PBM

PBM Protection, Control and Monitoring System

MOTOR MANAGEMENT SYSTEM

INTEGRAL SOLUTION FOR MCCs ADAPTABLE TO EVERY CUSTOMER NEEDS

MULTIFUNCTION

FAULT REPORTS

4 fault reports with the following information: dates, measurements, status bits, inputs and outputs.

SELF-DIAGNOSIS, INSTALLATION MONITORING AND STATISTICS

- Earth toroidal disconnection monitoring.
- PTC sensor open circuit and short circuit detection.
- Magnetic module hardware monitoring.
- Non-volatile memory stored information coherence.
- Number of motor start ups.
- Medium and maximum current of last start up.
- Number of faults for the following functions: Overload, PTC, JAM, locked rotor and neutral faults.
- Operating hours counter.

TEST MENU

Operation check on LEDs and outputs.

DESIGNED FOR SCADA APPLICATIONS

RTU Modbus protocol and RS485 communication

MODULAR AND SCALABLE

The basic functions of the system can be extended with different modules (PBM H, PBM D...)

COMMUNICATION SOFTWARE PBCom

PBM B

PBM H

PROTECTION FUNCTIONS

- θ> Overload with thermal image
- Overheating protection (PTC sensor)
- Phase imbalance or phase failure
- Phase sequence
- **JAM** JAM detection
- Locked rotor detection
- I_g>> Instantaneous earth leakage overcurrent
- I_g> Earth leakage inverse time overcurrent
- I_0>> Instantaneous neutral overcurrent
- I_0> Neutral inverse time overcurrent
- I< Undercurrent

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PBM B

BASE MODULE

Current measurement is obtained from the motor line through the magnetic module without need of external current transformers.

From 0,8 up to 25 A with internal current transformers.
Over 25 A with external current transformers.

MODELS		PBM-B1		PBM-B5	
		PBM-B11	PBM-B12	PBM-B51	PBM-B52
Adjustment range	Ib (A)	0,8-6A	0,8-6A	4-25A	4-25A
Auxiliary supply		110/230Vac-dc	24/48Vdc	110/230Vac-dc	24/48Vdc
Frequency		50/60/ variable (45-65) Hz			
Maximum motor nominal voltage		1.000 Vac			
CODE		17000	17002	17001	17003
For I_N of the motor below the minimum setting I_B		Pass the cables several times (n) through the holes in the relay I_B = n x I_N			
For I_N of the motor above the maximum setting I_B		Use 3 CT .../5 and the relay PBM B and pass the secondary through the holes			
OTHERS CHARACTERISTICS					
Optional		PBM-H display module HMI			
Inputs		1 x PTC temperature sensor, 1 x Toroidal transformer (external earth fault), 1 x Digital input 24 Vdc			
Outputs		2 x NO-NC contact			
Short circuit withstand rating		5000 A to 0,5s (SCR 5000@0,5s)			
Communication		RS485 ModBus RTU			
Signalling		5 signalling LEDs			
Reset mode		Manual, automatic and automatic time delayed			
Test		Specific test menu			
Operating temperature		- 10ºC + 60ºC			

PBM H

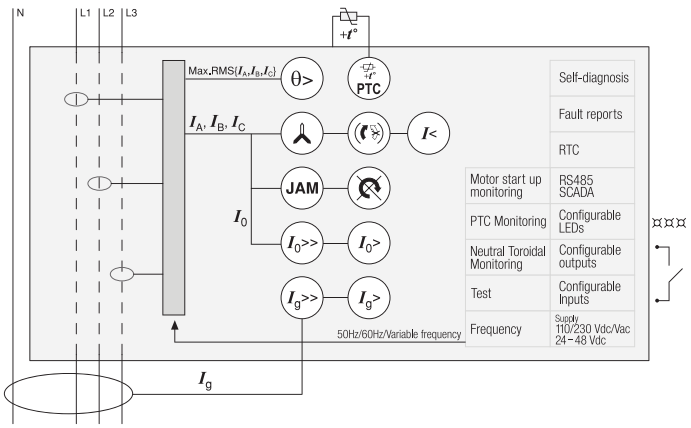
DISPLAY MODULE HMI

This is an optional display module with an LCD screen for signalling, control and setting.
The LEDs can be configured and are identified by labels.
Access to menus is intuitive and direct, making protection system commissioning easier.

CODE	ACCESORIES	LANGUAGE
17004	PBM-HS display	Spanish
17005	PBM-HS display	French
17006	PBM-HS display	English
17007	PBM-HS display	Polish
17010	PBM-HS display	German
79229	CD PBM	
17008	CDCNB CABLE 0,5 M	
17009	CDCN1 CABLE 1 M	

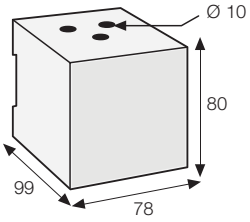
CHARACTERISTICS PBM H	
LCD Display	20 x 2 alphanumeric characters
Keyboard	9 keys
Communication	RJ45 connector to relay
Signalling	6 configurable signalling LEDs
Reset mode	Manual, automatic and automatic time delayed
Test	Specific test menu

FUNCTION DIAGRAM PBM B

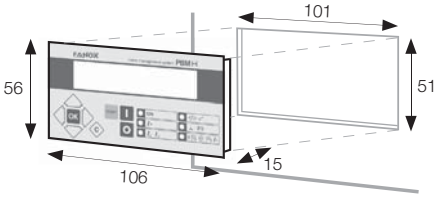


DIMENSIONS (mm)

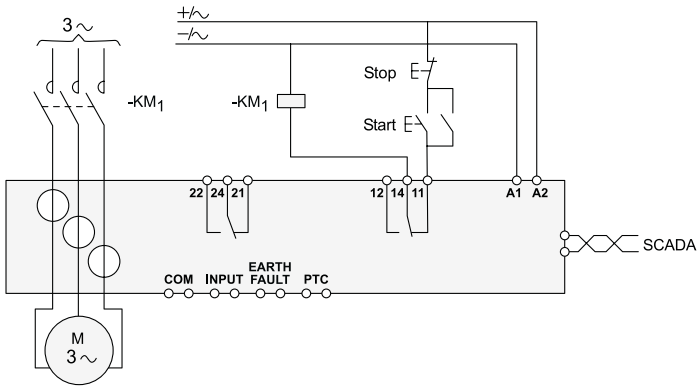
PBM B



PBM H



CONNECTION DIAGRAM PBM B



PBM Motor Management System Video demo: