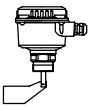
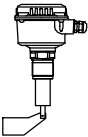
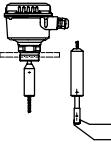
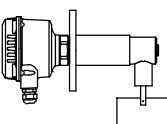
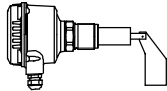
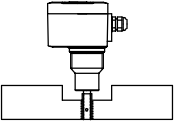


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Subject to change.

All dimensions in mm (inches).

All prices in Euro, excluding VAT.

All prices are EXW Betzigau, excluding packaging costs.

Valid: From 01.04.2013 until 31.03.2014, unless otherwise agreed.

By publishing this selection list all other lists become invalid.

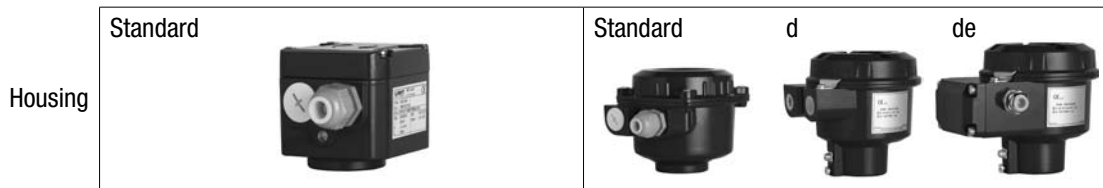
We assume no liability for typing errors.

Different variations to those specified are possible.  
 Please contact our technical consultants.

## Overview

- Level limit detection in bulk goods / solids
- Compact unit
- Very robust and reliable sensors
- Wide range of applications, no maintenance
- Full-, demand-, empty detector
- ATEX, IEC-Ex, FM, CSA Gas Ex and Dust Ex approvals
- GOST-R Ex and RTN Ex Dust Ex approval
- EHEDG Hygiene approval
- 1935/2004/EC Food grade material

Series	RN 3000	RN 6000
	ATEX / IEC-Ex / GOST-R / RTN Ex / EHEDG approval Small housing Sensitivity > 15 g/l (0.9lb/ft <sup>3</sup> )	ATEX / IEC-Ex / FM / CSA / EHEDG approval Spacious housing Sensitivity > 15 g/l (0.9lb/ft <sup>3</sup> )



## Overview

**RN ..002-rope**  
 Rope extension

RN 3002-rope



RN 6002-rope



**RN ..003**  
 Angled extension

RN 3003



RN 6003



**RN ..004**  
 Pipe extension  
 horizontal

RN 3004



RN 6004



**RN 3005**  
 Extra short version  
 for use in  
 loading bellow

RN 3005



## Specifications

Series	RN 3000	RN 6000
--------	---------	---------

<b>Approvals</b>	<b>CE</b>	•	•
	<b>ATEX / IEC-Ex:</b>		
	Zone 20/21      Dust Ignition Proof	•	•
	Zone 1            Flameproof / Increased Safety		•
	<b>FM / CSA:</b>		
	General purp.		•
	Cl. II, III Div. 1    Dust Ignition Proof		•
	Cl. I Div. 1        Explosionproof		•
	Zone 1            Flameproof / Increased Safety		•
	<b>GOST-R / RTN Ex:</b>		
Dust Ignition Proof	•		
<b>EHEDG</b>	•	•	

<b>Technical data</b>	Ambient temperature	-20 .. +50°C (-4 .. +122°F) -40 .. +50°C (-40 .. +122°F) with heating
	Type of protection	IP66 and NEMA Type 4/4X (RN6000)
	Material housing	Aluminium or plastics PA6 (RN3000, optional)
	Process connection material	Aluminium or 1.4305 (SS 303) or 1.4404 (316L)
	Material of measuring vane and shaft	1.4301 (SS 304) or 1.4305 (SS 303) or 1.4404 (316L)

<b>Electronics</b>	<b>RN 3000</b>							
	<b>Power supply</b>		<b>Output signal</b>					
			SPDT <sup>(1)</sup>	DPDT	PNP	FSH/FSL <sup>(2)</sup>	Adjustable delay	Fail safe alarm
	AC version	24V or 48V or 115V or 230V AC	•	-	-	option	-	-
	DC version	24V DC	•	-	-	-	-	-
	DC version	24V DC PNP	-	-	•	•	•	-
	Universal voltage	24V DC / 22...230V AC	•	-	-	•	•	option
	<b>RN 6000</b>							
	<b>Power supply</b>		<b>Output signal</b>					
			SPDT <sup>(1)</sup>	DPDT	PNP	FSH/FSL <sup>(2)</sup>	Adjustable delay	Fail safe alarm
	AC version	24V or 48V or 115V or 230V AC	•	with option FSH/FSL	-	option	-	option
	DC version	24V DC	•	-	-	-	-	option
	Universal voltage	24V DC / 22...230V AC	-	• <sup>(3)</sup>	-	•	•	option

<sup>(1)</sup> Micro switch, with Universal voltage Relais

<sup>(2)</sup> Switchable signal output (Fail safe high /low)

<sup>(3)</sup> For Ex approval "Increased safety" (pos.2 C,R,S) not in combination with option Fail safe alarm

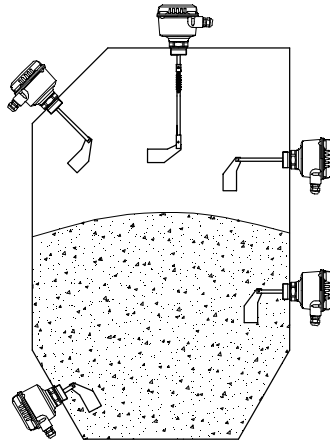
## Specifications

		RN 3000	RN 6000	
Extensions	RN ..001	Process temperature	-40/ -25 .. +80 /150 /250 /600°C (-40/-13 .. +176 /302 /482 /1112°F)	
		Process pressure	-0.9 .. +0.8bar; -0.9 .. +5 / 10bar (-13.1 ..+11.6; -13.1 .. +72.5 / 145psi)	
		<b>Length of extension</b>		
		Full detector vertical from the top	70 .. 300mm (2.76 .. 11.8")	
		Full detector with pendulum shaft, vertical from the top	300 .. 1000mm (11.8 .. 39.4")	
		Full detector oblique from the top	70 .. 300mm (2.76 .. 11.8")	
		Full detector horizontal	70 .. 300mm (2.76 .. 11.8")	
		Demand or empty detector horizontal	70 .. 150mm (2.76 .. 5.9") *	
		Empty detector oblique from the bottom	70 .. 150mm (2.76 .. 5.9") *	
	RN ..002	Process temperature	-40/-25 ..+80 /150 /250 /350 /600°C (-40/-13 ..+176 /302 /482 /662 /1112°F)	
		Process pressure	-0.9 .. +0.8bar; -0.9 .. +5 / 10bar (-13.1 ..+11.6; -13.1 .. +72.5 / 145psi)	
		<b>Length of extension</b>		
		Full detector vertical from the top	250 .. 3.000mm (9.84 .. 118") / 4.000mm (158") with support of the extension pipe	
	Full detector oblique from the top	250 .. 3.000mm (9.84 .. 118") with option "Bearing at tube end"		
	RN..002-rope	Process temperature	-40/-25 ..+80 /150 /250 /350 /600°C (-40/-13 ..+176 /302 /482 /662 /1112°F)	
		Process pressure	-0.9 .. +0.8bar; -0.9 .. +5 / 10bar (-13.1 ..+11.6; -13.1 .. +72.5 / 145psi)	
		<b>Length of extension</b>		
		Full detector vertical from the top	500 .. 10.000mm (19.7 .. 394") (observe max. traction)	
	RN ..003	Process temperature	-40/-25 .. +80 /150 /250°C (-40/-13 .. +176 /302 /482°F)	
		Process pressure	-0.9 .. +0.8bar; -0.9 .. +5 / 10bar (-13.1 ..+11.6; -13.1 .. +72.5 / 145psi)	
		<b>Length of extension</b>		
		Demand or empty detector horizontal	125 .. 300mm (4.92 .. 11.8")	
		Empty detector oblique from the bottom	125 .. 300mm (4.92 .. 11.8")	
	RN ..004	Process temperature	-40/-25 .. +80 /150 /250 /600°C (-40/-13 .. +176 /302 /482 /1112°F)	
		Process pressure	-0.9 .. +0.8bar; -0.9 .. +5 / 10bar (-13.1 ..+11.6; -13.1 .. +72.5 / 145psi)	
		<b>Length of extension</b>		
		Full detector vertical from the top	150 .. 300mm (5.90 .. 11.8")	
		Full detector oblique from the top	150 .. 300mm (5.90 .. 11.8")	
Full detector horizontal		150 .. 300mm (5,90 .. 11.8")		
Demand or empty detector horizontal		150 .. 300mm (5.90 .. 11.8") *		
Empty detector oblique from the bottom		150 .. 300mm (5.90 .. 11.8") *		
RN 3005	Process temperature	-40/-25 .. +80°C (-40/-13 .. +176°F)		
	Process pressure	-0.9 .. +0.8bar (-13.1 .. +11.6psi)		
	<b>Length of extension</b>			
	Application "Loading bellow"	90mm (3.5")		

\* A protective canopy is recommended for applications with high mechanical loads

## Applications

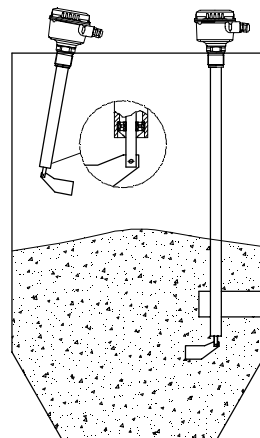
### RN..001 Short extension length



Extension for vertical installation  
with pendulum shaft

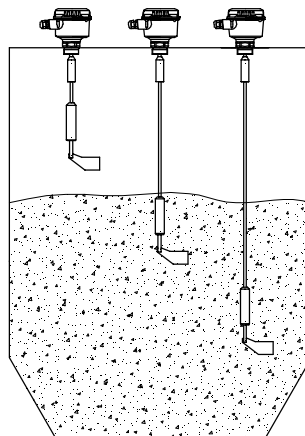
Horizontal mounting:  
Boot shaped vane  
recommended  
(min. mech. loading as  
the vane aligns itself to  
the material flow).

