ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

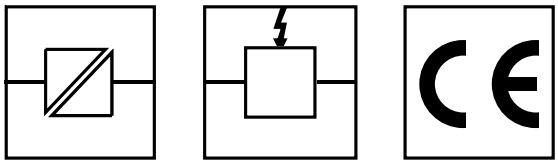
All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Westermo MD-62 ST 820nm* at our website: *Click HERE*

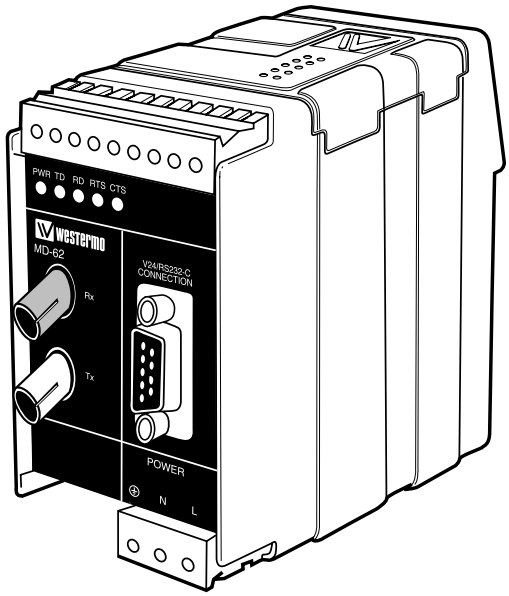
MD-62 AC
MD-62 DC

INSTALLATIONSANVISNING
INSTALLATION MANUAL
INSTALLATIONS ANLEITUNG

6070-2001



Galvanic Isolation | Transient Protection | CE Approved



Omvandlare, optisk fiber – RS-232/V.24
Converter, fibre-optic – RS-232/V.24
Glasfaser Wandler – RS-232/V.24

westermo®
www.westermo.se

©Westermo Teleindustri AB • 2000 • Rev. B

Specifications MD-62

Transmission	Asynchronous, full/half duplex or simplex
Interface 1	EIA RS-232/CCITT V.24 9-position D-sub connector female or 9-position detachable screw-terminal
Interface 2	ST-connectors, see table of power budget
Data rate	Up to 115.2 kbit/s
Indicators	Power, TD, RD, RTS, CTS
Temperature range	5-50°C ambient temperature
Humidity	0-95% RH without condensation
Dimension	55x100x128 mm (WxHxD)
Weight	0.4 kg AC / 0.25 kg DC
Mounting	On 35 mm DIN-rail

Power supply alternatives

Model description	MD-62 AC	MD-62 115V AC	MD-62 DC	MD-62 36–55V DC
Power supply	230V AC +15/–10%	115V AC +15/–10%	24V DC +50/–50%	48V DC +15/–25%
Frequency	48–62Hz	48–62Hz	–	–
Fuse, F2	100mA S 5x20 mm Littelfuse	100mA S 5x20 mm Littelfuse	1.6A S 5x20 mm Littelfuse	1.6A S 5x20 mm Littelfuse
Power consumption	5VA	5VA	3W	3W
Overvoltage protection	430V	220V	–	–
Isolation RMS	1 500V	1 500V	500V	500V

Functional description MD-62

MD-62 is developed for RS-232 point to point communication via fibre optic cables. Transmission rates up to 115.2 kbit/s and transmission distances up to 25 km is possible. The MD-62 consists of one F/O channel with separate transmitter and receiver, Tx and Rx. On the front of the unit there are also three LED's indicating the data transmission on the channel. The fibre optical cable is completely immune to external interference, which makes it ideal for harsh environments.

Power budget

Min. budget



Unit			
Fibre	**820 nm**	**1300 nm**	**single mode**
50/125	10.7 dB	8.1 dB	
62.5/125	14.5 dB	11.6 dB	
100/140	20.6 dB		
9/125			6.3 dB

Typ. budget



Unit			
Fibre	**820 nm**	**1300 nm**	**single mode**
50/125	16.6 dB	14.6 dB	
62.5/125	18.6 dB	15.1 dB	
100/140	25.9 dB		
9/125			12.3 dB

”Min. budget” states the minimum guaranteed power budget. Experience shows however that the typical value is in the range of the indicated ”Typ. budget”.

Attenuation in fibre cable

The values below can differ depending on quality and manufacturer of the fibre-optic cable.

