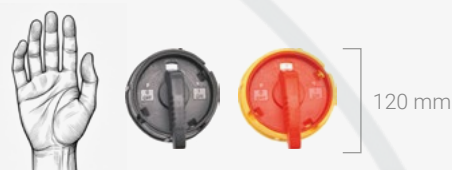


## Main, isolation and safety switches

switch positions: 2 | contacts: 3-6 + PE + N | auxiliary contacts: NO + NC + 2NC | current: 20-80A



Certified switch for versatile applications, featuring a large ergonomic Ø105 mm knob (120 mm with extended grip).



### Parameters

Designed for Ex zones

**Gases:** 1 and 2 | **Dusts:** 21 and 22

Marking according to ATEX

Ex II 2 G Ex db eb IIC T5/T6 Gb | Ex II 2 D Ex tb IIIC T85°C Db

Marking according to IECEx

Ex db eb IIC T5/T6 Gb | Ex tb IIIC T85°C Db

Knob size

Ø 105 mm (120 mm including grip)

Permissible ambient temperature

-40°C to +55°C

Degree of protection

IP66

Rated voltage

230 to 690V

Category of use

AC-3, AC-23

Rated current

20A / 25A / 35A / 40A / 63A / 75A / 80A

Short circuit protection  
(fuse ratings)

20A/25A: 20kA, 500V/35A  
30A/40A: 20kA, 500V/63A  
63A/75A/80A: 50kA, 500V/160A  
Fuse type: gG (IEC/EN 60269-1)

Rated insulation voltage ( $U_{ij}$ )

800V

Rated impulse withstand voltage ( $U_{imp}$ )

6kV

Rated short-time withstand current ( $I_{cw}$ )

3kA for 20A, 25A, 35A, 40A 10kA for 63A, 75A, 80A

Rated short-circuit making capacity ( $I_{cm}$ )

4kA (for 20A, 25A, 35A, 40) 17kA (for 63A, 75A, 80A)


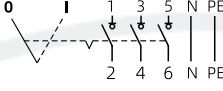

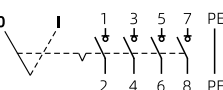

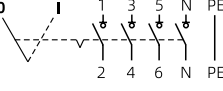





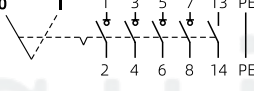

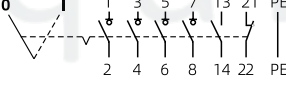
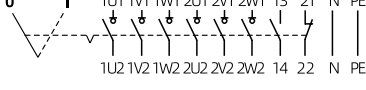
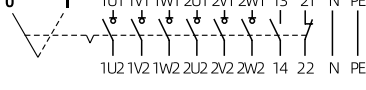
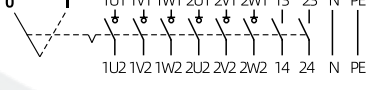
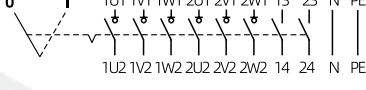
Cross section of wires

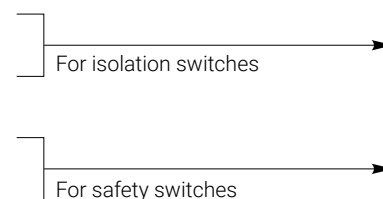
20A/25A: 2×1.5 to 4mm<sup>2</sup>  
35A/40A: 2×10mm<sup>2</sup>  
63A/75A/80A: 2×16 to 25mm<sup>2</sup>

Contact material

silver alloy

**Specifications**

Switch modules	Electrical diagram	Rated current	Weight [kg]	Reference no
 <b>20A / 25A</b>		20 / 25	0,34	<b>25A/3P-□</b>
		35 / 40	1,05	<b>40A/3P-□</b>
		63 / 75 / 80	3,57	<b>80A/3P-□</b>
 <b>35A / 40A</b>		20 / 25	0,37	<b>25A/4P-□</b>
		35 / 40	1,12	<b>40A/4P-□</b>
		63 / 75 / 80	3,91	<b>80A/4P-□</b>
 <b>35A / 40A</b>		20 / 25	0,37	<b>25A/3P+N-□</b>
		35 / 40	1,09	<b>40A/3P+N-□</b>
		63 / 75 / 80	3,92	<b>80A/3P+N-□</b>
 <b>63A / 75A / 80A</b>		20 / 25	0,37	<b>25A/3P-4-□</b>
		35 / 40	1,14	<b>40A/3P-4-□</b>
		63 / 75 / 80	3,66	<b>80A/3P-4-□</b>
 <b>63A / 75A / 80A</b>		20 / 25	0,44	<b>25A/3P-0-□</b>
		35 / 40	1,16	<b>40A/3P-0-□</b>
		63 / 75 / 80	3,69	<b>80A/3P-0-□</b>
 <b>63A / 75A / 80A</b>		20 / 25	0,44	<b>25A/4P-4-□</b>
		35 / 40	0,96	<b>40A/4P-4-□</b>
		63 / 75 / 80	3,56	<b>80A/4P-4-□</b>
 <b>63A / 75A / 80A</b>		20 / 25	0,47	<b>25A/4P-0-□</b>
		35 / 40	1,26	<b>40A/4P-0-□</b>
		63 / 75 / 80	4,05	<b>80A/4P-0-□</b>
		20 / 25	0,57	<b>25A/6P-0-□</b>
		35 / 40	1,69	<b>40A/6P-0-□</b>
		63 / 75 / 80	5,94	<b>80A/6P-0-□</b>
		20 / 25	0,57	<b>25A/6P-2-□</b>
		35 / 40	1,69	<b>40A/6P-2-□</b>
		63 / 75 / 80	5,94	<b>80A/6P-2-□</b>

