

Intelligent PM4 Monitors

PM4-RTC

Real Time Clock



4 digit LED 20mm digit height



4 digit LCD 12.7mm digit height



4 digit LED 14.2mm digit height



6 digit LED 14.2mm digit height



6 digit LCD 12.7mm digit height

Description

The real time clock monitor, PM4-RTC, is a highly visible and versatile indicator with a selection of display options. The clock may be set to display in 24 or 12 hour format. User selectable display formats are:

- Hours.Mins e.g. **1222**
- Hours.Mins.Secs - 6 digit model e.g. **0858.30**
- Days e.g. **364**
- Day.Month e.g. **08.11**
- Day.Month.Year - 6 digit models e.g. **28.11.12**
- Month.Day e.g. **1107**
- Month.Day.Year - 6 digit models e.g. **1128.12**

Clock synchronisation may be via an internal clock chip, 50Hz or 60Hz mains synchronisation, optional high accuracy 10MHz crystal or optional GPS satellite transmission.

The clock circuitry is backed up by battery which means that, in the case of power failure, the time does not need to be reset when power is re-applied to the display.

Each instrument is supplied with one control/alarm relay (standard). Extra relays and other outputs are available as options. The versatile alarm functions allow up to 32 day/time setpoints to be programmed e.g. a relay can be set to operate on Monday to Friday only at 08.30 and 16.30.

With serial retransmission options fitted, the PM4-RTC can be used as a master station in a master/slave clock installation. RS232 retransmission allows for connection of one slave display. RS485 retransmission allows for the connection of up to 32 slave displays to a single master.

Features

- Battery backed clock circuit
- Pushbutton calibration and setup
- Choice of display modes
- 240V, 110V, 32V, 24VAC, 12 to 48VDC or 50 to 110VDC operation (factory configured)
- Alarm/control relay output (5A) with up to 32 day/time setpoints
- Remote input for special functions including
 - Setpoint Access
 - No Access
 - Display brightness control

Output Options

- Additional setpoint relays (1, 3 or 6)
- RS232 or RS485 serial communications

See order code section for full list of options

PM4RTC-3.5-0

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Specifications - subject to change without notice

Technical Specifications

Synchronisation:	Internal clock oscillator, 50Hz mains frequency, 60Hz mains frequency, high accuracy 10MHz crystal or optional GPS receiver
Accuracy:	Internal Oscillator: ± 30 seconds/month Mains synch: Accurate to mains frequency. Where mains frequency is controlled this gives a typical accuracy of ± 1 seconds High accuracy crystal: ± 3 seconds/month GPS synch: Accurate to GPS system ± 0.1 second
Memory Retention:	Battery backed clock oscillator operates in case of power failure
Microprocessor:	MC68HC11 CMOS
Ambient temp:	LED models -10°C to 60°C, LCD models -10°C to 50°C
Humidity:	5% to 95% non condensing
Display types:	LED models: 4 digit 20mm, 5 digit 14.2mm, status LEDs, keypad. 6 digit 14.2mm, keypad. LCD models: 4 digit or 6 digit 12.7mm
Power supply:	240, 110, 32, 24VAC 50/60Hz, or 12 to 48VDC (factory configured)
Power usage:	AC supply 4 VA max, DC supply, approx 40mA at 24VDC (with no options fitted)
Output (standard):	1 x relay, form A, rated 5A resistive
Relay action:	Programmable N.O. or N.C.

Output Options

See order codes for full listing of options

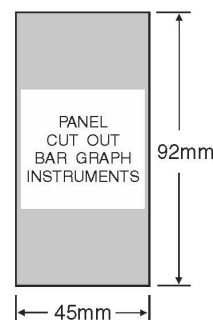
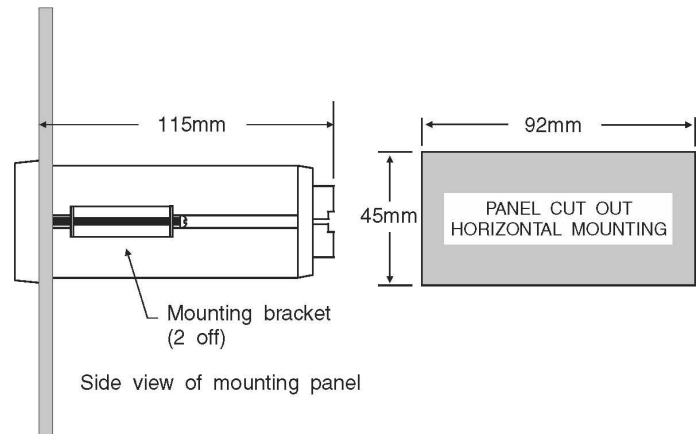
Physical Characteristics

