

## ***Level and temperature switch with display NT-MD***

- two fixed switch outputs for the liquid level surveillance
- Highly visible LED display with status indication of the switching outputs, turnable 270°
- menu structure based on VDMA guideline 24574 ff.
- up to four programmable temperature switching outputs
- alternatively continuous temperature signal (current or voltage adjustable) plus one free programmable switching output
- output characteristic for switching output adjustable as window or hysteresis
- two switching outputs adjustable as frequency output (1 to 100 Hz)
- Min/Max memory, logbook

## ***Niveau- and temperature switch NT-M***

- G3/4" connection thread
- various connector options
- Level and temperature control
- up to 4 outputs
- compact design with small dimensions
- reliable, dynamic float system
- housing material brass or stainless steel



## Technical data

## NT-M

### Basic unit

operating pressure	max. 1 bar	
operating temperature	-20 °C to +80 °C	
spec. density of fluid	min. 0,8 kg/dm <sup>3</sup>	
lengths in mm	280, 370, 500 (standard), variable to max 1000	
weight	<b>MS</b>	<b>VA</b>
at L=280 mm	approx. 290 g (approx. 390 g)*	approx. 220 g (approx. 320 g)*
	approx. 15 g	approx. 15 g

plus per 100 mm

\*value in brackets for NT-MD

### Material

immersion tube	<b>MS</b>	<b>VA</b>
flange G 3/4	MS	1.4571
float	MS	1.4571
	PU	PU

### Level contacts

function	<b>K8</b>	<b>W9</b>
min. distance of contacts	fC / fO*	change over
max. operating voltage	40 mm	40 mm
max. current	230 V	48 V
max. contact load	0,5 A	0,5 A
	10 VA	20 VA

\* fC = falling closer / fO = falling opener

### Temperature contact

max. operating voltage	<b>TM</b>	
max. current	230 V	
max. contact load	2 A	
switch-point tolerance	100 VA	
function	<b>NC*</b>	<b>NO*</b>
switch-point °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**

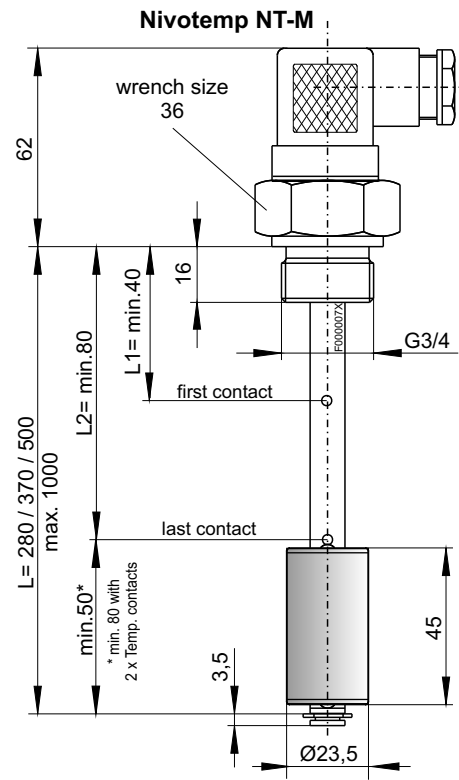
other temperatures on request

### Temperature sensor

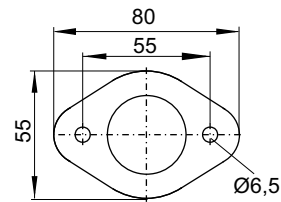
**RTD (Pt 100)** class B, DIN EN 60 751

tolerance ± 0,8 °C

G1	Adapter G3/4 on G1
OV	Adapter on oval flange incl. gasket and counter nut



Adapter on oval flange



OPTIONAL

## 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)

### Quantity level contacts

**1-4**

### Level contact type

**K** = opener / closer

**W** = change over (max. 2 pieces)

### Option

**OV** = oval flange

**G1** = Adapter on G1"

### only for double temp. contact

**B** 2. Temperature contact

opener	closer	
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TM50NC	TM50NO	=50°C
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TM60NC	TM60NO	=60°C
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TM70NC	TM70NO	=70°C
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TM80NC	TM80NO	=80°C
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### A Temperature

Pt 100\* = Temperature sensor

Temperature contact		
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opener	closer	
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TM50NC	TM50NO	=50°C
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TM60NC	TM60NO	=60°C
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TM70NC	TM70NO	=70°C
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TM80NC	TM80NO	=80°C
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\* 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, 1. contact 100 mm falling closer, 2. contact 450 mm falling opener I

