PMD 300 SERIES
MASTER MESSAGE DISPLAYS

FEATURES:

■ **4 lines x 20 characters per line display**

■ **Large 0.492" (12.5 mm) Character size, visible from 25 ft. (7.62 m)**

ADVANCED FEATURES:

■ **Stores approximately 175 80-character messages per 16K of EEPROM memory**

■ **Internal data logger has battery-backed RAM for internal storage of over 3,000 messages**

■ **Scroll, chain, blink, print, log, & center messages**

■ **115/230 VAC (standard), 24 VDC (optional)**

■ **UL Listed**

■ **CSA Certified**

■ **FM Division I, Class 2, Groups A, B, C, D**

■ **Front Panel: NEMA 12**

The PMD 300 Series Programmable Message Display is designed to give you fast, accurate information when you need it most. The units give you maximum flexibility with minimum complexity. Because the PMD 300 Series is so flexible, it is used in a wide-variety of applications. And, since machinery, processes, and electronic equipment vary from application to application, there are numerous ways to enter information into and extract information from your PMD 300 Series unit.

The PMD 300 Series products provide information from your controlled process or automated operation. Simple ON/OFF signals from your PLC enable a PMD 300 to translate current conditions into plain language by selecting a preprogrammed message. Message information may be displayed on the PMD 300's alphanumeric display, sent to an on-line printer, stored in the PMD 300's data log, and/or sent to and displayed on slave message displays; such as: PMD 180S, PMD 200S, PMD 300S, slave marquee displays, such as the PMD 1100, PMD 1200, PMD 1205, or numeric marquees PMD 1404 and PMD 1406.

These products feature chaining, blinking, scrolling, printing, and centering messages. Hardware features include data logging, 115 chained-message queuing with prioritization capability, and the ability to program messages in U.S., English, Swedish, French, Danish, German, Cyrillic, and Japanese Kana international character sets.

Any ASCII terminal, PLC with an ASCII module, or personal computer with an RS-232C port can be used to program a PMD message display. Custom program development software (DOS-only, Part Number 10F50) provides the menus, prompts, and help screens that make message entry and editing easy... You can program your displays, online, off line, or while residing in a network. And, the message simulation feature lets you see your message, as it will appear on the 300 Series display.

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MESSAGES CAN:

- Display on masters
- Display on virtually unlimited number of slaves
- Display time, date, and variable data
- Display punctuation as well as letters
- Be triggered by time of day

- Scroll left or up
- Blink words or characters
- Log with time/date stamp
- Print
- Chain messages (up to 115)

The PMD 300 Series comprises several versions, PMD 300, 350, 360, and PMD 380. If you are using a PMD 300 Series product with a PLC interface (PMD 350, 360, or 380), you need to be aware of the unit's scan time. The PMD 300 unit has a maximum scan time of 185 msec. The typical scan time is less than 185 msec between each triggered message to guarantee that the PMD 300 product will see the information. All four data sets can be changed within a single scan, but a data set cannot be changed twice within a scan of the PMD 300 display.

THE PMD 300 SERIES VERSIONS ARE:

PMD 300   PMD 300 Programmable Master Message Display is a compact, versatile 4-line display with 20 vacuum fluorescent 0.492" (12.5 mm) high characters per line. The front panel also features three pushbuttons (MODE, ENTER, RESTART) for operation of the display. The back panel contains the connectors for interfacing to the unit.

FEATURES INCLUDE:

Messages-   The PMD 300 monitors two 16-bit registers to control messages. The first register is the Message/Data register and is used to select a message number. The second is the Control register and is used to determine when the message is triggered and to control the use of the other registers monitored by the PMD 300.

Data Sets-   **Using PLC Outputs to Control:** PMD 300 can be configured to monitor up to four 16-bit registers to be used for variable data information in the PMD 300. Each word of PLC data is mapped directly into one data set. Each time the PLC data changes, the new PLC data will be put into the corresponding data set in the PMD 300. Note: Data sets are not mapped onto the display when the queue feature is enabled.

Controlling PLC Register: The PMD 300 can be configured to map up to four data set words directly into four registers in the PLC. Each time a data set changes in the PMD 300, it will be written to the corresponding register in the PLC.

PMD Status-   The PMD uses one 16-bit register in the PLC to indicate the status of the PMD. Each time the register changes, it is rewritten to the PLC.

Circular Message Queue-

A Circular Message Queue is available on all PMD 300 units equipped with a PLC interface. The Circular Queue is a feature that can be enabled or disabled. With the feature enabled a PMD 300 Series unit will cycle through the messages in the queue according to the display time associated with each message in the Display Mode. Each message is displayed according to its associated display time. Any function that affects the queue (add, delete, clear) will be ignored when the queue is disabled.

