



## FEATURES

- True RMS Measurement
- 3 or 2 Element Measurement
- Accuracy Class 1 (IS14697)
- Programmable PT / CT Primary
- Energy Storage in EERAM
- Run hour Indication
- Replaces several meters in a electrical panel
- Direct reading without multiplication factor
- Measures 4 quadrant power and records 2 quadrant energy, demand
- Built in phase analyzer for proper connection
- Digital Calibration by software
- Sealed dust proof ABS Plastic Enclosure
- Low PT/CT Burden (less than 0.2VA)

## OPTIONAL FEATURES

- Accuracy Class 0.5 (IS14697)
- Total Harmonic Distortion (THD) display of 3 phase voltage and current
- Optically isolated RS485 communication output with MODBUS RTU protocol
- Optically isolated RS485 communication output with PROFIBUS DP-Slave protocol
- RJ45 Ethernet connectivity with MODBUS / TCP support
- Seperate energy register for export energy recording
- 1 No. potential free relay output contact for user defined function
- 2 No. digital input for user defined function

## APPLICATION

- Panel metering in Substation, Power Station, Gensets
- Suitable for Individual loads
- Factory Monitoring, Building and Halls
- Energy Data Logging with PC

# LOAD MANAGER PCM 9011



## GENERAL DESCRIPTION

**ICD PCM 9011** is a high performance Digital Load Manager suitable for flush mounting on panels to display electrical parameters on a single display. Membrane Keypad on the front panel enable to set PT & CT Primary values. In addition to basic instantaneous parameters it also shows maximum demand kVA & kW, rising demand kVA & kW with kWh, kVAh, kVArh energy readings.

## DATA LOGGING

The Load Manager can be provided with a RS 485 serial port or ethernet supporting MODBUS - RTU, PROFIBUS DP-Slave or MODBUS TCP Protocol. Several Load Managers can be installed at different load centres and connected by multidrop RS485 serial communication network / LAN to log the data on PC for viewing all the parameters in a centralised control room.

An User friendly software package can be supplied to view, On Line Data, Historical Data, Graphical representation of several parameters. Also useful database on the performance and energy consumption of electrical systems can be generated.

# TECHNICAL SPECIFICATION

## MEASURED QUANTITIES

Parameter Shown : 1)3 Phase, Phase to Neutral Voltage  
 2)3 Phase, Phase to Phase Voltage  
 3)3 Phase Current  
 4)3 Phase kVA, kW, kVA<sub>r</sub> & PF  
 5)Average Voltage, Current, Total kVA, kW, kVA<sub>r</sub>, PF & Frequency  
 6)Total kWh, kVAh, kVA<sub>r</sub>h (Lag & Lead)  
 7)Rising Demand kVA & kW with integration Time  
 8)Maximum Demand kVA & kW with Date & Time  
 9)Clock, Calendar and Run hour

## RATINGS

Voltage Range : 80V to 520V AC line to line for LT  
 25V to 140V AC line to line for HT  
 Standard Current : 1A / 5A  
 Max. Current : 1.5A / 7.5A  
 Frequency Range : 40 Hz to 60 Hz  
 PF Range : 0.00 Lag to 0.00 Lead  
 Auxiliary Supply : 240V AC (-20% to +10%)  
 Operating Temperature : 55° C (Max.)

## DISPLAY

Type : 2 Row 16 Character LCD with Backlit  
 Character Size : 4.35 (H) x 2.95 (W) mm  
 LCD Power Save Mode : Provided. When no key is pressed for 3 minutes, the LCD Backlit is switched OFF to save power and enhance the life of LCD. The LCD is switched ON when any key is pressed

## MEASUREMENT

Method : 3 Phase 4 wire for LT  
 3 Phase 3 wire for HT  
 Accuracy : Class 0.5, 1

## INPUT AND OUTPUT

Calibration LED output : 3200 Imp/kWh  
 Digital Input (Option) : 2 (Function user defined)  
 Relay Output (Option) : 1 (Function user defined)

