OMM 335UC

Digital Panel Meter

UNIVERSAL COUNTER

1 Description

OM LINK

- Counter / Frequency / Time
- Range 0,1…10 000 Hz
- Scaling of measured values
- Input filter, Linearisation
- Setting from PC via USB
- Password protection to prevent unauthorised changes of settings
- Protection IP65
- Easy mounting into standardised Ø 22,5 mm hole

Note: There is galvanic connection between USB connector and input!
In case you need to configure the unit while the input signal is connected, the use of a galvanic isolated OM USB-ISO convertor is recommended.

Measured value (red/green LED)
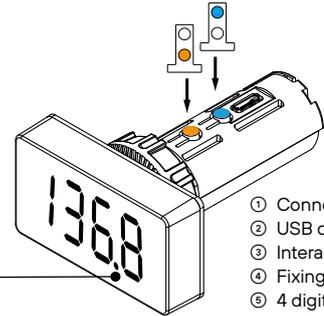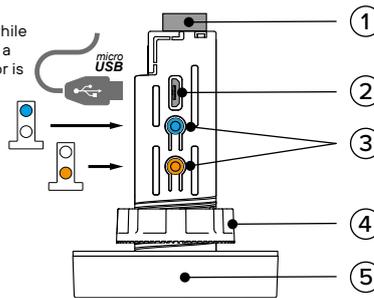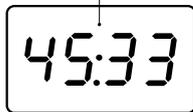
① Connector
② USB connection to PC
③ Interaction buttons
④ Fixing nut
⑤ 4 digit LED display

⚡ **DANGER** ⚠	⚠ **WARNING** ⚠	⚠ **CAUTION**
HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH - Disconnect all power before servicing equipment and other supply lines	**EQUIPMENT OPERATION HAZARD** - Do not use this product in safety critical system. - Do not disassemble, repair or modify this product. - Do not operate beyond the recommended operating environment.	**EQUIPMENT OPERATION HAZARD** - Install 100 mA fuse UL…Class CC ; IEC…gG if unable to determine loop input current is within 4 to 20 mA
Failure to follow this instruction will result in death or serious injury.	**Failure to follow these instructions can result in death, serious injury, or equipment damage.**	**Failure to follow this instruction can result in injury or equipment damage**

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel.
No responsibility is assumed by ORBIT MERRET for any consequences arising out of the use of this material.

2 Product Connection
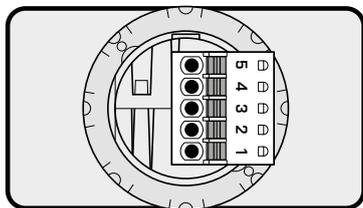
5	■	GND
4	✛	Input A
3	✛	Reset
2	■	Power
1	✛	Power
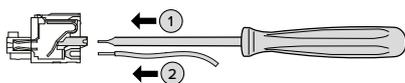
①	screwdriver	Ø 2 mm / 0,08 in

②	mm / inch	6…8 / 0,24…0,31	
	mm²	0,2…1,3	
	AWG	24…16	

Note: Contactors, high power electric motors, frequency drives and other power devices should not be in a close proximity of the meter. Input signal leads (measured value) should be seperated from all power lines and power devices. Even though the meters has been designed and tested according to standards for industrial environment, we strongly advise to adhere to the above presented rules

98.7

Measuring mode

PASS.
Access into instrument menu
Range: 0...9999

2 s

0

If password is set for **0**, then access is not password protected and the sign **PASS.**, is not displayed

NOdE
Measuring mode selection

FrE9. DEF

COUn.	counter
FrE9.	frequency
IdFr.	period
t IME	stopwatch

N.t IN.
Time base setting
For example 1 s has been selected. Then the meas.-period is from 1 to 2 s (1 s + max. of one period). If there is no incoming impulse detected within 2 s, input signal is considered to equal to zero.

0.5 DEF

0.1	0,1 s
0.5	0,5 s
1.0	1 s
5.0	5 s
10.0	10 s
50.0	50 s

F IL.
Digital input filter setting
This filter can suppress false pulses in the input signal. Set parameter defines the max. frequency the device will process without any restrictions (duty cycle 1:1)

OFF DEF

OFF	off
1000	1000 Hz
100	100 Hz
65	65 Hz
55	55 Hz
45	45 Hz
10	10 Hz
1	1 Hz

tYP.A
Selecting input type A
After selecting „PNP" it is necessary to select input level (Lev. A)

nPn.C DEF

| nPn.C | NPN, contact |
| PnP | PNP |

LEu.A
Setting of input level for Input A
Comparative level is approx. 80% of this value.
Range: 0...30 V

10.0 DEF

Only for Typ. A > PNP

POL.A
Active level / Active edge setting
Falling edge, opening of NPN input / rising edge, closing of NPN input

Lo H DEF

| Lo H | Lo > Hi |
| H. L | Hi > Lo |

N.StA.
Stopwatch controls setting - Input A
Besides options „Cont." and „CtCt" the stopwatch can be controlled by the signal edge

