

Manual switch-disconnectors OT16...125, IEC

Technical data

Technical data according to IEC 60947-3			Switch type							
			OT16F	OT25F	OT40F	OT63F	OT80F	OT100F	OT125F	
Rated insulation voltage and rated operational voltage AC20/DC20	Pollution degree 3	V	750	750	750	750	750	750	750	
Dielectric strength	50 Hz 1min.	kV	6	6	6	6	6	6	6	
Rated impulse withstand voltage		kV	8	8	8	8	8	8	8	
Rated thermal current and rated operational current AC20/DC20	Ambient 40°C ²⁾	In open air	A	25	32	40	63	80	115	125
	Ambient 40°C ²⁾	In enclosure	A	25	32	40	63	80	115	125
	Ambient 60°C	In enclosure	A	20	25	32	50	63	80	100
...with minimum conductor cross section	Cu	mm ²	4	6	10	16	25	35	50	
Rated operational current, AC-21A	up to 415 V	A	16	25	40	63	80	100	125	
	440...690 V	A	16	25	40	63	80	100	125	
Rated operational current, AC-22A	up to 415 V	A	16	25	40	63	80	100	125	
	440...690 V	A	16	25	40	63	80	100	125	
Rated operational current, AC-23A	up to 415 V	A	16	20	23	63	75	80	90	
	440 V	A	16	20	23	63	65	65	78	
	500 V	A	16	20	23	45	58	60	70	
	690 V	A	10	11	12	20	20	40	50	
Rated operational current / poles in series, DC-21A	24...48 V ¹⁾	A	16/1	25/1	32/1	63/1	80/1	100/1	125/1	
	110 V	A	16/2	25/2	32/2	63/2	80/2	100/2	125/2	
	220 V	A	16/3	25/3	32/3	63/4	80/4	100/4	125/4	
	440 V	A	16/4	16/4	16/4	16/4	16/4			
	500 V	A	16/4	16/4	16/4	16/4	16/4			
	750 V	A	16/8	25/8	32/8					
Rated operational current / poles in series, DC-22A	24...48 V ¹⁾	A	16/1	25/1	32/1	63/1	80/1	100/1	125/1	
	110 V	A	16/2	25/2	32/2	63/2	80/2	100/2	125/2	
	220 V	A	16/3	25/3	32/4	45/4	45/4	63/4	80/4	
	440 V	A	10/4	10/4	10/4	10/4	10/4			
	750 V	A	16/8	25/8	25/8					
Rated operational current / poles in series, DC-23A	24...48 V ¹⁾	A	16/1	25/1	32/1	63/1	80/1	100/1	125/1	
	110 V	A	16/2	25/2	32/2	63/2	80/2	100/2	125/2	
	220 V	A	16/4	25/4	32/4	45/4	45/4	63/4	63/4	
	440 V	A	10/4	10/4	10/4	10/4	10/4			
	750 V	A	16/8	16/8	16/8					
Rated operational power, AC-23A (These values are given for guidance and may vary acc. to the motor manufacturer)	220...240 V	kW	3	4	5.5	11	22	22	22	
	400...415 V	kW	7.5	9	11	22	37	37	45	
	440...500 V	kW	7.5	9	11	22	37	37	45	
	690 V	kW	7.5	9	11	15	18.5	37	45	
Rated breaking capacity, AC-23A	up to 415 V	A	128	160	184	360	640	640	720	
	440 V	A	128	160	184	360	448	520	624	
	500 V	A	128	160	184	360	464	480	560	
	690 V	A	80	88	96	160	160	320	400	
	750 V	A	64/8	64/8	64/8					
Rated breaking capacity/ poles in series, DC-23A	24...48 V	A	64/1	100/1	128/1	180/1	252/1	400/1	500/1	
	220 V	A	64/3	100/4	128/4	180/4	180/4	252/4	252/4	
	110 V	A	64/2	100/2	128/2	180/2	252/2	400/2	500/2	
	440 V	A	40/4	40/4	40/4	40/4	40/4			
	750 V	A	64/8	64/8	64/8					
Rated conditional short-circuit current I_{cc} (r.m.s.) and corresponding max. allowed cut-off current \hat{i}_c . The cut-off current \hat{i}_c refers to values listed by fuse manufacturers (single phase test acc. to IEC60269)	I_{cc} (r.m.s.)	50 kA	kA	6.5	6.5	6.5	13	13	16.5	16.5
	Max. OFA_fuse size gG/aM	≤ 415 V	A	40/32	40/32	40/32	100/80	100/80	125/125	125/125
	I_{cc} (r.m.s.)	100 kA	kA				17	17		
	Max. OFA_fuse size gG/aM	≤ 500 V	A				100/80	100/80		
	I_{cc} (r.m.s.)	10 kA	kA						8.2	8.2
	Max. OFA_fuse size gG/aM	≤ 690 V	A						125/100	125/100
Rated short-time withstand current	r.m.s. -value I_{sw}	690 V, 1 s	kA	0.5	0.5	0.5	1	1.5	2.5	2.5
	Peak value I_{sm}	690 V/500 V	kA	0.71	0.71	0.71	1.4	2.1	3.6	3.6
Rated capacitor power (the capacitor ratings are limited by the fuse link.)		400...415 V	kVAR	6.5	10	15	25	30	40	50
Power loss/pole	At rated operational current	W	0.3	0.6	1.6	2.8	4.5	4.0	6.3	
Mechanical endurance	Divide by two for operation cycles	Oper.	20 000	20 000	20 000	20 000	20 000	20 000	20 000	
Weight without accessories	3-pole	kg	0.11	0.11	0.11	0.27	0.27	0.36	0.36	
	4-pole	kg	0.15	0.15	0.15	0.35	0.35	0.50	0.50	
Cable size	Cu-wire size suitable	mm ²	0.75...10	0.75...10	0.75...10	1.5...35	1.5...35	10...70	10...70	
	for terminal clamps	AWG	18-8	18-8	18-8	14-4	14-4	8-00	8-00	
Terminal tightening torque	Counter torque required	Nm	0.8	0.8	0.8	2	2	6	6	
Operating torque	3-pole switch-disconnector	Nm	1	1	1	1.2	1.2	2	2	

