MOLLET
Füllstandtechnik GmbH

MOLOS roto

Rotary blade level indicator
with plastic housing

RF11

Appliance information

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Application (intended use)

The electromechanical level limit switch Typ **RF11** is intended for use as
full, empty and demand detector.

For level monitoring for simple applications in silos, bunkers, vessels, weighers, etc.

For granulated and grainy bulk materials up to a grain size of:
approx. 50 mm.

Filling level above the measuring blade up to 5,000 mm with bulk densities up to: **1,0 t/m³.**
(For larger bulk heights or bulk weights, please inquire.)

Bulk goods such as:
granules, pellets, flakes, flakes, etc.

Application in many branches of industry such as:
**plastic industry**
recycling.

Function

The rotating measuring blade projecting into the vessel is driven by a gearmotor. When the bulk goods heap up to the level of the blade, this prevents the blade from turning and it comes to a standstill. The return torque turns the fitted motor back from its end position and actuates the signal switch by a switching arm.

A second switch turns the motor delayed off. Should the level of the bulk goods drop and the measuring blade can turn freely, a spring brings the motor back into its original end position. At the same time the motor is turned on again and the signal switch is reset.

Elektrical connection

Standard design
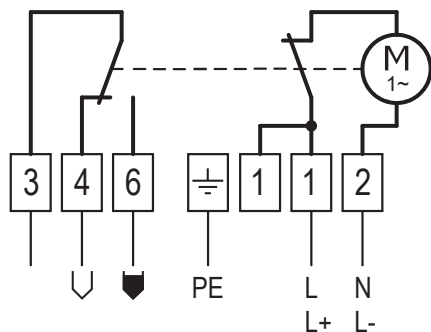
005-AP00

Alternative connection option with plug RSFM 5, 4-pin + PE

Sensor plug	M12x1
Housing material	**Brass**, nickel-plated
Type of protection	IP68 acc. to DIN EN 60529
Wiring	acc. to connection diagram 4-pole+PE
Voltage	up to 24 V DC

Technical data

Materials	Housing	ABS, RAL7001
	Shafts	Stainless steel 1.4301 / 304
	Rope	Stainless steel 1.4401 / 316
	Flange **F1**	GAL
	Measuring blade **TK**	PP, black
	Measuring blade **S1**	Stainless steel 1.4301 / 304
	Measuring blade **X1/X2/X3**	Stainless steel 1.4301 / 304

Bulk goods temperature	T_s	-20 °C … +80 °C
Ambient temperature	T_a	-20 °C … +70 °C
Pressure range	p	-0.5 bar … 1.0 bar

Supply voltage	**C1**	230 - 240 V AC (50...60Hz)
Supply	**C2**	110 - 120 V AC (50...60Hz)
	C3	48 V AC (50...60Hz)
	C4	24 V AC (50...60Hz)
	C5	24 V DC

Power consumption   **AC** = 4 VA   **DC** = 4 W

Signal contact		change-over contact, potential-free
Capacity of the contact	*Contact*	2 A / 250 V AC
Switching voltage		24 V...250 V AC or 12 V...65 V DC

Measuring blade speed	5 U/min
Response delay	approx. 0.75 sec.

Cable entry	gland M20x1,5
Connection clamps	max. 1.5 mm²

Type of protection   *IP*   **IP66**   acc. to DIN EN 60529

Weight	Sensor without extension	
	RF11CnG2TK	0.70 kg
	RF11CnG2S1	0.80 kg
	RF11CnF1S1	1.15 kg
	additional extension	
	W1	0.21 kg
	W4	0.50 kg
	W6	1.25 kg

Maintenance	none

Mounting position*	w/o extension	any
	with extension **W1**	vertical
	with extension **W4**	vertical
	with extension **W6**	vertical

*) When used as an empty indicator and for mounting from the outside through a sleeve, we recommend sawing off the plastic wing along the notch on one side.
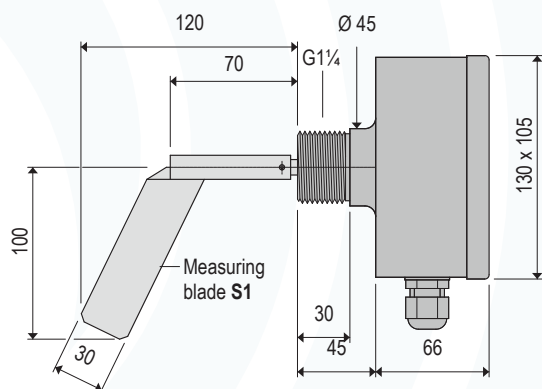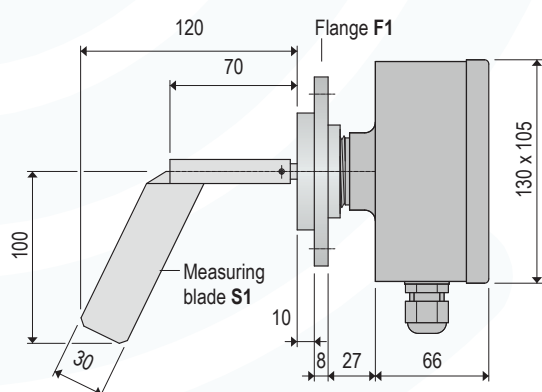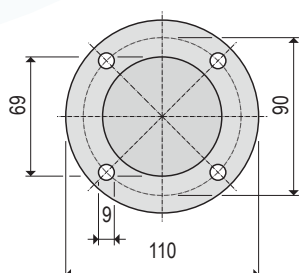
Subject to change