**3DE1****3DB1****3DE2****3DB2**

## Main and isolation switches

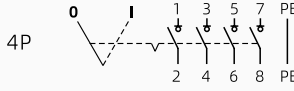
### Predefined products

Current	Photo	ATEX / IECEx	Dimensions	Cable glands	Order No
20A		II 2 G Ex db eb IIC T6 Gb [zone 1, 2] II 2 D Ex tb IIIC T85°C Db [zone 21, 22]	160 x 160 x 90	2 x M32	HCS1P 161609 S01611
25A		II 2 G Ex db eb IIC T5 Gb [zone 1, 2] II 2 D Ex tb IIIC T85°C Db [zone 21, 22]	160 x 160 x 90	2 x M32	HCS1P 161609 S01631
35A		II 2 G Ex db eb IIC T6 Gb [zone 1, 2] II 2 D Ex tb IIIC T85°C Db [zone 21, 22]	250 x 260 x 160	2 x M40	HCS1P 252616 S01711
40A		II 2 G Ex db eb IIC T5 Gb [zone 1, 2] II 2 D Ex tb IIIC T85°C Db [zone 21, 22]	250 x 260 x 160	2 x M50	HCS1P 252616 S01731
63A		II 2 G Ex db eb IIC T6 Gb [zone 1, 2] II 2 D Ex tb IIIC T85°C Db [zone 21, 22]	250 x 400 x 160	2 x M50	HCS1P 254016 S01811
80A		II 2 G Ex db eb IIC T6 Gb [zone 1, 2] II 2 D Ex tb IIIC T85°C Db [zone 21, 22]	250 x 400 x 160	2 x M50	HCS1P 254016 S01871

### Parameters

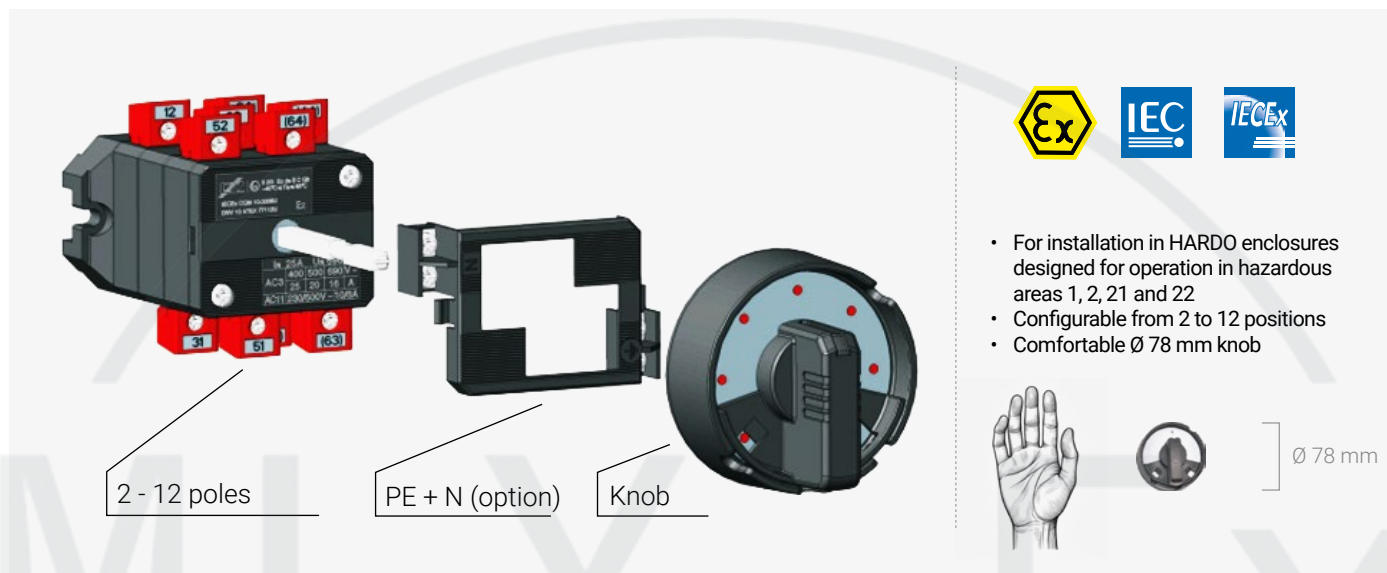
Rated voltage	up to 400V
Short-circuit protection (fuse ratings)	20A: 20kA, 500V/35A 25A: 20kA, 500V/35A 35A: 20kA, 500V/63A 40A: 20kA, 500V/63A 63A: 50kA, 500V/160A 75A: 50kA, 500V/160A Fuse type: gG (IEC/EN 60269-1)
Rated insulation voltage ( $U_i$ )	800V
Rated impulse withstand voltage ( $U_{imp}$ )	6kV
Rated short-time withstand current ( $I_{cw}$ )	3kA (for 20A, 25A, 35A, 40A) 10kA (for 63A, 75A)
Rated short-circuit making capacity ( $I_{cm}$ )	4kA (for 20A, 25A, 35A, 40A) 17kA (for 63A, 75A)
Cross section of wires	20A/25A: 2x1.5 to 4mm <sup>2</sup> 35A/40A: 2x10mm <sup>2</sup> 63A/75A: 2x16 to 25mm <sup>2</sup>

### Technical specifications

Permissible ambient temperature	-40°C to 40°C
Operating temperature	-40°C to +95°C
Degree of protection	IP66
Contact material	silver alloy
Fast action	yes, thanks to the spring release mechanism
Fire resistance	good
Electrical diagram	
On request (see previous page):	
3P	3P - 0
3P + N	4P - 4
3P - 4	4P - 0
6P - 0	
6P - 2	

## Control and main switches

switch positions: 2-12 | contacts: 2-12 + PE + N | current: 25A



The configurable, multi-position module used in HARDO switches can serve either a control or isolation function. Thanks to its modular design, the switch can have from 2 to 12 operating contact poles, as well as PE and N

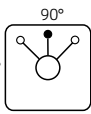
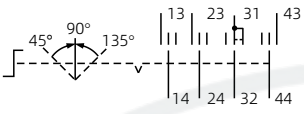
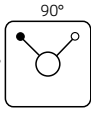
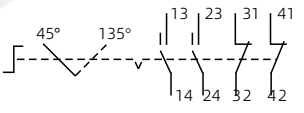
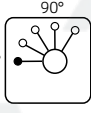
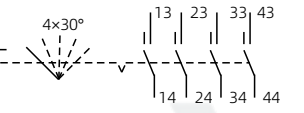
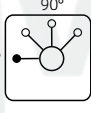
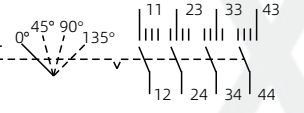
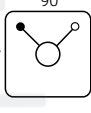
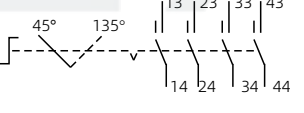
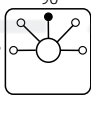
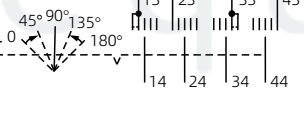
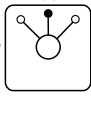
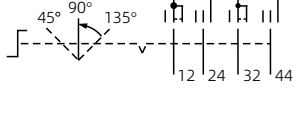
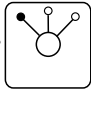
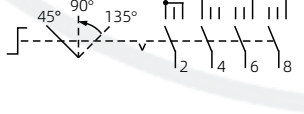
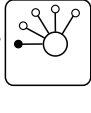
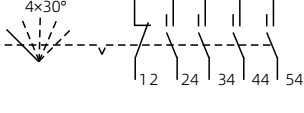
contacts. Depending on the position, the switch knob may lock or return to its original position. The device is equipped with a 78 mm diameter dial.

