004	1SCA121325R1001	1	0.65
OTM40…125F3CM_	10...70	OMZC03	1SCA117037R1001	1	0.5
OTM40…125F4CM_	10...70	OMZC04	1SCA117038R1001	1	0.65

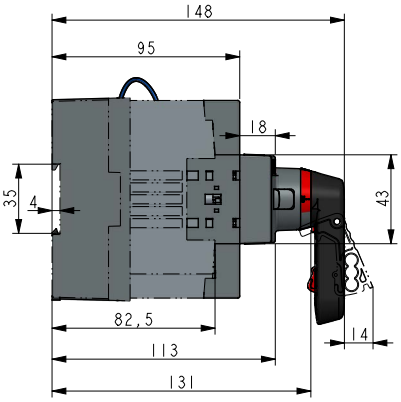
* Terminal shrouds can also be mounted on parallel connection kits.
Parallel connection kit cannot be used with 2 pole devices

Compact ATS

Dimensional drawings







Technical data

Compact automatic transfer switches

Automatic transfer switches functionality

OTM_C_D products overview	OTM_C20D_	OTM_C21D_
Features		
Rated operational voltage U_e	154 V AC - 480 V AC +/- 20% + N	
Rated frequency	50 / 60 Hz +/- 10%	
Voltage sensing precision	5%	
Frequency sensing precision	1%	
Rated impulse withstand voltage, U_{imp}	6 kV	
Overvoltage category	III	
Pollution degree	2	
Protection rating for the front panel	IP20	
Operating temperature	– 20...+ 60 °C	
Transportation and storage temperature	– 25...+ 80 °C	
Altitude	Max. 2000m	
Humidity With condensation	5 %...98 %	
Humidity Without condensation	5 %...90 %	
Operation Types		
Manual operation with handle	x	x
Local operation with front panel keypad		x
Automatic transfer switching equipment (ATSE)	x	x
Applications		
Transfer between two Transformers	x	x
Transfer between a Transformers and a generator		x
Operation modes		
Automatic transfer and back-switching operation	x	x
Automatic transfer and manual back-switching operation	x	x
Source failure detections		
No voltage	x	x
Undervoltage	Fixed 0.7U_e	0.7-0.95 U_e
Overvoltage	Fixed 1.3U_e	1.05-1.3 U_e
Phase missing	x	x
Voltage unbalance		x
Invalid frequency		x
Configuration		
By DIP switches	x	x
By rotary switches		x
Two power status display	x	x
Two switches status display	x	x
Auto status display	x	x
Alarm display	x	x

Technical data

Compact automatic transfer switches

Automatic transfer switches functionality

OTM_C_D products overview	OTM_C20D_	OTM_C21D_
Time delays		
Total transfer time 1->0->2	2 - 2,5s	2 - 2,5s
OFF time during transfer cycle	0,5 - 0,7s	0,5 - 0,7s
Delay on transfer[3)]		0-30s
Back-switching delay		0-900s
Generator stop delay		30s,400s
Signals input and output		
Emergency Off with 24VDC signal input	x	x
Test signal input		x
Switch position signal	With Auxiliary contacts	Without Auxiliary contact
Alarm output signal		x

[3)] Overvoltage and undervoltage conditions

Technical data

Compact automatic transfer switches OTM40...125_

Compact automatic transfer switches

Data according to IEC 60947-3				Switch size		
				OTM40_	OTM63_	OTM125_
Rated insulation voltage and rated operational voltage AC20/DC20		Pollution degree 3	V	800	800	800
Dielectric strength		50 Hz 1min.	kV	6	6	6
Rated impulse withstand voltage			kV	8	8	8
Rated thermal current and rated operational current AC20/DC20	/ ambient 40°C	In open air	A	40	63	125
	/ ambient 40°C	In enclosure	A	40	63	125
	/ ambient 60°C	In enclosure	A	32	50	100
..with minimum conductor cross section		Cu	mm^2	10	16	50
Rated operational current, AC-21A		up to 500 V	A	40	63	125
Rated operational current, AC-22A		up to 500 V	A	40	63	125
Rated operational current, AC-23A		up to 415 V	A	40	63	90
Rated operational power, AC-23A[1)]		230 V	kW	7.5	15	22
The kW-ratings are accurate for 3-phase 1500 R.P.M. standard asychronous motors		400 V	kW	18.5	30	45
		415 V	kW	18.5	30	45
		500 V	kW	22	37	45
		690 V	kW	37	37	45
Rated breaking capacity in category AC-23		up to 415 V	A	320	504	720
		500 V	A	320	480	560
		690 V	A	320	320	400
Rated conditional short-circuit current I_p (r.m.s.) and corresponding max. allowed cut-off current $\hat{i}_c$ (peak) value.	Ip (r.m.s.) 50 kA, 415 V	$\hat{i}$c (peak)	kA	16.5	16.5	16.5
	Max. OFA_ fuse size	gG/aM	A/A	125/125	125/125	125/125
	Ip (r.m.s.) 18 kA, 690 V	$\hat{i}$c (peak)	kA	11	11	11
The cut-off current $\hat{i}_c$ refers to values listed by fuse manufacturers (single phase test acc. to IEC60269).	Max. OFA_ fuse size	gG	A	125	125	125
	Ip (r.m.s.) 50 kA, 690 V	$\hat{i}$c (peak)	kA	10	10	10
	Max. OFA_ fuse size	gG/aM	A/A	63/63	63/63	63/63
Rated short-time withstand current	Icw (r.m.s.)	690 V 1s	kA	2.5	2.5	2.5
Rated short-time making capacity2)	Icm (peak)	690 V	kA	3.6	3.6	3.6
Power loss / pole	With rated current		W	1.6	2.8	6.3
Mechanical endurance	Number of oper. cycles[3)]		Cycles	10 000	10 000	10 000
Cable size	Cu-wire size suitable for terminal clamps		mm^2	2.5-25/2x2.5-16	10-70	10-70
			AWG	14-4/2x14-6	8-00	8-00
Terminal tightening torque	Counter torque required		Nm	6	6	6
Operating torque	Typical for 3-pole switches		Nm	5	5	5
Weight without accessories	3-pole switch		kg	1.75	1.75	1.75
	4-pole switch		kg	2.00	2.00	2.00

Technical data

Compact automatic transfer switches OTM40...125_

Compact automatic transfer switches

				Switch size		
Data according to IEC 60947-6-1				**OTM40_**	**OTM63_**	**OTM125_**
Class of equipment				PC	PC	PC
Rated short-time withstand current	Icw (r.m.s.)	690 V 0.1s	kA	5	5	5
Conditional short-circuit current	Icc (r.m.s.)	415 V	kA	50	50	50
Corresponding fuse rating	gG/aM fuse	415 V	A	125	125	125
Rated operational current, AC-31B		up to 415 V	A	40	63	125
Rated operational current, AC-32B		up to 415 V	A	40	63	125
Rated operational current, AC-33B		up to 415 V	A	40	63	80

[1] These values are given for guidance and may vary according to the motor manufacturer
[2] Short circuit duration > 50ms, without fuse protection
[3] Operating cycle: O - I - O - II - O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