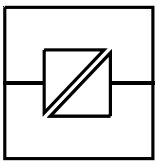
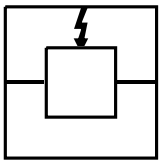
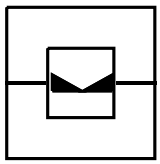
MA-12 AC
MA-12 DC

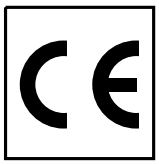
INSTALLATIONSANVISNING
INSTALLATION MANUAL
INSTALLATIONS ANLEITUNG

6012-2001


Galavanic Isolation


Transient Protection


Balanced Transmission


CE Approved

Korthållsmodem
Short haul modem
Kurzstreckenmodem

westermo®
www.westermosales.com

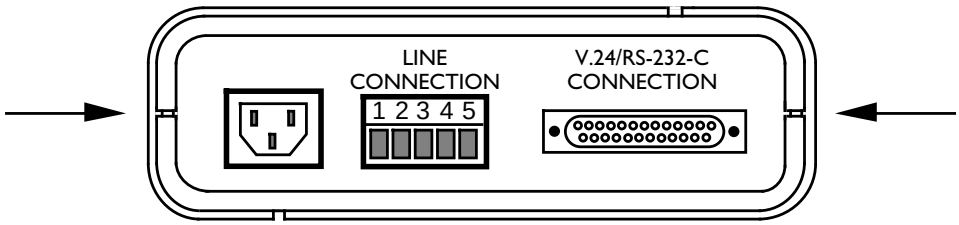
Specifications MA-12

Transmission	Asynchronous, full/half duplex or simplex
Interface 1	EIA RS-232-C/CCITT V.24/V.28 25-position D-sub female, DCE
Interface 2	±10mA balanced current loop
Data rate	Up to 38 400 bit/s
Indicators	Power, RD, DCD, RTS, TD
Isolation	Galvanic insulation with opto-coupler (data transmission) and transformer (supply)
Insulation voltage	1500V
Overvoltage protection	**Nät:** Breakdown voltage 440V at 230V AC and 220V at 115V AC **Interface 2:** Breakdown voltage transmitter 15V and receiver 5.8V Surge capacity 0.6 kW for 1 ms
Power supply	Switchable 115/230V +15/–10% 48–62Hz
Fuse	100 mA fast .2x.8 in.
Power consumption	Max 4VA at 230V
Temperature range	41–122°F, ambient temp.
Humidity	0–95% RH, non-condensing
Dimensions	6.3x5.5x2.1 in.
Weight	0.5 kg
Mounting	With rubber pads or screws. Screws: Remove the two ”keyholes” on the bottom of the case

Switch settings MA-12

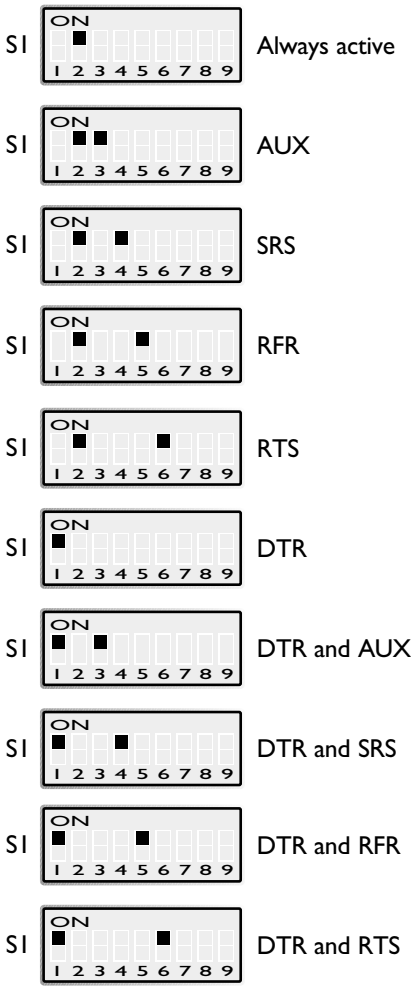
The MA-12 can, through different switch settings, be adapted to a variety of running conditions. To set the switches, open the plastic case by placing and turning a screw-driver between top and bottom at the rear of the case.