### RN..002 Pipe extension vertical



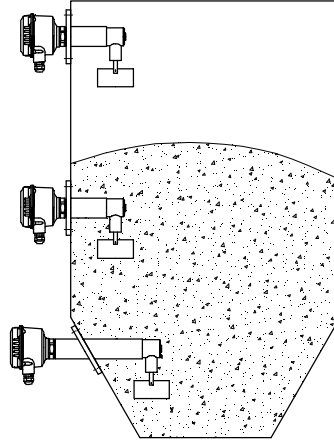
Deviation up to max.  
10° from vertical  
installation only with  
option „bearing at  
tube end“ possible

### RN..002 - rope Rope extension

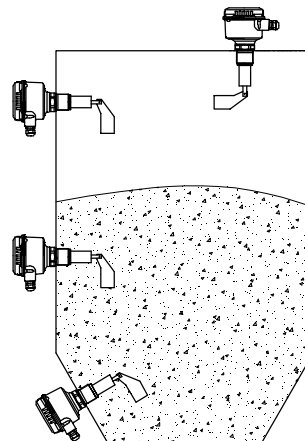


## Applications

**RN ..003**  
Angled extension

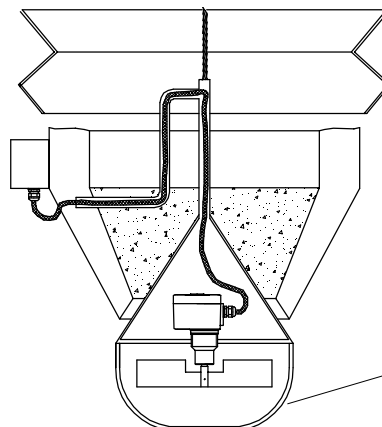


**RN ..004**  
Pipe extension horizontal



Horizontal mounting:  
Boot shaped vane  
recommended  
(min. mech. loading as  
the vane aligns itself to  
the material flow).

**RN 3005**  
Extra short version



Application  
„Loading bellow“

mechanical  
protection for  
sensor

## RN ..001 Short extension length

**RN 3001**



**RN 6001**



**Housings RN 6001**



Standard



d (flameproof)



de  
 (flameproof/  
 increased safety)

**Cable entries** (by default)

Depending on model selected, the following cable entries will be delivered (options see pos 28 on page 20):

Version:	Cable entries:
ATEX / IEC-Ex flameproof (pos.2 T) FM and CSA (pos.2 M,N,S,U) All other versions	M20x1.5 (1x open conduit + 1x Ex-d blind plug) NPT 1/2" tapered ANSI B1.20.1 (1x open conduit + 1x Ex-d blind plug) M20x1.5 (1x screwed cable gland + 1x blind plug)

**Dimensions**

see pages 24 - 28

**Basic Type**

- RN 3001 .....
- RN 6001 .....

pos. 2 **Certificate** (detailed Ex-markings: see page 28)

Certificate	Zone / Div		Protection method
	Dust	Gas	
0 CE	-	-	
W ATEX	Zone 20/21	-	Dust Ignition Proof
R ATEX	Zone 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
T ATEX	Zone 20/21	Zone 1	Flameproof / Dust Ignition Proof
A IEC-Ex	Zone 20/21	-	Dust Ignition Proof
C IEC-Ex	Zone 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
D IEC-Ex	Zone 20/21	Zone 1	Flameproof / Dust Ignition Proof
M FM /CSA	-	-	General purpose
N FM /CSA	Cl. II, III, Div.1	-	Dust Ignition Proof
	CSA A 20/21		
S FM /CSA	Cl. II, III, Div.1	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
	CSA A 20/21		
U FM /CSA	Cl. II, III, Div.1	Cl. I Div.1 / Zone 1	Explosion Proof / Dust Ignition Proof
	CSA A 20/21		

For RN3001: pos.2 0 includes GOST-R, pos.2 W includes RTN-Ex and GOST-R

pos. 3 **Process temperature**

- 1 max. + 80°C (176°F) .....
- 2 max. + 150°C (302°F) .....
- 3 max. + 250°C (482°F) .....
- 4 max. + 350°C (662°F) ..... (not for Ex, only with pos. 4.1) .....
- 5 max. + 600°C (1112°F) ..... (not for Ex, only with pos. 4.1) .....

pos. 4 **Process overpressure**

- 1 max. 0,8 bar (11,6psi) ..... (0,1bar (14.5psi) with Pos. 3.5) .....
- 2 max. 5 bar (73psi) .....
- 3 max. 10 bar (145psi) .....



## RN ..001 Short extension length

pos. 5	<b>Power supply</b>	
• •	A / S 230V AC 50-60 Hz	Motor Speed: A=1/min S= 5/min
• •	B / T 115V AC 50-60 Hz	Motor Speed: B=1/min T= 5/min
• •	C / U 48V AC 50-60 Hz	Motor Speed: C=1/min U= 5/min
• •	D / V 24V AC 50-60 Hz	Motor Speed: D=1/min V= 5/min
• •	E / W 24V DC	Motor Speed: E=1/min W= 5/min
• •	G / H 24V DC PNP	Motor Speed: G=1/min H= 5/min
• •	F / X 24V DC / 22...230V AC universal voltage <sup>(1)</sup>	Motor Speed: F=1/min X= 5/min
pos. 6	<b>Process connection</b>	
• •	A thread G 1½ inch, DIN 228	(max. 250°C (482°F))
• •	B thread G 1¼ inch, DIN 228	(max. 250°C (482°F)) (not for pos 2. R,S,T,U)
• •	C thread G 1 inch, DIN 228	(max. 250°C (482°F)) (not for pos 2. R,S,T,U)
• •	D thread M32x1.5	(max. 250°C (482°F)) (not for pos 2. R,S,T,U)
• •	E thread M30x1.5	(max.0.8 bar (11.6psi)/80°C (176°F)) (not for pos 2. R,S,T,U)
• •	F thread NPT 1½ inch, conical ANSI B1.20.1	
• •	Q thread NPT 1¼ inch, conical ANSI B1.20.1	(max. 250°C (482°F))
• •	G thread NPT 1 inch, conical ANSI B1.20.1	(max. 250°C; not for pos 2. R,S,T,U)
• •	P Triclamp 2" (DN 50) ISO 2852	(max. 80°C (176°F))
• •	H flange 150x150, 4x ø18 LK-ø170	(max. 0.8 bar (11.6psi))
• •	I flange 150x150, 4x ø14 LK-ø170	(max. 0.8 bar (11.6psi))
• •	K flange DN32 PN6, EN 1092-1	(max. 5 bar (73psi) / 250°C (482°F))
• •	L flange DN100 PN6, EN 1092-1	(max. 5 bar (73psi))
• •	M flange DN100 PN16, EN 1092-1	
• •	S flange 2" 150lbs ANSI B16.5	
• •	T flange 3" 150lbs ANSI B16.5	
• •	U flange 4" 150lbs ANSI B16.5	
pos. 7	<b>Material Process connection</b>	
• •	1 aluminium	(max. 0.8 bar (11.6psi) / 80°C (176°F))
• •	3 stainless steel 1.4305 (303) A-G / 1.4301 (304) P-I / 1.4541 (321) K-U	
• •	7 stainless steel 1.4404 (316L)	(only with pos. 9.7)
pos. 8	<b>Length of extension "L"</b>	
• •	K 70 mm (2,76")	(only with vane P)
• •	A 100 mm (3,93")	(only with vane A, D, R, B,C,E)
• •	B 150 mm (5,90")	
• •	C 200 mm (7,87")	
• •	D 250 mm (9,84")	
• •	E 300 mm (11,8")	
• •	Z other lengths	price per 50mm (1.97") or part thereof (starting from 0mm) min. 350 mm (13.8"), max. 1000mm (39.4")
pos. 9	<b>Material of extension "L"</b>	
• •	3 stainless steel 1.4305 (303)	
• •	7 stainless steel 1.4404 (316L)	(only with pos.7.7 and 10.A,D,F,K,S)
pos. 10	<b>Measuring vane</b>	
• •	A boot-shaped <sup>(2)</sup> 40 x 98mm (1.57 x 3.86")	for 1 1/2" socket (with pos.9.7 L=10mm longer)
• •	D boot-shaped <sup>(2)</sup> 35 x 106mm (1.38 x 4.17")	for 1 1/4" socket ("L"=10mm longer)
• •	R boot-shaped <sup>(2)</sup> 28 x 98mm (1.10 x 3.86")	for 1" and M32 socket
• •	J boot-shaped <sup>(2)</sup> 26 x 77mm (1.02 x 3.03")	for M30 socket
• •	B rectangular 50 x 98mm ( 1.97 x 3.86")	
• •	C rectangular 50 x 150mm (1.97 x 5.90")	
• •	E rectangular 50 x 250mm (1.97 x 9.84")	
• •	F rectangular 98 x 98mm (3.86 x 3.86")	
• •	G rectangular 98 x 150mm (3.86 x 5.90")	
• •	I rectangular 98 x 250mm (3.86 x 9.84")	
• •	K hinged vane 98 x 200mm (3.86 x 7.87") double sided (L=10mm longer)	1.4301/1.4404
• •	S hinged vane 98 x 100mm (3.86 x 3.93") single sided (L=10mm longer)	1.4301/1.4404
• •	M rubber vane 98 x 250mm (3.86 x 9.84")	(max.80°C (176°F), not for Ex)
• •	P notched 40 x 80mm (1.57 x 3.15")	(only with pos. 8K)
• •	Y without	including splint pin for fixation

Basic type

**Further options and accessories:** see page 20

<b>A</b>										
Position	1	2	3	4	5	6	7	8	9	10

← **Order code**

All positions are available in special design (use code "Z").

<sup>(1)</sup> not for FM/CSA

<sup>(2)</sup> maximum length of socket 40mm

## RN ..002 Pipe extension vertical

**RN 3002**



**RN 6002**



Without sealing and bearing  
 at tube end (see also option  
 pos. 32)

Housings RN 6002



Standard



d (flameproof)



de  
 (flameproof/  
 increased safety)

### Cable entries (by default)

Depending on model selected, the following cable entries will be delivered (options see pos 28 on page 20):

Version:	Cable entries:
ATEX / IEC-Ex flameproof (pos.2 T) FM and CSA (pos.2 M,N,S,U) All other versions	M20x1.5 (1x open conduit + 1x Ex-d blind plug) NPT 1/2" tapered ANSI B1.20.1 (1x open conduit + 1x Ex-d blind plug) M20x1.5 (1x screwed cable gland + 1x blind plug)

### Dimensions

see pages 24 - 28

### Basic Type

- RN 3002 .....
- RN 6002 .....

### pos. 2 Certificate (detailed Ex-markings: see page 28)

Certificate	Zone / Div		Protection method
	Dust	Gas	
0 CE	-	-	
W ATEX	Zone 20/21	-	Dust Ignition Proof
R ATEX	Zone 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
T ATEX	Zone 20/21	Zone 1	Flameproof / Dust Ignition Proof
A IEC-Ex	Zone 20/21	-	Dust Ignition Proof
C IEC-Ex	Zone 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
D IEC-Ex	Zone 20/21	Zone 1	Flameproof / Dust Ignition Proof
M FM /CSA	-	-	General purpose
N FM /CSA	Cl. II, III, Div.1	-	Dust Ignition Proof
	CSA A 20/21		
S FM /CSA	Cl. II, III, Div.1	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
	CSA A 20/21		
U FM /CSA	Cl. II, III, Div.1	Cl. I Div.1 / Zone 1	Explosion Proof / Dust Ignition Proof
	CSA A 20/21		

For RN3002: pos.2 0 includes GOST-R, pos.2 W includes RTN-Ex and GOST-R

## RN ..002 Pipe extension vertical

• •	pos. 3	<b>Process temperature</b>	
• •		1 max. + 80°C (176°F)	.....
• •		2 max. + 150°C (302°F)	.....
• •		3 max. + 250°C (482°F)	.....
• •		5 max. + 600°C (1112°F)	..... (not für Ex, only with pos. 4.1)
• •	pos. 4	<b>Process overpressure</b>	
• •		1 max. 0,8 bar (11,6psi)	..... (0,1bar (14.5psi) with pos. 3.5)
• •		2 max. 5 bar (73psi)	.....
• •		3 max. 10 bar (145psi)	.....
• •	pos. 5	<b>Power supply</b>	
• •		A / S 230V AC 50-60 Hz	..... Motor Speed: A=1/min S= 5/min
• •		B / T 115V AC 50-60 Hz	..... Motor Speed: B=1/min T= 5/min
• •		C / U 48V AC 50-60 Hz	..... Motor Speed: C=1/min U= 5/min
• •		D / V 24V AC 50-60 Hz	..... Motor Speed: D=1/min V= 5/min
• •		E / W 24V DC	..... Motor Speed: E=1/min W= 5/min
• •		G / H 24V DC PNP	..... Motor Speed: G=1/min H= 5/min
• •		F / X 24V DC / 22...230V AC universal voltage <sup>(1)</sup>	..... Motor Speed: F=1/min X= 5/min
• •	pos. 6	<b>Process connection</b>	
• •		A thread G 1½ inch, DIN 228	.....
• •		B thread G 1¼ inch, DIN 228	..... (max. 250°C (482°F))
• •		F thread NPT 1½ inch, conical ANSI B1.20.1	.....
• •		Q thread NPT 1¼ inch, conical ANSI B1.20.1	..... (max. 250°C (482°F))
• •		P Triclampe 2" (DN 50) ISO 2852	..... (max. 80°C (176°F))
• •		H flange 150x150, 4x Ø18 LK-Ø170	..... (max. 0.8 bar (11.6psi))
• •		I flange 150x150, 4x Ø14 LK-Ø170	..... (max. 0.8 bar (11.6psi))
• •		K flange DN32 PN6, EN 1092-1	..... (max. 5 bar (73psi))
• •		L flange DN100 PN6, EN 1092-1	..... (max. 5 bar (73psi))
• •		M flange DN100 PN16, EN 1092-1	.....
• •		S flange 2" 150lbs ANSI B16.5	.....
• •		T flange 3" 150lbs ANSI B16.5	.....
• •		U flange 4" 150lbs ANSI B16.5	.....
• •	pos. 7	<b>Material Process connection</b>	
• •		1 aluminium	..... (max. 0,8 bar (11.6psi) / 80°C (176°F))
• •		3 stainless steel 1.4305 (303) A-Q / 1.4301 (304) P-I / 1.4541 (321) K-U	.....
• •		7 stainless steel 1.4404 (316L)	..... (only with pos. 9.7)
• •	pos. 8	<b>Length of extension "L"</b>	
• •		Z price per 100mm (3.94") or part thereof (starting from 0mm)	.....
		min. 250mm (9.84"), max. 4.000mm (158")	
• •	pos. 9	<b>Material of extension "L"</b>	
• •		1 aluminium	..... (max. 0,8 bar (11.6psi) / 250°C (482°F))
• •		3 stainless steel 1.4305 (303)/1.4301 (304)	.....
• •		7 stainless steel 1.4404 (316L)	..... (only with pos.7.7 and 10.A,D,F,K,S and 32x)
• •	pos. 10	<b>Measuring vane</b>	
• •		A boot-shaped <sup>(2)</sup> 40 x 98mm (1.57 x 3.86")	for 1 1/2" socket (with pos.9.7 L=10mm longer)
• •		D boot-shaped <sup>(2)</sup> 35 x 106mm (1.38 x 4.17")	..... for 1 1/4" socket ("L"=10mm longer)
• •		B rectangular 50 x 98mm ( 1.97 x 3.86")	.....
• •		C rectangular 50 x 150mm (1.97 x 5.90")	.....
• •		E rectangular 50 x 250mm (1.97 x 9.84")	.....
• •		F rectangular 98 x 98mm (3.86 x 3.86")	.....
• •		G rectangular 98 x 150mm (3.86 x 5.90")	.....
• •		I rectangular 98 x 250mm (3.86 x 9.84")	.....
• •		K hinged vane 98 x 200mm (3.86 x 7.87") double sided	..... (L=10mm longer) 1.4301 / 1.4404
• •		S hinged vane 98 x 100mm (3.86 x 3.93") single sided	..... (L=10mm longer) 1.4301 / 1.4404
• •		M rubber vane 98 x 250mm (3.86 x 9.84")	..... (max.80°C (176°F), not for Ex)
• •		Y without	..... including splint pin for fixation

**Further options and accessories:** see page 20

Basic Type

	<b>B</b>									<b>Z</b>	
Position	1	2	3	4	5	6	7	8	9	10	

All positions are available in special design (use code "Z").

**L = mm**

Order code

<sup>(1)</sup> not for FM/CSA

<sup>(2)</sup> maximum length of socket 40mm

## RN ..002-rope Rope extension

**RN 3002 - rope**



**RN 6002 - rope**



**Housings RN 6002-rope**



Standard



d (flameproof)



de  
(flameproof /  
increased safety)

**Cable entries** (by default)

Depending on model selected, the following cable entries will be delivered (options see pos 28 on page 20):

Version:	Cable entries:
ATEX / IEC-Ex flameproof (pos.2 T) FM and CSA (pos.2 M,N,S,U) All other versions	M20x1.5 (1x open conduit + 1x Ex-d blind plug) NPT 1/2" tapered ANSI B1.20.1 (1x open conduit + 1x Ex-d blind plug) M20x1.5 (1x screwed cable gland + 1x blind plug)

**Dimensions**

see pages 24 - 28

**Basic Type**

- RN 3002-Rope .....
- RN 6002-Rope .....

pos. 1 **Types**

- C Standard ..... (max. 4kN load) .....
- H Strengthened ..... (max. 28kN load) (max. 80°C (176°F), only with pos7 3, with pos.2 R,S,T,U on request) .....

pos. 2 **Certificate** (detailed Ex-markings: see page 28)

Certificate	Zone / Div		Protection method
	Dust	Gas	
O CE	-	-	
W ATEX	Zone 20/21	-	Dust Ignition Proof
R ATEX	Zone 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
T ATEX	Zone 20/21	Zone 1	Flameproof / Dust Ignition Proof
A IEC-Ex	Zone 20/21	-	Dust Ignition Proof
C IEC-Ex	Zone 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
D IEC-Ex	Zone 20/21	Zone 1	Flameproof / Dust Ignition Proof
M FM /CSA	-	-	General purpose
N FM /CSA	Cl. II, III, Div.1	-	Dust Ignition Proof
	CSA	A 20/21	
S FM /CSA	Cl. II, III, Div.1	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
	CSA	A 20/21	
U FM /CSA	Cl. II, III, Div.1	Cl. I Div.1 / Zone 1	Explosion Proof / Dust Ignition Proof
	CSA	A 20/21	

For RN3002-Rope: pos.2 O includes GOST-R, pos.2 W includes RTN-Ex and GOST-R

## RN ..002-rope Rope extension

• •	pos. 3	<b>Process temperature</b>	
• •	1	max. + 80°C (176°F)	.....
• •	2	max. + 150°C (302°F)	.....
• •	3	max. + 250°C (482°F)	.....
• •	5	max. + 600°C (1112°F)	..... (not for Ex, only with pos. 4.1) .....
• •	pos. 4	<b>Process overpressure</b>	
• •	1	max. 0,8 bar (11,6psi)	..... (0,1bar (14.5psi) with pos. 3.5) .....
• •	2	max. 5 bar (73psi)	.....
• •	3	max. 10 bar (145psi)	.....
• •	pos. 5	<b>Power supply</b>	
• •	A / S	230V AC 50-60 Hz	..... Motor Speed: A=1/min S= 5/min .....
• •	B / T	115V AC 50-60 Hz	..... Motor Speed: B=1/min T= 5/min .....
• •	C / U	48V AC 50-60 Hz	..... Motor Speed: C=1/min U= 5/min .....
• •	D / V	24V AC 50-60 Hz	..... Motor Speed: D=1/min V= 5/min .....
• •	E / W	24V DC	..... Motor Speed: E=1/min W= 5/min .....
• •	G / H	24V DC PNP	..... Motor Speed: G=1/min H= 5/min .....
• •	F / X	24V DC / 22...230V AC universal voltage <sup>(1)</sup>	..... Motor Speed: F=1/min X= 5/min .....
• •	pos. 6	<b>Process connection</b>	
• •	A	thread G 1½ inch, DIN 228	.....
• •	B	thread G 1¼ inch, DIN 228	..... (max. 250°C (482°F)) .....
• •	F	thread NPT 1½ inch, conical ANSI B1.20.1	.....
• •	Q	thread NPT 1¼ inch, conical ANSI B1.20.1	..... (max. 250°C (482°F)) .....
• •	H	flange 150x150, 4x ø18 LK-ø170	..... (max. 0.8 bar (11.6psi)) .....
• •	I	flange 150x150, 4x ø14 LK-ø170	..... (max. 0.8 bar (11.6psi)) .....
• •	K	flange DN32 PN6, EN 1092-1	..... (max. 5 bar (73psi) / 250°C (482°F)) .....
• •	L	flange DN100 PN6, EN 1092-1	..... (max. 5 bar (73psi)) .....
• •	M	flange DN100 PN16, EN 1092-1	.....
• •	S	flange 2" 150lbs ANSI B16.5	.....
• •	T	flange 3" 150lbs ANSI B16.5	.....
• •	U	flange 4" 150lbs ANSI B16.5	.....
• •	pos. 7	<b>Material Process connection</b>	
• •	1	aluminium	..... (max. 0.8 bar (11.6psi) / 80°C (176°F)) .....
• •	3	stainless steel 1.4305 (303) A-Q / 1.4301 (304) P-I / 1.4541 (321) K-U	.....
• •	pos. 8	<b>Length of extension "L"</b>	
• •	Z	price per 100mm (3.94") or part thereof (starting from 0mm)	.....
• •		min. 500mm (19.69") pos 1C / 1000mm (39.4") pos 1H; max. 10.000mm (394")	.....
• •	Y	without rope (incl. rope fixing parts) (only with pos.1.C and pos.2.0)	.....
• •	pos. 10	<b>Measuring vane</b>	
• •	A	boot-shaped <sup>(2)</sup> 40 x 98mm (1.57 x 3.86")	..... for 1 1/2" socket .....
• •	D	boot-shaped <sup>(2)</sup> 35 x 106mm (1.38 x 4.17")	..... for 1 1/4" socket ("L"=16mm longer) .....
• •	B	rectangular 50 x 98mm ( 1.97 x 3.86")	.....
• •	C	rectangular 50 x 150mm (1.97 x 5.90")	.....
• •	E	rectangular 50 x 250mm (1.97 x 9.84")	.....
• •	F	rectangular 98 x 98mm (3.86 x 3.86")	.....
• •	G	rectangular 98 x 150mm (3.86 x 5.90")	.....
• •	I	rectangular 98 x 250mm (3.86 x 9.84")	.....
• •	K	hinged vane 98 x 200mm (3.86 x 7.87") double sided (L=10mm longer).....	.....
• •	S	hinged vane 98 x 100mm (3.86 x 3.93") single sided (L=10mm longer).....	.....
• •	M	rubber vane 98 x 250mm (3.86 x 9.84")	..... (max.80°C (176°F), not for Ex) .....
• •	Y	without	..... including splint pin for fixation .....

**Further options and accessories:** see page 20

Basic Type

							Z	3		
Position	1	2	3	4	5	6	7	8	9	10

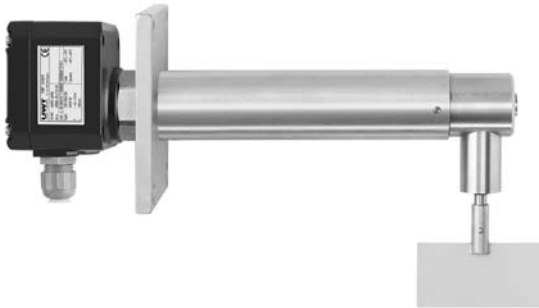
— **L =** mm ← **Order code**

All positions are available in special design (use code "Z").

<sup>(1)</sup> not for FM/CSA  
<sup>(2)</sup> maximum length of socket 40mm

## RN ..003 Angled extension

**RN 3003**



**RN 6003**



Housings RN 6003



**Cable entries** (by default)

Depending on model selected, the following cable entries will be delivered (options see pos 28 on page 20):

Version:	Cable entries:
ATEX / IEC-Ex flameproof (pos.2 T)	M20x1.5 (1x open conduit + 1x Ex-d blind plug)
FM and CSA (pos.2 M,N,S,U)	NPT 1/2" tapered ANSI B1.20.1 (1x open conduit + 1x Ex-d blind plug)
All other versions	M20x1.5 (1x screwed cable gland + 1x blind plug)

**Dimensions**  
 see pages 24 - 28

### Basic Type

- RN 3003 .....
- RN 6003 .....

pos. 2 Certificate (detailed Ex-markings: see page 28)

Certi- ficate	Zone / Div		Protection method
	Dust	Gas	
0 CE	-	-	
W ATEX	Zone 20/21	-	Dust Ignition Proof
R ATEX	Zone 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
T ATEX	Zone 20/21	Zone 1	Flameproof / Dust Ignition Proof
A IEC-Ex	Zone 20/21	-	Dust Ignition Proof
C IEC-Ex	Zone 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
D IEC-Ex	Zone 20/21	Zone 1	Flameproof / Dust Ignition Proof
M FM /CSA	-	-	General purpose
N FM /CSA	Cl. II, III, Div.1	-	Dust Ignition Proof
	CSA	A 20/21	
S FM /CSA	Cl. II, III, Div.1	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
	CSA	A 20/21	
U FM /CSA	Cl. II, III, Div.1	Cl. I Div.1 / Zone 1	Explosion Proof / Dust Ignition Proof
	CSA	A 20/21	

For RN3003: pos.2 0 includes GOST-R, pos.2 W includes RTN-Ex and GOST-R

## RN ..003 Angled extension

• •	pos. 3	<b>Process temperature</b>	
		1 max. + 80°C (176°F)	.....
		2 max. + 150°C (302°F)	.....
• •	pos. 4	<b>Process overpressure</b>	
		1 max. 0,8 bar (11,6psi)	.....
		2 max. 5 bar (73psi)	.....
• •	pos. 5	<b>Power supply</b>	
		A / S 230V AC 50-60 Hz	..... Motor Speed: A=1/min S= 5/min
		B / T 115V AC 50-60 Hz	..... Motor Speed: B=1/min T= 5/min
• •	pos. 6	<b>Process connection</b>	
		H flange 150x150, 4x ø18 LK-ø170	..... (max. 0,8 bar (11.6psi))
		I flange 150x150, 4x ø14 LK-ø170	..... (max. 0,8 bar (11.6psi))
• •	pos. 7	<b>Material Process connection</b>	
		1 aluminium	..... (max. 0.8 bar (11.6psi) / 80°C (176°F))
		3 stainless steel 1.4301 (304) / 1.4541 (321)	.....
• •	pos. 8	<b>Length of extension "L"</b>	
		1 125 mm (4,92")	.....
		2 150 mm (5,90")	.....
• •	pos. 9	<b>Material of extension "L"</b>	
		(must be the same material as pos.7)	
		1 aluminium	.....
• •	pos. 10	<b>Measuring vane</b>	
		A boot-shaped <sup>(2)</sup> 40 x 98mm (1.57 x 3.86")	.....
		B rectangular 50 x 98mm ( 1.97 x 3.86")	.....
• •	pos. 7	<b>Material Process connection</b>	
		1 aluminium	..... (max. 0.8 bar (11.6psi) / 80°C (176°F))
		3 stainless steel 1.4301 (304) / 1.4541 (321)	.....
• •	pos. 8	<b>Length of extension "L"</b>	
		1 125 mm (4,92")	.....
		2 150 mm (5,90")	.....
• •	pos. 9	<b>Material of extension "L"</b>	
		(must be the same material as pos.7)	
		1 aluminium	.....
• •	pos. 10	<b>Measuring vane</b>	
		A boot-shaped <sup>(2)</sup> 40 x 98mm (1.57 x 3.86")	.....
		B rectangular 50 x 98mm ( 1.97 x 3.86")	.....
• •	pos. 5	<b>Power supply</b>	
		C / U 48V AC 50-60 Hz	..... Motor Speed: C=1/min U= 5/min
		D / V 24V AC 50-60 Hz	..... Motor Speed: D=1/min V= 5/min
• •	pos. 6	<b>Process connection</b>	
		E / W 24V DC	..... Motor Speed: E=1/min W= 5/min
		G / H 24V DC PNP	..... Motor Speed: G=1/min H= 5/min
• •	pos. 7	<b>Material Process connection</b>	
		F / X 24V DC / 20...230V AC universal voltage <sup>(1)</sup>	..... Motor Speed: F=1/min X= 5/min
• •	pos. 8	<b>Length of extension "L"</b>	
		3 200 mm (7,87")	.....
		4 250 mm (9,84")	.....
• •	pos. 9	<b>Material of extension "L"</b>	
		(must be the same material as pos.7)	
		3 stainless steel 1.4305 (303)/1.4301 (304)	.....
• •	pos. 10	<b>Measuring vane</b>	
		I rectangular 98 x 98mm (3.86 x 3.86")	.....
		J rectangular 98 x 150mm (3.86 x 5.90")	.....
• •	pos. 5	<b>Power supply</b>	
		K hinged vane 98 x 200mm (3.86 x 7.87") double sided	.....
		L hinged vane 98 x 100mm (3.86 x 3.93") single sided	.....
• •	pos. 6	<b>Process connection</b>	
		M rubber vane 98 x 250mm (3.86 x 9.84")	..... (max.80°C (176°F), not for Ex)
		N without	..... including splint pin for fixation

Further options and accessories: see page 20

Basic Type

	D									
Position	1	2	3	4	5	6	7	8	9	10

← Order code

All positions are available in special design (use code "Z").

<sup>(1)</sup> not for FM/CSA

<sup>(2)</sup> maximum length of socket 40mm

## RN ..004 Pipe extension horizontal

**RN 3004**



**RN 6004**



Housings RN 6004



**Cable entries** (by default)

Depending on model selected, the following cable entries will be delivered (options see pos 28 on page 20):

Version:	Cable entries:
ATEX / IEC-Ex flameproof (pos.2 T)	M20x1.5 (1x open conduit + 1x Ex-d blind plug)
FM and CSA (pos.2 M,N,S,U)	NPT 1/2" tapered ANSI B1.20.1 (1x open conduit + 1x Ex-d blind plug)
All other versions	M20x1.5 (1x screwed cable gland + 1x blind plug)

**Dimensions**  
 see pages 24 - 28

**Basic Type**

- RN 3004 .....
- RN 6004 .....

pos. 2 **Certificate** (detailed Ex-markings: see page 28)

Certificate	Zone / Div		Protection method
	Dust	Gas	
0 CE	-	-	
W ATEX	Zone 20/21	-	Dust Ignition Proof
R ATEX	Zone 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
T ATEX	Zone 20/21	Zone 1	Flameproof / Dust Ignition Proof
A IEC-Ex	Zone 20/21	-	Dust Ignition Proof
C IEC-Ex	Zone 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
D IEC-Ex	Zone 20/21	Zone 1	Flameproof / Dust Ignition Proof
M FM /CSA	-	-	General purpose
N FM /CSA	Cl. II, III, Div.1	-	Dust Ignition Proof
	CSA	A 20/21	
S FM /CSA	Cl. II, III, Div.1	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
	CSA	A 20/21	
U FM /CSA	Cl. II, III, Div.1	Cl. I Div.1 / Zone 1	Explosion Proof / Dust Ignition Proof
	CSA	A 20/21	

For RN3004: pos.2 0 includes GOST-R, pos.2 W includes RTN-Ex and GOST-R





## RN ..004 Pipe extension horizontal

	pos. 3	<b>Process temperature</b>	
• •	1	max. + 80°C (176°F)	.....
• •	2	max. + 150°C (302°F)	.....
• •	3	max. + 250°C (482°F)	.....
• •	4	max. + 350°C (662°F)	..... (not for Ex, only with pos. 4.1) .....
• •	5	max. + 600°C (1112°F)	..... (not for Ex, only with pos. 4.1) .....
	pos. 4	<b>Process overpressure</b>	
• •	1	max. 0,8 bar (11,6psi)	..... (0,1bar (14,5psi) with pos. 3.5) .....
• •	2	max. 5 bar (73psi)	.....
• •	3	max. 10 bar (145psi)	.....
	pos. 5	<b>Power supply</b>	
• •	A / S	230V AC 50-60 Hz	..... Motor Speed: A=1/min S= 5/min .....
• •	B / T	115V AC 50-60 Hz	..... Motor Speed: B=1/min T= 5/min .....
• •	C / U	48V AC 50-60 Hz	..... Motor Speed: C=1/min U= 5/min .....
• •	D / V	24V AC 50-60 Hz	..... Motor Speed: D=1/min V= 5/min .....
• •	E / W	24V DC	..... Motor Speed: E=1/min W= 5/min .....
• •	G / H	24V DC PNP	..... Motor Speed: G=1/min H= 5/min .....
• •	F / X	24V DC / 22...230V AC universal voltage <sup>(1)</sup>	..... Motor Speed: F=1/min X= 5/min .....
	pos. 6	<b>Process connection</b>	
• •	A	thread G 1½ inch, DIN 228	.....
• •	B	thread G 1¼ inch, DIN 228	..... (max. 250°C (482°F)) .....
• •	F	thread NPT 1½ inch, conical ANSI B1.20.1	.....
• •	Q	thread NPT 1¼ inch, conical ANSI B1.20.1	..... (max. 250°C (482°F)) .....
• •	P	Triclampe 2" (DN 50) ISO 2852	..... (max. 80°C) .....
• •	H	flange 150x150, 4x Ø18 LK-Ø170	..... (max. 0.8 bar (11.6psi)) .....
• •	I	flange 150x150, 4x Ø14 LK-Ø170	..... (max. 0.8 bar (11.6psi)) .....
• •	K	flange DN32 PN6, EN 1092-1	..... (max. 5 bar / 250°C) .....
• •	L	flange DN100 PN6, EN 1092-1	..... (max. 5 bar (73psi)) .....
• •	M	flange DN100 PN16, EN 1092-1	.....
• •	S	flange 2" 150lbs ANSI B16.5	.....
• •	T	flange 3" 150lbs ANSI B16.5	.....
• •	U	flange 4" 150lbs ANSI B16.5	.....
	pos. 7	<b>Material Process connection</b>	
• •	1	aluminium	..... (max. 0.8 bar (11.6psi) / 80°C (176°F))
• •	3	stainless steel 1.4305 (303) A-Q / 1.4301 (304) P-1 / 1.4541 (321) K-U	.....
• •	7	stainless steel 1.4404 (316L)	..... (only with Pos. 9.7)
	pos. 8	<b>Length of extension "L"</b>	
• •	N	150 mm (5,90") (only with vane A, D, B, C, E)	.....
• •	P	200 mm (7,87")	.....
• •	Q	250 mm (9,84")	.....
• •	R	300 mm (11,8")	.....
• •	Z	other lengths	price per 50mm (1,97") or part thereof (starting from 0mm) .....
			min. 350 mm (13,8"), max. 600mm (23,6")
	pos. 9	<b>Material of extension "L"</b>	
• •	1	aluminium	..... (max. 0,8 bar / 80°C)
• •	3	stainless steel 1.4305 (303)/1.4301 (304)	.....
• •	7	stainless steel 1.4404 (316L)	..... (only with pos.7.7 and 10.A,D,F,K,S)
	pos. 10	<b>Measuring vane</b>	
• •	A	boot-shaped <sup>(2)</sup> 40 x 98mm (1,57 x 3,86")	for 1 1/2" socket (with pos.9.7 L=10mm longer)
• •	D	boot-shaped <sup>(2)</sup> 35 x 106mm (1,38 x 4,17")	for 1 1/4" socket (L =10mm longer)
• •	B	rectangular 50 x 98mm ( 1,97 x 3,86")	.....
• •	C	rectangular 50 x 150mm (1,97 x 5,90")	.....
• •	E	rectangular 50 x 250mm (1,97 x 9,84")	.....
• •	F	rectangular 98 x 98mm (3,86 x 3,86")	.....
• •	G	rectangular 98 x 150mm (3,86 x 5,90")	.....
• •	I	rectangular 98 x 250mm (3,86 x 9,84")	.....
• •	K	hinged vane 98 x 200mm (3,86 x 7,87") double sided	(L= 10mm longer) 1.4301/1.4404 .....
• •	S	hinged vane 98 x 100mm (3,86 x 3,93") single sided	(L= 10mm longer) 1.4301/1.4404 .....
• •	M	rubber vane 98 x 250mm (3,86 x 9,84")	..... (max.80°C (176°F), not for Ex) ...
• •	Y	without	including splint pin for fixation .....

**Further options and accessories:** see page 20

Basic Type

	<b>E</b>								
--	----------	--	--	--	--	--	--	--	--

Position 1 2 3 4 5 6 7 8 9 10

All positions are available in special design (use code "Z").

**Order code**

<sup>(1)</sup> not for FM/CSA

<sup>(2)</sup> maximum length of socket 40mm

**Simply working**

## RN 3005 Extra short version

---

**RN 3005**



**RN 6005**  
not available

**Cable entries** (by default)

M20x1.5 (1x screwed cable gland + 1x blind plug)  
Options see pos.28 on page 20

**Dimensions**      see pages 24 - 28

## RN 3005 Extra short version

### Basic Type

	RN 3005 .....
pos. 2	<b>Certificate</b>
•	0 CE <sup>(1)</sup> .....
•	W ATEX <sup>(2)</sup> Zone 20/21 Dust Ignition Proof (ATEX II 1/2D) .....
•	A IEC-Ex Zone 20/21 Dust Ignition Proof (ta/tb IIIC) .....
pos. 5	<b>Power supply</b>
•	A / S 230V AC 50-60 Hz ..... Motor Speed: A=1/min S= 5/min .....
•	B / T 115V AC 50-60 Hz ..... Motor Speed: B=1/min T= 5/min .....
•	C / U 48V AC 50-60 Hz ..... Motor Speed: C=1/min U= 5/min .....
•	D / V 24V AC 50-60 Hz ..... Motor Speed: D=1/min V= 5/min .....
•	E / W 24V DC ..... Motor Speed: E=1/min W= 5/min .....
•	G / H 24V DC PNP ..... Motor Speed: G=1/min H= 5/min .....
•	F / X 24V DC / 22...230V AC universal voltage ..... Motor Speed: F=1/min X= 5/min .....
pos. 6	<b>Process connection</b>
•	A thread G 1½ inch, DIN 228 .....
•	F thread NPT 1½ inch, conical ANSI B1.20.1 .....
pos. 7	<b>Material process connection</b>
•	1 aluminium
•	3 stainless steel (1.4305 / 303)
pos. 10	<b>Measuring vane</b>
•	N VT-vane .....
•	others on request

**Further options and accessories:** see page 20

### Basic Type

<b>RN 3005</b>	<b>F</b>	<b>1</b>	<b>1</b>				<b>A</b>	<b>3</b>		
Position	1	2	3	4	5	6	7	8	9	10

← **Order code**

All positions are available in special design (use code "Z").

<sup>(1)</sup> GOST-R included

<sup>(2)</sup> RTN-Ex and GOST-R included

## Options

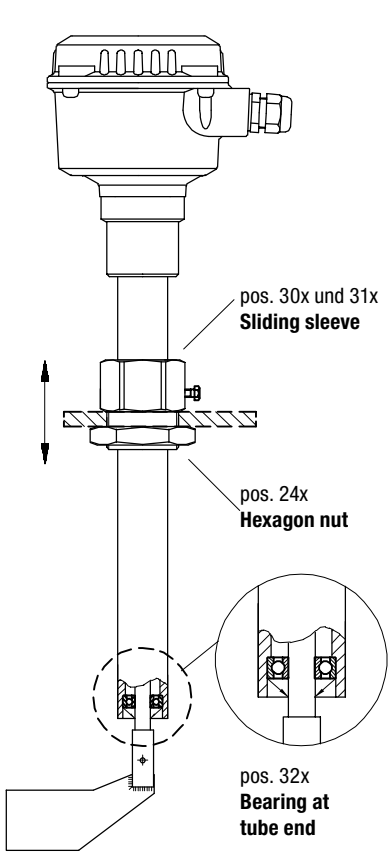
RN 3001	RN 6001	RN 3002	RN 6002	RN 3002- rope	RN 6002- rope	RN 3003	RN 6003	RN 3004	RN 6004	RN 3005																																																
•	•	•	•	•	•			•	•	•	Pos. 15a	<b>Flat gasket</b> (max. 250°C) for process connection thread 1½, incl. sealing face in aluminium .....																																														
•	•	•	•	•	•			•	•	•	Pos. 15b	for process connection thread 1½, incl. sealing face in 1.4404 (316L) .....																																														
•	•	•	•	•	•			•	•	•	Pos. 15c	for process connection thread 1¼ / 1" / M32x1.5 / M30x1.5 .....																																														
1		1		1		1		1		1	Pos. 16a	<b>Material of housing plastics PA6</b> .....																																														
												<b>Radial shaft sealing</b>																																														
2	2	2	2	2	2	2	2	2	2	2	pos. 17a	FPM (Viton) .....																																														
3	3	3	3	3	3	3	3	3	3	3	pos. 17b	PTFE (Teflon) .....																																														
											pos. 18x	<b>Stainless steel ball bearing</b> for RN ..001/ RN ..002/ RN ..004/ RN ..005 .....																																														
4	4	4	4	4	4			4	4	•		for RN ..003 .....																																														
5	5	5	5	5	5	5	5	5	5	5	pos. 21x	<b>Weather protection cover</b> (for Ex, only for Zone 2/22/Div. 2) .....																																														
												<b>Mounting set for flange mounting</b>																																														
												<table border="1"> <thead> <tr> <th rowspan="2">for flange</th> <th rowspan="2">for counter flange with</th> <th colspan="4">consists of</th> </tr> <tr> <th>screws*</th> <th>nuts*</th> <th>washers*</th> <th>sealing**</th> </tr> </thead> <tbody> <tr> <td>H</td> <td>hole ø18</td> <td>4 x M16x50</td> <td>4 x M16</td> <td>4 pcs</td> <td>1 piece</td> </tr> <tr> <td>H</td> <td>thread M16</td> <td>4 x M16x30</td> <td></td> <td>4 pcs</td> <td>1 piece</td> </tr> <tr> <td>L</td> <td>hole ø18</td> <td>4 x M16x60</td> <td>4 x M16</td> <td>4 pcs</td> <td>1 piece</td> </tr> <tr> <td>L</td> <td>thread M16</td> <td>4 x M16x40</td> <td></td> <td>4 pcs</td> <td>1 piece</td> </tr> <tr> <td>M</td> <td>hole ø18</td> <td>4 x M16x60</td> <td>8 x M16</td> <td>8 pcs</td> <td>1 piece</td> </tr> <tr> <td>M</td> <td>thread M16</td> <td>4 x M16x40</td> <td></td> <td>8 pcs</td> <td>1 piece</td> </tr> </tbody> </table>	for flange	for counter flange with	consists of				screws*	nuts*	washers*	sealing**	H	hole ø18	4 x M16x50	4 x M16	4 pcs	1 piece	H	thread M16	4 x M16x30		4 pcs	1 piece	L	hole ø18	4 x M16x60	4 x M16	4 pcs	1 piece	L	thread M16	4 x M16x40		4 pcs	1 piece	M	hole ø18	4 x M16x60	8 x M16	8 pcs	1 piece	M	thread M16	4 x M16x40		8 pcs	1 piece
for flange	for counter flange with	consists of																																																								
		screws*	nuts*	washers*	sealing**																																																					
H	hole ø18	4 x M16x50	4 x M16	4 pcs	1 piece																																																					
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L	hole ø18	4 x M16x60	4 x M16	4 pcs	1 piece																																																					
L	thread M16	4 x M16x40		4 pcs	1 piece																																																					
M	hole ø18	4 x M16x60	8 x M16	8 pcs	1 piece																																																					
M	thread M16	4 x M16x40		8 pcs	1 piece																																																					
•	•	•	•	•	•	•	•	•	•	•	pos. 22a	* material stainless A2 **max. 250°C																																														
•	•	•	•	•	•	•	•	•	•	•	pos. 22b																																															
•	•	•	•	•	•	•	•	•	•	•	pos. 22c																																															
•	•	•	•	•	•	•	•	•	•	•	pos. 22d																																															
•	•	•	•	•	•	•	•	•	•	•	pos. 22e																																															
•	•	•	•	•	•	•	•	•	•	•	pos. 22f																																															
•	•	•	•	•	•	•	•	•	•	•	pos. 24a	<b>Hexagon nut</b> aluminium 1 pc .....																																														
•	•	•	•	•	•	•	•	•	•	•	pos. 24b	aluminium 2 pcs .....																																														
•	•	•	•	•	•	•	•	•	•	•	pos. 24e	stainless steel 1.4305 (303) 1 pc .....																																														
•	•	•	•	•	•	•	•	•	•	•	pos. 24f	stainless steel 1.4305 (303) 2 pcs .....																																														
6	6	6	6	6	6	6	6	6	6	6	pos. 25a	<b>Switchable signal output FSH/FSL</b> .....																																														
•	•	•	•	•	•	•	•	•	•	•	pos. 25x	<b>Fail safe alarm</b> (for 24V DC/22 .. 230V AC universal voltage) .....																																														
7	7	7	7	7	7	7	7	7	7	7	pos. 26x	<b>Heating of housing</b> 2,5 watts for ambient/process temp. to -40°C (-40°F)																																														
8	8	8	8	8	8	8	8	8	8	8	pos. 27a	<b>Signal lamp</b> Bulb in cable gland, 2W green .....																																														
8	8	8	8	8	8	8	8	8	8	8	Pos. 27c	Bulb in cable gland, 2W red .....																																														
9	9	9	9	9	9	9	9	9	9	9	pos. 27b	LED (glass window in lid) .....																																														
10	10	10	10	10	10	10	10	10	10	10	pos. 27d	LED (transparent lid section) .....																																														
•	11	•	11	•	11	•	11	•	11	•	pos. 28x	<b>Cable entry</b> optionally available: Selection of the following options only necessary, if a deviation from the default cable gland / conduit is required:																																														
•	12	•	12	•	12	•	12	•	12	•	pos. 28d	M20x1,5 2x screwed cable gland .....																																														
•	•	•	•	•	•	•	•	•	•	•	pos. 28a	M20x1,5 1x screwed cable gland +1x blind plug .....																																														
•	•	•	•	•	•	•	•	•	•	•	pos. 28c	NPT 1/2" tapered ANSI B1.20.1 (1x conduit + 1x Ex-d blind plug) .....																																														
•	•	•	•	•	•	•	•	•	•	•	pos. 28c	NPT 3/4" tapered ANSI B1.20.1 (1x conduit + 1x Ex-d blind plug) .....																																														
13	13	13	13	13	13	13	13	13	13	13	pos. 29y	<b>Food grade materials</b> (in contact with process) .....																																														
												(according to 1935/2004/EC, with FDA conform sealing)																																														
14	14	14	14					14	14		pos. 29a	<b>EHDG approval</b> Process connection G 1 1/2" (without flush welding socket) .....																																														
14	14	14	14					14	14		pos. 29b	Process connection flush welding socket ø69/G 1 1/2" made of aluminium ...																																														
14	14	14	14					14	14		pos. 29c	Process connection flush welding socket ø69/G 1 1/2" made of 1.4301 (304)																																														
14	14	14	14					14	14		pos. 29d	Process connection flush welding socket ø69/G 1 1/2" made of 1.4404 (316L)																																														

## Options

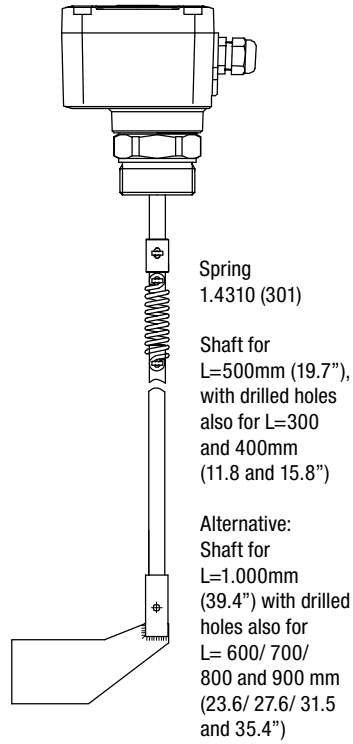
	15	15							pos. 30x	<b>Sliding sleeve</b> for applications without process overpressure .....
	16	16							pos. 31x	<b>Sliding sleeve</b> for applications with process overpressure (1.4305 (303)) .....
	•	•							pos. 32x	<b>Bearing at tube end</b> max. +80°C (176°F) ..... max. +150°C (302°F) ..... max. +250°C (482°F) ..... max. +600°C (1112°F) .....
									pos. 33x	<b>Extension and flange welded</b> $\alpha = \text{ }^\circ$ min. 0° max. 45° for aluminium (see pos. 7/9) ..... for stainless steel (1.4305 (303)) (see pos. 7/9) .....
									pos. 34x	<b>Reinforced rib</b> (only with pos. 33, max. $\alpha = 30^\circ$ ) .....
										<b>Plug</b>
17	17	17	17	17	17	17	17	17	pos. 35x	Valve connector (incl. mating plug) 4-pole (incl. PE) max. 230V
17	17	17	17	17	17	17	17	17	pos. 35a	M12 (without mating plug) 4-pole max. 25V
17	17	17	17	17	17	17	17	17	pos. 35b	M12 (without mating plug) 5-pole (incl. PE) max. 60V
17	17	17	17	17	17	17	17	17	pos. 35c	Harting Han 4A (incl. mating plug) 5-pole (incl. PE) max. 230V
										<b>Kit pendulum shaft</b> only for vertical installation, max. pulling force 400N, only with pos.8 A
	•	•							pos. 36x	L=500 mm (19.7") (drilled holes also for 300 and 400mm (11.8 and 15.8")) .....
	•	•							pos. 36y	L=1.000 mm (39,4") (drilled holes also for 600/ 700/ 800 and 900mm (23,6/ 27,6/ 31,5 und 35,4")) .....
18									pos. 39x	<b>Kit rope extension</b> L=2m, only available as full detector .....

