

## GENERAL

NORMAG Labor- und Prozesstechnik GmbH produces a range of devices that are suitable for measuring process-related variables and for controlling, regulating and automating laboratory systems. With the exception of the CU Easy, the new devices in the Control Unit series can be flexibly customised for a wide range of apparatus and systems. We would like to offer you a cost-efficient option,

to automate new and existing systems. Our latest series is the Control Unit Pro. It comes with new features such as browser-based control, recipe management, compact housing and flexible expandability. The browser-based control system allows you to control the appliances and systems from any device (PC, Mac, smartphone and tablet).

Please contact us to select and customise the devices. We will be happy to help you customise the devices for the corresponding application. NORMAG Labor- und Prozesstechnik GmbH also designs and manufactures special devices that are designed for specific applications in consultation with the customer.





## Easy control unit (order no.: CUeasy01)

Our Control Unit Easy is the redesign of our tried and tested products "Taktgeber 1" and "Taktgeber 1".

"Timer 2". You will find all the functions of cycle timer 1 and cycle timer 2 on the Easy. The Easy is an electronic timer for setting the return ratio of rectification systems (return/acceptance times). As usual, the Easy has the clock generator with monitoring of the head temperature. It is therefore suitable as a control unit for liquid dividers and vapour divider systems and can be used as a clock generator, temperature display and clock generator depending on the temperature or fixed return ratio.

The setting range for the return/acceptance times is 0-9999 s with a measuring resolution of 1 s. The temperature range for temperature monitoring is between -50 - 250°C with a measuring accuracy of 0.1°C. A Pt 100 with transmitter (4-20 mA) is used as the measuring sensor. The measured value and the times can be displayed digitally in parallel.

The following accessories are optionally available for the CU Easy: electromagnet for liquid divider, holder for electromagnet, connection cable for electromagnets, Pt 100 resistance thermometer with transmitter or Lemosa connection and prefabricated connection cables for the sensors.



## Control Unit Pro2

Our newly developed Control Unit Pro2 is suitable for the control and/or remote control of small or medium-sized laboratory systems. It has 12 analogue inputs, 8 digital inputs and inputs, 8 digital outputs (4 floating) and 6 analogue outputs. There are also 3 load outputs as connection options with max. 2 kW/connection. The software of the CU Pro2 enables the control of aggre-

The system offers a wide range of functions, such as the display of measured values, process control, recipe management, archiving and safety shutdowns. The processes can be visualised on a PC or tablet. We are happy to offer you further customisation options on request. Please note that the CU Pro2 is only sold in combination with a system.



Power [Watt]	Installation length [mm]	Flange	Order no.
250/ 1000	180/ 260	NS 29/32	CUpro2

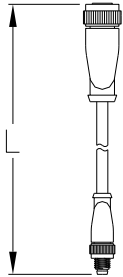
## Pt 100 with transmitter for GL screw connections



Glass tube design d [mm]	Installation length [mm]	Order no.
8	100 (photo right)	MTTLT08/100
8	150 (photo right)	MTTLT08/150
8	250 (photo left)	MTTLT08/250

- for use with CU Pro+, CU Basic and CU Easy
- Not suitable for older devices such as cycle generator 1/2, USG, power controller
- Ex variant on request

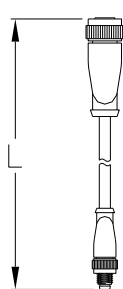
## Cable for Pt 100 with transmitter



Length [m]	Socket - plug	Order no.
3	M12 - M8	MTCT03/M12/M8
5	M12 - M8	MTCT05/M12/M8
10	M12 - M8	MTCT10/M12/M8
3	M8 - M8	MTCT03/M8/M8
5	M8 - M8	MTCT05/M8/M8
10	M8 - M8	MTCT10/M8/M8

- ESR 12171 01 serves as an extension

## Adapter Pt 100-CU

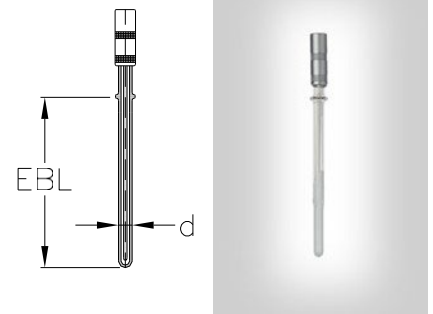


Length [m]	Plug	Order no.
0,2	M5 - M5	MTCTA02/M5/M5

- for the connection of Pt 100 with art. no. ESR 12148 XX and ESR 12150 XX with the CU Pro+ and the CU Basic

Pt 100 for GL screw connections

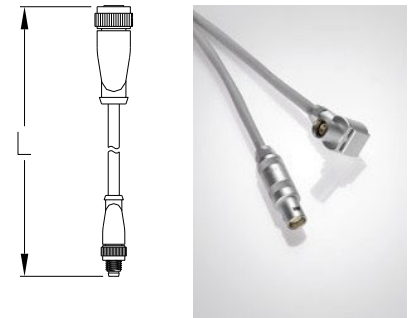
Glass tube design d [mm]	Installation length [mm]	Order no.
8	50	MTTL08/050
8	100	MTTL08/100
8	150	MTTL08/150
8	200	MTTL08/200
8	250	MTTL08/250
8	300	MTTL08/300



- Ex variant on request
- available in any length, order no. ESR 12150

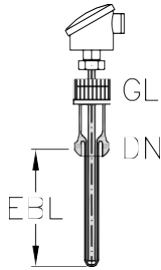
Pt 100 cable

Length [m]	Order no.
2	MTLC02
4	MTLC04
6	MTLC06
8	MTLC08
10	MTLC10



- for Pt 100 and ESR XXX
- Use with third-party devices or older NORMAG measurement and control technology

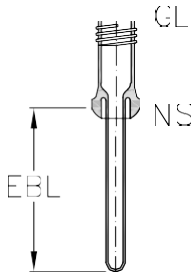
## Pt 100 with flange connection



- Ex variant available on request
- Available in any length

Nominal size DN	Nominal size GL	Installation length [mm]	Order no.
15/F1	25	200	MTT15/0200-F1
15/F1	25	300	MTT15/0300-F1
15/F1	25	500	MTT15/0500-F1
15/F1	25	750	MTT15/0750-F1
15/F1	25	1000	MTT15/1000-F1
15/F4	25	200	MTT15/0200-P
15/F4	25	300	MTT15/0300-P
15/F4	25	500	MTT15/0500-P
15/F4	25	750	MTT15/0750-P
15/F4	25	1000	MTT15/1000-P

## Glass part for Pt 100 with flange connection



- Any length available on request

Nominal size DN	Nominal size GL	Installation length [mm]	Order no.
15/F1	25	200	MT015/0200-F1-SP01
15/F1	25	300	MT015/0300-F1-SP01
15/F1	25	500	MT015/0500-F1-SP01
15/F1	25	750	MT015/0750-F1-SP01
15/F1	25	1000	MT015/1000-F1-SP01
15/F4	25	200	MT015/0200-P-SP01
15/F4	25	300	MT015/0300-P-SP01
15/F4	25	500	MT015/0500-P-SP01
15/F4	25	750	MT015/0750-P-SP01
15/F4	25	1000	MT015/1000-P-SP01

## Limit contact measurement for GL fittings

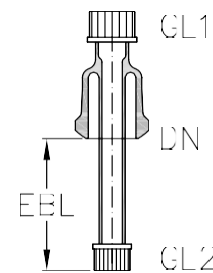
Glass tube design d [mm]	Length h [mm]	Order no.
8	100	MLSL08/100
8	200	MLSL08/200
8	300	MLSL08/300
8	400	MLSL08/400
8	500	MLSL08/500



- for measuring the min. and max. fill level
- Ex variant on request
- available in any length, art. no. ESR 12130

## Glass part for pH value measurement with flange connection

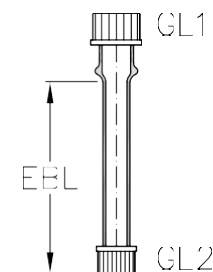
Nominal size DN	Nominal size GL 1	Nominal size GL2	Installation length [mm]	Order no.
40/F1	32	25	200	MpH40/0200-F1-SP01
40/F1	32	25	300	MpH40/0300-F1-SP01
40/F1	32	25	500	MpH40/0500-F1-SP01
40/F1	32	25	750	MpH40/0750-F1-SP01
40/F1	32	25	1000	MpH40/1000-F1-SP01
40/F4	32	25	200	MpH40/0200-P-SP01
40/F4	32	25	300	MpH40/0300-P-SP01
40/F4	32	25	500	MpH40/0500-P-SP01
40/F4	32	25	750	MpH40/0750-P-SP01
40/F4	32	25	1000	MpH40/1000-P-SP01



- available in any installation length, Art. No. ESR 12120
- including screw connection GI25/12 PTFE, GI32 screw caps with seal, for cable feed-through
- please ask us about the sensors

## Glass part for pH value measurement with GL connection

Nominal size GL 1	Nominal size GL2	Installation length [mm]	Order no.
32	25	150	MpHGL32/150-SP01
32	25	200	MpHGL32/200-SP01
32	25	250	MpHGL32/250-SP01
32	25	300	MpHGL32/300-SP01
32	25	350	MpHGL32/350-SP01
32	25	400	MpHGL32/400-SP01



- any installation length available, Art. No. ESR 12120
- including screw connection GI25/12 PTFE, GI32 screw caps with seal, for cable feed-through
- please ask us about the sensors
- A GL 32 or GL 45 is required for fastening

## Electromagnet for liquid divider



Order no.

MKSM01

- Attention: new product! Old electromagnet is no longer available.
- Operating voltage is 24 VDC

## Electromagnet for vapour divider



Order no.

MKSMS01

- Attention: new product! Old electromagnet is no longer available.
- Operating voltage is 24 VDC

## PTFE seat for magnets for vapour dividers



Size

1

Order no.

KPLMS01

- Bracket on request