

SELECTION

ISOLATORS-FR Series

FIRE RATED ENCLOSED SWITCH
DISCONNECTORS F400



The company

“

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

”



Stefano Scainelli CEO



SCAME PARRE S.p.A. is an Italian manufacturer of components and systems for low voltage electrical installations, in the residential and industrial fields.

Since 1963, the year it was founded, SCAME has grown to be an international group with a workforce of 650 employees at the three facilities located in the province of Bergamo, Italy, where the company's headquarters and main production lines have always been. The company also operates abroad, with 18 sales offices and branches, three of which are also production facilities.

In over 50 years of activity, it has kept its original spirit intact, spreading its values and distributing its products on the domestic market and, starting in the early 1970s, in over 80 foreign countries spread over 5 continents, currently achieving a consolidated yearly turnover of more than € 100 million.

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





SCAME
electrical solutions
Italy, Parre (Bergamo)



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ISOLATORS-FR Series

■ FIRE RATED ENCLOSED SWITCH DISCONNECTORS



The Scame Fire Rated ISOLATORS Series maintains continuity of a live circuit whilst exposed to an elevated environmental temperature of 400°C for a period of 120 minutes in compliance with the Standard EN 12101-3 (2002): "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
- IEC/EN 60947-3**
Low voltage switchgear and controlgear
Part 3: switches, disconnectors, switch-disconnectors and fuse-combination units.
- IEC/EN 60529**
Degrees of protection provided by enclosure.

■ TECHNICAL CHARACTERISTICS

Fire rated classifications according to EN 12101-3 (2002):	F400 (120)
Min-Max. Operating ambient temperature:	-25°C + 60°C
Protection degree:	IP65
IK degree	IK10
Material:	<ul style="list-style-type: none"> • Continuos-Casting Aluminium Alloy • Hot dip galvanized steel sheet with zinc
Finishing:	Electrostatic powder coating polyester resin saturated with epoxy resin
Color:	Red RAL 3020

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



■ TECHNICAL CHARACTERISTICS FROM 20A UP TO 160A

Rated current	In	A	20	32	40	63	80	100	125	160		
Rated insulation voltage	Ui	VAC	690	690	690	800	800	800	800	800		
Rated impulse withstand voltage	Uimp	kV	6	6	6	8	8	8	8	8		
Thermal current	Ithe	A	20	32	40	63	80	100	125	160		
Rated operational current - Ie	AC21A Resistive loads, including moderate overloads		415	V	20	32	40	63	80	100	125	160
	AC22A Mixed resistive and inductive loads, including moderate overloads		415	V	20	32	40	63	80	100	125	160
	AC23A Switching of motor loads or other inductive loads (3 phase/3 poles)		415	V	20	32	35	63	80	100	125	160
Rated operational power*	AC23A		415	kW	7.5	15	18.5	35	37	46	55	69
Rated short-time withstand current	Icw (1sec)	A	400	400	400	1500	1500	1500	3000	3000		
Rated conditional short circuit current		kA	10	10	10	30	30	30	50	50		
Associate fuse size	Type gG	A	16	32	40	63	80	100	125	125		
Terminal wire size	Flexible	mm²	1.5-10	1.5-10	1.5-10	10-50	10-50	10-50	10-70	10-70		
	Rigid	mm²	1.5-16	1.5-16	1.5-16	10-50	10-50	10-50	10-70	10-70		

*These values are given as guidance and may vary according to the specifics provided by the motor manufacturer

■ TECHNICAL CHARACTERISTICS - HIGH RATINGFROM - 200A UP TO 630A

Rated current	In	A	200	250	315	400	630		
Rated insulation voltage	Ui	VAC	1000	1000	1000	1000	1000		
Rated impulse withstand voltage	Uimp	kV	8	8	8	8	8		
Thermal current	Ithe	A	200	250	315	400	630		
Rated operational current - Ie	AC21A Resistive loads, including moderate overloads		415	V	200	250	315	400	630
	AC22A Mixed resistive and inductive loads, including moderate overloads		415	V	200	250	315	400	630
	AC23A Switching of motor loads or other inductive loads (3 phase/3 poles)		415	V	200	250	315	400	630
Rated operational power*	AC23A		415	kW	115	140	165	200	210
Rated short-time withstand current	Icw (1sec)	A	13	13	13	13	13		
Rated conditional short circuit current		kA	50	50	50	50	50		
Associate fuse size	Type gG	A	200	250	315	400	630		
Terminal bolt size		mm²	M8/M10 (+)	M8/M10 (+)	M10	M10	M12		

*These values are given as guidance and may vary according to the specifics provided by the motor manufacturer (+) For 6P version

■ TECHNICAL CHARACTERISTICS FROM 20A UP TO 630A

Rated Current A	Poles	Type of enclosures	Enclosures material	Dimensions	Cable entries
20-32-40	2P-3P-3P+N	Box with Lid	Aluminium	192x168x80	Blank side
	6P	Box with Lid	Aluminium	253x217x93	Blank side
63-80-100	2P-3P-3P+N	Box with Lid	Aluminium	253x217x93	Blank side
	6P	Box with Lid	Aluminium	314x264x122	Blank side
125-160	2P-3P-3P+N	Box with Lid	Aluminium	410x315x153	Blank side
	6P	Box with Lid	Sheet Steel	500x400x200	Blank side
200-250	3P-3P+N	Hinged door enclosure	Sheet Steel	600x500x200	Top and Bottom Gland plate
	6P	Hinged door enclosure	Sheet Steel	800x600x300	Top and Bottom Gland plate
315-400	3P-3P+N	Hinged door enclosure	Sheet Steel	700x500x250	Top and Bottom Gland plate
	6P	Hinged door enclosure	Sheet Steel	800x800x300	Top and Bottom Gland plate
630	3P-3P+N	Hinged door enclosure	Sheet Steel	800x800x300	Top and Bottom Gland plate
	6P	Hinged door enclosure	Sheet Steel	800x1000x300	Top and Bottom Gland plate

ISOLATORS-FR Series

■ FIRE RATED ENCLOSED SWITCH DISCONNECTORS 20A – 160A

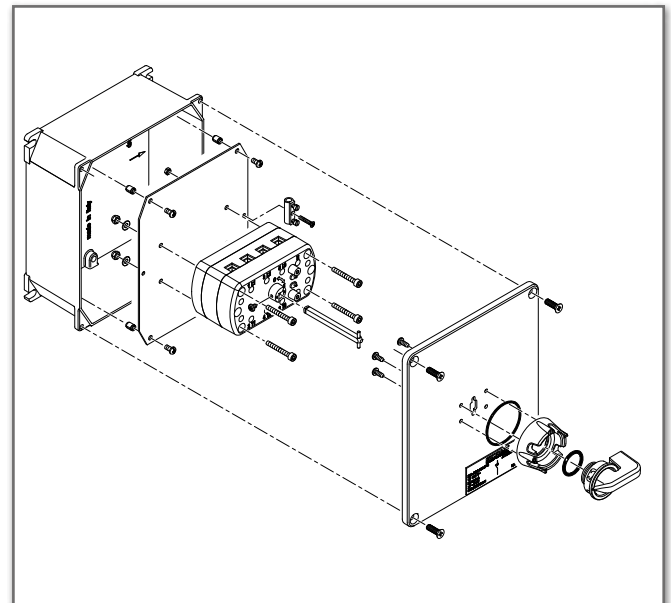


ALUMINIUM ENCLOSURE

	Poles	Red Handle	Red Handle with auxiliary contact
20A	2P	590.FEM2002	590.FEM2002.U
	3P	590.FEM2003	590.FEM2003.U
	3P+N	590.FEM2005	590.FEM2005.U
	6P	590.FEM2006	590.FEM2006.U
32A	2P	590.FEM3202	590.FEM3202.U
	3P	590.FEM3203	590.FEM3203.U
	3P+N	590.FEM3205	590.FEM3205.U
40A	6P	590.FEM3206	590.FEM3206.U
	2P	590.FEM4002	590.FEM4002.U
	3P	590.FEM4003	590.FEM4003.U
	3P+N	590.FEM4005	590.FEM4005.U
63A	6P	590.FEM4006	590.FEM4006.U
	2P	590.FEM6302	590.FEM6302.U
	3P	590.FEM6303	590.FEM6303.U
	3P+N	590.FEM6305	590.FEM6305.U
80A	6P	590.FEM6306	590.FEM6306.U
	2P	590.FEM8002	590.FEM8002.U
	3P	590.FEM8003	590.FEM8003.U
	3P+N	590.FEM8005	590.FEM8005.U
100A	6P	590.FEM8006	590.FEM8006.U
	2P	590.FEM10002	590.FEM10002.U
	3P	590.FEM10003	590.FEM10003.U
125A	3P+N	590.FEM10005	590.FEM10005.U
	6P	590.FEM10006	590.FEM10006.U
	3P	590.FEM12503	590.FEM12503.U
160A	3P+N	590.FEM12505	590.FEM12505.U
	6P	590.FEM12506 *	590.FEM12506.U *
	3P	590.FEM16003	590.FEM16003.U
160A	3P+N	590.FEM16005	590.FEM16005.U
	6P	590.FEM16006 *	590.FEM16006.U *



Inner switch disconnectors have been specifically developed to be resistant at very high temperature for long time. The thermosetting material - Glass Reinforced Polyester (GRP) - used for their housing is the best polymer to ensure resistance to high temperature (GW 960°) and guarantee dimensional stability.



Inner switch disconnectors are mounted on the rear plate (box mounting) for easier wiring and maintenance operations. Version equipped with auxiliary contacts are also available. Enclosures are equipped with metal door locking in on position and handles are padlockable in both on and off position.



* ISOLATORS-FR 125A and 160A in 6P configurations are provided with sheet steel enclosure with lid.



The full range of ISOLATORS-FR from 20 to 630A is also available with the handle in black color. To order it just replace "FEM" with "FGE" in the part number.

**FIRE RATED ENCLOSED SWITCH DISCONNECTORS
HIGH RATINGS 200A – 630A**



SHEET STEEL HINGED
DOOR ENCLOSURE

	Poles	Red Handle	Red Handle with auxiliary contact
200A	3P	590.FEM20003	590.FEM20003.U
	3P+N	590.FEM20005	590.FEM20005.U
	6P	590.FEM20006	590.FEM20006.U
250A	3P	590.FEM25003	590.FEM25003.U
	3P+N	590.FEM25005	590.FEM25005.U
	6P	590.FEM25006	590.FEM25006.U
315A	3P	590.FEM31503	590.FEM31503.U
	3P+N	590.FEM31505	590.FEM31505.U
	6P	590.FEM31506	590.FEM31506.U
400A	3P	590.FEM40003	590.FEM40003.U
	3P+N	590.FEM40005	590.FEM40005.U
	6P	590.FEM40006	590.FEM40006.U
630A	3P	590.FEM63003	590.FEM63003.U
	3P+N	590.FEM63005	590.FEM63005.U
	6P	590.FEM63006	590.FEM63006.U



High ratings versions from 200A up to 630A are provided with hinged door and double top and bottom gland plate, durable metal hinges and door locks.

FIRE RATED SWITCH DISCONNECTORS

APPLICATION EXAMPLE



ZP01039-GB-1



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