SMART POWER

ATEX enclosed safety switches

Designed for a potentially explosive atmosphere

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ATEX approved switches
Designed for a potentially explosive atmosphere

ATEX enclosed safety switches are designed for a potentially explosive atmosphere and are made according to ATEX directive 2014/34/EU. A potentially explosive atmosphere exists when a mixture of air gases, vapours, mists, or dusts combine in a way that can ignite under certain operating conditions. Typical applications for ATEX switches are refineries, mills, conveyor belt in hazardous areas, and dusty environments. Our ATEX enclosed safety switches support you in creating a safe working environment, reducing the risk of electrical and mechanical accidents, especially during maintenance and repair work.

Ex tc III T70°C Dc
ATEX eclosed switches are made according to ATEX class for enclosed switches. They are designed for zone 22, endure conductive dust and the enclosure has a maximum temperature of 70°C. The specification of zone 22 is that an explosive atmosphere is not likely to occur, and if it does, it is only for a short time.

Reliable in extreme conditions

Rigid and well proven design
The ATEX enclosed safety switches are built to last and resist the wear of harsh operating conditions. They are made according to ATEX class for enclosed switches Ex tc III T70°C Dc, which means that they are designed for a potentially explosive atmosphere.

The enclosures are made of high-quality, UV-resistant materials and the degree of protection is IP65. They are suitable for both indoors and outdoors. They are also EMC approved and can be used in environments with electromagnetic disturbances.

Safety and protection

ABB puts safety first
Our design is based on ensuring safety and preventing electrical accidents.

Safety features such as cover interlock make maintenance and installation as safe as possible.

Easy to buy and install

ABB is a one-stop-shop for enclosed switches
The purchase and installation of ATEX enclosed switches is easy.

The delivery includes handle (I-O/ON-OFF), PE-terminal, threaded cable entries, cable glands for two cables and one control cable, cable entry plugs, and 1NO auxiliary contact for disconnection or annunciation.

Our web based selection tool e-Configure enables you to select the suitable switch in an easy way.

Link to e-Configure

ATEX enclosed safety switches
Safe and dependable performance

ATEX enclosed safety switches in demanding operating conditions help ensure that machinery cannot be accidentally started while maintenance is in progress. Safety and dependable performance has been taken into consideration in every aspect of their design.

Tried and tested performance
We offer IEC standard AC switches from 16 to 125 Amperes, with power ratings from 7.5 to 45 kW up to 690 V. The ratings correspond to utilization category AC-23A. ATEX enclosed safety switches are available in 3-, 4- and 6-pole versions. They are front-operated and have interlocked cover. The enclosure is made of dye cast aluminium.

All our safety switches have been tested according to IEC 60947-3 standard. After rigorous testing, our safety switches have proven to maintain a high degree of safety. Our safety switches are delivered with an auxiliary contact that can be used for electrical interlocking. This is done by connecting the safety switch to a starter or other motor control devices. For easy identification, each safety switch has a sticker label. For the most extreme operational conditions, corrosion-resistant gold plated auxiliary contacts are available upon request.

Ensured EMC safety
ABB's design also takes into consideration the need for reliable performance in environments with electromagnetic disturbances (EMC), in full compliance with EN 55011, according to EU directive 2004/108/EC. Electromagnetic compatibility (EMC) refers to the ability of a device to function despite electromagnetic disturbances in the environment without electromagnetically disturbing other devices in its surroundings. This is important in environments where the disturbance from frequency converters may rise up to tens of, or even hundreds of MHz.

