Maximum Demand Meter

Instrument
Division

Data sheet No.: MDI/10/11

DESCRIPTION

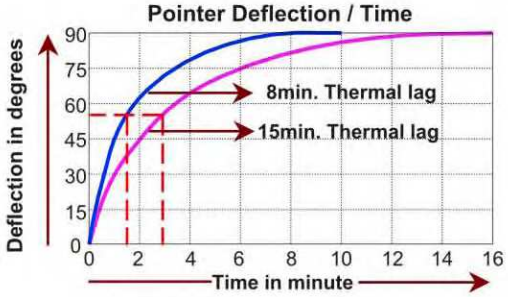
Maximum Demand meter is used for monitoring thermal loading in Power Distribution systems, Networks, Machines etc. It indicates maximum loading current over a period. Short-period current peaks are not registered but long overloads are registered.
In the Maximum Demand meter the measuring current flows through the bimetal spiral which is temperature sensitive. The free end of the spiral is connected to a black measuring pointer. The moving system is activated by heat generated by the current flowing through the spiral. The instrument is provided with an additional red slave pointer with a higher friction, which makes it to remain at its maximum position, which determines the maximum average loading current. The high torque of metallic movement drags the red pointer along with the black pointer. The red pointer remains stationary at the maximum value reached. This can be reset by rotating the knob provided on front facia. To prevent false indication due to fluctuations in ambient temperature, an additional bimetallic spiral is wound in opposite direction, which is mounted on the same spindle to compensate variation in temperature from 10 to +55 degrees Centigrade.
Frequently there is a need to measure instantaneous current simultaneously & hence moving iron movement having the same range is incorporated in the same meter.

FEATURES

- RMS measurement of maximum current.
- Long current peaks are registered.
- Red pointer to indicate maximum current reached.
- Analogue Indication.
- 20% overload capacity.
- Instantaneous current measurement. (3 Pointer)
- Sturdy movement.

ELECTRICAL SPECIFICATIONS

TYPE	:	**a)** BIMETALLIC **b)** BIMETALLIC & ANALOGUE AMMETER.
OPERATING CURRENT	:	1Amp or 5Amp
FREQUENCY	:	40 ~ 65Hz.
ACCURACY	:	± 3% for resettable red pointer (Bimetallic). ±1.5% instantaneous value pointer (Moving Iron)
THERMAL LAG (SETTING TIME)	:	15 minutes (standard) & 8 minutes (on special request).
VA BURDEN	:	Approx. 3.5VA for Bimetallic Ammeters & Approx. 4VA for Bimetallic And Moving Iron Ammeter.
INSULATION RESISTANCE	:	Greater than 20M ohms at 500V DC
DIELECTRIC TEST	:	2kV rms for 1 minute.
OPERATING TEMP.	:	-10°C to 55°C (for Analogue Instrument)
STORAGE TEMP.	:	-20°C to 70°C
HUMIDITY	:	Up to 95% RH



MECHANICAL SPECIFICATIONS

MODEL	MDIS 72A*	MDID 72A*	MDIS 96A	MDID 96A
SIZE (mm)	72 x 72 x 70	72 x 72 x 70	96 x 96 x 70	96 x 96 x 70
PANEL CUTOUT (mm)	68 x 68 $^{+0.7}$	68 x 68 $^{+0.7}$	92 x 92 $^{+0.8}$	92 x 92 $^{+0.8}$
SCALE LENGTH (Approx.) OF BIMETALLIC SYSTEM	60mm	60mm	90mm	90mm
SCALE LENGTH (Approx.) OF MI SYSTEM	N.A.	38mm	N.A.	70mm
WEIGHT (Approx.)	0.180kg	0.200kg	0.230kg	0.250kg

