

MBX1

Technical Data



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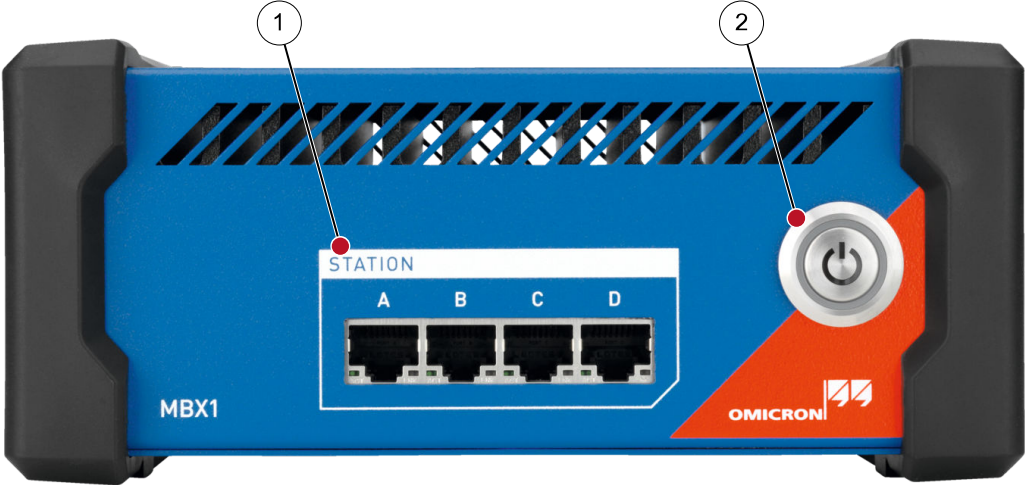
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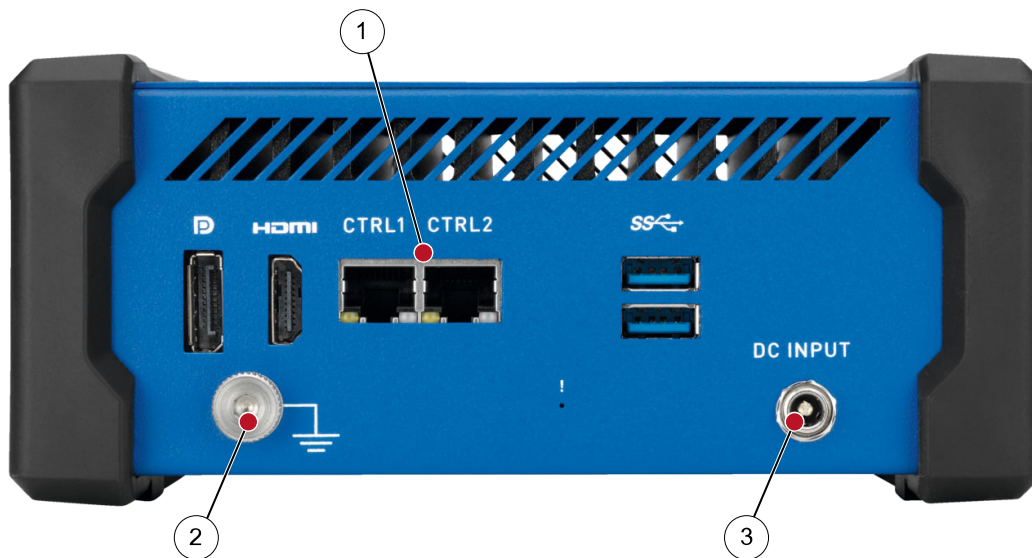
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1 Device overview



Front view		
1	STATION – A, B, C, D	Ethernet connectors for connection to substation and accessory devices
2	Power button	Button to switch the <i>MBX1</i> on and off The LED lights up when the <i>MBX1</i> is switched on.



Back view		
1	CTRL1, CTRL2	Ethernet connectors for connection to computer
2	Grounding screw	For connection to ground (e.g. with a 6 m/19.8 ft grounding cable with a battery clamp and an M6 cable lug)
3	DC INPUT	Connection to power supply
–	Display port	<i>Future use</i>
–	HDMI port	<i>Future use (service port)</i>
–	USB ports	<i>Future use</i>

2 MBX1 technical data

2.1 Computing performance

Computing performance	
Processors	Secure cryptoprocessor according to TPM 2.0 (ISO/IEC 11889) Dual-core processor with hardware multithreading
Memory	8 GB memory 64 GB SSD

2.2 Mechanical data

Mechanical data	
Weight	2.4 kg 5.3 lb
Dimensions W × H × D	180 × 80 × 180 mm 7.1 × 3.15 × 7.1 in
Ingress protection	IP40

2.3 External power supply unit

AC power supply	
Connection	C14 connector in accordance with IEC 60320-1
Power connector	Standard DC barrel jack, positive center pin Ø 2.1 × 5.5 × 11 mm Ø 0.08 × 0.22 × 0.43 in
Input voltage, single phase	
Nominal voltage	100 V _{AC} ... 240 V _{AC}
Maximum input current	1.8 A
Overvoltage category	II
Output	
Output voltage	12 V _{DC} (±5 %)
Output power	96 W
Frequency	
Nominal frequency	50 Hz / 60 Hz
Operational range	47 Hz ... 63 Hz (±1 Hz)

2.4 Connectors

Ethernet ports CTRL1 and CTRL2	
Type	10/100/1000Base-TX
Connector	RJ45
Cable type	LAN cable of category 5 (CAT5) or better
Status indication	Green LED: physical link present
	Yellow LED: traffic on interface

Ethernet ports STATION A, B, C, D	
Type	10/100/1000Base-TX
Connector	RJ45
Cable type	LAN cable of category 5 (CAT5) or better
Status indication	Green LED: physical link present
	Yellow LED: traffic on interface

USB	
Type	USB 3.0 (<i>SuperSpeed</i> , 5 GBit/s)
Connector	USB type A

HDMI (service port)	
Type	HDMI 1.4, 3840 × 2160 at 30 Hz
Connector	HDMI type A

Display port	
Type	DisplayPort 1.2, 3840 × 2160 at 60 Hz
Connector	Full-size DisplayPort

2.5 Environmental conditions

Environmental conditions		
Temperature	Operating	0 °C ... +45 °C 32 °F ... 113 °F
	Storage	-20 °C ... +80 °C -4 °F ... +176 °F
Maximum altitude	Operating	4,000 m 13,123 ft
	Storage	15,000 m 49,212 ft
Humidity	20 % ... 80 % relative humidity; non-condensing	

2.6 Electromagnetic compatibility and safety standards

Electromagnetic compatibility (EMC)

Electromagnetic interference (EMI)	
Europe	EN 61326-1
	EN 61000-3-2/3, EN 55032 (Class B)
International	IEC 61326-1
	IEC 61000-3-2/3
	CISPR 32 (Class B)
USA	47 CFR 15 Subpart B (Class B) of FCC

Electromagnetic susceptibility (EMS)	
Europe	EN 61326-1 (industrial electromagnetic environment)
	EN 61000-6-5 (substation/interface type 2) ¹
International	IEC 61326-1 (industrial electromagnetic environment)
	IEC 61000-6-5 (substation/interface type 2) ¹

¹ Classified as passive monitoring equipment.

Safety standards	
Europe	EN 62368-1
International	IEC 62368-1
USA	UL 62368-1
Canada	CAN/CSA-C22.2 No 62368-1
Certificates	