### Parameters

Designed for Ex zones	<b>Gases:</b> 1 and 2   <b>Dusts:</b> 21 and 22
Marking according to ATEX	Ex II 2 G Ex db eb IIC T5/T6 Gb   Ex II 2 D Ex tb IIIC T85°C Db
Marking according to IECEx	Ex db eb IIC T5/T6 Gb   Ex tb IIIC T85°C Db
Knob size	Ø 78 mm
Permissible ambient temperature	-40°C to +55°C
Degree of protection	IP66
Rated voltage	230 to 690V
Rated current	25A
Short circuit protection (fuse ratings)	25A: 20kA, 500V/35A Fuse type: gG (IEC/EN 60269-1)
Rated insulation voltage ( $U_i$ )	800V
Rated impulse withstand voltage ( $U_{imp}$ )	6kV
Rated short-time withstand current ( $I_{cw}$ )	3kA
Rated short-circuit making capacity ( $I_{cm}$ )	4kA
Cross section of wires	25A: 2×1.5 to 4mm <sup>2</sup>
Contact material	silver alloy

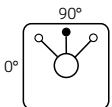
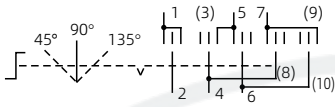
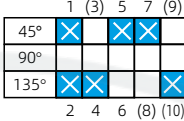
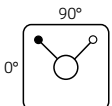
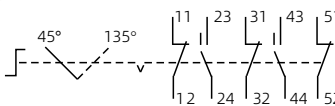
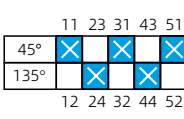
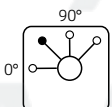
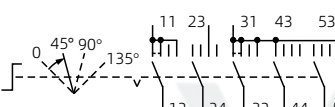
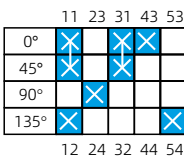
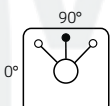
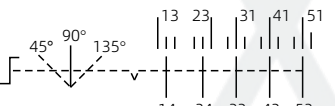
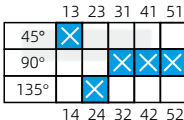
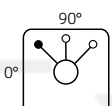
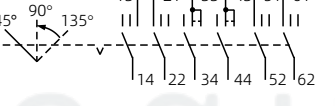
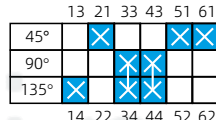
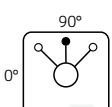

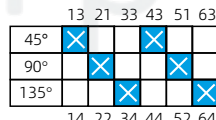
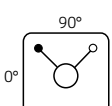
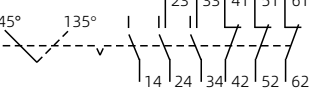
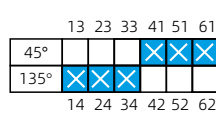
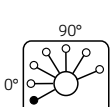
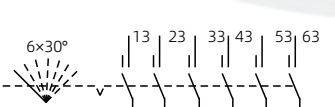
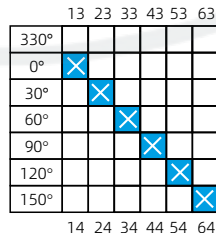
Switch positions		Contact diagram	Weight [kg]	Reference no
	2P		0.350	<b>25A/02-101-5TD</b>
			0.350	<b>25A/02-102-5TD</b>
			0.350	<b>25A/02-103-5TD</b>
			0.350	<b>25A/02-104-5TD</b>
	3P		0.410	<b>25A/03-104-5TD</b>
			0.410	<b>25A/03-105-5TD</b>
			0.410	<b>25A/03-106-5TD</b>
	4P		0.440	<b>25A/04-100-5TD</b>
			0.440	<b>25A/04-101-5TD</b>
			0.440	<b>25A/04-102-5TD</b>

Other configurations are available upon request.

Switch positions		Contact diagram	Weight [kg]	Reference no
	4P		0.440	<b>25A/04-103-5TD</b>
			0.440	<b>25A/04-104-5TD</b>
			0.440	<b>25A/04-105-5TD</b>
			0.440	<b>25A/04-106-5TD</b>
			0.440	<b>25A/04-107-5TD</b>
			0.440	<b>25A/04-108-5TD</b>
			0.440	<b>25A/04-109-5TD</b>
			0.440	<b>25A/04-110-5TD</b>
	5P		0.520	<b>25A/05-101-5TD</b>

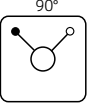
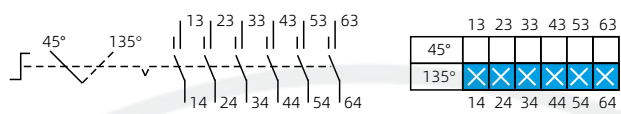
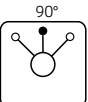
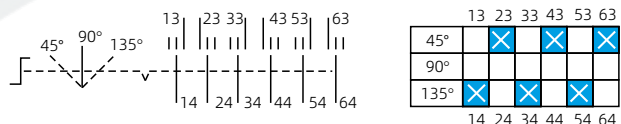
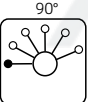
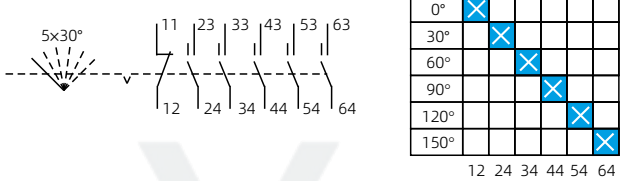
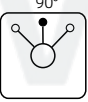
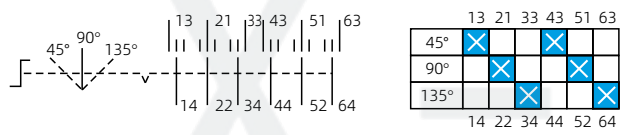

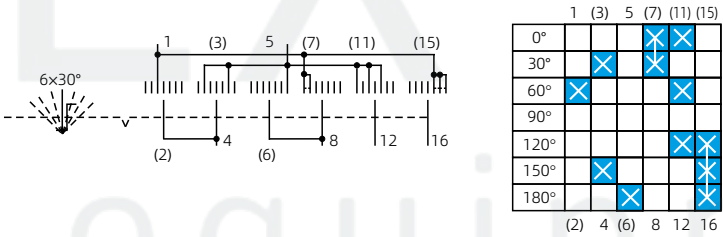

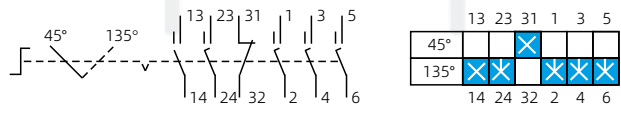
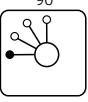
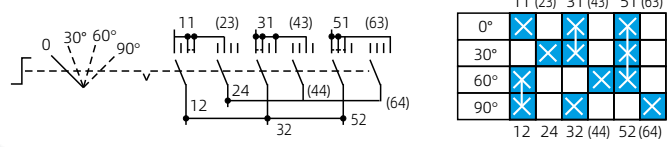

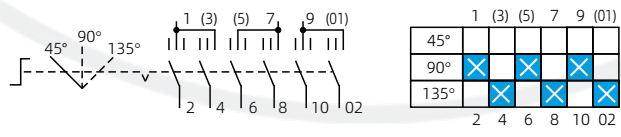

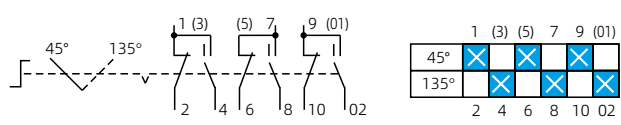
Other configurations are available upon request.



Switch positions		Contact diagram	Weight [kg]	Reference no
		 	0.520	<b>25A/05-102-5TD</b>
		 	0.520	<b>25A/05-103-5TD</b>
	5P	 	0.520	<b>25A/05-104-5TD</b>
		 	0.520	<b>25A/05-105-5TD</b>
		 	0.550	<b>25A/06-101-5TD</b>
		 	0.550	<b>25A/06-102-5TD</b>
	6P	 	0.550	<b>25A/06-103-5TD</b>
		 	0.610	<b>*25A/06-104-5TD</b>

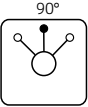
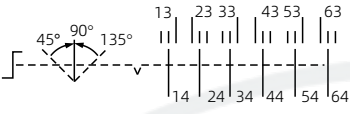
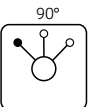
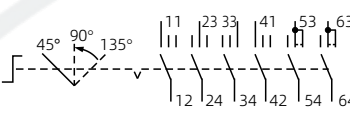
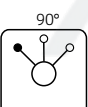
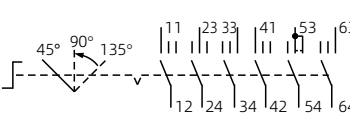
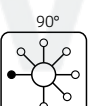
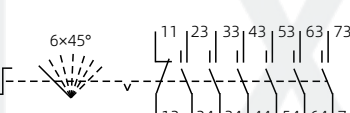
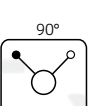
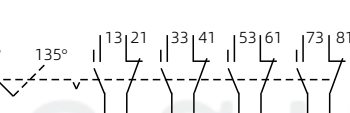
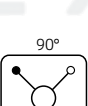
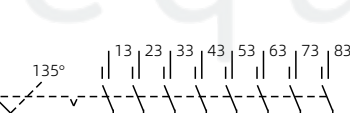
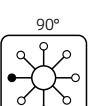
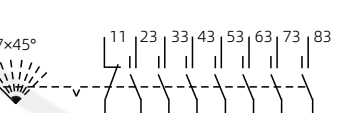
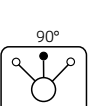
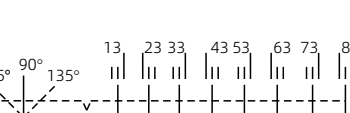
\* 25A/06-104TD The external dimensions of this switch correspond to 8 poles switch.

Other configurations are available upon request.

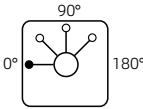
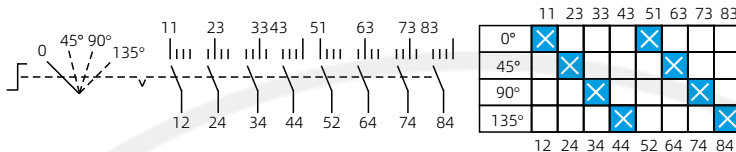
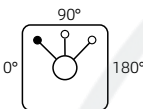
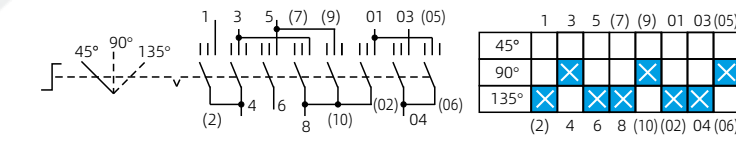
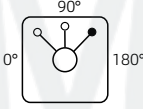
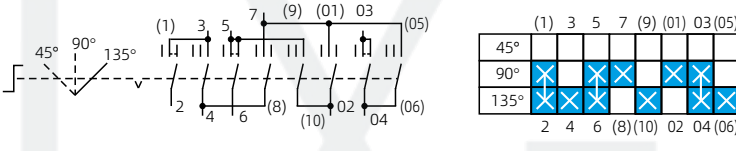
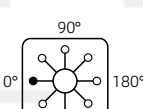
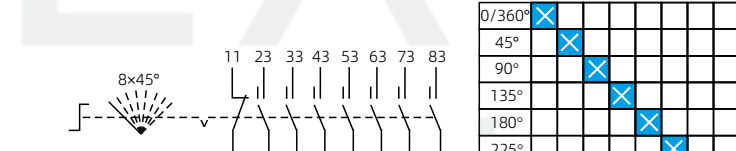
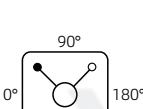
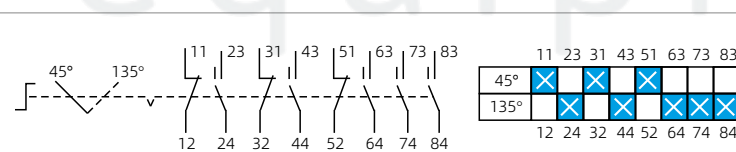
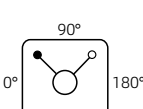
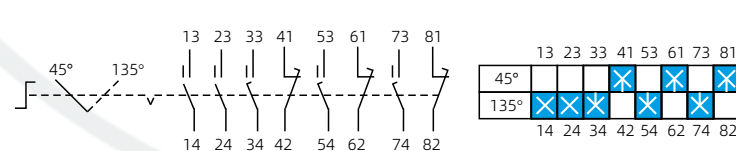
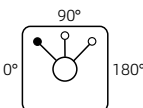
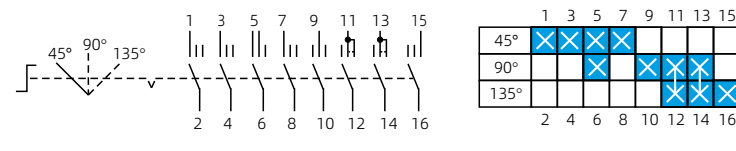
Switch positions	Contact diagram	Weight [kg]	Reference no
		0.550	<b>25A/06-105-5TD</b>
		0.550	<b>25A/06-106-5TD</b>
		0.550	<b>25A/06-107-5TD</b>
		0.550	<b>25A/06-108-5TD</b>
		0.550	<b>25A/06-109-5TD</b>
		0.550	<b>25A/06-110-5TD</b>
		0.550	<b>25A/06-111-5TD</b>
		0.550	<b>25A/06-112-5TD</b>
		0.550	<b>25A/06-113-5TD</b>

Other configurations are available upon request.

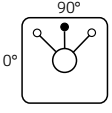
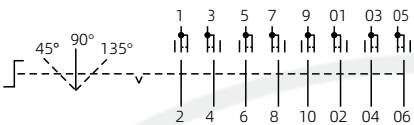
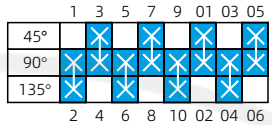
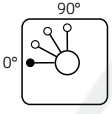

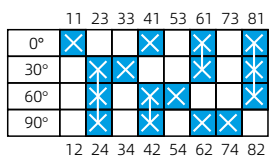
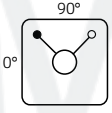
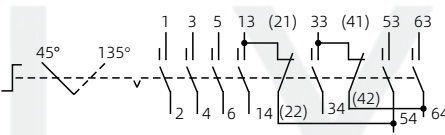
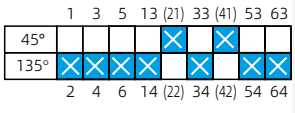
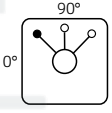
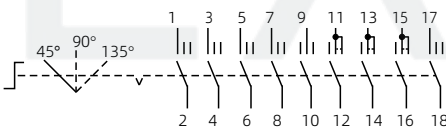
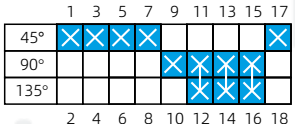
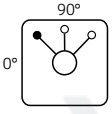
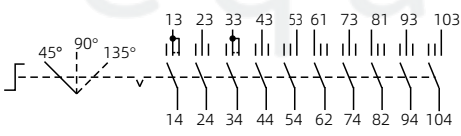
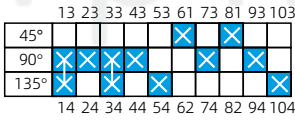
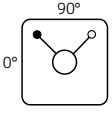
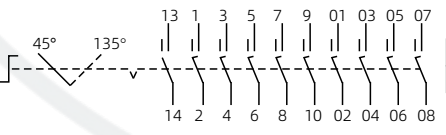
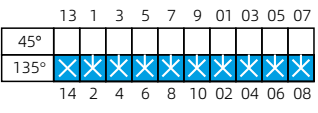
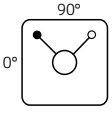
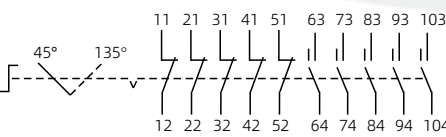
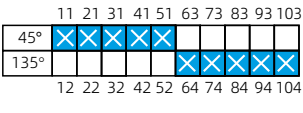


Switch positions		Contact diagram	Weight [kg]	Reference no
			0.550	<b>25A/06-114-5TD</b>
	6P		0.550	<b>25A/06-115-5TD</b>
			0.550	<b>25A/06-116-5TD</b>
	7P		0.620	<b>25A/07-101-5TD</b>
			0.650	<b>25A/08-101-5TD</b>
			0.650	<b>25A/08-102-5TD</b>
	8P		0.650	<b>25A/08-103-5TD</b>
			0.650	<b>25A/08-104-5TD</b>

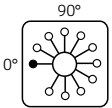
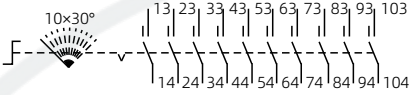
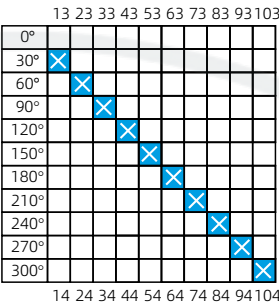
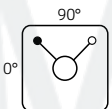
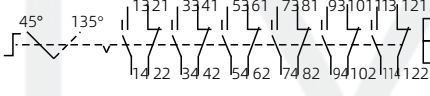
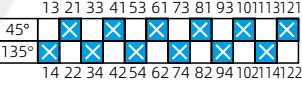
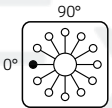
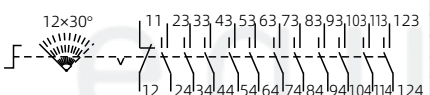
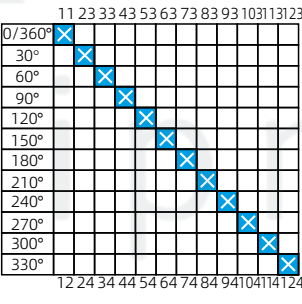
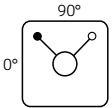
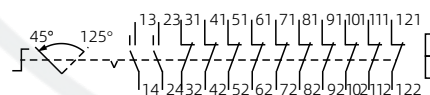
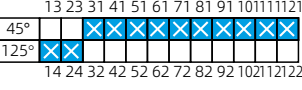
Other configurations are available upon request.

