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Find the *Westermo MD-44 / MD-44DC RS-442 / 485* at our website: ***Click HERE***

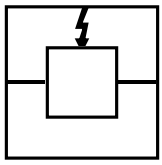
MD-44 AC
MD-44 DC

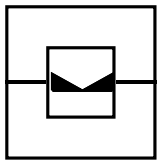
INSTALLATIONSANVISNING
INSTALLATION MANUAL
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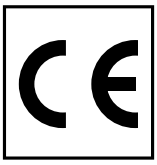
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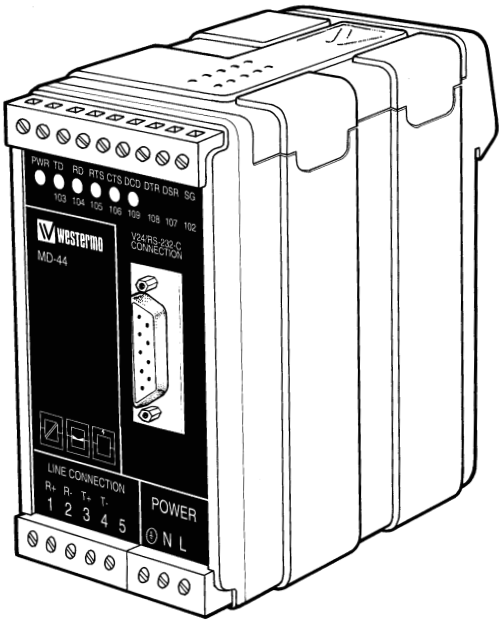
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Galvanic Isolation


Transient Protection


Balanced Transmission


CE Approved



Omvandlare RS-232 – RS-422/485
Converter RS-232 – RS-422/485
RS-232 – RS-422/485 Wandler

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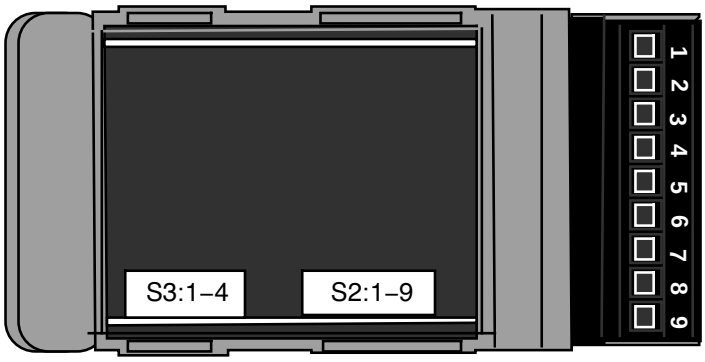
Specifications MD-44

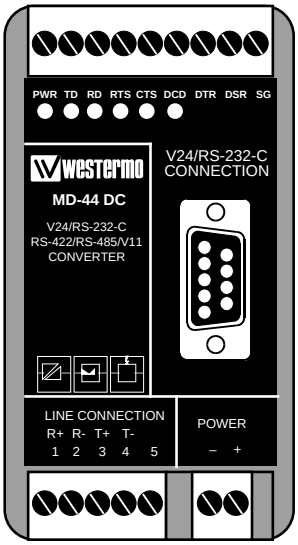
Transmission	Asynchronous, full/half duplex or simplex
Interface 1	EIA RS-232-C/CCITT V.24/V.28 9-position D-sub female, DCE
Interface 2	EIA RS-422/RS-485/CCITT V.11
Data rate	300 bit/s – 38.4 kbit/s
Indicators	Power, RD, DCD, CTS, RTS, TD
Insulation	Galvanic insulation with opto-coupler (data transmission) and transformer (supply)
Insulation voltage	1500V
Overvoltage protection	**Mains:** Breakdown voltage 430V at 230V AC **Interface 2:** Breakdown voltage transmitter and receiver 7V Surge capacity 0.6 kW for 1ms
Power supply	230V +15/–10% 48–62Hz
Fuse	100 mA fast 5x20 mm
Power consumption	Max 22 mA at 230V
Temperature range	5–50°C, ambient temperature
Humidity	0–95% RH, non-condensing
Dimensions	55x100x128 mm (WxHxD)
Weight	0.5 kg AC / 0.25 kg DC
Mounting	On DIN-rail 35 mm

Switch settings MD-44

The MD-44 can through different switch settings be adapted to a variety of running conditions. To set the switches, open the plastic case with e.g. a screw-driver.

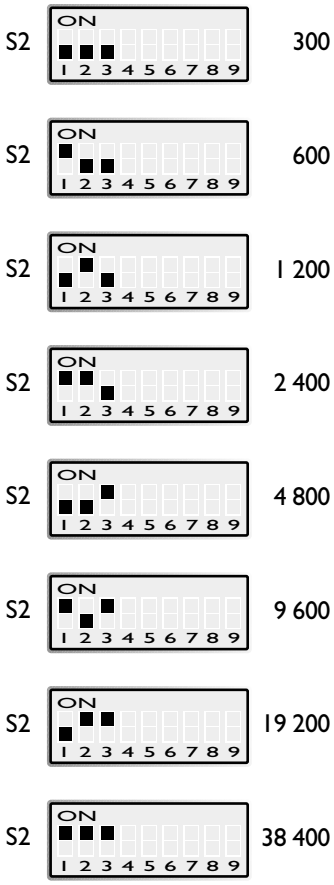
Danger! Do not open connected unit





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Selection of data rate

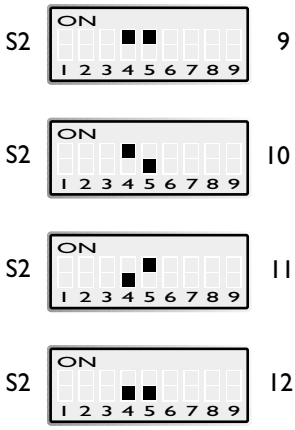


S2: 8-9 not used.

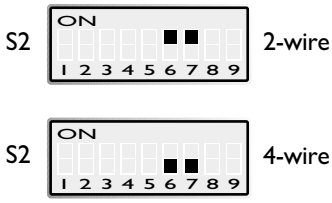
* The fail-safe function forces the signal state of the receiver to OFF when the connected transmitter is in tri-state (transmitter inactive). The receiver located furthest away shall be terminated.

Supervision table when selecting data bits								
7 bits	●	●	●		●			
8 bits				●		●	●	●
No parity	●	●		●		●		
Parity			●		●		●	●
1 stop bit	●		●	●			●	
2 stop bits		●			●	●		●
Number of bits	9	10	10	10	11	11	11	12

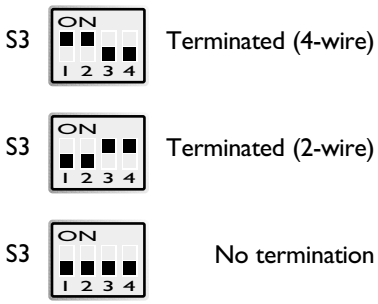
Selection of bits



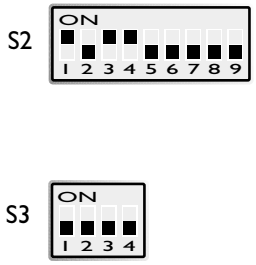
2/4-wire transmission



Termination with fail-safe *



Factory settings



S2: 8 and 9 not used

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Connections MD-44 AC

Line connection

(5-position screw-terminal)

Direction	No.	CCITT V.11 Description
Receiver	1	A' (R+)
Receiver	2	B' (R–)
Transmitter	3	A (T+)
Transmitter	4	B (T–)
	5	Shield

The definations R+/R–, T+/T– can be various between different manufactures.

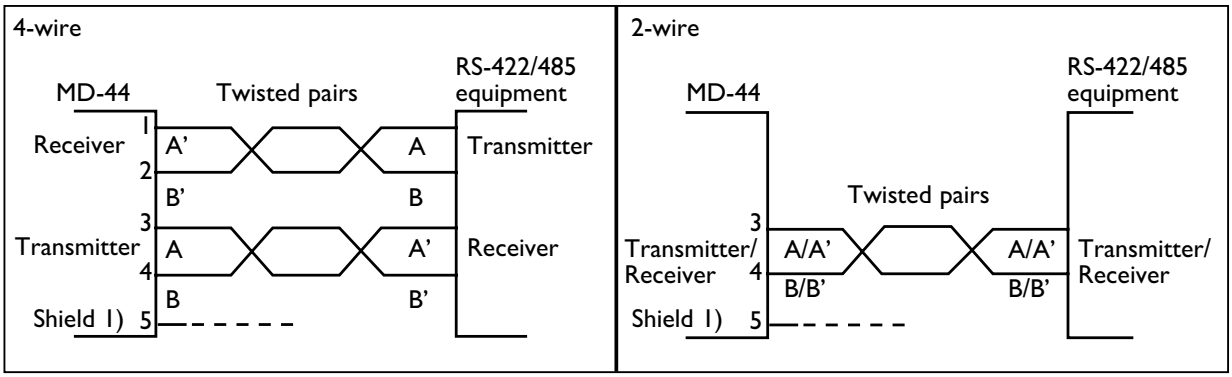
Terminal connection (DCE)

(RS-232-C/V.24/V.28, 9-position D-sub, female)

Direction 1)	Pin no.	Screw-terminal	CCITT V.24 Circuit number	Description
I	3	8	103	TD / Transmitted Data
O	2	7	104	RD / Received Data
I	7	6	105	RTS / Request to Send
O	8	5	106	CTS / Clear to Send
O	6	2	107	DSR / Data Set Ready
–	5	9 & 1	102	SG / Signal Ground
O	1	4	109	DCD / Data Carrier Detect
I	4	3	108/2	DTR / Data Terminal Ready

1) I = input O = output on MD-44

Line connection



1) If shielded cable is used, connect the shield only at one end to avoid ground currents.

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Transmission range (interface 2)

Use twisted pair cable. Max transmission range 1200 m (cable specifications 0.3 mm^2 and capacitance 42pF/m).
The transmission range will increase if a cable with lower capacitance and larger diameter is used.
Use shielded cable in heavy industrial environments.

MD-44 DC

Specifications

Power supply 12–36V DC
Power consumption Max 1.8W
Insulation 1000V
Fuse F1 1.6A fast 5x20 mm
I övrigt gäller MD-44 AC specifikationerna

Connections

According to MD-44 AC, except power supply

Connection no.	Power supply
1	– Voltage
2	+ Voltage
3	

Switch settings

According to MD-44 AC

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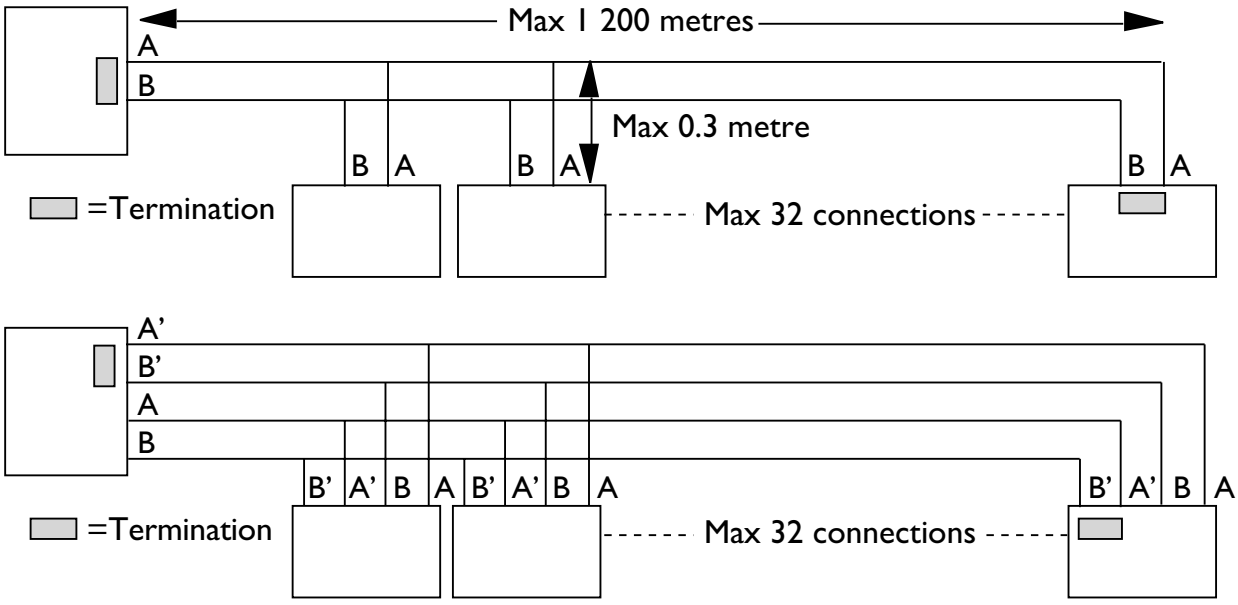
Hints

RS-422/485 was designed for multidrop applications. When a system is installed it should form a bus structure (see diagrams). Star shaped networks should never be created, there are other Westermo products designed to work in star net applications. To get a correct installation according to the RS-422/485 specification it´s very important that the line is terminated at the correct points. The recommendation is to terminate the receiver on the master unit and the final bus slave unit. See diagrams for details of how this is done with RS-485 (2-wire) and RS-422 (4-wire).

