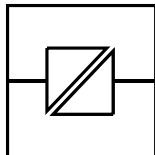


LD-34 AC  
LD-34 DC

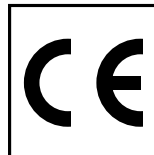
<sup>®</sup>  
**WESTERMO**

# INSTALLATIONSANVISNING INSTALLATION MANUAL INSTALLATIONS ANLEITUNG

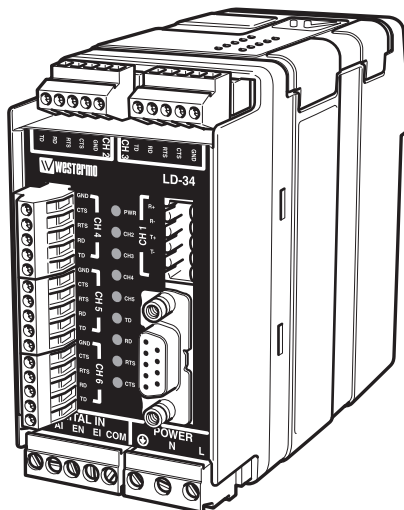
6603-2001



Galvanic  
Isolation



CE  
Approved



**4 kanalig RS-232 switch  
RS-232/V.24**

**4 channel RS-232 switch  
- RS-232/V.24**

**4 Kanal RS-232 Erweiterung  
-RS-232/V.24**

 **westermo**<sup>®</sup>  
[www.westermo.se](http://www.westermo.se)

## Description LD-34

### General

The LD-34 is a 4 channel RS-232 switch. The unit has one input channel that communicates with a selected output channel. A sixth channel called the "Expansion channel" is provided for onward connection to a modem or another unit. All channels are DCE connections. RTS, CTS is available on all channels flow control.

Channel selection is made by external signals on the "Digital in" connector or by raising the RTS signal line.

The front cover has 9 LED's to indicate the state of the various communications paths.

As with all Westermo products the LD-34 provides a high level of galvanic isolation on the power supply side through transformers and through optocouplers on the inputs. Channel one and the digital inputs are isolated from channel 2-6.

All operating parameters are set-up via DIP switches located under the lid on the top of the unit.

The LD-34 is available in both AC (230V) and DC (12-36V) supply voltage.

### Digital In

The Digital Inputs, A0,A1,EN, EI and COM can be used to select the required output channel. The inputs have a voltage range of 10-30 VDC between A0, A1, EN, EI and COM, COM is equivalent to 0V (-). It is possible to reverse the polarity, which means COM = 10-30 VDC and the inputs are activated by 0V(-) being applied.

The maximum input voltage on the inputs is 30 VDC at a maximum current of 5mA per input. Switching time when channel is less then 0.1 ms.

All digital inputs are galvanic isolated via optocouplers.

### RTS control

Raising the RTS signal on channels 2-5 activates this channel. Only one channel can be activated at a time. If two RTS lines have active, the first gets priority.

## Specifications LD-34

<b>Transmission</b>	Asynchronous, full/half duplex or simplex
<b>Interface</b>	CCITT V.24 Inputs: 9-position D-sub outputs: 5-position screw block
<b>Isolation</b>	AC 3000V, DC 1500V
<b>Data rate</b>	0-115,2 kbit/s
<b>Power supply</b>	230 V AC +15/-10% 48-62 Hz, 12-36V DC
<b>Fuse</b>	AC 100mA fast 5x20 mm. DC 1.6 A
<b>Indicators</b>	PWR, CH2, CH3, CH4, CH5, TD, RD, RTS, CTS
<b>Power consumption</b>	AC 30 mA, DC 1.5W
<b>Temperature range</b>	5-50°C
<b>Humidity</b>	0-95% RH, non-condensing
<b>Dimension</b>	55x100x128 mm (WxHxD)
<b>Weight</b>	AC 0.5 kg, DC 0.3 kg
<b>Mounting</b>	On 35 mm DIN-rail

## LEDs for indication on LD-34

- PWR Indicates that the unit has power
- CH2 Indicates that channel 2 is selected channel
- CH3 Indicates that channel 3 is selected channel
- CH4 Indicates that channel 4 is selected channel
- CH5 Indicates that channel 5 is selected channel
- TD Indicates that the unit is receiving data through channel 1
- RD Indicates that the unit is sending data through channel 1
- RTS Indicates that the unit is receiving RTS signal through channel 1
- CTS Indicates that the unit is sending CTS signal through channel 1

# Switch settings LD-34

**Activation control**

SI

RTS selection of channel 2-5

SI

Selecting channel with Digital in (A0, A1)

S2:1-6 (No function)

## Digital in

A0	A1	EN	E1	Ch 2	Ch 3	Ch 4	Ch 5	Ch 6
0	0	0	0	data	–	–	–	data
1	0	0	0	–	data	–	–	data
0	1	0	0	–	–	data	–	data
1	1	0	0	–	–	–	data	data
0	0	1	0	–	–	–	–	data
1	0	1	0	–	–	–	–	data
0	1	1	0	–	–	–	–	data
1	1	1	0	–	–	–	–	data
X	X	0	1	data	data	data	data	data
X	X	1	1	–	–	–	–	data

X = don't care

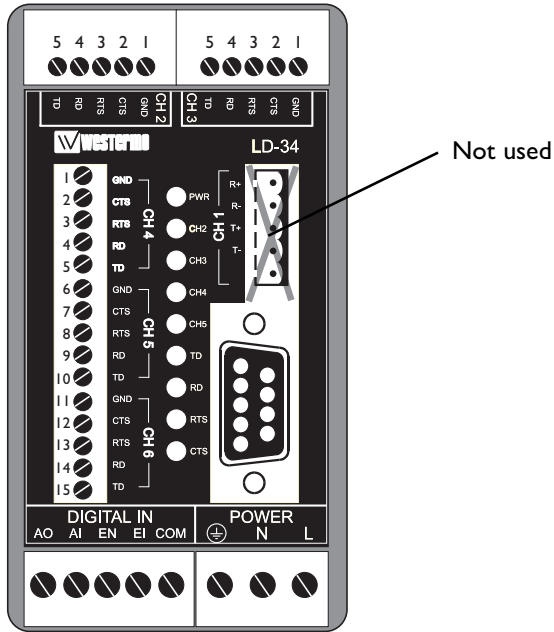
Note: Unconnected input is '0'

**Factory settings**

SI

S2

# Connections LD-34



## Terminal connection

### RS-232 (Channel 1)

Direction DCE	Connection 9-pin D-Sub	CCITT V.24 Description	Signal Description
NC	1	109	DCD/Data Carrier Detect
O	2	104	RD/Received Data
I	3	103	TD/Transmitted Data
NC	4	108/2	DTR/Data Terminal Ready
-	5	102	SG/Signal Ground
NC	6	107	DSR/Data Set Ready
I	7	105	RTS/Request To Send
O	8	106	CTS/Clear To Send
NC	9		


### RS-232 (Channel 2-6)

Direction	Channel 2-4 Pin No.	Channel 5 Pin No.	Channel 6 Pin No.	Signal Description
I	5	10	15	TD/Transmitted Data
O	4	9	14	RD/Received Data
I	3	8	13	RTS/Request To Send
O	2	7	12	CTS/Clear To Send
-	1	6	11	GND/Signal Ground

I = input O = output  
 NC = not connected

## Power connection LD-34 AC

3-position screw-terminal

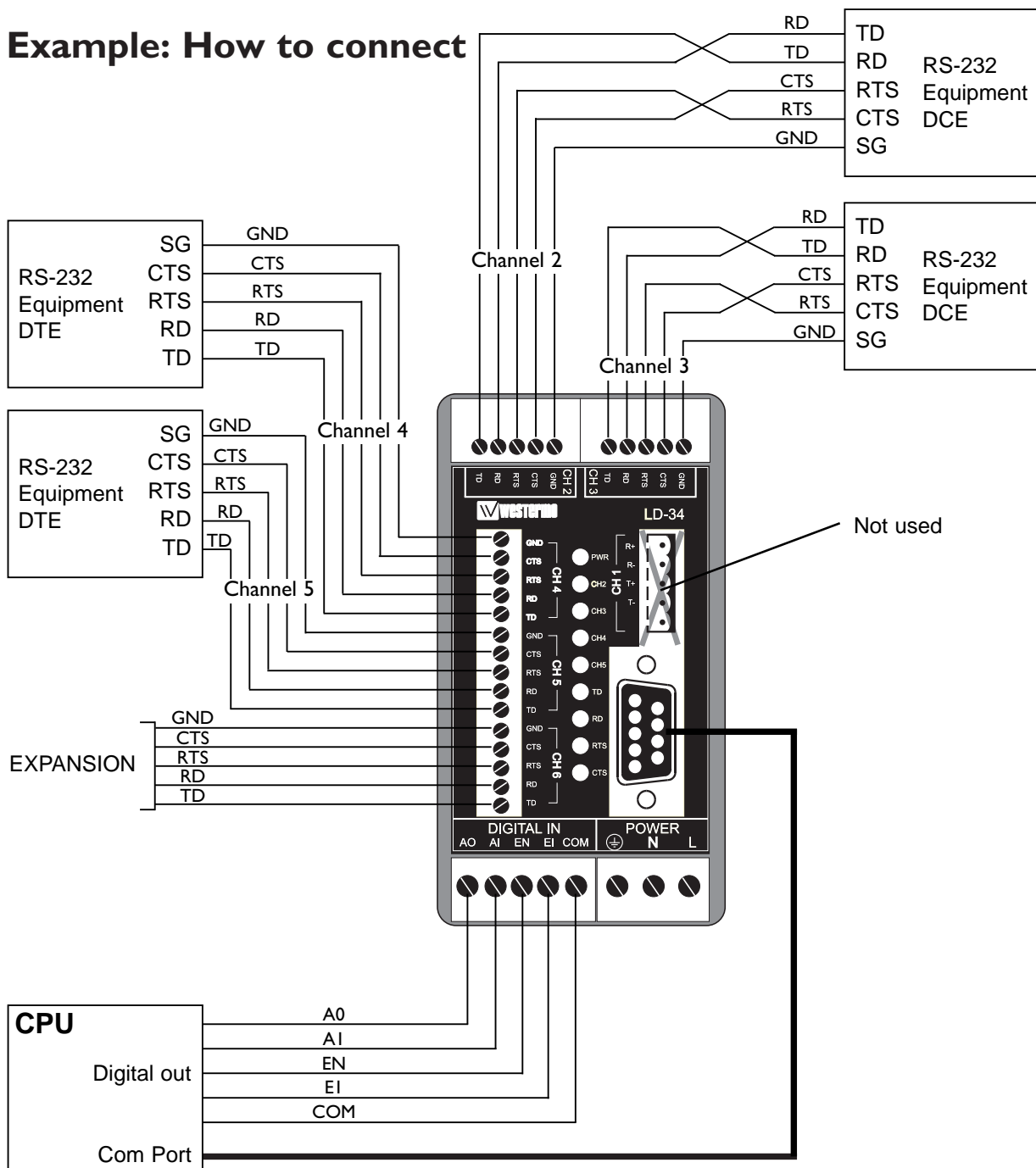
Screw	Power supply
L N	230V AC power
	Earth