Danger! Do not open connected unit

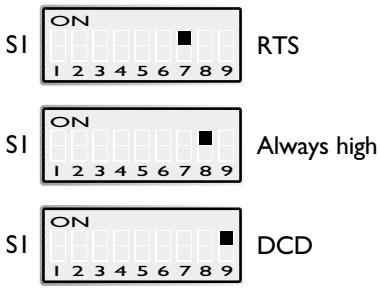


Switch settings

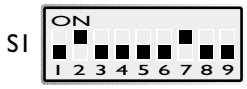
Transmitter (carrier) activated by



CTS controlled by



Factory settings



S1 Selection of signal activating transmitter (carrier)
Selection of signal controlling CTS

S2 Selection of power supply 115/230V AC

Connections

Line connections

(5-pos. screw-terminal)

Direction	No.	Description
Receiver	1	R+
Receiver	2	R–
Transmitter	3	T+
Transmitter	4	T–
	5	Shield

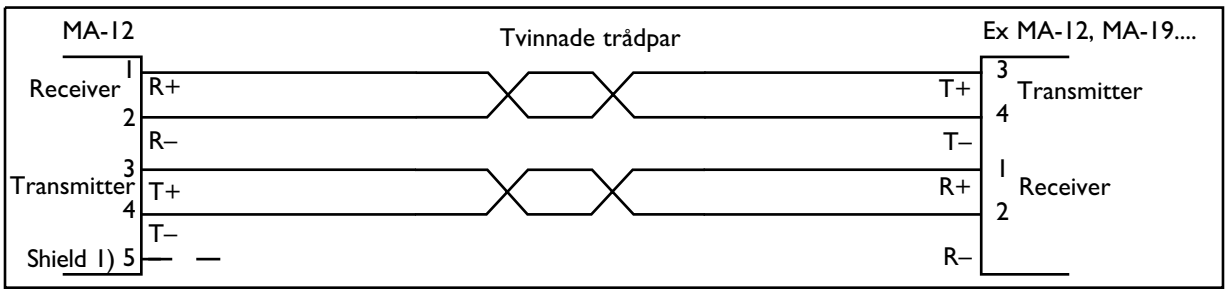
Terminal connection (DCE)

(RS-232-C/V.24/V.28, 25-position D-sub, female)

Direction 1)	Pin no.	CCITT V.24 Circuit number	Description
I	2	103	TD / Transmitted Data
O	3	104	RD / Received Data
I	4	105	RTS / Request to Send
O	5	106	CTS / Clear to Send
O	6	107	DSR / Data Set Ready
–	7	102	SG / Signal Ground
O	8	109	DCD / Data Carrier Detect
I	11	–	AUX / Auxiliary
I	19	120	SRS / Secondary Request to Send
I	20	108/2	DTR / Data Terminal Ready
I	25	133	RFR / Ready For Receiving

1) I = Input O = Output on MA-12

Line connection

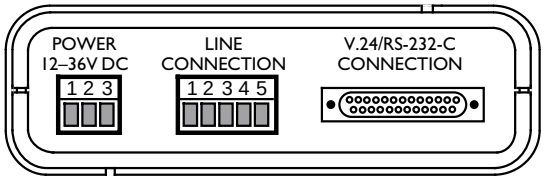


1) If shielded cable is used, connect the shield only at one end to avoid ground currents.

Transmission range (interface 2)

Cable	Transmission rate bit/s						
42pF/m	600	1200	2400	4800	9600	19200	38400
0,3mm^2	18000 m	12000 m	8000 m	5000 m	2500 m	1000 m	500 m

MA-12 DC



Specifications

Power supply 12-36V DC

Power consumption Max 3W

Insulation 1000V

Fuse F1 1.6A fast .2x.8 in.

All other specifications according to MA-12 AC

Switch settings

According to MA-12AC

Anslutning

According to MA-12AC, exept power supply

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

Hints

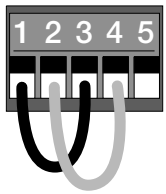
MA-12 are compatible with all asyncronous Westermo modem.

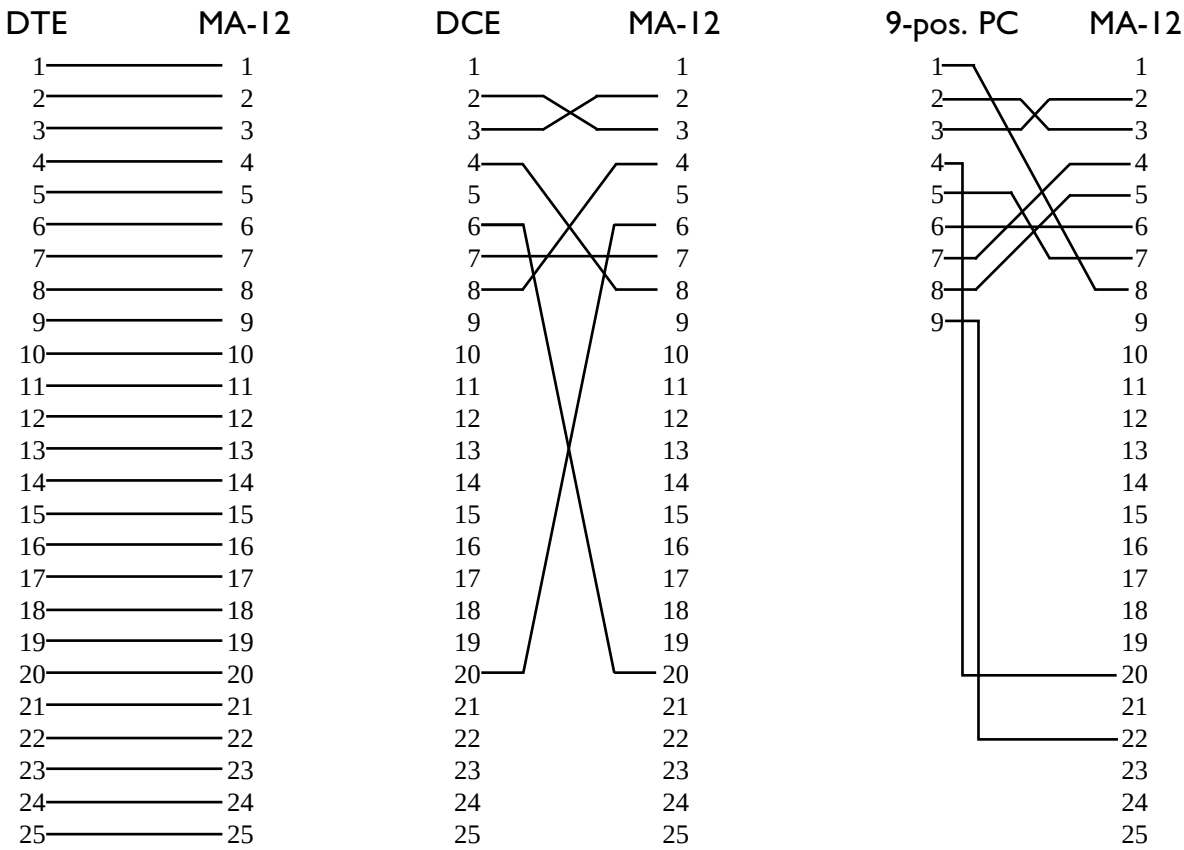
The RS-232 interface on the MA-12 is configured as DCE (Data Communication Equipment). Most printers, PC's and terminals are set as DTE (Data Terminal Equipment). Some recommendation of cable configurations are given below.

If any problems do occur on set up of the MA-12, the LED's will be helpful.

- PWR: The unit has power.
- RD: Data received on line interface.
- TD: Data received on RS-232 interface.
- DCD: Carrier indication, must be on for transmission.
- RTS: Indicates the carrier control status.

