

OM 351DC



2003-3-en

- **3 1/2 digit programmable projection**
- **±2/20 mA; ±0,2/2/20/200 V**
- **±1/5 A; ±60/150 mV**
- **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 351DC is a low-cost 3 1/2 digit panel programmable DC voltmeter/ammeter.

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

Standard functions

Programmable display projection

Setting manual, optional projection on the display may be set for both limit values of input signal in „CM“, e.g.: range 0...19,99 V ⇒ projection 0...150,0 ±1999

Projection

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 blocking the control keys or the access into “CM”

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	Impedance/Max. drop	
Range 1:	$\pm 2/20$ mA	< 200 mV
	$\pm 0,2/2$ V	100 kOhm
	$\pm 20/200$ V	10 MOhm
Range 2:	$\pm 1/5$ A	< 150 mV
	$\pm 60/150$ mV	100 kOhm
Range "DC":	± 20 mA	< 200 mV
(for DC non-isolated supply)	± 20 V	100 kOhm
	± 200 V	10 MOhm

PROJECTION

Display: ± 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
 Overload capacity: 10x ($t < 30$ ms) - does not apply for 200 V and 5 A, 2x (long-term)
 Watch-dog: reset after 20 ms
 Function: Hold - stop measuring (upon contact)
 Lock - control keys blocking (upon contact), not simultaneously with function Hold, Tare
 Digital filter - adjustable in Configuration menu
 Tare - resetting display upon non-zero input signal
 Calibration: at 25°C and 40 % r.h.

COMPARATOR

Type: digital, adjustable in programming mode, contact switch-on < 30 ms
 Limit 1 and 2: ± 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, ± 10 %, 3 VA
 12...24 VDC/max. 200 mA, non-isolated (w/o analog output and RSxxx)
 10...30 VDC/max. 250 mA, (24 VDC/90 mA), isolated
 - power supply is protected by a fuse inside the instrument

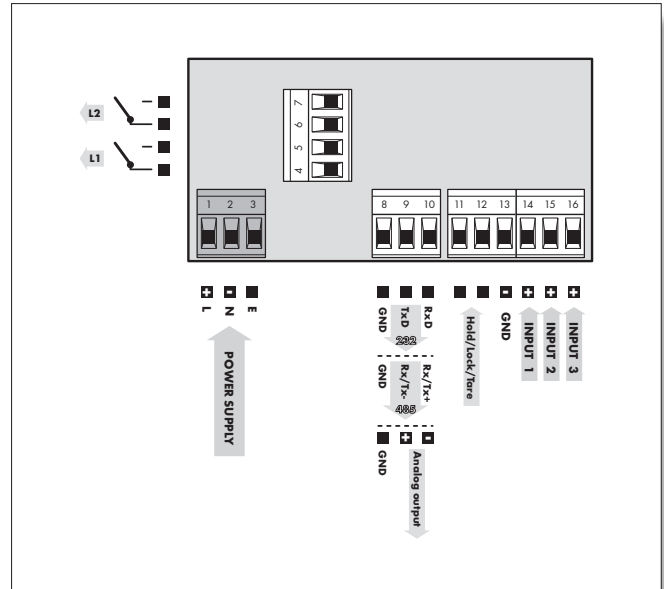
MECHANIC PROPERTIES

Material: Noryl GFN2 SE1, incombustible UL 94 V-1
 Dimensions: 96 x 48 x 120 mm
 Panel cut: 90,5 x 45 mm

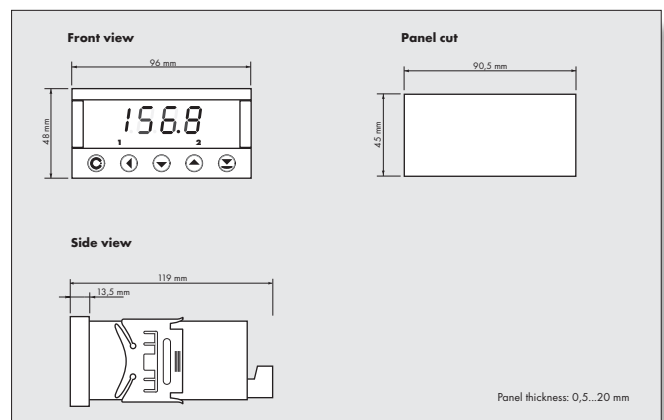
OPERATING CONDITIONS

Connection: connector terminal board, conductor section up to 2,5 mm²
 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 55022, A1, A2

Connection



Dimensions



Order code

