

## ***Level and temperature switch with display NV64D***

- highly visible LED display with status indication of the switching outputs, turnable 270°
- menu structure based on the VDMA guideline 24574 ff.
- 2 wireless, adjustable level contacts
- up to 4 programmable temperature switching outputs
- alternatively continuous temperature output 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 function

## ***Level and temperature switch NT 64***

- wireless, adjustable level contacts
- flange according to DIN 24557 part 2
- various connector options
- up to 4 level contacts or 2 outputs for level plus RTD or analogue output for temperature
- reliable, dynamic float system
- stainless steel option for temperatures up to 150°C
- probe length up to 1.5 m (longer on request)
- 24 V standard, 230 V on request



# Technical data

# NT 64

## Basic unit

operating pressure	max. 1 bar
operating temperature	-20 °C to +80 °C
min. spec. density of fluid	0,80 kg/dm <sup>3</sup> with float SK 601 0,85 kg/dm <sup>3</sup> with float SK 221
length	280, 370, 500

Material / Design	MS	VA
float	hard PU (SK 601)	1.4571 (SK 221)
immersion tube	brass	1.4571
flange (DIN 24557)	PA	PA

Level contacts	K	W
function	fO / fC*	change over
max. quantity	4	2
max. voltage	30 V	30 V
max. current	0,5 A	0,5 A
max. contact load	10 VA	20 VA
min. distance of contact	40 mm	40 mm

\*fO= falling opener / fC = falling closer

## included in delivery

fixing bolts (6 pieces) and GI cork-gasket

Temperature contact	TK
max. voltage	30 V
max. current	2,5 A
max. contact load	100 VA

Function	NC	NO
switching point °C	50 / 60 / 70 / 80	50 / 60 / 70 / 80
switching point tolerance	± 3 K	± 3 K
max. hysteresis	10 K ± 3 K	10 K ± 3 K

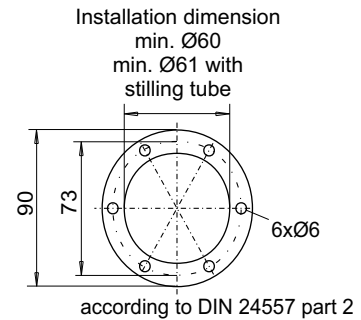
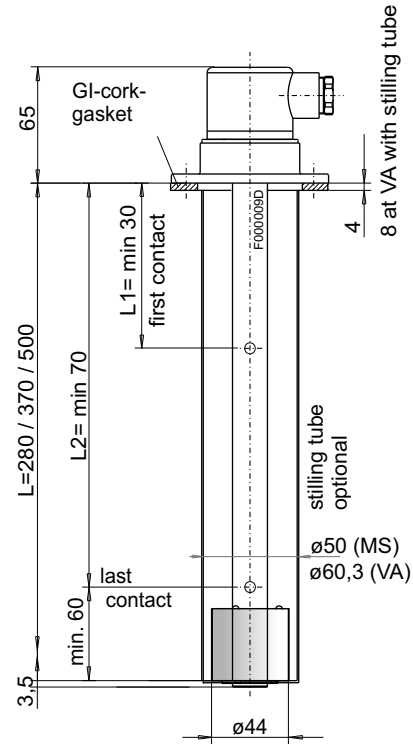
NC = opener / NO = closer (figures at increasing temperature)

Temperature sensor	Pt 100 class B, DIN EN 60751
tolerance	±0,8°C

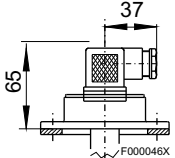
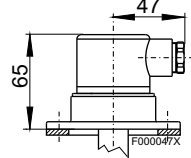
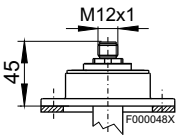
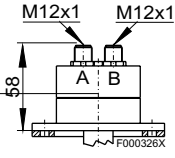
Temperature transmitter	KT
probe element	Pt 100 class B, DIN EN 60751
measuring range	0 °C to +100 °C
operating voltage (U <sub>B</sub> )	10 - 30 V DC
output	4 - 20 mA
load Ω max.	(U <sub>B</sub> - 7,5 V) / 0,02 A
other measurement ranges on request	