## KEY FUNCTIONS

Key Pad : 4 Keys namely Index, Shift, Increment and Enter used for Program mode setting and Run mode selection  
 Program mode Parameters : PT Primary Voltage, CT Primary Current, Device address, Energy, Run hour and MD Reset  
 Unauthorised Person Entry Protection : Provided through Password Facility  
 Setting, Energy and Run hour Storage : EERAM

## COMMUNICATIONS (Option)

Type : RS485, Ethernet  
 Protocol : MODBUS - RTU, MODBUS - TCP, PROFIBUS DP-Slave  
 Isolation : Provided  
 Traffic Status : Indicated through TXD, RXD LED

## CASE AND DIMENSIONS

Enclosure : ABS Plastic  
 Dimension : 96(H) x 96(W) x 120(D) mm  
 or 96(H) x 96(W) x 80(D) mm  
 Cutout : 88(H) x 88(W) mm  
 Mounting : Flush / Panel

## APPROVALS

Type test Approved as per IS14697 Standards for Class 1, Class 0.5  
 Confirms EMI, EMC Regulations as per IS14697 standards

## PARAMETERS DISPLAYED

PARAMETERS	RANGE	RESOLUTION	ACCURACY
R, Y, B Voltage (LT Meter)	180 V - 270 V	0.1 V	± 0.5% + 2 least digit
RY, YB, BR Voltage (LT Meter)	310 V - 470 V	0.1 V	± 0.5% + 2 least digit
R, Y, B Voltage (HT Meter)	Primary Voltage	0.01 kV	± 0.5% + 2 least digit
RY, YB, BR Voltage (HT Meter)	Primary Voltage	0.01 kV	± 0.5% + 2 least digit
Current	0 - 100 A 100 A & above	0.1 A 1 A	± 0.5% + 2 least digit
kVA / kW / kVA <sub>r</sub> (LT Meter)	0 - 1000 1000 & above	0.1 kVA / kW / kVA <sub>r</sub> 1 kVA / kW / kVA <sub>r</sub>	± 0.5% + 2 least digit for kW/kVA ± 1% + 2 least digit for kVA <sub>r</sub>
kVA / kW / kVA <sub>r</sub> (HT Meter)	0 - 10000 10000 & above	1 kVA / kW / kVA <sub>r</sub> 0.01 MVA / MW / MVA <sub>r</sub>	± 0.5% + 2 least digit for kW/kVA ± 1% + 2 least digit for kVA <sub>r</sub>
3 Phase Power Factor & Total	0.0 lag to unity to 0.0 lead	0.001	± 0.5% + 2 least digit
Frequency	40.00 - 60.00 Hz	0.01 Hz	± 0.2% + 2 least digit
kVAh / kWh / kVA <sub>r</sub> h (Lead & Lag) LT Meter	9999999.9	0.1 kVAh / kWh / kVA <sub>r</sub> h	Class 1 or 0.5
kVAh / kWh / kVA <sub>r</sub> h (Lead & Lag) HT Meter	99999999	1 kVAh / kWh / kVA <sub>r</sub> h	Class 1 or 0.5
Demand Parameters	9999.9 / 99999	0.1 kVA / kW or 1 kVA / kW	± 0.5% for kW better than +1% for kVA

### PLEASE PROVIDE THE FOLLOWING DETAILS WHILE PLACING YOUR ORDER / ENQUIRY

1. Voltage Input 2. Current Input 3. HT / LT Application 4. CT Primary 5. PT Primary 6. Self Powered / External Supply.

## OUR RANGE OF PRODUCTS

Volt Meter, Ammeter, VAF Meter, Energy Meter, Dual Source Meter, Load Manager, Power Multimeter, Trivector Meter, Maximum Demand Controller, Harmonic Indicator, Power Factor Controller, Smart PF Controller, Power Factor Correction Panel, AC Voltage Controller, AC Current Controller, Motor Protection System, Voltage/Current/Power/Frequency Transducer, Power Transmitter, Energy Management and Billing Systems etc...



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