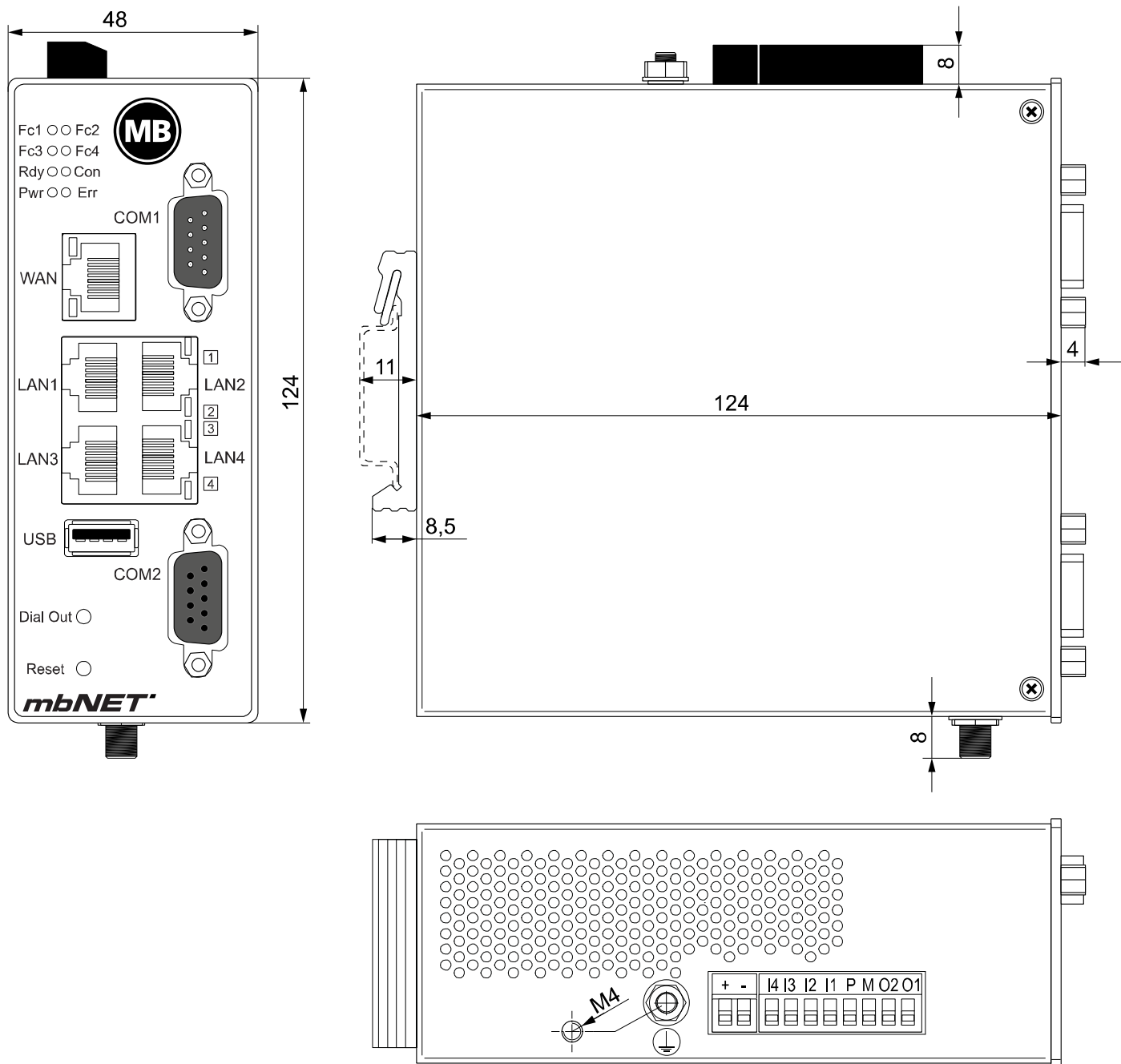


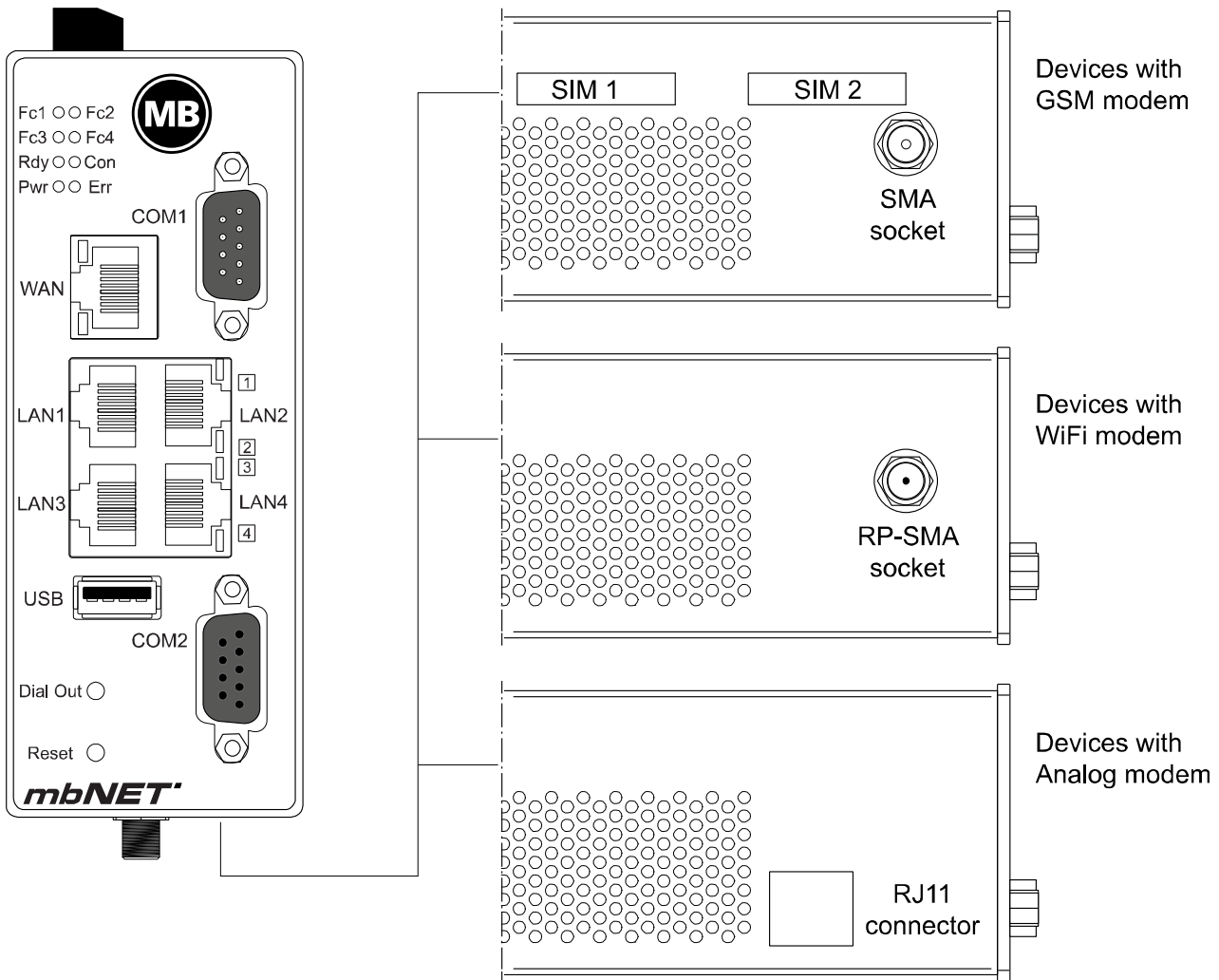


TECHNICAL SPECIFICATIONS EN

Industrial router **mbNET** MDH800 – MDH859

(Item no.: 8810-UL, 8811-UL, 8812-UL, 8813-UL, 8814-UL, 8815-UL, 8816-UL, 8817-UL, 8818-UL, 8819-UL, 8830-UL, 8831-UL, 8833-UL, 8834-UL, 8835-UL, 8841-UL, 8849-UL, 8850-UL-AT&T, 8850-UL-EU, 8855-UL-AT&T, 8855-UL-EU, 8858-UL-AT&T, 8858-UL-EU, 8859-UL-AT&T, 8859-UL-EU)







General data

Voltage \equiv V (DC)	10 – 30V DC (external Power Supply or other SELV Power Supply Source, rated 10-30V DC, max. 40A)
Power consumption	max. 1300 mA @ 24 V
IP protection class	IP 20
Area of application	Dry environments
Operating temperature	0 – 50 °C
Storage temperature	-20 – 60 °C
Humidity	0 – 95% (non condensing)
Dimensions (max.)	48 mm x 137 mm x 140 mm (W x D x H)
Weight (max.)	650 g
Mounting	DIN rail mounting (based on DIN EN 50022)

I/Os and standard interfaces

Digital inputs	4 pcs. digital inputs (10-30V) (fuse-protected), (Low 0-3,2 V DC, High 8-30 V DC)
Digital outputs	2 pcs. digital outputs (200mA max. / output), 200 mA @ 12 V DC / 100 mA @ 24 V DC
LAN interfaces	4 pcs. 10/100 Mbit/s full and half duplex operation, autodetection patch cable / crossover cable
USB interface	USB Host 2.0

VPN

VPN protocol	IPsec/PPTP/OpenVPN, 64 tunnel	Item no.: 8812-UL, 8813-UL, 8814-UL, 8830-UL, 8831-UL, 8833-UL, 8834-UL, 8850-UL-EU, 8850-UL-AT&T, 8855-UL-EU, 8855-UL-AT&T
Encryption method	Blowfish, AES, DES/3DES	
VPN protocol	OpenVPN, 1 tunnel	Item no.: 8810-UL, 8811-UL, 8815-UL, 8816-UL, 8817-UL, 8818-UL, 8819-UL, 8835-UL*, 8841-UL, 8849-UL, 8858-UL-EU, 8858-UL-AT&T, 8859-UL- EU, 8859-UL- AT&T
Encryption method	Blowfish	
Encryption algorithm	MD5, SHA1	
Authorization	Pre-Shared-Key, X.509	
*can only be operated with mbCONNECT24, mymbCONNECT24.hosted, -.virtual, -.mini, -.midi or -.maxi		

Network / Security

Firewall	1:1 NAT, IP-Filter, Port forwarding, stateful inspektion
IP-Router	NAT-IP, TCP/IP routing, IP forwarding
Services	DHCP server, DHCP client, DNS server, NTP client, PPP server, DynDNS
Time synchronization	NTP server




Optional interfaces


WAN interface	10/100 Mbit/s full and half duplex operation, autodetection patch cable / crossover cable
Interface 1 (COM1)	RS-232/485 (using software switchable)
Interface 2 (COM2) depending on the device	RS-232/485 (using software switchable) or MPI/PROFIBUS - 12 Mbit/s
SIM card slots	2 pcs. SIM card reader with ejector (for mini-SIM)

Communication

Devices with analog modem (Item no.: 8810-UL, 8815-UL, 8830-UL)	
Target region	240 countries
Modulation type	V.21, V.22, V22bis, V.23, V.32, V.32bis, V.34
Data compression	V.42bis, MNP5
Error correction	MNP 2-4, V.42 LAPM
Dialing method	MFV/IWV
Modem connector	RJ11 socket
FCC	Part 15 & Part 68

Devices with UMTS (3G) modem (Item no.: 8814-UL, 8819-UL, 8834-UL, 8849-UL)	
Target region	Global
GSM / GPRS / EDGE	850, 900, 1800, 1900 MHz; downlink max. 296 kbps, uplink max. 236.8 kbps
HSxPA	800/850, 900, AWS 1700, 1900, 2100 MHz; downlink max. 21 Mbps, uplink max. 5.76 Mbps
Antenna connector	SMA socket 
FCC	FCC ID: R17HE910
TAC	35613607

Devices with UMTS (3G) modem (Item no.: 8813-UL, 8818-UL, 8833-UL)	
Target region	EMEA (Europe, the Middle East and Africa), Australia APAC (East Asia, Southeast Asia, Australia and Oceania) LATAM (Latin America)
GSM / GPRS / EDGE	850, 900, 1800, 1900 MHz; downlink max. 296 kbps, uplink max. 236,8 kbps
HSxPA	800/850, 900, AWS 1700, 1900, 2100 MHz; downlink max. 7.2 Mbps, uplink max. 5.76 Mbps


Devices with LTE (4G) modem (Item no.: 8850-UL-EU, 8855-UL-EU, 8858-UL-EU, 8859-UL-EU)	
Target region	EMEA (Europe, the Middle East and Africa), Australia
GSM / GPRS / EDGE	850, 900, 1800, 1900 MHz; max. 236 kbps
HSxPA	850, 900, 1900, 2100 MHz; downlink max. 42 Mbps, uplink max. 5.76 Mbps
LTE	800, 900, 1800, 2100, 2600 MHz; downlink max. 100 Mbps, uplink max. 50 Mbps
Antenna connector	SMA socket 





Communication

FCC	FCC ID: N7NMC7304
TAC	35685305

Devices with LTE (4G) modem - AT&T (Item no.: 8850-UL-AT&T, 8855-UL- AT&T, 8858-UL- AT&T, 8859-UL- AT&T)	
Target region	AMER (North and South America)
CDMA 1XRTT / EV-DO REV A	800 (BC0), 1900 PCS (BC1), Secondary 800 (BC10) MHz; max. 236 kbps
GSM / GPRS / EDGE	850, 900, 1800, 1900 MHz; max. 236 kbps
HSxPA	2100 (B1), 1900 (B2), AWS (B4), 850 (B5), 900 (B8) MHz CDMA EVDO/1x: BCO, BC1, BC10; downlink max. 42 Mbps, uplink max. 5.76 Mbps
LTE	1900 (B2), AWS (B4), 850 (B5), 700 (B13), 700 (B17), 1900 (B25) MHz; downlink max. 100 Mbps, uplink max. 50 Mbps
FCC	FCC ID: N7NMC7355

Devices with WiFi modem (Item no.: 8811-UL, 8831-UL, 8841-UL) - not currently UL listed -	
WiFi	IEEE802.11b/g & 802.11n (1T1R mode), up to 150 Mbit/s
WiFi specification	<ul style="list-style-type: none"> · EU (2.412 GHz-2.472 GHz, 1-13 Channel) · USA (2.412 GHz-2.462 GHz, 1-11 Channel) · WPA/WP2, 64/128/152bit WEP, WPS · 802.11b: 1,2,5,11 Mbps · 802.11g: 6,9,12,18,24,36,48,54 Mbps · 802.11n: (20 MHz) MCS0-7, up to 72 Mbps · 802.11n: (40 MHz) MCS0-7, up to 150 Mbps
Antenna connector	RP-SMA socket 
FCC	FCC ID: YWTWFXM05

General approvals	EN 61000-6-4, interference emission for industrial enterprises EN 61000-6-2, immunity for industrial enterprises	
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 I. T. E. E358792	The following models are UL listed
	MDH810, MDH813, MDH814, MDH815, MDH816, MDH817, MDH818, MDH819, MDH830, MDH833, MDH834, MDH835, MDH849, MDH850, MDH855; MDH858, MDH859

Certificates (CE, UL etc.) can be downloaded from www.mbconnectline.com.

Author: MABR	Version: V 3.6.1
Date: 05.04.2017	Previous version: V 3.6.0 / 07.09.2016
Title: Datasheet-mbNET-MDH800-MDH859-EN	Page 5 / 5