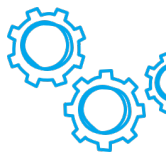




MRU10

The Monitoring & Reporting Unit (MRU10) reliably records and analyses the sensor data of the High Power D-Box MRU. The information collected can be shown directly on site via display, requested remotely via the integrated web GUI or forwarded to a superordinate management system via an interface. With the ability to monitor up to ten High Power D-Boxes simultaneously, the MRU10 offers a scalable solution for demanding infrastructures. It provides complete transparency about the actual power consumption of the loads - the ideal basis for well-founded decisions and targeted optimisation measures. The MRU10 also provides all relevant measurement data for calculating essential KPIs, such as Power Usage Effectiveness (PuE).



TYPICAL FEATURES

- Rated voltage DC 24 V, DC 48 V, DC 65 V, max. DC 80 V
- On-site indication via display
- Remote access via integrated web GUI
- Different protocols: SNMP v1/v2/v3, Modbus TCP, Modbus RTU, http, https, LDAP
- Redundant power distribution via High Power-D-Box MRU
- Cascading of several MRU10 possible

TYP. APPLICATIONS

Telecommunications and datacom, network infrastructures

WEB LINKS

[Further information](#), [International approvals](#), [Technical basics](#), [REACH](#), [RoHS](#), [Contact](#)

YOUR BENEFITS

- Flexible data access: Show the values directly on site via the display or conveniently via remote request using integrated interface protocols
- Simple commissioning: Ready for operation when the optional cable is plugged in- without interrupting loads (plug & play)
- High reliability: Redundant power supply ensures maximum availability
- Space-saving design: With just 1 HU, the 19-inch housing perfectly fits into existing control cabinet structures

COMPLIANCE

REACH ✓ **RoHS** ✓ **CE**

TECHNICAL DATA

DISPLAY DATA

Display	2.0" full colour display
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ELECTRICAL DATA

Rated voltage U_n	DC 24 V; DC 48 V; DC 65 V; max. DC 80 V
Power consumption	Typ. 10 W
External connection	2x Ethernet, RJ45 socket for standard network cables of the Cat-6 (Shielded Twisted Pair) category. 10 / 100 / 1000 Mbit/s Base-T 1x RS485 for Modbus RTU (mating connector included in the scope of delivery)
LED for operating condition signalling	Multicoloured (red, green, blue) • Status LEDs
Insulation co-ordination (IEC 60934)	1000 V (according to EN 60934 – table 20 rated voltage > 50. ≤ 125 V)

MECHANICAL DATA

Mounting dimensions (WxHxD)	482.6 x 44.5 x 215 mm
Material	Aluminium
Enclosure grounding	2 x M6 for enclosure

SUPPLY

Terminals / Cable cross section	Redundant power supply via the connected High Power D-Box MRU 12-pin socket, rear connection for cable see accessories
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MEASURING SENSORS

Measuring data	Current (I), voltage (U), power (P), energy (E)
Terminals / Cable cross section	12-pole connection sleeve, Connection at the back, For cable see accessories
Voltage measurement accuracy	±1 %
Current measuring accuracy	±1 %

PROTOCOLS

HTTP / HTTPS (Hypertext Transfer Protocol)	Integrated web server
SNMP v1, v2c, v3 protocol	Protocol for integration into a management system
SNMP-MIB (Management Information Base)	File: MRU10-V1_0_0.mib
Modbus TCP/IP	Protocol for integration into a management system
Modbus RTU	Protocol for integration into a management system
SSH v2 (Secure Shell)	System configuration and safety settings
Recommended SSH v2 terminal programme	LePuttyc 1997-2006 Simon Tathman
NTP (Network Time Protocol)	Automatic time synchronisation via an NTP server
IP protocol (internet protocol)	IPv4 and IPv6 address formats are supported
DHCP server (Dynamic Host Config. Protocol)	Is supported, allows automatic assignment of network parameters, e.g. the IP address

AMBIENT CONDITIONS

Ambient temperature	-20...+60 °C
Storage temperature	-30...+70 °C
Damp heat	Test according to IEC 60068-2-78, 3K6 climate class according to EN 60721 96 hours at 95 % relative humidity, 40 °C
IP code (standard)	IP20
ESD	4 kV / air 8 kV

EMC requirements (EMC directive, CE logo) emitted interference EN 61000-6-3

EMC requirements (EMC directive, CE logo) resistance to disturbances EN 61000-6-2

FURTHER INFORMATION

OPERATING CONDITIONS SIGNALLING

Status LED	Condition	Description
	OFF	No supply voltage
Blue	blinking	The MRU10 module is booting. Booting can take up to 60 seconds.
Green	ON	Boot process completed. The MRU10 runs in error-free operation. Ethernet connection has been established
Green	blinking	Boot process completed. The MRU10 runs in error-free operation. No Ethernet connection
Red	ON	internal failure