- Available for certificat CE, ATEX and IEC-Ex dust explosionproof (pos.2 0, W, A). Not with cable entry NPT (pos.28 a, c) and control lamp LED (pos.27 b). For ATEX and IEC-Ex the min. ambient temperature is -20°C (-4°F).
- Available for temp. up to 80°C and for pressure up to 0.8 bar, except M30x1.5 (pos. 6E). Note: 150°C version including FPM as standard.
- Available for temp. up to 150°C and for pressure up to 0.8 bar, except M30x1.5 (pos. 6E). Note: Above 250°C and 5bar/10bar PTFE included as standard.
- Available for temperature up to 250°C except M30x1.5 (pos. 6E), not for RN3002-rope strengthened (pos. 1H).  
All bearings mounted in the extension are made of stainless steel.
- Available for all versions except explosionproof / flameproof version (pos.2 R,T,S,U).
- Available for power supply 230V/115V/48V/24V AC (pos.5 A, B, C, D, S, T, U, V). Not for FM/CSA (pos.2 M, N, S, U). Not with fail safe alarm (pos. 25x).  
Note: Universal voltage implements FSH/FSL by default.
- Available with universal voltage (pos.5 F,X) and PNP (Pos.5 G,H). Consider reduced switching sensitivity (see technical data).  
Note: For temperatures down to -20°C (-4°F) the electronic "universal voltage" and "PNP" have "heating of housing" implemented by default (in this case option pos. 26x is not required).
- Available for CE (pos.2 0), not in combination with weather protection cover (pos 21) and cable entries pos.28 x,a,c.  
In combination with universal voltage (pos.5 F, X) three bulbs (24V, 115V and 230V) will be delivered.  
Connection of bulb signal lamp wires with internal terminals: without (standard) or according to customer specification.
- Available for all versions except explosionproof / flameproof version (pos.2 R,T,S,U) not in combination with weather protection cover (pos 21).
- Available for certificate CE (pos. 2,0)
- Available for all versions except flameproof version (pos.2 T,U).
- Available for FM/CSA versions (pos.2 M,N,S) except flameproof version (pos.2 T,U).
- Available up to max. 250°C. Not for M30x1.5 (pos. 6E), vane (pos.10 M), flange sealings (pos.22). The option does not automatically implement a food conform design (food conform gaps and radiuses).
- Certificate only valid with the use of the "flush welding socket". With pos.29a this socket must be manufactured on site.  
Available up to max. 250°C. Only for G 1 1/2" (pos.6 A). Not with vane pos.10 K, P, S, M, Y. Vane pos.10 A can not be inserted through the flush welding socket. RN 3002/6002 only with bearing at tube end (pos 32x). Not in combination with options pos.15, 22, 24, 29y, 30, 31, 36, 39.
- Available for CE (pos.2 0). Process connection and material as choosen in pos.6 and 7.
- Available for temperatures up to 250°C. Process connection as choosen in pos.6.
- Available for CE (pos.2 0). Without connection of stranded wires for installation and internal terminals (standard) or according to customer specification.
- Available for certificate CE, ATEX, IEC-Ex (pos. 2,0,W,A), Extension 100mm (pos.8,A) and 1.4305 (pos.9,3)

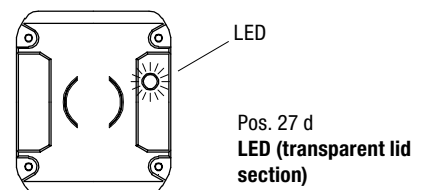
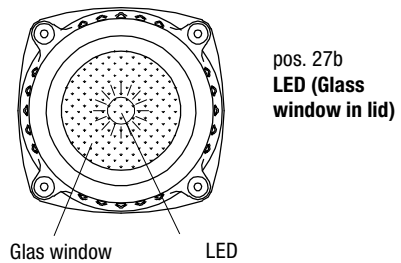
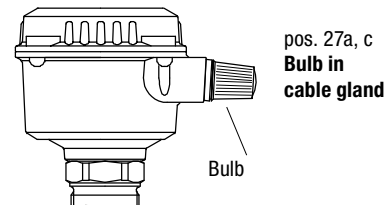
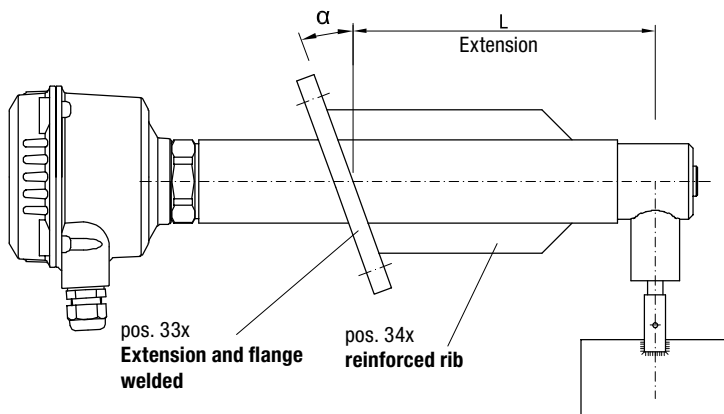
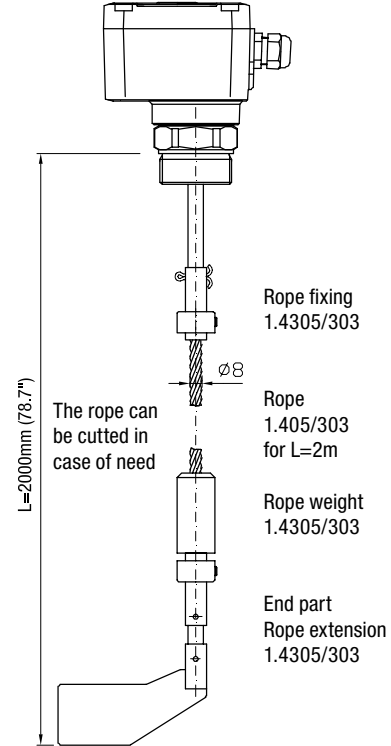
## Options



pos. 36  
**Kit "pendulum shaft"**

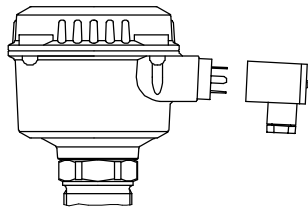
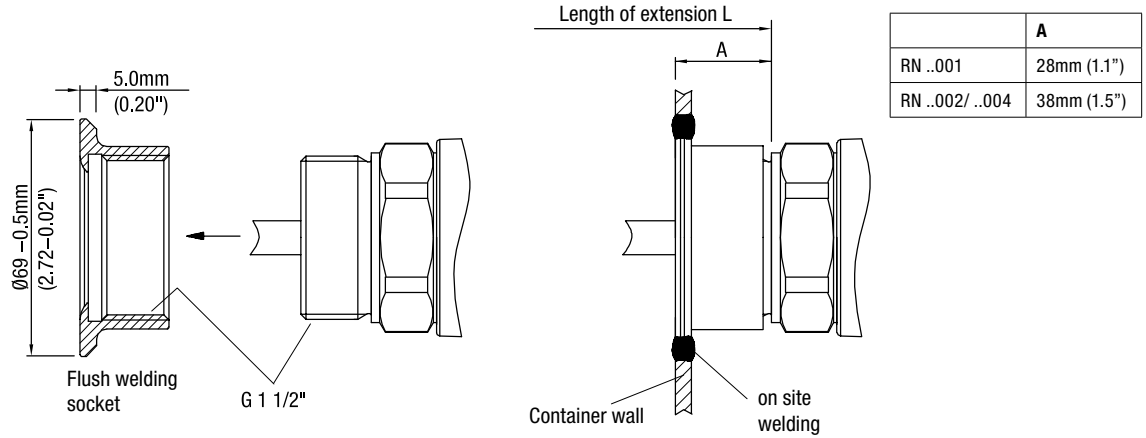


pos. 39  
**Kit „rope extension“**

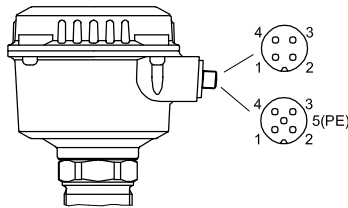


## Options

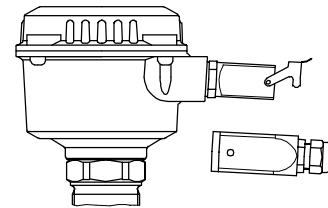
Pos. 29  
**EHEDG approval**



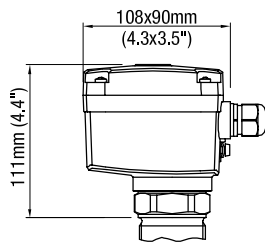
Pos. 35x  
**Valve connector**  
 Enclosure plastic  
 Protection IP65



Pos. 35a,b  
**Plug M12**  
 Enclosure brass  
 Protection IP67

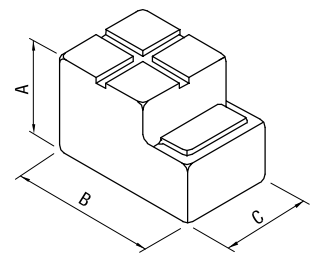


Pos. 35c  
**Plug Han 4A**  
 Enclosure zinc  
 Protection IP65



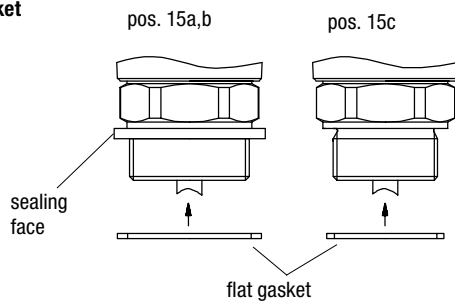
Pos. 16a  
 Material of housing  
 Plastics PA6

pos. 21x  
**Weather protection cover**



	RN 3000	RN 6000
A	100mm (3.9")	130mm (5.1")
B	165mm (6.5")	200mm (7.9")
C	95mm (3.7")	125mm (4.9")

