

# PANEL DIGITAL READOUTS

## SERIES VD3 LQRQ

### Versions VD30 VD30TF VD31 VD31TF

Digital readouts series **VD3 LQRQ** can be coupled to linear or rotary potentiometer transducers with resistive value ranging between 1 and 100 Kohm. The value of the measured magnitude can be adjusted from zero up to the instrument full range scale value.

The number of decimal digits can be selected by means of internal bridges. All instruments are provided with extractable terminal board.

#### Specifications:

<b>Power supply</b>	24 Vac or 115/230 Vac $\pm 10\%$ 50/60Hz
<b>Absorption</b>	3 VA
<b>Display</b>	7-segment LED display h. 12.7 mm
<b>Display range</b>	<b>VD30</b> -999 $\div$ 999 <b>VD31</b> -1999 $\div$ 1999
<b>Decimal digits</b>	0, 1, 2, 3
<b>Polarity</b>	automatic with $\pm$ sign indication
<b>Resolution</b>	<b>VD30</b> 0.1% FSR value <b>VD31</b> 0.05% FSR value
<b>Accuracy</b>	$\pm 0.05\%$ of the calibration value
<b>Operating temperature</b>	0 $\div$ 45° C
<b>Voltage provided by the instrument for the transducer supply</b>	2.5 Vdc steady
<b>Panel cut off dimensions</b>	92 x 45 mm
<b>Front case dimension</b>	48 x 96 mm

#### Installation and maintenance

Connect the instrument as described in the enclosed diagram C2421; check that the power supply corresponds to the label indication.

In order to change the position of the decimal point extract the circuit from the rear case after removing the restrained frame; then select the jumper as required.

By positioning the jumpers as described in the connection diagram tables it is possible to adjust the decimal point position, the input gain value, and the full range scale excursion.

After positioning the jumpings it is highly recommended to close the instrument before energising it.

#### Configuration

In order to configurate the instrument it is necessary to plug it off, take out the extractable terminal board, remove the frame placed back of the instrument (levering on the proper housings) and remove the circuit completely from its holder.

#### Full range scale adjusting

The instrument is normally supplied with adjustment value = 20 digits.

Use the adjusting trimmers P1 and P2 to set the display values as needed. In case you cannot achieve the needed values, it is necessary to set the FRS at the next superior value.

**elap**

via Vittorio Veneto, 4 I-20094 Corsico (MI) - tel. +39.02.4519561  
fax +39.02.45103406 – e-mail elapsa@tin.it - URL www.elap.it

**Gain**

The instrument is normally supplied with gain value x1; setting gain x2 or x4 allows to reach the FRS with half or one fourth of the max potentiometer excursion.

**Connecting the transducer with one end to zero**

With this configuration the instrument displays zero when the cursor is next to one of the transducer ends. The ends are linked to terminals 4 and 7 while the cursor is connected to terminal 8.

**Connecting the transducer with mid-stroke zero**

With this configuration the instrument displays zero when the cursor is at the transducer mid-stroke. The transducer ends are linked to terminals 4 and 6 while the cursor is connected to terminal 8.

**Calibration**

We advise to adjust the readout in the following way:

- Set the machine axis to zero and adjust the display indication to zero by means of the trimmer P1 placed on the front case
- Set the machine axis to its maximum excursion and adjust the display at the requested value by means of the display range trimmer P2 placed on the rear case.

Repeat the operation to achieve the best measuring accuracy.

The display value increasing direction can be inverted by inverting the transducer ends.

**REMARK:**

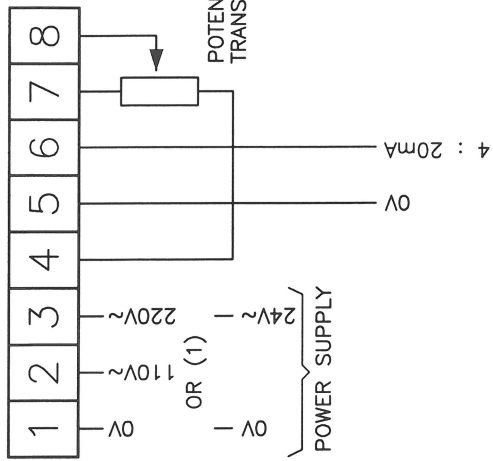
The readout type TF has both trimmers placed on the front case, which must be removed to calibrate the instrument. To remove the front case slightly lever between the front case and the frame with a small flat screw-driver.

**MAINTENANCE**

Check the terminals clamping regularly.

The logo for elap, consisting of the lowercase letters 'elap' in a bold, sans-serif font.

M1

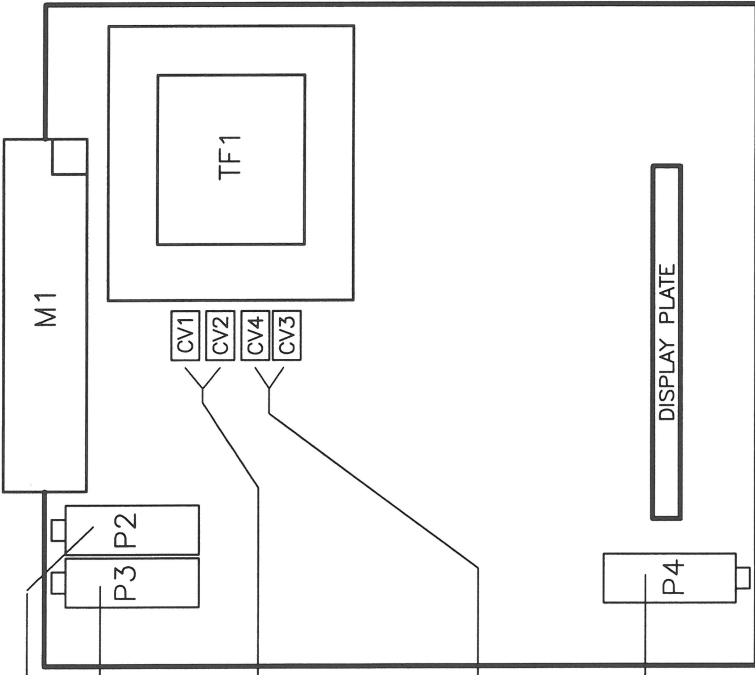


FULL SCALE ADJUST

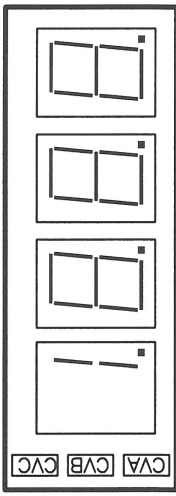
FULL SCALE ADJUST CIRCUIT 20mA

SCALE RANGE SET	
CV1	SR SET RQ
DIS.	DIS.
ENAB.	DIS.
DIS.	ENAB.

AMPLIFICATION	
CV3	CV4
ENAB.	DIS.
DIS.	ENAB.
DIS.	DIS.



REMARK:  
\* DO NOT TAMPER TRIMMERS



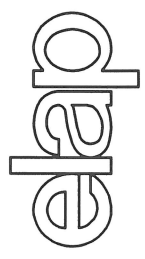
VD3 3 DIGITS E 1/2			
CVA	CVB	CVC	DISPLAY
ENAB.	DIS.	DIS.	X.XXX
DIS.	ENAB.	DIS.	XX.XX
DIS.	DIS.	ENAB.	XXX.X
DIS.	DIS.	DIS.	XXXX

VD3 3 DIGITS			
CVA	CVB	CVC	DISPLAY
DIS.	ENAB.	DIS.	X.XX
DIS.	DIS.	ENAB.	XX.X
ENAB.	DIS.	DIS.	.XXX
DIS.	DIS.	DIS.	XXX

(1) SEE THE INSTRUMENT SUPPLY LABEL

DISIGNO N.	C2627	SCALA	FUGLID	SOSTITUITO DA	DATA	FIRMA	DISIGNATO	DATA	SOFTWARE
DENOMINAZIONE	VD3	TOLL.	MATER.	SOSTITUISCE	DATA	FIRMA	VISTO	FILE	
NOTE	External Connections With output 4-20mA Version LQ-RQ	DESCRIZIONE			DATA	FIRMA			
CLIENTE		MODIFICHE			DATA				



VIA VITTORIO VENETO, 4  
20094 CORSTICO (Milano)  
TEL. 02/4519561 FAX. 02/45103406

