

# Power analyzer

6M  
SERIES



Panels for electrical distribution



Control panels



Electrical energy control



Industrial robots



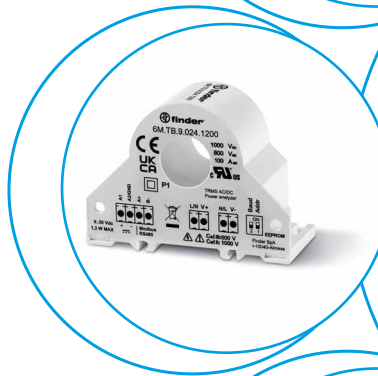
Inverter



Charging Stations



PV applications





**Single phase power analyzer able to make TRMS AC and DC measurements**

**Type 6M.TA.9.024.1200**

- 50A - 800 V AC / 1000 V DC

**Type 6M.TB.9.024.1200**

- 100A - 800 V AC / 1000 V DC

**Type 6M.TF.9.024.1200**

- 300A - 800 V AC / 400A - 1000 V DC

- Modbus RS485 communication port
- Instantaneous values measured: V (RMS), A (RMS), PF, kW, kVA, kvar, Hz, THD (I), Vpk, Ipk, Cosφ
- Bidirectional energy measurement: kWh
- Accuracy Class: 0.5% F.S.
- Available measure register: MSW first, LSW first or hundredts
- Fully configurable by Modbus RS485 interface
- Conform to EN 61010-1/2010
- Din Rail mounting (with DIN rail adaptor included)

**NEW 6M.TA.9.024.1200**



- 50A - 800 V AC / 1000 V DC
- Modbus RS485 interface

**NEW 6M.TB.9.024.1200**



- 100A - 800 V AC / 1000 V DC
- Modbus RS485 interface

**NEW 6M.TF.9.024.1200**



- 300A - 800 V AC / 400A - 1000 V DC
- Modbus RS485 interface

For outline drawing see page 6

**Specification**

Type of measure		TRMS (AC)/DC	TRMS (AC)/DC	TRMS (AC)/DC
Nominal current AC/DC	A	50/50	100/100	300/400
Minimum measured current I <sub>min</sub> AC/DC	A	0.5	0.5	0.5
Maximum measured current I <sub>pk</sub> AC/DC	A	90	180	450
Current Accuracy class		0.5% F.S.	0.5% F.S.	0.5% F.S.
Voltage Accuracy class		0.5% F.S.	0.5% F.S.	0.5% F.S.
Voltage measurement range for AC system V AC		90...800	90...800	90...800
Voltage measurement range for DC system V DC		90...1000	90...1000	90...1000
Working frequency	Hz	DC or 1...400	DC or 1...400	DC or 1...400
Sampling rate	Hz	11 000	11 000	11 000
Nominal supply voltage	V DC	24	24	24
Operating range	V DC	9...30	9...30	9...30
Max power consumption	W	<1.3	<1.3	<1.3

**Technical data Modbus protocol**

Bus System		Modbus RS485 RTU	Modbus RS485 RTU	Modbus RS485 RTU
Frame		8, N, 1	8, N, 1	8, N, 1
Max bus length	m	1000	1000	1000
Baud rate	Baud	1200...115 200	1200...115 200	1200...115 200

**Technical data**

Accuracy Class for V, I, W	%	0.5	0.5	0.5
Accuracy Class for kWh	%	1	1	1
Working temperature	°C	-15...+65	-15...+65	-15...+65
Overvoltage category up to 600 V		III	III	III
Overvoltage category up to 1000 V DC		II	II	II
Protection category		IP 20	IP 20	IP 20
Dimensions with mounted connectors (LxHxD)		63 x 46.2 x 41.94		99.25 x 89.1 x 43-41

**Approvals** (according to type)



**Bridge Modbus TCP/IP to Modbus RTU (RS485 master) with on board web server interface, up to 10 clients**

- Ethernet comm port: 10/100 Mb/s
- Modbus RTU comm port: RS485 up to 115 200 bit/s
- Insulation between power supply, RS485, Ethernet: 1500 V
- User interface: 6 LED status indication
- Up to 10 Ethernet clients
- Conform to: EN 61000-6-4/2006 + A1 2011; EN 64000-6-2/2005; EN 61010-1/2010

**NEW** 6M.BU.0.024.2200



- Modbus TCP/IP to Modbus RS485 RTU bridge interface
- Up to 200 modbus devices
- Up to 10 clients

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For outline drawing see page 6

Protocol type		
Modbus RS485 RTU - Modbus TCP/IP Bridge interface		
Nominal supply voltage	V AC/DC	24/24
Operating range	V AC/DC	19...28/10...40
Max power consumption	W	<1.5
Communication port specification		
Ethernet comm port	Mb/s	10-100 Mb/s (Max 10 Client)
RS485 RTU port comm	Baud	1200 - 115 200 (Max 200 slave)
Working temperature	°C	-20...+60
<b>Approvals</b> (according to type)		<b>CE UK CA</b>

### Ordering information

Example: 6M series, 1ph power analyzer up to 100 A, ModbusRS485 comm port, 0.5% accuracy with DIN rail adaptor for mounting.

**6 M . T B . 9 . 0 2 4 . 1 2 0 0**

**Series**

**Type**

TA = 50A - 800 V AC / 1000 V DC  
TB = 100A - 800 V AC / 1000 V DC  
TF = 300A - 800 V AC / 400A - 1000 V DC  
BU = ModbusTCP/IP-Modbus RS485 RTU

**Supply version**

0 = AC/DC  
9 = DC

**Supply voltage**

024 = 24 V

**Option**

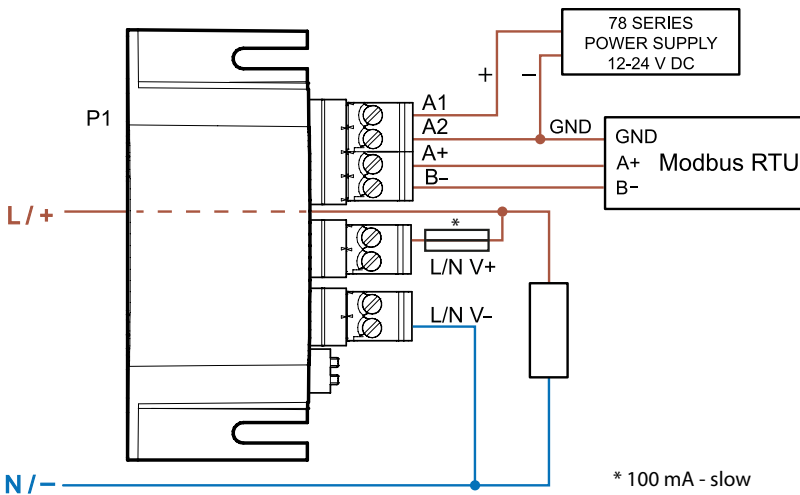
2 = Modbus RS485 RTU

**Version**

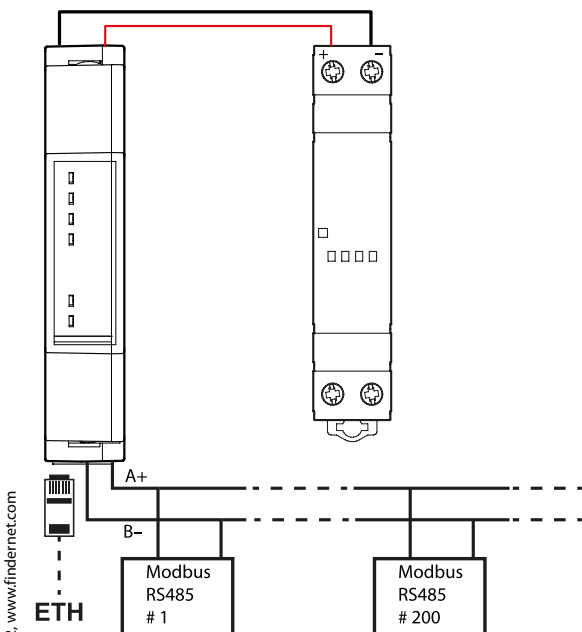
1 = CT shape  
2 = Wired with RJ45 (only for 6M.BU)

