

## Power Transformer

## Cooler Pump & Fan Monitoring Unit



- Monitors pumps & fans during normal operation and in exercise mode.
- Indicates individual pump and fan failure.
- Can be configured to monitor individual supply phases.
- 18 monitored inputs in 3 configurations for fan only, single stage or dual stage cooling systems. (see ordering requirements)
  - 18 Fan inputs, or
  - 2 Pump & 16 Fan inputs
- Can be used alongside both Mechanical & Electronic WTIs.
- Universal input power supply.
- Power loss alarm output for power failure.
- LED indication of channel status & alarm output and unit ON/OFF.
- Surface mount case.
- Optional programmable cooler exercising unit available.
- Can be retrofitted to existing installations.
- On site fitting service available
- 5 year warranty available when supplied & installed by Accurate Controls.



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## Accurate Controls Ltd.

25 Cowley Road, Nuffield Industrial Estate,  
Poole, Dorset, BH17 0UJ, United Kingdom.

Tel: +44 (0)1202 678108

e-mail: [info@accurate-controls.ltd.uk](mailto:info@accurate-controls.ltd.uk)

web: [www.accurate-controls.ltd.uk](http://www.accurate-controls.ltd.uk)



# PFM – Watchdog

## Technical Specification

### Configuration :

Inputs: 1– 18 current sensing inputs from monitoring transducers (CTs) of Pumps, Fans and/or Supply phases.  
 2 control inputs for operation in single or dual cooling modes.  
 Pumps & Fans: *Pumps Ch 17 & 18 Fans Ch 1 to 16*  
 Fans only: *Ch 1 to 18*

CTs: **CT-1** Standard, for motors ½ HP and above  
**CT-2** High Sensitivity, for motors ¼ HP and below.

Inhibits: Inhibit switches to disable channels not being used, with LED indication.

Outputs: A voltage free alarm contact for any input failure or power loss alarm with LED indication.

LED indication of status of each channel

LED Configuration:

Channel LED Colours:

Green = OK  
 Red = Error / Fault  
 Blue = Inhibited / unused Channel  
 Pink = False Inhibit

Master LED Colours:

Green = OK  
 Red = Alarm Output

(Refer to Instruction Manual for more information ).

Function: Electric current status motoring

Alarm: Volt Free single pole relay  
 Rated: 250Vac , 6A,  
 30/110/220Vdc 3A/0.35A/0.2A

### Typical Applications :

Pump & Fan Cooler monitoring  
 Fan only monitoring  
 Motor operation monitoring  
 Individual supply phase monitoring.

### Case :

Mounting : Surface mounted  
 Dimensions: 220mm x 120mm x 90mm  
 IP rating: IP55  
 Case Entry : 3 x M25 Stuffing glands

### Power :

Supply Voltage: 85 – 264 VAC (47 – 63Hz)  
 110– 370 VDC  
 Power supply should be protected with external fuse & link.

### Electrical Connections :

2.5mm<sup>2</sup> terminal block in easily accessed compartment.

### Temperature range:

Operating: -25°C to +50°C  
 Storage: -40°C to +85°C

### EMC compliance :

Instrument complies with applicable EMC directives for radiated emissions and susceptibility, conducted emissions, electrical fast transients and electrostatic discharge.

### Additional Items:

Transducers: Miniature CT 's fitted as standard with 5 metres of cable. (longer lengths available to order )