The line transmitter used in the MD-44 is activated by data received on the RS-232 interface, unlike conventional converters that rely on a control signal (e.g. RTS).

If any problems do occur on set up of the MD-44, the LED's will be helpful.

- PWR: The unit has power.
- RD: Data received on the RS-422/485 interface.
- DCD: Follows RD in two wire operation. Always active for four wire.
- CTS: Follows RTS.
- RTS: Status of RTS from the RS-232 interface.
- TD: Data received on RS-232 interface.



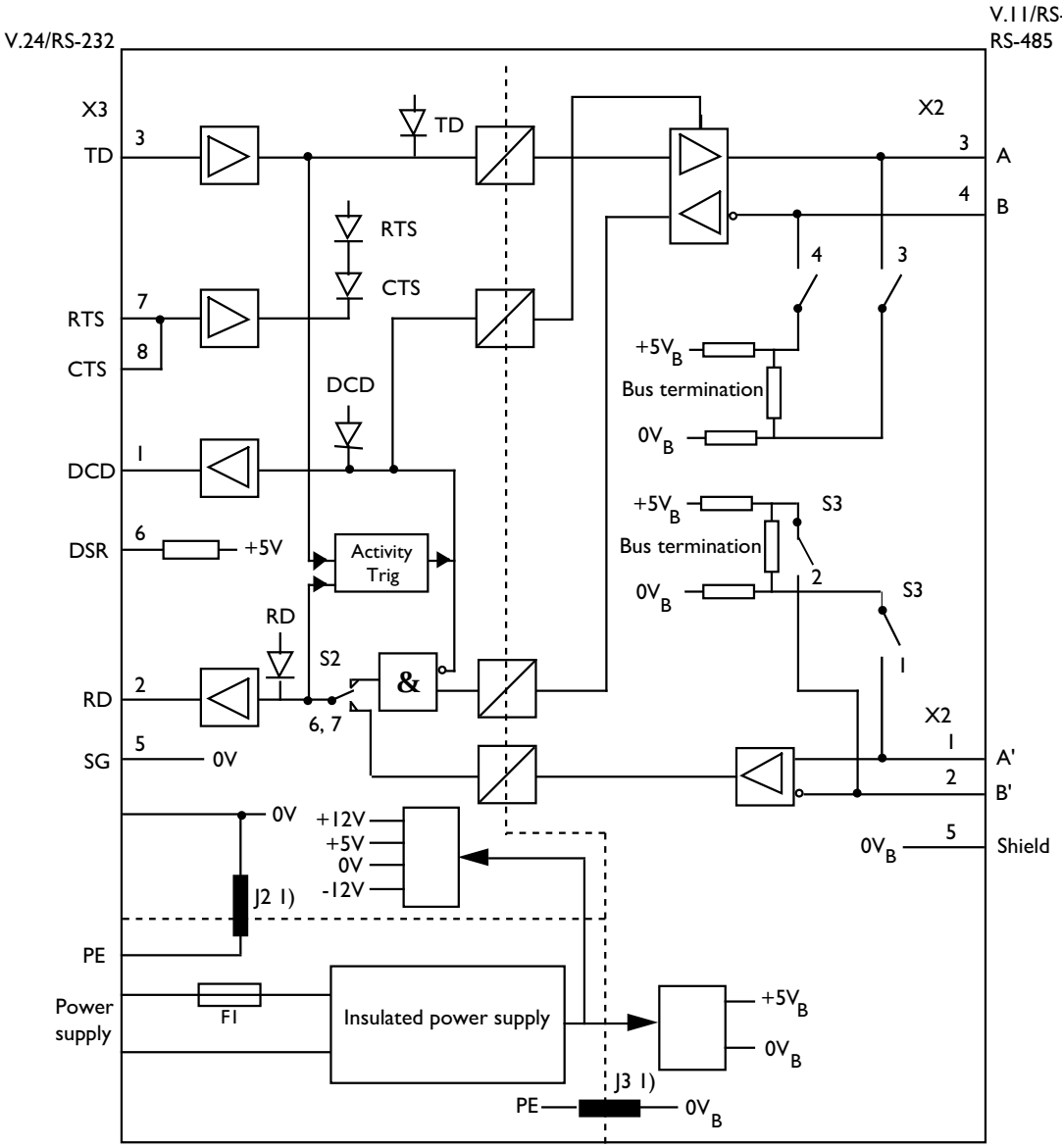
N.B. R+/R–, T+/T– definitations are not standard, it can help to shift A and B if the unit does not work.

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OWN COMMENTS

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Block diagram



1) The jumpers J2 and J3 is normally not mounted

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