

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.

DESIGNED FOR SCADA APPLICATIONS

RTU Modbus protocol and RS485 communication

COMMANDS MANAGEMENT

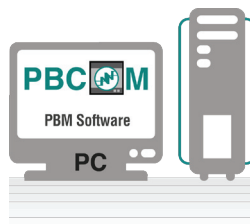
- Start/Stop by 2 or 3 wires, without additional switches or push-buttons
- Remote Start/Stop, more efficiency and cost saving.

COMMUNICATION SOFTWARE PBCom

PBM B



PBM H



PROTECTION FUNCTIONS

- $I_{0>}$ Overload with thermal image
- $I_{t'}$ Overheating protection (PTC sensor)
- I_{Δ} Phase imbalance or phase failure
- (P) Phase sequence
- JAM** JAM detection
- I_{L} 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



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	lb (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 $I_B = n \times I_N$					
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	- 10°C + 60°C					

PBM H

DISPLAY MODULE HMI

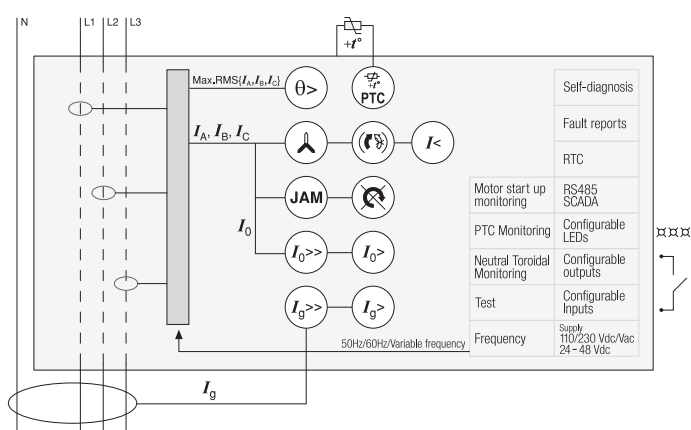
This is an optional display module with an LCD screen for signalling, control and setting. The LEDs can be configured and are identified by labels. Access to menus is intuitive and direct, making protection system commissioning easier.

CODE	ACCESORIES	LANGUAGE
17015	PBM - H1S1	Spanish
17016	PBM - H1F1	French
17017	PBM - H1E1	English
17018	PBM - H1P1	Polish
17019	PBM - H1G1	German
79229	CD PBM	
17008	CDCNB CABLE 0,5 M	
17009	CDCN1 CABLE 1 M	

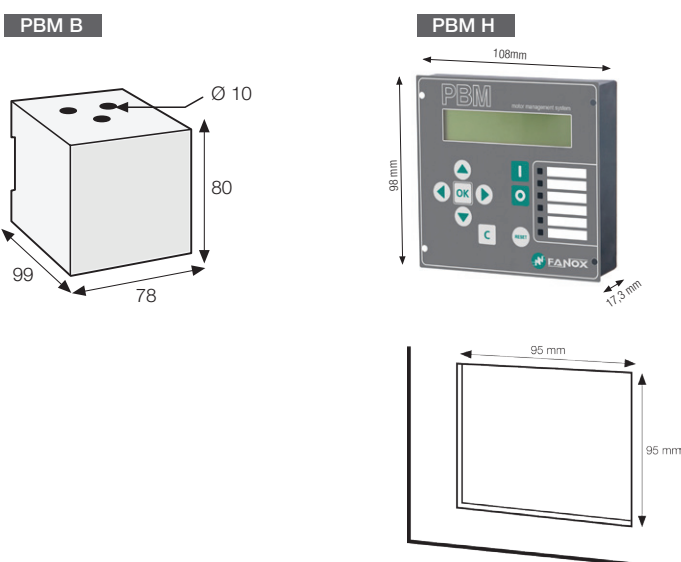
CHARACTERISTICS PBM H

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)



CONNECTION DIAGRAM PBM B