## Power connection LD-34 DC

2-position screw-terminal

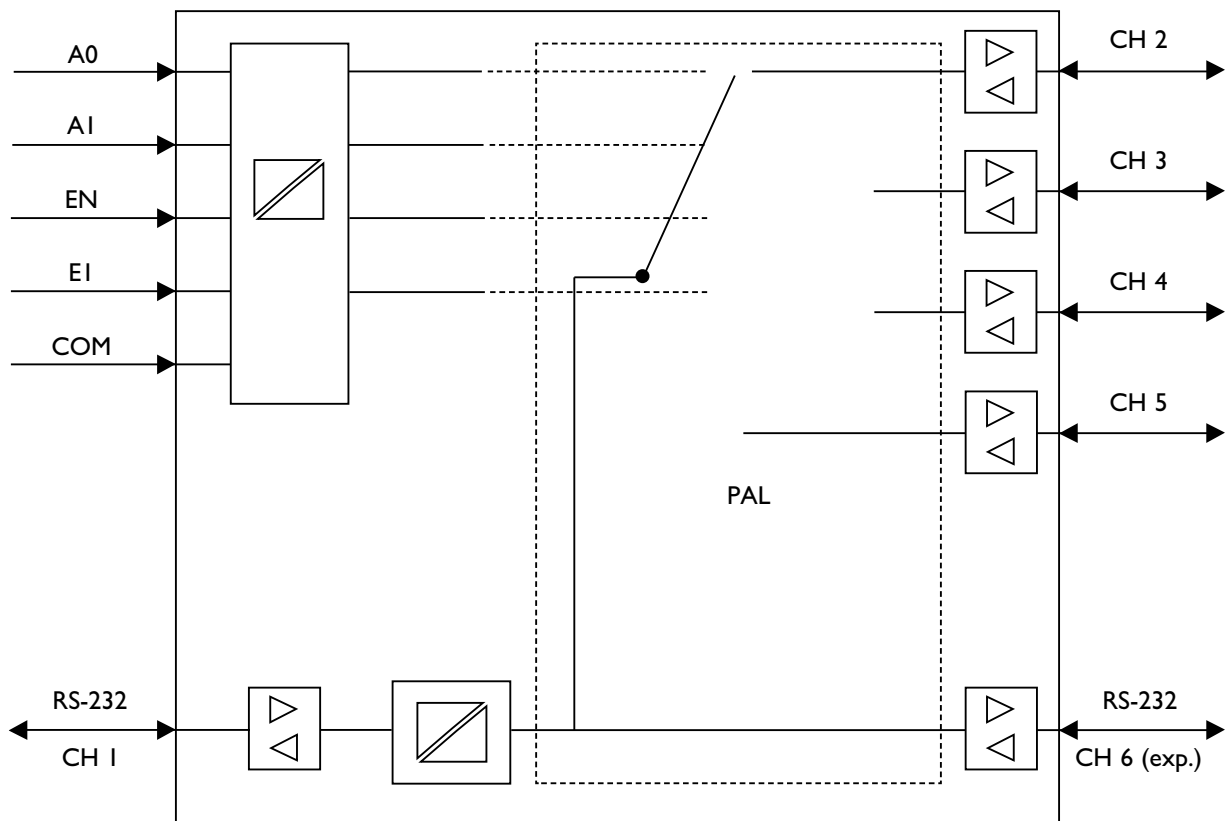
Connection	Power supply
-	- Voltage
+	+ Voltage

### Example: How to connect





## Block diagram



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