

## OM 351DU



2003-3-en

- **3 1/2 digit programmable projection**
- **Input for linear potentiometers**
- **Digital filter, Tare**
- **Size of DIN 96 x 48 mm**
- **Power supply 230 VAC**

### Options

Dual comparator • Data output • Universal analog output • Power supply 24 VAC, 110 VAC, 10...30 VDC

### Description

The OM 351DU is a low-cost 3 1/2 digit panel programmable instrument for linear potentiometers with direct projection in required units.

The instrument is based on an 8-bit controller with A/D converter, that secures good accuracy, stability and easy operation of the instrument.

### Standard functions

#### Programmable display projection

Setting automatic, optional projection on the display may be set for both limit values of the linear potentiometer in „CM“

Projection ±1999

#### Digital filter

Radius of insensitiv. band of suppressed change of measured value

Exponential average from 2...100 measurements

#### Function

Tare resetting display upon non-zero input signal

#### External control

Hold display/instrument blocking

Lock control keys blocking

### Operation

The instrument is set and controlled by five control keys located on the front panel. All programmable settings of the instrument are realised in two adjusting modes.

Configuration menu (hereinafter referred to as CM) is protected by an optional number code and contains complete instrument setting

User menu may contain arbitrary programming settings defined in „CM“ with another selective restriction (see, change)

All programmable parameters are stored in the EEPROM memory (they hold even after the instrument is switched off).

### Options

**Comparators** are assigned to monitor two limit values with relay output. The limits have adjustable hysteresis within the full range of the display as well as selectable delay of the switch-on in the range of 0...99,9 s. Reaching the preset limits is signalled by LED and simultaneously by the switch-on of the relevant relay.

**Data outputs** are for their rate and accuracy suitable for transmission of the measured data for further projection or directly into the control systems. We offer an isolated RS232 and RS485 with the ASCII protocol.

**Analog outputs** will find their place in applications where further evaluating or processing of measured data is required in external devices. We offer universal analog output with the option of selection of the type of output - voltage/current. The value of analog output corresponds with the displayed data and its type and range are selectable in CM.

## Technical data

### MEASURING RANGE

Power sup.for lin.pot.: 2,5 VDC/6 mA  
minimum resistance of linear potentiometer is 500 Ohm

### PROJECTION

Display:  $\pm 1999$ , red or green 7-segment LED, digit height 14 mm  
Decimal point: adjustable - in Configuration menu  
Brightness: adjustable - in Configuration/User menu

### INSTRUMENT ACCURACY

Tempco: 100 ppm/°C  
Accuracy:  $\pm 0,2\%$  of range + 1 digit  
Rate: 0,5 - 1,2 - 2,5 - 5 - 10 measurements/s  
Watch-dog: reset after 20 ms  
Function: Hold - stop measuring (upon contact)  
Lock - control keys blocking (upon contact), not simultaneously with Hold, Tare  
Digital filter - adjustable in Configuration menu  
Tare - resetting display upon non-zero input signal  
at 25°C and 40 % r.h.

### COMPARATOR

Type: digital, adjustable in programming mode, contact switch-on < 30 ms  
Limit 1 and 2:  $\pm 1999$   
Hysteresis: 0...999  
Delay: 0...99,9 s  
Outputs: 2 relays with switch-on (switch-off) contact (250 VAC/30 VDC, 3 A)  
- the relay function is adjustable in Configuration menu  
upon request SSR (250 VAC, 1 A) or open collector may be fitted

### DATA OUTPUTS

Data format: rate 1 200...38 400 Baud, 8 bit + no parity + 1 stop bit  
RS 232: isolated  
RS 485: isolated, addressing (max. 31 instruments)

### ANALOG OUTPUTS

Type: isolated, programmable with resolution max. 5 000 points, analog output corresponds with the displayed data, output type and range are selectable in CM  
Non-linearity: 0,2 % of range  
Tempco: 100 ppm/°C  
Rate: response to change of value < 100 ms  
Voltage: 0...2 V/5 V/10 V  
Current: 0...5 mA/0/4...20 mA (compensation of conduct up to 600 Ohm)

### POWER SUPPLY

24; 110; 230 VAC, 50/60 Hz,  $\pm 10\%$ , 3 VA  
12...24 VDC/max. 200 mA, non-isolated (without analog output and RSxxx)  
10...30 VDC/max. 300 mA, (24 VDC/110 mA), isolated  
- power supply is protected by a fuse inside the instrument

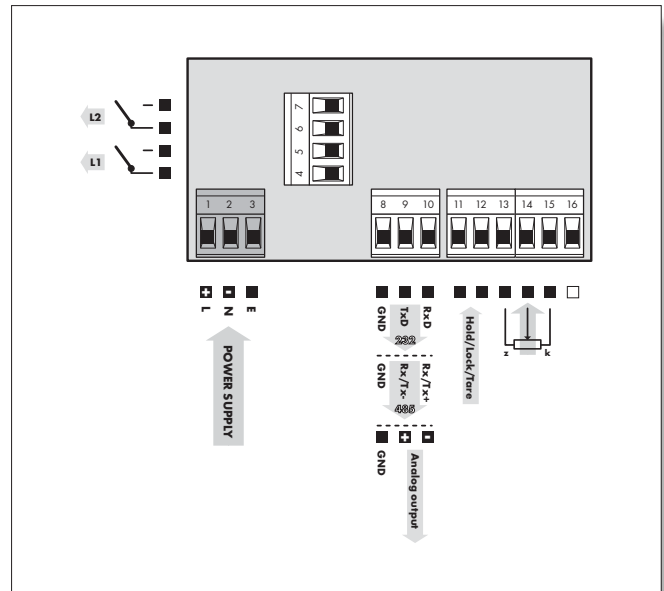
### MECHANIC PROPERTIES

Material: Noryl GFN2 SE1, incombustible UL 94 V-I  
Dimensions: 96 x 48 x 120 mm  
Panel cut: 90,5 x 45 mm

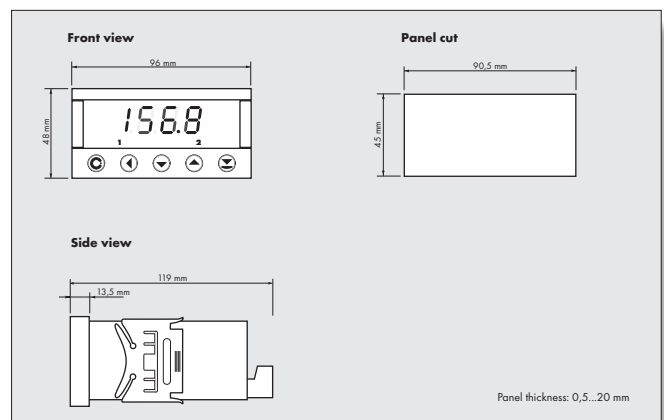
### OPERATING CONDITIONS

Connection: connector terminal board, conductor section up to 2,5 mm<sup>2</sup>  
Stabilization period: within 15 minutes after switch-on  
Working temperature: 0°...60°C  
Storage temperature: -10°...85°C  
Covering: IP65 (front panel only)  
Construction: safety class I  
Electrical safety: EN 61010-1, A2  
Overvoltage category: for pollution degree II  
III. - instrument power supply, relay output (300 V)  
II. - input, output (300 V)  
EMC: EN 61000-3-2+A12; EN 61000-4-2, 3, 4, 5, 8, 11; EN 550222, A1, A2

## Connection



## Dimensions



## Order code

