OM 374DC

2003 - 3 - en

- **3 ¾ digit programmable projection**
- **60/150/300 mV; 4/40/400 V**
- **400 mA/1A/5 A**
- **Quadruple comparator**
- **Digital filter, Tare**
- **Size of DIN 96 x 48 mm**
- **Power supply 230 VAC**

Options

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

Description

The OM 374DC is a 3 ¾ digit panel programmable DC voltmeter/ ammeter.
The instrument is based on an 8-bit microcontroller with precise A/D converter, that secures high accuracy, stability and easy operation of the instrument.

Standard functions

Programmable display projection

Setting	manual, optional projection on the display may be set for the maximum input signal value in „CM“, e.g.: range 0...39,99 V ⇨ projection 0...350,0
Projection	-999...3999

Digital filter

Radius of insensitiv.	band of suppressed change of measured value

Function

Tare	resetting display upon non-zero input signal

External control

Hold	display/instrument blocking
Lock	control keys blocking

Output

Limits	4 relays with switching contact, The limits have both adjustable hysteresis and optional delay of the switch-on. Reaching the limits is signalled by LED and at the same time by the switch-on of the relevant relay.

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). The measured units may be projected on the display.

Options

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

Voltage:	0...60 mV	1,8 MOhm	Input 1
	0...150 mV	1,8 MOhm	Input 1
	0...300 mV	1,8 MOhm	Input 1
	0...4 V	1,8 MOhm	Input 2
	0...40 V	1,8 MOhm	Input 2
	0...400 V	1,8 MOhm	Input 2
Current:	0...400 mA	< 50 mV	Input 2
	0...1 A	< 50 mV	Input 1
	0...5 A	< 50 mV	Input 1

PROJECTION

Display:	-999...3999, red or green 14-segment LED, digit height 14 mm
Decimal point:	adjustable - in Configuration menu
Brightness:	adjustable - in Configuration/User menu

INSTRUMENT ACCURACY

Tempco:	60 ppm/°C
Accuracy:	±0,15 % of range + 1 digit
	±0,25 % of range + 1 digit (for 60/150/300 mV)
Rate:	1,3 - 2,5 - 5 - 10 - 20 - 40 measurements/s
Overload capacity:	10x (t < 30 ms) - does not apply for 400 V and 5 A, 2x (long-term)
Watch-dog:	reset after 1,2 s
Function:	Hold - stop measuring (upon contact)
	Lock - control keys blocking (upon contact), not simultaneously with Hold function
	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...4	-999...3999
Hysteresis:	0...999
Delay:	0...99,9 s
Outputs:	4 relays with switching contact (250 VAC/50 VDC, 3 A)
	upon request SSR (250 VAC, 1 A) or open collector may be fitted

DATA OUTPUT

Data format:	rate 150...115 200 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. 10 000 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 < 40 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 %, 5 VA
	10...30 VDC/max. 300 mA, (24 VDC/150 mA), isolated
	- power supply is protected by a fuse inside the instrument

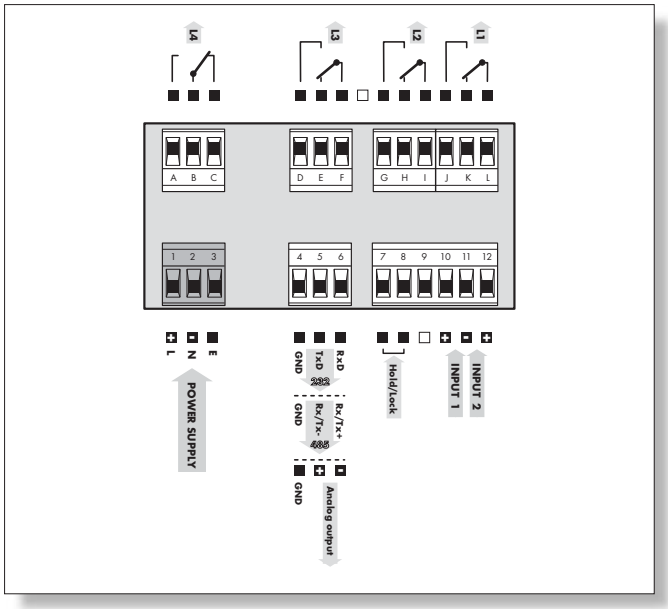
MECHANIC PROPERTIES

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

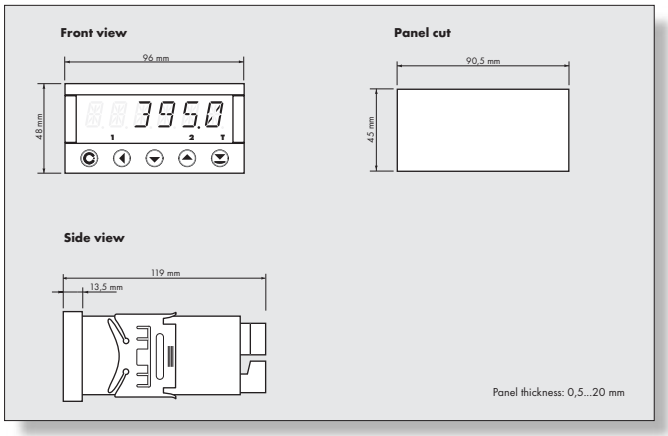
OPERATING CONDITIONS

Connection:	connector terminal board, conductor section up to 2,5 mm^2
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

OM 374DC - xxxx

Power supply
0: 24 VAC/50 Hz
1: 230 VAC/50 Hz
3: 110 VAC/50 Hz
4: 10...30 VDC, isolated

Input
U: Voltage
I: Current

Display color
1: red
2: green

Output
0: no
1: Analogue
2: Data - RS 232
3: Data - RS 485

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