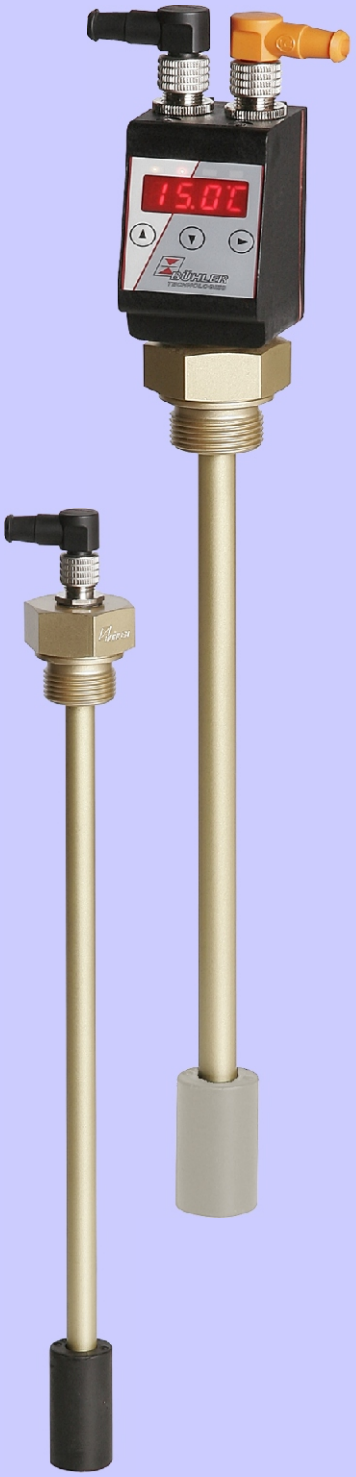
Nivotemp NT-M

Level and temperature switch with display NT-MD

- Two fixed switch outputs for liquid level monitoring
- Highly visible LED display indicates the switching outputs, able to rotate 270°
- Menu structure based on VDMA guidelines
- Up to four programmable temperature switching outputs
- Continuous temperature signal (adjustable current or voltage) plus one programmable output
- Switching output adjustable as window or hysteresis
- Two switching outputs adjustable as frequency output (1 to 100 Hz)
- Min/Max memory, logbook function



Level and temperature switch NT-M

- G3/4” connection thread
- Multiple connector options
- Level and temperature control
- Up to four outputs
- Compact design with small dimensions
- Reliable dynamic float system
- Housing material brass or stainless steel

Bühler Technologies GmbH
D - 40880 Ratingen, Harkortstr. 29
Tel.: + 49 (0) 2102 / 4989-0 Fax: + 49 (0) 2102 / 4989-20
Internet: www.buehler-technologies.com
e-mail: fluidcontrol@buehler-technologies.com

Technical data NT-M

Basic unit

max. operating pressure		1 bar	
operating temperature		-20 °C to +80 °C	
min. density of fluid		0.8 kg/dm³	
standard lengths	mm	280, 370, 500, variable up to max. 1000	
weight at L=280 mm		**MS**	**VA**
	app.	290 g	220 g
plus per 100 mm	app.	15 g	15 g

Material	**MS**	**VA**
immersion tube	MS	1.4571
flange G 3/4	MS	1.4571
float	NBR	NBR

Level contacts	**K8**	**W9**
function	NC / NO*	change over
min. distance of contacts	40 mm	40 mm
max. operating voltage	230 V	48 V
max. current	0.5 A	0.5 A
max. contact load	10 VA	20 VA

