



Breakers and Switches

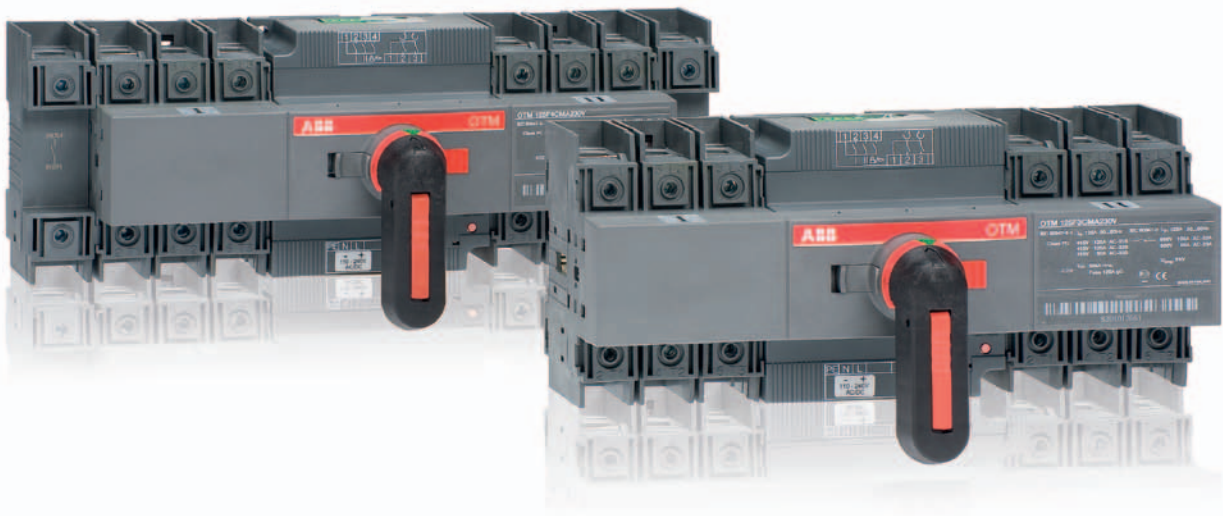
Switches

Motorized change-over switches

OTM40...125_C

OTM40...125_C

Improves your performance



Assembly made easy

- Bridging bars for quick wiring
- Tunnel terminals ensure a tight and good connection every time
- Snap on accessories are easy to install
- Mounting in any direction
- ▶ Fast and reliable installation every time

Most compact solution

- The very small footprint area of OTM allows it to be installed in confined spaces
- ▶ Reduced size means savings in costs

Performance that meets your needs

- Tested according to IEC 60947-3 and IEC 60947-6-1
- Full ratings according to utilization categories AC22A/32B which are the typical categories in GenSet applications
- A wide supply voltage range provides enhanced logistics and effortless design work
- 3- and 4-pole switches as standard
- ▶ Designed for your application

Safe to use

- OTM is not only a transfer device, it is also an isolator providing safe maintenance work
- Reliable position indication is always guaranteed
- Finger-safe construction prevents contact with live parts
- Mechanical and electrical locking options - safety is always considered
- ▶ Safe and reliable operation and maintenance

Effortless assembly, safety features, optimized performance and small size enable OTM40...125_C motorized change-over switches to improve the performance of your application!

ABB offers a wide range of components for transfer and critical power applications. This means that all components can be sourced from one supplier.



Technical data

OTM40...125_C

Motorized change-over switches

Data according to IEC 60947-3

			Switch size
Rated insulation voltage and rated operational voltage AC20/DC20		Pollution degree 3	V
Dielectric strength		50 Hz 1min.	kV
Rated impulse withstand voltage			kV
Rated thermal current and rated operational current AC20/DC20	/ ambient 40°C	In open air	A
	/ ambient 40°C	In enclosure	A
	/ ambient 60°C	In enclosure	A
..with minimum conductor cross section		Cu	mm ²
Rated operational current, AC-21A		up to 500 V	A
		690 V	A
Rated operational current, AC-22A		up to 500 V	A
		690 V	A
Rated operational current, AC-23A		up to 415 V	A
		500 V	A
		690 V	A
Rated operational current / poles in series, DC-21A		up to 48 V	A
		110 V	A
		220 V	A
Rated operational current / poles in series, DC-22A		up to 48 V	A
		110 V	A
		220 V	A
Rated operational current / poles in series, DC-23A		up to 48 V	A
		110 V	A
		220 V	A
Rated operational power, AC-23A ¹⁾		230 V	kW
The kW-ratings are accurate for 3-phase 1500		400 V	kW
R.P.M. standard asynchronous motors		415 V	kW
		500 V	kW
		690 V	kW
Rated breaking capacity in category AC-23		up to 415 V	A
		500 V	A
		690 V	A
Rated conditional short-circuit current I_p (r.m.s.) and corresponding max. allowed cut-off current \hat{I}_c (peak) value. The cut-off current \hat{I}_c refers to values listed by fuse manufacturers (single phase test acc. to IEC60269).	I_p (r.m.s.) 50 kA, 415 V	\hat{I}_c (peak)	kA
	Max. OFA_fuse size	gG/aM	A/A
	I_p (r.m.s.) 18 kA, 690 V	\hat{I}_c (peak)	kA
	Max. OFA_fuse size	gG	A
	I_p (r.m.s.) 50 kA, 690 V	\hat{I}_c (peak)	kA
	Max. OFA_fuse size	gG/aM	A/A
Rated short-time withstand current	I_{DSE} (r.m.s.)	690 V 1s	kA
Rated short-time making capacity ²⁾	I_{cm} (peak)	690 V	kA
Power loss / pole	With rated current		W
Mechanical endurance	Number of oper. cycles ³⁾		Cycles
Mechanical endurance / switch	Number of operations		Oper.
Cable size	Cu-wire size suitable for terminal clamps		mm ² AWG
Terminal tightening torque	Counter torque required		Nm
Operating torque	Typical for 3-pole switches		Nm
Weight without accessories	3-pole switch		kg
	4-pole switch		kg

Data according to IEC 60947-6-1

Class of equipment			
Rated short-time withstand current	I_{DSE} (r.m.s.)	690 V 0.1s	kA
Conditional short-circuit current	I_{SC} (r.m.s.)	415 V	kA
Corresponding fuse rating	gG/aM fuse	415 V	A
Rated operational current, AC-31B		up to 415 V	A
Rated operational current, AC-32B		up to 415 V	A
Rated operational current, AC-33B		up to 415 V	A

¹⁾ These values are given for guidance and may vary acc. to the motor manufacturer.

²⁾ Short circuit duration >50ms, without fuse protection

³⁾ Operating cycle: O - I - O - II - O

OTM40_	OTM63_	OTM80_	OTM100_	OTM125_
800	800	800	800	800
6	6	6	6	6
8	8	8	8	8
40	63	80	115	125
40	63	80	115	125
32	50	63	80	100
10	16	25	35	50
40	63	80	100	125
40	63	80	100	125
40	63	80	100	125
40	63	80	100	125
40	63	80	80	90
40	60	60	60	70
40	40	40	40	50
40/1	63/1	80/1	100/1	125/1
40/2	63/2	80/2	100/2	125/2
40/4	63/4	80/4	100/4	100/4
40/1	63/1	80/1	100/1	125/1
40/2	63/2	80/2	100/2	125/2
40/4	63/4	80/4	80/4	80/4
40/1	63/1	80/1	100/1	125/1
40/2	63/2	80/2	100/2	125/2
40/4	63/4	63/4	63/4	63/4
7.5	15	22	22	22
18.5	30	37	37	45
18.5	30	37	37	45
22	37	37	37	45
37	37	37	37	45
320	504	640	640	720
320	480	480	480	560
320	320	320	320	400
16.5	16.5	16.5	16.5	16.5
125/125	125/125	125/125	125/125	125/125
11	11	11	11	11
125	125	125	125	125
10	10	10	10	10
63/63	63/63	63/63	63/63	63/63
2.5	2.5	2.5	2.5	2.5
3.6	3.6	3.6	3.6	3.6
1.6	2.8	3.5	4.0	6.3
10 000	10 000	10 000	10 000	10 000
20 000	20 000	20 000	20 000	20 000
2.5-25/2x2.5-16	10-70	10-70	10-70	10-70
14-4/2x14-6	8-00	8-00	8-00	8-00
6	6	6	6	6
5	5	5	5	5
1.37	1.37	1.37	1.37	1.37
1.60	1.60	1.60	1.60	1.60
PC	PC	PC	PC	PC
5	5	5	5	5
50	50	50	50	50
125	125	125	125	125
40	63	80	100	125
40	63	80	100	125
40	63	80	80	80

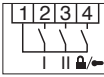
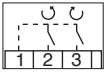
Technical data, motor operator

OTM40...125_C

Data for motor operator

according to IEC 60947		Switch size	40...125
Rated operational voltage U_e		Pollution degree 3 50/60 Hz	V AC/DC V DC 110...240 24
Operating voltage range			0.85...1.1 x U_e
Operating time ¹⁾	90° I-0, 0-I, 0-II, II-0	110...240 V AC/DC 24 V DC	s s 0.5...1.0 0.6...1.3
Operating transfer time ¹⁾	180° I-II, II-I	110...240 V AC/DC 24 V DC	s s 1.2...1.5 1.4...2.1
OFF -time when operating I-II or II-I ¹⁾	180° I-II, II-I	110...240 V AC/DC 24 V DC	s s 0.4...0.8 0.6...1.0
Nominal current I_n ¹⁾		110...240 V AC/DC 24 V DC	A A 0.2...0.5 0.6
Current inrush ¹⁾		110...240 V AC/DC 24 V DC	A A 1.5...3.0 3.6
Operating rate	Cycle 0-I-0-II-0 Max. continuous Max. short-time ≤ 10 cycles		cycles/min cycles/min 1 10
Overvoltage category			III
Rated impulse withstand voltage U_{imp}			kV 4
Dielectric strength		50 Hz 1 min.	kV 1.5
Impulse command		Min. impulse duration	ms 100

Terminals

Voltage supply wiring for U_e				PE - N - L
Cross section		Solid/stranded	mm ²	1.5 - 2.5
Short-circuit protection device		Max. MCB	A	16
Control terminal				C - II - I - 0
Cross section		Solid/stranded	mm ²	1.5...2.5
Maximum cable length			m	100
Terminal for state information		Solid/stranded	mm ²	1.5
Also used with the OMD automatic control unit		Rating	A	3 AC-1/250V
Common, voltage supply	1			
Position of switch I	2			
Position of switch II	3			
Handle attached or motor operator locked	4			
Short-circuit protection device		Max. MCB	A	C2
Control terminal for OMD automatic control unit		Solid/stranded	mm ²	1.5...2.5
				
Common, voltage supply from motor operator	1		V DC	24
Close switch I or open switch II	2		V DC mW	24 500
Close switch II or open switch I	3		V DC mW	24 500
Operating temperature			°C	-25...+55
Transportation and storage temperature			°C	-40...+70
Max. altitude			m	2 000
Protection degree (front panel)				IP20

¹⁾ Under nominal conditions

Ordering information

OTM40...125_C



OTM40...125F3CM_



OTM40...125F4CM_

Change-over switches, motor operation, I-O-II -operation, open transition

Including a handle for manual operation, a storage clip for the handle and female connectors for control circuits.

No. of poles	Rated current AC-21A, AC-22A ≤ 415 V I [A]	Rated power 400V S[kVA]	Rated current AC-31B/ AC-33B 415 V I [A]	Type	Order number	Units/ type [pcs]	Weight/ unit [kg]
Motor voltage U_e 110...240 V AC/DC							
3	40	27	40/40	OTM40F3CMA230V	1SCA120096R1001	1	1.64
4	40	27	40/40	OTM40F4CMA230V	1SCA120102R1001	1	1.86
3	63	43	63/63	OTM63F3CMA230V	1SCA120095R1001	1	1.64
4	63	43	63/63	OTM63F4CMA230V	1SCA120101R1001	1	1.86
3	80	55	80/80	OTM80F3CMA230V	1SCA120093R1001	1	1.64
4	80	55	80/80	OTM80F4CMA230V	1SCA120100R1001	1	1.86
3	100	70	100/80	OTM100F3CMA230V	1SCA120071R1001	1	1.64
4	100	70	100/80	OTM100F4CMA230V	1SCA120098R1001	1	1.86
3	125	86	125/80	OTM125F3CMA230V	1SCA120070R1001	1	1.64
4	125	86	125/80	OTM125F4CMA230V	1SCA120097R1001	1	1.86
Motor voltage U_e 24 V DC							
3	40	27	40/40	OTM40F3CMA24D	1SCA124061R1001	1	1.64
4	40	27	40/40	OTM40F4CMA24D	1SCA124063R1001	1	1.86
3	63	43	63/63	OTM63F3CMA24D	1SCA124060R1001	1	1.64
4	63	43	63/63	OTM63F4CMA24D	1SCA124064R1001	1	1.86
3	80	55	80/80	OTM80F3CMA24D	1SCA124059R1001	1	1.64
4	80	55	80/80	OTM80F4CMA24D	1SCA124062R1001	1	1.86
3	100	70	100/80	OTM100F3CMA24D	1SCA124058R1001	1	1.64
4	100	70	100/80	OTM100F4CMA24D	1SCA124066R1001	1	1.86
3	125	86	125/80	OTM125F3CMA24D	1SCA124057R1001	1	1.64
4	125	86	125/80	OTM125F4CMA24D	1SCA124065R1001	1	1.86

Handles included as standard, cable cross section

Suitable for switches	Cable cross section [mm ²]	Handle
OTM40F_CM	2.5...25 or 2 x 2.5...16	OTV65D6CM
OTM63...125F_CM	10...70	OTV65D6CM

Ordering information

Accessories



S07102

OHB65D6CM

Handles, direct mounting

Plastic I - O - II handle.

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



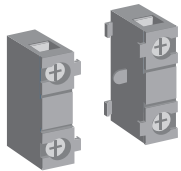
S07103

OTVS0

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 [pcs]	Weight/ unit [kg]
OTM40...125F_CM	OTVS0	1SCA117524R1001	1	0.02



S0261A

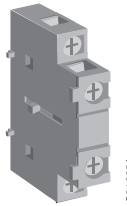
OA1_8_7_

Auxiliary contacts

Snap-on mounting to the switch, IP 20, max. 2 blocks/ side. $I_{th} = 16$ A, suitable for cable cross sections max. 2×2.5 mm². 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	Delivery batch [pcs]	Weight/ unit [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
OTM40...125F3CM	1NO+1NC	Either	OA2G11 ¹⁾	1SCA022379R8100	1	0.04

¹⁾ Not mountable on 4-pole change-over switches.



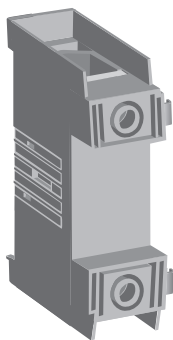
S01025A

OA2G11

4th poles

Snap-on mounting to the left or right side of the switches, IP20. Simultaneous operation with power poles. The type and ordering number is for one piece.

Suitable for switches	Rated current/ up to 415V AC-21A/AC-22A /AC-23A I[A]	Type	Order number	Delivery batch [pcs]	Weight/ unit [kg]
OTM40F_CM	40/40/40	OTPS60FP	1SCA111009R1001	1	0.14
OTM63...125F_CM	125/125/90	OTPS125FP	1SCA105099R1001	1	0.14

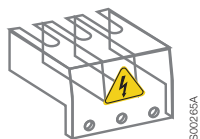


S01342A

OTPS_

Ordering information

Accessories



OTS125T3



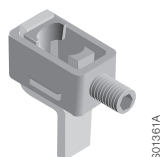
OTS125T1



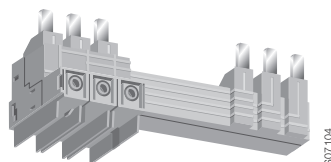
OZXT1



OZXT2, OZXT3



OZXL1



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 [pcs]	Weight/ unit [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	Cable cross section [mm ²]	Type	Order number	Units/ type [pcs]	Weight/ unit [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

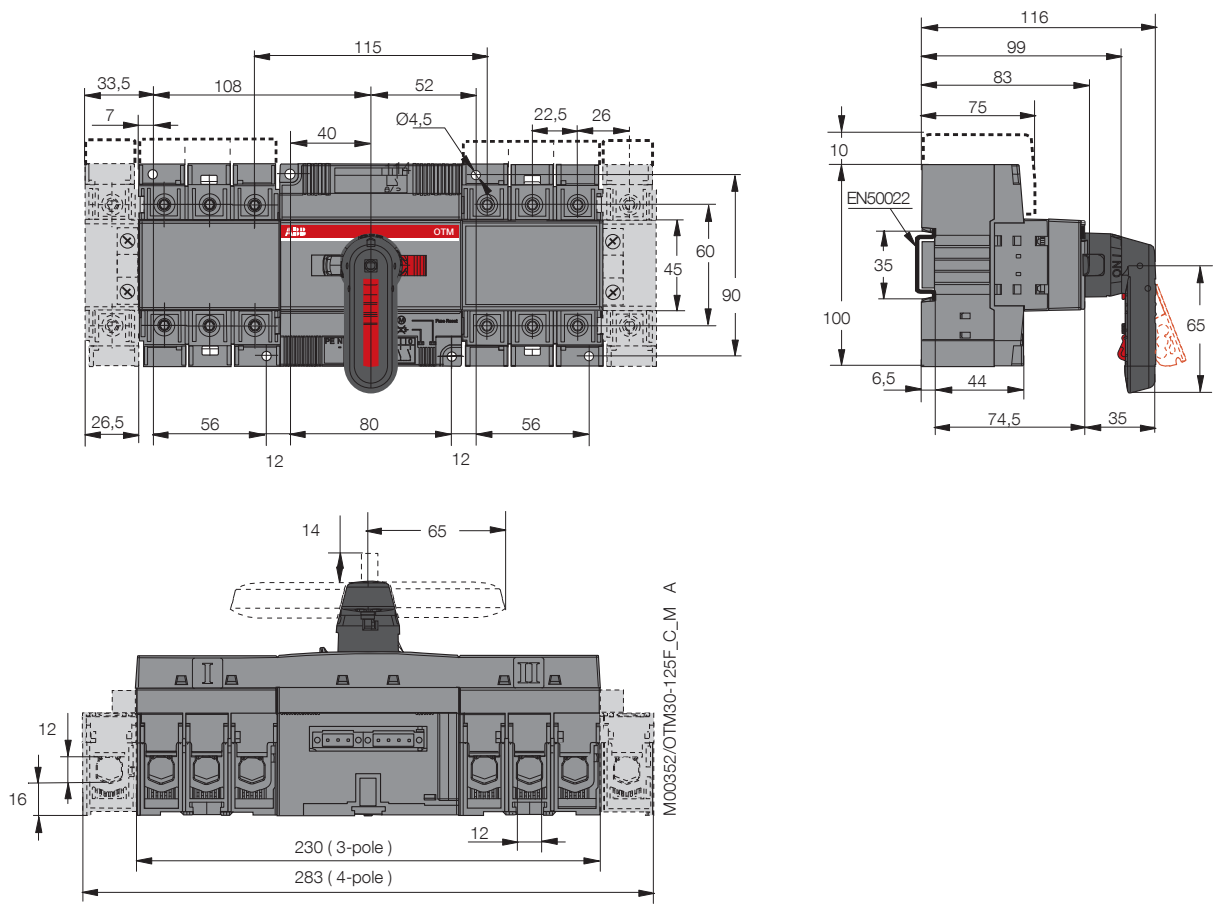
Parallel connection kits

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 cross section [mm ²]	Type	Order number	Units/ type [pcs]	Weight/ unit [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.

Dimension drawings OTM40...125_C



Contact us

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> Low Voltage Products and Systems

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