## Option

**SSR** - stilling tube material same as immersion tube



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Connector	M3	S6	M12 (base)	2 x M12 (base)
max. voltage	3 pol. + PE DIN EN 175301-803 30 V AC/DC	6 pol. + PE DIN EN 175201-804 30 V AC/DC	4 pol. 30 V DC IP 67**	2 x 4 pol. 30 V DC IP 67**
protection class	IP 65	IP 65		
cable connection	PG 11	M20 x 1,5		
max. quantity of contacts				
- Level/Temp. contact	1 x K / 1 x TK - / -	3 x K / 1 x TK 1 x W / 1 x TK	1 x K / 1 x TK - / -	3 x K 10 / 1 x TK 1 x W11 / 1 x TK
- level only	2 x K 1 x W	4 x K 2 x W	2 x K 1 x W	4 x K 2 x W

\*\*with casted connector head / on request other connectors

# Product code for NT 64

NT 64-

**Series**  
Nivotemp **NT 64**

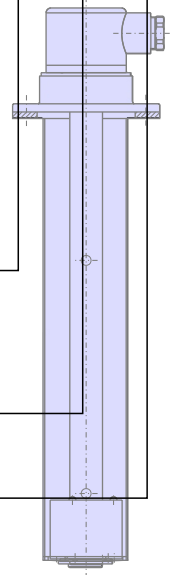
**Design**  
**MS** brass  
**VA** float and immersion tube VA

**Connector**  
**M3**  
**S6**  
**M12**  
**2M12**

**Length**  
**280**  
**370**  
**500**

**Quantity level contacts**  
**1-4**

**Level contact**  
**K** = opener / closer  
**W** = change over



**Accessories**  
SSR = stilling tube

**Temperature**

Pt 100 = Temperature sensor (RTD)  
KT = Temperature transmitter

TK = Temperature contact  
T50NO = 50 °C closer  
T60NO = 60 °C closer  
T70NO = 70 °C closer  
T80NO = 80 °C closer

T50NC = 50 °C opener  
T60NC = 60 °C opener  
T70NC = 70 °C opener  
T80NC = 80 °C opener

### Example for order

You need: Level switch with flange, brass, connector S6, length L = 500 mm, 2 x level contacts and temperature contact TK 80 as opener, 1. contact 100 mm falling closer, 2. contact 420 mm falling opener

You order: NT 64-MS-S6/ 500 - 2K -T80NC, L1=100 fC, L2 = 420 fO

## Standard pin assignment NT 64

Connector	M3 (DIN 43650)	S6 (DIN 46651)	M12 ( base )	2 x M12 ( base )
only level contact(s) Type K				
only level contact(s) Type W				
Level contact(s) Type K and temperature				
Level contact(s) Type W and temperature				
Level contact(s) Type K and Pt 100 (RTD)				

TK = Thermo contact

KT = Temperature transmitter

PT = Temperature sensor Pt 100 (RTD)

other assignments on request

## Technical data

## NT 64D

### Basic unit

max. operating pressure	1 bar
operating temperature	-20 °C to +80 °C
min. spec. density of fluid	0,80 kg/dm <sup>3</sup> with float SK 601 0,85 kg/dm <sup>3</sup> with float SK 221
lengths	280, 370, 500

### Material / Design

	MS	VA
display housing	PA	PA
float	hard PU (SK 601)	1.4571 (SK 221)
immersion tube	brass	1.4571
flange (DIN 24557)	PA	PA
SSR (option)	brass	VA

### Level contacts

	K10
max. quantity	2
function	fC / fO*
max. voltage	30 V
max. current	0,5 A
max. contact load	10 VA
min. distance of contact	40 mm

\*fO= falling opener / fC = falling closer

### included in the delivery

fixing bolts (6 pieces) and GI cork-gasket

### Display

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	by 3 buttons
current consumption at power up	approx. 100 mA for 100 ms
operating current consumption	approx. 50 mA
supply voltage (U <sub>B</sub> )	10 - 30 V DC (nominal voltage 24 V DC)
ambient temperature	-20 °C to +70 °C

### Temperature sensor:

Pt 100 class B, DIN EN 60751

The following temperature outputs are available:

