

Low Voltage Products

SwitchLine OT change-over switches 160, 200, 250, 315, 400, 630 and 800 Amps

Catalogue OT7GB 05_09
1SCC301012C0201



SwitchLine

160...800 Change-over

IEC



OT160E
OT200E
OT250E

I_{th} / A
I_e / AC22A, ≤ 415V
I_e / AC23A, ≤ 415V

160 200 250
160 200 250
160 200 250



OT160E_W
OT200E_W
OT250E_W

160 200 250
160 200 250
160 200 250

IEC



OT315E
OT400E

I_{th} / A
I_e / AC22A, ≤ 415V
I_e / AC23A, ≤ 415V

315 400
315 400
315 400



OT630E
OT800E

630 800
630 800
630 800

Accessories



Optional handles
Extended shafts
Auxiliary contacts

Terminal shrouds
Connecting accessories
Locking accessories

Amps switches



SwitchLine Change-over switches OT160 - 800

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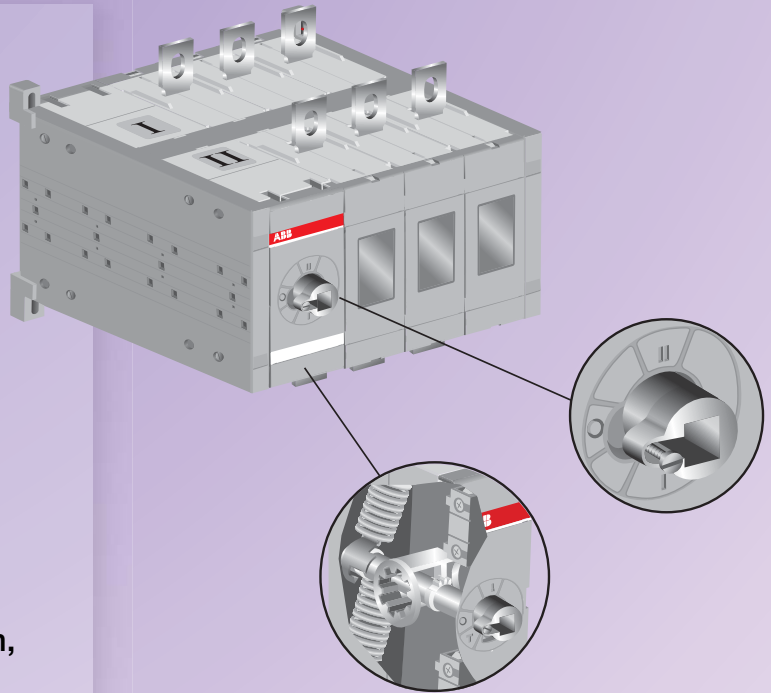
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NEW OT160...OT800

Compact and safe composition

Optimally designed, the integrated OT change-over mechanism offers an advanced and compact solution, providing you with added value.

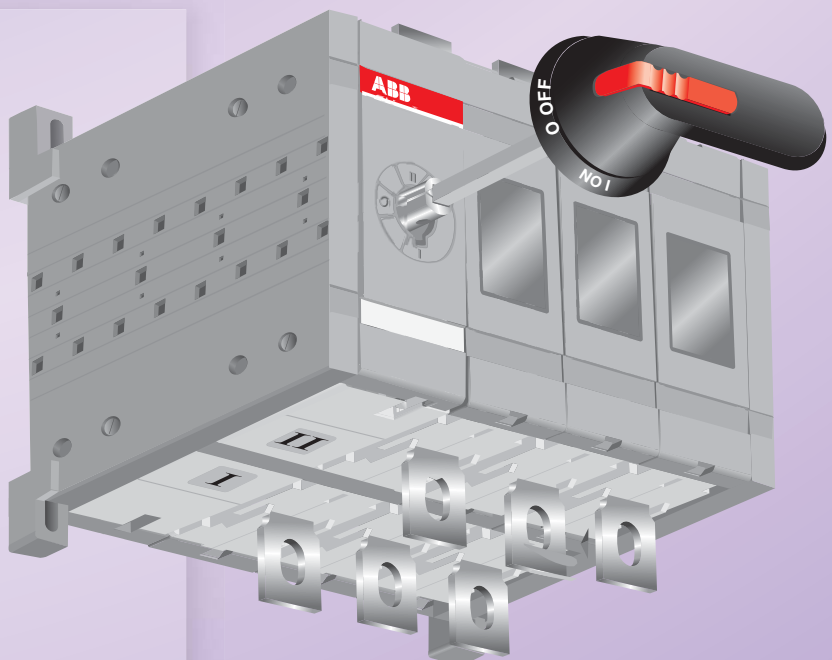
- Compact design is enabled by a double-sided spring construction combined with fewer components and a uniquely short current path.
- Having all the moving parts housed in the fully enclosed casing ensures safe operation, protecting people and equipment.
- The OT change-over switch has three definite positions (I-O-II). The isolation between two power supplies is guaranteed by the contact mechanism, designed as a positive opening construction, with mechanically operated contacts.



Superior performance in category A

The electrical characteristics of the OT change-over switch allow on-load switching between two power supplies, adding value to and enhancing the performance of the change-over switch and its applications.

Electrical and mechanical switching is tested and secured with operation performance according to category A. It enables superior performance compared to the more commonly used category B, ensuring a five times longer life span for the switch!

