Multifunction and Power Meters

Introducing M1M 20C/30C - Measurement, made simple
Multifunction and Power Meters
Measurement, made simple

M1M Range - Introduction of 20C and 30C

The ABB M1M multimeters and power meters ranges, the solution for any standard application in buildings and industry.

M1M 15, M1M 20 and M1M 30 are the ABB ranges of multifunction meters and power meters, offering exactly what is needed to monitor the electrical system and analyze the power quality in a single device.

With the introduction of the compact version 72x72, M1M 20C and M1M 30C, the M1M range now fits an even wider range of applications.
Multifunction and Power Meters

What’s new

M1M 20C and M1M 30C complete ABB M1M range and increase the flexibility of the ABB offer in terms of space usage, helping distributors and panel builders to find a compact 72x72 solution for basic applications in buildings and industry.

On top of that, M1M 30C also offers a 24VDC built-in power supply for DI function, which allows customers to save extra wiring and labor costs by simplifying the arrangement process of panels.

Simple and complete the M1M power meter range covers all basic electrical system measurement needs, making measurement simple.
Multifunction and Power Meters

New product range composition

**M1M 15**

M1M 15 is a multi-function meter with LED display:
- Voltage, Current, Frequency
- Complete power and energy (active, reactive, apparent)

<table>
<thead>
<tr>
<th>Product name</th>
<th>Comm. Protocol</th>
<th>I/O</th>
<th>Accuracy</th>
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<tbody>
<tr>
<td>M1M 15</td>
<td>-</td>
<td>-</td>
<td>Class 1</td>
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<tr>
<td>M1M 15 Modbus</td>
<td>Modbus RTU</td>
<td>-</td>
<td>Class 1</td>
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</tbody>
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**M1M 20**

M1M 20 is a basic power meter with LCD display:
- Voltage, Current, Frequency
- Complete power and energy + 4 quadrants (N/A for 20C)
- Total Harmonic Distortion (THD)
- Compact version available (M1M 20C only)

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<tr>
<td>M1M 20</td>
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<td>Class 0.5S</td>
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<tr>
<td>M1M 20 Modbus</td>
<td>Modbus RTU</td>
<td>-</td>
<td>Class 0.5S</td>
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<tr>
<td>M1M 20C Modbus</td>
<td>Modbus RTU</td>
<td>-</td>
<td>Class 0.5S</td>
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<tr>
<td>M1M 20 Ethernet</td>
<td>Modbus TCP/IP</td>
<td>-</td>
<td>Class 0.5S</td>
</tr>
<tr>
<td>M1M 20 I/O</td>
<td>Modbus RTU</td>
<td>2DI, 2DO</td>
<td>Class 0.5S</td>
</tr>
</tbody>
</table>

**M1M 30**

M1M 30 is a power meter with LCD display:
- Voltage, Current, Frequency
- Complete power and energy + 4 quadrants
- THD, unbalances, up to 40 single harmonics (31 for M1M 30C)
- Avg/max/min values and Real Time Clock
- Compact version available (M1M 30C only)
- DI built-in power supply (M1M 30C only)

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<td>M1M 30 Modbus</td>
<td>Modbus RTU</td>
<td>2DO</td>
<td>Class 0.5S</td>
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<td>Modbus TCP/IP</td>
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<td>2DI, 2DO</td>
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<tr>
<td>M1M 30C I/O</td>
<td>Modbus RTU</td>
<td>2DI, 2DO</td>
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Multifunction and Power Meters
M1M 15

Details

Bright display
Simple reading of the measurement data for all 3 phases on the wide LED display.

Intuitive navigation
LEDs on the sides to help during the navigation in the menu pages.

Common experience
Same intuitive menu structure all over the different M1M meters, with 4 pushbuttons keyboard for simplified access to the device.

Not Available in Compact version
Multifunction and Power Meters
M1M 15

Details

Electrical system monitoring
Reliable electrical measurement parameters for basic applications compliant with IEC 61557-12, including voltage, current, frequency, power, energy.

Comfortable wiring
Vertical disposition of the terminals all over M1M range terminals makes the cabling inside the switchboard easy to be completed.
Multifunction and Power Meters
M1M 20/30 and 20C/30C

Details

Intuitive visualization
Clear visualization of the measurements with self-guided menus on the bright backlit LCD displays.

Manual-less configuration
Guided wizard for first commissioning helping to save time for the basic configuration.

Compact design
Only 65.8mm depth inside the switchboard to ensure optimized logistics and a reduced footprint in the panel (74.8mm for M1M 20C/30C with terminals).

+ Now available in two formats: 96x96 and Compact 72x72.

Available in Compact version

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Multifunction and Power Meters
M1M 20/30 and 20C/30C

Details

Power quality measurement
Complete set of power quality features according to IEC 61557-12 for M1M 96x96 and GB/T 13729 for M1M 72x72, including main KPIs and datalogger functionality on flash memory.

Remote measurement
Availability of Modbus RTU and Modbus TCP/IP (not available for Compact 20C/30C) communication protocols for easy integration in any system.

+ Now with the option of DI internal power supply for the M1M 30C.
Dimensions
96x96 vs 72x72

96x96

72x72

M1M 15, M1M 20, M1M 30

M1M 20C, M1M 30C
Multifunction and Power Meters

Your benefits

**Complete offer**
One supplier to cover all needs

Select in maximum 2 steps the right and most competitive power meter to cover all basic electrical system measurement needs. Thanks to integrated functionalities, communication protocols, and an option for compact dimensions, the M1M range now fits an even wider range of applications.

**Easy to use**
Common user experience

Common and intuitive menu structure all over the different ranges on clear and large backlit LED and LCD displays, helping to reduce the time needed to operate the power meters. Feedback on correct operations and quick reactivity on the system events are ensured by alarms icons and frontal LEDs by the entire product range.

**Easy to install**
Optimized installation process

Compact power meters, ensuring a very limited footprint inside the panel, now even more with 20C and 30C versions, providing easy wiring of cables and fast installation. No special tool is required for product mounting thanks to mounting clips.

**Energy Efficiency**
Reliable and accurate measurement

Complete set of measurement functionalities, from multi-function meters to intermediate power meters, compliant with accuracy standard of IEC 61557-12 for M1M 96x96 and GB/T for M1M 72x72 for improved energy efficiency of the electrical system. Remote communication on main communication protocols, Modbus RTU and Modbus TCP/IP (N/A for 20C/30C).
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**Summarize**

- Complete ABB offer to cover an even wider range of applications
- Reduced time needed for product selection thanks to a simple range composition
- Reduced time for installation and operations
- Minimum space usage in panels and internal stock