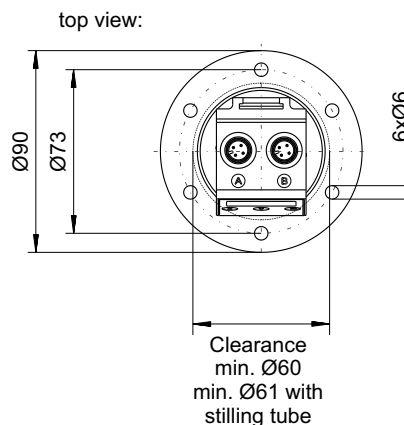
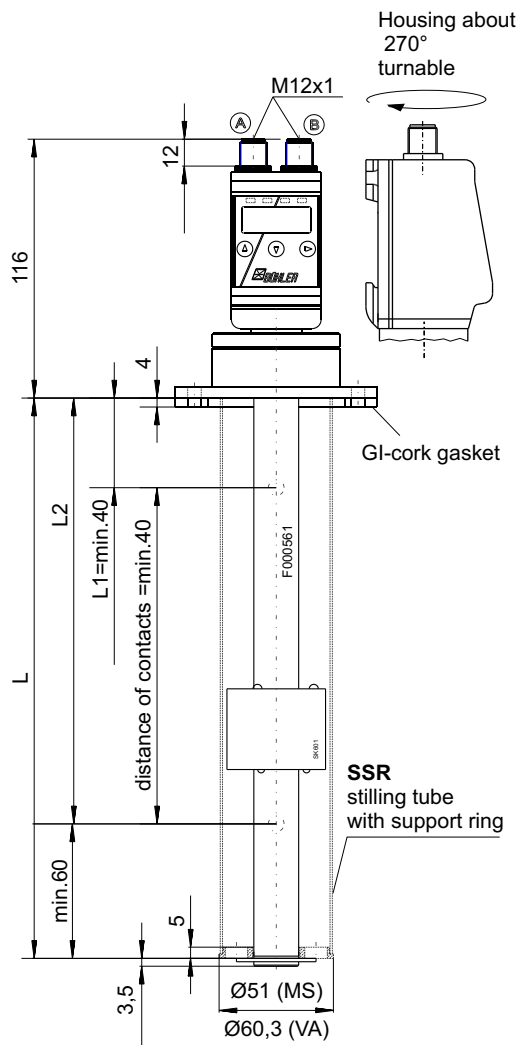
	-2T
connector (base)	2 x M12 - 4 pol
max. contact load	1 A
PNP transistor output, current PNP output	2 x free programmable max. 0,5 A per output

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

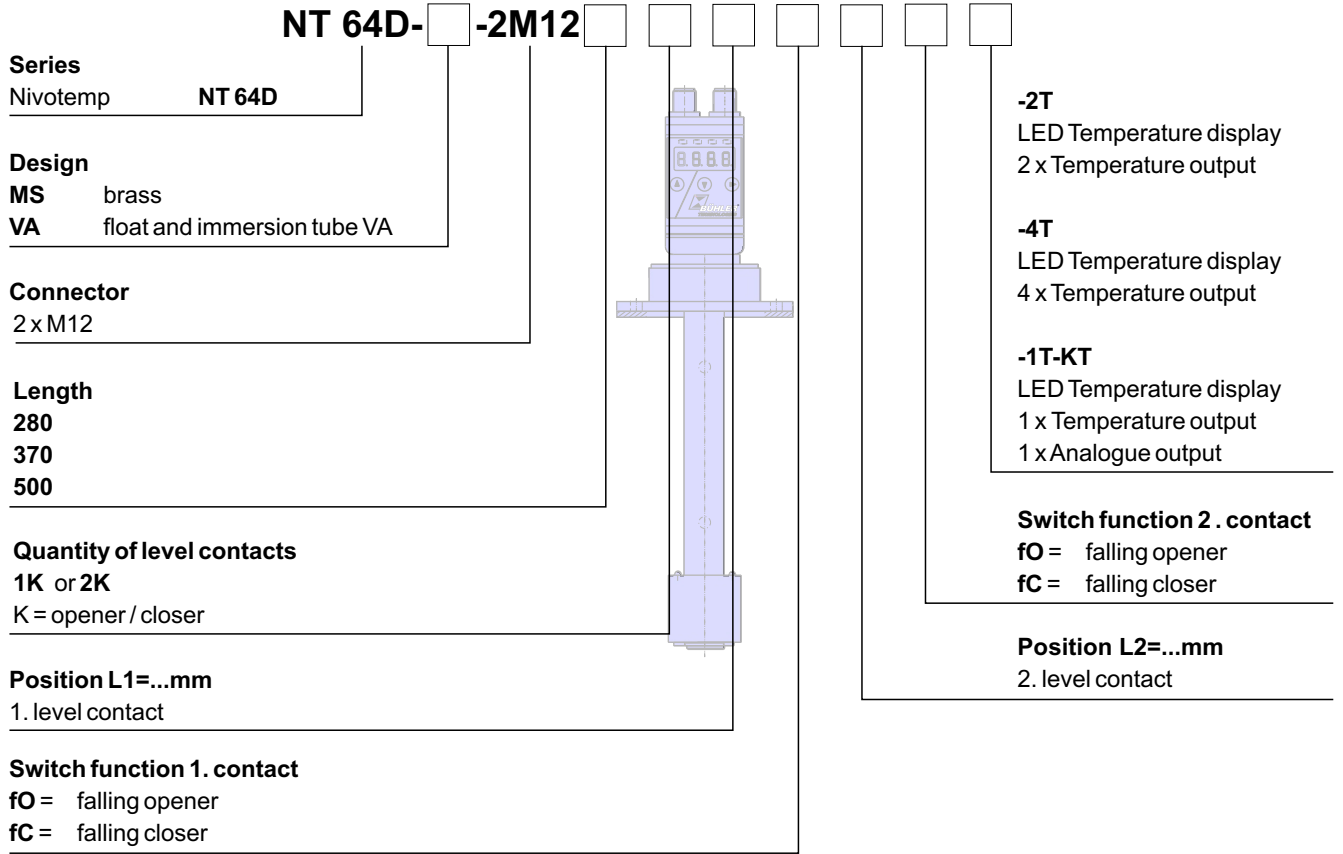
	-4T
connector (base)	1 x M12 - 4 pol. 1 x M12 - 8 pol.
max. contact load	1 A
PNP transistor output, current PNP output	4 x free programmable max. 0,5 A per output max. 1 A overall

