

EMDX³

SMART
ELECTRICITY
METERS



SUSTAINABLE SAVINGS
FOR YOUR INSTALLATIONS



A meter should be selected according to the network (single-phase or three-phase) and its maximum current, required displayed values and communication type allowing it to be run by a supervision system.



Conforming to standards IEC 61557-12, IEC 62053-21/23, IEC 62052-11, IEC 62052-31, EN 50470-1/3 (for the MID version)

| | Cat.No | I _{max} (A) | Width (number of modules) | Non-MID | MID | Output | | Dual Tariff | WAGES (Pulse Input) |
|--|----------|----------------------|---------------------------|---------|-----|-----------------|-------|-------------|---------------------|
| | | | | | | Modbus (RS 485) | Pulse | | |
| | 0 046 70 | 32 | 1 | x | | | x | | |
| | 4 120 68 | 45 | 1 | x | | x | | | |
| | 4 120 69 | 45 | 1 | | x | | x | | |
| | 4 120 80 | 63 | 2 | x | | | x | | x |
| | 4 120 81 | 63 | 2 | x | | x | | o | o |
| | 4 120 82 | 63 | 2 | | x | | x | | x |
| | 4 120 83 | 63 | 2 | | x | x | | o | o |
| | 4 120 90 | 63 | 4 | x | | | x | | x |
| | 4 120 91 | 63 | 4 | x | | x | | o | o |
| | 4 120 92 | 63 | 4 | | x | | x | | x |
| | 4 120 93 | 63 | 4 | | x | x | | o | o |
| | 4 120 74 | 125 | 6 | x | | x | x | x | |
| | 4 120 75 | 125 | 6 | | x | x | x | x | |
| | 4 120 40 | 5 | 4 | x | | | x | | x |
| | 4 120 41 | 5 | 4 | x | | x | | o | o |
| | 4 120 42 | 5 | 4 | | x | | x | | x |
| | 4 120 43 | 5 | 4 | | x | x | | o | o |

New range

x Built-in

o Dual tariff or 1 pulse input for other meters to connect (water, gas etc.)

The Dual Tariff function allows energy consumption to be measured during different time slots (peak period, off-peak period) or record energy use from two different sources (EB or DG) with a single meter.



Scan to know more about the product.

EMDX³ multi-function meters for smart distribution board

Din rail mounting

Din Rail Meters for Smart Distribution Board.
LCD meter with bright graphical back lit display.
1P / 3P Direct connection or connection with
CT. Measures kWh as well as other values like
current, voltage, active energy, power
etc.

Confirms to Standards: IEC 61557-12; IEC 62053-
21/23; IEC 62052-11 and IEC 62052-31

MID* compliance ensures accuracy for billing

Dual Tariff meters

WAGES Enabled (1 Pulse input to connect water
meter, gas meter etc.)

*MID - Measuring Instruments Directive. The
meters comply to MID, ensures the
highest levels of reliability and transparency, and in
order to provide complete
metrological assurance, applications that
necessitate the installation of meters
dedicated to invoicing purposes.

Direct connection single phase

| Cat. Nos | Current Rating (A) | Description | No. of Modules | MRP* ₹ / Unit | Pack |
|----------|--------------------|---|----------------|---------------|------|
| 0046 70 | 32 | 32A 1P Energy Meter with Pulse Output | 1 | ■ | 1 |
| 4120 68 | 45 | 45A 1P Multi Function Meter with RS-485 | 1 | ■ | 1 |
| 4120 69 | 45 | 45A 1P Multi Function Meter with Pulse Output - MID | 1 | ■ | 1 |
| 4120 80 | 63 | 63A 1P Multi Function Meter with WAGES & Pulse Output | 2 | ■ | 1 |
| 4120 82 | 63 | 63A 1P Multi Function Meter with WAGES & Pulse Output - MID | 2 | ■ | 1 |
| 4120 81 | 63 | 63A 1P Multi Function Meter with Dual Tariff / WAGES & RS-485 | 2 | ■ | 1 |
| 4120 83 | 63 | 63A 1P Multi Function Meter with Dual Tariff / WAGES & RS-485 - MID | 2 | ■ | 1 |

* MRP - Maximum Retail Price Inclusive of all taxes including GST.
■ Price available on request.



4120 80



4120 91

EMDX³ multi-function meters for smart distribution board

| Cat. Nos | Current Rating (A) | Description | No. of Modules | MRP* ₹ / Unit | Pack |
|----------|--------------------|-------------|----------------|---------------|------|
|----------|--------------------|-------------|----------------|---------------|------|

Direct connection

three phase

| | | | | | |
|---------|-----|--|---|---|---|
| 4120 90 | 63 | 63A 3P Multi Function Meter with WAGES & Pulse Output | 4 | ■ | 1 |
| 4120 92 | 63 | 63A 3P Multi Function Meter with WAGES & Pulse Output - MID | 4 | ■ | 1 |
| 4120 91 | 63 | 63A 3P Multi Function Meter with Dual Tariff / WAGES & RS-485 | 4 | ■ | 1 |
| 4120 93 | 63 | 63A 3P Multi Function Meter with Dual Tariff / WAGES & RS-485 - MID | 4 | ■ | 1 |
| 4120 74 | 125 | 125A 3P Multi Function Meter with Dual Tariff / WAGES, RS-485 & Pulse Output | 6 | ■ | 1 |
| 4120 75 | 125 | 125A 3P Multi Function Meter with Dual Tariff / WAGES, RS-485 & Pulse Output - MID | 6 | ■ | 1 |

Connection with CT

| | | | | | |
|---------|---|---|---|---|---|
| 4120 40 | 5 | 3P with CT Multi Function Meter with WAGES & Pulse Output | 4 | ■ | 1 |
| 4120 42 | 5 | 3P with CT Multi Function Meter with WAGES & Pulse Output - MID | 4 | ■ | 1 |
| 4120 41 | 5 | 3P with CT Multi Function Meter with Dual Tariff / WAGES & RS-485 | 4 | ■ | 1 |
| 4120 43 | 5 | 3P with CT Multi Function Meter with Dual Tariff / WAGES & RS-485 - MID | 4 | ■ | 1 |

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EMDX³ digital panel meter

| Cat. Nos | Description | MRP* ₹ / Unit | Pack |
|----------|-------------|------------------|------|
|----------|-------------|------------------|------|

Modular multi function meter

LCD meter with bright graphical back lit display.
 4 Dedicated Keys (V / I / P Q S / E P F F)
 Precision class 1 / 0.5
 Connection with current transformers (CT)
 Measurement of currents, voltages, frequency, active, reactive and apparent power, power factor, active and reactive energy
 4 tariff metering
 THD voltages, currents and harmonic analysis up to order 25th (available on Modbus COM port)
 Programmable alarms on all functions
 RS 485 and pulse output
 Phase sequence correction diagnostic
 Customized display page

| Cat. Nos | Current Rating (A) | Description | No. of Modules | MRP* ₹ / Unit | Pack |
|----------|--------------------|---|----------------|------------------|------|
| 4120 45 | 5 | Modular Multi Function Meter with THD - RS-485 & Pulse Output CI 1 | 4 | ■ | 1 |
| 4120 51 | 5 | 4 Tariff Modular Multi Function Meter with Individual THD, Programmable alarms - RS-485 & Pulse Output CI 0.5 | 4 | ■ | 1 |



4120 51

Pulse concentrator

For collecting and transmitting measurements taken by 12 universal pulse electricity meters. Collects pulses from other meters (gas meters, water meters, etc.) RS-485 output

| Cat. Nos | Description | No. of Modules | MRP* ₹ / Unit | Pack |
|----------|--------------------|----------------|------------------|------|
| 4120 65 | Pulse Concentrator | 4 | ■ | 1 |



4120 65

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EMDX³ digital panel meter

| Cat. Nos | Description | MRP* ₹ / Unit | Pack |
|----------|-------------|------------------|------|
|----------|-------------|------------------|------|

communication interface

For mounting on door or solid faceplate
 Dimensions: 96 x 96 x 62 mm
 LCD meter with bright graphical back lit display.
 4 Dedicated Keys (V / I / P Q S / E P F F)
 Measurement of currents, voltages, active, reactive and apparent power and power factor

Metering:

- Active energy consumed or produced
- Reactive energy consumed or produced
- Operating time
- Pulses
- THD voltages, currents, and individual harmonic up to order 25(1)
- RS 485 communication and Pulse output
- Phase sequence correction diagnostic
- Optorelays with potential-free SPST-NO contact
- Customized display page

| Cat. Nos | Description | MRP* ₹ / Unit | Pack |
|----------|-------------|------------------|------|
|----------|-------------|------------------|------|

| | | | |
|---------|---|---|---|
| 4120 47 | Multi Function Meter with THD - RS-485 & Pulse Output CI 1 | ■ | 1 |
| 4120 52 | Advance Multi Function Meter with Individual THD - RS-485 & Pulse Output CI 0.5 | ■ | 1 |



