

PEARL-MM Pearl-MM Relay Output Module Relay
Output PC/104 Module



 **PC104**



FEATURES

- 16 SPDT (Form C) relays
- Long lifetime - 100,000,000 operations
- 500VAC/DC isolation between board and signals
- Two pin headers for I/O connections
- 40°C to +85°C operating temperature

 **Description**

Pearl-MM is a PC/104 format industrial control module with 16 relays. The relays have PDT (form C) configuration. Each relay has 3 contacts: Common, Normally Open, and Normally Closed. For safety and reliability, all relays are in their power-off state (Common connected to Normally Closed) at power-up or system reset. The relays can switch both AC and DC voltages. They feature long life (100,000,000 operations), quick actuation time (4ms max operate and release), and isolation (500V AC or DC).

 **I/O Headers**

C = Common>

NC = Normally Closed (connected to Common when relay is not energized)

NO = Normally Open (connected to Common when relay is energized)

Pearl-MM is programmed using two 8-bit I/O registers. Each bit controls one relay. Writing a 1 to a bit turns the relay on, while writing a 0 turns the relay off. On power-up or reset, all bits are 0, and all relays are off (C connected to NC).

The diagram below shows one pin header for relays 0-7. The second one uses similar pinout for relays 8-15.

0 NO	1	2	0 NO
0 C	3	4	0 C
0 NC	5	6	0 NC
1 NO	7	8	1 NO
1 C	9	10	1 C
1 NC	11	12	1 NC
2 NO	13	14	2 NO
2 C	15	16	2 C

2 NC	17	18	2 NC
3 NO	19	20	3 NO
3 C	21	22	3 C
3 NC	23	24	3 NC
4 NO	25	26	4 NO
4 C	27	28	4 C
4 NC	29	30	4 NC
5 NO	31	32	5 NO
5 C	33	34	5 C
5 NC	35	36	5 NC
6 NO	37	38	6 NO
6 C	39	40	6 C
6 NC	41	42	6 NC
7 NO	43	44	7 NO
7 C	45	46	7 C
7 NC	47	48	7 NC
NOT USED	49	50	NOT USED

Specifications

Relays	
No. of Outputs	16
Relay type	SPDT (Form C)
Max voltage/current	DC: 0VDC/2A 60W (DC), 60VA (AC) AC: 125VAC/0.5A resistive
Max switching capacity	220VDC, 250VAC
Max operating voltage	10mA@10mVDC
Contact resistance	100mΩ max
Relay lifetime	100,000,000 operations
Actuation time	4ms max operate or release
General	
I/O connections	50-position (2x20) .025" square pin header on .1" centers
Isolation (all I/O)	500VDC or AC, channel-to-channel and channel-to-board
Power supply	+5VDC ±10%
Operating temperature	-40°C to +85°C
Operating humidity	5% to 95% non-condensing
Weight	3.4oz / 96g
MTBF	118,227 hours
RoHS	Compliant

Pearl-MM uses two 50-pin .1" pitch pin headers for all I/O. Cable C-50-18 may be used for convenient connection to these pin headers. Each board requires 1 or 2 cables for up to 8 or up to 16 relays respectively.

Cable	Description	Drawing
C-50-18	50-conductor .1" pitch 18" ribbon cable, Data acquisition Cable (uses 2)	Show

Ordering

Information

◆ Models and Accessories

Pearl-MM

available models:

PMM-P Pearl-MM 16 SPDT Relays, Pin Headers Min Order Quantity

Please [login](#) or [signup](#) for an online quote request.

Cables and accessories

available models:

C-50-18 50-conductor .1" pitch 18" ribbon cable (uses 2)

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