

ISOLATORS - FR SERIES

FIRE RATED ENCLOSED
SWITCH DISCONNECTORS
F200



The company

“

In over
fifty years
we have built an
industrial reality
that has always maintained
the spirit of its origins

”



Stefano Scainelli CEO



THE CONCEPT OF QUALITY IS AN INTEGRAL PART OF OUR CULTURE IN ALL ASPECTS AND EVERY ACTIVITY OF OUR WORK.



SCAME PARRE S.p.A., head of the SCAME group, is a manufacturer of components and systems for electrical installations in the civil, services and industrial sector, born and raised in the mountains of the upper Val Seriana, in the Province of Bergamo, Northern Italy.

Since 1963, the year of its foundation, in more than half a century of activity, SCAME has never betrayed the spirit of the origins made of attention to the environment and the person, as well as continuous research to provide an innovation that is never an end in itself, but which translates into total quality and real benefits for the user.

Already a pioneer in the field of the solutions dedicated to electric vehicles charging, for which it has created a specific business division and is today considered an absolute benchmark, the continuous search for new markets has led SCAME to develop also an articulated range of ATEX IECEx products for installation in hazardous areas, without neglecting its traditional offer based on products for domestic and industrial applications, even heavy ones.

A catalog able to meet any installation requirement, a product quality guaranteed by compliance with national and international Standards, a rapid customer service able to support every choice and an high level of service, have enabled SCAME to affirm its presence not only nationally, but also internationally through a network of 17 branches and a consolidated network of distributors in over 80 countries on 5 continents.



SCAME
electrical solutions
Italy, Parre (Bergamo)



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ISOLATORS-FR Series

Fire rated enclosed switch disconnectors F200

ALUMINIUM/HINGED SHEET STEEL ENCLOSURE - 16A-630A



The Scame Fire Rated ISOLATORS Series maintains continuity of a live circuit whilst exposed to an elevated environmental temperature of 200°C for a period of 120 minutes in compliance with the Standard EN 12101-3 (2015): "Smoke and heat control systems. Specification for powered smoke and heat exhaust ventilators".

This Standard relates to smoke extraction systems and in particular to their motor systems. In order to be able to ensure functional reliability under emergency conditions, all components of the complete ventilation system have to comply with this Standard and the relevant test procedures.

REFERENCE STANDARDS

BS EN 12101-3

Smoke and heat control systems.
Specification for powered smoke and heat exhaust ventilators

EN 60947-3

Low voltage switchgear and controlgear.
Part 3: switches, disconnectors, switch-disconnectors and fuse-combination unit.

EN 60529

Degrees of protection provided by enclosure.

TECHNICAL CHARACTERISTICS

Polarity: **1P+SN, 2P, 3P, 3P+SN, 3P+N, 6P**

Rated current: **16A-20A-25A-32A-40A-63A-80A-100A-125A-160A-200A-250A-315A-400A-500A-630A**

Fire rated classifications according to EN 12101-3 (2015): **F200 (120)**

Min-Max. Operating ambient temperature: **-25°C +60°C**

Protection degree: **IP66 (16A÷100A)
IP65 (125A÷630A)**

IK degree: **IK08 (125A÷160A)
IK10 (16A÷100A / 200A÷630A)**

Material: **Continuous-Casting-Aluminium Alloy
Hot dip galvanized steel sheet with zinc**

Finishing: **Electrostatic powder coating polyester resin saturated with epoxy resin**

Colour: **Red RAL 3020**

- 3P+N with early make late break neutral pole.
- Door locking in ON position
- Padlockable handle with 3 padlocks in both OFF and ON position

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	Limited Resistance	Limited Resistance	Resistant	Limited Resistance	Limited Resistance	Resistant	Resistant	Resistant

BEHAVIOUR WITH CHEMICAL AND ATMOSPHERIC AGENTS - SHEET STEEL

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

Resistance values to chemical agents have to be considered indicative.
For further information and specific substances, contact the technical service.

