FISCHER
MESS- UND REGELTECHNIK

Typ 10 N ≙ NK 10

Application

The level switch 10 N is used as a safety device in thermotechnical as well as in process plants to prevent liquid levels from falling below the lowest permissible limit. As a limiter, the instrument meets the safety requirements of DIN 4754 for plants with organic liquids.

Features

- temperatures resistant up to 400 °C
- wetted parts of stainless steel
- double-walled stainless steel bellows
- heat-resistant varnish

Operation

The level switch is installed with the float system extending into the liquid-filled vessel. The float rod transfers the movement of the float, which is a result of the varying liquid level, directly to a micro switch.

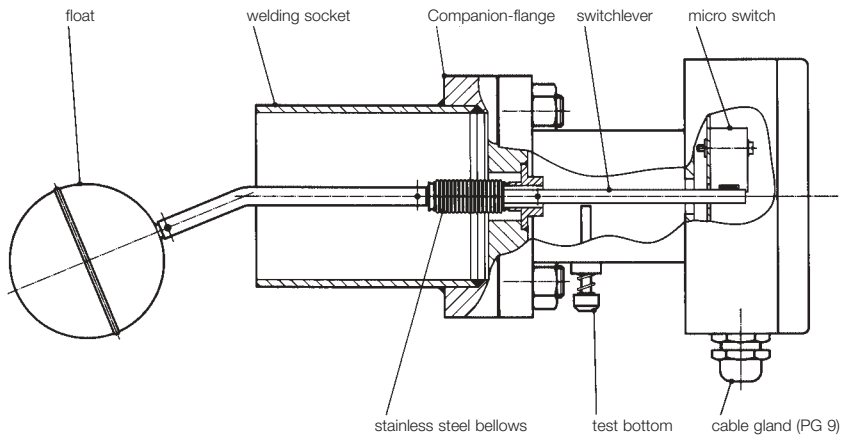
The fixpoint of the float rod is located in the unpressurized part of the switch, which is sealed against the pressurized part by a stainless steel bellows.

The switch is equipped with a test botton, which allows a functional check of the signal circuit acc. to. DIN 32 728, without draining the vessel.

In case of pressing this test botton moves the float against the buoyancy force of the liquid and thus simulates a falling liquid level.

According to DIN 32 728, a locking and unlocking device, which meets the requirements of DIN 57 116 / VDE 0116, has to be incorporated in the subsequent electric circuit, if the instrument is to be used as a level limiter.

Functional Diagram



061 N/2/0701 E

Technical Data

Type 10 N S 80, 10 N S 90, 10 N 61, 10 N 80

Maximum operating pressure	16 bar
Maximum medium temperature	400 °C
Maximum permissible ambient temperature	70 °C

Type 10 N 65/10

Maximum operating pressure	10 bar
Maximum medium temperature	350 °C
Maximum permissible ambient temperature	70 °C

All types

Contact rating	250 V, 6 A, resistance load
Electrical connection	internal terminal board
Enclosure classification	IP 55 acc. to DIN 40 050
Minimum specific gravity	rho = 0.6 kg/dm^3
Switching hysteresis	approx. 6 mm
Installation	horizontally

Material

Switching point difference	max. 30 mm

Material

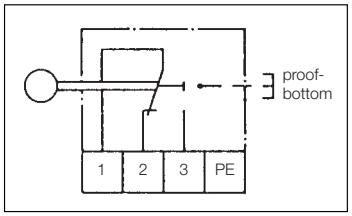
Float system	1.4301
Stainless steel bellows	1.4541
Welding Socket	St. 35.8
Flanges	1.0425 (H II) bzw. 15 Mo 3

Electrical Connection

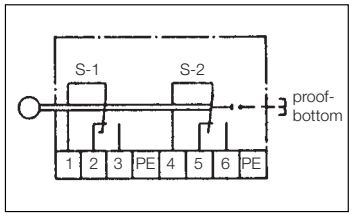
The electrical connection has to be carried out in accordance to the applicate codes and standards (VDE-regulations) and with the rules set by the power supply company.

Electrical Connection

1 micro-switch



2 micro-switches



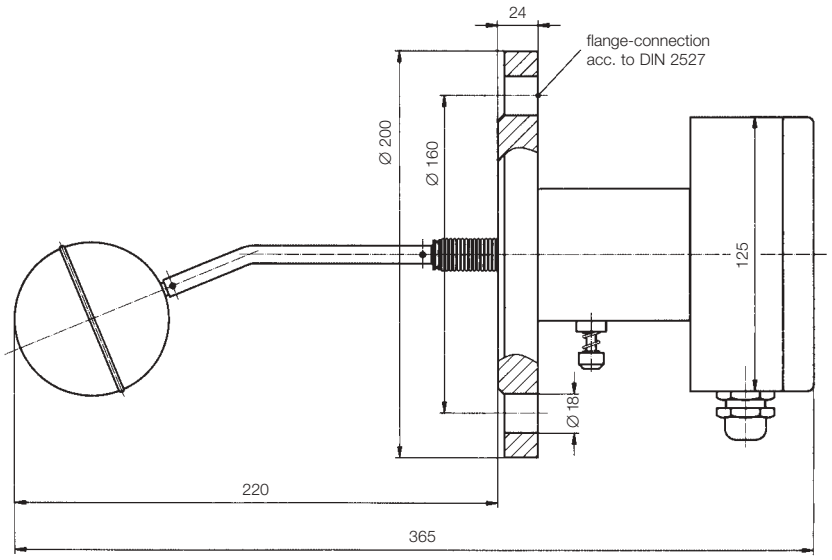
Dimensioned Drawings

Mounting
Type ... 10 N 80

These switches are equipped with a mounting flange according to DIN 2501.
Mounting flange

Type	Flange
10 N 80	DN 80 PN 25

The switch must be positioned in such a way that the unobstructed movement of the float in the vertical direction is guaranteed.

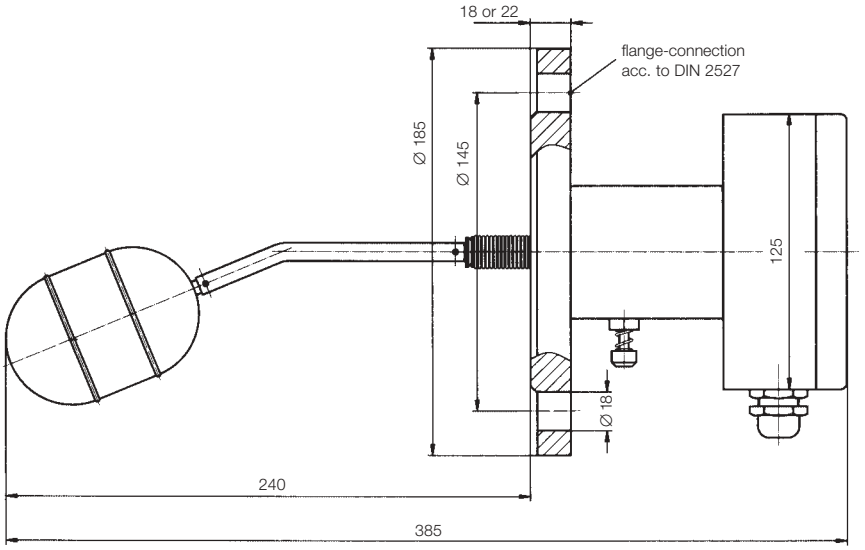


Mounting
Type ... 10 N 65
... 10 N 65/10

These switches are equipped with a mounting flange according to DIN 2501.
Mounting flange

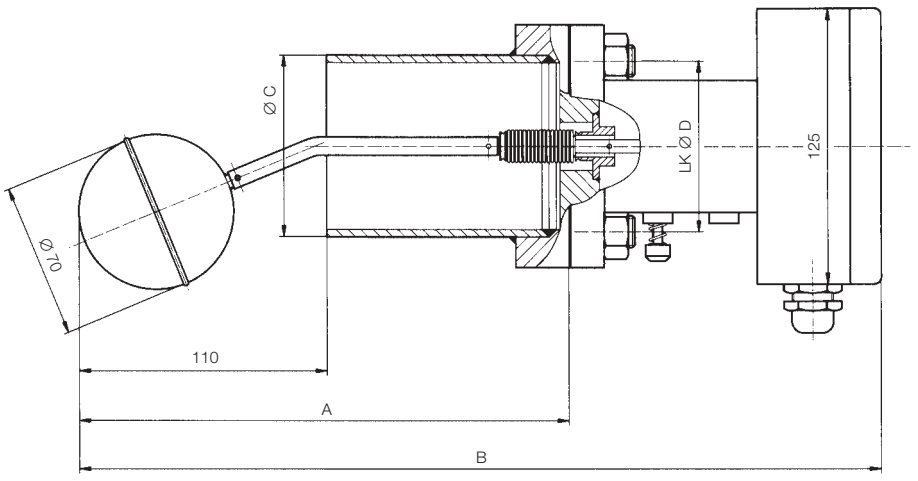
Type	Flange
10 N 65	DN 65 PN 25
10 N 65/10	DN 65 PN 10

The switch must be positioned in such a way that the unobstructed movement of the float in the vertical direction is guaranteed.



Mounting
Typ ... 10 N S 80
... 10 N S 90

The socket of the instrument is welded to the expandition vessel acc. to DIN 4754.
The switch must be positioned in such a way that an unobstructed movement of the float in the vertical direction is guaranteed.



Mounting

Type	Size A	Size B	Size C	Size D
10 N S 80	220	365	82,9	ø 110
10 N S 90	250	395	88,9	90 x 90

Certificate acc. to DIN 2527

DIN CERTCO

Gesellschaft für
Konformitätsbewertung mbH

Genehmigung
zum Führen des DIN-Prüf- und Überwachungszeichens
License
for bearing the DIN Testing and Inspection Mark

Genehmigungsinhaber Licensee	Klaus Fischer Meß- und Regeltechnik GmbH Bielefelder Str. 37 a 32107 Bad Salzuflen
Produktbezeichnung Produkt designation	Füllstandbegrenzer
Typ, Modell Typ, Model	10 N 65, 10 N 80, 10 N 65/10, 10 N S 80, 10 N S 90 Bei 2 Mikroschaltern Zusatzkennzeichnung ..... K 2
Prüfgrundlage Basis Type testing	DIN 32728:1981-02;
Registernummer Registration No.	1D01697
Gültig bis Valid until	2002-05-31

Registernummer	1D01697
Technische Daten Technical Datas	Art des Meßgliedes: Schwimmer Meßgefäß: Art der Meßwertübertragung: mechanisch durch Schwimmerstange mit Balgabdichtung Zulässiger Betriebsüberdruck: 16 bar /10 bar (10 N 65/10) Zulässige Betriebstemperatur: 400 °C /350 °C (10 N 65/10) Nennspannung: 250 V bzw. 480 V
Prüflaboratorium/ Überwachungsstelle Testing Laboratory/ Inspection body	Technischer Überwachungs-Verein Hannover/Sachsen-Anhalt e. V. Am TÜV 1 30519 Hannover
Prüfbericht Test report	UW-Rod/Wol 45 473 7 vom 11.05.1988 FBW 4409/92 vom 30.09.1992 FBW 4509/92 vom 30.09.1992 FBW 9108/97 vom 26.08.1997
Termin für die nächste Fremdüberwachung Date of...	1998-05-31
Genehmigungsgrundlage Basis of Examination	- Ihr Antrag von 1997-07-11 - Aufgeführte Prüf- und Überwachungsunterlagen
Status Status	2. Verlängerung der Erstgenehmigung von 1987-05-21

Weitere Angaben siehe Seite 2
For more information please refer to page 2

DIN GEPRÜFT

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DIN CERTCO Gesellschaft für
Konformitätsbewertung mbH
Burggrafenstraße 6, 10787 Berlin

1997-10-08
Datum, Leiter des Produktbereiches

Order Nos

Level Switch / Level limiter

Type 10 N ≙ NK 10

Article-No.

		≙		0	0	0	0	0	0	

Flange connection acc. DIN 2527 form E DN65 PN25 . . ▷ 65 . . ▷ 1
Flange connection acc. DIN 2527 form E DN80 PN25 . . ▷ 80 . . ▷ 2
Flange connection acc. DIN 2527 form E DN65 PN16 . . ▷ 65/10 . . ▷ 3

Welding connection – 82.5 mm . . . . . ▷ S 80 . . ▷ 4
Welding connection – 88.9 mm . . . . . ▷ S 90 . . ▷ 5

Electrical connection

1 micro switch . . . . . ▷ K1 . . . . . ▷ 1
2 micro switches (switch S2 adjustable) . . . . . ▷ K2 . . . . . ▷ 2