HCS1P Series for Zones 1/2 and 21/22

Switches / selector switches for hazardous areas



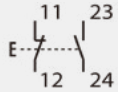
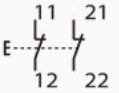
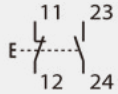
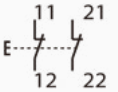
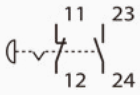
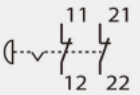
Design features

- **The robust, thick enclosure walls (4.5–9 mm)** ensure high structural rigidity and allow the use of threads with a large number of turns, further enhancing the device's reliability.
- **Silicone cover gasket**, which effectively protects the interior of the case from the ingress of moisture and dirt.
- **Cover screws**, made of AISI 316L stainless steel, guarantee durability and resistance to harmful external factors.
- **Internal mounting screws**, made of corrosion-resistant materials, significantly increase the durability and service life of the entire structure.

In this section you will find	Description	70-92
Emergency switches	Contacts: 1NO, 1NC, 2NC Type: mushroom head Others on request	71
Momentary switches	Contacts: 1NO, 1NC Type: mushroom head Others on request	72
Illuminated momentary switches	Contacts: 2NO Type: switch with knob / key Others on request	73
Control switches	Contacts: 1NO Type: switch with knob / key Others on request	74, 78-89
Main switches	Contacts: 3-6 + PE + N + NO + NC + 2NC Type: switch with large knob (padlock) Current: up to 80A	75-89
Isolation switches	Contacts: 3-6 + PE + N + NO + NC + 2NC Type: switch with large knob (padlock) Current: up to 80A	75-77
Motor switches	Contacts: 3 + NO, NC, PE, D1, D2 Type: switch with large knob (padlock) Overload trip: 0.1-25A	90-92

Emergency switches

Predefined products

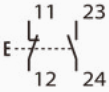
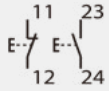
Photo	Electrical diagram		Description	Cable glands	Order No
Pull to release					
		1NO + 1NC	1 x mushroom button	1 x M25	HCS1P 121209 S10001
		2NC	1 x mushroom button	1 x M25	HCS1P 121209 S10002
		1NO + 1NC	1 x mushroom button Pull to release	1 x M25	HCS1P 121209 S10003
		2NC	1 x mushroom button Pull to release	1 x M25	HCS1P 121209 S10004
Twist to release					
		1NO + 1NC	1 x mushroom button Twist to release	1 x M25	HCS1P 121209 S10011
		2NC	1 x mushroom button Twist to release	1 x M25	HCS1P 121209 S10012

Parameters

Designed for Ex zones	**Gases:** 1 and 2 | **Dusts:** 21 and 22
ATEX certificate	FIDI 22 ATEX 0065X
IECEx certification	IECEx FIDI 22.0008X
Marking according to ATEX (2014/34/EU)	Ⓔx II 2 G Ex db eb IIC/IIB T6....T4 Gb | Ⓔx II 2 D Ex tb IIIC T85°C
Marking according to IECEx	Ex db eb IIC/IIB T6...T4 Gb | Ex tb IIIC T85°C
Dimensions (L x W x H)	120 x 120 x 90 mm
Product weight	~0,4 kg
Mechanical life	1 million cycles
Housing material	glass fiber reinforced polyester (GRP)
Permissible ambient temperature	-20°C to 40°C (optional -50°C to 60°C)
Degree of protection according to EN 60529	IP66
Max voltage	400 V AC
Rated current	16 A
Protection class	I
Short-circuit protection	16A / 500V
Terminals	2 x 2,5 mm^2

Momentary switches

Predefined products

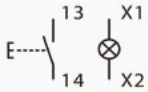
Photo	Electrical diagram		Description	Cable glanads	Order No
		1NO + 1NC	1 x monostable button colour: green	1 x M25	HCS1P 121209 S10051
		1NO + 1NC	1 x monostable double button colours: red, green	1 x M25	HCS1P 121209 S10101

Parameters

Designed for Ex zones	**Gases:** 1 and 2 | **Dusts:** 21 and 22
ATEX certificate	FIDI 22 ATEX 0065X
IECEx certification	IECEx FIDI 22.0008X
Marking according to ATEX (2014/34/EU)	Ⓔx II 2 G Ex db eb IIC/IIB T6....T4 Gb | Ⓔx II 2 D Ex tb IIIC T85°C
Marking according to IECEx	Ex db eb IIC/IIB T6...T4 Gb | Ex tb IIIC T85°C
Dimensions (L x W x H)	120 x 120 x 90 mm
Product weight	~0,4 kg
Mechanical life	1 million cycles
Housing material	glass fiber reinforced polyester (GRP)
Permissible ambient temperature	-20°C to 40°C (optional -50°C to 60°C)
Degree of protection according to EN 60529	IP66
Max voltage	400 V AC
Rated current	16 A
Protection class	I
Short-circuit protection	16A / 500V
Terminals	2 x 2,5 mm^2

Illuminated momentary switches

Predefined products

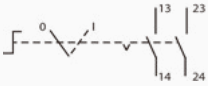
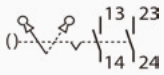
Photo	Electrical diagram		Description	Cable glands	Order No
		1NO	1 x illuminated push button colour: ● red	1 x M25	HCS1P 121209 S10301
		1NO	1 x illuminated push button colour: ● green	1 x M25	HCS1P 121209 S10302
		1NO	1 x illuminated push button colour: ● yellow	1 x M25	HCS1P 121209 S10303
		1NO	1 x illuminated push button colour: ● blue	1 x M25	HCS1P 121209 S10304
		1NO	1 x illuminated button, 1NO colour: ○ white	1 x M25	HCS1P 121209 S10305

Parameters

Designed for Ex zones	**Gases:** 1 and 2 | **Dusts:** 21 and 22
ATEX certificate	FIDI 22 ATEX 0065X
IECEx certification	IECEx FIDI 22.0008X
Marking according to ATEX (2014/34/EU)	Ex II 2 G Ex db eb IIC/IIB T6....T4 Gb | Ex II 2 D Ex tb IIIC T85°C
Marking according to IECEx	Ex db eb IIC/IIB T6...T4 Gb | Ex tb IIIC T85°C
Dimensions (L x W x H)	120 x 120 x 90 mm
Product weight	~0,4 kg
Mechanical life	1 million cycles
Housing material	glass fiber reinforced polyester (GRP)
Permissible ambient temperature	-20°C to 40°C (optional -50°C to 60°C)
Degree of protection according to EN 60529	IP66
Max voltage	400 V AC
Rated current	16 A
Protection class	I
Short-circuit protection	16A / 500V
Terminals	2 x 2,5 mm^2

