

# Enclosed DC rated switch-disconnectors OTDCP from 16 to 32 Amperes



Enclosed OTDC switches from 16 to 32 Amperes meet the demanding requirements of photovoltaic applications. Enclosed OTDC switches expand ABB's offering of reliable products for photovoltaic applications needed from the strings on the direct current side to the alternate current grid connection point.

## Reliability at higher voltages

Enclosed OTDC switch-disconnectors from 16 to 32 Amperes have extensive DC voltage ratings with the same footprint area. The switches are specifically designed for DC use up to 1000 V. They are available in 2-, 3- and 4-pole versions.

- ▶ Safe and reliable PV systems at a wide voltage range.

## Thermal excellence

Enclosed OTDC switches meet the standard's thermal requirements even in exceptionally high operating ambient temperatures.

- ▶ Thanks to thermal characteristics enclosed OTDC switches are suitable for warm locations.

Low power losses minimize the waste of energy

- ▶ Maximum energy efficiency of PV systems.

## Simplicity in installation

The switch has tunnel terminals suitable for a wide range of stranded Cu wires 2.5...16mm<sup>2</sup>. Connection bars and terminal numbering are factory-mounted.

- ▶ Fast and perfect installation every time.

## Designed for safety

- Padlockable in the OFF-position
- If the contacts are welded together, the handle does not reach the OFF-position, maintaining the cover interlock and preventing padlocking.
- Cover interlock in the ON-position. The cover interlock can be defeated by skilled personnel.

- Provision for cover sealing
- Mounting screws isolated from enclosure interior.
- Enclosure with a high degree of protection (IP65)
  - ▶ Personnel and equipment are protected

## Features

- One compact enclosure size for whole range
- Plastic enclosure:
  - Glass reinforced polycarbonate, PC f1
  - Suitable for outdoor use with respect to exposure to ultra violet light, water exposure and immersion in accordance with UL746C.
- Cable outlets M20 sized threaded knock-outs
- Cable outlets M16 sized threaded knock-outs and blank cable entries available on request
- Red-yellow or black handle
- Neutral link and PE-terminal available as optional extra