ORDERING NUMBER CODE



1 TYPE NUMBER

MRU10 Monitoring & Reporting Unit

2 EXTERNAL INTERFACES

0 2x Ethernet, RJ45 socket
1x RS485 for Modbus RTU

3 POWER SUPPLY

0 DC 20 ... 80 V

4 DISPLAY

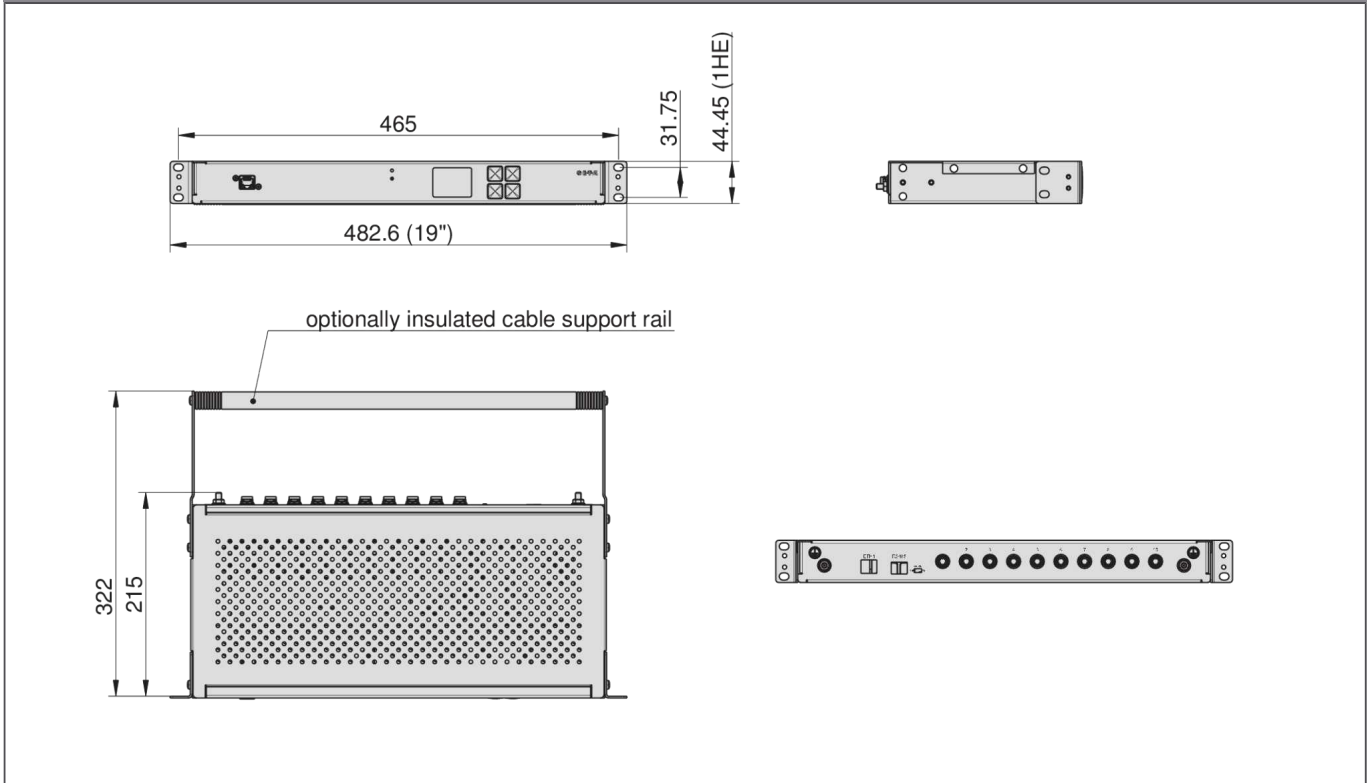
0 2.0" full colour display

5 SOFTWARE PROTOCOLS

A IPv4, IPv6, SNMPv1, v2, v3, http, https, SSH v2, Modbus TCP, Modbus RTU, NTP

DIMENSIONS

DIMENSIONS



ACCESSORIES

REQUIRED ACCESSORIES

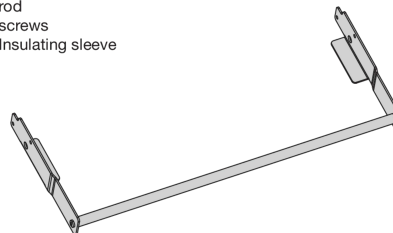
X22412201	Connection cable MRU10 (2.5 m)	
X22412202	Connection cable MRU10 (5 m)	
X22412203	Connection cable MRU10 (7.5 m)	
X22412204	Connection cable MRU10 (10 m)	

FURTHER INFORMATION ABOUT ACCESSORIES (DRAWINGS)

ACCESSORIES

Cable clamp rail

X 223 260 01
 consisting of
 2 mounting brackets
 1 rod
 6 screws
 1 Insulating sleeve



All information and data given on our products are accurate and reliable to the best of our knowledge, but E-T-A does not accept any responsibility for the use in applications which are not in accordance with the present specification. E-T-A reserves the right to change specifications at any time in the interest of technical improvement. Dimensions are subject to change without notice. Please enquire for the latest dimensional drawing with tolerances if required. All dimensions, data, pictures and descriptions are for information only and are not binding. Amendments, errors and omissions excepted. Ordering part numbers may differ from the device marking.