

OPERATING MANUAL

3 PHASE ENERGY METER

EPM-14 Pulse Output

MULTISPAN

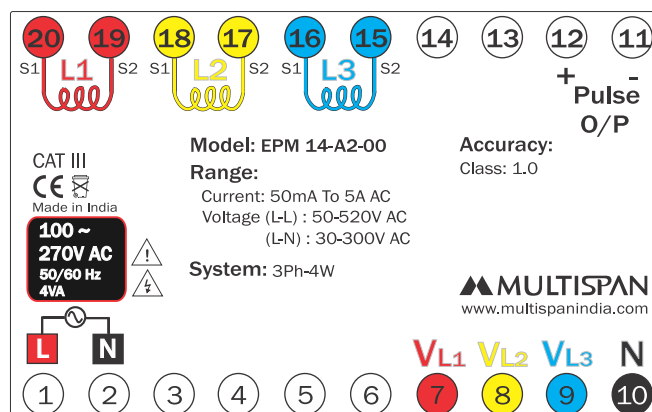


Technical Specification

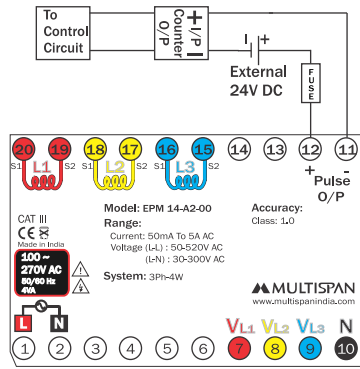


Model	EPM-14
Display	UPPER: 7 Seg, 8digit,0.39", RED LED display for KWH LOWER: 7 Seg, 4digit,0.39", GREEN LED display for KW
Size (mm)	96(H) X 96 (W) X 54 (D) mm
Panel Cutout	92 X 92 mm
Voltage Input	50 To 520V AC L-L CAT III 30 To 300V AC L-N
Current Input	0.1Amp To 5Amp AC direct or C.T Selectable up to 6000/5 ratio
Active Power (KW)	0000-9999 KW
Active Energy (KWh)	0-99999999 KWH
Power Supply	100 to 270V AC,50/60Hz,Approx 4VA
Output	Pulse Output : Voltage range 24V DC Max (External) Pulse Width : 50 to 500ms Selectable
Frequency	45 To 65 Hz
Wiring System	3Ph-4W
Protection Level (As per request)	IP-65 (Front side) As per IS/IEC 60529 : 2001
Operating Temperature	0°C To 50°C
Relative Humidity	Up to 95% RH Non Condensing

CONNECTION DIAGRAM:



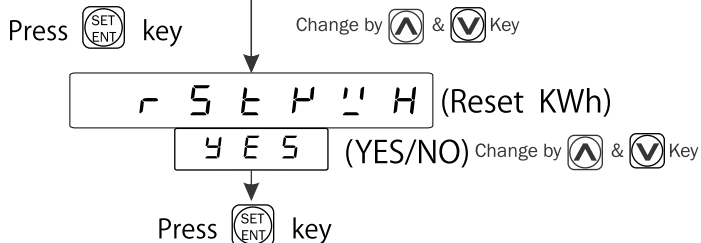
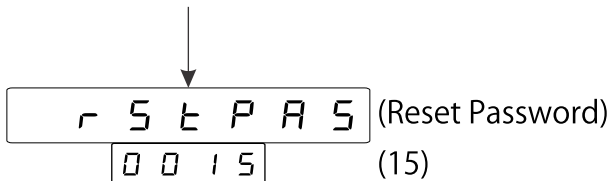
ENERGY CONTROLLER



Pulse output from meter can be used alarm generator or total energy controller by interfacing it with pre settable counter and control circuits (Contactors, Relay, trip Circuit). The counter is loaded with the maximum energy consumption. When count is reaches setpoint it provides output to control Circuit to take action.

RESETTING kWh.

Press **RESET** key For 5 Sec



APPLICATION:

- Power Management
- Control Panels
- Gensets
- Power Distribution Switchboards
- Building Management System
- Quality Control System
- Quality Control System
- Plant Maintenance
- Energy Audit

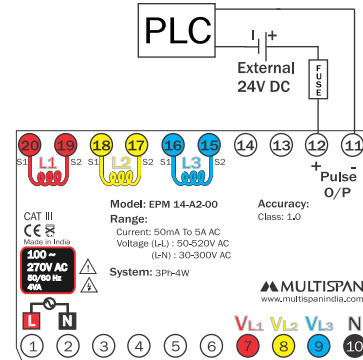
Resolution

CT Primary	Energy Rate Pulse Output
5 to 75	0.01 KWH
76 to 750	0.1 KWH
751 to 6000	1 KWH

PULSE OUTPUT

It is an optically isolated solid state pulse output which drives the remote counter, PLC, DCS stations etc.

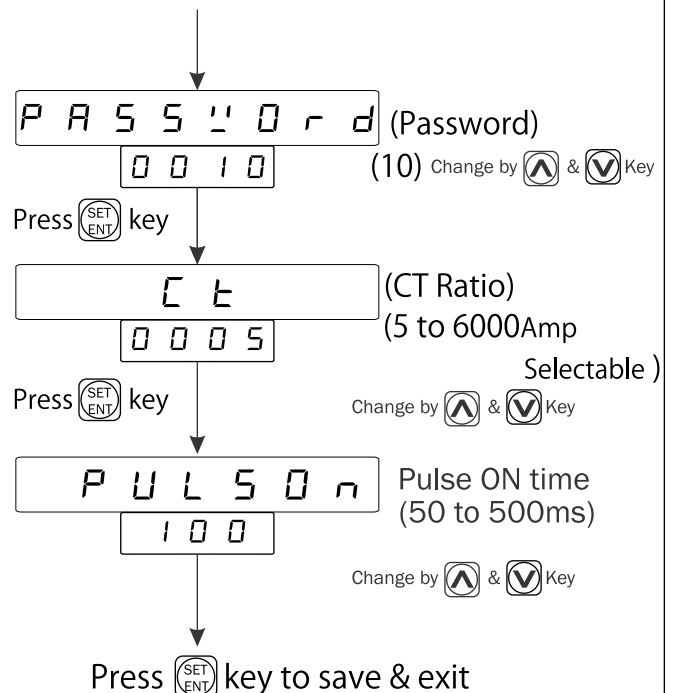
It does not require multiplication factor. Pulse output settings (like Energy per Pulse and Pulse on Time) are user programmable in the field.



Pulse output from meter can be interfaced into a process through a PLC for on line control of energy content in the process. If the PLC has a self Excited digital input, external DC supply is not needed. The kwh pulse is also used to derive average kwh information at the PLC.

CT PRIMARY SELECTION:

Press **SET/ENT** key For 5 Sec



Safety Precautions

All safety related codifications, symbols and instructions that appear in this operating manual or on the equipment must be strictly followed to ensure the safety of the operating personnel as well as the instrument.

If all the equipment is not handled in a manner specified by the manufacturer, it might impair the protection provided by the equipment .

=> Read complete instructions prior to installation and operation of the unit.



WARNING : Risk of electric shock.

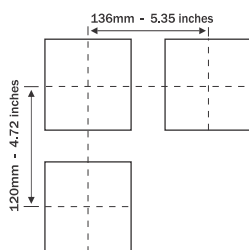
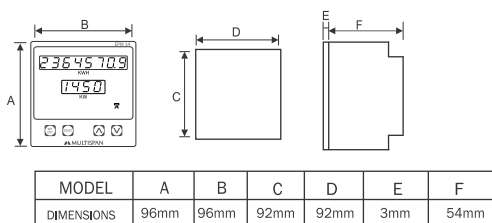
Warning Guidelines

- 1) To prevent the risk of electric shock power supply to the equipment must be kept OFF while doing the wiring arrangement. Do not touch the terminals while power is being supplied.
- 2) To reduce electro magnetic interference, use wire with adequate rating and twists of the same of equal size shall be made with shortest connection.
- 3) Cable used for connection to power source, must have a cross section of 1mm^2 or greater. These wires should have insulations capacity made of at least 1.5kV.
- 4) A better anti-noise effect can be expected by using standard power supply cable for the instrument.

Installation Guidelines

- 1) This equipment, being built-in-type, normally becomes a part of main control panel and in such case the terminals do not remain accessible to the end user after installation and internal wiring.
- 2) Do not allow pieces of metal, wire clippings, or fine metallic fillings from installation to enter the product or else it may lead to a safety hazard that may in turn endanger life or cause electrical shock to the operator.
- 3) Circuit breaker or mains switch must be installed between power source and supply terminal to facilitate power 'ON' or 'OFF' function. However this mains switch or circuit breaker must be installed at convenient place normally accessible to the operator.
- 4) Use and store the instrument within the specified ambient temperature and humidity ranges as mentioned in this manual.

Mechanical Installation



- 1) Prepare the panel cutout with proper dimensions as show above.
- 2) Fit the unit into the panel with the help of clamp given.
- 3) The equipment in its installed state must not come in close proximity to any heating source, caustic vapors, oils steam, or other unwanted process by products.
- 4) Use the specified size of crimp terminal (M3.5 screws) to wire the terminal block. Tightening the screws on the terminal block using the tightening torque of the range of 1.2 N.m.
- 5) Do not connect anything to unused terminals.

Maintenance

- 1) The equipment should be cleaned regularly to avoid blockage of ventilating parts.
- 2) Clean the equipment with a clean soft cloth. Do not use isopropyl alcohol or any other cleaning agent.
- 3) Fusible resistor must not be replaced by operator.

Note: