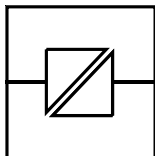


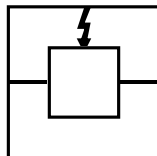
LD-01 AC  
LD-01 DC

# INSTALLATIONSANVISNING INSTALLATION MANUAL INSTALLATIONS ANLEITUNG

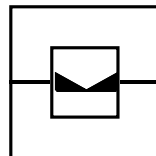
6154-2001



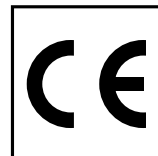
Galvanic  
Isolation



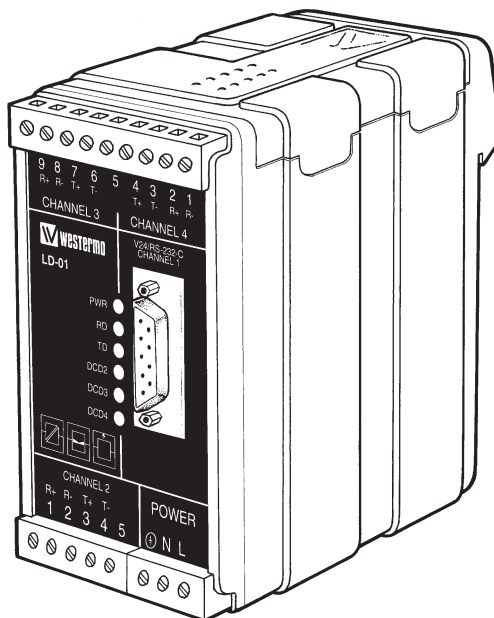
Transient  
Protection



Balanced  
Transmission



CE  
Approved



*Linjedelare  
Line Split Unit  
Leitungsteiler*

 **westermo**<sup>®</sup>  
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<sup>®</sup>  
**WESTERMO**

## Specifications LD-01

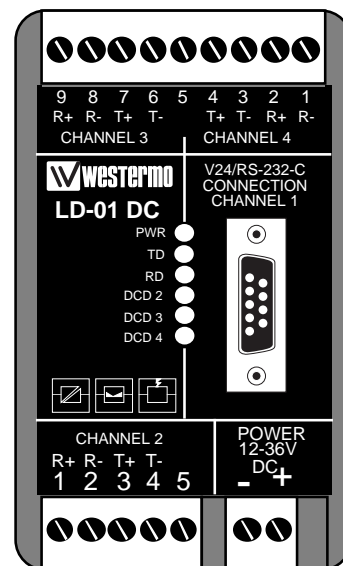
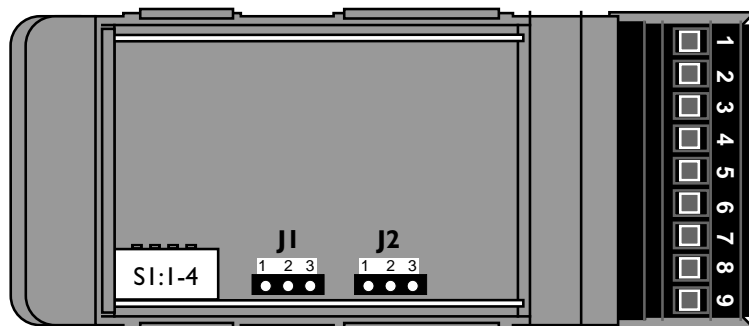
|                                |   |
|--------------------------------|---|
| <b>Transmission</b>            | Asynchronous, full/half duplex or simplex   |
| <b>Interface 1</b>             | EIA RS-232-C/V.24 fixed on channel 1, selectable on channel 2 and 3   |
| <b>Interface 2, (WI)</b>       | 10 mA balanced current loop fixed on channel 4, selectable on channel 2 and 3   |
| <b>Connection</b>              | <b>Channel 1:</b> 9 pin D-sub female<br><b>Channel 2:</b> 5 pos screw-terminal<br><b>Channel 3, 4:</b> 9 pos screw-terminal                                   |
| <b>Transmission rate</b>       | Data rates up to 38.4 Kbit/s  |
| <b>Indicators</b>              | Power<br><b>Channel 1:</b> RD, TD<br><b>Channel 2–4:</b> DCD  |
| <b>Isolation</b>               | Galvanic isolation with opto-coupler (Interface 2) and transformer (supply)<br>Interface 1 only isolation against supply                                      |
| <b>Isolation voltage</b>       | 1500V   |
| <b>Oversvoltage protection</b> | <b>Mains:</b> Breakdown voltage 430V at 230V AC and 230V at 115V AC*<br>Breakdown voltage transmitter 15V, receiver 5.8V<br>Surge capacity 0.6 kW during 1 ms |
| <b>Power supply</b>            | 115V*/230V AC 48–62Hz +15/–10%  |
| <b>Fuse</b>                    | 100 mA fast 5x20 mm   |
| <b>Power consumption</b>       | Max 4VA at 115V*/230V AC  |
| <b>Temperature range</b>       | 5–50°C, ambient temperature   |
| <b>Humidity</b>                | 0-95% RH, non-condensing  |
| <b>Dimension</b>               | 55x100x128 mm (WxHxD)   |
| <b>Weight, kg</b>              | AC 0,5 / DC 0,3   |
| <b>Mounting</b>                | On DIN-rail 35 mm   |