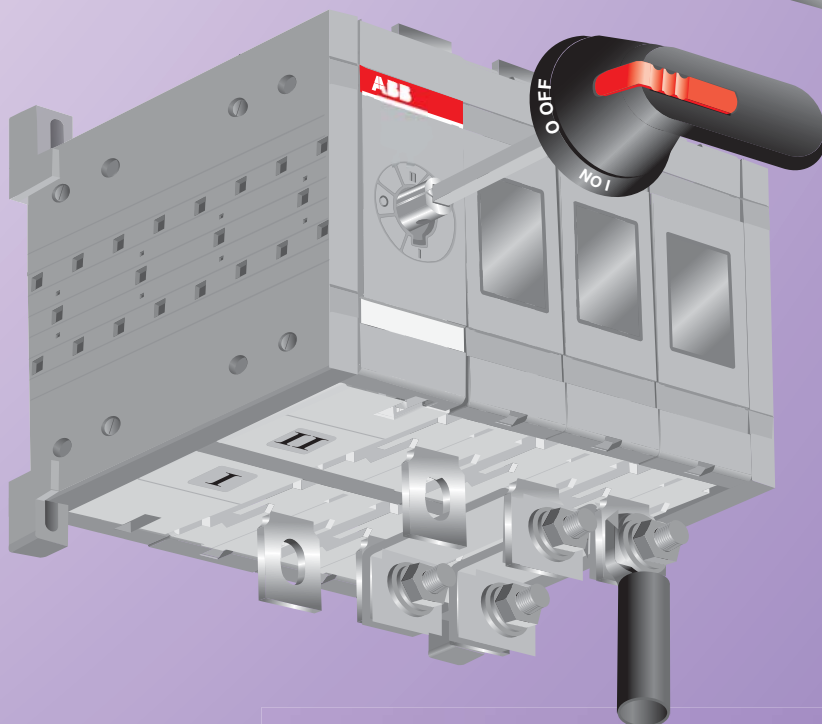
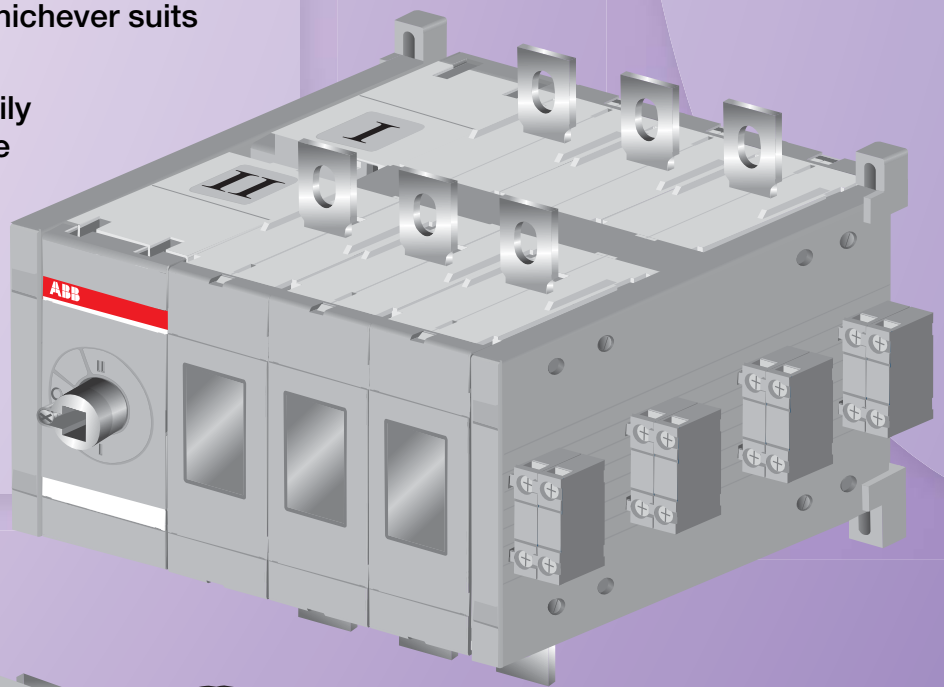


change-over switches

Easy installation

User-friendly and flexible, the OT change-over switch can be easily installed:

- The mechanism and the power poles can be optionally located within the casing in relation to each other – whichever suits best for the application.
- Auxiliary contacts are easily installed on the side of the switch simply by snapping-on to the switch frame.
- Bridging bars also enable a simple and time-saving installation of cables.



ABB's new OT change-over switches provide the most compact change-over range on the market today, maximizing the benefits and optimizing your use of assets.

SwitchLine

OT change-over switches 160 - 800

Technical data

Technical data according to IEC 60947-3

Switch size				OT160_	OT200_	OT250_	OT315_	OT400_	OT630_	OT800_
Rated insulation voltage and rated operational voltage AC-20, DC-20 Dielectric strength Rated impulse withstand voltage	Pollution degree 3		V	1 000	1 000	1 000	1 000	1 000	1 000	1 000
		50 Hz 1min.	kV	10	10	10	10	10	10	10
			kV	12	12	12	12	12	12	12
Rated thermal current and rated operational current AC-20, DC-20 in ambient 40 °C	In open air In enclosure		A	160	200	250	315	400	630	800
...with minimum cable cross section		Cu	mm ²	70	95	120	185	240	2x185	2x240
Rated operational current, AC-21A		≤ 500 V	A	160	200	250	315	400	630	800
		690 V	A	160	200	250	315	400	630	800
Rated operational current, AC-22A		≤ 500 V	A	160	200	250	315	400	630	800
		690 V	A	160	200	250	315	400	630	800
Rated operational current, AC-23A		≤ 500 V	A	160	200	250	315	400	630	800
		690 V	A	160	200	250	315	400	630	800
Rated operational power, AC-23 ¹⁾		230 V	kW	45	55	75	90	132	200	250
		400 V	kW	90	110	132	160	200	355	400
		415 V	kW	90	110	132	160	200	355	400
		500 V	kW	110	132	160	200	250	400	560
		690 V	kW	132	160	250	315	400	630	800
Rated breaking capacity in category AC-23		≤ 500 V	A	1280	1600	2000	2520	3200	5040	6400
		690 V	A	1280	1600	2000	2520	3200	5040	6400
Rated conditional short-circuit current I _p (R.M.S.) and corresponding max. allowed cut-off current î _c peak value	I _p (R.M.S.) Max. OFA_ fuse size gG/aM	100 kA, 500 V	kA	40.5	40.5	40.5	61.5	61.5	75	75
			A	315/315	315/315	315/315	500/450	500/450	800/800	800/800
The cut-off current î _c refers to values listed by fuse manufacturers (single phase test acc. to IEC60269).	I _p (R.M.S.) Max. OFA_ fuse size gG/aM	80 kA, 690 V	kA	40.5	40.5	40.5	59	59	70	70
			A	355/315	355/315	355/315	500/500	500/500	800/1000	800/1000
Rated short-time withstand current	R.M.S. value I _{cw}	690 V 0,15s	kA	15	15	15	31	31	38	38
		690 V 0,25s	kA	15	15	15	24	24	36	36
		690 V 1s	kA	8	8	8	15	15	20	20
Rated short-time making capacity	Peak value I _{cm}	690 V	kA	30	30	30	65	65	80	80
Mechanical endurance	Divide by four for oper. cycles ²⁾		Oper.	16 000	16 000	16 000	16 000	16 000	10 000	10 000
Weight without accessories	3-pole switch		kg	2.5	2.5	2.5	4.7	4.7	12.8	12.8
	4-pole switch		kg	3.2	3.2	3.2	5.8	5.8	15.6	15.6
Terminal bolt size	Metric thread diameter x length		mm	M8x25	M8x25	M8x25	M10x30	M10x30	M12x40	M12x40
Terminal tightening torque	Counter torque required		Nm	15-22	15-22	15-22	30-44	30-44	50-75	50-75
Operating torque	Typical for 3-pole switch fuses		Nm	7	7	7	16	16	27	27

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

²⁾ Operating cycle: 0 - I - 0 - II - 0.

SwitchLine

OT change-over switches 160 - 800

Ordering information



OT250E03CP



OT400E03CP



OT250E03WCP



OT250E04CP



OT800E03CP



OT400E13CP



OT250E04WCP

Manual change-over switches

Including a black plastic IP65 I - 0 - II pistol type handle, padlockable in the 0-position, door interlock in the I- and II-positions and when padlocked.

Included handles

OT160...250: OHB65J6E011, OT315...400: OHB95J12E011, OT630...800: OHB125J12E011

Included shafts

OT160...250: OXP6x161, length 161 mm, OT315-400: OXP12x166, length 166 mm, OT630...800: OXP12x185, length 185 mm

Included bolt kits for all terminals:

OT160...250: M8x25, OT315...400: M10x30, OT630...800: M12x40

Description	Ith [A]	AC21...22A/≤415V [A]	AC23A/≤415V [A]	Type	Order number	Weight [kg]
3-pole types						
Mechanism at the end of the switch						
160	160	160	160	OT160E03CP	1SCA022772R6510	3.30
200	200	200	200	OT200E03CP	1SCA022771R7520	3.30
250	250	250	250	OT250E03CP	1SCA022771R3450	3.30
315	315	315	315	OT315E03CP	1SCA022772R6780	5.90
400	400	400	400	OT400E03CP	1SCA022771R8500	5.90
630	630	630	630	OT630E03CP	1SCA022785R6050	17.7
800	800	800	800	OT800E03CP	1SCA022785R6300	17.7
Mechanism between the poles						
160	160	160	160	OT160E12CP	1SCA022776R9080	3.30
200	200	200	200	OT200E12CP	1SCA022776R8510	3.30
250	250	250	250	OT250E12CP	1SCA022776R9320	3.30
315	315	315	315	OT315E12CP	1SCA022776R9910	5.90
400	400	400	400	OT400E12CP	1SCA022776R9590	5.90
630	630	630	630	OT630E12CP	1SCA022785R8690	17.7
800	800	800	800	OT800E12CP	1SCA022785R8850	17.7
Mechanism at the end of the switch, with extended phase distance						
160	160	160	160	OT160E03WCP	1SCA022772R8210	3.60
200	200	200	200	OT200E03WCP	1SCA022772R8720	3.60
250	250	250	250	OT250E03WCP	1SCA022772R8300	3.60
4-pole types						
Mechanism at the end of the switch						
160	160	160	160	OT160E04CP	1SCA022775R9440	4.10
200	200	200	200	OT200E04CP	1SCA022771R7280	4.10
250	250	250	250	OT250E04CP	1SCA022775R4640	4.10
315	315	315	315	OT315E04CP	1SCA022775R7150	7.10
400	400	400	400	OT400E04CP	1SCA022771R8680	7.10
630	630	630	630	OT630E04CP	1SCA022785R6130	21.0
800	800	800	800	OT800E04CP	1SCA022785R6210	21.0
Mechanism between the poles						
160	160	160	160	OT160E13CP	1SCA022777R0170	4.10
200	200	200	200	OT200E13CP	1SCA022777R0250	4.10
250	250	250	250	OT250E13CP	1SCA022777R0330	4.10
315	315	315	315	OT315E13CP	1SCA022777R0410	7.10
400	400	400	400	OT400E13CP	1SCA022777R0500	7.10
630	630	630	630	OT630E13CP	1SCA022785R9070	21.0
800	800	800	800	OT800E13CP	1SCA022785R9230	21.0
Mechanism at the end of the switch, with extended phase distance						
160	160	160	160	OT160E04WCP	1SCA022775R0220	4.40
200	200	200	200	OT200E04WCP	1SCA022775R0650	4.40
250	250	250	250	OT250E04WCP	1SCA022775R0810	4.40