Bezel size:	DIN 48mm x 96mm x 10mm
Case size:	44mm x 91mm x 115mm behind face of panel
Panel cut out:	45mm x 92mm (+1mm & -0mm)
Connections:	Plug in screw terminals (max 2.5mm ² wire)
Weight:	400g basic model, 450g with option card

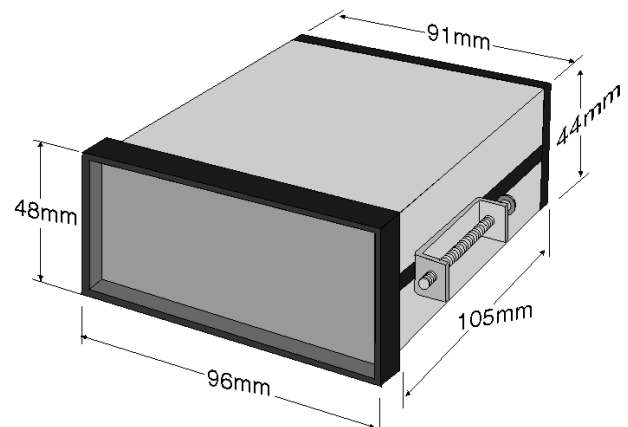
PM4-RTC Accessories

Description	Model No.
IP65 access cover	COVER-IP65
Wall mount enclosure	ENC-PM1-01
Wall mount encl. with IP65 cover	ENC-IP65-PM1-01
Surface mount kit	PM4-OPT-SMKIT
Portable/bench enclosure AC	ENC-PM-AC
Portable/bench enclosure DC	ENC-PM-DC

PM4-RTC panel mounting details



PM4-RTC case dimensions



Wiring diagrams and full operations manual are available from www.aicpl.com.au/pdf/pm4rtcma.pdf.

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PM4-RTC order codes

The last section is for optional outputs, if required. (Note: only one of the optional outputs below can be fitted).