\* LD-01 115V AC only

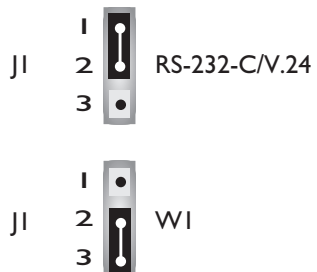
## Switch settings

The LD-01 can through different switch settings be adapted to a variety of running conditions. To set the switches, open the lid on the top of the plastic case.

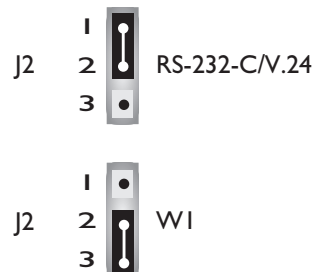
**WARNING!**  
**DO NOT OPEN CONNECTED UNIT**



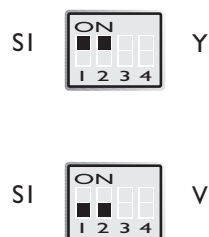
### RS-232-C/V.24 or WI, Channel 2



### RS-232-C/V.24 or WI, Channel 3

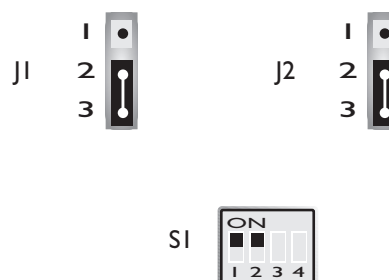


### V or Y function



SI:3 and 4 not used  
See functional description

### Factory settings



# Connections


## Connection RS-232-C/V.24

| Direction<br>DCE | RS-232-C/V.24 |           |           | CCITT V.24<br>Circuit no. | Description             |
|------------------|---------------|-----------|-----------|---------------------------|-------------------------|
|                  | Channel 1     | Channel 2 | Channel 3 |                           |                         |
| O                | 1             | 4         | 6         | 109                       | DCD/Data Carrier Detect |
| O                | 2             |           |           | 104                       | RD/Received Data        |
| I                | 3             |           |           | 103                       | TD/Transmitted Data     |
| I                | 4             |           |           | 108/2                     | DTR/Data Terminal Ready |
| -                | 5             | 5         | 5         | 102                       | SG/Signal Ground        |
| O                | 6             |           |           | 107                       | DSR/Data Set Ready      |
| I                | 7             |           |           | 105                       | RTS/Request To Send     |
| O                | 8             |           |           | 106                       | CTS/Clear To Send       |
| NC               | 9             |           |           |                           |                         |

I = Input O = Output, the LD-01 is a DCE (Data Communication Equipment) NC = Not connected  
 □ = the signals are only connected with each other.

## Power connection (AC)

(3-position screw-terminal)

| Screw no.   | Power Supply           |
|---|------------------------|
| N<br>L  | 115V*/230V<br>AC power |
|  | PE/Protective Earth    |

\* LD-01 115V only

## Line connection

| Direction   | Pin configuration 10mA balanced current loop |           |           | Signal name |
|-------------|--|-----------|-----------|-------------|
|             | Channel 2                                    | Channel 3 | Channel 4 |             |
| Receiver    | 1  | 9         | 2         | R+          |
| Receiver    | 2  | 8         | 1         | R-          |
| Transmitter | 3  | 7         | 4         | T+          |
| Transmitter | 4  | 6         | 3         | T-          |
|             | 5  | 5         | 5         | I) Shield   |

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

## Transmission range (10mA balanced current loop WI)

| Cable | Transmission data rate bit/s |        |       |       |       |       |       |
|-------|------------------------------|--------|-------|-------|-------|-------|-------|
|       | 42pF/m<br>0,3mm <sup>2</sup> | 600    | 1200  | 2400  | 4800  | 9600  | 19200 |
|       | 18000m                       | 12000m | 8000m | 5000m | 2500m | 1000m | 500m  |

## LD-01 DC

### Specifications

**Power supply** 12–36V DC, 36–55V DC\*

**Power consumption** Max 3W

**Insulation** 1000V

**Fuse FI** 1.6 A fast 5x20 mm

\* LD-01 DC, 36–55V DC only

All other specifications according to LD-01 AC

### Switch settings

According to LD-01 AC

### Connections

According to LD-01 AC, except power supply

| Connection no | Power Supply |
|---------------|--------------|
| 1             | – Voltage    |
| 2             | + Voltage    |

