



ISOLATORS-EX Series

Switch - disconnectors
for applications in potentially
explosive atmospheres



ISOLATORS-EX Series

> SWITCHES – DISCONNECTORS



> VERSIONS

	Switch - disconnectors In aluminium – General use
	Switch - disconnectors In aluminium – Emergency control
	Switch - disconnectors In thermoplastic – General use
	Switch - disconnectors In thermoplastic – Emergency control

> REFERENCE STANDARDS

EN 61241-0

Electrical apparatus for use in the presence of combustible dust.
Part 0: general requirements.

EN 61241-1

Electrical apparatus for use in the presence of combustible dust.
Part 1: protection by enclosures "tD".

EN 60947-1

Low-voltage switchgear and controlgear.
Part 1: general requirements.

EN 60947-3

Low-voltage switchgear and controlgear.
Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units.

> TECHNICAL CHARACTERISTICS

ATEX Code:	 II 2D
Ex Protection type:	
Thermoplastic:	Ex tD A21 IP66 T80°C (Ta -25°C +40°C) Ex tD A21 IP66 T90°C (Ta -25°C +60°C)
Aluminium:	Ex tD A22 IP65 T80°C (Ta -25°C +40°C) Ex tD A22 IP65 T90°C (Ta -25°C +60°C)
Protection degree:	IP65 (aluminium) IP66 (thermoplastic)
Ambient temperature:	-25°C +60°C
Maximum permissible surface temperature:	T90°C (aluminium, thermoplastic)
Glow wire test:	650°C (thermoplastic)
Material:	Aluminium/Thermoplastic
Colour:	Satin-finished (aluminium) Grey RAL 7016 (thermoplastic)
Polarity:	2P - 3P - 4P
Rated current:	20A-32A-40A-63A (aluminium) 20A-32A-40A (thermoplastic)

UNDER DEVELOPMENT – ALUMINIUM ZONE 21

> BEHAVIOUR WITH CHEMICAL AND ATMOSPHERIC AGENTS - ALUMINIUM

Saline solution	Acids		Bases		Solvents				Mineral oil	UV rays
	Concentrated	Diluted	Concentrated	Diluted	Hexane	Benzol	Acetone	Alcohol		
Resistant	Limited Resistance	Resistant	Resistant	Resistant	Not Resistant	Not Resistant	Not Resistant	Limited Resistance	Resistant	Resistant

For specific substances please contact our technical service.

> BEHAVIOUR WITH CHEMICAL AND ATMOSPHERIC AGENTS - THERMOPLASTIC

Saline solution	Acids		Bases		Solvents				Mineral oil	UV rays
	Concentrated	Diluted	Concentrated	Diluted	Hexane	Benzol	Acetone	Alcohol		
Resistant	Limited Resistance	Resistant	Limited Resistance	Limited Resistance	Resistant	Limited Resistance	Limited Resistance	Resistant	Limited Resistance	Resistant

For specific substances please contact our technical service.

> APPLICATION EXAMPLES



ISOLATORS-EX Series

Ex II 2D aluminium enclosure

> ELECTRICAL CHARACTERISTICS OF THE SWITCH - DISCONNECTORS

TECHNICAL DATA								
Control device					ISOLATORS-EX Series			
					590.XHGE/X HEM200X	590.XHGE/X HEM320X	590.XHGE/X HEM400X	590.XHGE/X HEM630X
SCAME switch – disconnecter Fam.590		Rated current			20A	32A	40A	63A
		Insulating voltage (UI)			690V	690V	690V	690V
		Duty rated current based on the category	AC23A	415V	20A	32A	35A	63A
				690V	16A	25A	25A	30A
			AC3	400V	16A	28,5A	28,5A	40A
				690V	12A	20A	20A	25A
		Nominal frequency			50/60Hz	50/60Hz	50/60Hz	50/60Hz

> TECHNICAL DATA OF POWER/EARTH TERMINALS

POWER TERMINALS - CONNECTABLE WIRES AND TIGHTENING TORQUES		
Power terminal version	Cable section to be used (rigid or flexible) mm ²	Tightening torque (Nm)
20A	4	0.8
32A	6	0.8
40A	6	0.8
63A	10	3.6
Earth terminal	Maximum section 10	2

