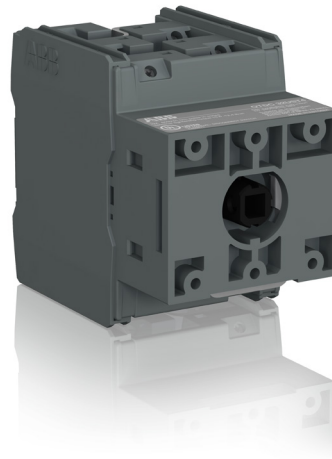


Switches for photovoltaic applications

Disconnect switches, UL

OTDC_U from 16 to 32 Amperes



OTDC16...32U - Compact efficiency

OTDC from 16 to 32 amperes offers various DC voltage ratings and a control of up to 3 circuits within the same footprint area. The modular structure guarantees the most cost efficient disconnect switch solution up to 1000 VDC.

- ▶ One footprint, variety of applications

The OTDC disconnect switches are installation ready straight from the box offering fast DIN rail or screw mounting. Specific door-mount versions add one more dimension to the flexibility of the product and touch-safe tunnel terminals enable quick wiring with secure connections.

- ▶ Easy, fast installation for optimized production

Thermal excellence is a birth mark of the OTDC16...32U disconnect switches, the rated currents need no derating even beyond 60 degrees Celsius (140 Fahrenheit). This does not only mean suitability for applications in high ambient temperatures but also minimal power losses and thus, maximized energy efficiency.

- ▶ Designed for installations under the sun

ABB has been designing, testing and producing disconnect switches for tens of years and the OTDC family was the first disconnect solution in the market dedicated for photovoltaic applications. The offering of OTDC16...32U disconnect switches now brings the experience and dedication also to the UL side of the lower amperage DC applications.

- ▶ OTDC, simply optimal.

Technical data

OTDCP16...32U

Technical data according to UL508i

Switch size			OTDC16U	OTDC25U	OTDC32U
UL Listed		Standard	UL 508i	UL 508i	UL 508i
Rated ambient temperature		°C	...+60	...+60	...+60
Rated current /poles in series	600 V	One circuit	16/2	25/2	
		Two circuits	16/2	25/2	32/2
		Three circuits	16/2		
Short circuit rating		kA, 600 V	5	5	5
		Protection type	RK5 Fuse	RK5 Fuse	RK5 Fuse
		Max fuse size	70 A	70 A	70 A
Wire range		MCM	12-6 AWG	12-6 AWG	12-6 AWG
Technical data according to IEC 60947		See IEC table for type	OTDC16U	OTDC25U	OTDC32U

Technical data according to IEC 60947

Switch size				OTDC16U	OTDC25U	OTDC32U
Rated insulation voltage U_i		Pollution degree 2	V	1250 ¹⁾	1250 ¹⁾	1250 ¹⁾
		Pollution degree 3	V	1000 ¹⁾	1000 ¹⁾	1000 ¹⁾
Dielectric strength		50 Hz 1 min	kV	6	6	6
Rated impulse withstand voltage			kV	8	8	8
Rated thermal current I_{th}		In open air, normal conditions ²⁾	A	40	50	63
		In enclosure 40°C	A	32	40	50
		In enclosure 60°C	A	25	32	40
...with minimum cable or bar cross section		Cu	mm ²	4	6	10
DC-21B	660	One circuit	V	16/2	25/2	
		Two circuits	V	16/2	25/2	32/2
		Three circuits	V	16/2		
	1000	One circuit	V	10/2 ³⁾	16/2 ³⁾	
		Two circuits	V	10/2 ³⁾	16/2 ³⁾	20/2 ³⁾
		Three circuits	V	10/2 ³⁾		
Rated short-time withstand current, 1000 V, 1 s		R.M.S. -value I_{cw}	kA	1,0	1,0	1,0
Rated short circuit making capacity, 1000 V		Peak value I_{cm}	kA			
Rated conditional short-circuit current I_p (r.m.s.)		I_p (r.m.s.), 1000 V	kA	10	10	10
		Max fuse size, gPV	A	80	80	80
Power loss / pole		At rated current	W	0,1	0,2	0,35
Terminal cable size		Cu	mm ²	2.5...16	2.5...16	2.5...16

¹⁾ When used with external handle. For use with direct mounted handle, see installation instruction.

²⁾ Normal conditions defined in IEC 60947-1-6.1

³⁾ U and UT types only. (Not applicable for US nor UST.)

Ordering information

Front operated disconnect switches, base and DIN-rail mounting

OTDC16U2, OTDC16US2



OTDC16U4, OTDC16US4



OTDC16U6, OTDC16US6



OTDC16...32U

Touch-safe IP20 protected terminal clamps included. Types OTDC16...32US include pre-mounted short circuit link OEZXY86. Shafts and handles to be ordered separately.

Single circuit

Number of poles	Rated operat. current [A]			Type	Order number	Weight/ unit [kg]
	UL	IEC				
	600 VDC	660 VDC	1000 VDC			
2	16	16	10	OTDC16U2	1SCA134369R1001	0.15
2	25	25	16	OTDC25U2	1SCA134375R1001	0.15
2	16	16	-	OTDC16US2	1SCA134372R1001	0.15
2	25	25	-	OTDC25US2	1SCA134378R1001	0.15

Double circuit

Number of poles	Rated operat. current [A]			Type	Order number	Weight/ unit [kg]
	UL	IEC				
	600 VDC	660 VDC	1000 VDC			
4	16	16	10	OTDC16U4	1SCA134370R1001	0.15
4	25	25	16	OTDC25U4	1SCA134377R1001	0.15
4	32	32	20	OTDC32U4	1SCA136703R1001	0.15
4	16	16	-	OTDC16US4	1SCA134373R1001	0.15
4	25	25	-	OTDC25US4	1SCA134379R1001	0.15
4	32	32	-	OTDC32US4	1SCA136704R1001	0.15

Triple circuit

Number of poles	Rated operat. current [A]			Type	Order number	Weight/ unit [kg]
	UL	IEC				
	600 VDC	660 VDC	1000 VDC			
6	16	16	10	OTDC16U6	1SCA134371R1001	0.15
6	16	16	-	OTDC16US6	1SCA134374R1001	0.15

Ordering information

Front operated disconnect switches, door mounting

OTDC16UT2, OTDC16UST2



OTDC16UT4, OTDC16UST4



OTDC16UT6, OTDC16UST6



OTDC16...32U_T

Touch-safe IP20 protected terminal clamps included. Types OTDC16...32US include pre-mounted short circuit link OEZXY86. Shafts and handles to be ordered separately.

Single circuit - up to 1000 VDC

Number of poles	Rated operat. current [A]			Type	Order number	Weight/unit [kg]
	UL	IEC				
	600 VDC	660 VDC	1000 VDC			
2	16	16	10	OTDC16UT2	1SCA134387R1001	0.15
2	25	25	16	OTDC25UT2	1SCA134388R1001	0.15
2	16	16	-	OTDC16UST2	1SCA134581R1001	0.15
2	25	25	-	OTDC25UST2	1SCA134578R1001	0.15