Switch positions	Contact diagram	Weight [kg]	Reference no
		0.650	<b>25A/08-105-5TD</b>
		0.650	<b>25A/08-106-5TD</b>
		0.650	<b>25A/08-107-5TD</b>
		0.650	<b>25A/08-108-5TD</b>
		0.650	<b>25A/08-109-5TD</b>
		0.650	<b>25A/08-110-5TD</b>
		0.650	<b>25A/08-111-5TD</b>

Other configurations are available upon request.

Switch positions	Contact diagram	Weight [kg]	Reference no
	 	0.650	<b>25A/08-112-5TD</b>
8P			
	 	0.650	<b>25A/08-113-5TD</b>
	 	0.720	<b>25A/09-101-5TD</b>
9P			
	 	0.720	<b>25A/09-102-5TD</b>
	 	0.740	<b>25A/10-101-5TD</b>
	 	0.740	<b>25A/10-102-5TD</b>
10P			
	 	0.740	<b>25A/10-103-5TD</b>

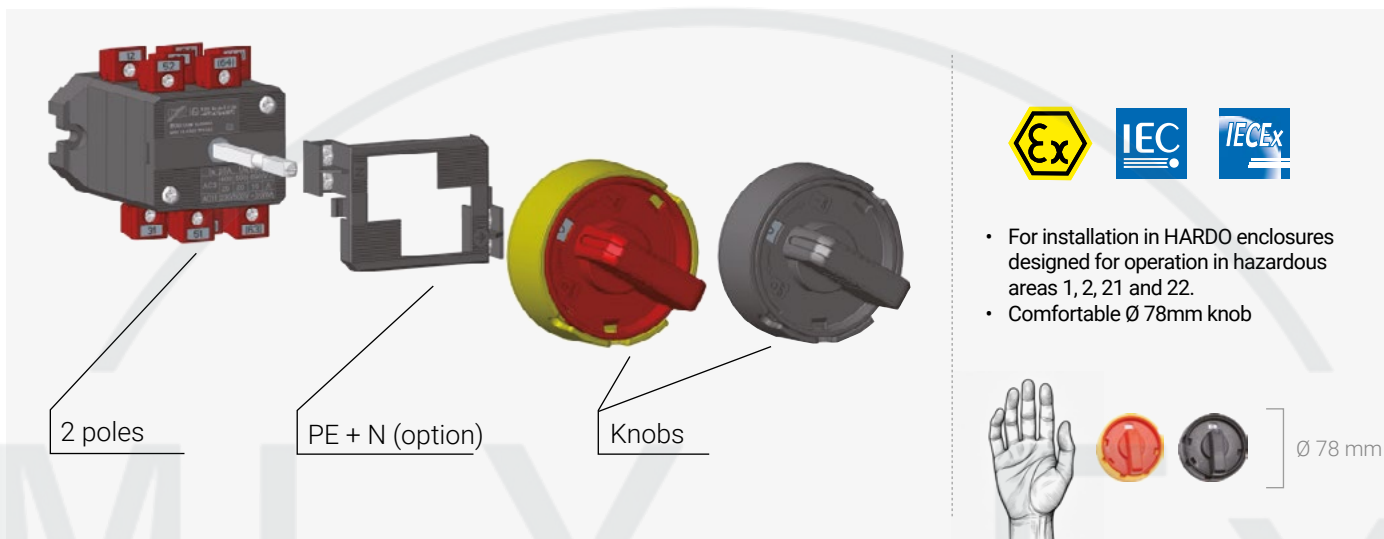
Other configurations are available upon request.

Switch positions	Contact diagram	Weight [kg]	Reference no
 <p>90° 0° 180°</p>	<p>10P</p>  	0.800	<b>*25A/10-100-5TD</b>
 <p>90° 0° 180°</p>	 	0.840	<b>25A/12-101-5TD</b>
 <p>90° 0° 180°</p>	<p>12P</p>  	0.840	<b>25A/12-102-5TD</b>
 <p>90° 0° 180°</p>	 	0.840	<b>25A/12-103-5TD</b>

\* The external dimensions of this switch correspond to 12 poles switch.  
Other configurations are available upon request.

## Control and main switches

switch positions: 2 | contacts: 3-8 + PE + N | current: 25A

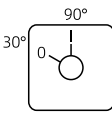
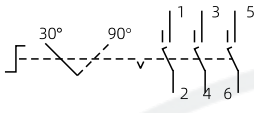
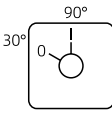
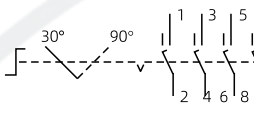
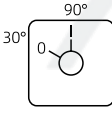
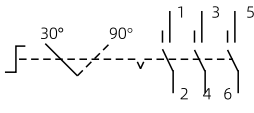
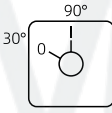
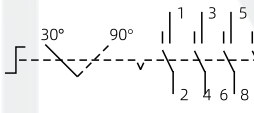
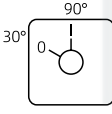
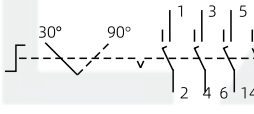
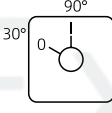
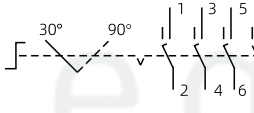
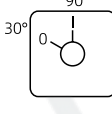
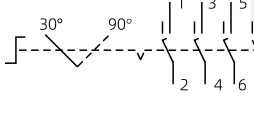
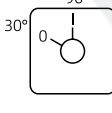
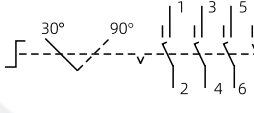
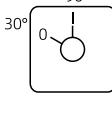
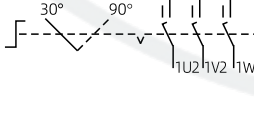
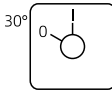
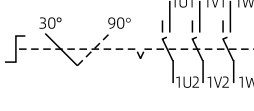


The two-position module used in HARDO switches allows safe control and isolation of electrical circuits in hazardous areas. The modular design offers extensive configuration possibilities — depending on requirements, a switch built on this module can be equipped with 3 to 8 contacts, as well as PN and N contacts. The integrated spring-operated quick-

make and quick-break mechanism ensures reliable and durable operation. Silver alloy contacts and stainless steel screws guarantee high conductivity and corrosion resistance. In addition, the module features a long isolation path, which increases the safety of use.