Control switches

Predefined products

Photo	Electrical diagram		Description	Cable glands	Order No
	 2NO 		1 x control switch 2 stable positions description: 0 - I	1 x M25	HCS1P 121209 S10151
	 2NO 		1 x control switch 3 stable positions description: I - 0 - II	1 x M25	HCS1P 121209 S10171
	 2NO		1 x key-operated switch 2 positions: stable	1 x M25	HCS1P 121209 S10201

Parameters

Designed for Ex zones	**Gases:** 1 and 2 | **Dusts:** 21 and 22
ATEX certificate	FIDI 22 ATEX 0065X
IECEx certification	IECEx FIDI 22.0008X
Marking according to ATEX (2014/34/EU)	Ⓔx II 2 G Ex db eb IIC/IIB T6....T4 Gb | Ⓔx II 2 D Ex tb IIIC T85°C
Marking according to IECEx	Ex db eb IIC/IIB T6...T4 Gb | Ex tb IIIC T85°C
Dimensions (L x W x H)	120 x 120 x 90 mm
Product weight	~0,4 kg
Mechanical Life:	1 million cycles
Housing material	glass fiber reinforced polyester (GRP)
Permissible ambient temperature	-20°C to 40°C (optional -50°C to 60°C)
Degree of protection according to EN 60529	IP66
Max voltage	400 V AC
Rated current	16 A
Protection class	I
Short-circuit protection:	16A / 500V
Terminals	2 x 2,5 mm^2

Main, isolation and safety switches

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



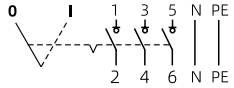
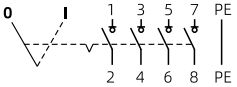
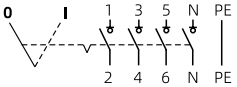
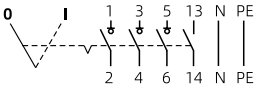
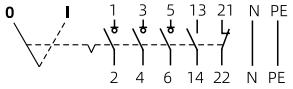
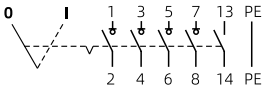
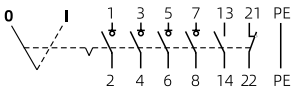
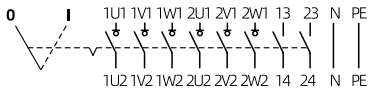
Certified switch for versatile applications, featuring a large ergonomic Ø105 mm knob (120 mm with extended grip).



Parameters

Designed for Ex zones	**Gases:** 1 and 2 | **Dusts:** 21 and 22
Marking according to ATEX	Ⓔx II 2 G Ex db eb IIC T5/T6 Gb | Ⓔx 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_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, 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 4mm² 35A/40A: 2×10mm² 63A/75A/80A: 2×16 to 25mm²
Contact material	silver alloy

Specifications

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

 **3DE1**

 **3DE2**

 **3DB1**

 **3DB2**

For isolation switches

For safety switches

Main and isolation switches

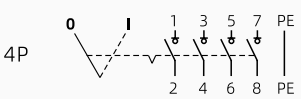
Predefined products

Current	Photo	ATEX / IECEx	Dimensions	Cable glands	Order No
20A		Ex II 2 G Ex db eb IIC T6 Gb [zone 1, 2] Ex II 2 D Ex tb IIIC T85°C Db [zone 21, 22]	160 x 160 x 90	2 x M32	HCS1P 161609 S01611
25A		Ex II 2 G Ex db eb IIC T5 Gb [zone 1, 2] Ex II 2 D Ex tb IIIC T85°C Db [zone 21, 22]	160 x 160 x 90	2 x M32	HCS1P 161609 S01631
35A		Ex II 2 G Ex db eb IIC T6 Gb [zone 1, 2] Ex II 2 D Ex tb IIIC T85°C Db [zone 21, 22]	250 x 260 x 160	2 x M40	HCS1P 252616 S01711
40A		Ex II 2 G Ex db eb IIC T5 Gb [zone 1, 2] Ex II 2 D Ex tb IIIC T85°C Db [zone 21, 22]	250 x 260 x 160	2 x M50	HCS1P 252616 S01731
63A		Ex II 2 G Ex db eb IIC T6 Gb [zone 1, 2] Ex II 2 D Ex tb IIIC T85°C Db [zone 21, 22]	250 x 400 x 160	2 x M50	HCS1P 254016 S01811
80A		Ex II 2 G Ex db eb IIC T6 Gb [zone 1, 2] Ex 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 ($_{Ui}$)	800V
Rated impulse withstand voltage (U_{imp})	6kV
Rated short-time withstand current ($_{Icw}$)	3kA (for 20A, 25A, 35A, 40A) 10kA (for 63A, 75A)
Rated short-circuit making capacity ($_{Icm}$)	4kA (for 20A, 25A, 35A, 40) 17kA (for 63A, 75A)
Cross section of wires	20A/25A: 2×1.5 to 4mm² 35A/40A: 2×10mm² 63A/75A: 2×16 to 25mm²

Technical specifications

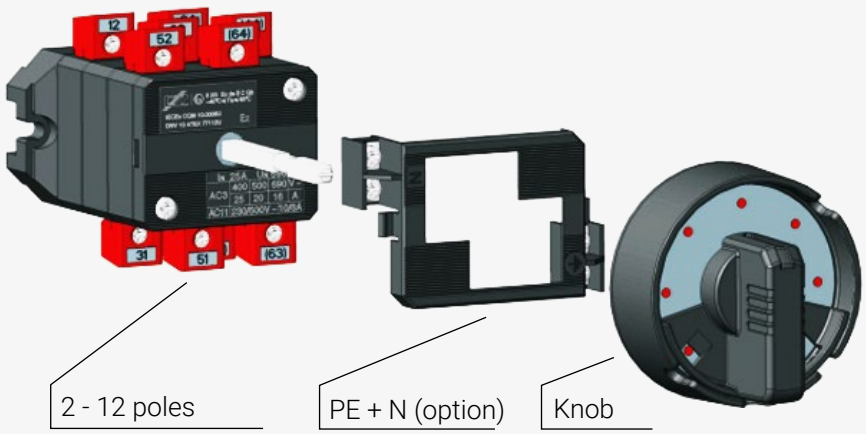
Permissible ambient temperature	-40°C to 40°C
Operating temperature	-40°C to +95°C
Degree of protection	IP66
Contact material	silver alloy
Fast action	yes, thanks to the spring release mechanism
Fire resistance	good
Electrical diagram	

On request (see previous page):

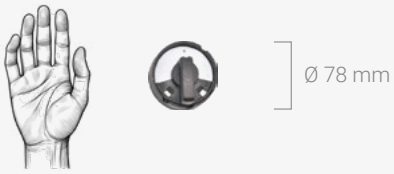
3P	3P - 0	6P - 0
3P + N	4P - 4	6P - 2
3P - 4	4P - 0	

Control and main switches

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

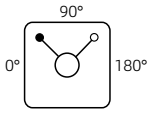
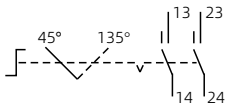
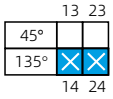
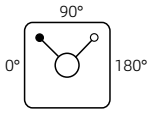
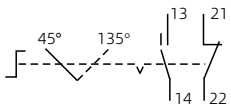
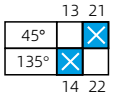
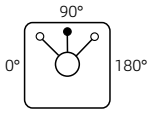
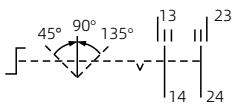
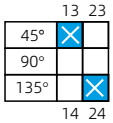
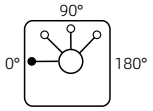
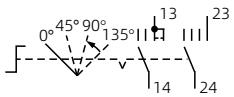
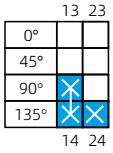
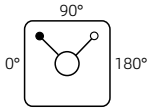
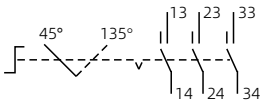
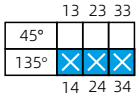
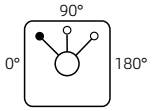
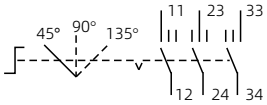
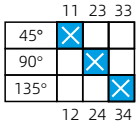
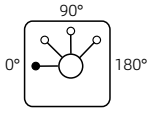
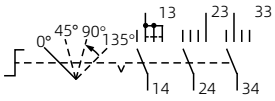
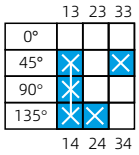
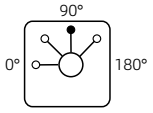
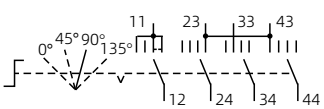
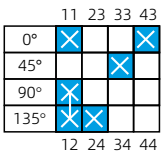
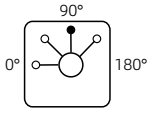
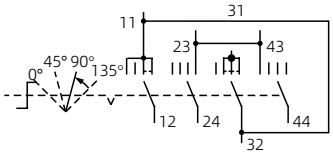
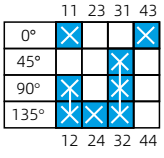
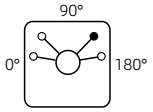
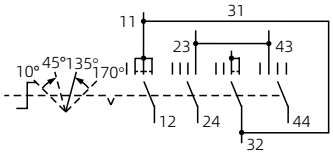
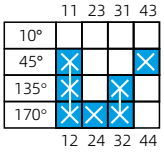


- For installation in HARDO enclosures designed for operation in hazardous areas 1, 2, 21 and 22
- Configurable from 2 to 12 positions
- Comfortable Ø 78 mm knob

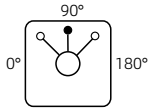
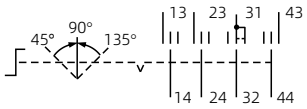
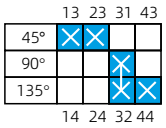
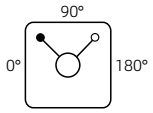
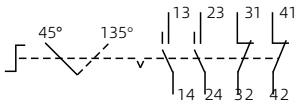
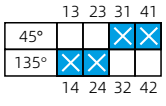
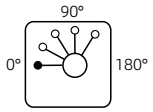
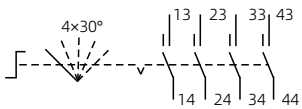
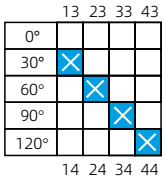
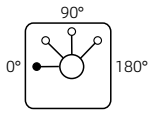
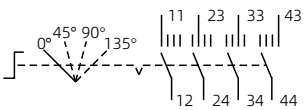
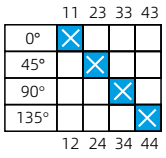
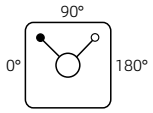
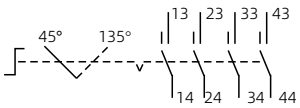
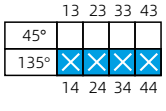
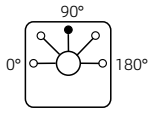
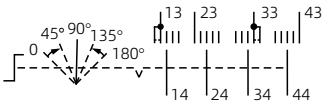
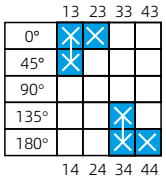
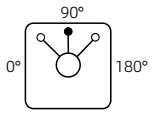
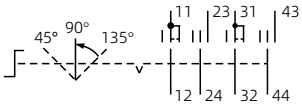
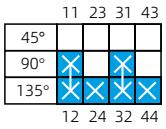
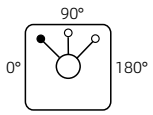
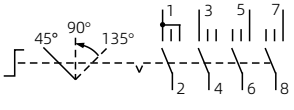
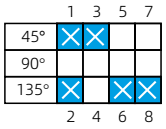
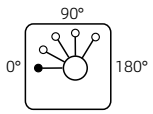
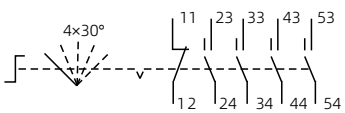
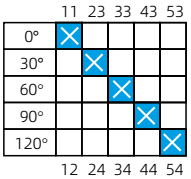


The configurable, multi-position module used in HARDO switches can serve either a control or isolation function. Thanks to its modular design, the switch can have from 2 to 12 operating contact poles, as well as PE and N contacts. Depending on the position, the switch knob may lock or return to its original position. The device is equipped with a 78 mm diameter dial.