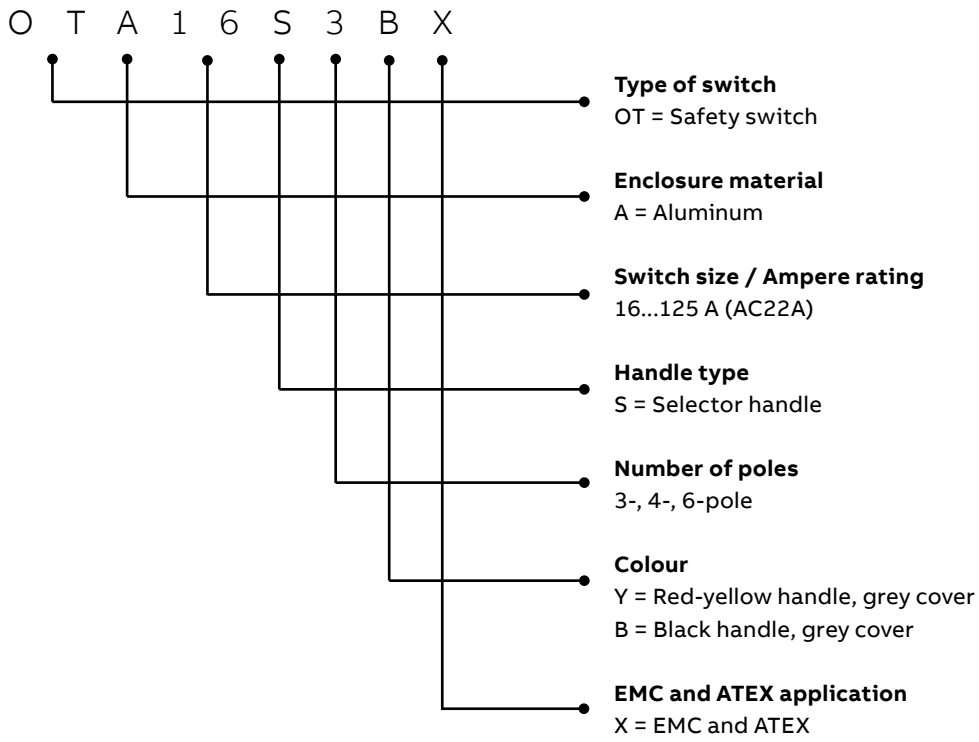
Type designation key

ATEX enclosed safety switches

Type codes

Understanding the type codes below will help you to quickly identify the correct product for your needs. The simple naming system allows you to see the product type, current rating, standard classification and number of poles – all in one glance.

Explanation of types OTA16...125 A



Technical data

ATEX enclosed safety switches

Data according to IEC 60947-3	Switch type			OTA16_X	OTA25_X	OTA40_X	OTA63_X	OTA80_X	OTA100_X	OTA125_X
Rated insulation voltage and rated operational voltage AC20/DC20	Pollution degree 3	50 Hz 1 min.	V	750	750	750	750	750	750	750
Rated thermal current	Ambient 40 °C [2]		A	25	32	40	63	80	115	125
	Ambient 60 °C		A	20	25	32	50	63	80	100
Rated operational current, AC-23A		up to 415 V	A	16	20	23	63	75	80	90
		500 V	A	16	20	23	45	58	60	70
		690 V	A	10	11	12	20	20	40	50
Rated operational power, AC-23A (These values are given for guidance and may vary acc. to the motor manufacturer)		220...240 V	kW	3	4	5.5	11	22	22	22
		400...415 V	kW	7.5	9	11	22	37	37	45
		440...500 V	kW	7.5	9	11	22	37	37	45
		690 V	kW	7.5	9	11	15	18.5	37	45
Rated conditional short-circuit current Iq (r.m.s.) and corresponding max. Allowed cut-off current Îc of fuse. The cut-off current Îc referes to values listed by fuse manufacturers (single phase test acc. To IEC60269)	Iq 50kA, 415V Max. OFA_fuse size	Îc	kA	6.5	6.5	6.5	13	13	16.5	16.5
		gG/aM	A/A	40/32	40/32	40/32	100/80	100/80	125/125	125/125
	Iq 100kA, 500V Max. OFA_fuse size	Îc	kA	–	–	–	17	17	–	–
		gG/aM	A/A	–	–	–	100/80	100/80	–	–
	Iq 10kA, 690V Max. OFA_fuse size	Îc	kA	–	–	–	–	–	8.2	8.2
		gG/aM	A/A	–	–	–	–	–	125/100	125/100
	Iq 50kA, 690V Max. OFA_fuse size	Îc	kA	4	4	4	11	11	10	10
		gG/aM	A/A	25/16	25/16	25/16	80/63	80/63	63/63	63/63
Rated short-time withstand current	r.m.s. -value Icw	690 V, 1 s	kA	0.5	0.5	0.5	1	1.5	2.5	2.5
Cable size	Cu-wire size suitable for terminal clamps		mm^2	0.75...10	0.75...10	0.75...10	1.5...35	1.5...35	10...70	10...70

Ordering information

ATEX enclosed safety switches

OTA16...40S3BX
OTA16...40S4BX

OTA63...125S3BX
OTA63...125S4BX
OT16...40S6BX

ATEX enclosed safety switches, 3, 4 and 6-pole, IP65, black handle

The delivery includes a black handle (I-O/ON-OFF), PE-terminal, threaded cable entries, cable glands for two cables and one control cable, cable entry plugs and auxiliary contacts according to the table below. Enclosure in rigid dye casted aluminium. Safety switch sticker included.