### Wiring diagrams

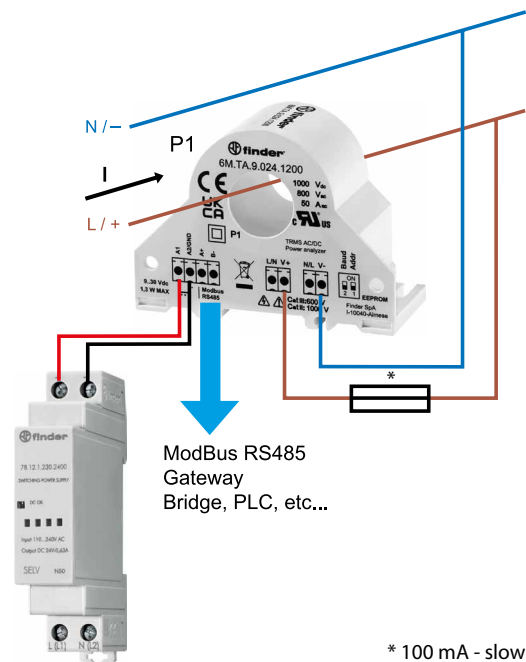
Type 6M.TA, 6M.TB and 6M.TF



Type 6M.BU with 78.12

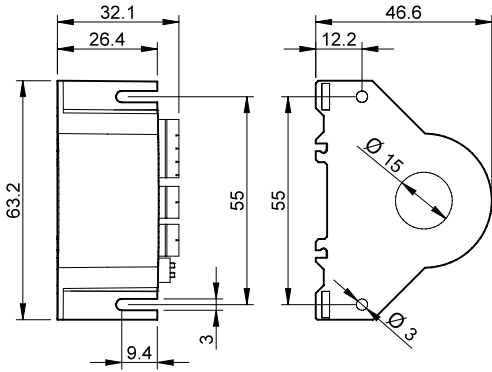


Type 6M.TX with 78.12

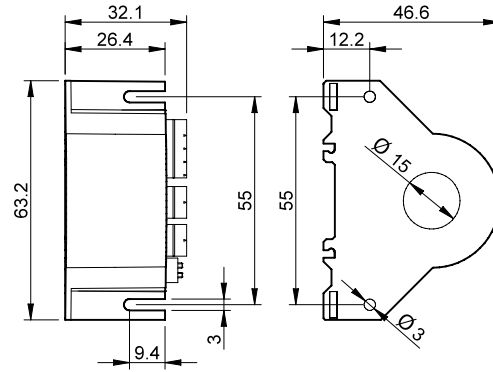


## Outline drawings

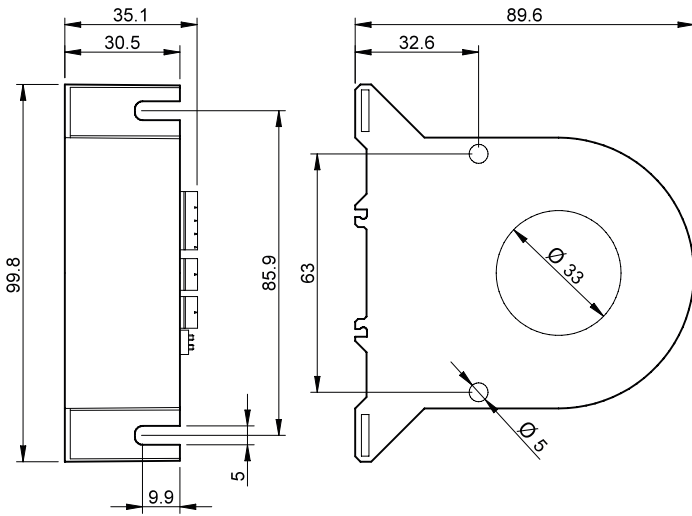
Type 6M.TA



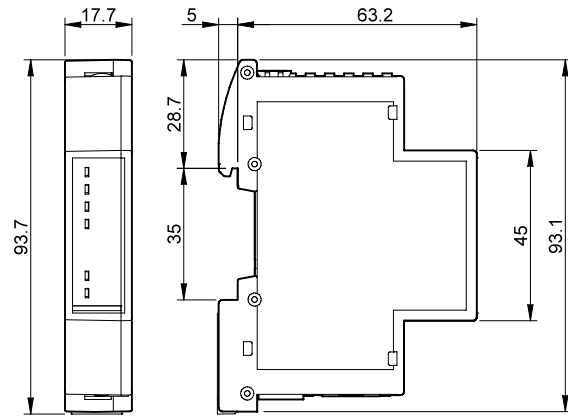
Type 6M.TB



Type 6M.TF



Type 6M.BU



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