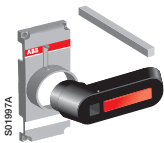
SwitchLine

Accessories

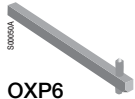
Ordering information



OHB_



OTV_



OXP6_



OXP12_

Handles, door mounting

Plastic I - 0 - II handle, IP65, padlockable with three padlocks in 0-position, door interlock in I- and II-position and when padlocked.

Suitable for switches	Colour	Shaft diam. [mm]	Type	Order number	Weight [kg]
OT160...250E_C	black	6	OHB65J6E011	1SCA022383R2480	0.12
OT315...400E_C	black	12	OHB95J12E011	1SCA022621R0760	0.12
OT630...800E_C	black	12	OHB125J12E011	1SCA022589R3340	0.14

Plastic I - 0 - II handle, IP65, padlockable with three padlocks in I- , 0- and II-position, door interlock in I- and II-position and when padlocked.

OT160...250E_C	black	6	OHB65J6E311	1SCA022662R4730	0.12
OT315...400E_C	black	12	OHB95J12E311	1SCA022779R2140	0.12
OT630...800E_C	black	12	OHB125J12E311	1SCA022615R1730	0.14

Handles, direct mounting

Plastic I - 0 - II handle, padlockable with three padlocks in 0-position. Includes a shaft and a mechanism cover.

OT160...250E_C	black	shaft included	OTV250ECK	1SCA022783R0090	0.08
OT315...400E_C	black	shaft included	OTV400ECK	1SCA022783R0170	0.26
OT630...800E_C	black	shaft included	OTV800ECK	1SCA022797R2470	0.30

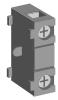
Extended shafts

Suitable for switches	Installation depth [mm]	Type	Order number	Weight [kg]
Shaft diameter 6 mm				
OT160...250E_C	166...214	OXP6X90	1SCA022064R1180	0.03
	209...254	OXP6X130	1SCA022057R0570	0.04
	240...285	OXP6X161	1SCA022067R1760	0.05
	289...334	OXP6X210	1SCA022295R6080	0.06
	369...414	OXP6X290	1SCA022042R6370	0.08
	439...484	OXP6X360	1SCA022042R6530	0.11
Shaft diameter 12 mm				
OT315...400E_C	209...266	OXP12X107	1SCA022029R9750	0.12
	243...307	OXP12X148	1SCA022658R5570	0.17
	261...325	OXP12X166	1SCA022325R7100	0.20
	280...344	OXP12X185	1SCA022325R6710	0.22
	345...409	OXP12X250	1SCA022325R6980	0.29
	375...439	OXP12X280	1SCA022137R5140	0.33
	420...484	OXP12X325	1SCA022042R5810	0.38
	490...554	OXP12X395	1SCA022042R5990	0.46
	560...624	OXP12X465	1SCA022042R6020	0.54
OT630...800E_C	287...385	OXP12X148	1SCA022658R5570	0.17
	324...422	OXP12X185	1SCA022325R6710	0.22
	389...487	OXP12X250	1SCA022325R6980	0.29
	464...562	OXP12X325	1SCA022042R5810	0.38
	534...632	OXP12X395	1SCA022042R5990	0.46
	604...702	OXP12X465	1SCA022042R6020	0.54

SwitchLine

Accessories

Ordering information



OA_G_



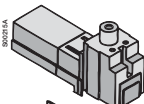
OTZC_



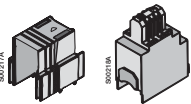
OTS_L



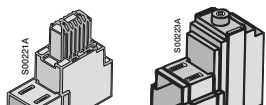
OTS_S



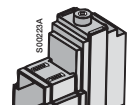
OZXB2K



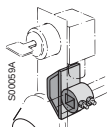
OZXB3K



OZXB4K



OZXB5K



OETLZW_

Auxiliary contact blocks

Mounting on the right side of the switch: Max. 4 auxiliary contact blocks/switch (totally 8 blocks). Simultaneous action with the main contacts.

Function	Protection degree	Type	Order number	Weight [kg]
1NO	IP20	OA1G10	1SCA022353R4970	0.03
1NC	IP20	OA3G01	1SCA022456R7410	0.03

Bridging bars

The bridging bars provide a connection link either on the incoming or outgoing side of the switch.

Suitable for switches	Number of poles	Type	Order number	Weight [kg]
OT160...250 E_C	3	OTZC13	1SCA022767R6910	0.60
	4	OTZC14	1SCA022767R7040	0.80
OT315...400 E_C	3	OTZC23	1SCA022767R7120	0.60
	4	OTZC24	1SCA022767R7210	0.80
OT630...800 E_C	3	OTZC33	1SCA022785R7020	1.00
	4	OTZC34	1SCA022785R7110	1.30

Terminal shrouds

Snap-on mounting, grey plastic. Transparent shrouds available on request, please replace the letter "G" with "T". Suitable for the upper switch. A kit includes three (four) shrouds which can be used on either side of the switch.