* NC = normally closed / NO = normally open, all figures with empty reservoir

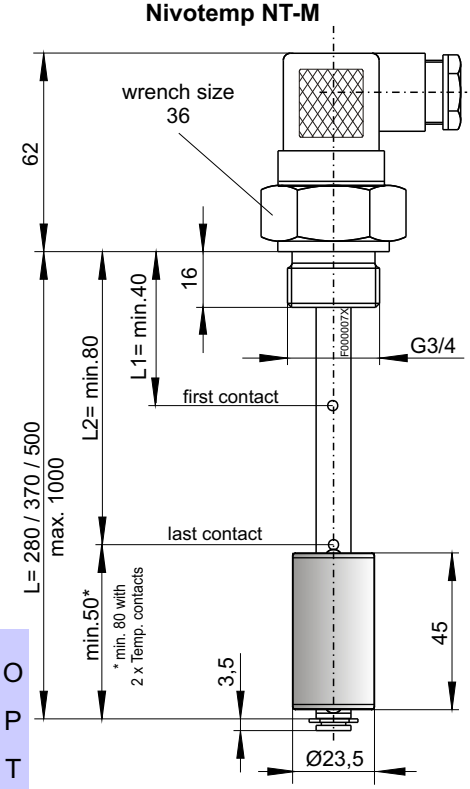
OPTIONAL

Temperature contact		**TM**	
max. operating voltage		230 V	
max. current		2 A	
max. contact load		100 VA	
switch-point tolerance		± 5 K	
function		**NC***	**NO***
switch-point	in °C	50 / 60 / 70 / 80	50/60/70/80
Hysteresis		18 K ± 5 K	26/35/40/45 K ± 5 K

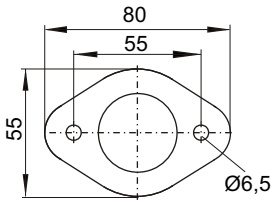
* NC = normally closed / NO = normally open at **low temperature**
(other temperatures on request)

Temperature sensor	**RTD (Pt 100)** class B, DIN EN 60 751
tolerance	± 0.8 °C
G1	Adapter G3/4 to G1
OV	Adapter on oval flange incl. gasket and counter nut

Nivotemp NT-M



Adapter on oval flange



Product code for NT-M

NT-M- ☐ ☐ ☐ ☐ ☐ **A** **B** ☐

Series
Nivotemp **NT-M**

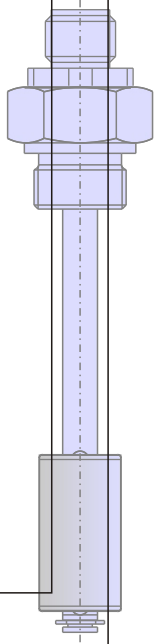
Material
MS
VA

Connector
M3
GS4
M12 (accessories see page 4)
C7

Length max. 1000 mm
280
370
500
Variable (please quote)

 # level contacts
1-4

Level contact type
K = NC/NO
W = change over (max. 2 pieces)



Option
OV = oval flange
G1 = Adapter on G1"

OPTIONAL

only for double temp. contact
B 2. Temperature contact

NC	NO
TM50NC	TM50NO = 50 °C
TM60NC	TM60NO = 60 °C
TM70NC	TM70NO = 70 °C
TM80NC	TM80NO = 80 °C

A Temperature
Pt 100* = Temperature sensor

Temperature contact

NC	NO
TM50NC	TM50NO = 50°C
TM60NC	TM60NO = 60°C
TM70NC	TM70NO = 70°C
TM80NC	TM80NO = 80°C

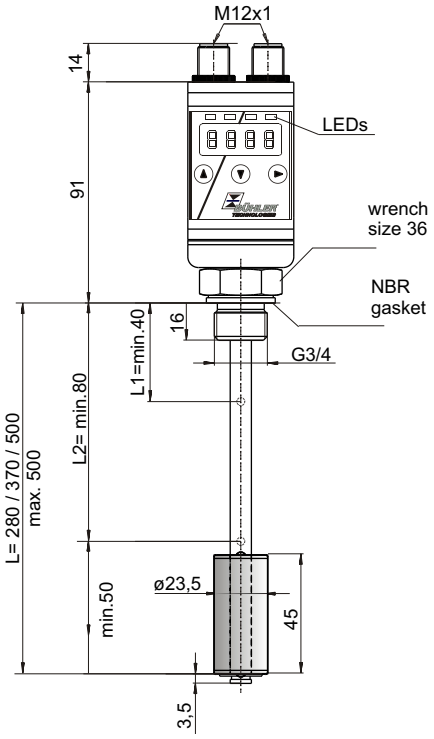
* not available with temperature contact

