

DISCREPENCY SWITCHES

APPLICATION AND USE

FRMM6 micro-sender-switches are mounted on switchboards and in telephonic and electric fields, where small currents are required. Suitable for control & indication of circuit breakers, disconnectors, contactors & electrovalves.

DESCRIPTION AND CONSTRUCTIONAL FEATURES OF THE UNIT.

front plate, round 25mm dia, or square shaped with 25mm sides.

contacts: moving and stationary. Moving contacts are mounted on the control shaft. The stationary contacts are mounted on the melamine block either by soldering or with stand clamps for electric wire connection.

Lamp holder: BA7S lamp for 24, 48, 60Vdc, with bayonet cap; Additional resistances are fitted for lamps when different voltages are required;

trip system allows 2 to 4 positions. The positions supplied by micro-sender-switches are the same as for type FRM 10.

FRMM 6 micro-sender-switches allow all connections as previously specified for FRM 10 switches except the ones requiring dragging effect (FRM 10T).

RATED ELECTRICAL CHARACTERISTICS

Type FRMM 6

Thermal current $I_{th} = 12A$

Insulation voltage $U_i = 690V$

Utilization categories	AC14	AC15	DC14
Operational voltage (U_e)	400V	400V	110V
Operational Current (I_e)	10A	6A	3,5A

Conditioned short-circuit current

Maximum peak current 1400A

Joule integral (I^2t) 30kA²s

DECLARATION OF CONFORMITY TO EN 60947-5-1 STANDARDS.

All the FRMM 6 models comply with the requirements of EN 60947-5-1 standard.

Thus they also conform to EC directives n° 73/23, 93/68, 89/3396 (EMC), (low voltage directive).

TYPE TEST CARRIED OUT IN CESI LABORATORIES MILAN No MP-94/032850.

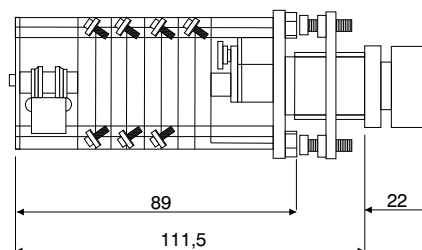
INSTALLATION

Apart from boring, patterns shown in the following pages, the installation process of the FRMM 6 is the same as that for FRM 10.

**Also available as key switches
&
selector switches.**

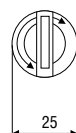


DIMENSIONS

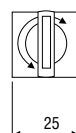


NUMBER OF UNITS	LENGTH mm
1	80
2	93
3	106
4	119
5	132
6	145

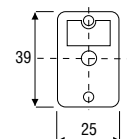
Round front plate



Square front plate

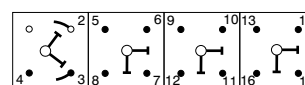
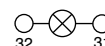
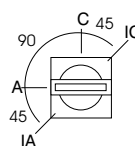


Boring



ELECTRIC DIAGRAMS

		ELEMENT		1	2	3	4
POSITIONS	IMPULSE			2 3	5 6	9 10	13 14
	CONTACT			2 3	5 6	9 10	13 14
	CONTATTO CHIUSO SENZA INTERRUZIONE			3 4	8 7	12 11	16 15
				3 4	8 7	12 11	16 15
1	IA						
2	A						
3	C						
4	IC						



DISCREPENCY SWITCHES

APPLICATION AND USE

FRM 10 sender-switches are suitable for switch board mounting. They are used for operation and for position control of disconnectors and circuit-breakers. They can also send short impulses mainly for remote controlling of contactors, electro-valves etc.

DESCRIPTION AND CONSTRUCTIONAL FEATURES OF THE UNIT.

control handle made of nylon varnished black. The handle has a slot housing a transparent screen through which diffusion of light is allowed.

front plate, round 40mm dia, or square shaped with 40mm sides, made of a light black alloy.

contacts: moving and stationary. Either thickly silver-plated or gilded upon request as for FR 10.

lamp holder: BA9S type

Additional resistances are fitted for lamps when different voltages are required.

These are mounted on a switch -unit, and fastened by the clamps of same unit.

trip system allows 2 to 4 positions.

FRMM 6 micro-sender-switches allow all connections as previously specified for FRM 10 switches except the ones requiring dragging effect. (FRM 10T).

RATED ELECTRICAL CHARACTERISTICS

Type FRM 10

Thermal current $I_{th} = 20A$

Insulation voltage $U_i = 690V$

Utilization categories

AC 14	AC 15	DC 14
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Operational voltage (U_e)	400V	400V	110V
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Operational current (I_e)	16A	10A	6A
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Conditioned short-circuit current

Maximum peak current 1500A

Joule integral (I^2t) 30kA²s

DECLARATION OF CONFORMITY TO EN 60947-5-1 STANDARD.

All the FRM 10 models comply with the requirements of EN 60947-5-1 standard.

Thus they also conform to EC directives n° 73/23, 93/68, 89/336 (EMC), (low voltage directive).

TYPE TEST CARRIED OUT IN CESI LABORATORIES MILAN

No 94/034529

INSTALLATION

After suitable boring of panels (see boring patterns in the following figures) proceed as follows:

remove knob and front plate from switch

fit switch in from rear of panel

insert the knob ensuring that the displacements are correctly positioned.

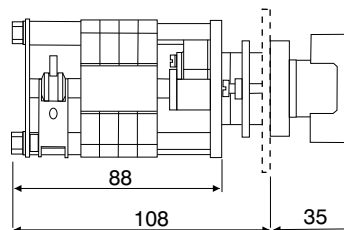
replace front plate up to thread end

position switch metal ring to panel and tighten fastening screws.

The panel thickness can range from 2 to 10 mm.

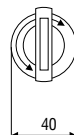


DIMENSIONS

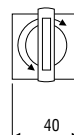


NUMBER OF UNITS	LENGTH mm
1	100
2	108
3	116
4	124
5	132
6	140
7	148
8	156
9	164
10	172

Round front plate



Square front plate

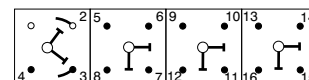
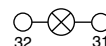
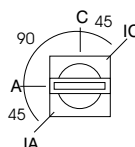


Boring



ELECTRIC DIAGRAMS

		ELEMENT			
		1	2	3	4
POSITIONS	IMPULSE	2 3	5 6	9 10	13 14
	CONTACT				
	CONTACTO CHIUSO SENZA INTERRUZIONE	3 4	8 7	12 11	16 15
1	IA				
2	A				
3	C				
4	IC				



Micro packet switches also available
Please contact us for more information