CtCt DEF

COnt.	running
CtCt	act. input
rUn	Start edge
EdGE	Start/Stop
rStC	Start/Stop+Reset
CrSt.	Reset+Start/Stop
CLr.	Reset+Start*
CLrr.	Reset+Start

* if not running

Only for Mode > Time

tYP.C
Selecting input type C/Reset
After selecting „PNP" it is necessary to select input level (Lev. C)

nPn.C DEF

| nPn.C | NPN, contact |
| PnP | PNP |

LEu.C
Setting of input level for Input C/Reset
Comparative level is approx. 80% of this value.
Range: 0...30 V

10.0 DEF

Only for Typ. C > PNP

POL.C
Active level / Active edge setting - Reset
Falling edge, opening of NPN input / rising edge, closing of NPN input

Lo H DEF

| Lo H | Lo > Hi |
| H. L | Hi > Lo |

N.Sto.
Stopwatch controls - Input C/Reset
Stopwatch is controlled by the signal's edge

CLr. DEF

CLr.	Reset
S.CL.	Stop + Reset
StoP	Stop

Only for Mode > Time

bACr.
Display backup mode selection
Mode of displayed value after a sudden loss of power or after a power off

YES DEF

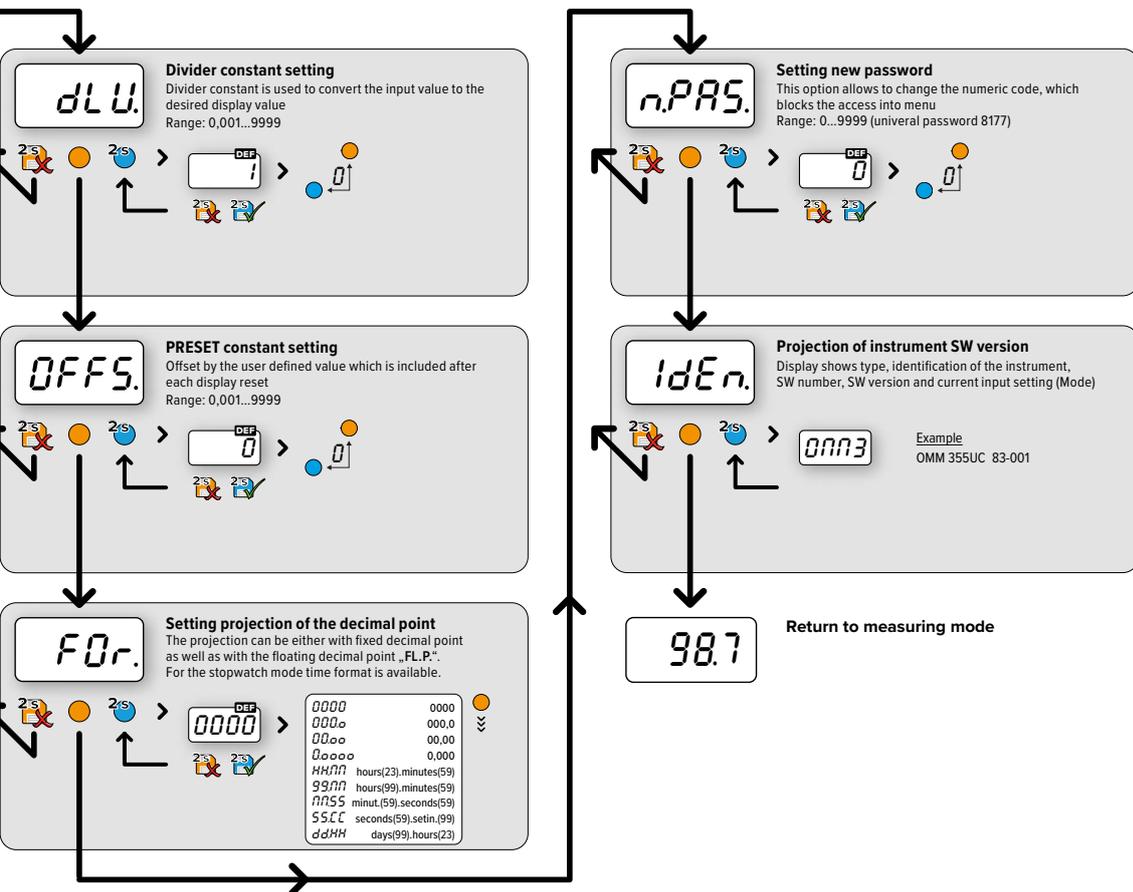| n0 | Reset |
| YES | Original value restored |

Only for Mode > Time

SCAL.
Multiplier constant setting
Multiplier constant is used to convert the input value to the desired display value
Range: 0,001...9999

1 DEF

Legend

- Enter Menu
- Interaction buttons
- Settings not saved (t > 2 s)
- Settings saved (t > 2 s)
- Return to measuring mode
- DEF Default

Divider constant setting
Divider constant is used to convert the input value to the desired display value
Range: 0,001...9999

`dLU.`

`1` `0`

PRESET constant setting
Offset by the user defined value which is included after each display reset
Range: 0,001...9999

`OFFS.`

`0` `0`

Setting projection of the decimal point
The projection can be either with fixed decimal point as well with the floating decimal point „**FL.P.**".
For the stopwatch mode time format is available.

`FOr.`

`0000`

`0000`	0000
`000.o`	000,0
`00.oo`	00,00
`0.oooo`	0,000
`HH.NN`	hours(23).minutes(59)
`99.NN`	hours(99).minutes(59)
`NN.SS`	minut.(59).seconds(59)
`SS.CC`	seconds(59).setin.(99)
`dd.HH`	days(99).hours(23)

Setting new password
This option allows to change the numeric code, which blocks the access into menu
Range: 0...9999 (univeral password 8177)

`n.PAS.`

`0` `0`

Projection of instrument SW version
Display shows type, identification of the instrument, SW number, SW version and current input setting (Mode)

`IdEn.`

`0NN3`

<u>Example</u>
OMM 355UC 83-001

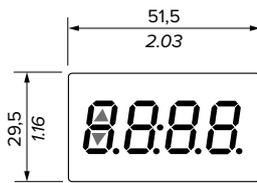`98.7` **Return to measuring mode**

Note: For an easier unit configuration we recommend using our free PC SW called OM Link
www.merret.cz/en/products/software/om-link

Note: If there is a pause during configuration exceeding 60 seconds, the configuration mode closes down automatically and the device is switched into a measuring mode. In such case all unconfirmed selections will be lost.
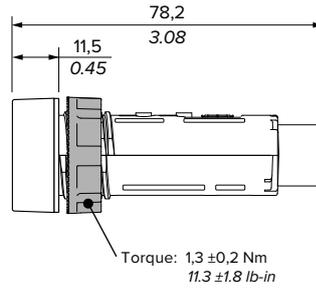
4 Error conditions

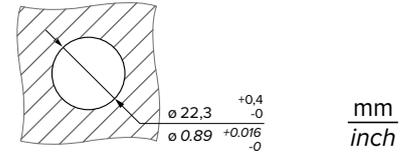| ERROR	CAUSE	ELIMINATION
`E. d._`	number is too small (large negative) to be displayed	change DP setting, channel constant setting
`E. d.¯`	number is too high to be displayed	change DP setting, channel constant setting
`E. t_`	number is below the linearization table value; Error table underflow	change input signal value or linearization table
`E. t¯`	number is above the linearization table value; Error table overflow	change input signal value or linearization table

5 | Instrument dimensions and installation

Front view

51,5
2.03

29,5
1.16

Side view

78,2
3.08

11,5
0.45

Torque: 1,3 ±0,2 Nm
11.3 ±1.8 lb-in

Panel cut

Panel thickness: 1...6 mm
0.04...0.24 in

ø 22,3 +0,4 -0
ø 0.89 +0.016 -0

mm
inch

6 | Technical data

INPUT

Number of inputs	1
Range	on contact, TTL, NPN/PNP 0...30 V comparative levels are adjustable 0,1...10 000 Hz
Measuring mode	counter frequency 1/frequency time

PROJECTION

Display	9999, 7-segment LED
Digit height	14 mm
Display color	red or green
Projection	-999...9999 *Projection for Mode „Time"* 00.00...99.59 - hours/minutes 00.00...23.59 - hours/minutes 00.00...23.59 - minutes/seconds 00.00...59.99 - seconds/hundredths of a second 00.00...99.59 - days/hours
Decimal point	setting - in menu
Brightness	fixed

INSTRUMENT ACCURACY

TC	50 ppm/°C
Accuracy	±0,15 % of the value + 1 digit
Rate	0,1...100 measurements/s
Overload capacity	2x
Linearisation	linear interpolation in 50 points (only via OM Link)
OM Link	company communication interface for operation, setting and update of instruments. (microUSB)
Watch-dog	reset after 500 ms
Calibration	at 25°C and 40 % r.h.

POWER SUPPLY

Power	24 VDC/24 VAC, ±10 %, 0,2 VA, 10...30 VDC/24 VAC, ±10 %, 0,2 VA, isolated

MECHANIC PROPERTIES

Material	PA66, incombustible UL 94 V-0
Dimensions	51,5 x 29,5 x 78,2 mm
Panel cutout	ø 22,5 mm

OPERATING CONDITIONS

Connection	connector terminal blocks, section 0,2...1,3 mm²
Stabilization period	within 5 minutes after switch-on
Working temp.	-20°...60°C
Storage temp.	-20°...85°C
Protection	IP65 (front panel only)
Construction	safety class I
El. safety	EN 61010-1, A2
Dielectric strength	700 VAC after 1 min. between power supply and signal input
Insulation resist.*	for pollution degree II, measurement cat. II power supply, input > 250 V (PI)
EMC	EN 61326-1 (Industrial area)

* PI - Primary insulation, DI - Double insulation

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