

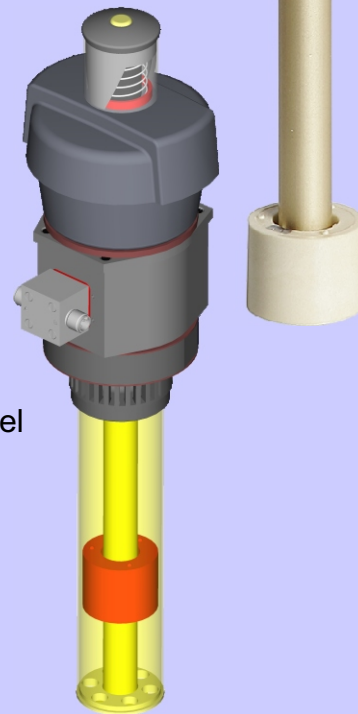
Level and temperature switch with display NV 71D

- highly visible LED display with status indication of the switching outputs
- qualified breather with replaceable element
- visual surveillance of breather optional
- up to 4 programmable temperature switching outputs
- alternatively continuous temperature output signal (current or voltage adjustable) plus one free programmable switching output
- output characteristic of the switching output adjustable as window or hysteresis
- Two switching outputs adjustable as frequency output (1 to 100 Hz)
- menu structure based on the VDMA guideline 24574 ff.
- Min/Max memory, logbook function



Level and temperature switch NV 71

- flange according to DIN 24557 part 2
- qualified breather with replaceable element
- visual surveillance of breather optional
- miscellaneous connector options
- up to 4 level contacts or 2 switching outputs for level plus RTD or analogue output for temperature
- reliable float system with high dynamic
- probe length up to 1,5 m (longer on request)
- up to 230 V applicable



Technical data

NV 71

Basic units

operating pressure max. 1 bar
 operating temperature -20 °C to +80 °C
 spec. density of fluid min. 0,80 kg/dm³ float SK 601
 0,85 kg/dm³ float SK 221
 lengths 280, 370, 500 (standard)
 variable to max. 1500

Breather filter

grade of filter **HY** Type Hydac BF 7
 3 µm
 additional equipment filling protection cover
 - not applicable for filling adapter -

Material / Design

float	MS	VA*
	hard PU	1.4571
	SK 601	SK 221
immersion tube	brass	1.4571
flange/ filter housing	PA	PA
SSR (option)	brass	VA

Level contacts

function	K10	W11
max. voltage	fO / fC	change over
max. current	230 V	48 V
max. contact load	0,5 A	0,5 A
min. distance between contacts	10 VA	20 VA
	40 mm	40 mm

fO = falling opener / fC = falling closer

Temperature contact

quantity temp. contacts	TK	TM
max. voltage	1	2
max. current	230 V	230 V
max. contact load	2,5 A	2 A
	100 VA	100 VA
Function	NC	NC
switching point °C	50/60/70/80	50/60/70/80
switching point tolerance	±3 K	±5 K
max. hysteresis	10 K ±3 K	26/35/40/45 K ±5 K

Function

switching point °C	NC	NC
switching point tolerance	50/60/70/80	50/60/70/80
max. hysteresis	± 3 K ± 5 K	26/35/40/45 K ±5 K

NC= normally open / NO = normally closed (at **low temperature**)
 other temperatures & designs with 2 x TK contact on request

Temperature sensor

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

Temperature transmitter

sensor element	KT
measurement range	Pt 100 class B, DIN EN 60751
operating voltage (U _B)	0 °C bis +100 °C
output	10-30 V DC
load Ω max.	4 - 20 mA
other measurement ranges on request	(U _B - 7,5 V) / 0,02 A

Options/ Accessories (see details on page 6)

VS visual clogging indicator for the breather
BFA** filling adapter incl. ribbed flange with sieve insert:
SSR** stilling tube with support ring and filling adapter
MT for Multiterminal
MTS for Multiterminal including stilling tube
FCT Fluidcontrolterminal