You order: NT-M-MS-M3 / 500-2K L1=100 fC , L2 = 450 fO

# Nivotemp

# NT-MD

## Display

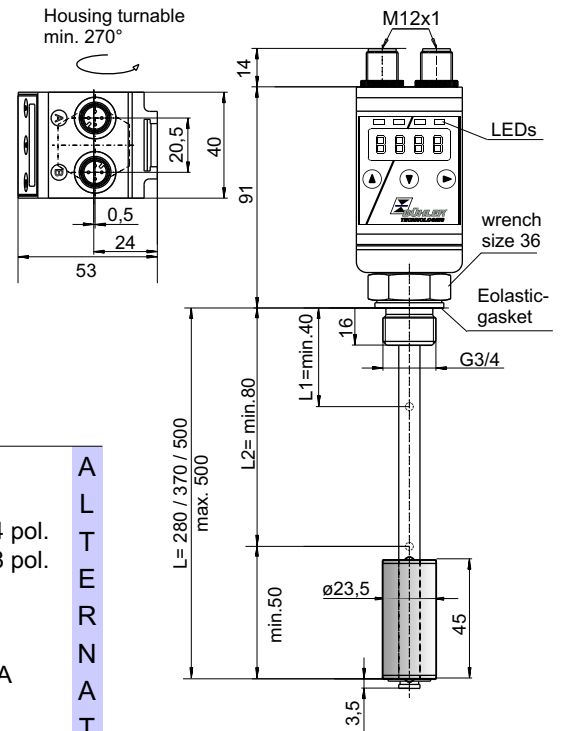
display housing	PA
temperature display range	-20 °C to +120 °C (4 °F to 248 °F)
indication range alarm	0 °C to 100 °C (32 °F to 178 °F)
accuracy	1%
resolution	0,5 °C (1 °F)
protection class	IP65
display	4 digit 7 segment LED display
operation	via 3 keys
current consumption at power up	approx. 100 mA for 100 ms
operating current consumption	approx. 50 mA
supply voltage (U <sub>B</sub> )	10 V to 30 V DC (nominal voltage 24 V DC)
ambient temperature	-20 °C to +70 °C
<b>Temperature sensor:</b>	Pt 100 class B DIN / IEC 751

Following output options are available:

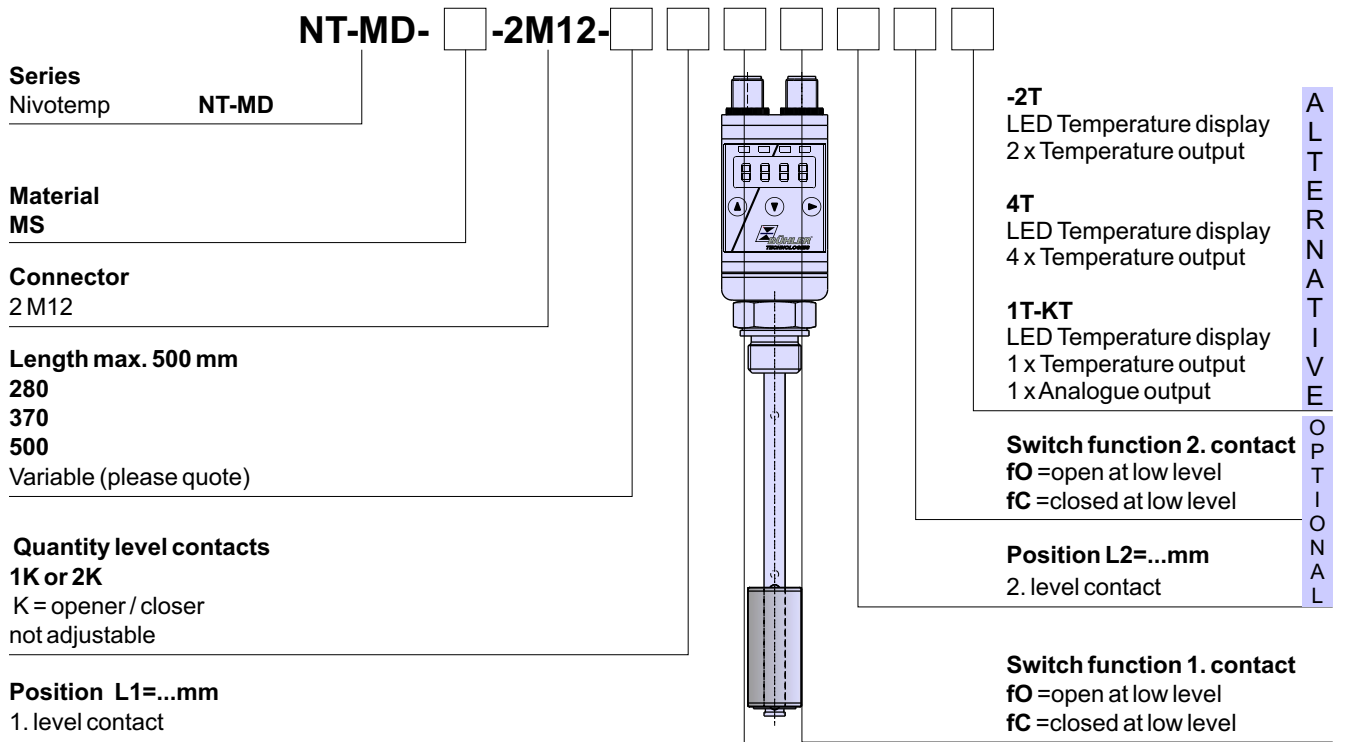
Type	-2T	-1T-KT	-4T
connector (base)	2 x M12, 4 pol	2x M12, 4 pol	1x M12, 4 pol. 1x M12, 8 pol.
max. contact load	1 A	1 A	1 A
PNP transistor output, free programmable	2	1	4
current per PNP output	max 0,5 A	max. 0,5 A	max. 0,5 A
analogue output		1x 4-20 mA / 2-10 V / 0-10 V / 0-5 V	
load analogue output		max. 500 Ω	