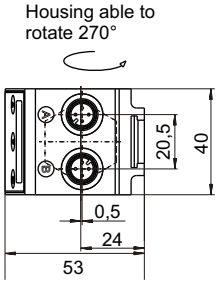
Example for order
You need: Level switch with connector G3/4, brass design, length L= 500 mm, 2 level contacts, 1st contact 100 mm NC, 2nd contact 450 mm NO
You order: NT-M-MS-M3 / 500-2K L1=100 NC , L2 = 450 NO

We reserve the right to amend specifications

Technical data NT-MD

Nivotemp NT-MD





Basic unit		
max. operating pressure		1 bar
operating temperature		-20 °C to +80 °C
min. density of fluid		0.8 kg/dm³
standard lengths	mm	280, 370, 500, variable up to max. 500
weight at L=280 mm		**MS**
	app.	390 g
plus per 100 mm	app.	15 g
Material		**MS**
immersion tube		MS
flange G 3/4		MS
float		PU
Level contacts		**K8**
function		NC / NO*
min. distance of contacts		40 mm
max. operating voltage		230 V
max. current		0.5 A
max. contact load		10 VA

* NC = normally closed / NO = normally open, all figures with empty reservoir

Display	
display housing	PA
temperature display range	-20 °C to +120 °C (4 °F to 248 °F)
alarm indicator range	0 °C to 100 °C (32 °F to 178 °F)
accuracy	1%
resolution	0.5 °C (1 °F)
protection class	IP65
display	4 digit 7 segment LED display
operation	3 button keypad
current consumption at power up	approx. 100 mA for 100 ms
operating current consumption	approx. 50 mA
supply voltage (U_B)	10 V to 30 V DC (nominal voltage 24 V DC)
ambient temperature	-20 °C to +70 °C
Temperature sensor	Pt 100 (RTD) class B DIN / IEC 751

Following output options are available:

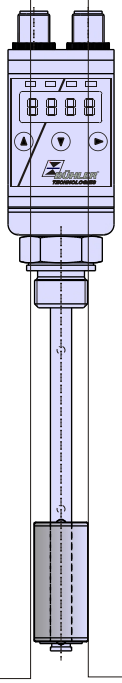
Type	**-2T**	**-1T-KT**	**-4T**
connector (base)	2 x M12, 4 pole	2x M12, 4 pole	1x M12, 4 pole 1x M12, 8 pole
PNP transistor output, free programmable	2	1	4
max. current per output sustained short circuit-proof	0.5 A	0.5 A	0.5 A
max. contact load (overall)	1 A	1 A	1 A
analogue output		1x 4-20 mA / 2-10 V / 0-10 V / 0-5 V	
load analog output		max. 500 Ω	

OPTIONS

We reserve the right to amend specifications.

Product code for NT-MD

NT-MD- ☐ -2M12- ☐ ☐ ☐ ☐ ☐ ☐ ☐



Series
Nivotemp **NT-MD**

Material
MS

Connector
2 M12

Length mm max. 500
280
370
500
Variable (please quote)

#level contacts
1K or 2K
K = NC/NO
not adjustable

Position L1=...mm
1st level contact

OPTIONS

-2T
LED Temperature display
2 x Temperature output

4T
LED Temperature display
4 x Temperature output

1T-KT
LED Temperature display
1 x Temperature output
1 x Analogue output

Switch function 2nd contact
NO =open at low level
NC =closed at low level

Position L2=...mm
2nd level contact

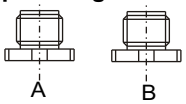
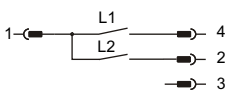
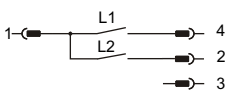
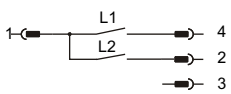
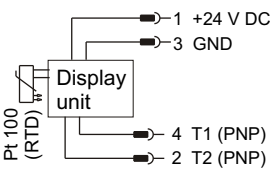
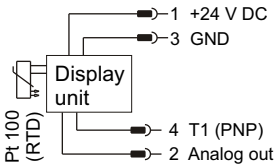
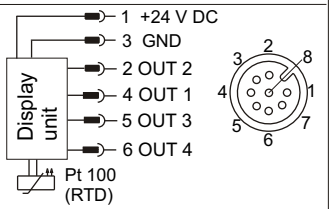
Switch function 1st contact
NO =open at low level
NC =closed at low level

Accessories

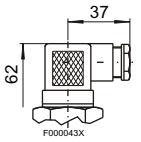
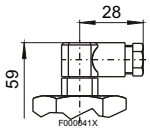
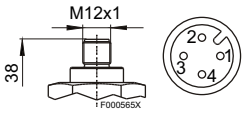
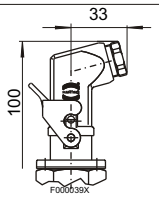
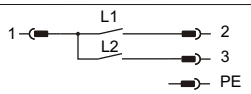
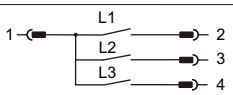
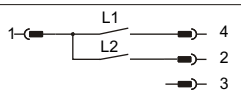
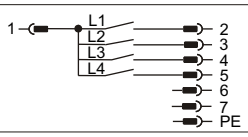
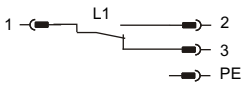
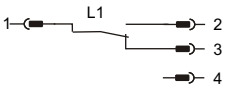
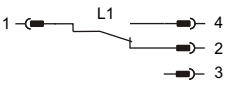
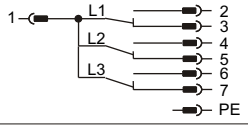
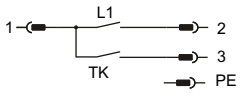
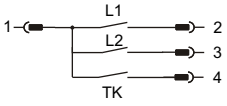
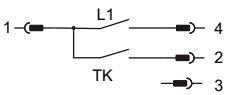
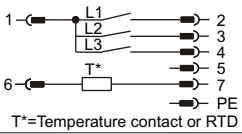
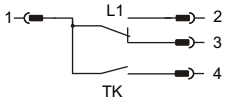
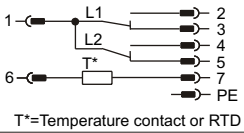
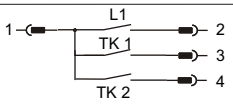
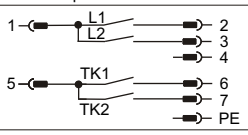
Part-No. 4-pole	Part-No. 8-pole	Connecting Cable
9144 05 0010	9144 05 0048	M12x1, 1.5 m, elbow connector (female) and straight connector (male)
9144 05 0046	9144 05 0049	M12x1, 3.0 m, elbow connector (female) and straight connector (male)
9144 05 0047	9144 05 0033	M12x1, 5.0 m, elbow connector (female) and wire

Example for order
You need: Level switch with connector G3/4, brass design, length L= 500 mm, 2 level contacts, 1st contact 100 mm NC, 2nd contact 450 mm NO, temperature analysis with display and 2 programmable outputs
You order: NT-MD-MS-2M12 / 500-2K-100 NC-450 NO-2T

Nivotemp NT-MD

Standard pin assignment 	**Type NT-MD-2T** Level contact(s) 2 x Temperature output	**Type NT-MD-1T-KT** Level contact(s) 1 x Temperature output 1 x Analogue output	**Type NT-MD-4T** Level contact(s) 4 x Temperature output
Connector A: Level 			
Connector B: Temperature 			

Nivotemp NT-M

Connector max. voltage protection class cable gland	**M3** (DIN EN 175301-803) 3 pol. + PE 230 V* IP 65 PG 11	**GS4** 4 pol. 30 V IP 65 PG 7	**M12** (base) 4 pol. 30 V IP 67**	**C7** (DIN EN 175201-804) 7 pol. + PE 230 V* IP 65 PG 11
Standard pin assignment				
level contact(s) only type K8				
level contact(s) only type W9				
level contact(s) K8 and temperature contact (TM)				 T*=Temperature contact or RTD
level contact(s) W9 and temperature contact (TM)				 T*=Temperature contact or RTD
level contact(s) K8 and temperature contact (TM)				

* max. 48V at change over contact

** with casted connector head

We reserve the right to amend specifications.