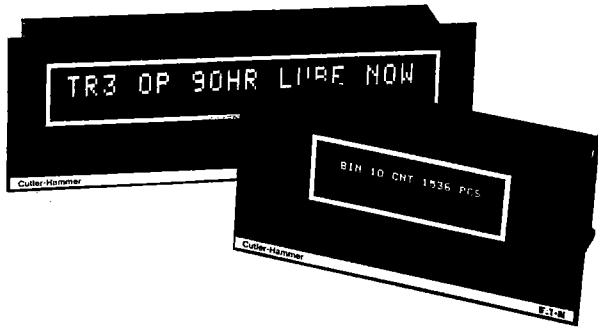


# CUTLER-HAMMER MESSAGE DISPLAY UNITS

12/15/90

## D800 Series Programmable Message Displays

TECHNICAL  
INFORMATION  
PUBLICATION  
**D800**



### GENERAL SPECIFICATIONS

Display Type	Vacuum Fluorescent
Display Color	Green-Blue
Display Size 5 mm 15 mm	0.2", 20 character, 1 line 0.59", 20 character, 1 line
Display Format	5 x 7 matrix
Memory Size	8K bytes
Memory Type	EEPROM
Message Storage	256 20-character messages
Rating of Enclosure	NEMA 4, NEMA 12 Gasketed
Alarm Output	Form C(NO/NC) 3 A, 120 V
Programmer/Printer Port	RS-232, 25 pin "D" connector, 300-900 Baud
Power Supply	120-240 V (+10%, -20%) 50/60 Hz 24 V dc (+/-25%), 3 to 5 watts
Temperatures Storage Operating	-30° C to 85° C 0° C to 70° C
Humidity	10 to 85% non-condensing
Electrical Noise Immunity	NEMA ICS 2-230 showering Arc ANSI C37.90a-1974 SWE
Control Direct Connect Generic Connect	D100 Serial Protocol 24 V dc Sink or Source
Weight	1.18 kg (2.62 lb) 1.63 kg (3.62 lb)
Certification	UL and CSA Pending

### DESIGN CHARACTERISTICS

- **8K EEPROM Memory**
  - stores 256 messages
  - each message may have 256 characters
- **Message Options Include:**
  - Flashing (variable rate)
  - Scrolling (variable rate)
  - Chaining up to all 256 messages
  - Send message to printer
  - Trigger external alarm
- **Messages can be triggered by:**
  - Internal real time clock
  - D100 coils (Direct Connect Unit)
  - Any remote inputs (GenericConnect Unit)

In the event of multiple message triggers in close proximity:

  - message priority can be established
  - message can be buffered for display or print
- **Variable Data from D100 can be Included in any or all messages.**
  - Monitor timers and counters
  - Real time stamp on printed messages
  - Monitor data using Bar Graph

Cutler-Hammer programmable Message Display Units (MDU) allow the user to get information about machine status in understandable text. They provide a system to monitor situations as they occur in an industrial environment.

MDUs communicate diagnostic and fault information and prompt the operator to quick action. They add intelligence to control systems by storing PLC messages and using them to alert operators about system conditions.

Products in the D800 family are one line, 20 character message displays. These units have some unique features including direct connection to the D100 PLC Line. In addition, the generic connect unit can be used with any PLC on the market, but is not limited to PLCs.

The installation and use of Cutler-Hammer products should be in accordance with the provisions of the U.S. National Electrical Code and/or other local codes or industry standards that are pertinent to the particular end use. Installation or use not in accordance with these codes and standards could be hazardous to personnel and/or equipment.

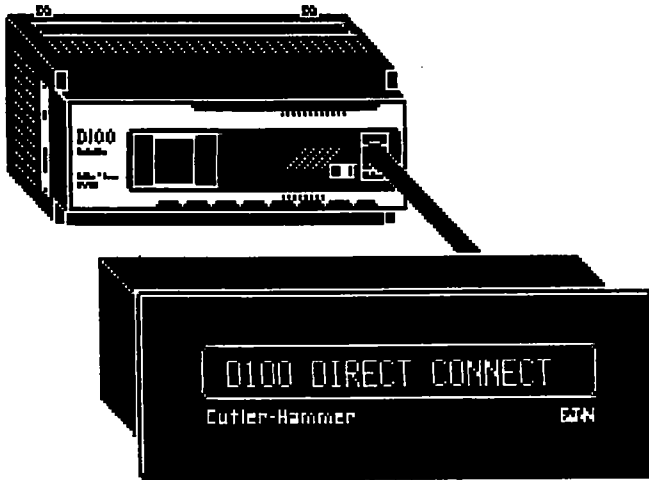
**D800 Series Programmable Message Displays**

The units can display real time variables including timer/counter values and register information (speed, elapsed time, pressure, weight).

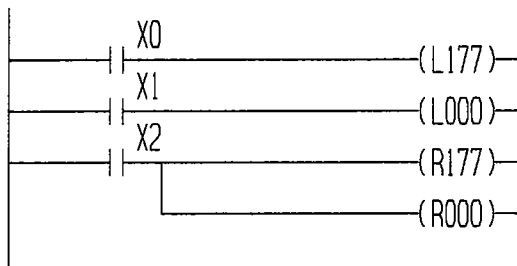
A real time clock and a calendar are standard features. Both can be reset with two buttons on the back of the panel, without program changes.

The flourescent dot matrix display provides high visibility in all types of light or complete darkness.

**DIRECT CONNECTION**

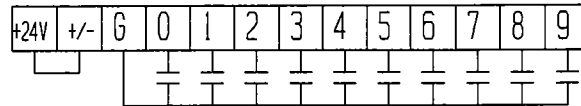


The Direct Connect MDU simply plugs into the D100 Programmer Port. No I/O space is wasted. The D100 Programmable Controller triggers messages by energizing the Retentive Coils (L coils) and the Internal Relays (R coils). The Retentive Coils (177 down to 0) trigger messages 0 to 127 and the Internal Relays (177-0) trigger messages 128-255. An example D100 program follows.

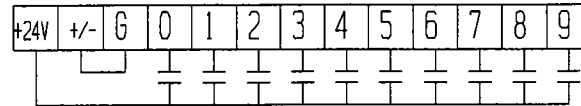


- Input X0 triggers message 0.
- Input X1 triggers message 127.
- Input X2 triggers messages 128 & 255.

**GENERIC CONNECTION**



Sinking Contacts



Source Contacts

The Generic Connect MDU accepts inputs in one of three formats programmable by user.

- 1 of 10 (10 messages)
  - Each input selects a corresponding message: input 0 displays message 2, input 9 displays message 11.
  - Message 0 is a blank display
  - Message 1 is the time and date
- Binary Coded Decimal (99 messages)
  - Data & message numbers are strobed in as 2 parallel BCD digits. Inputs 0-3 correspond to the least significant digit. Inputs 4-7 correspond to the most significant digit. Input 8 strobes in the message number set up on inputs 0-7. Input 9 strobes in the data set up on inputs 0-7.
- 8-bit Binary (256 messages)
  - Data and message numbers are strobed in as binary bytes. Inputs 0-7 correspond to the binary byte. Input 8 strobes in the message number set up on inputs 0-7. Input 9 strobes in the data set up on inputs 0-7.

**CATALOG NUMBERS**

Character Size	Power Supply	D100 Direct Connect Cat. No.	Generic Connect Cat. No.
5 mm	120 V ac	D805D12	D805G12
	240 V ac	D805D13	D805G13
	24 V dc	D805D14	D805G14
15 mm	120 V ac	D815D12	D815G12
	240 V ac	D815D13	D815G13
	24 V dc	D815D14	D815G14

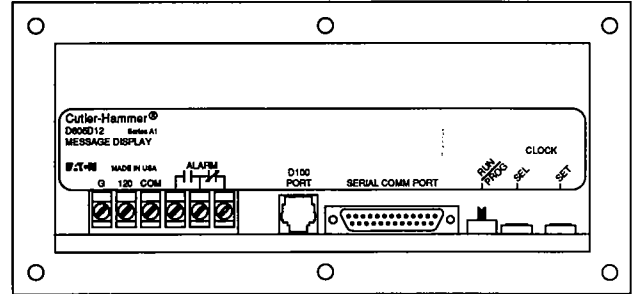
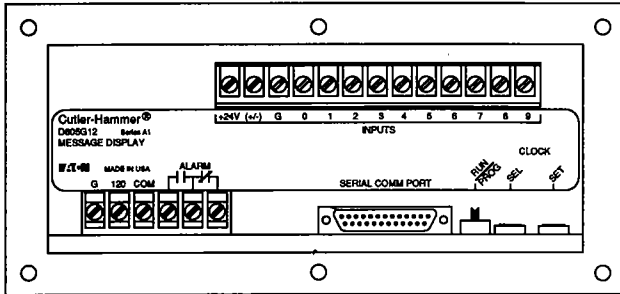
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## D800 Series Programmable Message Displays