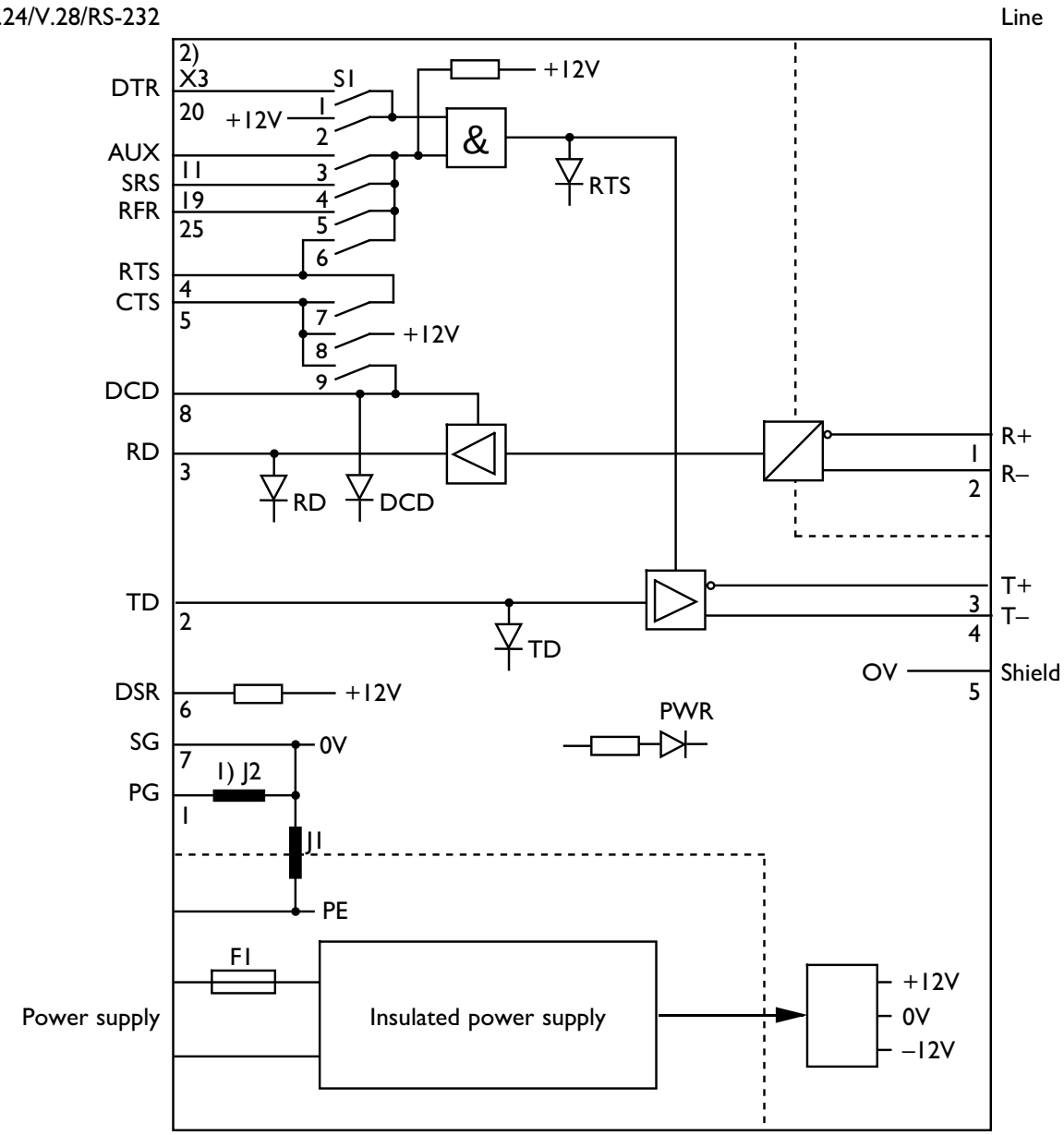
A good way to check the MA-12 is to carry out a loop back test. Connect T+ to R+ and T– to R–. Connect the RS-232 port to a terminal. When keys are pressed on the terminal you should receive the echo on screen. The TD & RD lights will both flicker simultaneously as you press the keys.





OWN COMMENTS

Block digram



1) 0 Ω resistor J2 is normally not mounted 2) Metal housing on D-sub is connected to 0V

Westermo Teleindustri AB have distributors in several countries,
contact us for further information.