SPECIFICATIONS

MECHANICAL

Weight: 7.6 lb. (3.45 kg)

Housing:
Rugged Black Aluminum Case

Front Plate:
NEMA 12
NEMA 4X - Stainless Steel

Dimensions: See drawing-inches (mm)

DISPLAY

Display Technology:
Vacuum Fluorescent (blue)

Lines: 4

Characters per line:
20, 5 x 7 dot matrix

Character Height:
0.492" (12.5 mm)

Character Set:
All standard ASCII upper/lower case
and symbols

Viewing Distance: 25 ft. (7.63 m)

ELECTRICAL

Slave Port: RS-422A

Computer Port: RS-422A

Printer Port: Parallel

Terminal Block:
Serial Ports, Relay, and Control:
Wire-Clamp screws for 18-22 AWG

Power Input:
Wire-Clamp screws for 12-18 AWG

PLC Connector:
PMD 350 (A-B) Plug-in, 7-position
terminal block

PMD 360 (Siemens/TI) 9-position
female D-style connector

PMD 380 (GE Genius I/O) Plug-in,
8-position terminal block

PMD 380 (Hand-held monitor)
9-position male D-style connector

Power Source:
AC Model (jumper select):
115 VAC (102-132) 47-63 Hz, 22 VA
230 VAC (194-250) 47-63 Hz, 22 VA

DC Model:
24 VDC (21.6-26.4), 10 W

Control Power:
5-30 VDC (75 mA @ 5V,
200 mA @ 30 V) all inputs on

Electrical Interference:
NEMA ICS 2-230 Showering Arc Test

Electrical Tolerance:
ANSI C37.90a-1974 (SWC) Surge
Withstand Capability Test

MEMORY

Battery Life-OFF continuously:
Typically 5 years
(minimum 1 1/2 years)

Memory Message Type:
EEPROM (16K, 32K, 64K, 128K)

EEPROM Life:
Minimum 10,000 changes to a
given location

Memory Usage:
Approximately 175 80-character
messages per16K Bytes of EEPROM

ENVIRONMENTAL

Temperature (Ambient):
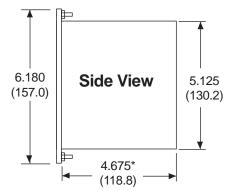**Operational:**32 to 140 °F
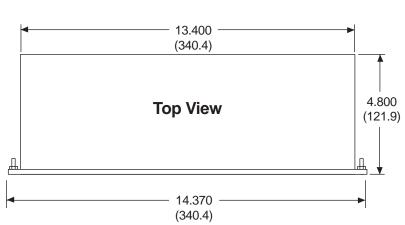(0 to 60 °C)
Storage:-40 to +203 °F
(-40 to +95 °C)

Humidity:
10 to 95% RH, Noncondensing

Enclosure Rating:
NEMA 12 (standard)

Mounting Dimensions:

6.180
(157.0)

Side View

5.125
(130.2)

4.675*
(118.8)

13.400
(340.4)

Top View

4.800
(121.9)

14.370
(340.4)

USING THE OPTIONAL PMD 400E EXPANDER MODULE BRINGS ADDITIONAL FEATURES (ALL MODELS EXCEPT PMD 380):

LEDs- When used with the optional PMD 400E Expander Module, the PMD 300 can be configured to monitor up to two 16-bit registers to be used for LED status in the PMD 300 Series. Each word of PLC data is mapped directly into one set of 16 LEDs. Each time the PLC data changes, the new PLC data will be put into the corresponding LED status in the PMD 300.

Function Keys- When used with the optional PMD 400E Expander Module, the PMD 300 Series can be used to map up to two sets of 16 function keys to up to two 16-bit registers in the PLC. Each time a function key is pressed, it sets the corresponding bit in the PLC. When the key is released, the bit is cleared.

PMD 300 SERIES DISPLAYS WITH PLC-SPECIFIC INTERFACES:

PMD 350 The PMD 350 is essentially a PMD 300, which directly interfaces to an Allen-Bradley PLC2, PLC3, or PLC5 through Remote I/O, Block Transfer, or Data Highway/Plus. Each of these modes operates independently from the other and the PMD 350 can be configured to communicate using any one of them. It has all of the PMD 300 features, but the PMD 350 receives communications through twinaxial cable ("blue hose").

The PMD 300 Parallel Port and the associated Message Control terminals and the Power IN/Power OUT terminals have been removed and replaced by the PLC interface connector located on the bottom of the PMD 350.

PMD 360 PMD 360 is very similar to the PMD 300. It contains an interface to Siemens/Texas Instruments Series 545 (and the 560, and 565 CPUs used in conjunction with the Siemens/TI RCC module) which have the RS-485 remote I/O module. The PMD 360 will appear as a RBC (Remote Base Controller) to the Siemens/TI PLC. The PMD 360 can also listen to an existing RBC and use the information from it.

The PMD 300 Parallel Port and the associated Message Control Terminals and the Power IN/Power OUT terminals have been removed and replaced by the 9-position D-style PLC interface connector located on the bottom of the PMD 360.

PMD 380 The PMD 380 has all of the PMD 300 capabilities, but contains support for a Genius Network Adapter (GENA) board which allows the PMD 380 to be configured as a node on the Genius I/O system. The PMD 380 can be configured as an I/O bock on a Genius I/O system and will receive data from a bus interface module. A bus interface module is typically a PLC with a Genius bus controller module or a Genius Personal Computer Interface Module (PCIM) card installed in a personal computer. The PMD 380 will exist on the Genius I/O network as an I/O block broadcasting its inputs to the bus and reading the outputs sent to it by the bus controller.

The PMD 300 parallel port, message control terminals, and the VDC Power IN/Power OUT terminals have been removed and replaced by a right-angle, 8-position, removable terminal block located on the bottom of the PMD 380.

The PMD 380 must be configured to fit into the Genius network. The unit must have a unique serial bus address and it must be configured to use the same baud rate that is used by the bus controller module and the rest of the devices on the network.

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