Dimensional drawings: www.scame.com

■ CABLE INLETS
Aluminium enclosure 1P+SN, 2P, 3P, 3P+SN, 3P+N

Rated current (A)	Nr of poles	Enclosure dimensions (mm)	Cable entries		
			Top	Bottom	Rear
20-32-40	1P+SN, 2P, 3P, 3P+SN, 3P+N	105x150x82	Top	-	Blank side (*)
			Bottom	-	Blank side (*)
			Rear	-	Blank side (*)
63-80-100	1P+SN, 2P, 3P, 3P+SN, 3P+N	150x210x107	Top	-	Blank side (*)
			Bottom	-	Blank side (*)
			Rear	-	Blank side (*)
125	3P, 3P+SN, 3P+N	264x315x122	Top	-	Blank side (*)
			Bottom	-	Blank side (*)
			Rear	-	Blank side (*)
160	3P, 3P+SN, 3P+N	315x410x153	Top	-	Blank side (*)
			Bottom	-	Blank side (*)
			Rear	-	Blank side (*)

(*) Perforated or threaded entries on request.

■ CABLE INLETS
Aluminium enclosure 6P

Rated current (A)	Nr of poles	Enclosure dimensions (mm)	Cable entries		
			Top	Bottom	Rear
16-25-32-40	6P	150x210x107	Top	-	Blank side (*)
			Bottom	-	Blank side (*)
			Rear	-	Blank side (*)
63-80-100	6P	264x315x122	Top	-	Blank side (*)
			Bottom	-	Blank side (*)
			Rear	-	Blank side (*)
125-160	6P	315x410x153	Top	-	Blank side (*)
			Bottom	-	Blank side (*)
			Rear	-	Blank side (*)

(*) Perforated or threaded entries on request.

■ CABLE INLETS
**Hinged sheet steel enclosure 3P, 3P+SN, 3P+N
Top/Bottom entries**

Rated current (A)	Nr of poles	Dimension (mm)	Cable entries	
			Top	Bottom
200-250	3P, 3P+SN, 3P+N	300x500x200	Top	Blank side
			Bottom	Gland plate
315-400	3P, 3P+SN, 3P+N	400x600x200	Top	Blank side
			Bottom	Gland plate
500-630	3P, 3P+SN, 3P+N	500x700x250	Top	Blank side
			Bottom	Gland plate

■ CABLE INLETS
**Hinged sheet steel enclosure 6P
Top/Bottom entries**

Rated current (A)	Nr of poles	Dimension (mm)	Cable entries	
			Top	Bottom
200-250	6P	600x800x300	Top	Blank side
			Bottom	Gland plate
315-400-500	6P	800x800x300	Top	Blank side
			Bottom	Gland plate
630	6P	1000x1000x300	Top	Blank side
			Bottom	Gland plate

ISOLATORS-FR Series

Fire rated enclosed switch disconnectors F200

■ TECHNICAL CHARACTERISTICS 1P+SN, 2P, 3P, 3P+SN, 3P+N

Switch size			Y1			Y2		Y4	Y5		
Rated current In			20A	32A	40A	63A	80A	100A	125A	160A	
Rated insulation voltage	Ui	VAC	690	690	690	690	690	800	800	800	
Rated impulse withstand voltage	Uimp	kV	4	4	4	8	8	8	8	8	
Thermal current	Ith/Ithe	A	20	32	40	63	80	100	125	160	
Rated operational current – Ie	AC21A Resistive loads, including moderate overloads	415V	A	20	32	40	63	80	100	125	160
		500V	A	20	32	32	63	80	100	125	160
		690V	A	20	32	32	63	80	100	125	160
	AC22A Mixed resistive and inductive loads, including moderate overloads	415V	A	20	32	40	63	80	100	125	160
		500V	A	20	32	32	63	80	100	125	160
		690V	A	20	32	32	63	80	100	125	160
	AC23A Switching of motor loads or other highly inductive loads (3 phase / 3 pole)	415V	A	20	32	35	63	67	100	125	160
		500V	A	20	25	25	40	67	-	125	125
		690V	A	20	25	25	30	38	-	100	100
	AC23A Rated operational power (°)	415V	Kw	9	15	18.5	33	37	46	55	69
	AC3 Squirrel-cage motor: starting, switching off motor during running (3 phase / 3 pole)	415V	A	18	25	28.5	40	55	-	-	-
		690V	A	12	18	20	25	32	-	-	-
Rated short time withstand current	Icw (1s)	A	400	400	400	1500	1500	1500	3000	3000	
Conditional short circuit current		kAeff	10	10	10	10	10	30	50	50	
Associate fuse size for conditional short circuit current - Type gG		A	20	32	40	63	80	100	125	125	
Flexible wire		mm ²	1.5-10	1.5-10	1.5-10	10-35	10-35	10-50	10-70	10-70	
Rigid wire		mm ²	1.5-16	1.5-16	1.5-16	10-35	10-35	10-50	10-70	10-70	

(°) This values are given for guidance and may vary according to the specifics provided by the motor manufacturer.

■ TECHNICAL CHARACTERISTICS 6P

Switch size			Y3				Y4			Y5		
Rated current In			16A	25A	32A	40A	63A	80A	100A	125A	160A	
Rated insulation voltage	Ui	VAC	800	800	800	800	800	800	800	800	800	
Rated impulse withstand voltage	Uimp	kV	8	8	8	8	8	8	8	8	8	
Thermal current	Ith/Ithe	A	16	25	32	40	63	80	100	125	160	
Rated operational current – Ie	AC21A Resistive loads, including moderate overloads	415V	A	16	25	32	40	63	80	100	125	160
		500V	A	16	25	32	40	63	80	100	125	160
		690V	A	16	25	32	40	63	80	100	125	160
	AC22A Mixed resistive and inductive loads, including moderate overloads	415V	A	16	25	32	40	63	80	100	125	160
		500V	A	16	25	32	40	63	80	100	125	160
		690V	A	16	25	32	40	63	80	100	125	160
	AC23A Switching of motor loads or other highly inductive loads (3 phase / 3 pole)	415V	A	16	25	32	40	63	80	100	125	160
		500V	A	16	25	32	40	63	63	63	125	125
		690V	A	16	25	25	25	32	32	32	100	100
	AC23A Rated operational power (°)	415V	kW	7,5	11	15	18,5	35	37	46	55	69
	Rated short time withstand current	Icw (1s)	A	1100	1100	1100	1100	1500	1500	1500	3000	3000
	Conditional short circuit current		kAeff	50	50	50	50	50	50	30	50	50
Associate fuse size for conditional short circuit current - Type gG		A	16	25	32	40	63	80	100	125	125	
Flexible wire		mm ²	4-25	4-25	4-25	4-25	10-50	10-50	10-50	10-70	10-70	
Rigid wire		mm ²	4-25	4-25	4-25	4-25	10-50	10-50	10-50	10-70	10-70	

(°) This values are given for guidance and may vary according to the specifics provided by the motor manufacturer.

■ TECHNICAL CHARACTERISTICS 3P, 3P+SN, 3P+N, 6P

Switch size			K2		K3			K4	
Rated current In			200	250	315	400	500	630	
Rated insulation voltage	Ui	(V)	1000	1000	1000	1000	1000	1000	
Rated impulse withstand voltage	Uimp	(kV)	12	12	12	12	12	12	
Thermal current	Ith/Ithe	(A)	200	250	315	400	500	800	
Rated operational current – Ie	AC21A/B Resistive loads, including moderate overloads	415V (A)	200	250	315	400	500	630/800	
		500V (A)	200	250	315	400	500	630/800	
		690V (A)	200	250	315	400	500	630/800	
	AC22A/B Mixed resistive and inductive loads, including moderate overloads	415V (A)	200	250	315	400	500	630/800	
		500V (A)	200	250	315	400	400	630	
		690V (A)	200	250	315	400	400	630	
	AC23A/B Switching of motor loads or other highly inductive loads (3 phase / 3 pole)	415V (A)	200	250	315	400	500	630	
		500V (A)	160	200	250	315	315	500	
		690V (A)	125	160	200	250	250	400	
	AC23A Rated operational power (°)	415V kW	105	130	165	200	210	330	
	Rated making capacity	415V AC23	(A)	2000	2500	3150	4000	4000	6300
	Rated breaking capacity	415V AC23	(A)	1600	2000	2520	3200	3200	5040
Short circuit withstand current 1sec		(kA)	8	8	13	13	13	26.5	
Short circuit withstand current 0.25 sec		(kA)	16	16	26	26	26	53	
Short circuit making capacity	415V	(kA)	13.5	13.5	26	26	26	30	
Rated fuse short-circuit current	Back up fuse	(A)	200	250	315	400	400	630	
	R.M.S value	(kA)	50	50	50	50	50	50	
	Peak value	(kA)	20	25	25	30	30	40	
Terminal bolt size		mm ²	M8	M8	M10	M10	M10	M12	
Palm width		mm	21	21	25	25	25	30	

(°) This values are given for guidance and may vary according to the specifics provided by the motor manufacturer.

ISOLATORS-FR Series

Switch disconnectors F200 - Aluminium enclosure

SURFACE MOUNTING - IP66
16A÷40A - 1P+SN, 2P, 3P, 3P+SN, 3P+N, 6P

ISOLATORS-FR Series

105x150x82 mm

150x210x107 mm



	Poles	Switch size	□	105x150x82 mm		150x210x107 mm	
				EMERGENCY SWITCHING	GENERAL USE	EMERGENCY SWITCHING	GENERAL USE
16A	6P	Y3	1/5			590.F2EM1606	590.F2GE1606
20A	1P+SN	Y1	1/12	590.F2EM2002.SN	590.F2GE2002.SN		
	2P			590.F2EM2002	590.F2GE2002		
	3P			590.F2EM2003	590.F2GE2003		
	3P+SN			590.F2EM2005.SN	590.F2GE2005.SN		
	3P+N			590.F2EM2005	590.F2GE2005		
25A	6P	Y3	1/5			590.F2EM2506	590.F2GE2506
32A	1P+SN	Y1	1/12	590.F2EM3202.SN	590.F2GE3202.SN		
	2P			590.F2EM3202	590.F2GE3202		
	3P			590.F2EM3203	590.F2GE3203		
	3P+SN			590.F2EM3205.SN	590.F2GE3205.SN		
	3P+N			590.F2EM3205	590.F2GE3205		
	6P	Y3	1/5			590.F2EM3206	590.F2GE3206
40A	1P+SN	Y1	1/12	590.F2EM4002.SN	590.F2GE4002.SN		
	2P			590.F2EM4002	590.F2GE4002		
	3P			590.F2EM4003	590.F2GE4003		
	3P+SN			590.F2EM4005.SN	590.F2GE4005.SN		
	3P+N			590.F2EM4005	590.F2GE4005		
	6P	Y3	1/5			590.F2EM4006	590.F2GE4006

□ Pack Quantity

- 3P+N with early make late break neutral pole.
- Equipped with door locking.

- Switch disconnectors units suitable as spare parts available in the General catalogue. For 6 pole contact technical support.
- 1P+SN / 3P+SN: unswitched neutral (solid neutral terminal block)

■ SURFACE MOUNTING - IP66
63A÷160A - 1P+SN, 2P, 3P, 3P+SN, 3P+N, 6P

ISOLATORS-FR Series

150x210x107 mm

264x315x122 mm (●)

315x410x153 mm (●)

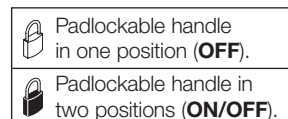


Poles	Switch size	□	150x210x107 mm		264x315x122 mm (●)		315x410x153 mm (●)	
			EMERGENCY SWITCHING	GENERAL USE	EMERGENCY SWITCHING	GENERAL USE	EMERGENCY SWITCHING	GENERAL USE
63A	1P+SN		590.F2EM6302.SN	590.F2GE6302.SN				
	2P		590.F2EM6302	590.F2GE6302				
	3P	Y2	1/5	590.F2EM6303	590.F2GE6303			
	3P+SN		590.F2EM6305.SN	590.F2GE6305.SN				
	3P+N		590.F2EM6305	590.F2GE6305				
	6P	Y4	1			590.F2EM6306	590.F2GE6306	
80A	1P+SN		590.F2EM8002.SN	590.F2GE8002.SN				
	2P		590.F2EM8002	590.F2GE8002				
	3P	Y2	1/5	590.F2EM8003	590.F2GE8003			
	3P+SN		590.F2EM8005.SN	590.F2GE8005.SN				
	3P+N		590.F2EM8005	590.F2GE8005				
	6P	Y4	1			590.F2EM8006	590.F2GE8006	
100A	3P		590.F2EM10003	590.F2GE10003				
	3P+SN		590.F2EM10005.SN	590.F2GE10005.SN				
	3P+N	Y4	1/5	590.F2EM10005	590.F2GE10005			
	6P		1			590.F2EM10006	590.F2GE10006	
125A	3P				590.F2EM12503	590.F2GE12503		
	3P+SN		1/5		590.F2EM12505.SN	590.F2GE12505.SN		
	3P+N	Y5			590.F2EM12505	590.F2GE12505		
	6P		1				590.F2EM12506	590.F2GE12506
160A	3P						590.F2EM16003	590.F2GE16003
	3P+SN		1/5				590.F2EM16005.SN	590.F2GE16005.SN
	3P+N	Y5					590.F2EM16005	590.F2GE16005
	6P		1				590.F2EM16006	590.F2GE16006

□ Pack Quantity

- 3P+N with early make late break neutral pole.
- Equipped with door locking.
- (●) Protection degree IP65









- Switch disconnectors units suitable as spare parts available in the General catalogue. For 6 pole contact technical support.
- 1P+SN / 3P+SN: unswitched neutral (solid neutral terminal block)



ISOLATORS-FR Series

Switch disconnectors F200 - Hinged sheet steel enclosure

■ SURFACE MOUNTING - IP65 200A ÷ 630A - 3P, 3P+SN, 3P+N, 6P - TOP/BOTTOM CONNECTION

		300x500x200 mm		400x600x200 mm		500x700x250 mm					
Poles	Switch size	□	 EMERGENCY SWITCHING 		 GENERAL USE 		 EMERGENCY SWITCHING 		 GENERAL USE 		
			200A	3P	K2	1	590.F2EM20003	590.F2GE20003			
3P+SN	590.F2EM20005.SN	590.F2GE20005.SN									
3P+N	590.F2EM20005	590.F2GE20005									
6P											
250A	3P	K2	1	590.F2EM25003	590.F2GE25003						
	3P+SN			590.F2EM25005.SN	590.F2GE25005.SN						
	3P+N			590.F2EM25005	590.F2GE25005						
	6P										
315A	3P	K3	1			590.F2EM31503	590.F2GE31503				
	3P+SN					590.F2EM31505.SN	590.F2GE31505.SN				
	3P+N					590.F2EM31505	590.F2GE31505				
	6P										
400A	3P	K3	1			590.F2EM40003	590.F2GE40003				
	3P+SN					590.F2EM40005.SN	590.F2GE40005.SN				
	3P+N					590.F2EM40005	590.F2GE40005				
	6P										
500A	3P	K3	1					590.F2EM50003	590.F2GE50003		
	3P+SN							590.F2EM50005.SN	590.F2GE50005.SN		
	3P+N							590.F2EM50005	590.F2GE50005		
	6P										
630A	3P	K4	1					590.F2EM63003	590.F2GE63003		
	3P+SN							590.F2EM63005.SN	590.F2GE63005.SN		
	3P+N							590.F2EM63005	590.F2GE63005		
	6P										

□ Pack Quantity
 - 3P+N with early make late break neutral pole.
 - Equipped with door locking.

- Switch disconnectors units suitable as spare parts available in the General catalogue.
 - 3P+SN: unswitched neutral (solid neutral terminal block)

ISOLATORS-FR Series

600x800x300 mm

800x800x300 mm

1000x1000x300 mm



600x800x300 mm		800x800x300 mm		1000x1000x300 mm	
EMERGENCY SWITCHING	GENERAL USE	EMERGENCY SWITCHING	GENERAL USE	EMERGENCY SWITCHING	GENERAL USE
590.F2EM20006	590.F2GE20006				
590.F2EM25006	590.F2GE25006				
		590.F2EM31506	590.F2GE31506		
		590.F2EM40006	590.F2GE40006		
		590.F2EM50006	590.F2GE50006		
				590.F2EM63006	590.F2GE63006

Pack Quantity
 - 3P+N with early make late break neutral pole.
 - Equipped with door locking.

- Switch disconnectors units suitable as spare parts available in the General catalogue.
 - 3P+SN: unswitched neutral (solid neutral terminal block)

	Padlockable handle in one position (OFF).
	Padlockable handle in two positions (ON/OFF).

ZP01136-GB-1



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