PM4-RTC-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>
	↑		↑		↑
	240	-----	240VAC		240VAC
	110	-----	110VAC		110VAC
	32	-----	32VAC		32VAC
	24	-----	24VAC		24VAC
	DC	-----	12-48VDC isolated		12-48VDC isolated
	DCH	-----	50-110VDC isolated		50-110VDC isolated
					Display type
	4E	-----	4 Digit 20mm red led		4 Digit 20mm red led
	5E	-----	5 digit 14mm red led with front pushbuttons & annunciators		5 digit 14mm red led with front pushbuttons & annunciators
	6E	-----	6 digit 14mm red led with front pushbuttons		6 digit 14mm red led with front pushbuttons
	4C	-----	4 digit 12.7mm lcd		4 digit 12.7mm lcd
	4CG	-----	4 digit 12.7mm lcd with backlight		4 digit 12.7mm lcd with backlight
	6C	-----	6 digit 12.7mm lcd		6 digit 12.7mm lcd
					Optional outputs
	R	-----	2nd setpoint relay		2nd setpoint relay
	R12	-----	2nd setpoint relay and 24V (+/- 12V) isolated transmitter supply		2nd setpoint relay and 24V (+/- 12V) isolated transmitter supply
	RRR	-----	2nd, 3rd and 4th setpoint relays		2nd, 3rd and 4th setpoint relays
	R6	-----	2nd to 7th setpoint relays (i.e. 6 extra relays)		2nd to 7th setpoint relays (i.e. 6 extra relays)
	12	-----	24V (+/- 12V) isolated transmitter supply		24V (+/- 12V) isolated transmitter supply
	A	-----	Analog retransmission (isolated)		Analog retransmission (isolated)
	AR	-----	Analog retransmission (isolated) and 2nd setpoint relay		Analog retransmission (isolated) and 2nd setpoint relay
	ARRR	-----	Analog retransmission (isolated) and 2nd, 3rd and 4th setpoint relays		Analog retransmission (isolated) and 2nd, 3rd and 4th setpoint relays
	AR12	-----	Analog retransmission (isolated), 2nd relay and 24V (+/- 12V) isolated transmitter supply		Analog retransmission (isolated), 2nd relay and 24V (+/- 12V) isolated transmitter supply
	A12	-----	Analog retransmission (isolated) and 24V (+/- 12V) isolated transmitter supply		Analog retransmission (isolated) and 24V (+/- 12V) isolated transmitter supply
	AR6	-----	Analog retransmission (isolated) and 2nd to 7th setpoint relays		Analog retransmission (isolated) and 2nd to 7th setpoint relays
	AA	-----	Dual analog retransmission (isolated)		Dual analog retransmission (isolated)
	AAR	-----	Dual analog retransmission (isolated) and 2nd setpoint relay		Dual analog retransmission (isolated) and 2nd setpoint relay
	A2	-----	Analog retransmission, 4-20mA only (isolated) and RS232 communications (isolated)		Analog retransmission, 4-20mA only (isolated) and RS232 communications (isolated)
	A2R	-----	Analog retransmission, 4-20mA only (isolated), RS232 communications (isolated) and second relay		Analog retransmission, 4-20mA only (isolated), RS232 communications (isolated) and second relay
	A4	-----	Analog retransmission, 4-20mA only (isolated) and RS485 communications (isolated)		Analog retransmission, 4-20mA only (isolated) and RS485 communications (isolated)
	A4R	-----	Analog retransmission, 4-20mA only (isolated), RS485 communications (isolated) and second relay		Analog retransmission, 4-20mA only (isolated), RS485 communications (isolated) and second relay
	2	-----	RS232 communications (isolated)		RS232 communications (isolated)
	2R	-----	RS232 communications (isolated) and 2nd setpoint relay		RS232 communications (isolated) and 2nd setpoint relay
	2R12	-----	RS232 communications (isolated), 2nd setpoint relay and 24V (+/- 12V) isolated transmitter supply		RS232 communications (isolated), 2nd setpoint relay and 24V (+/- 12V) isolated transmitter supply
	4	-----	RS485 communications (isolated)		RS485 communications (isolated)
	4R	-----	RS485 communications (isolated) and 2nd setpoint relay		RS485 communications (isolated) and 2nd setpoint relay
	4R12	-----	RS485 communications (isolated), 2nd setpoint relay and 24V (+/- 12V) isolated transmitter supply		RS485 communications (isolated), 2nd setpoint relay and 24V (+/- 12V) isolated transmitter supply
	DN	-----	Digital NPN 16 bit Binary/BCD retransmission		Digital NPN 16 bit Binary/BCD retransmission
	DNR	-----	Digital NPN 16 bit Binary/BCD retransmission and 2nd relay		Digital NPN 16 bit Binary/BCD retransmission and 2nd relay
	DN12	-----	Digital NPN 16 bit Binary/BCD retransmission and 24V (+/- 12V) isolated transmitter supply		Digital NPN 16 bit Binary/BCD retransmission and 24V (+/- 12V) isolated transmitter supply
	DNR12	-----	Digital NPN 16 bit Binary/BCD retransmission, 2nd relay and 24V (+/- 12V) isolated transmitter supply		Digital NPN 16 bit Binary/BCD retransmission, 2nd relay and 24V (+/- 12V) isolated transmitter supply
	DP	-----	Digital PNP 16 bit Binary/BCD retransmission		Digital PNP 16 bit Binary/BCD retransmission
	DPR	-----	Digital PNP 16 bit Binary/BCD retransmission and 2nd relay		Digital PNP 16 bit Binary/BCD retransmission and 2nd relay
	DP12	-----	Digital PNP 16 bit Binary/BCD retransmission and 24V (+/- 12V) isolated transmitter supply		Digital PNP 16 bit Binary/BCD retransmission and 24V (+/- 12V) isolated transmitter supply
	DP12	-----	Digital PNP 16 bit Binary/BCD retransmission and 24V (+/- 12V) isolated transmitter supply		Digital PNP 16 bit Binary/BCD retransmission and 24V (+/- 12V) isolated transmitter supply
	DP12	-----	Digital PNP 16 bit Binary/BCD retransmission and 24V (+/- 12V) isolated transmitter supply		Digital PNP 16 bit Binary/BCD retransmission and 24V (+/- 12V) isolated transmitter supply
	DP12	-----	Digital PNP 16 bit Binary/BCD retransmission and 24V (+/- 12V) isolated transmitter supply		Digital PNP 16 bit Binary/BCD retransmission and 24V (+/- 12V) isolated transmitter supply
	ABP	-----	Analog retransmission bipolar output (-10V to +10VDC only)		Analog retransmission bipolar output (-10V to +10VDC only)

Applications/input types available with panel mount display models

- Analog input, process transmitters etc. $\pm 20\text{mA}$, 4-20mA or $\pm 2.5\text{VDC}$ or $\pm 25\text{VDC}$
- Pulse input, rate, total, count, grand total (encoders, switches, proximity sensors etc.)
- Rate, total from quadrature pulse input
- Liquid conductivity/resistivity/ppm
- pH/Redox (ORP)
- Loop powered displays
- AC current or AC voltage input
- Temperature - RTD, thermocouple, 4-20mA
- Weighing - 4 or 6 wire mV/V output loadcells
- Pressure measurement - 4 or 6 wire mV/V pressure sensors or 4-20mA analog transducers
- Liquid level measurement - 4 or 6 wire mV/V pressure sensors or 4-20mA analog transducers
- Serial input - RS232, RS485, Serial current loop for slave displays etc.
- Synchronous Serial Interface (SSI) for high accuracy position etc. measurement
- Binary, BCD or Gray Code input
- Real time clock with alarms
- Timer, elapsed time, stopwatch, run time etc.
- Auto/Manual station

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