4120 52

Power quality & network analyzer with data logger

Dimensions: 96 x 96 x 62 mm
 LCD meter with bright graphical back lit display.
 Customized display page
 4 Dedicated Keys (V / I / P Q S / E P F F)
 Precision class: 0.5
 Measurement of currents, voltages, active, reactive

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EMDX³ power quality & network analyzer with data logger

| Cat. Nos | Description | MRP* ₹ / Unit | Pack |
|----------|-------------|------------------|------|
|----------|-------------|------------------|------|

and apparent power, internal temperature and power factor

Metering:

- active energy consumed or produced
- Reactive energy consumed or produced
- Operating time
- THD
- Programmable alarms on all functions
- Power quality functions: harmonics (U & I) to 50th, dips, swells, interruption, rapid voltage change and flickers
- Memory embedded (8 Mb)
- RTC (real time clock)
- Can take 4 EMDX3 optional modules

| Cat. Nos | Description | MRP* ₹ / Unit | Pack |
|----------|-------------|------------------|------|
|----------|-------------|------------------|------|

| | | | |
|---------|---|---|---|
| 4120 53 | Power Quality & Network Analyzer with Data Logger | ■ | 1 |
| 4120 55 | R485 communication module with Modbus link | ■ | 1 |
| 4120 59 | 2 Pulse output module for energy count | ■ | 1 |
| 4120 57 | 2 inputs / 2 outputs module | ■ | 1 |
| 4120 60 | 2 analog outputs module | ■ | 1 |
| 4120 58 | Temperature module | ■ | 1 |

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■ Price available on request.



0046 89

EMDX³ energy management multi-support web servers

| Cat. Nos | Description | MRP* ₹ / Unit | Pack |
|----------|-------------|------------------|------|
|----------|-------------|------------------|------|

RS485 / ethernet

| | | | |
|---------|---|---|---|
| 0046 89 | IP converter For RS 485/Ethernet conversion for connecting electricity meters and measurement control units to an IP network | ■ | 1 |
|---------|---|---|---|

Energy management multi-support web servers

Allow remote configuration, test, control and visualization, via a web browser on PCs, smartphones, web viewers, tablet computers, of data

Features

- In-built IP converter
- Power supply: 9 to 28 V= with the help of a single-phase switching mode power supply Cat.No 1 467 21 to be ordered separately
- With the Legrand Power supervision system, circuit breakers are integrated in a supervision system
- You can therefore check the status of the circuit breakers, measure the electrical values and control the circuit breakers remotely
- MODBUS protocol

| Cat. Nos | Description | MRP* ₹ / Unit | Pack |
|----------|-------------|------------------|------|
|----------|-------------|------------------|------|

| | | | |
|---------|--|---|---|
| 4149 47 | For 10 Modbus addresses or 10 pulse modules | ■ | 1 |
| 4149 48 | For 32 Modbus addresses or 32 pulse modules | ■ | 1 |
| 4149 49 | For 255 Modbus addresses or 255 pulse modules Supplied with external power supply and fixing" brackets | ■ | 1 |



4149 48

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PMX

DIGITAL PANEL METERS

FOR ACCURATE
MONITORING AND
ENERGY SAVINGS.



WHY IS PMX PERFECT FOR YOUR FACILITY?



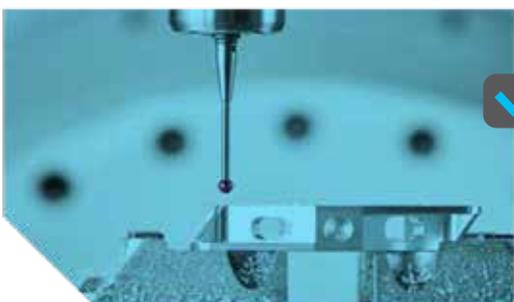
ROBUST

- ✓ Single function meter to advanced level MFM and demand controllers
- ✓ Ensures accurate wiring with ease
- ✓ Cost effective



ADAPTABLE

- ✓ Universal control power supply
- ✓ Site selectable CT/PT ratios
- ✓ Seamless integration with EMS/SCADA



PRECISE

- ✓ True RMS measurement
- ✓ High accuracy class 1 & class 0.5 s
- ✓ Detailed measurements with auto-scaling



Scan to know more about the product.