Fibre	Attenuation at 820 nm	Attenuation at 1300 nm	Attenuation at single mode (1300 nm)
50/125 µm	3.0 dB/km	1.0 dB/km	
62.5/125 µm	3.5 dB/km	1.2 dB/km	
100/140 µm	4.0 dB/km		
9/125 µm			0.5 dB/km

Attenuation in connectors

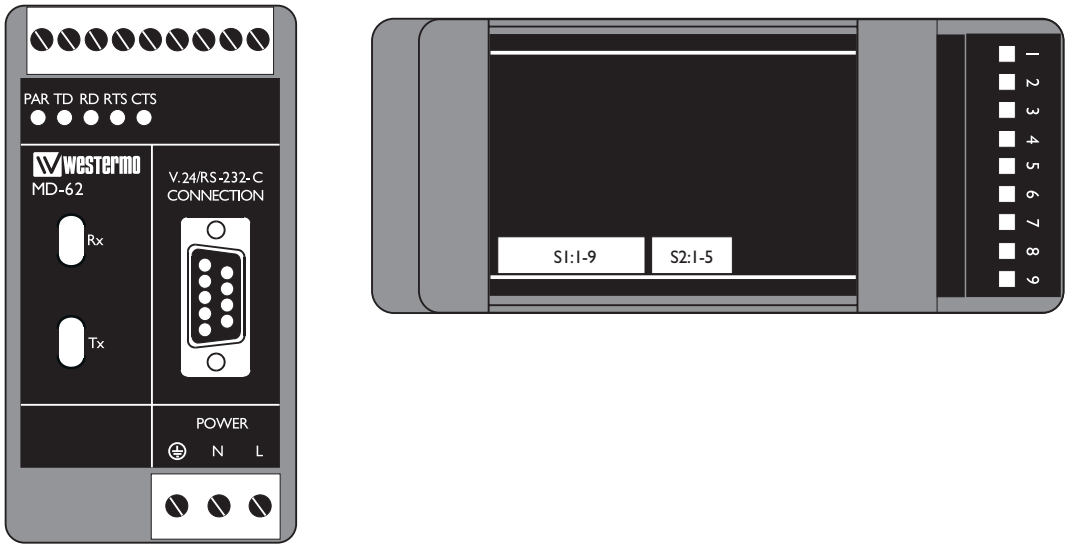
0.2–0.4 dB

Attenuation in splice

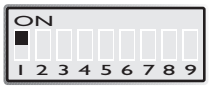
Fusion	0.1 dB
Mecanical	0.2 dB

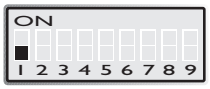
Switch settings MD-62

The MD-62 can, through switch settings, be set in to several modes. To set the switches, open the plastic case by removing the top cover.



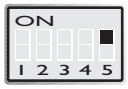
Status signal

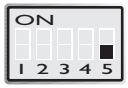
S1  Enabled

S1  Disabled

Switch S1: 2–9 not used

Transmitted power

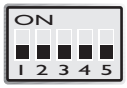
S2  Low

S2  High

Switch S2: 1–4 not used

Factory settings

S1 

S2 

Connections MD-62

Terminal connection (DCE)

(RS-232-C/V.24, 9-position female D-sub connector or 9-position screw-terminal)

Direction	Pin no.	Screw no.	CCITT V.24 Circuit no.	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
–	5	1 & 9	102	SG/Signal Ground

I = Input **O** = Output on MD-62

Power connection MD-62 AC

(3-position screw-terminal)

Screw no.	Power supply
L N	115*/230V AC power
⏚	PE/Protective Earth

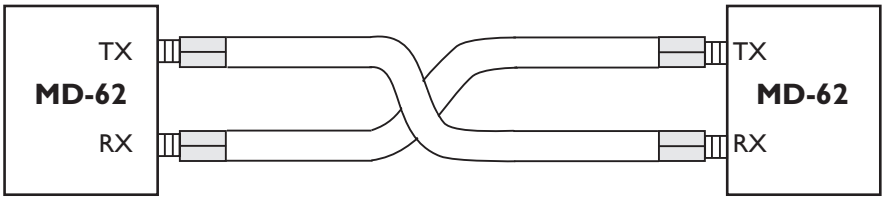
* MD-62 115V

Power connection MD-62 DC

(2-position screw-terminal)

Connection no.	Power Supply
1 2	– Voltage + Voltage

Fibre optic connection



Hints

If any problems occur upon set-up of the MD-62, the following notes may be helpful.

1. Power up the MD-62 and check that the PWR LED is lit.
2. Check the cable between your RS-232 interface and the RS-232 connection on the MD-62. The RS-232 interface on the MD-62 is configured as DCE (Data Communication Equipment). Most printers, PCs and terminals are set as DTE (Data Terminal Equipment).
   See 3 suggestions of cable configurations on the next side.