### Parameters

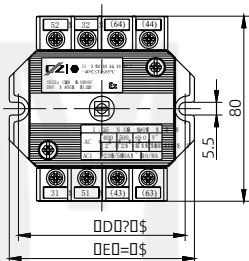
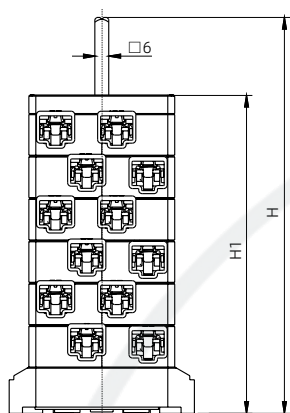
Designed for Ex zones	<b>Gases:</b> 1 and 2   <b>Dusts:</b> 21 and 22
Marking according to ATEX	Ex II 2 G Ex db eb IIC T5/T6 Gb   Ex II 2 D Ex tb IIIC T85°C Db
Marking according to IECEx	Ex db eb IIC T5/T6 Gb   Ex tb IIIC T85°C Db
Knob size	Ø 78 mm
Permissible ambient temperature	-40°C to +55°C
Degree of protection	IP66
Rated voltage	230 to 690V
Rated current	25A
Short circuit protection (fuse ratings)	25A: 20kA, 500V/35A Fuse type: gG (IEC/EN 60269-1)
Rated insulation voltage ( $U_i$ )	800V
Rated impulse withstand voltage ( $U_{imp}$ )	6kV
Rated short-time withstand current ( $I_{cw}$ )	3kA
Rated short-circuit making capacity ( $I_{cm}$ )	4kA
Cross section of wires	25A: 2×1.5 to 4mm <sup>2</sup>
Contact material	silver alloy

Switch positions		Contact diagram	Weight [kg]	Reference no
	3P		0.410	<b>25A/3P-5PD</b>
	4P		0.440	<b>25A/4P-5PD</b>
	3P		0.410	<b>25A/03-5PD</b>
	4P		0.440	<b>25A/04-5PD</b>
	4P		0.440	<b>25A/3P-4-5PD</b>
	5P		0.520	<b>25A/3P-0-5PD</b>
	5P		0.520	<b>25A/3P-2-5PD</b>
	6P		0.550	<b>25A/3P-5-5PD</b>
	8P		0.650	<b>25A/6P-0-5PD</b>
			0.650	<b>25A/6P-2-5PD</b>

D - black knob (optional E - red knob)

Other configurations are available upon request.

## Switch module dimensions

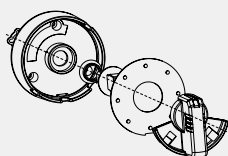


Layers / poles	H1	H
1/2P	47	106
2/3P-4P	65	106
3/5P-6P	83	151
4/7P-8P	101	151
5/9P-10P	119	171
6/11P-12P	137	171

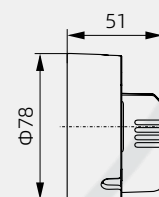
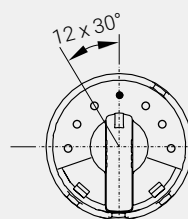
1. Each layer has two separate switch contacts or one switch contact and one cap.
2. Maximum of 6 layers / 12 poles.

## Knobs for modules up to 25A

### Control switches (2 - 12 positions), up to 25A



5TD



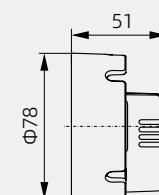
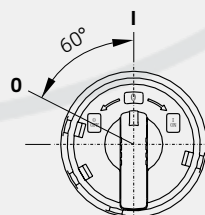
### Main and safety switches (2 positions), up to 25A



5PE



5PD





## Motor switches

switch positions: 2 | contacts: 3 + NO, NC, PE, D1, D2 | overload trigger: 0,1-25A



Certified motor switch with a large 97 mm diameter knob that allows the motor to be operated even with work gloves




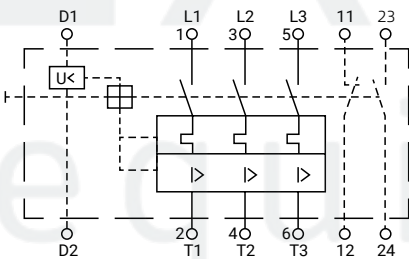
Ø 97 mm

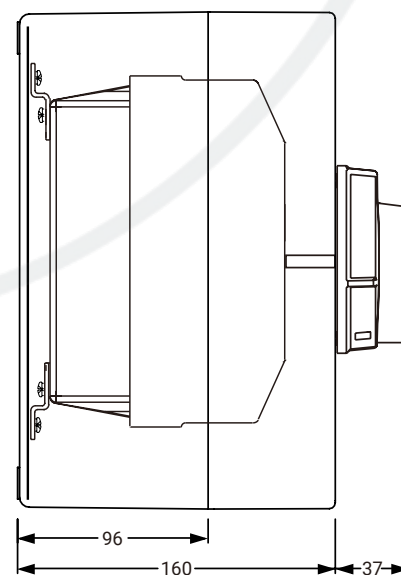
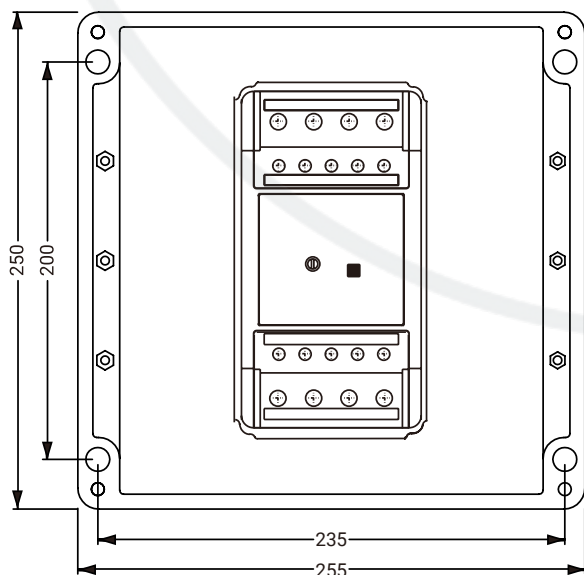
The HARDO motor circuit breaker provides comprehensive protection for electric motors against overload, short circuit, overheating, phase loss and optional voltage drop. Its robust design and wide range of current settings

allow it to be used in a variety of industrial applications. The device effectively protects motors from damage resulting from adverse operating conditions.