> CABLE GLANDS / CABLE ENTRIES

Versions	Number of cable entries	Maximum cable inlet temperature
590.XHGE200X – 20A	2xM25	-
590.XHEM200X – 20A		
590.XHGE320X – 32A	2xM25	95° C
590.XHEM320X – 32A		
590.XHGE400X – 40A		
590.XHEM400X – 40A		
590.XHGE630X - 63A		
590.XHEM630X - 63A	2xM32	110° C

Ex II 2D thermoplastic enclosure

> ELECTRICAL CHARACTERISTICS OF THE SWITCH - DISCONNECTORS

TECHNICAL DATA							
Control device					ISOLATORS-EX Series		
					590.XGE/XE M200X	590.XGE/XE M320X	590.XGE/XE M400X
SCAME switch – disconnectors Fam.590		Rated current			20A	32A	40A
		Insulating voltage (UI)			690V	690V	690V
		Duty rated current based on the category	AC23A	415V	20A	32A	35A
				690V	16A	25A	25A
			AC3	400V	16A	28,5A	28,5A
				690V	12A	20A	20A
		Nominal frequency			50/60Hz	50/60Hz	50/60Hz

> TECHNICAL DATA OF POWER/EARTH TERMINALS

POWER TERMINALS - CONNECTABLE WIRES AND TIGHTENING TORQUES		
Power terminal version	Cable section to be used (rigid or flexible) mm ²	Tightening torque (Nm)
20A	4	0.8
32A	6	0.8
40A	10	0.8
Earth terminal	Maximum section 10	2

> CABLE GLANDS / CABLE ENTRIES

Versions	Number of cable entries	Maximum cable inlet temperature
590.XGE200X - 20A	2xM25 + 1xM20	-
590.XEM200X - 20A		
590.XGE320X - 32A	2xM32 + 1xM20	95° C
590.XEM320X - 32A		
590.XGE400X - 40A		
590.XEM400X - 40A		

> LOCKING TORQUES

Threaded hole	Maximum tightening torque (Nm)
M20	10
M25	12
M32	14

ISOLATORS-EX Series

> SWITCHES / MOTOR CUT-OUTS



> VERSIONS

	Fixed guard automatic cut-out
	Adjustable auto-limiter motor cut-out switch

> REFERENCE STANDARDS

IEC/EN 61241-0

Electrical apparatus for use in the presence of combustible dust.

Part 0: general requirements.

IEC/EN 61241-1

Electrical apparatus for use in the presence of combustible dust.

Part 1: protection by enclosures "tD".

IEC/EN 60079-0

Electrical apparatus for potentially explosive atmospheres.

Part 0: General requirements

IEC/EN 60079-1

Electrical apparatus for potentially explosive atmospheres.

Part 1: Flameproof enclosures "d".

