

**DM 52
Electronic**

3Ø Energy Meters

80mm Depth

96 x 96 mm Flush Mount

ISO 9001-2000 Certified

- True RMS ■ Compact size ■ Low PT, CT burden ■ Accurate on Distorted waveforms ■ Accuracy Class 1.0 IEC 61036 & Class 0.5 ■ Simultaneous sampling of Volts & Amps ■ **Reverse LED** for trouble shooting ■ Sealed **dust-proof** construction ■ Quick and easy installation ■ Isolated Pulse Output ■ Tamper Proof Cover option ■ 3 Phase 4 wire (& Single phase), 3 Phase 3 wire ■ Field settable standard full scale ■ Industrial Quality

True RMS



PULSE OUTPUT FEATURE

Optically Isolated, Solid-state NO Contact gives digital pulse output to drive Remote Counter, PLC, DCS Station etc. for off line monitoring of Energy Data, on line control for Energy/Power/Process optimisation, correlating Energy Input to product output etc. See Application Information overleaf.

TAMPER PROOF COVER OPTION

A Tamper Proof cover enables sealing of terminal block at the rear of the meter. This prevents tampering of connections.

ACCESSORIES

Optional Fused Voltage Probes & Clamp-on Current

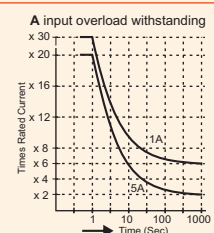
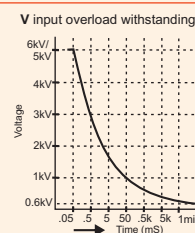
Sl.	Parameters	Off the Shelf		On Order ²
1	Model No.	DM5240	DM5230	DM5230/40
2	Wiring	3Ph 4Wire	3Ph 3Wire	3 Ph 3,4 Wire
3	Accuracy Class	Class 1	Class 1	CL 1 or 0.5
4	Frequency	50Hz	50Hz	50 or 60Hz
5	Voltage Input	415 VLL	110 VLL	110 or 415VLL
6	Current Input	5A	1A	5A or 1A
7	PT Ratio Pri/Sec	415/415VLL	11kV/110VLL ¹	33kV/110VLL ²
8	CT Ratio Pri/Sec	5/5A ¹	100/1A ¹	1200/5A ²
9	Auxiliary Supply	240V	110V	110 or 240V
10	Pulse O/P	500 mS	500 mS	500 mS
11	Mounting	Flush Mount	Flush Mount	Flush Mount
12	Tamper cover	N.A.	N.A.	Cover Fitted (Option)

Note :

1. Other PT, CT Ratios via simple Multiplying Factor.
2. Additional PT, CT Ratios available on Order. Subsequent non-standard Scale Change possible only at H.O. at extra cost.

TECHNICAL SPECIFICATIONS

Input (3 Phase 3 Wire / 4 Wire) :



Nominal Voltage	Range	Nominal Current	Range
110 VLL	80 to 130 V	5 Amps	0.25 to 6.0 Amps
240 VLN	170 to 270 V	1 Amp	0.05 to 1.2 Amps
415 VLL	330 to 470 V		

Frequency: 50 Hz / 60 Hz ± 5% Power Factor: 0.5 PF Lag-Unity-0.8 PF Lead

- **Auxiliary Supply** : Nominal 110 V Range 80-150 V (45 to 65 Hz) Nominal 240 V Range 170-300 V
- **Burden** : **0.2 VA max. per phase (Volts/Amps Input)**
3 VA max. on Auxiliary Supply
- **Display** : 6 Digit Impulse Counter. Max counts 999999. Tamper proof, Non-resettable. Retains the last recorded reading even under power failure conditions.
- **Accuracy** : Class 1.0 ; as per IEC 61036
Class 0.5 ; ± (0.25 % of reading + 0.25 % of Full Scale)

	1	2	3	4	5	6	0	0	0
Decimal Point	○	○	○	○	○	○	○	○	○
Full Scale kW $\sqrt{3} V_{Pri} I_{LL} \times A_{Pri}$	0.4 to 4.0	4.1 to 40	41 to 400	401 to 4000	4,001 to 40,000	40,001 to 4,00,000			
Multiplying Factor: (Represented by decimal point)	0.01	0.1	1	10	100	1000			
Resolution : - Counter : kWh/ Count	0.01	0.1	1	10	100	1000			
- INTEG LED kWh/ Blink	0.01	0.1	1	10	100	1000			
- Pulse Output kWh/ Pulse	10 or 8	10 or 8	10 or 8	10 or 8	10 or 8	10 or 8			

- **Overflow Hours** : 2,500 - 25,000 (at Full Load)
- **Pulse Width** : 500 mS ± 50 mS
- **Contact Rating** : 24V DC, 100 mA Max
- **Ambient** : Temperature 0 - 50 °C⁰
Humidity < 95% Non-Condensing
- **Weight** : **450 gms** approx.
- **Dimension** : Bezel: 96 x 96 mm
- **Depth** : **80 mm** behind Bezel
- **Panel Cut-out** : (92^{+0.5}) x (92^{+0.5}) mm
- **Mounting** : Flush Mounting.
- **Warranty** : 1 Year from date of Invoice

Know your DM 52

Multiplying Factor (MF)

In the case of Direct Reading Meters, Multiplying Factor is the number by which Counter reading must be multiplied to get actual kWh consumed. The MF is indicated by decimal point of the Meter. In the case of 3 Phase 4 Wire Model DM 5240, calibrated for 415V/5A, the decimal point printed on the meter is 0.01. Each count on the Counter represents 1/100th of a kWh for direct input of 415V/5A.