### Option

stilling tube	<b>SSR</b> Material as immersion tube
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## Product code for NT 64D



### Accessories:

Part No.	Description
91 44 05 0010	Connecting cable M12x1, 4-pol., 1,5 m, elbow connector (female) and straight connector (male)
91 44 05 0046	Connecting cable M12x1, 4-pol., 3,0 m, elbow connector (female) and straight connector (male)
91 44 05 0047	Connecting cable M12x1, 4-pol., 5,0 m, elbow connector (female) and wire
91 44 05 0048	Connecting cable M12x1, 8-pol., 1,5 m, elbow connector (female) and straight connector (male)
91 44 05 0049	Connecting cable M12x1, 8-pol., 3,0 m, elbow connector (female) and straight connector (male)
91 44 05 0033	Connecting cable M12x1, 8-pol., 5,0 m, elbow connector (female) and wire

### Example for order

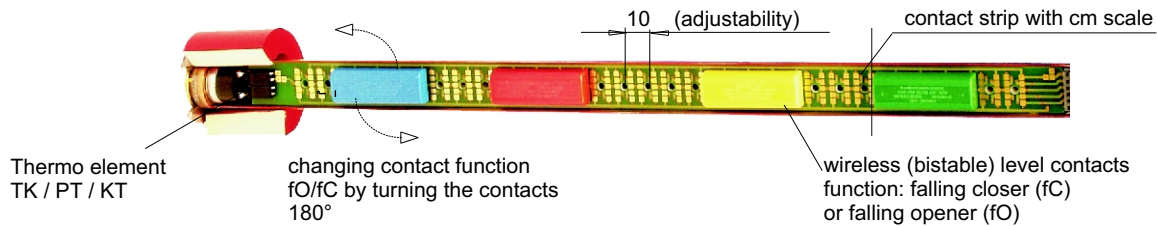
You need: Level switch with flange, Design MS, connector S6, length L = 500 mm, 2 x level contacts; 1. contact 100 mm falling closer, 2. contact 420 mm falling opener, with temperature display and 2x programmable temperature output

You order: NT 64D-MS-2M12/500-2K-100fC-420fO-2T

## Standard pin assignment NT 64D

	Type NT 64D-2T Level contact(s) 2 x Temperature output	Type NT 64D-1T-KT Level contact(s) 1 x Temperature output 1 x Analogue output	Type NT 64D-4T Level contact(s) 4 x Temperature output
<p>Connector A = level</p>			
<p>Connector B = temperature</p>			

## Das EasyJust System



Using adjustable level contacts allows the application of standardised immersion tubes in oil tanks of different sizes and geometrical shapes.

The switching points are changeable to the requirement of the individual application at any time without purchasing a specific level switch.

This facilitates design and logistics for the users and OEMs.

The level contacts are electric items which need to be in contact with the respective circuit. Therefore normally wires are used which results in difficult adjustability when using several contacts.

The Easy Just System is based on a wireless structure of the contacts.

The contacts are designed of closed and colour coded housings. They are positioned on a printed circuit board with gold plated contacts. The colours are used for the coding of the different contacts and assure the allocation of the connector's assignments.

The contacts' function (fO or fC) is determined by the 180° rotation on the printed circuit board.

An adjusted temperature switch (bi-metal, NO or NC), a Pt 100 (RTD) or a 4-20 mA transmitter is fixed at the lower end of the printed circuit board, depending on the chosen option for the temperature surveillance.