PRIMARY CURRENT	SECONDARY CURRENT : 5AMPS OR 1 AMPS — SCALE —					
MODEL	MDIS 72A	MDID 72A		MDIS 96A	MDID 96A	
100%	120%	120%	200%	120%	120%	200%
10 A	12 A	12 A	0 ..... 10 / 20A	12 A	12 A	0 ..... 10 / 20A
15 A	18 A	18 A	0 ..... 15 / 30 A	18 A	18 A	0 ..... 15 / 30 A
20 A	24 A	24 A	0 ..... 20 / 40 A	24 A	24 A	0 ..... 20 / 40 A
25 A	30 A	30 A	0 ..... 25 / 50 A	30 A	30 A	0 ..... 25 / 50 A
30 A	36 A	36 A	0 ..... 30 / 60 A	36 A	36 A	0 ..... 30 / 60 A
40 A	48 A	48 A	0 ..... 40 / 80 A	48 A	48 A	0 ..... 40 / 80 A
50 A	60 A	60 A	0 ..... 50 / 100 A	60 A	60 A	0 ..... 50 / 100 A
60 A	72 A	72 A	0 ..... 60 / 120 A	72 A	72 A	0 ..... 60 / 120 A
75 A	90 A	90 A	0 ..... 75 / 150 A	90 A	90 A	0 ..... 75 / 150 A
80 A	96 A	96 A	0 ..... 80 / 160 A	96 A	96 A	0 ..... 80 / 160 A
100 A	120 A	120 A	0 .....100 / 200 A	120 A	120 A	0 .....100 / 200 A
125 A	150 A	150 A	0 ..... 125 / 250 A	150 A	150 A	0 ..... 125 / 250 A
150 A	180 A	180 A	0 ..... 150 / 300 A	180 A	180 A	0 ..... 150 / 300 A
200 A	240 A	240 A	0 ..... 200 / 400 A	240 A	240 A	0 ..... 200 / 400 A
250 A	300 A	300 A	0 ..... 250 / 500 A	300 A	300 A	0 ..... 250 / 500 A
300 A	360 A	360 A	0 ..... 300 / 600 A	360 A	360 A	0 ..... 300 / 600 A
400 A	480 A	480 A	0 ..... 400 / 800 A	480 A	480 A	0 ..... 400 / 800 A
500 A	600 A	600 A	0.... 500 / 1000 A	600 A	600 A	0.... 500 / 1000 A
600 A	720 A	720 A	0.... 600 / 1200 A	720 A	720 A	0.... 600 / 1200 A
750 A	900 A	900 A	0.... 750 / 1500 A	900 A	900 A	0.... 750 / 1500 A
800 A	960 A	960 A	0.... 800 / 1600 A	960 A	960 A	0.... 800 / 1600 A
1000 A	1.2 kA	1.2 kA	0 .....1 / 2 kA	1.2 kA	1.2 kA	0 .....1 / 2 kA
1200 A	1.4 kA	1.4 kA	0 .....1.2 / 2.4 kA	1.4 kA	1.4 kA	0 .....1.2 / 2.4 kA
1500 A	1.8 kA	1.8 kA	0 ..... 1.5 / 3 kA	1.8 kA	1.8 kA	0 ..... 1.5 / 3 kA
2000 A	2.4 kA	2.4 kA	0 ..... 2 / 4 kA	2.4 kA	2.4 kA	0 ..... 2 / 4 kA
2500 A	3.0 kA	3.0 kA	0 ..... 2.5 / 5 kA	3.0 kA	3.0 kA	0 ..... 2.5 / 5 kA
3000 A	3.6 kA	3.6 kA	0..... 3 / 6 kA	3.6 kA	3.6 kA	0..... 3 / 6 kA
4000 A	4.8 kA	4.8 kA	0..... 4 / 8 kA	4.8 kA	4.8 kA	0..... 4 / 8 kA
5000 A	6.0 kA	6.0 kA	0 ..... 5 / 10 kA	6.0 kA	6.0 kA	0 ..... 5 / 10 kA

* ***PRESENTLY UNDER PROCESS.***

Ordering information

1) Type 2) Model 3) Operating Current
4) C.T.R. 5) Thermal lag / Setting Time