How to check whether the equipment is DTE or DCE:

- Power up the unknown equipment and ensure that nothing is plugged into the RS-232 interface. Using a multi-meter, first measure the voltage on pin 2 of the connector (male or female) with reference to ground on pin 7 (25 pole connector) or on pin 5 (9 pole connector, PC standard). Then measure the voltage on pin 3 in the same way. The pin with the most negative voltage will be the output pin and will identify the device as DCE or DTE.

25 pole connector RS-232-C

- If the most negative voltage is on pin 2: the device is DTE.
- If the most negative voltage is on pin 3: the device is DCE.

9 pole connector,PC standard

- If the most negative voltage is on pin 3: the device is DTE.
- If the most negative voltage is on pin 2: the device is DCE.

3. The RS-232 cable is correct but it still does not work. The LEDs may be helpful.

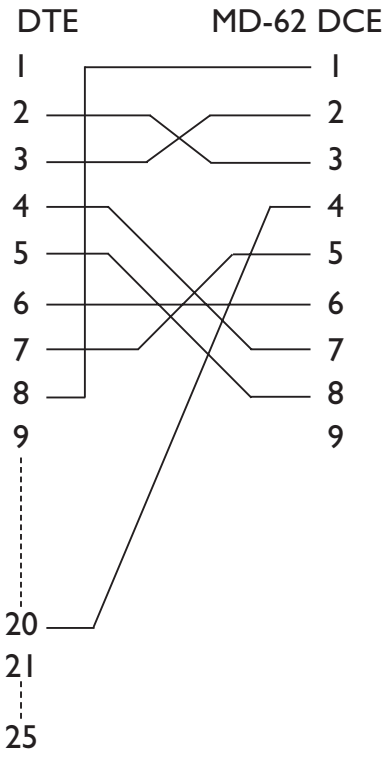
- PWR: The unit has power
- RD: Data received from fibre interface
- TD: Data received from RS-232 interface
- RTS: RTS from RS-232 side
- CTS: Indicates RTS from RS-232 side on oppsite modem.

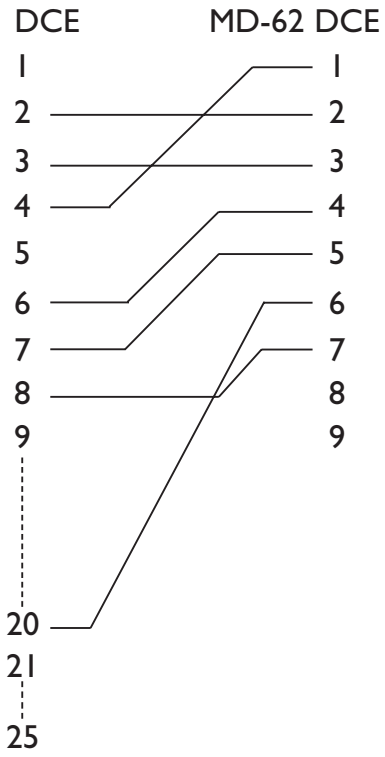
4. Test each individual modem. All switches in OFF state. Make sure that the mains-power socket is disconnected when the modem lid is off.

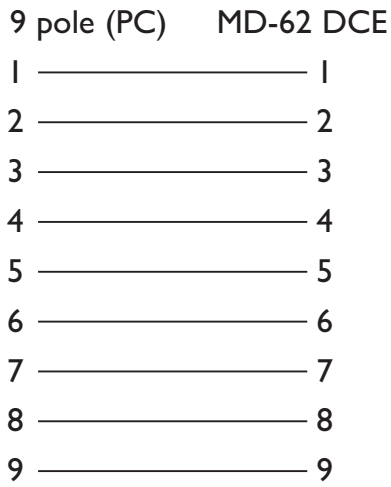
A. Equipment required: a terminal or a PC with terminal program, an RS-232 cable according to point 2, and a fibre cable.
B. Connect a cable between the modem and terminal, or PC with a terminal program. Connect the fibre cable between RX and TX.
C. Press any key on the keyboard. During keystrokes, the TD and RD LED's should flash on the modem, simultaneously, the characters will be echoed on the monitor.
D. If the fibre cable is removed from one port only, the TD LED will flash when a key is pressed, but no characters will appear on the screen.
   Repeat the same test with the second modem.

5. Testing the modems together.

A. Leave the last tested modem in place, connected to the terminal or the PC (modem A).
B. Connect two fibre cables between the modems RX (modem A) – TX (modem B) and vice versa.
C. Connect pins 2 and 3 of the RS-232 interface on modem B (top screw terminal 7, 8).
D. Continue according to point 4.C.

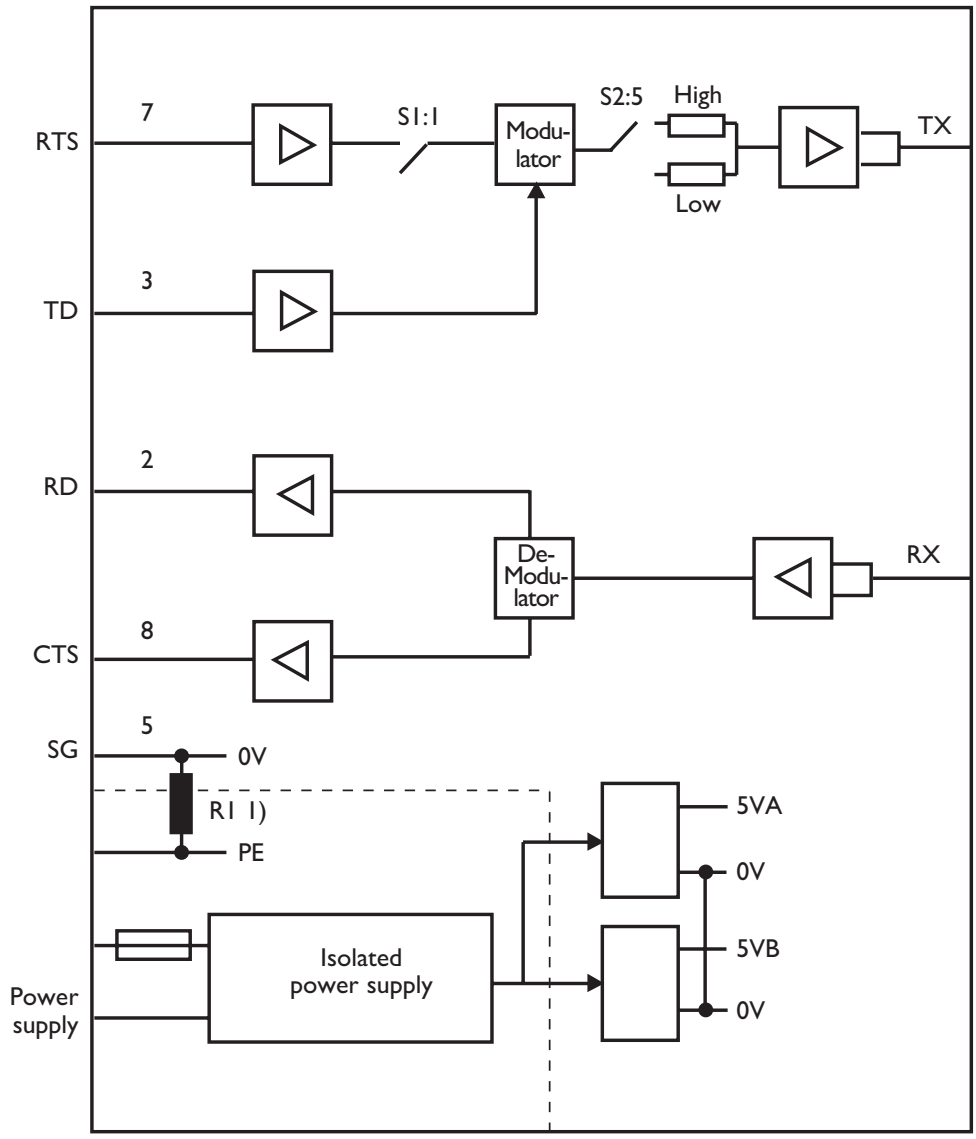

DTE
MD-62 DCE
1
2
3
4
5
6
7
8
9
20
21
25
1
2
3
4
5
6
7
8
9


DCE
MD-62 DCE
1
2
3
4
5
6
7
8
9
20
21
25
1
2
3
4
5
6
7
8
9


9 pole (PC)
MD-62 DCE
1
2
3
4
5
6
7
8
9
1
2
3
4
5
6
7
8
9

Block diagram

RS-232-C/V.24



1) Jumper R1 normally not mounted

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

Westermo Teleindustri AB • S-640 40 Stora Sundby, Sweden
Phone +46 16 612 00 Fax +46 16 611 80
E-mail: info@westermo.se • Westermo Web site: www.westermo.se

Subsidiaries

Westermo Data Communications Ltd
Solent Business Centre • Millbrook Road West
Millbrook, Southampton • SO15 0HW
Phone: +44(0)2380 704 611 • Fax.:+44(0)2380 702 682
E-Mail: sales@westermo.co.uk

Westermo Data Communications GmbH
Bruchsaler Straße 18, 68753 Waghäusel
Tel.: +49(0)7254-95400-0 • Fax.:+49(0)7254-95400-9
E-Mail: westermo.germany@t-online.de

6070-2001 03.00 Mälartryck AB, Eskilstuna, Sweden

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP