

## 16 Channel Current Multiplexer/ De-Multiplexer System MDM-11

**Function:** The MDM-11 is a current multiplexer/de-multiplexer system that transfers 16 channels of data between two points via a single pair of wires. The front end of the system (M-11) accepts up to 16 process standard 4 to 20mA inputs, multiplexes these at a user selectable scan rate of up to 1000 channels per second and transmits them up to a distance of 2Km maximum. At the receiving end (DM-11) the analogue channels are reproduced in the same order and magnitude as the inputs. The DM-11 unit also has an alarm (flashing LED and volt free contact output) which is operated whenever there is a communications failure of any description (multiplexer failure, cable break or short circuit).

### SPECIFICATIONS

#### M-11

##### INPUTS:

###### DC Current

16 channels of two or four wire transmitters  
4 to 20mA

###### Input Impedance

Addition to loop resistance:  
470 ohms maximum

###### Transmitter Power Supply

V<sub>SUPPLY</sub> – 3 Volts DC

###### Transmitter Current

Limited to 40mA maximum

###### Scan Rate

User selectable

Channels/sec	Distance
250	2000 Mtrs
500	1000 Mtrs
1000	500 Mtrs

##### OUTPUT:

###### Output

Multiplexed current loop

#### DM-11

##### INPUT:

###### Input

Multiplexed current loop

##### OUTPUTS:

###### DC Current

16 channels of 4 to 20mA continuous current loop

###### Alarm

1 x Volt Free Contact  
Contact Rating: 1A at 230 Volt AC maximum

#### SUPPLY:

##### M-11

###### Power Supply Voltage

15 to 40 Volts DC

###### Current Consumption

20mA maximum  
not including transmitter currents

###### Fuses

5 x 20mm quick blow

Main Fuse: 630mA

Channel Fuse: 63mA

###### Pilot Lights

Yellow LED shows Power ON  
Red LED per active channel

##### DM-11

###### Power Supply Voltage

24 Volts DC  $\pm 10\%$

###### Current Consumption

500mA maximum  
(includes the outputs)

###### Fuses

5 x 20mm quick blow

Main Fuse: 630mA

Multiplexed Input Fuse: 63mA

###### Pilot Lights

Yellow LED shows Power ON  
Red LED per active channel  
Red LED for ALARM indication

#### GENERAL:

##### Accuracy

$\pm 0.1\%$  of span typical,  
 $\pm 0.25\%$  maximum

##### Communication Cable

2 wire cable

**N.B.** Transmitters connected to MDM-11 have to comply with the total loop resistance of the M-11 (470 ohms) and the two way lead resistance

##### Operating Temperature Range

0 to +70°C

##### Storage Temperature Range

-25 to +85°C

##### Operating/Storage Humidity Range

5 to 95% RH non-condensing

##### Housing

DIN Rail mounting plastic, polycarbonate

##### Protection Level

Housing: IP50 DIN40050

Terminals: IP20 DIN40050

##### Weights

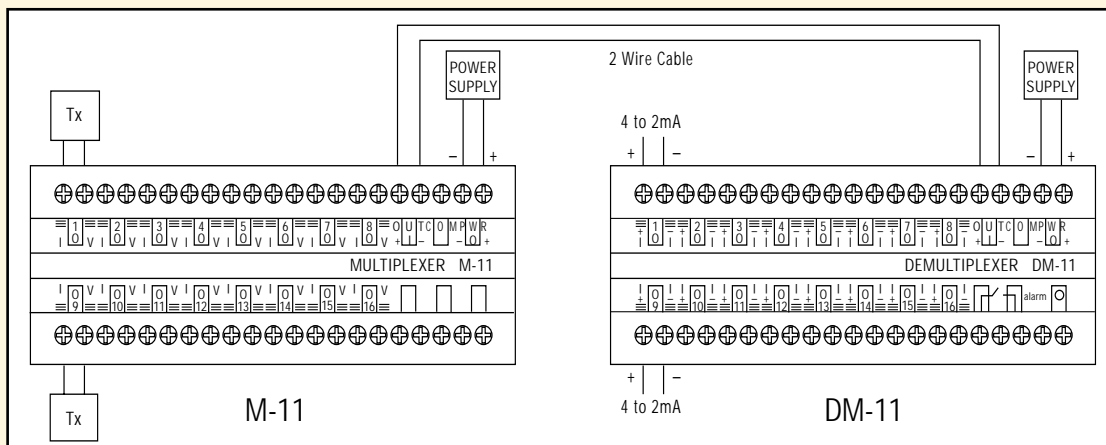
M-11 800 gms

DM-11 750 gms

### MECHANICAL DETAILS

For Mechanical Details  
see page 7.6.

### TERMINATION DETAILS



### ORDERING DETAILS

(a) Give identification code, i.e. MDM-11  
If Lee-Dickens to configure:

(b) Specify scan rate required, i.e. 500 channels per second