1) Below 48 V, two poles in parallel up to OT80 are recommended particularly in polluted atmosphere.

2) Acc. to IEC 60947-1, § 6.1.1.

Manual switch-disconnectors OT16...160

Type designation key

Type codes

Understanding the type code keys below will help you quickly identify the correct product for your needs. The simple naming system allows you to see the products type, Ampere rating, standard classification and number of poles, all in one glance.

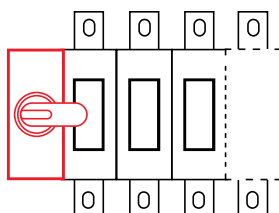
Explanation of the types OT16..160

OT	16	F	4	N2
1	2	3	4	5
1 Brand				
OT:	ABB switch-disconnector brand			
2 Switch size				
16...160:	16...160			
3 Mounting / Construction				
F:	Base and DIN-rail mounting, front operated			
FT:	Door mounting, front operated			
G:	Base and DIN-rail mounting, front and side operated			
GT:	Door mounting, front and side operated			
FL:	Base and DIN-rail mounting, extended terminals on both sides of the switch, front operated			
FLA:	Base and DIN-rail mounting, extended terminals on top side only, front operated			
FLB:	Base and DIN-rail mounting, extended terminals on bottom side only, front operated			
M, ML:	Installation switches for 45 mm standard opening, base and DIN-rail mounting, front operated			
4 Number of poles				
3	3 poles			
4	4 poles			
6	6 poles			
8	8 poles			
03	3 poles, operating mechanism at the left end of the switch			
04	4 poles, operating mechanism at the left end of the switch			
30	3 poles, operating mechanism at the right end of the switch			
40	4 poles, operating mechanism at the right end of the switch			
5 Included accessories				
N2:	Fourth pole, simultaneous function with the main contacts			
_(blank):	no accessories included			
P:	Pistol handle + shaft			
K:	Direct mount handle (for base mounting versions only)			

Pole configuration table, OT160G

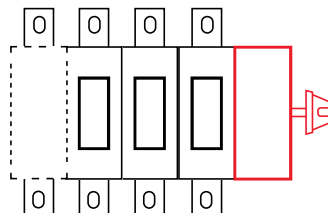
Front operated

Configuration 03, 04, 12, 22



Side operated

Configuration 30, 40 or 03, 04:



Load break switches

Switch-disconnectors OT16...125

Front operated switch-disconnectors



OT16...40F3



OT63...80F3



OT100...125F3



OT16...40FT3



OT63...80FT3



OT100...125FT3

3 Poles, base and DIN rail mounted

Included protected terminal clamps, IP20. Direct knob handle provided as standard.

Fourth pole available, mounting the OTPS_ accessory on the side of the switch - see below
Extension shaft (XP6X_) and pistol handle (OH_J6) available as an accessory.

In	Rated operational current AC22...23 – 415V	Cable cross section	Order code
A	A/A	mm ²	
16	16/16	0.75...10	OT16F3
25	25/20	0.75...10	OT25F3
40	40/23	0.75...10	OT40F3
63	63/45	1.5...35	OT63F3
80	80/75	1.5...35	OT80F3
100	100/80	10...70	OT100F3
125	125/90	10...70	OT125F3

3 Poles, door mounted

Included protected terminal clamps, IP20.

Fourth pole available, mounting the OTPS_ accessory on the side of the switch.

Compulsory selector handle (OH_S_) available as an accessory.

In	Rated operational current AC22...23 – 415V	Cable cross section	Order code
A	A/A	mm ²	
16	16/16	0.75...10	OT16FT3
25	25/20	0.75...10	OT25FT3
40	40/23	0.75...10	OT40FT3
63	63/45	1.5...35	OT63FT3
80	80/75	1.5...35	OT80FT3
100	100/80	10...70	OT100FT3
125	125/90	10...70	OT125FT3

4 pole switch ordering example

Selector handle

OT16F3	+	OHBS3AH1	+	OXS6x180	+	OTPS40FPN2	+	OTS40T3
Load break switch	+	Selector handle	+	Shaft	+	Fourth Pole	+	Shrouds

Pistol handle

OT16F3	+	OHBS3AH1	+	OXS6x180	+	OTPS40FPN2	+	OTS40T3
Load break switch	+	Pistol handle	+	Shaft	+	Fourth Pole	+	Shrouds

Door mount – Selector handle

OT16FT3	+	OHBS2PJ
Load break switch	+	Selector handle

Manual switch-disconnectors OT16...160

Ordering information



Accessory guide for OT16F...125F (base and DIN-rail mounted switch-disconnectors)

- | | |
|------------------------|---------------------------|
| 1. Switch-disconnector | 8. Shaft alignment ring |
| 2. Extended shaft | 9. Legend plate |
| 3. Terminal clamp | 10. Selector handle |
| 4. Fourth pole | 11. Handle knob |
| 5. N- and PE-terminals | 12. Pistol handle |
| 6. Auxiliary contact | 13. Conversion kit |
| 7. Terminal shroud | 14. Labelling accessories |



Please note that listed accessories are not automatically included in your order.

Load break switches

Accessories: Switch-disconnectors OT16...125



OHBS1



OHBS3



OHRS3



OHBS2AJ



OHYS2AJ

Optional handle knobs, for base and DIN rail mounted switches

Mounted directly to the switch, no shaft required. IP20.

Suitable switches	Handle description	Knob length mm	Colour	Order code
OT16...80F3 & F4	Non padlockable	31	Black	OHBS1
OT16...125F3 & F4	Padlockable on O-OFF position	40	Black	OHBS2
	Non padlockable	39	Black	OHBS3
			Red	OHRS3

Optional selector type handles, for base and DIN rail mounted switches

For shaft diameter 6mm (to be ordered separately, type OXS6X_), door drilling 22.5mm.

Indication I-O/ON-OFF.

OH_S3AH1 padlock diameter: 5...6.3mm. OH_S2AJ padlock diameter: 5...8mm.

Suitable switches	Handle description	Colour	Order code
OT16...125F_	Padlockable with 1 padlock in pos. O-OFF and door lock in pos I-ON. 45mm. IP54	Black	OHBS3AH1
		Red-Yellow	OHYS3AH1
	Padlockable with 3 padlock in pos. O-OFF and door lock in pos I-ON. 65mm. IP65	Black	OHBS2AJ
		Red-Yellow	OHYS2AJ

Compulsory selector type handles, for door mounted switches

Shaft not required. Indication I-O/ON-OFF. Padlockable with max. 3 padlocks.

Padlock diameter: 5...8mm. IP65.

Suitable switches	Handle description	Colour	Order code
OT16...40FT_	Snap-on mounted, door drilling 22.5mm	Black	OHBS2PJ
		Red-Yellow	OHYS2PJ
OT16...125FT_	Screw mounted, hole distance 36mm	Black	OHBS2RJ
		Red-Yellow	OHYS2RJ

Optional pistol handle, for base and DIN rail mounted switches

Forwarded handle, IP65. Screw fixing from the back side of the handle. No screws on the front ensures double insulation.

Indication I-O/ON-OFF. Padlockable with 3 padlocks in O-OFF position, door interlock in I-ON position.

For shaft diameter 6mm (to be ordered separately, type OXP6X_).



OHB45J6

Suitable switches	Handle description	Colour	Order code
OT16...125F_	45mm handle length	Black	OHB45J6

Load break switches

Accessories: Switch-disconnectors OT16...125



OHM65L6

Stainless steel pistol handle

Forwarded handle, IP66. Screw fixing from the back side of the handle. No screws on the front ensures double insulation.

Indication I-O/ON-OFF. Padlockable with 3 padlocks in O-OFF position, door interlock in I-ON position. Shaft to be ordered separately.

Suitable switches	Handle length mm	Suitable shaft mm	Order code
OT16...125F_	65	6	OHM65L6

Shafts

Shaft diameter 6mm.



OXS6X_



EXP6X_

Suitable	Shaft length mm	Order code
Selector type handles		
OT16...125F_	120	OXS6X120
	180	OXS6X180
	250	OXS6X250
	330	OXS6X330
Pistol type handles		
OT16...125F_	150	EXP6X150
	210	EXP6X210
	265	EXP6X265
	290	EXP6X290
	360	EXP6X360
	430	EXP6X430

Auxiliary contact blocks

IP20. Snap-on mounted to both sides of the switch. I=16A, cable cross section max. 2x2.5mm². Early-break type OA1G10. OA2G11 not mountable on 4 pole versions.

OA2G11 - OT16...32: Max. 2 N.O.+ 2 N.C. / OT45...125: Max. 4 N.O.+ 4 N.C.

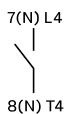


OA1G_

Suitable switches	Description	Order code
OT16...125F_, FT_	1 N.C. mounted on the left side, max. 2 units	OA1G01
	1 N.O. mounted on the right side, max. 2 units	OA1G10
OT16..125F_	1 N.C. + 1 N.O. not mountable on the same side as fourth pole	OA2G11

Fourth poles

IP20. Mountable on the side of the switch. Simultaneous function with main contacts.



OTP_63_

Suitable switches	Order code
OT16...40F3	OTPS40FPN1*
OT63...80F3	OTPS80FP
OT100...125F3	OTPS125FP
OT16...40FT3	OTPS40FDN1*
OT63...80FT3	OTPS80FD
OT100...125FT3	OTPS125FD

*Note: N1 = on left hand side of switc. N2 = on right hand side of switch.

Load break switches

Accessories: Switch-disconnectors OT16...125



OTS63T3



OTS63T1

Terminal shrouds

IP20. Snap-on mounted, transparent. Suitable for upper and lower terminals.
For full protection switch 2 times the same part number required. For 4 poles protection, 3 poles shroud and 1 pole shroud required.

Suitable switches	Number of poles	Order code
OT16...40F3, FT3	3 poles	OTS40T3
	4 th pole	OTS40T1
OT63...80F3, FT3	3 poles	OTS63T3
	4 th pole	OTS63T1
OT100...125F3, FT3	3 poles	OTS125T3
	4 th pole	OTS125T1

Conversion kits for front operated switch combinations



OWP6D40



OWP6D80

6 and 8-pole switch mechanism

Parallel attachment for connecting two 3- or 4 Pole switches.
The switches work simultaneously. Mounted directly on the top of 2 switch-disconnectors, snap-on mounting.

The switch size is printed on stickers for the different switch sizes. The fourth pole or auxiliary contacts can be mounted on the outer side of the combination.

Suitable switches	Order code
OT16...40	OWP6D40
OT63...80	OWP6D80
OT100...125	OWP6D125

Order shaft and handle separately for D80 - D125

6 - 8 pole conversion ordering example

Selector handle

OWP6D125	+	OT125F3 x2	+	OTS125T3 x2	+	EXP6X...	+	OHB45J6
Switch mech	+	Switch	+	Shroud (optional)	+	Shaft	+	Handle

Load break switches

Accessories: Switch-disconnectors OT16...125



OWC6D40



OWC6D125



OESAZW2

Change-over switch mechanism

Two switches (3 or 4-pole) are connected with a mechanism operating between I-O-II -positions. The modular change-over switches can be built by adding a compact snap-on kit on the top of two switch-disconnectors. The kits do not require any additional foot print area, only the height is increased 12 mm.

Suitable for switches	Shaft distance [mm]	Order code
Change-over kits		
OT16...40		OWC6D40
OT63...80		OWC6D80
OT100...125		OWC6D125
Attachment levers		
OT16...160	90+(0...10)x15	OESAZW1

See the table of the handles and shafts included in the conversion kits on the following spread.
Order shaft and handle separately for D80 - D125

Changeover kit ordering example

Selector handle

OWC6D125	+	OT125F3 x2	+	OTS125T3 x2	+	OXp6X...	+	OHB45J6
Changeover mech	+	Switches	+	Shroud (optional)	+	Shroud	+	Handle