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# Technical data

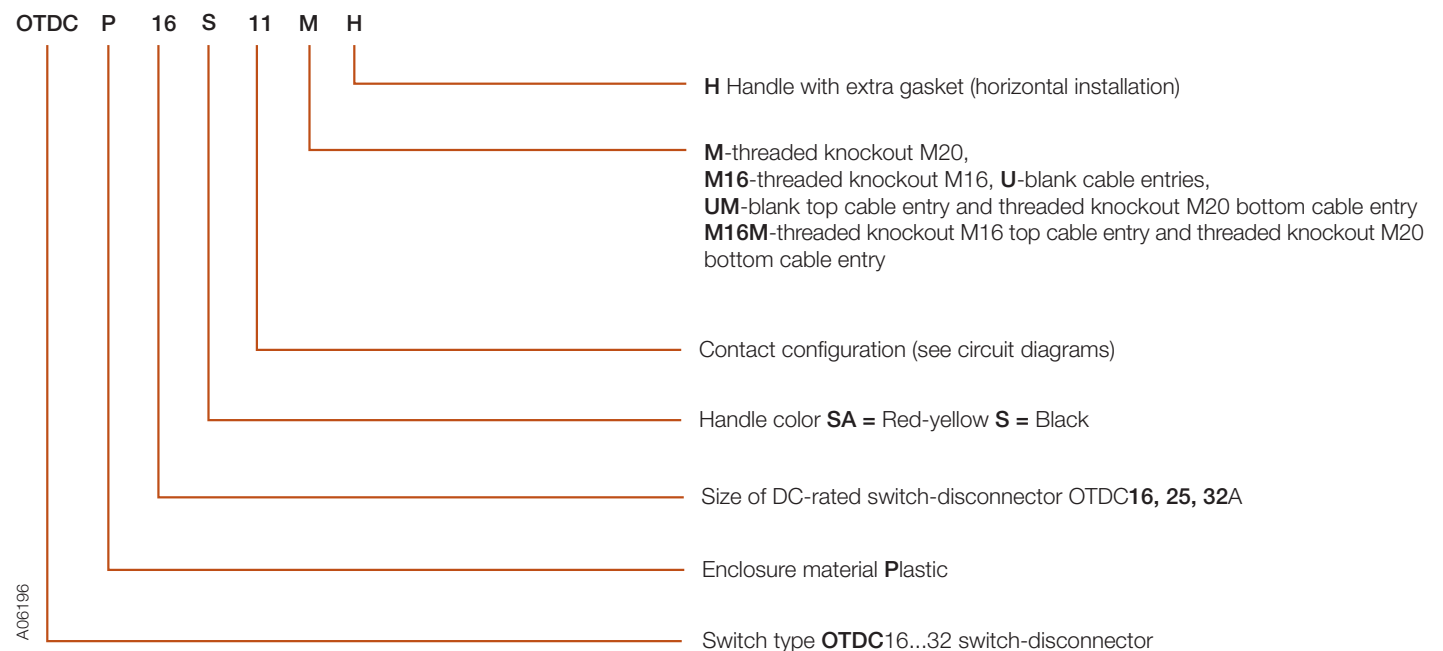
## OTDCP16...32

### Technical data according to IEC 60947 for OTDCP16...32 switch-disconnectors

Switch size		A	OTDCP16	OTDCP25	OTDCP32
Rated insulation voltage $U_i$	Pollution degree 2	V	1250	1250	1250
	Pollution degree 3	V	1000	1000	1000
Rated thermal current $I_{th}$ DC-20	enclosure 40°C	A	25	32	45
	enclosure 60°C	A	25	32	32
...with minimum cable cross section	Cu	mm <sup>2</sup>	4	6	10
Suitable wire size	Cu	mm <sup>2</sup>	2.5...16	2.5...16	2.5...16
Rated operational current / poles in series DC-21B	660 V	A	16/2	25/2	32/2
	1000 V	A	16/3	25/3	32/3
	1000 V / 2 X 660 V <sup>1)</sup>	A	16/4	25/4	32/4
Rated short-time withstand current, 1000 V, 1 s	R.M.S. -value /lcw	A	400	600	800
Power loss / pole at rated current	2 pole	W	0.3	0.6	1
	3 pole	W	0.45	0.9	1.5
	4 pole	W	0.6	1.2	2
Mechanical endurance		Operations	4000	4000	4000

<sup>1)</sup> 1000 with all the poles in series, 660 V with two poles in series

## Type designation key



# Ordering information

## OTDCP16...32

OTDCP\_SA



OTDCP\_S



### DC rated switch-disconnectors

M20 threaded knock-outs, compression glands have to be ordered separately. M16 threaded knock-outs available on request.

#### Up to 660 VDC

Number of poles	Rated operational current [A] DC-21B / 660V	Type	Order number	Weight [kg]
Includes selector type red-yellow handle (I-O and ON-OFF indication)				
2	16	OTDCP16SA11M	1SCA125126R1001	0.55
2	25	OTDCP25SA11M	1SCA125127R1001	0.55
2	32	OTDCP32SA11M	1SCA125128R1001	0.55
Includes selector type black handle (I-O and ON-OFF indication)				
2	16	OTDCP16S11M	1SCA125129R1001	0.55
2	25	OTDCP25S11M	1SCA125130R1001	0.55
2	32	OTDCP32S11M	1SCA125131R1001	0.55

#### Up to 1000 VDC

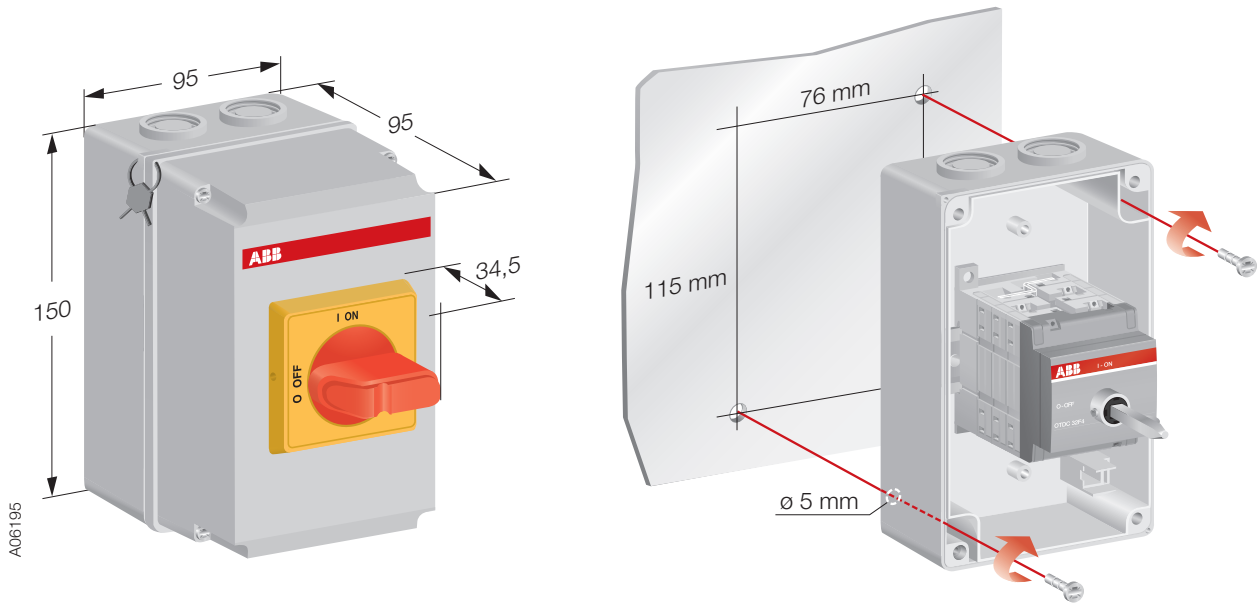
Number of poles	Rated operational current [A] DC-21B / 1000V	Type	Order number	Weight [kg]
Includes selector type red-yellow handle (I-O and ON-OFF indication)				
3	16	OTDCP16SA12M	1SCA125150R1001	0.59
3	25	OTDCP25SA12M	1SCA125151R1001	0.59
3	32	OTDCP32SA12M	1SCA125152R1001	0.59
Includes selector type black handle (I-O and ON-OFF indication)				
3	16	OTDCP16S12M	1SCA125153R1001	0.59
3	25	OTDCP25S12M	1SCA125154R1001	0.59
3	32	OTDCP32S12M	1SCA125155R1001	0.59

#### Up to 1000 VDC <sup>1)</sup>

Number of poles	Rated operational current [A] DC-21B / 1000V	Type	Order number	Weight [kg]
Includes selector type red-yellow handle (I-O and ON-OFF indication)				
4	16	OTDCP16SA22M	1SCA125094R1001	0.63
4	25	OTDCP25SA22M	1SCA125091R1001	0.63
4	32	OTDCP32SA22M	1SCA125090R1001	0.63
Includes selector type black handle (I-O and ON-OFF indication)				
4	16	OTDCP16S22M	1SCA125095R1001	0.63
4	25	OTDCP25S22M	1SCA125092R1001	0.63
4	32	OTDCP32S22M	1SCA125093R1001	0.63

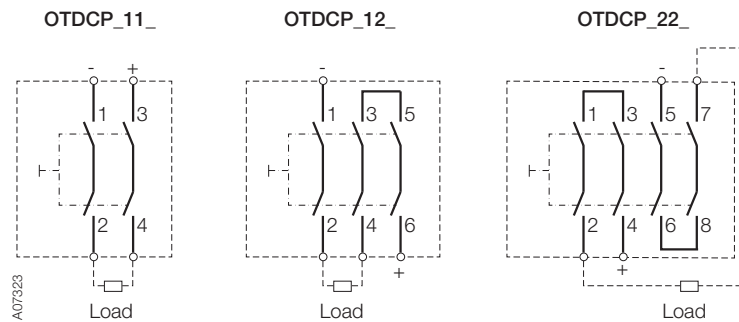
<sup>1)</sup> 1000 with all the poles in series, 660 V with two poles in series

## Dimension drawings



OTDCP10GB 12-02, 1SCC34201B0201

## Circuit diagrams



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