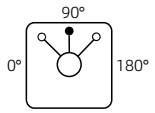
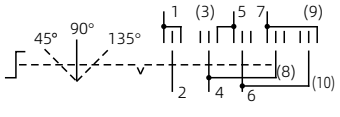
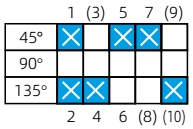
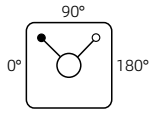
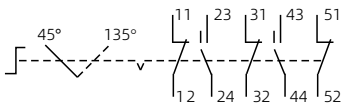
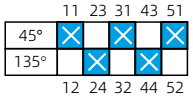
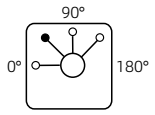
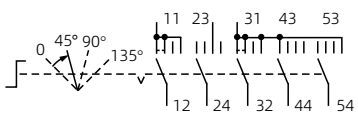
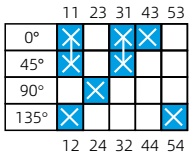
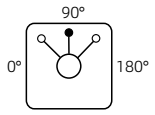
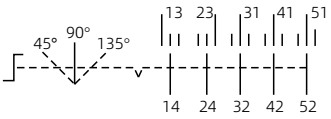
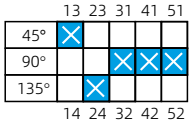
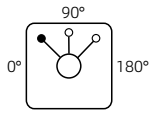
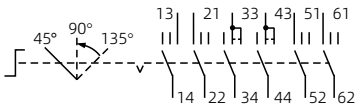
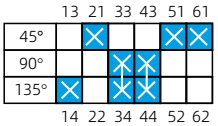
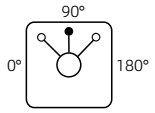
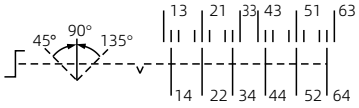
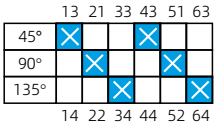
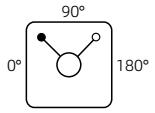
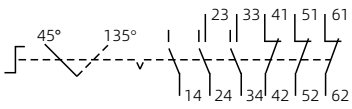
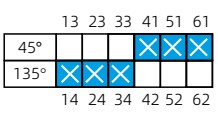
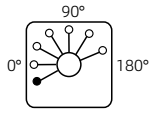
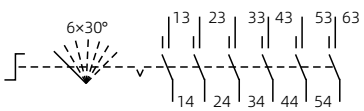
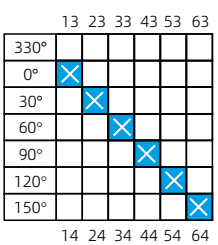
Parameters	
Designed for Ex zones	**Gases:** 1 and 2 | **Dusts:** 21 and 22
Marking according to ATEX	Ⓔx II 2 G Ex db eb IIC T5/T6 Gb | Ⓔx II 2 D Ex tb IIIC T85°C Db
Marking according to IECEx	Ex db eb IIC T5/T6 Gb | Ex tb IIIC T85°C Db
Knob size	Ø 78 mm
Permissible ambient temperature	-40°C to +55°C
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_{ui})	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 4mm²
Contact material	silver alloy

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

Other configurations are available upon request.

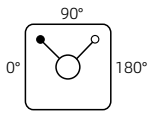
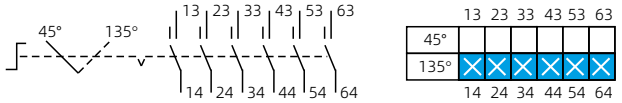
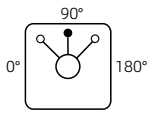
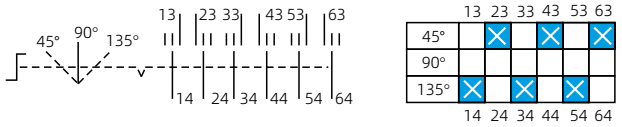
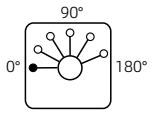
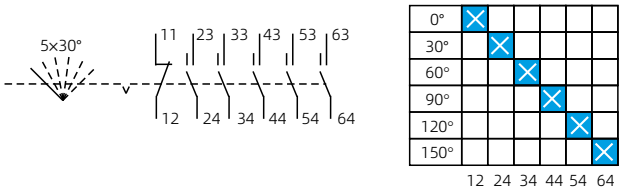
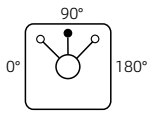
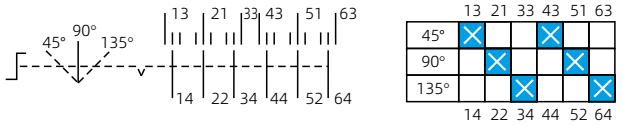
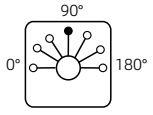
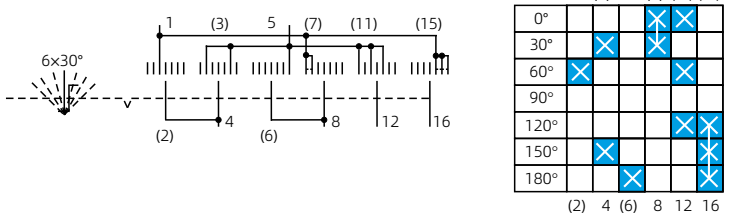
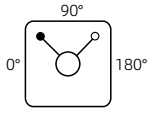
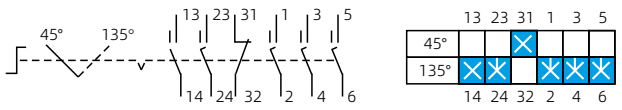
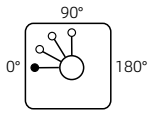
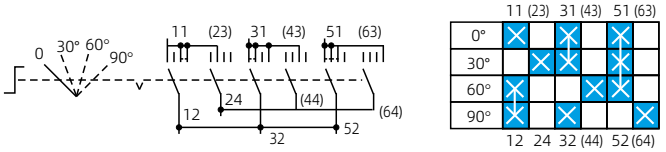
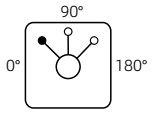
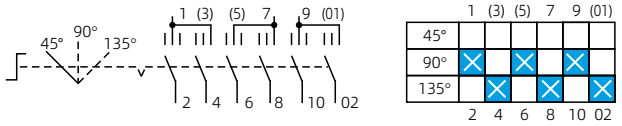
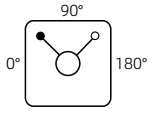
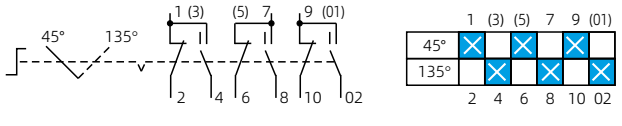
Switch positions		Contact diagram		Weight [kg]	Reference no
	4P			0.440	**25A/04-103-5TD**
				0.440	**25A/04-104-5TD**
				0.440	**25A/04-105-5TD**
				0.440	**25A/04-106-5TD**
				0.440	**25A/04-107-5TD**
				0.440	**25A/04-108-5TD**
				0.440	**25A/04-109-5TD**
				0.440	**25A/04-110-5TD**
	5P			0.520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

Other configurations are available upon request.

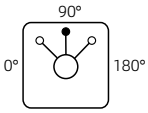
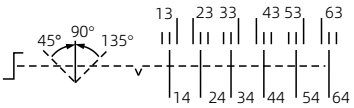
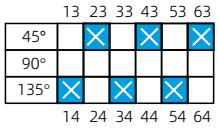
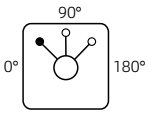
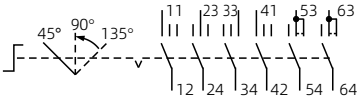
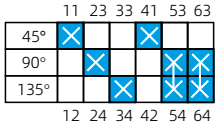
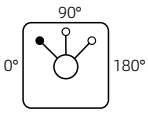
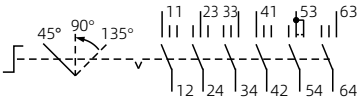
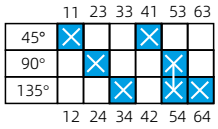
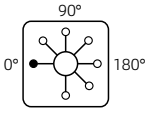
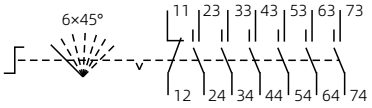
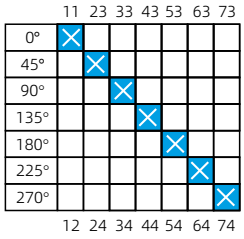
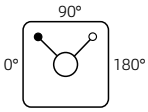
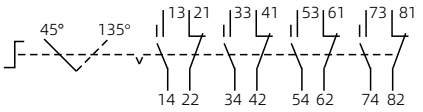
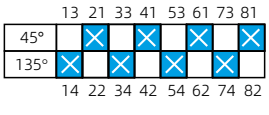
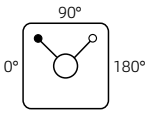
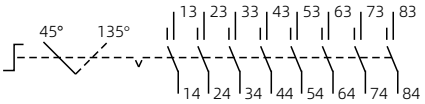
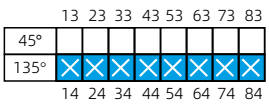
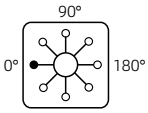
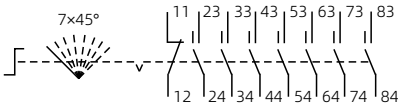
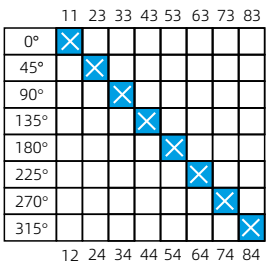
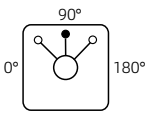
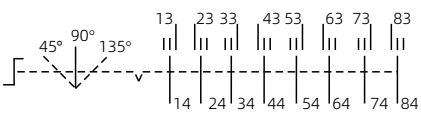
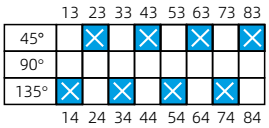
Switch positions		Contact diagram		Weight [kg]	Reference no
	5P			0.520	**25A/05-102-5TD**
				0.520	**25A/05-103-5TD**
				0.520	**25A/05-104-5TD**
				0.520	**25A/05-105-5TD**
	6P			0.550	**25A/06-101-5TD**
				0.550	**25A/06-102-5TD**
				0.550	**25A/06-103-5TD**
				0.610	***25A/06-104-5TD**

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

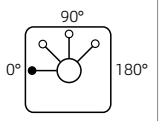
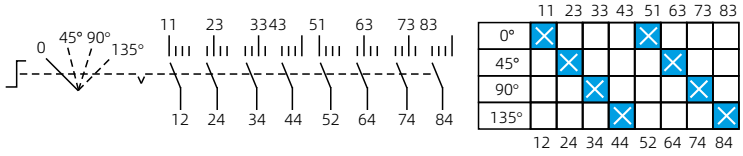
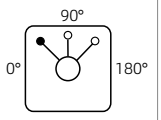
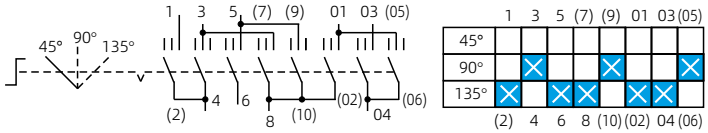
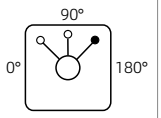
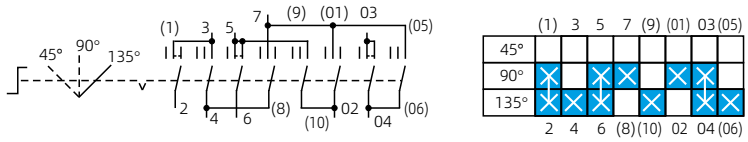
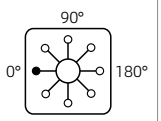
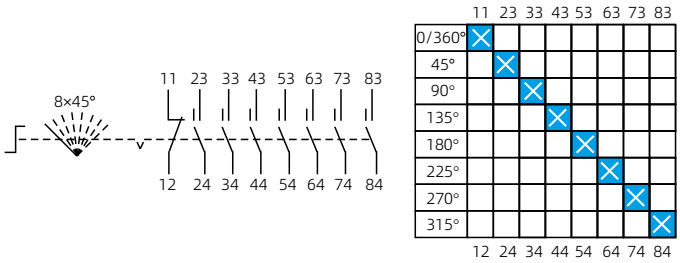
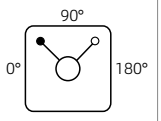
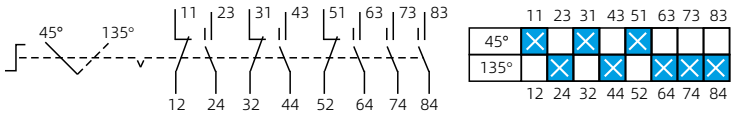
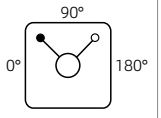
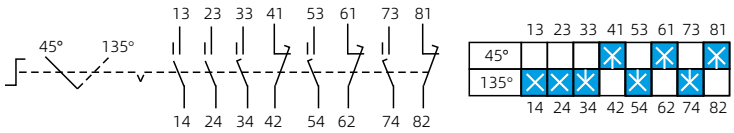
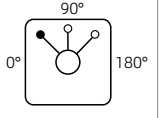
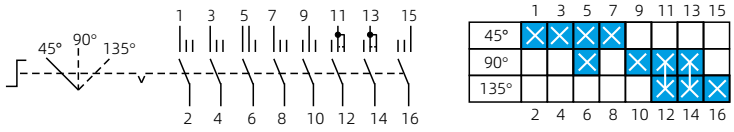
Other configurations are available upon request.

Switch positions		Contact diagram	Weight [kg]	Reference no
			0.550	**25A/06-105-5TD**
			0.550	**25A/06-106-5TD**
			0.550	**25A/06-107-5TD**
			0.550	**25A/06-108-5TD**
	6P		0.550	**25A/06-109-5TD**
			0.550	**25A/06-110-5TD**
			0.550	**25A/06-111-5TD**
			0.550	**25A/06-112-5TD**
			0.550	**25A/06-113-5TD**

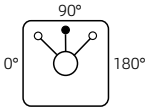
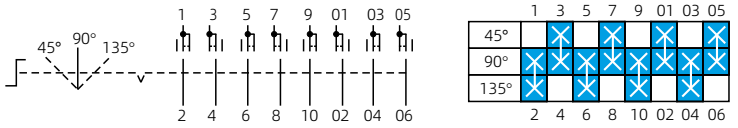
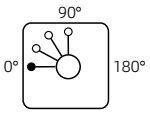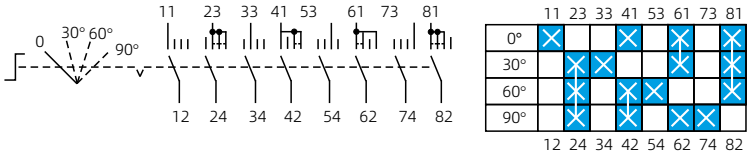
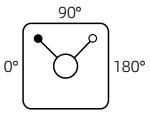
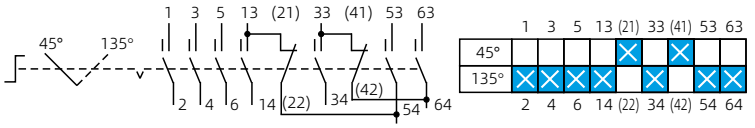
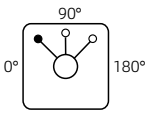
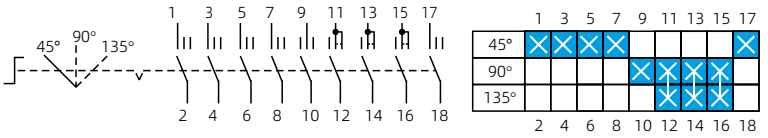
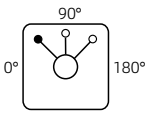
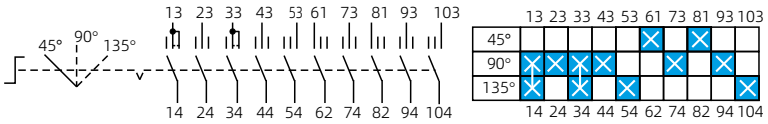
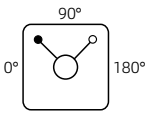
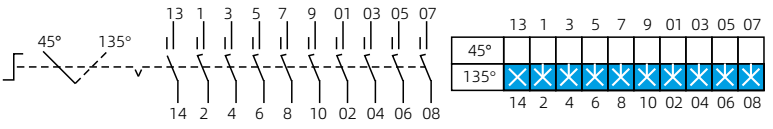
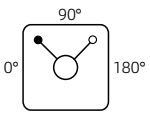
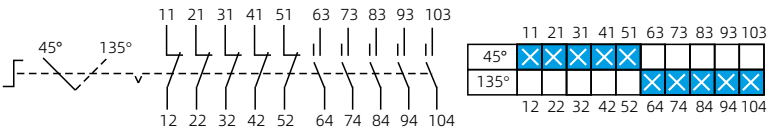
Other configurations are available upon request.

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

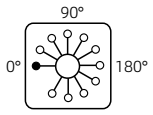
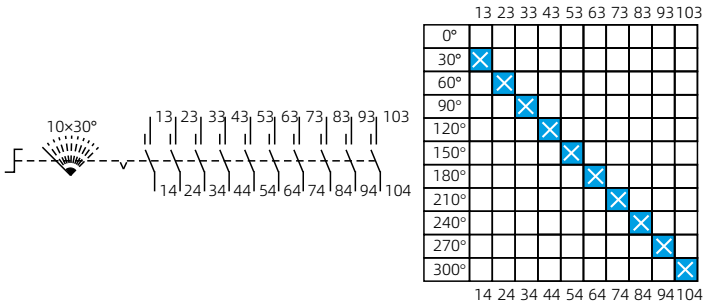
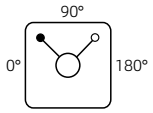
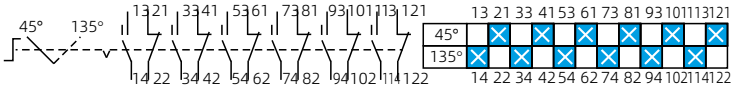
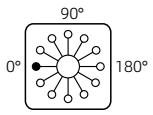
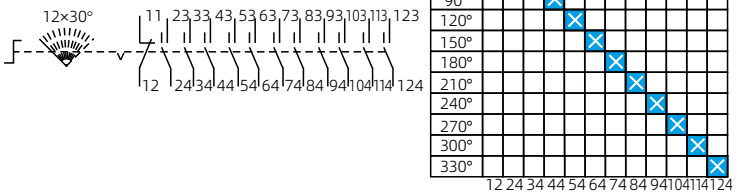
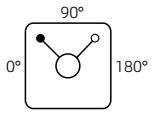
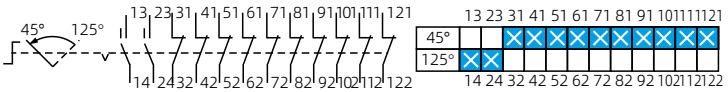
Other configurations are available upon request.

Switch positions		Contact diagram	Weight [kg]	Reference no
	8P		0.650	**25A/08-105-5TD**
			0.650	**25A/08-106-5TD**
			0.650	**25A/08-107-5TD**
			0.650	**25A/08-108-5TD**
			0.650	**25A/08-109-5TD**
			0.650	**25A/08-110-5TD**
			0.650	**25A/08-111-5TD**

Other configurations are available upon request.

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

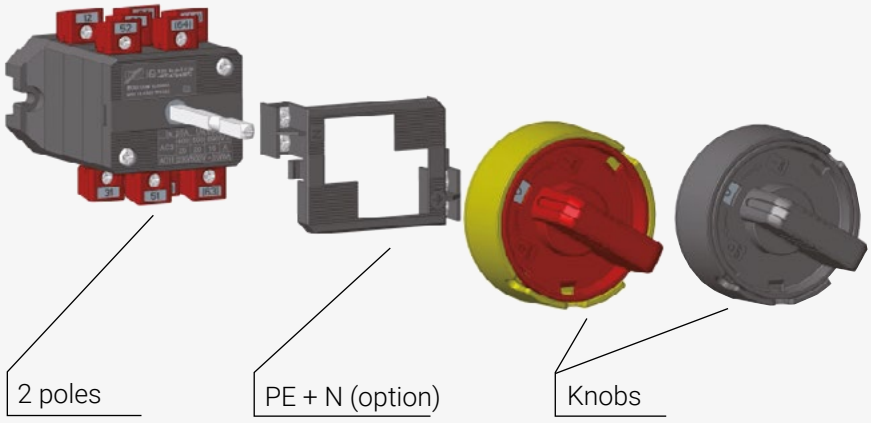
Other configurations are available upon request.