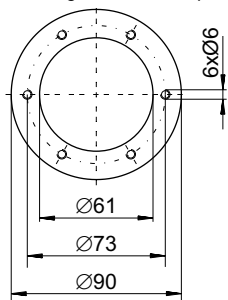
* not available in combination with the option **FCT**

** not available in combination with the option **FCT, MT and MTS**

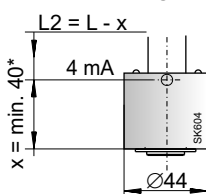
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Flange picture

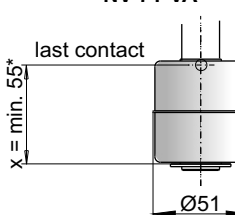
according to DIN 24557/part 2



Float SK 601 for NV 71-MS

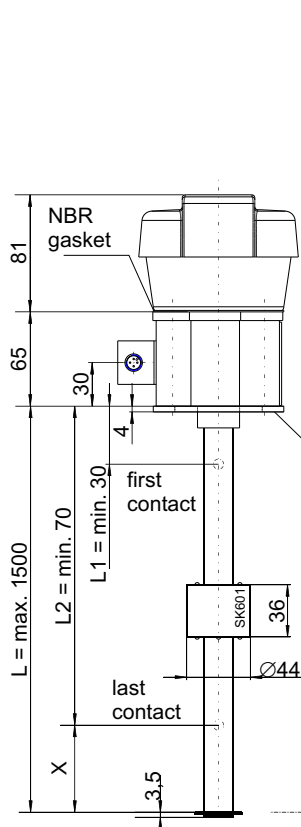


Float SK 221 for NV 71-VA

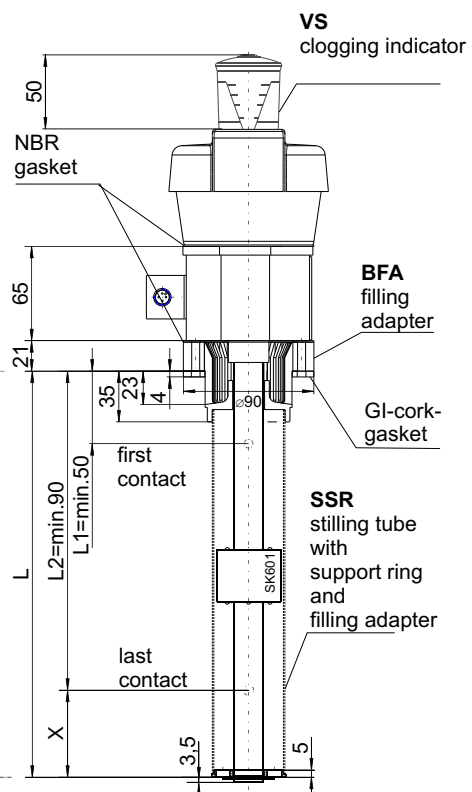


* min. 80 with temperature

Basic version



Design with options



Product code for NV 71

NV 71-HY- [] [] [] [] [] **A** [] **B** [] **C** [] []

Series

Nivovent NV 71-HY

Design

MS brass

VA* float with immersion tube VA

Connector

M3

S6

M12

2M12

Lengths (max. 1500 mm)

280

370

500

Variable (please quote)

Quantity level contacts

1-4

Level contact

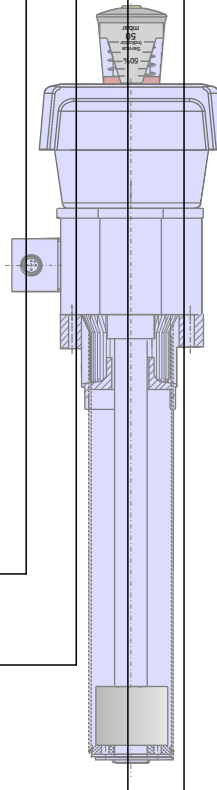
K = opener / closer

W = change over

* not available in combination with option FCT

** not available in combination with the option **FCT, MT and MTS**

***not for combination with temperature contact TM



Options / Accessories

VS = clogging indicator

BFA** = filling adapter

SSR** = stilling tube with filling adapter

MT = for Multiterminal

MTS = for Multiterminal incl. stilling tube

FCT = Fluidcontrolterminal

Only for double temp. contact

C T2 (2. Temperature contact)