When input is through a CT, depending on the CT Ratio an additional MF has to be applied by the user to get actual consumption. For example, for a CT Ratio of 100/5, the consumption is given by (Counter Reading) x 0.01 x 100/5 i.e., (Counter Reading) x 0.2. Thus, for a 500/5 CT, the Counter Reading directly gives the consumption.

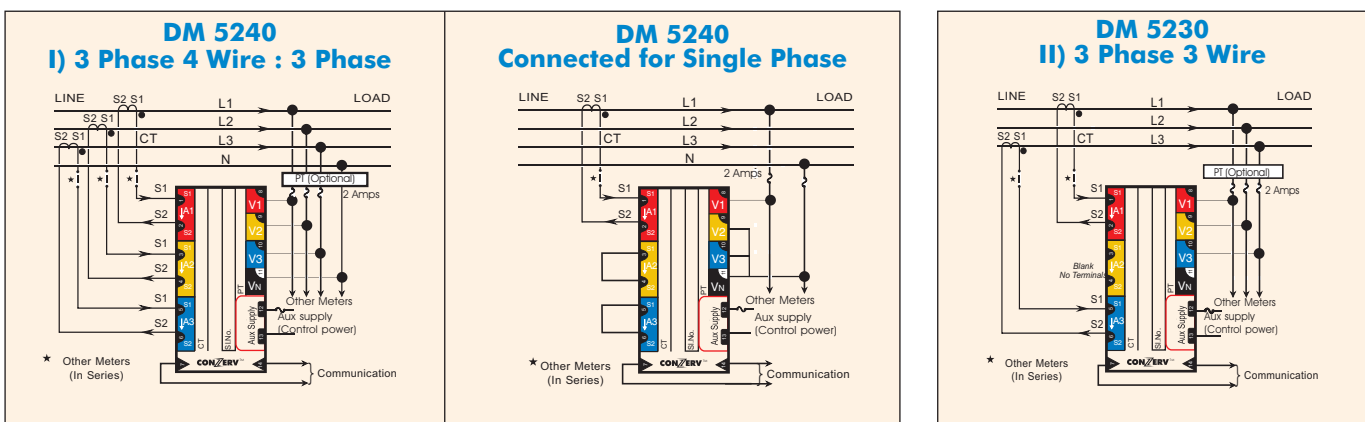
What do the POWER & INTEG LEDs on the front panel do ?

POWER LED indicates presence of Auxiliary Power which is essential for the meter operation. INTEG LED indicates that integration of Energy is in progress. The LED Blink Rate is either 10 or 8 times that of the Counter update. Hence its resolution is 10 or 8 times that of the Counter and can be conveniently used for meter calibration.

Overflow Hours?

As the Counter accumulates kWh, it will eventually reach 999999 and then overflow to 000000. The duration it takes to overflow is approximately equal to (999999) : average kW which the meter senses.

Wiring



Pulse Output Option Applications

Process Integration

Pulse output from DM 52 can be integrated into a process through a PLC/DCS for online control of Energy content in a process.

If the DCS/PLC has a self excited 12V or 24V Digital Input, external 24V DC Supply is not needed.

The kWh pulses may also be used to derive average kW information at the PLC

Energy Totalizing

Remote Totalizer can be configured to record Data shift-wise, day wise etc., while DM 52 records total consumption.

Energy Management System

Several DM 52s can be networked into a cost effective centralised system to centrally monitor energy data and generate a variety of reports covering load-wise, shift-wise, day-wise or batch-wise analysis of energy consumption.

Energy Dispensing

The Presettable Counter is programmed with the amount of Energy to be dispensed. When it counts down to zero, it de-energises the load.

★ Contact Conzerv for Energy Management Systems.



Conzerv strives for continuous product innovation. Product specifications are therefore subject to change without notice. **CONZERV** is a Registered Trade Mark of Conzerv Systems Pvt Ltd

Energy Audits, Power Quality Audits, Tuned Harmonic Filters, Training on Energy Efficiency, Energy Management Systems, Reactive Power Compensation, Block Reactors, Power Factor Improvement, Multi-Function Meters, Intelligent Power Factor Controllers, Power Analysers, Portable Palm Top Analysers, Genset Synchronisation Meters, AMF Relays, Electronic Energy Meters, Digital Panel Meters, Static Watt Hour Meters, Power Capacitors HT & LT, Current Probes & Voltage Probes.

<p>Conzerv Representative</p>	<p>MeterUSA Ph. 1-847-302-7691 Fx. 1 847 375 9523 Email: Meters@metersusa.com www.metersusa.com</p>
--------------------------------------	---

Customer Help Desk 1600 425 0555 (Toll Free All India from BSNL / MTNL lines) Or Call 080 2852 0604 (Standard Charges Apply)

Email contact@conzerv.com

www.conzerv.com