The products are all EMC approved. EMC glands to be ordered separately.

Cable entries from top and bottom

Max. motor output AC-23A		Cable outlets / side	Dimensions			Type	Order code	Weight (1 pce)
415 V	690 V		Height	Width	Depth			
kW / A	kW / A		mm	mm	mm			kg
3-pole Auxiliary contacts included: 1NO0NC. Auxiliary contacts max: 2NO2NC.								
7.5 / 16	7.5 / 10	2xM25+M20 / 2xM25+M20	165	130	131	OTA16S3BX	1SCA152716R1001	1.3
9 / 20	9 / 11	2xM25+M20 / 2xM25+M20	165	130	131	OTA25S3BX	1SCA152722R1001	1.3
11 / 23	11 /12	2xM32+M20 / 2xM32+M20	165	130	131	OTA40S3BX	1SCA152728R1001	1.3
22 / 63	15 / 20	2xM40 / 2xM40+M16	230	160	145	OTA63S3BX	1SCA152734R1001	1.8
37 / 75	18.5 / 20	2xM40 / 2xM40+M16	230	160	145	OTA80S3BX	1SCA152738R1001	1.8
37 / 75	37 / 40	2xM40 / 2xM40+M16	230	160	145	OTA100S3BX	1SCA152697R1001	1.8
45 / 90	45 / 50	2xM40 / 2xM40+M16	230	160	145	OTA125S3BX	1SCA152712R1001	1.8
4-pole Auxiliary contacts included: 1NO0NC. Auxiliary contacts max: 2NO2NC.								
7.5 / 16	7.5 / 10	2xM25+M20 / 2xM25+M20	165	130	131	OTA16S4BX	1SCA152718R1001	1.3
9 / 20	9 / 11	2xM25+M20 / 2xM25+M20	165	130	131	OTA25S4BX	1SCA152724R1001	1.3
11 / 23	11 /12	2xM32+M20 / 2xM32+M20	165	130	131	OTA40S4BX	1SCA152730R1001	1.3
22 / 63	15 / 20	2xM40 / 2xM40+M16	230	160	145	OTA63S4BX	1SCA152736R1001	1.8
37 / 75	18.5 / 20	2xM40 / 2xM40+M16	230	160	145	OTA80S4BX	1SCA152740R1001	1.8
37 / 80	37 / 40	2xM40 / 2xM40+M16	230	160	145	OTA100S4BX	1SCA152710R1001	1.8
45 / 90	45 / 50	2xM40 / 2xM40+M16	230	160	145	OTA125S4BX	1SCA152714R1001	1.8
6-pole Auxiliary contacts included: 1NO0NC. Auxiliary contacts max: 2NO2NC. Contains glands for 4 cables, and one control wire.								
7.5 / 16	7.5 / 10	2xM25 / 2xM25+M16	230	160	145	OTA16S6BX	1SCA152720R1001	1.8
9 / 20	9 / 11	2xM25 / 2xM25+M16	230	160	145	OTA25S6BX	1SCA152726R1001	1.8
11 / 23	11 / 12	2xM32 / 2xM32+M16	230	160	145	OTA40S6BX	1SCA152732R1001	1.8

Ordering information
ATEX enclosed safety switches

OTA16...40S3YX
OTA16...40S4YX

OTA63...100S3YX
OTA63...100S4YX
OTA16...40S6YX

ATEX enclosed safety switches, 3, 4 and 6-pole, IP65, red-yellow handle

The delivery includes a red-yellow handle (I-O/ON-OFF), PE-terminal, threaded cable entries, cable glands for two cables and one control cable, cable entry plugs and auxiliary contacts according to the table below. Enclosure in rigid dye casted aluminium. Safety switch sticker included.

The products are all EMC approved. EMC glands to be ordered separately.