Dimensions

RF11CnG2TK
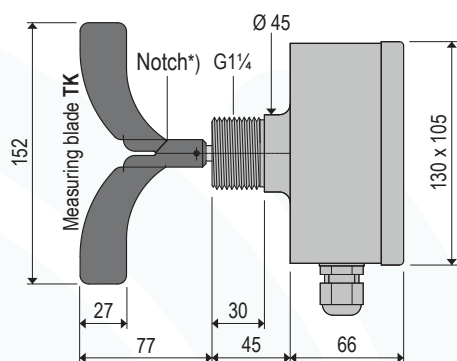
Ø 45
Notch*) G1¼
Measuring blade TK
152
130 x 105
27
77
30
45
66

005-0200

Jib extensions

Extension length > L <

W1 Fixed shaft
> L < = 450 mm
with splint hole for
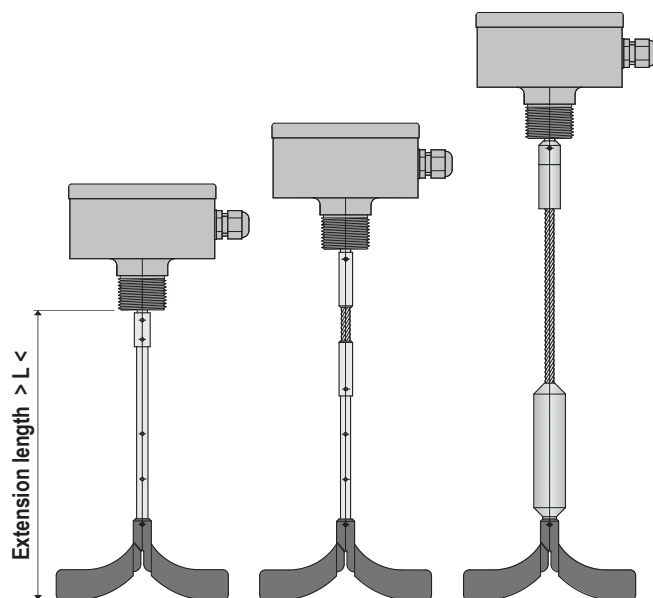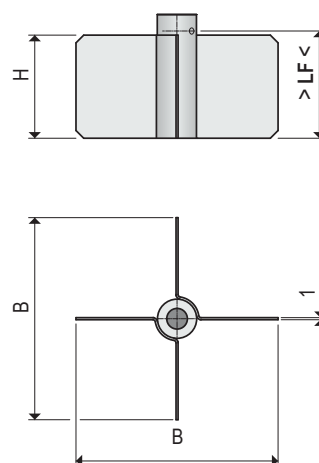> L < = 350 and
> L < = 250 mm

W4 Pendulum shaft
with buckling protection
> L < = 1050 mm
with splint hole for
> L < = 850 und
> L < = 650 mm

W6 Rope shaft
> L < = 2000 mm
shorten as needed

RF11CnG2S1

120
70
Ø 45
G1¼
130 x 105
100
30
30
45
66
Measuring blade **S1**

005-0201

RF11CnF1S1

120
70
Flange **F1**
130 x 105
100
30
Measuring blade **S1**
10
8 27 66

005-0202

X measuring blade

H
> LF <
B
B
1

001-0233

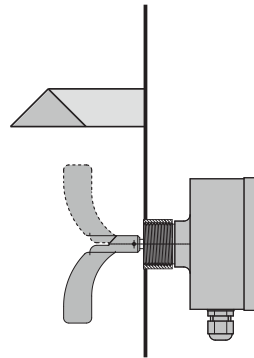|	B	H	LF
-X1	98	50	52
-X2	98	100	102
-X3	180	100	102

Flange F1

69
90
9
110

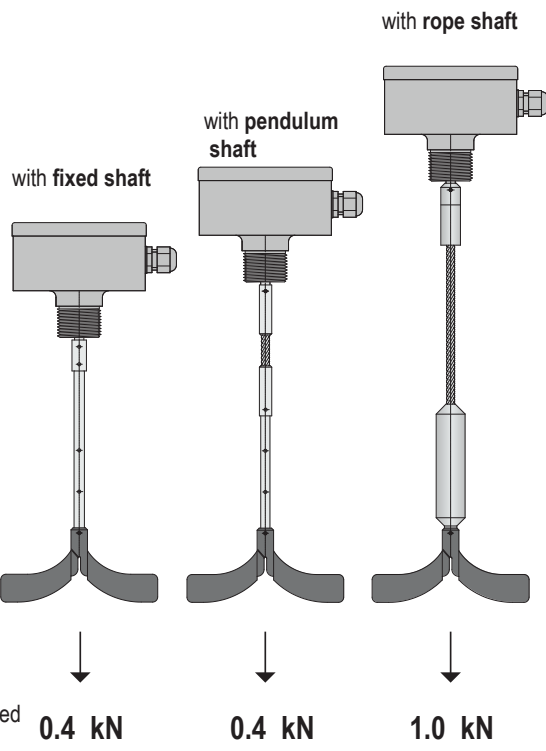001-0212

Application instructions

RF11

Simple applications
Any installation position

When used as an empty detector, it is recommended to cut off the wing on one side, and if the wing is heavily loaded, the installation of a protective roof is also recommended.
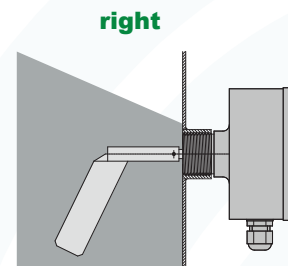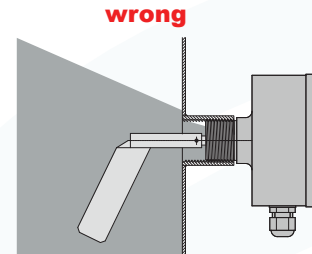
RF11

Jib extension
Vertical installation

with **rope shaft**

with **pendulum shaft**

with **fixed shaft**

| max. allowed traction | 0.4 kN | 0.4 kN | 1.0 kN |

Installation

The level indicators are attached to the container with the thread or with the flange.
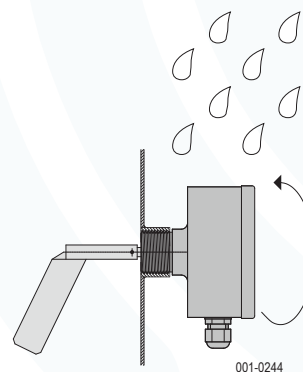
wrong

right

001-0242

The devices should by installed, that no bulk goods can deposit in the thread or flange fittings.

Moisture protection

Mount the device in such a way that the cable gland points vertically downwards.

Advantage: optimal functioning of the device and no infiltration of moisture

001-0244

Mounting flange for textile silos MG2

Textile silo wall

Thread G1¼

Ø280
Ø250
Ø220

001-0222
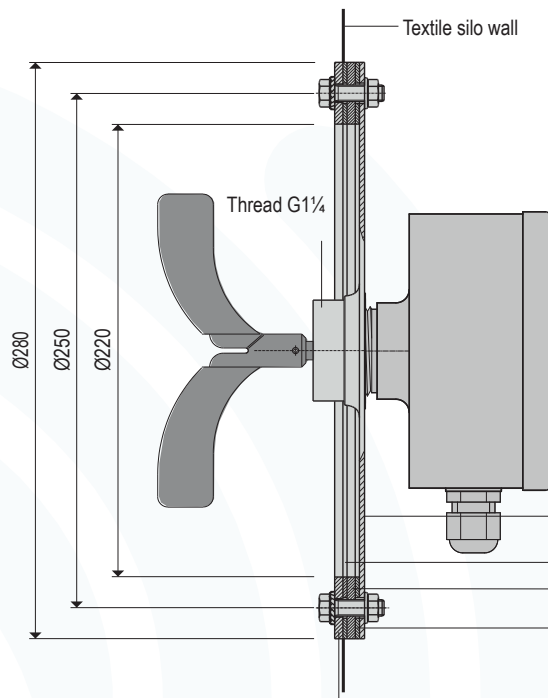
Mounting flange for installing level indicators in flexible bag silos.

Large installation port for blades up to 215 mm.

The large area diameter of 280 mm avoids false alarms when the silo walls sag.

Material	Steel, galvanised
Connection thread	G1¼ (**G2**)
Seal ring	NBR, white FDA

Mounting flange consists of:

Flange with thread G1¼ (**G2**)

Seal ring Ø280 mm

Flange ring with thread for outside

Seal ring Ø280 mm

Flange ring with borehole for inside

Scrwes, nuts and washers

Protection from condensation
SDK
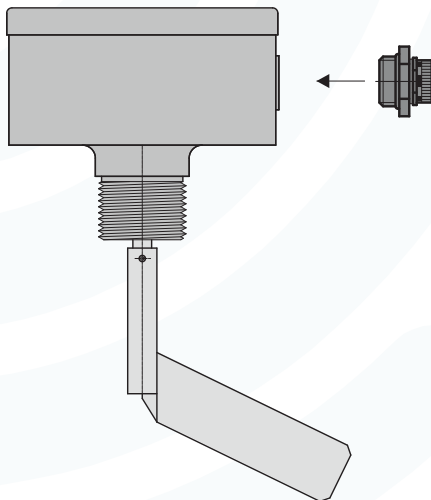
Condensate protection valve for screwing into a threaded hole. Recommended when using the level indicator outdoors.

A waterproof membrane that is open to vapor diffusion prevents the formation of condensate in the interior of the housing.

Material	Polyamid
Seals	VITON
Connection thread	M20x1,5
Type of protection	**IP66**

Notes