Opener Closer

TM50NC TM50NO =50°C

TM60NC TM60NO =60°C

TM70NC TM70NO =70°C

TM80NC TM80NO =80°C

B T1 (1. Temperature contact)

Opener Closer

TM50NC TM50NO =50°C

TM60NC TM60NO =60°C

TM70NC TM70NO =70°C

TM80NC TM80NO =80°C

A Temperature ***

Pt 100 (RTD) = Temperature sensor

KT = Temperature transmitter

TK = Temperature contact

TK50NC = 50°C (opener)

TK60 NC = 60°C (opener)

TK70 NC = 70°C (opener)

TK80 NC = 80°C (opener)

TK50 NO = 50°C (closer)

TK60 NO = 60°C (closer)

TK70 NO = 70°C (closer)

TK80 NO = 80°C (closer)

Accessories

Part-No. 4-pole Description

9144 05 0010 Connecting cable M12x1, 1,5 m, elbow connector (female) and straight connector (male)

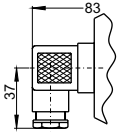
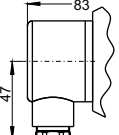
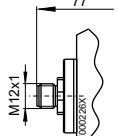
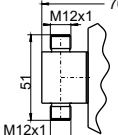
9144 05 0046 Connecting cable M12x1, 3,0 m, elbow connector (female) and straight connector (male)

9144 05 0047 Connecting cable M12x1, 5,0 m, elbow connector (female) and wire

Example for order

You need: Level switch brass with breather and clogging indicator, length L=500 mm, 2 level contacts and temperature contact TK80°C as opener, 1. contact: 100 mm falling closer, 2. contact: 420 mm falling opener

You order: NV 71-HY-MS-S6-500-2K -TK80NC-VA, L1=100 NC, L2 = 420 NO

Connector	M3 (DIN43650)	S6 (DIN43651)	M12 (base)	2x M12 (base)
max. voltage	3 pol. + PE	6 pol. + PE	4 pol.	4 pol./4 pol.
protection class	230 VAC/DC*	230 VAC/DC*	30 VDC	30 VDC
cable connection	IP 65 PG 11	IP 65 M20x1,5	IP67**	IP67**
max. quantity of contacts				
Level / Temp. contact	1 x K10 / 1 x TK - / - - / -	3 x K10 / 1 x TK 2 x K10 / 2 x TM 1 x W11 / 1 x TK 1 x W11 / 2 x TM	1 x K10 / 1 x TK - / - - / -	3 x K 10 / 1 x TK 2 x K10 / 2 x TM 1 x W11 / 1 x TK 1 x W11 / 2 x TM
level only	2 x K10	4 x K10	2 x K10	4 x K10
or	1 x W11	2 x W11	1 x W11	2 x W11

* max. 48V for change over contact / **with casted connector head / other connectors on request

Technical Data

NV 71D

Basic units

operating pressure
operating temperature
min. spec. density of fluid

max. 1 bar
-20 °C to +80 °C
0,80 kg/dm³ float SK 601
0,85 kg/dm³ float SK 221
280, 370, 500 (standard)
variable to max. 1500

lengths

Breather

grade of filter
accessories

HY Typ Hydac BF 7
3 µm
filling protective cover
- not applicable for filling adapter -