Switch positions	Contact diagram	Weight [kg]	Reference no
		0.800	***25A/10-100-5TD**
		0.840	**25A/12-101-5TD**
		0.840	**25A/12-102-5TD**
		0.840	**25A/12-103-5TD**

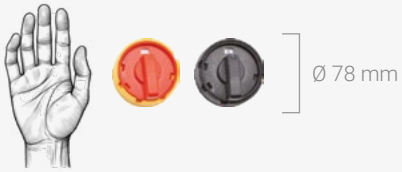
* The external dimensions of this switch correspond to 12 poles switch.
Other configurations are available upon request.

Control and main switches

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

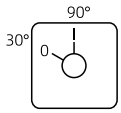
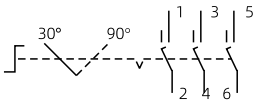
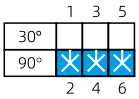
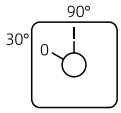
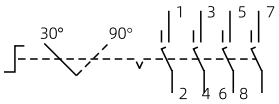
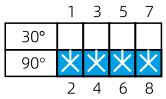
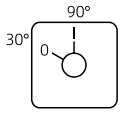
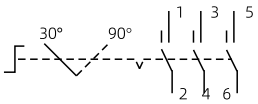
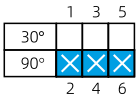
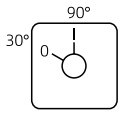
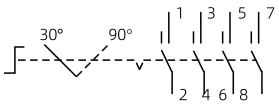
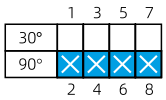
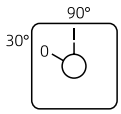
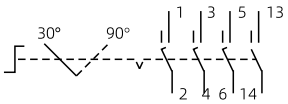
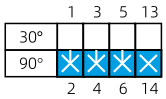
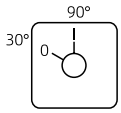
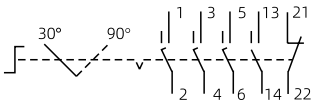
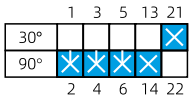
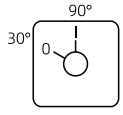
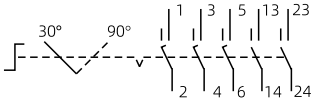
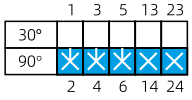
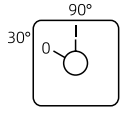
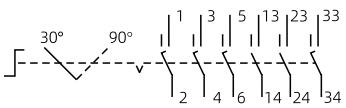
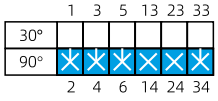
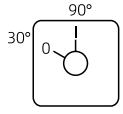
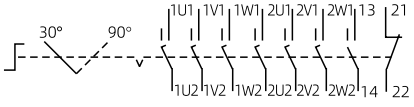
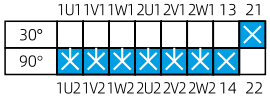
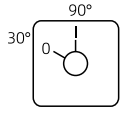
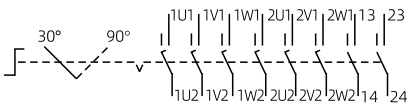
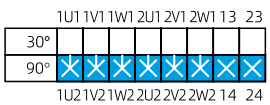


- For installation in HARDO enclosures designed for operation in hazardous areas 1, 2, 21 and 22.
- Comfortable Ø 78mm knob



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.

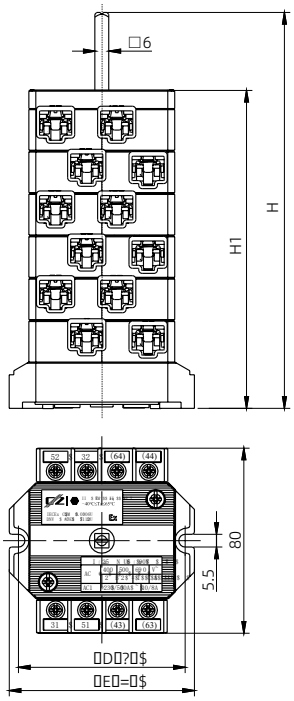
Parameters	
Designed for Ex zones	**Gases:** 1 and 2 | **Dusts:** 21 and 22
Marking according to ATEX	Ⓔx II 2 G Ex db eb IIC T5/T6 Gb | Ⓔx II 2 D Ex tb IIIC T85°C Db
Marking according to IECEx	Ex db eb IIC T5/T6 Gb | Ex tb IIIC T85°C Db
Knob size	Ø 78 mm
Permissible ambient temperature	-40°C to +55°C
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 4mm²
Contact material	silver alloy

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

D - black knob (optional E - red knob)

Other configurations are available upon request.

Switch module dimensions



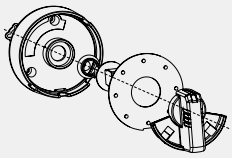
Layers / poles	H1	H
1/2P	47	106
2/3P-4P	65	106
3/5P-6P	83	151
4/7P-8P	101	151
5/9P-10P	119	171
6/11P-12P	137	171

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

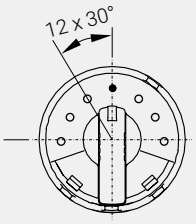
Knobs for modules up to 25A

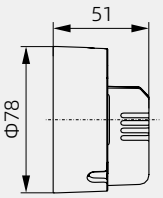
Control switches (2 - 12 positions), up to 25A





5TD





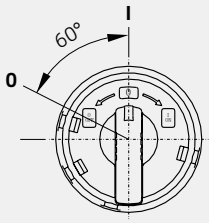
Main and safety switches (2 positions), up to 25A

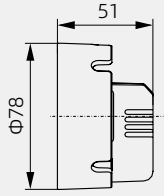


5PE



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

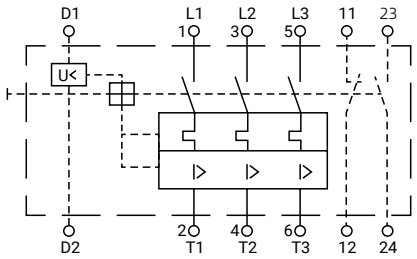


The HARDO motor circuit breaker provides comprehensive protection for electric motors against overload, short circuit, overheating, phase loss and optional voltage drop. Its robust design and wide range of current settings allow it to be used in a variety of industrial applications. The device effectively protects motors from damage resulting from adverse operating conditions.

Parameters	
Designed for Ex zones	**Gases:** 1 and 2 | **Dusts:** 21 and 22
Marking according to ATEX	II 2 G Ex db eb IIC T4/T5/T6 Gb | 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:	▸ overload protection ▸ undervoltage protection (optional) ▸ phase failure protection ▸ short-circuit protection ▸ thermal protection
Overload trip range	0.1 to 25A
Motor switching capacity in AC-3 category	up to 440V / 25A
Main contacts	from 1 to 10 mm² (from 6 to 10 mm²using collets)
Auxiliary contacts	1 to 2.5 mm²
Auxiliary contact capacity	AC15 1A / 230V
Rated switching capacity	high - up to 65 kA

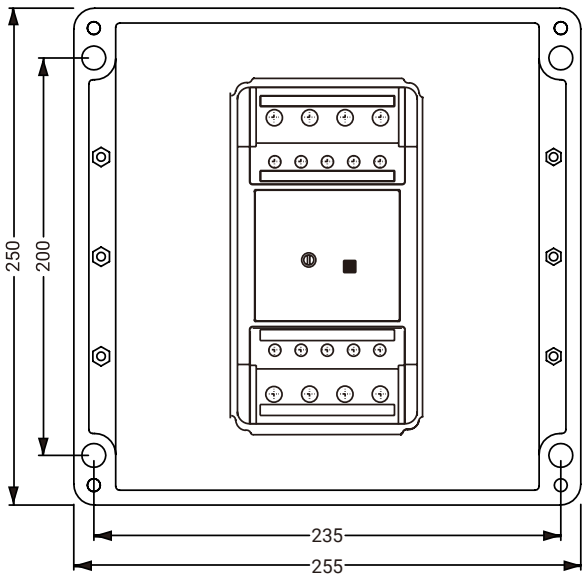
Photo	Overload trip range	Rated switching capacity (making and breaking)	Cable glands	Order No
 ~6,25 kg 250 x 260 x 160 mm	0.1 - 0.16A	65kA	2 x M25	HCS1P 252616 S01211
	0.16 - 0.25A	65kA	2 x M25	HCS1P 252616 S01221
	0.25 - 0.4A	65kA	2 x M25	HCS1P 252616 S01231
	0.4 - 0.63A	65kA	2 x M25	HCS1P 252616 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

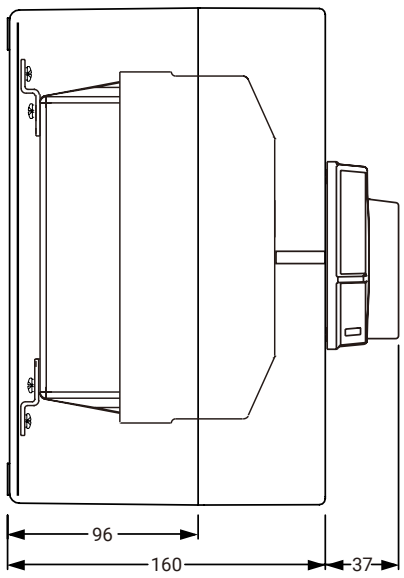
Electrical diagram



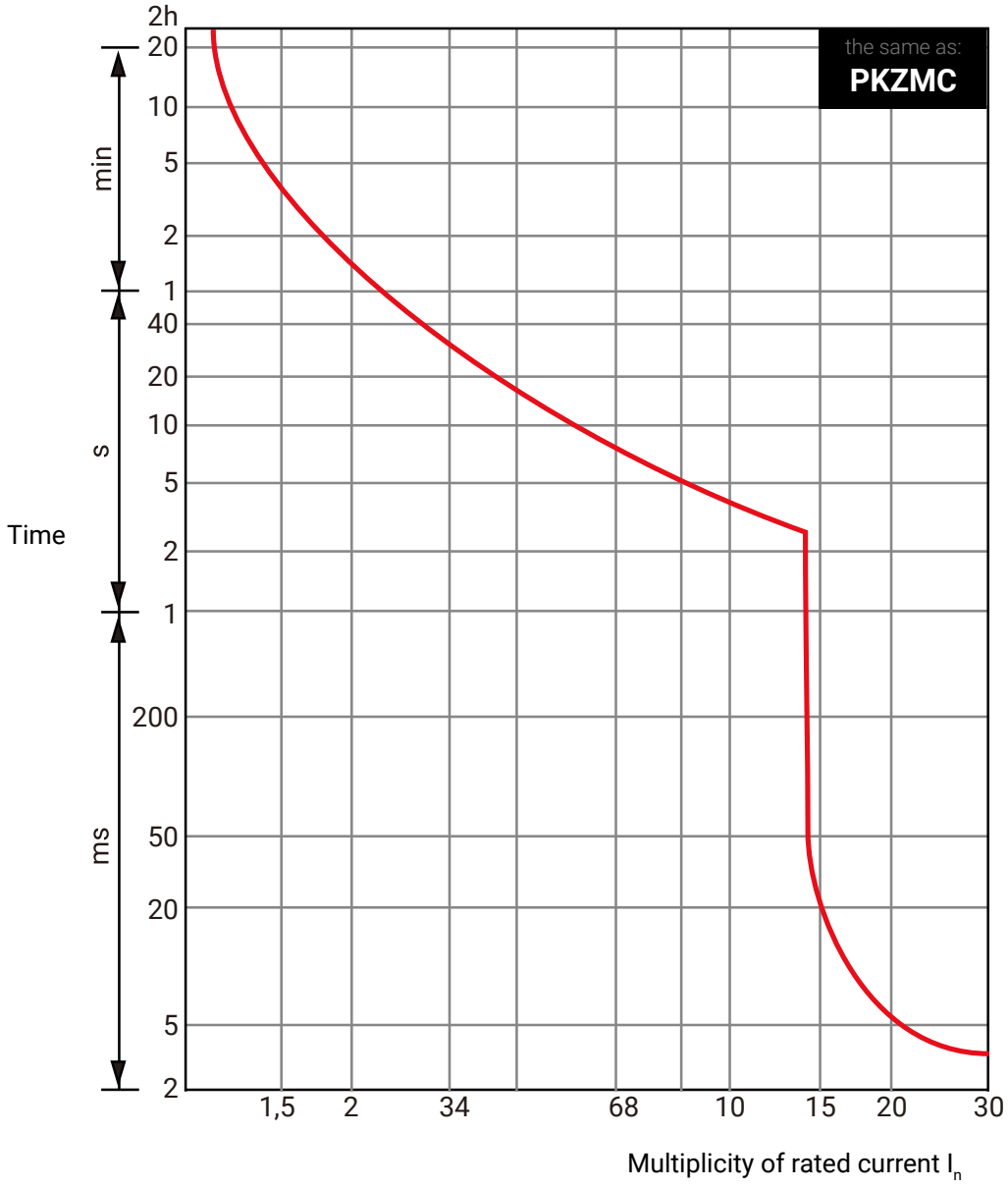
Options

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





Trigger characteristics (ambient temp. 30°C)



Motor switch knob



8003/2DA