> TECHNICAL CHARACTERISTICS

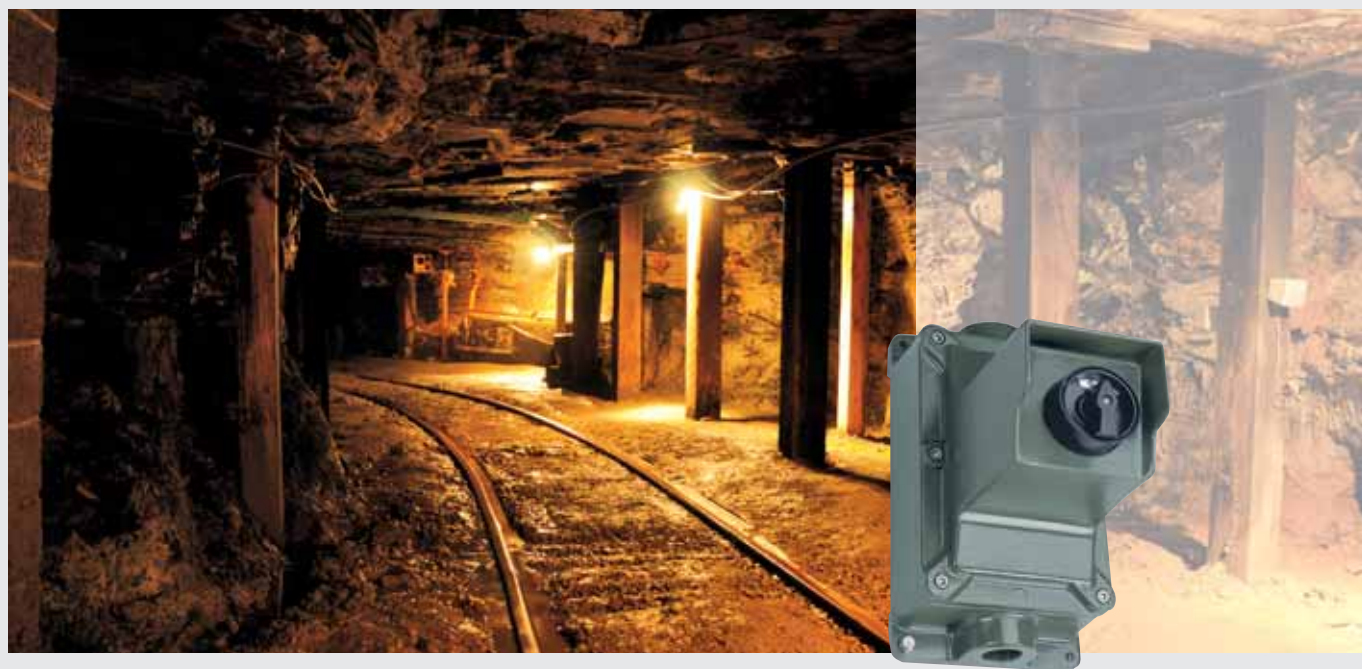
ATEX Code:	 II 2GD
Ex Protection type:	Ex d IIB T6 Ex tD A21 IP66 T85°C ATEX 94/9/CE Zone 1 - Zone 2, Zone 21 - Zone 22
Certificates:	INERIS 02ATEX0027X GOST R
Protection degree:	IP66/IP67
Ambient temperature:	-30°C +55°C
Material:	Aluminium
Colour:	Painted RAL 6003
Polarity:	2P - 3P
Rated current:	220÷600V~
Frequency:	50÷60Hz
Cable inlets:	M32

> BEHAVIOUR WITH CHEMICAL AND ATMOSPHERIC AGENTS

Saline solution	Acids		Bases		Solvents				Mineral oil	UV rays
	Concentrated	Diluted	Concentrated	Diluted	Hexane	Benzol	Acetone	Alcohol		
Resistant	Limited Resistance	Resistant	Resistant	Resistant	Not Resistant	Not Resistant	Not Resistant	Limited Resistance	Resistant	Resistant

For specific substances please contact our technical service.

> APPLICATION EXAMPLES



ISOLATORS-EX Series

> SWITCHES – DISCONNECTORS IN ALUMINIUM – IP65

Current	Poles	Cable inlets	Dimensions (mm)			
					General use	Emergency control
20A	2	2xM25	105x150x82	1/12	590.XHGE2002	590.XHEM2002
	3		105x150x82	1/12	590.XHGE2003	590.XHEM2003
	4		105x150x82	1/12	590.XHGE2004	590.XHEM2004
32A	2	2xM25	105x150x82	1/12	590.XHGE3202	590.XHEM3202
	3		105x150x82	1/12	590.XHGE3203	590.XHEM3203
	4		105x150x82	1/12	590.XHGE3204	590.XHEM3204
40A	2	2xM25	105x150x82	1/12	590.XHGE4002	590.XHEM4002
	3		105x150x82	1/12	590.XHGE4003	590.XHEM4003
	4		105x150x82	1/12	590.XHGE4004	590.XHEM4004
63A	2	2xM32	150x210x106	1/5	590.XHGE6302	590.XHEM6302
	3		150x210x106	1/5	590.XHGE6303	590.XHEM6303
	4		150x210x106	1/5	590.XHGE6304	590.XHEM6304

 Package/Bulk Pack.

> SWITCHES – DISCONNECTORS IN THERMOPLASTIC – IP66

Current	Poles	Cable inlets	Dimensions (mm)			
					General use	Emergency control
20A	2	2xM25 + 1xM20	115x190x128	1/12	590.XGE2002	590.XEM2002
	3		115x190x128	1/12	590.XGE2003	590.XEM2003
	4		115x190x128	1/12	590.XGE2004	590.XEM2004
32A	2	2xM32 + 1xM20	115x190x128	1/12	590.XGE3202	590.XEM3202
	3		115x190x128	1/12	590.XGE3203	590.XEM3203
	4		115x190x128	1/12	590.XGE3204	590.XEM3204
40A	2	2xM32 + 1xM20	115x190x128	1/12	590.XGE4002	590.XEM4002
	3		115x190x128	1/12	590.XGE4003	590.XEM4003
	4		115x190x128	1/12	590.XGE4004	590.XEM4004

 Package/Bulk Pack.

> FIXED GUARD AUTOMATIC CUT-OUT – IP66/IP67



Current	Poles	Volt	Cable inlets	Dimensions (mm)	□	
16A	2	220-240	2xM32	157x278x227	1	590.EFQL216
	3	380-415		157x278x227	1	590.EFQL316
32A	2	220-240	2xM32	157x278x227	1	590.EFQL232
	3	380-415		157x278x227	1	590.EFQL332
40A	2	220-240	2xM32	157x278x227	1	590.EFQL240
	3	380-415		157x278x227	1	590.EFQL340
63A	3	380-415	2xM32	157x278x227	1	590.EFQL363

□ Package/Bulk Pack.

> ADJUSTABLE AUTO-LIMITER MOTOR CUT-OUT SWITCH – IP66/IP67

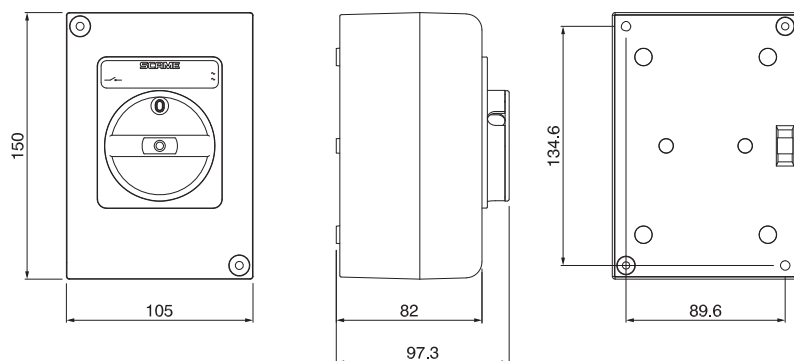


Current	Poles	Volt	Cable inlets	Dimensions (mm)	□	
16A	3	380-415	2xM32	132x237x210	1	590.EPKZM316
32A	3	380-415	2xM32	132x237x210	1	590.EPKZM332
40A	3	380-415	2xM32	132x237x210	1	590.EPKZM340
63A	3	380-415	2xM32	132x237x210	1	590.EPKZM363

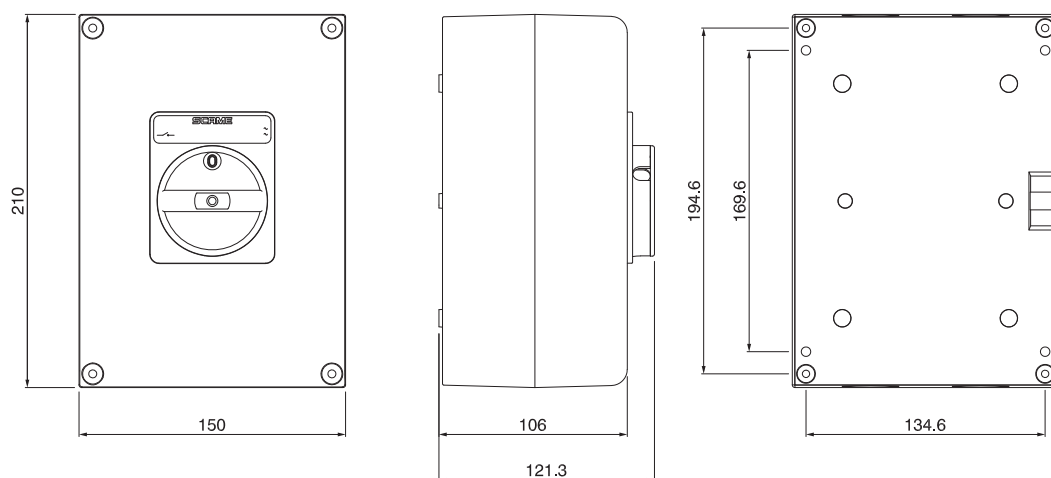
□ Package/Bulk Pack.

> DIMENSIONS

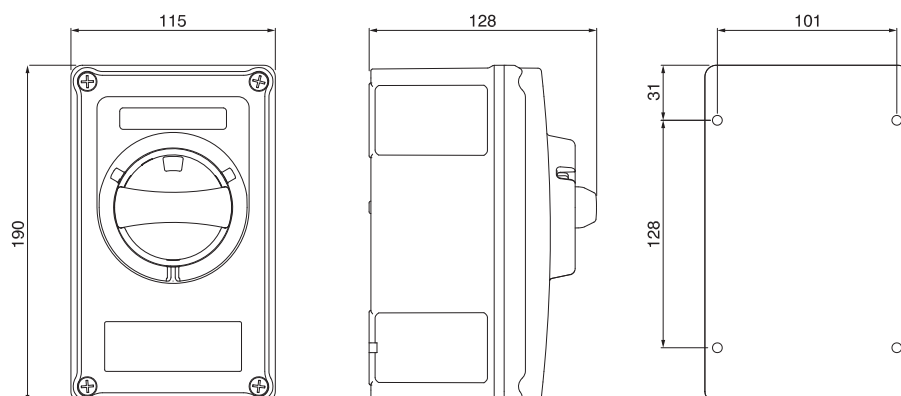
ENCLOSURE IN ALUMINIUM 20A-32A-40A



ENCLOSURE IN ALUMINIUM 63A

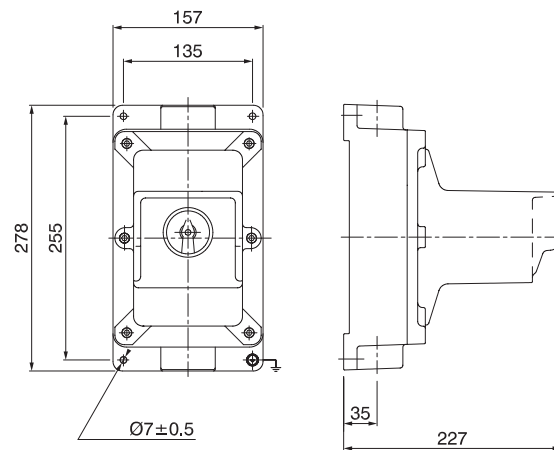


ENCLOSURE IN THERMOPLASTIC 20A-32A-40A

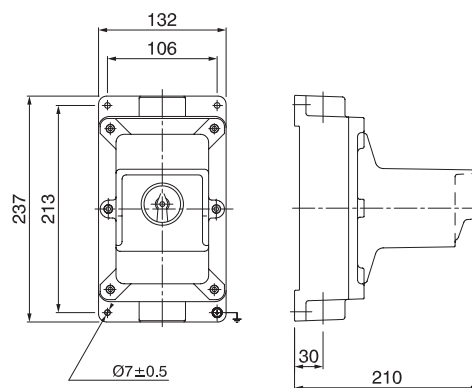


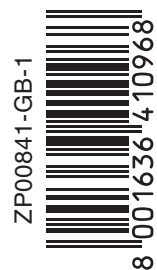
(Dimensions in mm)

FIXED GUARD AUTOMATIC CUT-OUT



ADJUSTABLE AUTO-LIMITER MOTOR CUT-OUT SWITCH





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