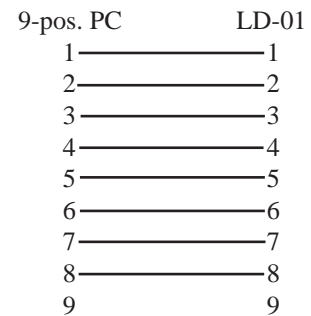
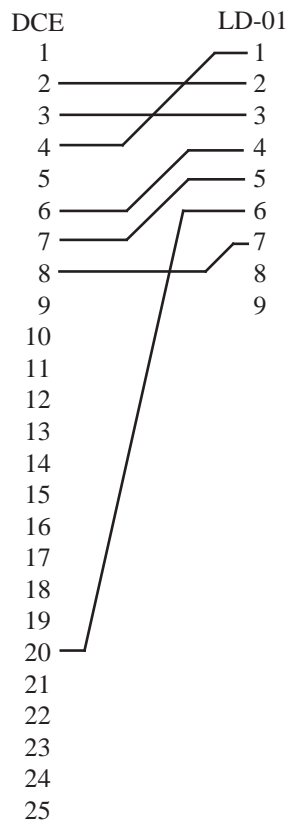
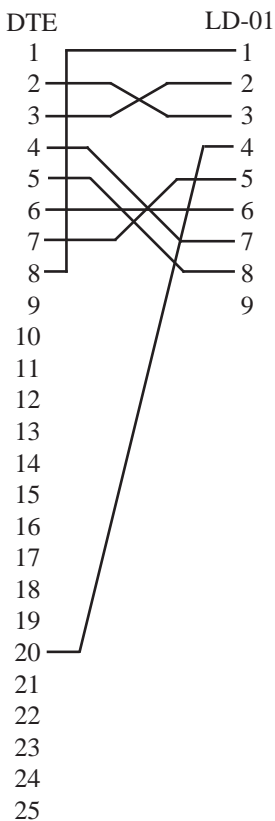
## Hints

LD-01 has four channels. Channel 1 has RS-232 interface and channel 2 and 3 can be configured as RS-232 or WI interface. Channel 4 has only WI interface. The LD-01 splits the line and repeats the signal in a multidrop system. The maximum number of units in serial connection is 14 units.

The drop channel (no 1) is configured as DCE (Data Communication Equipment). Most printers, PC's and terminals are set as DTE (Data Terminal Equipment). A recommendation of cable configurations is given below.

If any problems do occur on set up of the LD-01:s, the LED's may be helpful.

- PWR: The unit has power.
- RD channel 1: Indicates transmitted data from channel 1
- TD channel 1: Indicates received data on channel 1
- DCD channel 2: Indicates that WI is connected to channel 2
- DCD channel 3: Indicates that WI is connected to channel 3
- DCD channel 4: Indicates that WI is connected to channel 4



**OWN COMMENTS**

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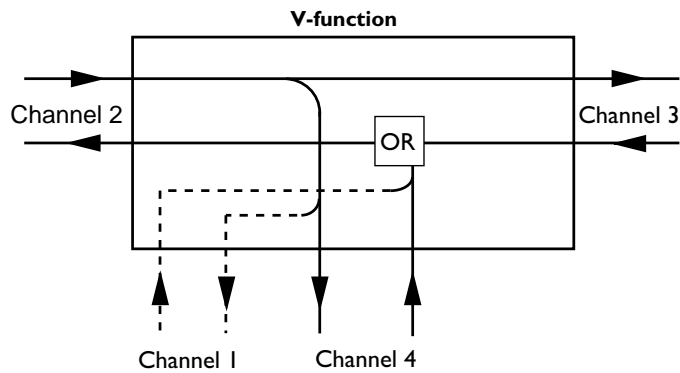
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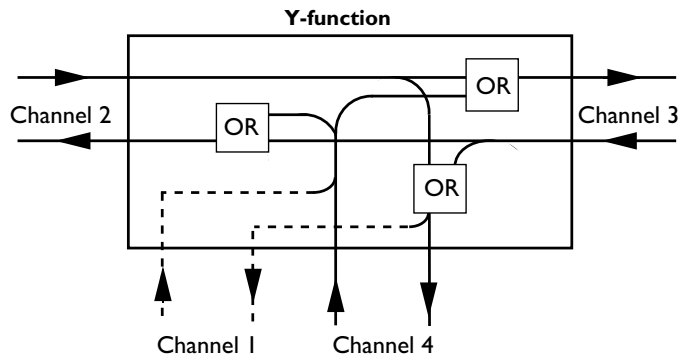
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## Functional Description



Communication between master and slaves.



Communication between all connected units.

Westermo Teleindustri AB have distributors in several countries,  
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