Cable entries from top and bottom

Max. motor output AC-23A		Cable outlets / side	Dimensions			Type	Order code	Weight (1 pce)
415 V	690 V		Height	Width	Depth			
kW / A	kW / A		mm	mm	mm			kg
3-pole								
Auxiliary contacts included: 1NO0NC. Auxiliary contacts max: 2NO2NC.								
7.5 / 16	7.5 / 10	2xM25+M20 / 2xM25+M20	165	130	131	OTA16S3YX	1SCA152717R1001	1.3
9 / 20	9 / 11	2xM25+M20 / 2xM25+M20	165	130	131	OTA25S3YX	1SCA152723R1001	1.3
11 / 23	11 / 12	2xM32+M20 / 2xM32+M20	165	130	131	OTA40S3YX	1SCA152729R1001	1.3
22 / 63	15 / 20	2xM40 / 2xM40+M16	230	160	145	OTA63S3YX	1SCA152735R1001	1.8
37 / 75	18.5 / 20	2xM40 / 2xM40+M16	230	160	145	OTA80S3YX	1SCA152739R1001	1.8
37 / 80	37 / 40	2xM40 / 2xM40+M16	230	160	145	OTA100S3YX	1SCA152709R1001	1.8
45 / 90	45 / 50	2xM40 / 2xM40+M16	230	160	145	OTA125S3YX	1SCA152713R1001	1.8
4-pole								
Auxiliary contacts included: 1NO0NC. Auxiliary contacts max: 2NO2NC.								
7.5 / 16	7.5 / 10	2xM25+M20 / 2xM25+M20	165	130	131	OTA16S4YX	1SCA152719R1001	1.3
9 / 20	9 / 11	2xM25+M20 / 2xM25+M20	165	130	131	OTA25S4YX	1SCA152725R1001	1.3
11 / 23	11 / 12	2xM32+M20 / 2xM32+M20	165	130	131	OTA40S4YX	1SCA152731R1001	1.3
22 / 63	15 / 20	2xM40 / 2xM40+M16	230	160	145	OTA63S4YX	1SCA152737R1001	1.8
37 / 75	18.5 / 20	2xM40 / 2xM40+M16	230	160	145	OTA80S4YX	1SCA152741R1001	1.8
37 / 80	37 / 40	2xM40 / 2xM40+M16	230	160	145	OTA100S4YX	1SCA152711R1001	1.8
45 / 90	45 / 50	2xM40 / 2xM40+M16	230	160	145	OTA125S4YX	1SCA152715R1001	1.8
6-pole								
Auxiliary contacts included: 1NO0NC. Auxiliary contacts max: 2NO2NC. Contains glands for 4 cables, and one control wire.								
7.5 / 16	7.5 / 10	2xM25 / 2xM25+M16	230	160	145	OTA16S6YX	1SCA152721R1001	1.8
9 / 20	9 / 11	2xM25 / 2xM25+M16	230	160	145	OTA25S6YX	1SCA152727R1001	1.8
11 / 23	11 / 12	2xM32 / 2xM32+M16	230	160	145	OTA40S6YX	1SCA152733R1001	1.8

Ordering information

Compression glands for ATEX enclosed safety switches

EXM16G

EMSKE16

Compression glands for ATEX enclosed safety switches

Plastic

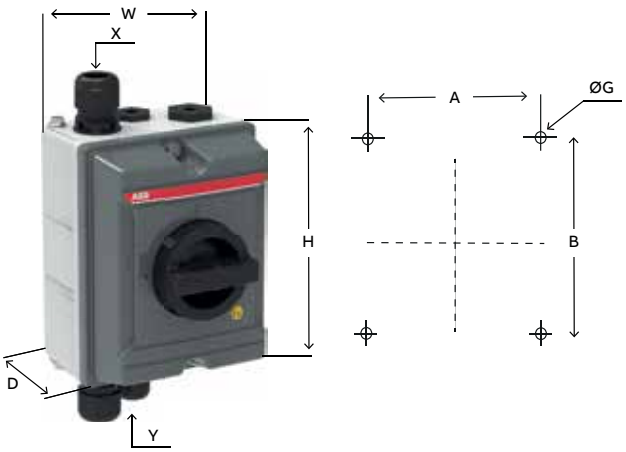
Thread	Cable DIA	Type	Order number	Weight
	mm			kg
M16	4.5…9	EXM16G	1SCA152891R1001	0.01
M20	7…13	EXM20G	1SCA152892R1001	0.01
M25	10…17	EXM25G	1SCA152894R1001	0.02
M32	13…21	EXM32G	1SCA152896R1001	0.02
M40	17…28	EXM40G	1SCA152899R1001	0.03