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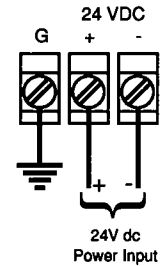
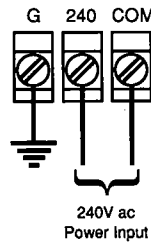
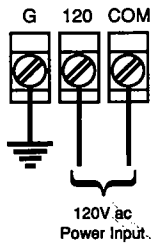
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### Connection Diagrams

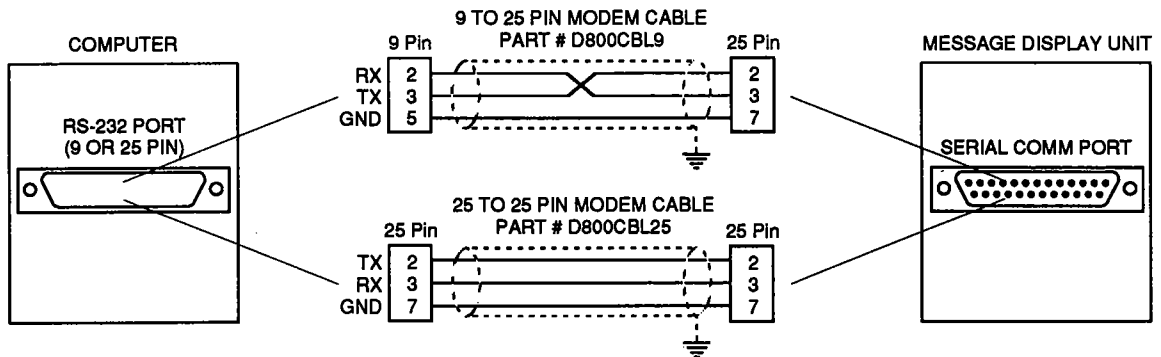


Generic Connection Rear Panel

Direct Connection Rear Panel



### Power Connections

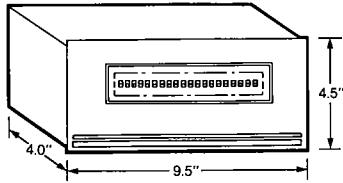


Computer to MDU Cables

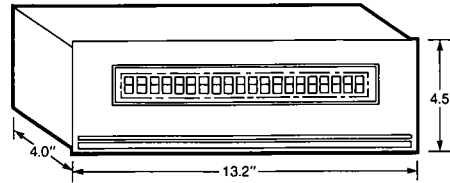
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**APPROXIMATE DIMENSIONS**

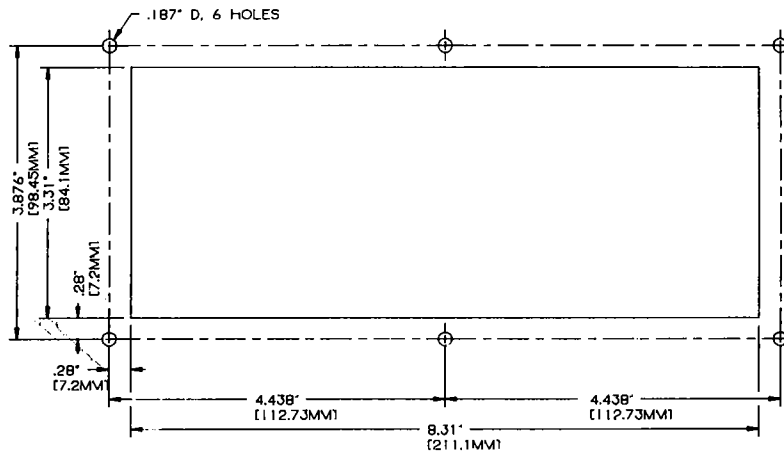


5 mm Message Display Unit



15 mm Message Display Unit

Panel Cutout  
for 5 mm  
Message  
Display Unit



Panel Cutout  
for 15 mm  
Message  
Display Unit