PMX digital panel meters

| Cat.Nos | Model Series | Description | MRP* ₹ / Unit | Pack |
|---------|--------------|-------------|------------------|------|
|---------|--------------|-------------|------------------|------|

PMX 1000 precise single function meters

Features

- **RoHS Compliance**
- True RMS measurement
- High accuracy with class 1 as per IEC 62053-21
- Volts & Amps: $\pm 1.0\%$ of Rated Current.
- **Bright 7 Segment LED display with four digit resolution and 14mm Height**
- Auto and Manual scrolling
- **Site selectable CT/PT ratios**
- Site selectable CT Secondary 1 A/5 A
- **Site selectable 3Phase 4Wire, 3Phase 3Wire & 1Ph configuration**
- Suitable for 50/60 Hz
- Wide range of control power supply 80 - 300 V AC, 40-70 Hz
- Low burden < 0.2 VA per phase Volts & Amps
- Average & Phase wise measurements
- Password protection



4149 77



4149 78

| | | | | |
|---------|----------|-------------------------|------|---|
| 4149 75 | PMX 1100 | 1Ph Ammeter CI 1 | 1498 | 1 |
| 4149 76 | PMX 1200 | 1Ph Voltmeter CI 1 | 1498 | 1 |
| 4149 77 | PMX 1103 | 3Ph Ammeter CI 1 | 2170 | 1 |
| 4149 78 | PMX 1203 | 3Ph Voltmeter CI 1 + Hz | 2170 | 1 |

PMX 4000 true VAF + PF meter

Features

- **RoHS Compliance**
- **Displays Current, line to neutral & line to line Voltages, frequency & Power Factor. (VA & PF - Phase Wise & Average)**
- **Display on Hours**
- True RMS measurement with simulations sampling of Current & Voltage
- High accuracy with class 1 as per IEC 62053-21 Volts & Amps: $\pm 1.0\%$ of Rated Current.
- **3 Row Display with LED status for different parameter selection.**
- Auto and Manual scrolling
- Site selectable CT/PT ratios
- Site selectable CT Secondary 1 A/5 A
- Site selectable 3Phase 4Wire, 3Phase 3Wire & 1Ph configuration
- Suitable for 50/60 Hz
- Universal control power supply 80 - 300 V AC/DC, 40-70 Hz
- Low burden < 0.2 VA per phase Volts & Amps
- Average & Phase wise measurements
- **Password protection**
- **Seamless integration with EMS/SCADA system with RS485 serial channel communication,**



4149 82

PMX digital panel meters

| Cat.Nos | Model Series | Description | MRP* ₹ / Unit | Pack |
|---------|--------------|-------------|------------------|------|
|---------|--------------|-------------|------------------|------|

Industry standard Modbus RTU protocol.

| | | | | |
|---------|----------|------------------------------------|------|---|
| 4149 79 | PMX 4000 | 3Ph VAF + PF meter CI 1 | 3682 | 1 |
| 4149 80 | PMX 4000 | 3Ph VAF + PF meter CI 1 with RS485 | 4394 | 1 |



4149 80

PMX 5000 smart energy meters for smart energy billing

Features

- **RoHS Compliance**
- kWh/kVA
- **Old Energy register for back up of last cleared energy values**
- Bright LED with parameter name and value
- Auto scaling capability in adjustment of Kilo, Mega, Giga.
- kWh / kVA / PF / W - any one programmable
- **Positive energy accumulation even with CT polarity reversal with reverse lock program**
- High Accuracy with class 1 as per IEC 62053-21
- Site selectable CT/PT ratios
- Site selectable CT Secondary 1 A/5 A
- Universal control power supply 80 - 300 V AC/DC, 40-70 Hz
- Password protection for tamper proofing
- **Seamless integration with EMS/SCADA system with RS485 serial channel communication, Industry standard Modbus RTU protocol.**
- **Pulse output for integration into a process through PLC/DCS for online energy management**
- Provision for Tamper proofing with meter casing* *optional strip for tamper proofing.

| | | | | |
|---------|----------|--------------------------------------|------|---|
| 4149 81 | PMX 5000 | kWh LED meter CI 1 | 4218 | 1 |
| 4149 82 | PMX 5000 | kWh LED meter CI 1 with RS485 | 4842 | 1 |
| 4149 83 | PMX 5000 | kWh LED meter CI 1 with Pulse Output | 5892 | 1 |

PMX 6000 multi dual source meter

Features

- **RoHS Compliance**
- **Bright LED display for showing parameters for both EB & DG**
- **Displays full range of parameters**
Basic : VLL, VLN, A (Avg. & Phase wise), F
Power: W, PF (Avg. & Phase wise)
Energy: Wh
- **Load Hours, Run Hours, Old Wh, Old Load Hours for both EB & DG.**
- **DG Sensing input - 230 VAC**
- Auto scaling capability in adjustment of Kilo, Mega, Giga.
- Positive energy accumulation even with CT polarity reversal with reverse lock program.
- High Accuracy with class 1 as per IEC 62053-21 & class 0.5 as per IEC 62053-22

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PMX digital panel meters

| Cat.Nos | Model Series | Description | MRP* ₹ / Unit | Pack |
|---------|--------------|-------------|------------------|------|
|---------|--------------|-------------|------------------|------|

- Site selectable CT/PT ratios
- Site selectable CT Secondary 1 A/5 A
- Universal control power supply 80 – 300 V AC/DC, 40-70 Hz
- Password protection for tamper proofing
- **Seamless integration with EMS/SCADA system with RS485 serial channel communication, Industry standard Modbus RTU protocol.**
- Provision for Tamper proofing with meter casing*
*optional strip for tamper proofing



4149 85

| | | | | |
|---------|----------|---|------|---|
| 4149 84 | PMX 6000 | Dual Source LED meter CI 1 with RS485 | 7524 | 1 |
| 4149 85 | PMX 6000 | Dual Source LED meter CI 0.5 with RS485 | 8968 | 1 |

PMX 7000 multifunction meter

Features

- **RoHS Compliance**
- **Bright LED display to view more than 25 parameters.**
- Displays full range of parameters
Basic : VLL, VLN, A (Avg. & Phase Wise), F
Power: W, PF, VA (Avg. & Phase Wise)
Energy: Wh,
- **Load Hours, Run Hours, Old Wh, Old Load Hours**
- Auto scaling capability in adjustment of Kilo, Mega, Giga.
- **Positive energy accumulation even with CT polarity reversal with reverse lock programmable**
- High Accuracy with class 1 as per IEC 62053-21
- Site selectable CT/PT ratios
- Site selectable CT Secondary 1 A/5 A
- Universal control power supply 80 – 300 V AC/DC, 40-70 Hz
- Password protection for tamper proofing
- **Seamless integration with EMS/SCADA system with RS485 serial channel communication, Industry standard Modbus RTU protocol**
- Provision for Tamper proofing with meter casing*
*optional strip for tamper proofing



4149 90



4149 91

| | | | | |
|---------|----------|---|-------|---|
| 4149 90 | PMX 7000 | MFM (VAF + W/VA/PF/Wh) LED meter CI 1 with RS485 [^] | 6972 | 1 |
| 4149 91 | PMX 7300 | MFM LED meter CI 1 | 8436 | 1 |
| 4149 92 | PMX 7300 | MFM LED meter CI 1 with RS485 | 10066 | 1 |

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PMX digital panel meters

| Cat.Nos | Model Series | Description | MRP* ₹ / Unit | Pack |
|---------|--------------|-------------|------------------|------|
|---------|--------------|-------------|------------------|------|

PMX 7400

advance multifunction meter / load manager / demand monitor

Features

- **RoHS Compliance**
- **Advance multifunction meter with High/Low recording of VLL, VLN, A, Hz, PF, Var with time stamp.**
- **Voltage & Current THD (Total Harmonics Distortion) with Individual harmonics up to 31st order.**
- **K-factor V & A to keep check on the losses due to harmonic load currents & their effects on transformer heating.**
- Load manager with demand monitoring
- **RTC based Demand management**
- **Import/Export/Net monitoring of Wh, VAh, VARh Inductive/Capacitive, Load hours**
- Auto scaling capability in adjustment of Kilo, Mega, Giga.
- **Positive energy accumulation even with CT polarity reversal with reverse lock programmable**
- High Accuracy with class 1 as per IEC 62053-21 & class 0.5s as per IEC 62053-22
- Site selectable CT/PT ratios
- Site selectable CT Secondary 1 A/5 A
- Universal control power supply 80-300 V AC/DC, 40-70 Hz
- Password protection for tamper proofing
- **Seamless integration with EMS/SCADA system with RS485 serial channel communication, Industry standard Modbus RTU protocol.**
- Byte order option – Field Programmable Float/ Little Endian/ Big Endian data formats



4149 96

| | | | | |
|---------|----------|--|-------|---|
| 4149 93 | PMX 7400 | MFM + THD LED meter CI 1 with RS485 | 13472 | 1 |
| 4149 94 | PMX 7400 | MFM + THD LED meter CI 0.5 with RS485 | 16528 | 1 |
| 4149 95 | PMX 7410 | MFM + THD + Demand monitoring LED meter CI 1 with RS485 | 19564 | 1 |
| 4149 96 | PMX 7420 | MFM + THD with Individual + Harmonics + Demand + Import/Export LED meter CI 1 with RS485 | 20276 | 1 |

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