A  
L  
T  
E  
R  
N  
A  
T  
I  
V  
E

# Nivotemp NT-MD



## Product code for NT-MD



## Accessories

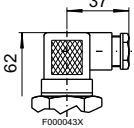
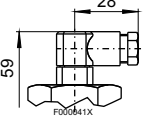
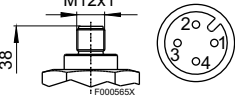
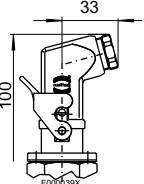
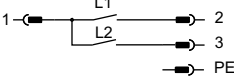
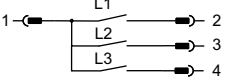
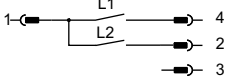
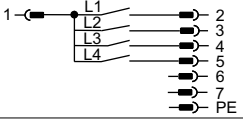
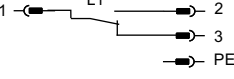
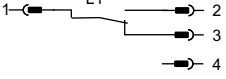
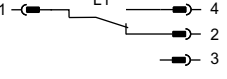
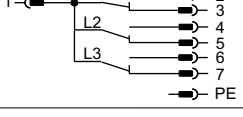
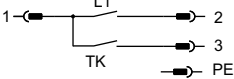
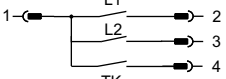
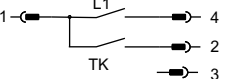
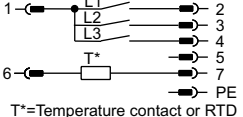
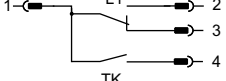
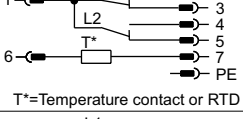
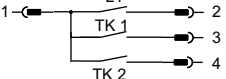
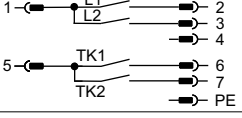
Part-No. 4-pole	Part-No. 8-pole	Description
9144 05 0010	9144 05 0048	Connecting cable M12x1, 1,5 m, elbow connector (female) and straight connector (male)
9144 05 0046	9144 05 0049	Connecting cable M12x1, 3,0 m, elbow connector (female) and straight connector (male)
9144 05 0047	9144 05 0033	Connecting cable 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, 1. contact 100 mm closed at low level, 2. contact 450 mm open at low level, temperature analysis with display and 2 programmable outputs

You order: NT-MD-MS-2M12 / 500-2K-100 fC-450 fO-2T

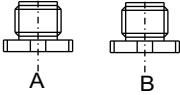
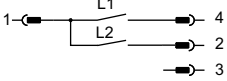
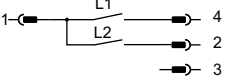
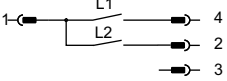
# Nivotemp NT-M

Connector	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
max. voltage protection class cable connection				
Standard pin assignment				
level contact(s) only Type K8				
level contact(s) only Type W9				
level contact(s) K8 and temperature contact (TM)				
level contact(s) W9 and temperature contact (TM)				
level contact(s) K8 and temperature contact (TM)				

\* max. 48V at change over contact

\*\* with casted connector head

# 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	