Double circuit - up to 1000 VDC

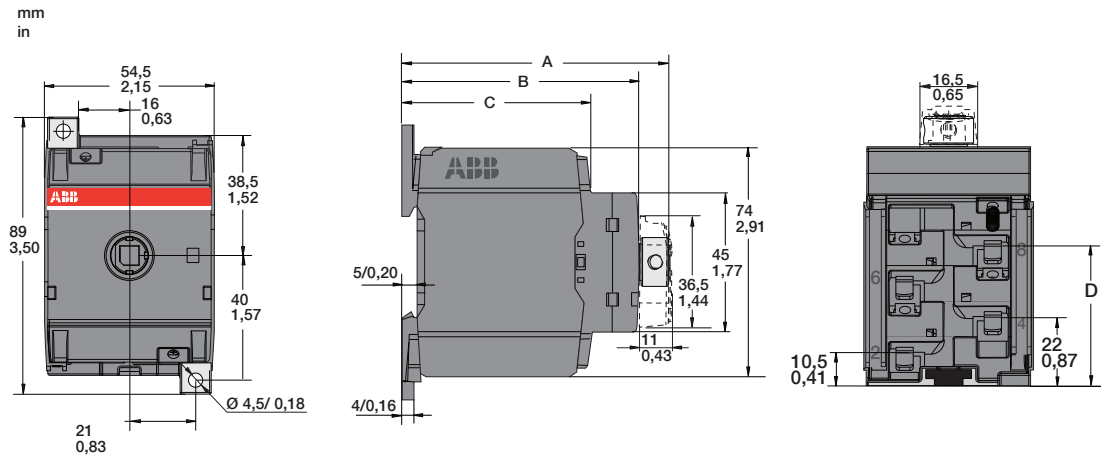
Number of poles	Rated operat. current [A]			Type	Order number	Weight/unit [kg]
	UL	IEC				
	600 VDC	660 VDC	1000 VDC			
4	16	16	10	OTDC16UT4	1SCA134390R1001	0.15
4	25	25	16	OTDC25UT4	1SCA134391R1001	0.15
4	32	32	20	OTDC32UT4	1SCA136705R1001	0.15
4	16	16	-	OTDC16UST4	1SCA134582R1001	0.15
4	25	25	-	OTDC25UST4	1SCA134579R1001	0.15
4	32	32	-	OTDC32UST4	1SCA136706R1001	0.15

Triple circuit - up to 1000 VDC

Number of poles	Rated operat. current [A]			Type	Order number	Weight/unit [kg]
	UL	IEC				
	600 VDC	660 VDC	1000 VDC			
6	16	16	10	OTDC16UT6	1SCA134580R1001	0.15
6	16	16	-	OTDC16UST6	1SCA134583R1001	0.15

Dimension drawings

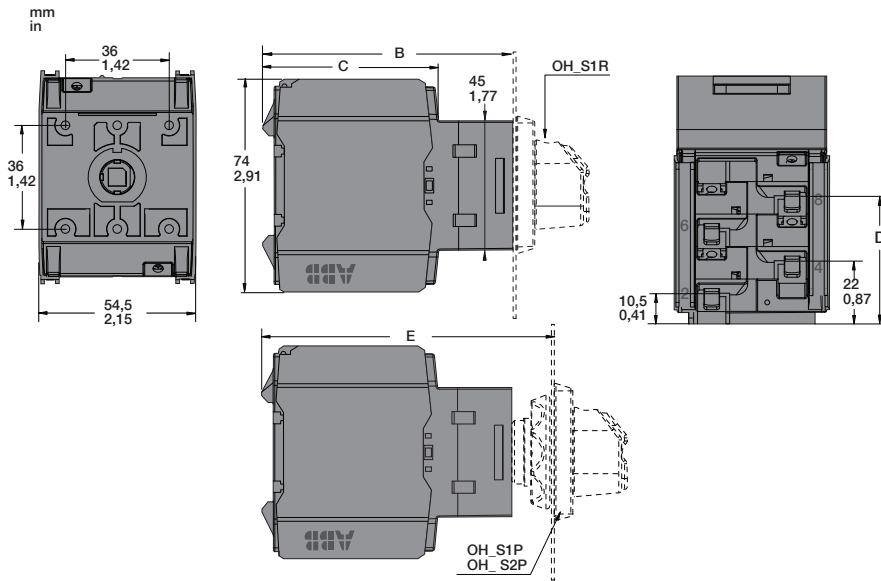
Front operated disconnect switches



M00469/OTDC16-36U_C

OTDC 16-36U_

[mm/in]	02	04	06
A	64/2,52	87/3,43	109,5/4,31
B	54/2,13	77/3,03	100/3,94
C	38,5/1,52	61/2,40	84/3,31
D	22/0,87	45/1,77	67,5/2,66



M00470/OTDC16-36UT_C

OTDC 16-36UT_

[mm/in]	02	04	06
B	64/2,52	87/3,43	110/4,33
C	38/1,50	61/2,40	84/3,31
D	22/0,87	45/1,77	68/2,68
E	79/3,11	102/4,02	124,5/4,9

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