

# OMM 37

---

3 1/2 DIGIT

DC VOLTMETER/AMMETER  
PROCESS MONITOR  
THERMOMETER FOR PT 100



## **SAFETY INSTRUCTIONS**

Please, read the enclosed safety instructions carefully and observe them! These instruments should be safeguarded by isolated or common fuses (breakers)! For safety information the EN 61 010-1 + A2 standard must be observed. This instrument is not explosion-safe!

## **TECHNICAL DATA**

Measuring instruments of the OMM 37 series conform to the European regulation 89/336/EWG and the Ordinance 168/1997 Coll.

They are up to the following European and Czech standards:

EN 55 022, class B

EN 61000-4-2, -4, -5, -6, -8, -9, -10, -11

The instruments are applicable for unlimited use in agricultural and industrial areas.

## **CONNECTION**

Supply of energy from the main line has to be isolated from the measuring leads.



## **ORBIT MERRET, spol. s r.o.**

Vodnanska 675/30

198 00 Prague 9

Czech Republic

Tel: +420 - 281 040 200

Fax: +420 - 281 040 299

e-mail: orbit@merret.cz

www.orbit.merret.cz

# 1. CONTENTS

1.	Contents .....	3
2.	Instrument description .....	4
3.	Connection .....	5
4.	Setting .....	6
	Setting the decimal point. ....	6
	Change of projection on the display .....	6
5.	Technical data .....	8
6.	Instrument dimensions and installation .....	10
7.	Certificate of guarantee .....	11

## 2. INSTRUMENT DESCRIPTION

### DESCRIPTION

The OMM 37 model series include simple 3 1/2 digit panel instruments in these alternatives:

DC	DC voltmeter/ammeter
PM	Process monitor
RTD	Thermometer for Pt 100 sensors

For their dimensions the instruments are suitable for mosaic panel installation.

### ADJUSTABLE DISPLAY PROJECTION

Setting	by potentiometers from the back of the instrument (in the range of approx. $\pm 10\%$ )
Projection	$\pm 1999$

### OPERATION

The instrument is designed for simple measurement without further control.  
Placement of the decimal point is selectable by a jumper under the front panel.

### EXTENSION

**Isolated supply** of the instrument with range of 7...30 VDC is designated for applications where galvanic separation must be used.

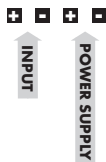
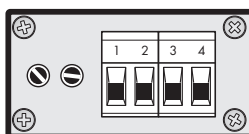
### 3. CONNECTION

The lead for feeding the instrument should not be in the proximity of the incoming low-potential signals.

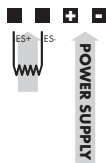
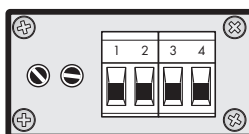
Contactors, motors with larger input power and other efficient elements should not be in the proximity of the instrument.

The lead into the input of the instrument (the measured quantity) should be in sufficient distance from all power leads and appliances. Provided this cannot be secured it is necessary to use shielded leads with connection to ground.

The instruments are tested in compliance with standards for use in industrial area, yet we recommend to abide by the above mentioned principles.



**OMM 37DC, PM**



**OMM 37RTD**

## 4. INSTRUMENT SETTING

### SETTING BRIGHTNESS AND DECIMAL POINT

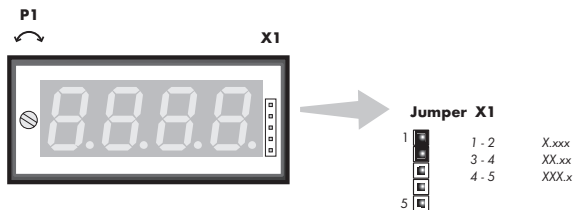
After removing the top cover frame the following settings are accessible

#### Decimal point

by jumper X1

#### Display brightness

by trimmer P1 under the front panel



### MODIFICATION FO THE MEASURING RANGE

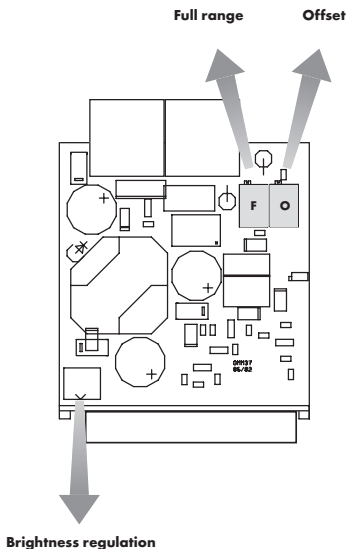
The adjusting trimmers for correction of display projection are accessible at the input brackets of the instrument

#### Full range

- setting display projection (approx.  $\pm 10\%$ )

#### Offset

- shifting zero
- (compensation of 2-wire lead for OMM 37RTD),
- the trimmer is fitted only in the OMM 37PM and RTD model





## 5. TECHNICAL DATA

### INPUT

the range is fixed, according to order

$\pm 199,9 \text{ mV}$	1 MOhm
$\pm 1,999 \text{ V}$	1 MOhm
$\pm 19,99 \text{ V}$	1 MOhm
$\pm 199,9 \text{ V}$	1 MOhm
$\pm 199,9 \mu\text{A}$	< 260 mV
$\pm 1,999 \text{ mA}$	< 260 mV
$\pm 19,99 \text{ mA}$	< 260 mV
$\pm 199,9 \text{ mA}$	< 260 mV

DC

the range is fixed, according to order

0...5 mA	< 260 mV
0...20 mA	< 260 mV
4...20 mA	< 260 mV
$\pm 2 \text{ V}$	1 MOhm
$\pm 5 \text{ V}$	1 MOhm
$\pm 10 \text{ V}$	1 MOhm

PM

Pt 100	-20°...140°C
Type Pt:	100 Ohm, platinum element, $\alpha = 0,003850 \text{ Ohm/Ohm/}^\circ\text{C}$
Connection:	2 wire

RTD

### PROJECTION

Display:	$\pm 1999$ , intensive red or green LED, digit height 9,1 mm
Decimal point:	adjustable - by jumper
Brightness:	adjustable - by trimmer inside the instrument

### INSTRUMENT ACCURACY

TC:	100 ppm/°C
Accuracy:	$\pm 0,1$ % of range $\pm 0,8$ % of range
Resolution:	1°C
Rate:	2,5 measurements/s
Overload:	10x (t < 100 ms), 2x (long-term)
Calibration:	at 23°C and 40 % r.h.

RTD

RTD

### POWER SUPPLY

7...12 V AC/DC, max. 100 mA (DC), 60 mA (AC)
7...30 V AC/DC, max. 160 mA (DC), 280 mA (AC), (24 VDC/55 mA), isolated

### MECHANIC PROPERTIES

Connection:	connector terminal board conductor cross section up to 2,5 mm <sup>2</sup>
Material:	Noryl GFN2 SE1, incombustible UL 94 V-1
Dimensions:	48 x 24 x 75 mm
Panel Cut-out:	43,5 x 22,5 mm

### OPERATING CONDITIONS

Stabilization period:	within 15 minutes after switch-on
Working temp.:	0°...50°C
Storage temp.:	-10°...85°C
Cover:	IP42, (front panel only)
Overvoltage cat.:	EN 61010-1, A2 III. - instrument power supply (300 V) II. - input (300 V) for pollution degree II
EMC:	EN 61000-3-2+A12; EN 61000-4-2, 3, 4, 5, 8, 11; EN 550222, A1, A2



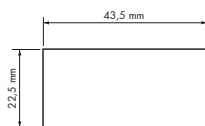


## 6. INSTRUMENT DIMENSIONS

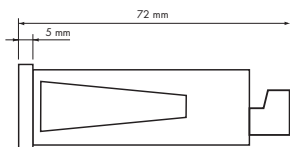
**Front view**



**Panel cut**



**Side view**



Panel thickness: 0,5...20 mm

## 7. CERTIFICATE OF GUARANTEE

Product	<b>OMM 37</b>	<b>DC</b>	<b>PM</b>	<b>RTD</b>
Type	.....			
Manufact. No.	.....			
Date of sale	.....			

For this instrument applies a guarantee period of 12 months of the date of sale to the user. Defects occurring during this period due to manufacturing error or due to material faults shall be eliminated free of charge.

For instrument quality, function and construction the guarantee shall apply provided that the instrument was connected and used in compliance with the instructions for use.

The guarantee does not apply to defects caused by:

- mechanical damage
- transportation
- intervention of unqualified person including the user
- irreversible event
- other unprofessional interference

The manufacturer performs guarantee and post-guarantee repairs unless provided for otherwise.

Stamp, signature

**ORBIT MERRET, spol. s r.o.**

Vodnanska 675/30  
198 00 Prague 9  
Czech Republic  
tel: +420 - 281 040 200  
fax: +420 - 281 040 299  
e-mail: orbit@merret.cz  
www.orbit.merret.cz

---

**Austria**

ING.E.GRUBER GmbH  
Edu. Kittenberger Gasse 97 Top2  
A-1230 Wien  
tel: +43 - 1 - 869 23 39-0  
fax: +43 - 1 - 865 18 75  
e-mail: office@gruber-components.at  
www.gruber-components.at

**The Netherlands**

AE SENSORS B.V.  
J. Valsterweg 92  
3301 AB Dordrecht  
Tel: +31 - 78 - 621 31 52  
Fax: +31 - 78 - 621 31 46  
e-mail: aesensors@aesensors.nl  
www.aesensors.nl

**Switzerland**

ORBIT CONTROLS AG  
Zürcherstrasse 137  
8952 Schlieren  
tel: +41 - 1 - 730 27 53  
fax: +41 - 1 - 730 27 83  
e-mail: info@orbitcontrols.ch  
www.orbitcontrols.ch

**USA**

METRIX Instruments Co.  
1711 Townhurst Dr.  
Houston, Texas 77043-2899  
tel: +1 - 713 - 461 21 31  
fax: +1 - 713 - 461 82 83  
e-mail: sales@metrix1.com  
www.metrix1.com

**Germany**

MEGATRON Elektronik AG & Co.  
Hermann-Oberth-Str. 7  
85640 Putzbrunn/München  
tel: +49 - 89 - 460 94 - 0  
fax: +49 - 89 - 460 941 01  
e-mail: sales@megatron.de  
www.megatron.de

**Russian Federation**

PO <INTERFACE>  
a.b. 3408  
Krasnodar, 350044  
tel: +1 - 8612 - 660 483  
fax: +1 - 8612 - 623 000  
e-mail: iff@au.ru  
www.meter.chat.ru

**Turkey**

ALFA ELEKTRONIK Ltd.  
Baglarbasi Mah. Ergenekon No: 33  
TR - 81540 Maltepe - ISTANBUL  
Tel: +90 - 216 - 442 39 49  
Fax: +90 - 219 - 305 54 50  
e-mail: sb@elmak.com.tr  
www.alfa-technik.com

**Lithuania**

RIFAS UAB  
Tinklu g. 29a  
LT-5300 Panevėžys  
tel: +370 - 5 - 510 400  
fax: +370 - 5 - 582 729  
e-mail: sales@metrix1.com  
www.metrix1.com

**Slovakia**

TECHREG, s.r.o.  
Dukelských hrdinov 2  
984 22 Lučenec  
tel: +421 - 47 - 433 15 92  
fax: +421 - 47 - 433 15 92  
e-mail: techreg@bb.psg.sk  
www.techreg.sk

**Ukraine**

OOO <KOTRIS>  
Nesterova 3, Office 907  
030 57 Kyjev  
tel: +44 - 446 - 21 42  
fax: +44 - 446 - 21 42  
e-mail: metrix-ua@svitonline.com