Suitable for switches	Number of poles	Description	Type	Order number	Weight [kg]
OT160...250	3	Long type	OTS250G1L/3	1SCA022731R8150	0.09
	3	Short type	OTS250G1S/3	1SCA022731R8310	0.06
OT160...250	4	Long type	OTS250G1L/4	1SCA022731R8230	0.12
	4	Short type	OTS250G1S/4	1SCA022731R8400	0.08
OT315...400	3	Long type	OTS400G1L/3	1SCA022736R8840	0.15
	3	Short type	OTS400G1S/3	1SCA022736R9060	0.09
OT315...400	4	Long type	OTS400G1L/4	1SCA022736R9490	0.20
	4	Short type	OTS400G1S/4	1SCA022736R9650	0.12
OT630...800	3	Long type	OTS800G1L/3	1SCA022776R7890	0.32
	3	Short type	OTS800G1S/3	1SCA022776R8190	0.17
OT630...800	4	Long type	OTS800G1L/4	1SCA022776R7970	0.42
	4	Short type	OTS800G1S/4	1SCA022776R8270	0.26

Snap-on mounting, transparent plastic, IP 2X.

Suitable for terminal clamps	Number of poles	Type	Order number	Weight [kg]
OZXB2, 2L	3	OZXB2K	1SCA022264R0010	0.05
OZXB3, 4	3	OZXB3K	1SCA022264R0440	0.20
OZXB5, 6	3	OZXB4K	1SCA022199R2850	0.24
OZXB7, 7L	3	OZXB5K	1SCA022283R8040	0.13

Locking accessories

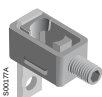
Cam attachment for adopting the switches to Castell, Lowe&Fletcher or Ronis interlock. The lock is not included. Mounting to OXP-shaft, works together with OH-door handle and a shaft.

Suitable for switches	Type	Order number	Weight [kg]
OT160...250E_C	OETLZW16	1SCA022093R2070	0.17
OT315...800E_C	OETLZW5	1SCA022052R3900	0.14

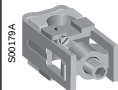
SwitchLine

Accessories

Ordering information



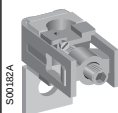
OZXB 1L



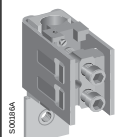
OZXB 2



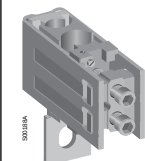
OZXB 8, 9



OZXB 2L, 7L



OZXB 3



OZXB 4

Terminal clamp sets for Al- and Cu-cables

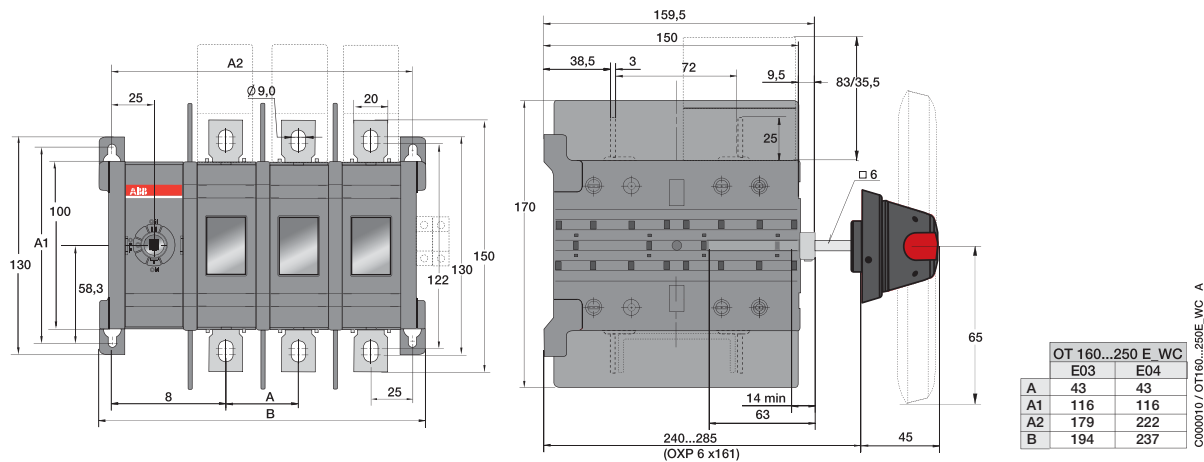
Suitable for switches	Cable cross section [mm²]	Suitable shroud	Type	Order number	Pack. [pcs]
OT 160...250	10...70	OTS250_L	OZXB1L	1SCA022169R2030	3
	10...70	OTS250_L	OZXB1L/1	1SCA022194R0030	1
	25...120	OZXB2K	OZXB2	1SCA022119R7610	3
	25...120	OZXB2K	OZXB2/1	1SCA022194R0200	1
	25...120	OZXB2K	OZXB2L	1SCA022158R7750	3
	25...120	OZXB2K	OZXB2L/1	1SCA022194R0460	1
	95...185	OTS250_L	OZXB8	1SCA022744R1510	3
	95...185	OTS250_L	OZXB8/1	1SCA022744R1600	1
	95...240	OTS250_L	OZXB9	1SCA022750R3210	3
	95...240	OTS250_L	OZXB9/1	1SCA022750R3300	1
OT 315...400	25...120	OZXB2K	OZXB2L	1SCA022158R7750	3
	25...120	OZXB2K	OZXB2L/1	1SCA022194R0460	1
	95...185	OZXB3K	OZXB3	1SCA022136R8100	3
	95...185	OZXB3K	OZXB3/1	1SCA022194R0620	1
	2x(95...185)	OZXB3K	OZXB4	1SCA022137R4760	3
	2x(95...185)	OZXB3K	OZXB4/1	1SCA022194R0890	1
	120...240	OZXB5K	OZXB7	1SCA022185R0040	3
	120...240	OZXB5K	OZXB7/1	1SCA022194R1430	1
	120...240	OZXB5K	OZXB7L	1SCA022185R7130	3
	120...240	OZXB5K	OZXB7L/1	1SCA022194R1600	1
	95...185	OTS400_L	OZXB8	1SCA022744R1510	3
	95...185	OTS400_L	OZXB8/1	1SCA022744R1600	1
	95...240	OTS400_L	OZXB9	1SCA022750R3210	3
	95...240	OTS400_L	OZXB9/1	1SCA022750R3300	1
OT630...800	120...300	OZXB4K	OZXB5	1SCA022137R2470	3
	120...300	OZXB4K	OZXB5/1	1SCA022194R1010	1
	2x(120...300)	OZXB4K	OZXB6	1SCA022137R4920	3
	2x(120...300)	OZXB4K	OZXB6/1	1SCA022194R1270	1

SwitchLine

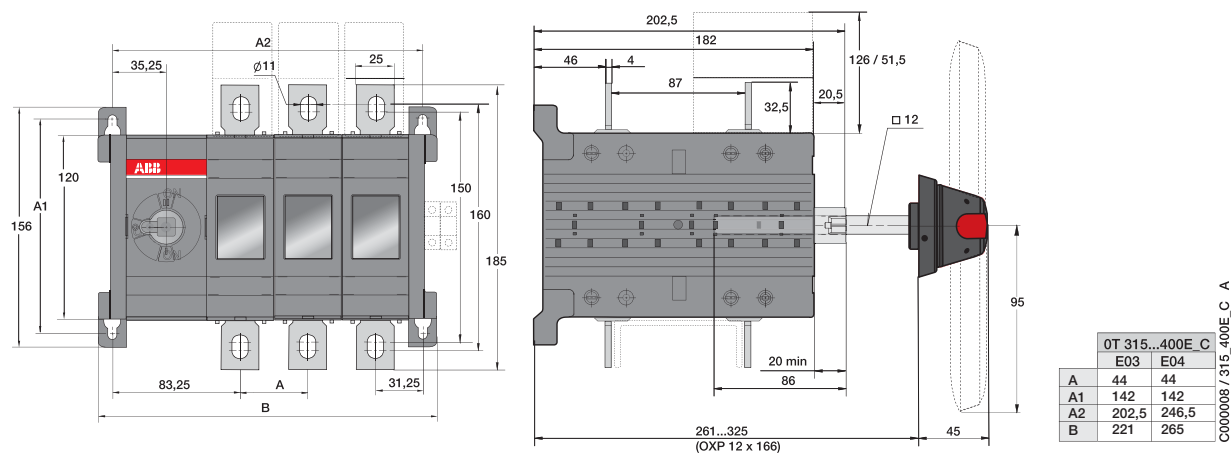
Change-over switches OT160 - 400

Dimension drawings

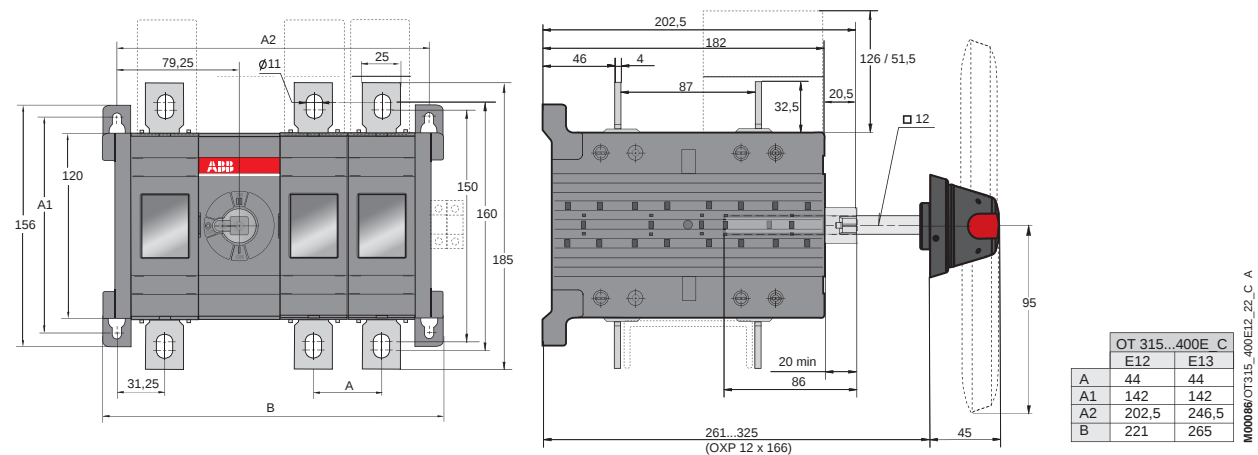
OT160E03/04WCP ... OT250E03/04WCP



OT315E03/04CP ... OT400E03/04CP



OT315E12/13CP ... OT400E12/13CP

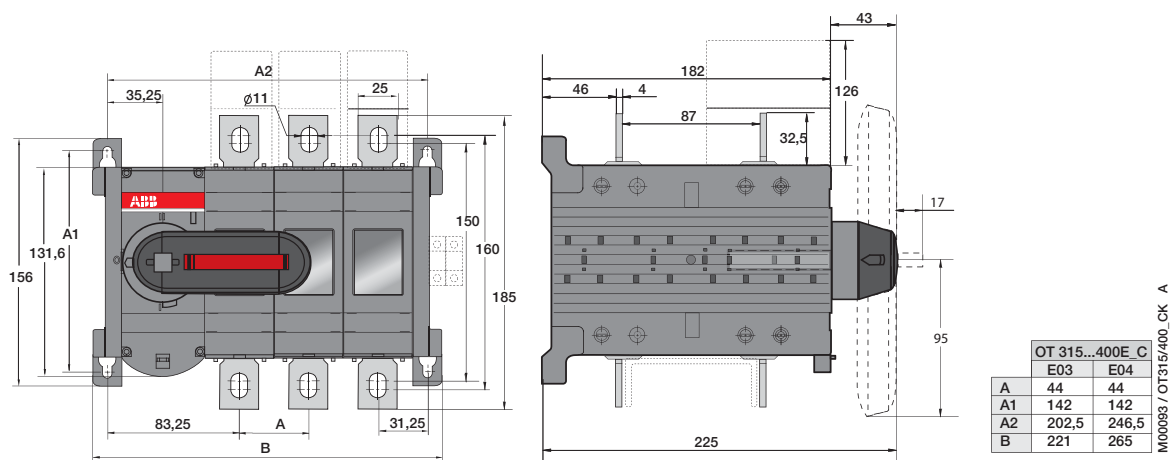


SwitchLine

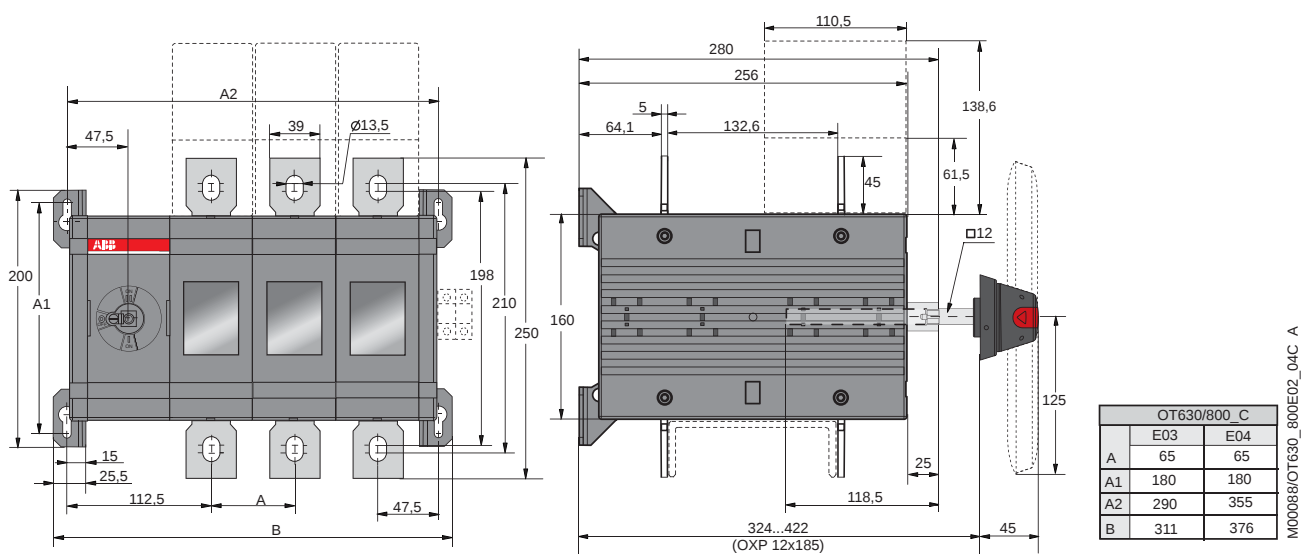
Change-over switches OT315 - 800

Dimension drawings

OT315E03/04CK ... 400E03/04CK

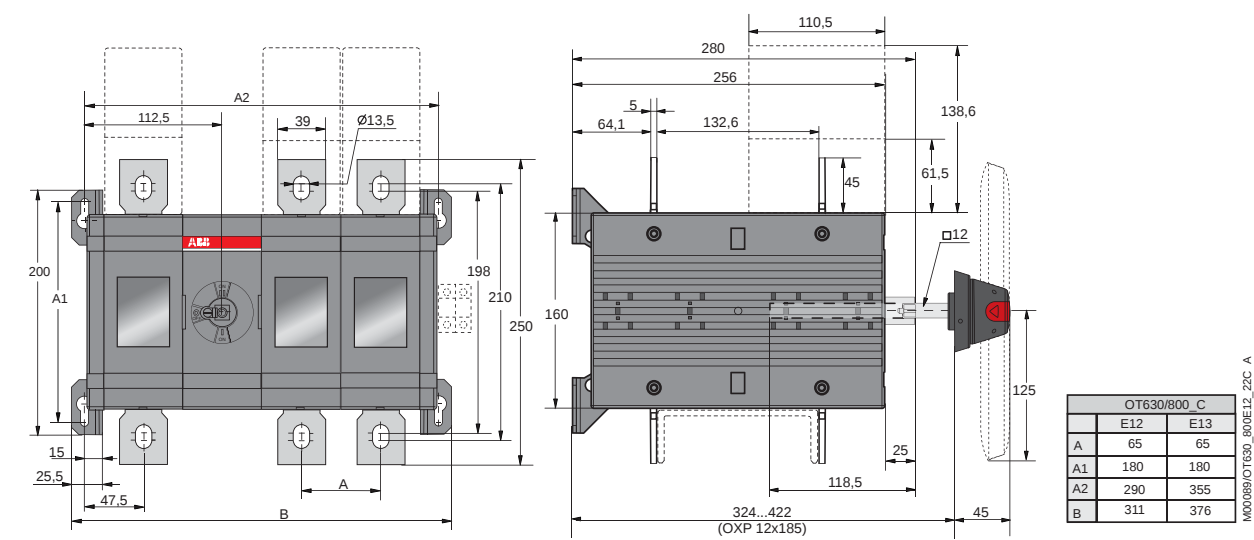


OT630E03/04CP ... 800E03/04CP

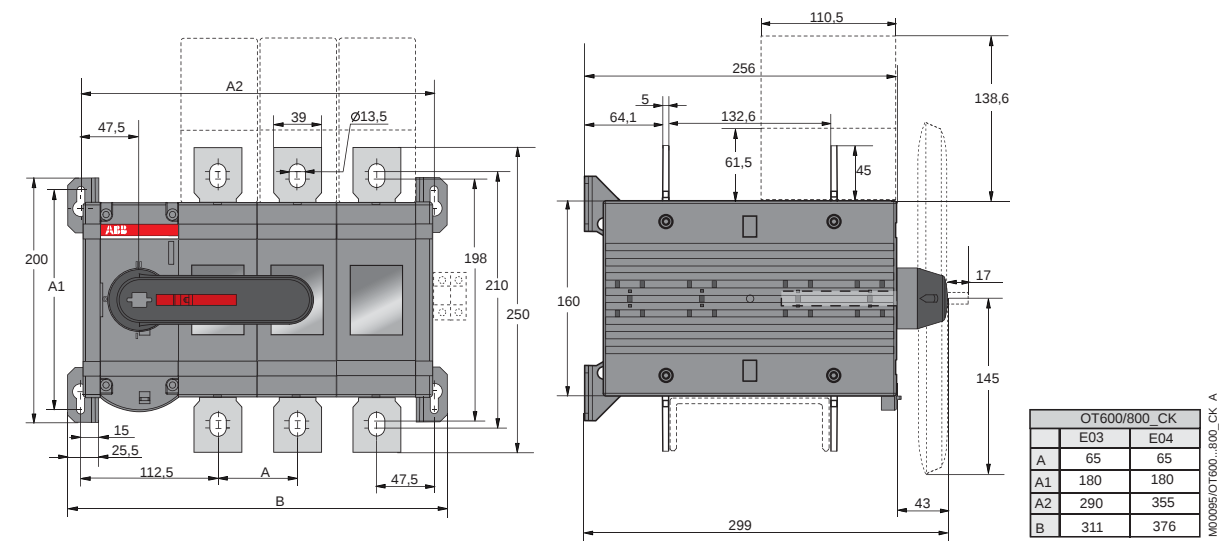


SwitchLine Change-over switches OT630 - 800 Dimension drawings

OT630E12/13CP ... 800E12/13CP



OT630E03/04CK ... 800E03/04CK

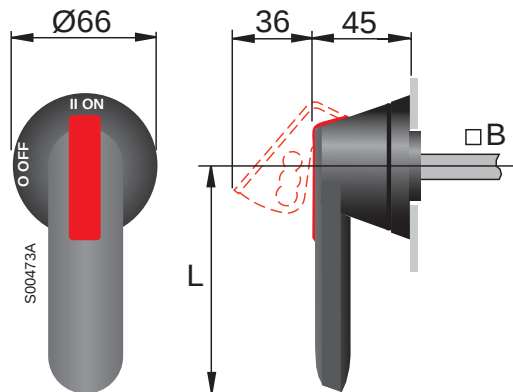


SwitchLine

Handles, door drilling

Dimension drawings

Plastic handles



Handle type	Handle length (mm) L	Shaft (mm) B
OH_65J6E_	65	6
OH_80J6E_	80	6
OH_95J12E_	95	12
OH_125J12E_	125	12
OH_145J12E_	145	12
OH_175J12E_	175	12
OH_275J12E_	275	12

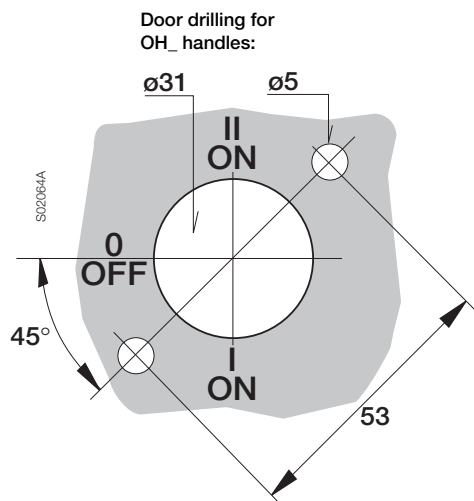




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