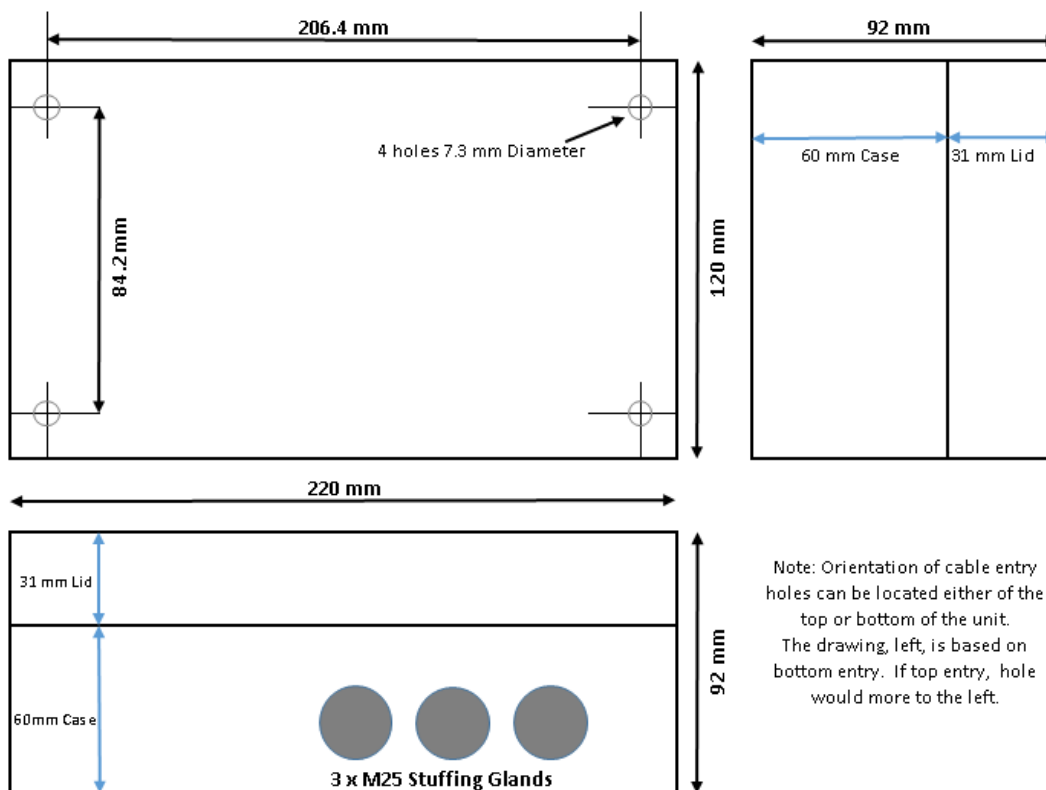
### Options :

Programmable Exerciser for regular pre-set exercising of pumps & fans, internally installed (See PFE –1 datasheet )  
 Additional Relay for dedicated Power Loss Alarm output, internally installed.

### Warranty:

- 1) 12 months return to factory, for supply only.
- 2) 5 years return to factory for instruments supplied and fitted by Accurate Controls Ltd

**Ordering:** See page 3 for Part Nos / Order codes



Full on site installation, calibration and maintenance service available.  
 Please contact Accurate Controls for technical assistance.

# INSTRUMENT SPECIFICATION SHEET PFM

## Quotation Request

# WATCHDOG

**PFM-Watchdog** (supply only: 12 months return to factory warranty)

|                    |                    |  |
|--------------------|--------------------|--|
| Part No:           | Quantity Required: |  |
| Delivery Required: |                    |  |

| Part No.                               | Configurations without Timer Module               | No. of Pumps                                     | No. of Fans |
|--|---|--|-------------|
| PFM-1-Watchdog                         | Single Stage cooler                               | Fans only (max 18) or<br>2 Pumps & up to 16 Fans |             |
| PFM-2-Watchdog                         | Dual Stage cooler                                 |  |             |
| Configurations with PFE-1 Timer Module |   |  |             |
| PFM-1T-Watchdog                        | Single Stage cooler with<br>PFE-1 Exerciser Timer | Fans only (max 18) or<br>2 Pumps & up to 16 Fans |             |
| PFM-2T-Watchdog                        | Dual Stage cooler with<br>PFE-1 Exerciser timer   |  |             |

|  |   |          |  |
|--|---|----------|--|
| <b>Additional Power Loss Alarm Relay</b> | Some configurations require a dedicated power loss alarm output in which case an additional relay is required to be fitted in the unit. | YES / NO |  |
|--|---|----------|--|

| No. of CT's required   | Length | Qty |
|--|--------|-----|
| Standard CT-1 with standard 4 metre cable                      |        |     |
| High Sensitivity CT-2 with standard 4 metre cable              |        |     |
| CT-1 with custom length cable (please specify length required) |        |     |
| CT-2 with custom length cable (please specify length required) |        |     |

|   |          |  |
|---|----------|--|
| <b>Pre- Programmed</b> (PFE-1 will be programmed prior to delivery) | YES / NO |  |
| Day of Week   |          |  |
| Hour of Day   |          |  |
| Duration of Exercise  |          |  |

An example program would be : MONDAY 11.00am 20 mins

**INSTALLATION BY ACCURATE CONTROLS LTD with a 5 year warranty**

|                                 |          |  |
|---------------------------------|----------|--|
| Supply & Installation Quotation | YES / NO |  |
|---------------------------------|----------|--|

Please advise address of installation