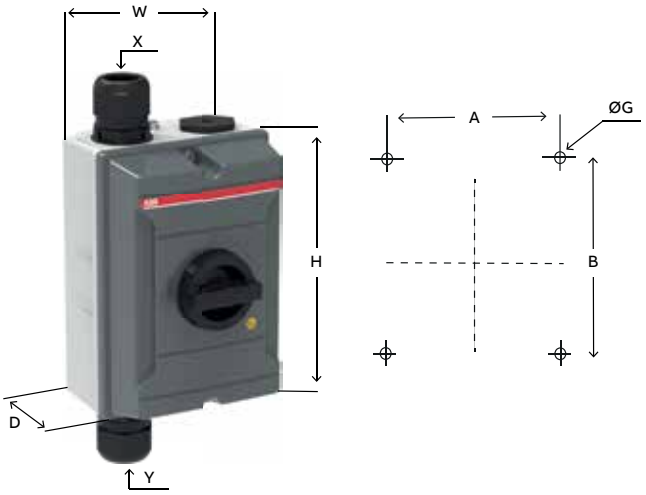
Metallic

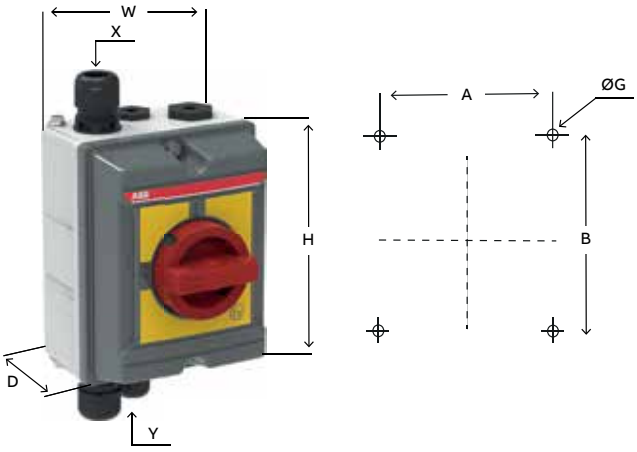
Thread	Cable DIA	Type	Order number	Weight
	mm			kg
M16	5…10	EMSKE16	1SCA157031R1001	0.02
M20	6…13	EMSKE20	1SCA157032R1001	0.03
M25	10…17	EMSKE25	1SCA157033R1001	0.04
M32	13…21	EMSKE32	1SCA157034R1001	0.06
M40	16…28	EMSKE40	1SCA157035R1001	0.08

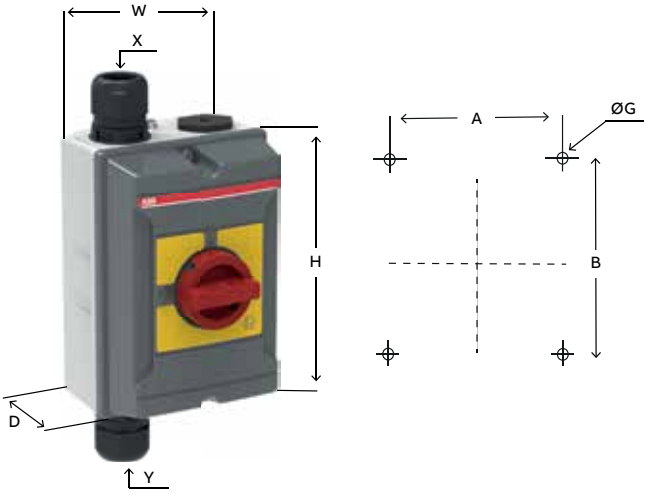
Dimension drawings

ATEX enclosed safety switches









Dimensions			Cable entry		Fixing dimensions		
mm					mm		
H	W	D	X	Y	A	B	G
OTA16...25 3- and 4-pole							
165	130	131	2xM25+M20	2xM25+M20	95	125	6.5
OTA40 3- and 4 pole							
165	130	131	2xM32+M20	2xM32+M20	95	125	6.5

Dimensions			Cable entry		Fixing dimensions		
mm					mm		
H	W	D	X	Y	A	B	G
OTA63...125 3- and 4-pole							
230	160	145	2xM40	2xM40+M16	124	190	5.3
OTA16...25 6-pole							
230	160	145	2xM25	2xM25+M16	124	190	5.3
OTA40 6-pole							
230	160	145	2xM32	2xM32+M16	124	190	5.3

Additional information
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