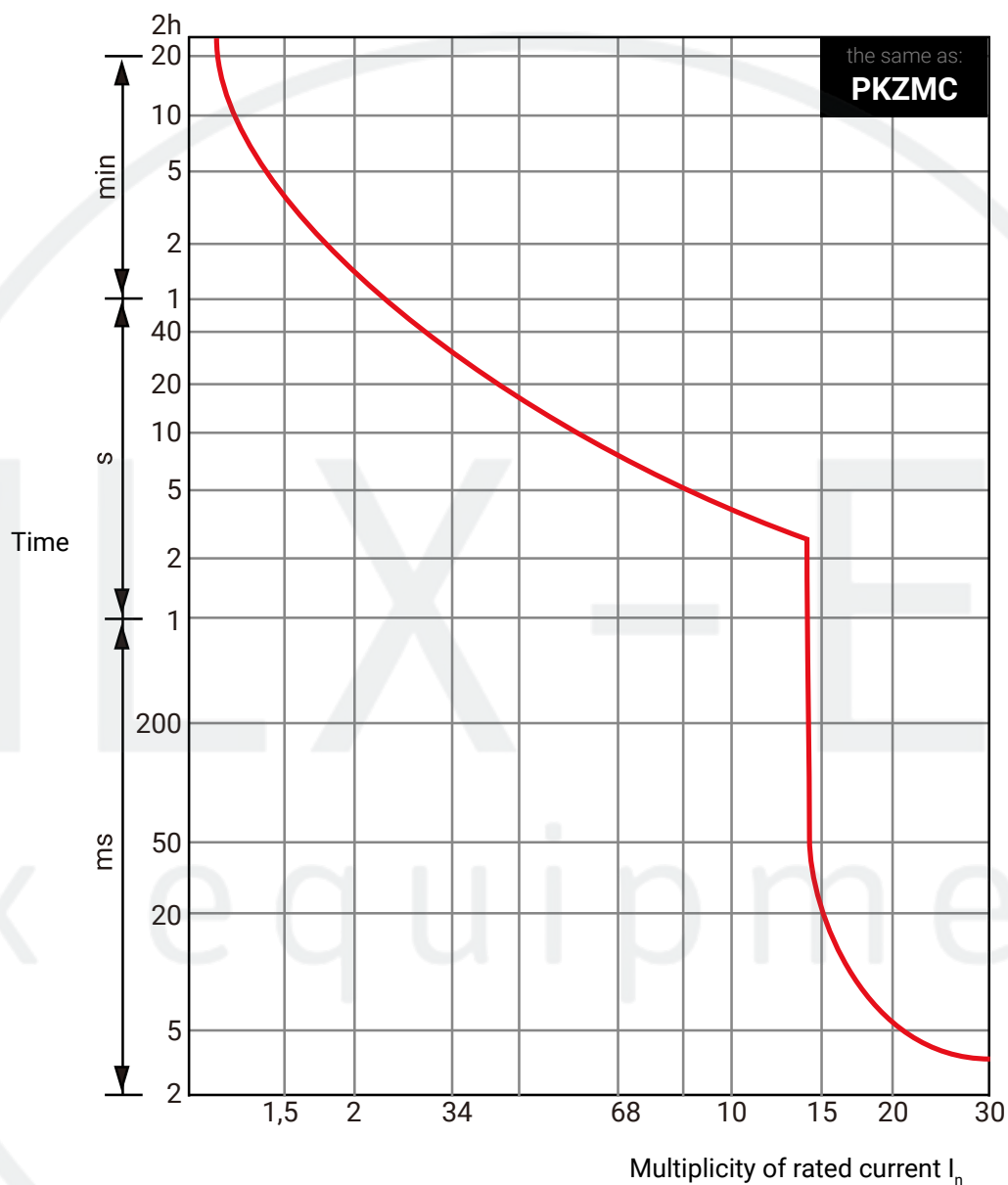
### Parameters

Designed for Ex zones	<b>Gases:</b> 1 and 2   <b>Dusts:</b> 21 and 22
Marking according to ATEX	Ex II 2 G Ex db eb IIC T4/T5/T6 Gb   Ex II 2 D Ex tb IIIC T85°C Db
Marking according to IECEx	Ex db eb IIC T5/T6 Gb   Ex tb IIIC T85°C Db
Knob size	Ø 97 mm
Permissible ambient temperature	-40°C to +55°C
Degree of protection	IP66
Rated voltage	440V
Applied protections:	<ul style="list-style-type: none"><li>▶ overload protection</li><li>▶ undervoltage protection (optional)</li><li>▶ phase failure protection</li><li>▶ short-circuit protection</li><li>▶ thermal protection</li></ul>
Overload trip range	0.1 to 25A
Motor switching capacity in AC-3 category	up to 440V / 25A
Main contacts	from 1 to 10 mm <sup>2</sup> (from 6 to 10 mm <sup>2</sup> using collets)
Auxiliary contacts	1 to 2.5 mm <sup>2</sup>
Auxiliary contact capacity	AC15 1A / 230V
Rated switching capacity	high - up to 65 kA

Photo	Overload trip range	Rated switching capacity (making and breaking)	Cable glands	Order No
 <p>~6,25 kg 250 x 260 x 160 mm</p>	0.1 - 0.16A	65kA	2 x M25	HCS1P 252616 S01211
	0.16 - 0.25A	65kA	2 x M25	HCS1P 252616 S01221
	0.25 - 0.4A	65kA	2 x M25	HCS1P 252616 S01231
	0.4 - 0.63A	65kA	2 x M25	HCS1P 252616 S01241
	0.63 - 1A	65kA	2 x M25	HCS1P 252616 S01251
	1 - 1.6A	65kA	2 x M25	HCS1P 252616 S01261
	1.6 - 2.5A	65kA	2 x M25	HCS1P 252616 S01271
	2.5 - 4A	16kA	2 x M25	HCS1P 252616 S01281
	4 - 6.3A	16kA	2 x M25	HCS1P 252616 S01291
	6.3 - 10A	16kA	2 x M25	HCS1P 252616 S01301
	10 - 16A	16kA	2 x M25	HCS1P 252616 S01311
	16 - 20A	12kA	2 x M32	HCS1P 252616 S01321
	20 - 25A	12kA	2 x M32	HCS1P 252616 S01331
Electrical diagram			Options	
			<p>1 - basic version without trigger undervoltage and auxiliary contacts  2 - with undervoltage trigger  3 - with auxiliary contacts 1NO + 1NC with undervoltage trigger and auxiliary contacts 1NO + 1NC</p>	



## Trigger characteristics (ambient temp. 30°C)



## Motor switch knob



8003/2DA