Material / Design

display housing
float

immersion tube
flange/ filter housing

MS	VA*
PA	PA
hard PU	1.4571
SK 601	SK 221
brass	1.4571
PA	PA

Level contacts

max. quantity	K10
function	2
max. voltage	NC / NO
max. current	30 V
max. contact load	0,5 A
min. distance between contacts	10 VA
	40 mm

* NC= normally open / NO = normally closed at **empty reservoir**

Display

Temperature display range	-20 °C to +120 °C / 4 °F to 248 °F)
setting range alarm	0 °C to 100 °C (32 °F to 178 °F)
accuracy	1%
resolution	0,5 °C (1 °F)
protection class	IP 65
display operation	4 digit, 7 segment LED by 3 buttons
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 Temperature sensor

-20 °C to +70 °C
Pt 100 class B, DIN EN 60 751

The following temperature outputs are available:

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

Options/ Accessories (see details on page 6)

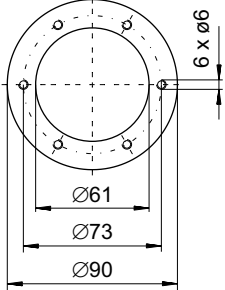
VS visual clogging indicator for the breather
BFA** filling adapter incl. ribbed flange with sieve insert:
SSR** stilling tube with support ring and filling adapter
MT for Multiterminal
MTS for Multiterminal including stilling tube
FCT Fluidcontrolterminal

* not available in combination with the option **FCT**
** not available in combination with the option **FCT, MT and MTS**

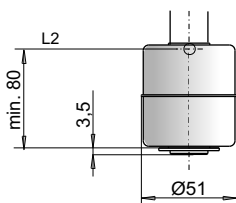
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Flange picture

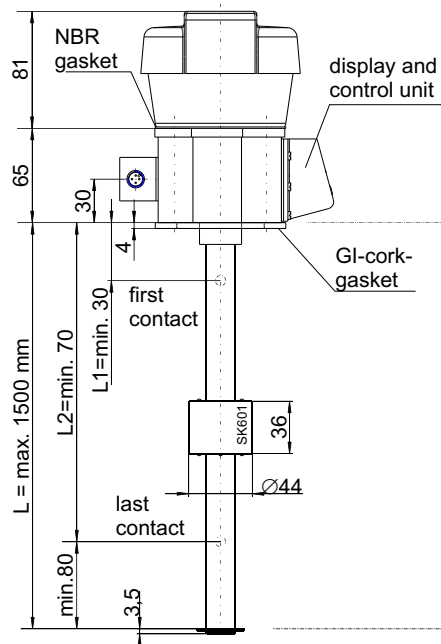
according to DIN 24557/part2



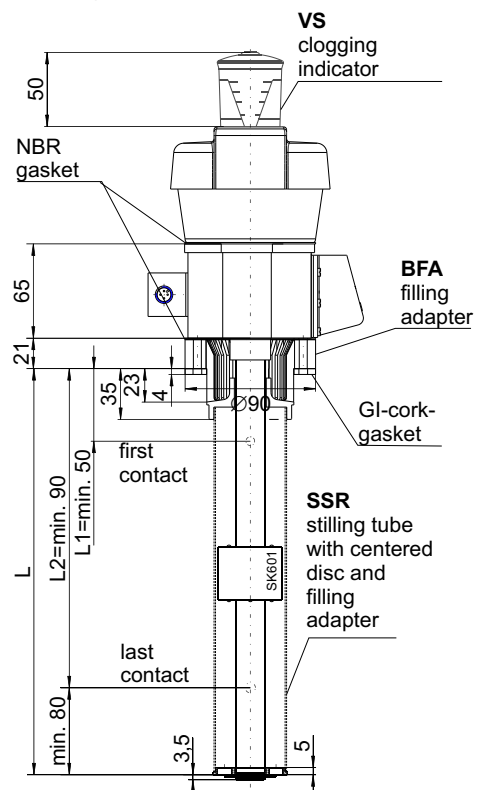
Float for NV 71D-VA



Basic version



Design with options



Product code for NV 71D

NV 71D-HY- **-2M12**

Series
Nivovent **NV 71D-HY**

Design
MS brass
VA* float and immersion tube VA

Connector
2 x M12

Length (max. 1500 mm)
280
370
500
Variable (please quote)

Quantity level contacts
1K or 2K
K = opener / closer

Position L1=...mm
1. level contact

Switch function 1. contact
NO = falling opener
NC = falling closer

* not available in combination with option FCT
** not available in combination with the option FCT, MT and MTS

Options / Accessories
VS = clogging indicator

BFA** = filling adapter
SSR** = stilling tube with filling adapter
MT = for Multiterminal
MTS = for Multiterminal incl. stilling tube
FCT = Fluidcontrolterminal

-2T
LED temperature indication
2 x temperature outputs

-4T
LED temperature indication
4 x temperature outputs

-1T-KT
LED temperature indication
1 x temperature output
1 x analogue output 4-20 mA

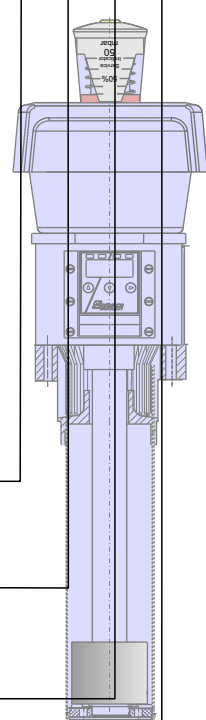
Switch function 2. contact
NO = falling opener
NC = falling closer

Position L2=...mm
2. level contact

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Accessories

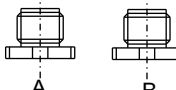

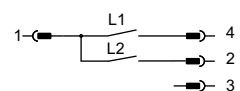
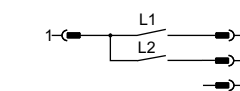
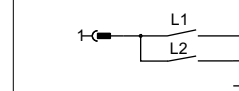

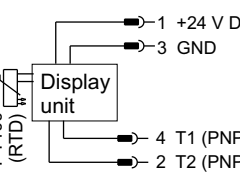
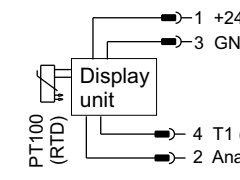
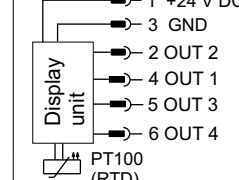
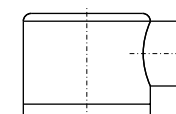
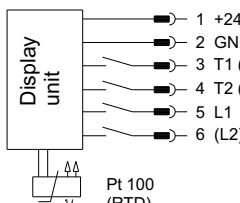
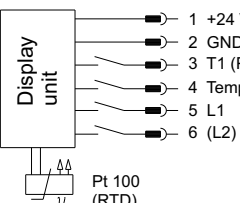
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9144 05 0046	9144 05 0049	Connecting cable M12x1, 3,0 m, elbow connector (female) and straight connector (male)
9144 05 0047	9144 05 0033	Connecting cable M12x1, 5,0 m, elbow connector (female) and wire

Example for order


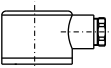


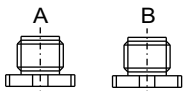
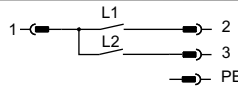
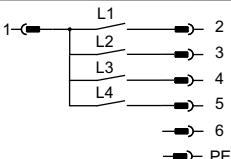
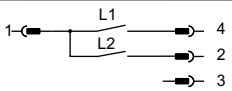
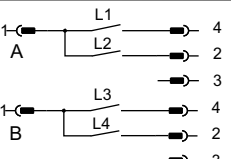
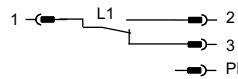
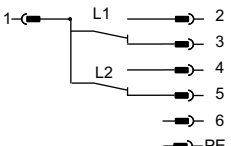
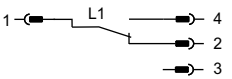
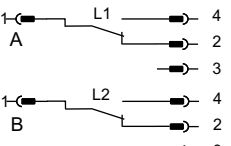
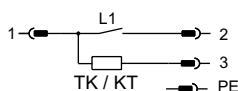
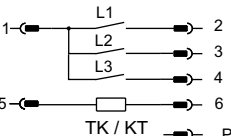
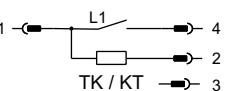
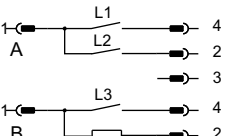
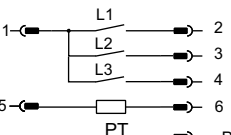
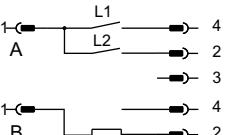
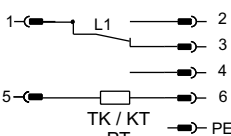
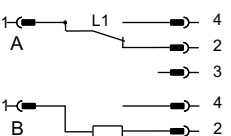
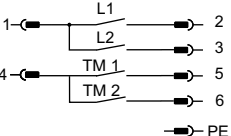
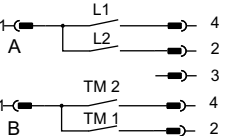
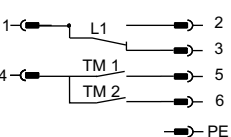
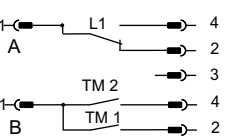
You need: Level switch stainless steel with breather and clogging indicator, length L= 500 mm, 2 level contacts, 1. contact: 100 mm falling closer, 2. contact: 420 mm falling opener, 2 temperature outputs

You order: NV 71D-HY-VA-2M12-500-2K-100 fC-420 fO-2T-VA

Standard pin assignment NV 71D

Connector 2xM12 	Type NV 71D-2T Level contact(s) 2 x Temperature outputs	Type NV 71D-1T-KT Level contact(s) 1 x Temperature output 1 x Analogue output	Type NV 71D-4T Level contact(s) 4 x Temperature output
Connector A: Level 			
Connector B: Temperature 			
Connector S6 			

Standard pin assignment NV 71

Connector	M3 (DIN EN 175301-803)	S6 (DIN EN 175201-804)	M12 (base)	2 x M12 (base)
			 	
only level contact(s) Type K10				
only level contact(s) Type W11				
level contact(s) Type K10 and temperature				
level contact(s) Type K10 and Pt 100 (RTD)				
level contact(s) Type W11 and temperature				
level contact(s) Type K10 and 2 temp. contacts				
level contact Type W11 and 2 temp. contacts				

TK/TM = Thermo switch KT = temperature transmitter PT = temperature sensor Pt 100 (RTD) other configurations on request

Options / Accessories

VS clogging indicator visual for the breather: analogue underpressure indicator, display range 0,35 bar.

BFA* filling adapter incl. ribbed flange with sieve insert: this option allows that small oil quantities can be filled via the breather housing. Therefore the corresponding housing is equipped in that version.

SSR* stilling tube with support ring and filling adapter: This includes the option stilling tube as well as the option for filling as the **BFA**. The stilling tube is made of the same material as the requested immersion tube (MS/VA).

MT for integration into Multiterminal: The basic unit will be mounted to the Multiterminal. For specification we refer to data sheet DE 10 0201.

MTS for integration into Multiterminal including stilling tube: in addition to the basic unit, a stilling tube with support ring is mounted to the Multiterminal.

FCT Fluidcontrolterminal: The Fluidcontrolterminal (**FCT**) will be mounted to the basic product. For specification we refer to data sheet DE 10 0202.

* not available in combination with option **FCT**, **MT** and **MTS**