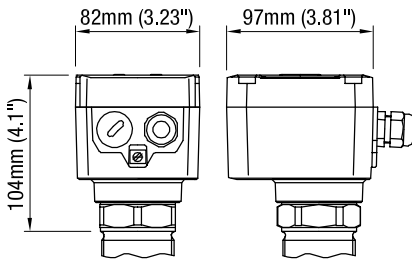
Pos. 15  
**Flat gasket**



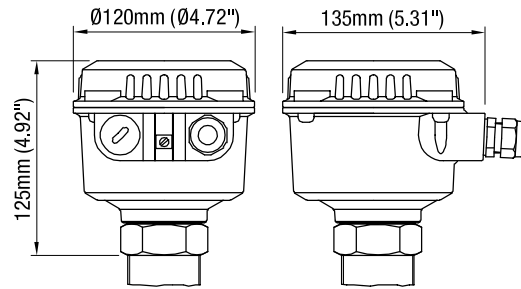
## Dimensions

### Housing versions

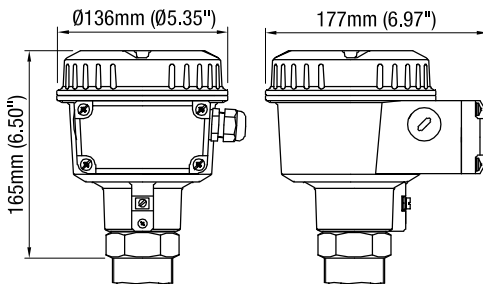
**Series RN 3000**  
Standard



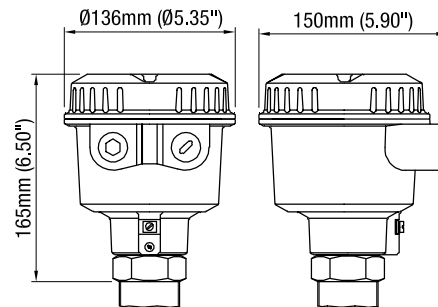
**Series RN 6000**  
Standard



**Series RN 6000**  
de explosionproof with increased  
safety terminal box

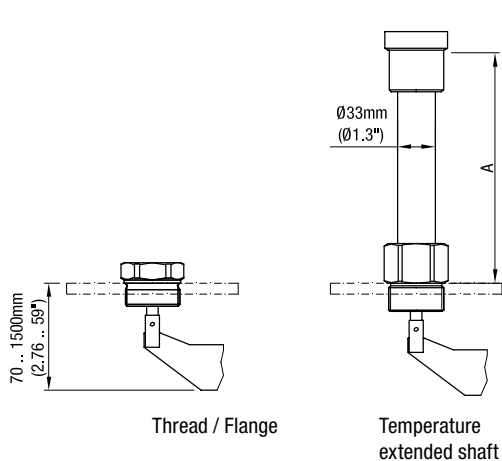


**Series RN 6000**  
d flameproof /explosionproof

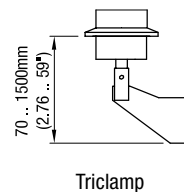


### Extensions

RN ..001



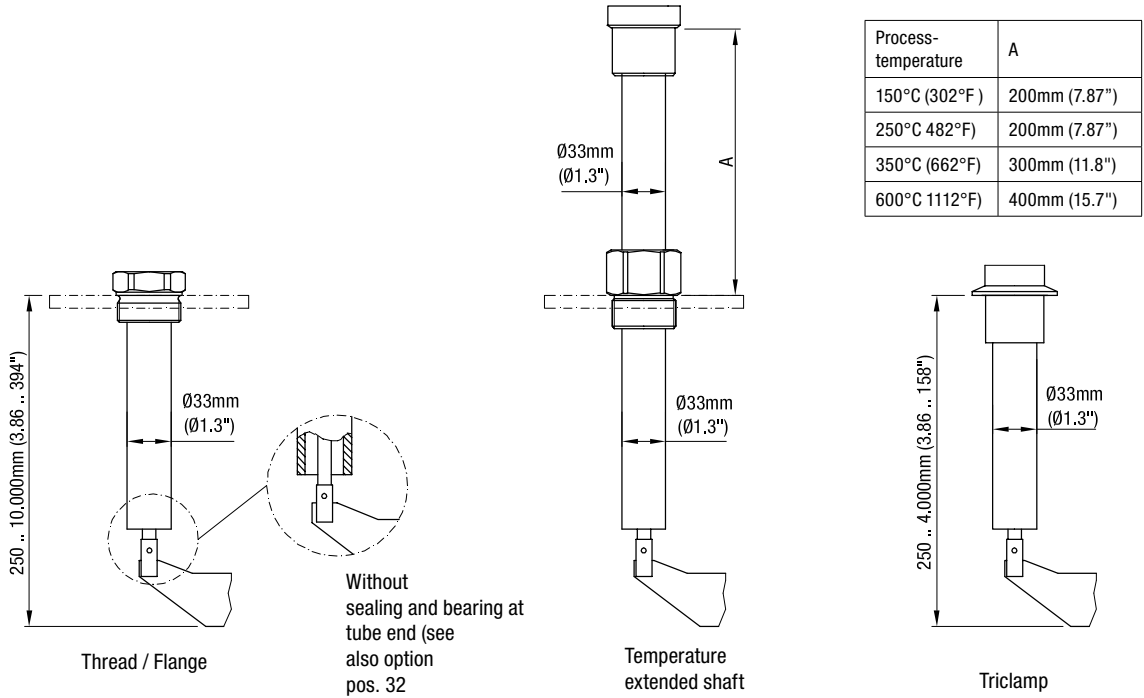
Process-temperature	A
150°C (302°F)	200mm (7.87")
250°C (482°F)	200mm (7.87")
350°C (662°F)	300mm (11.8")
600°C (1112°F)	400mm (15.7")



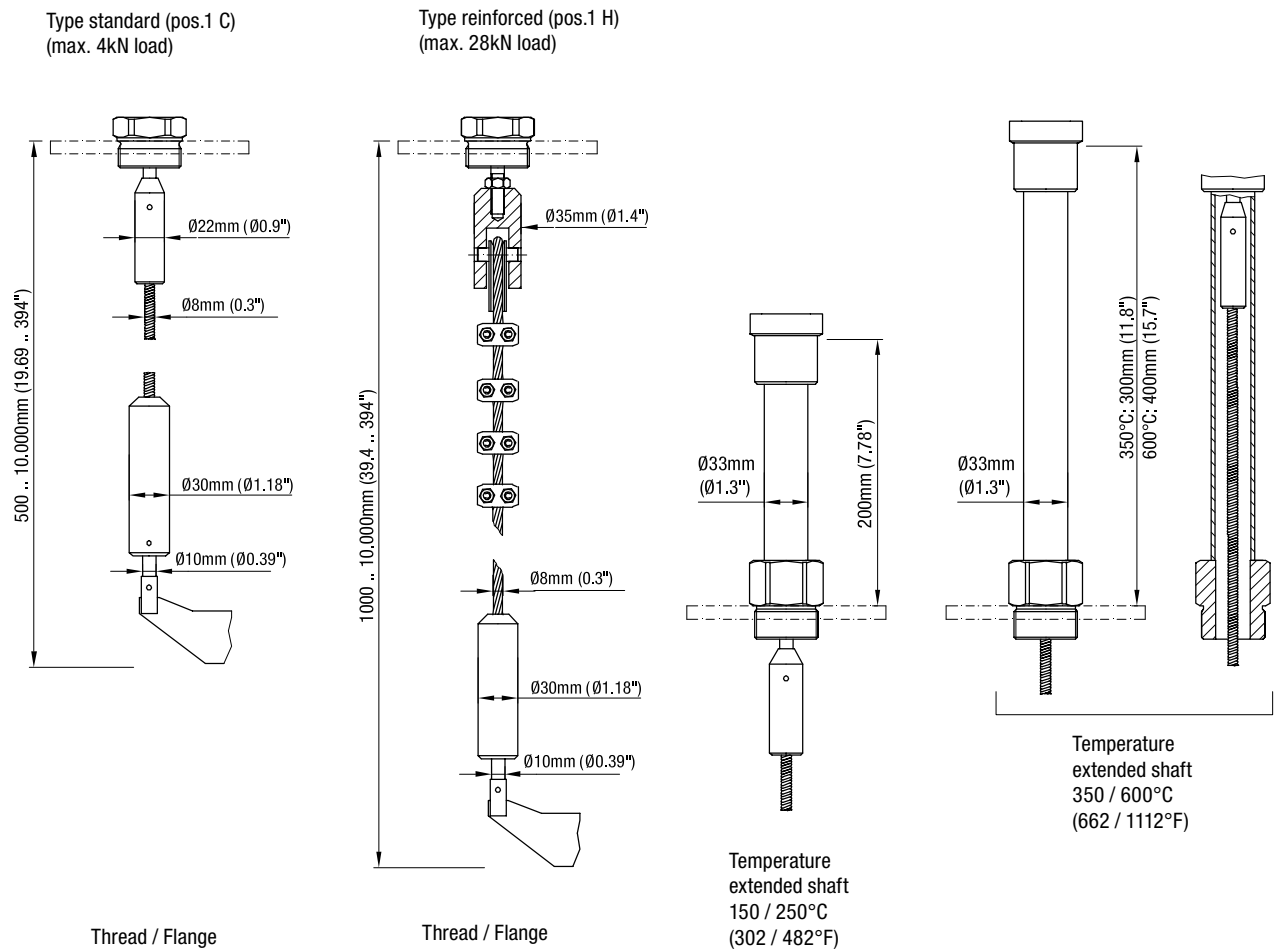


## Dimensions

RN ..002

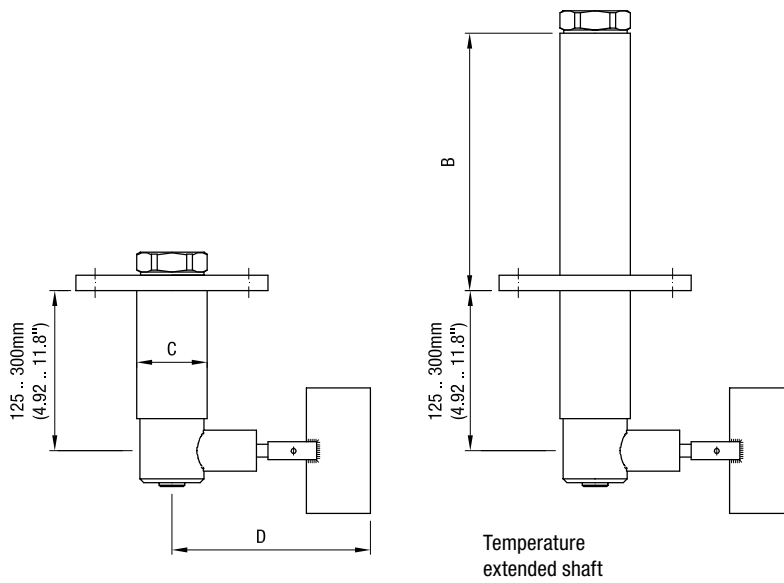


RN ..002 rope



## Dimensions

### RN ..003

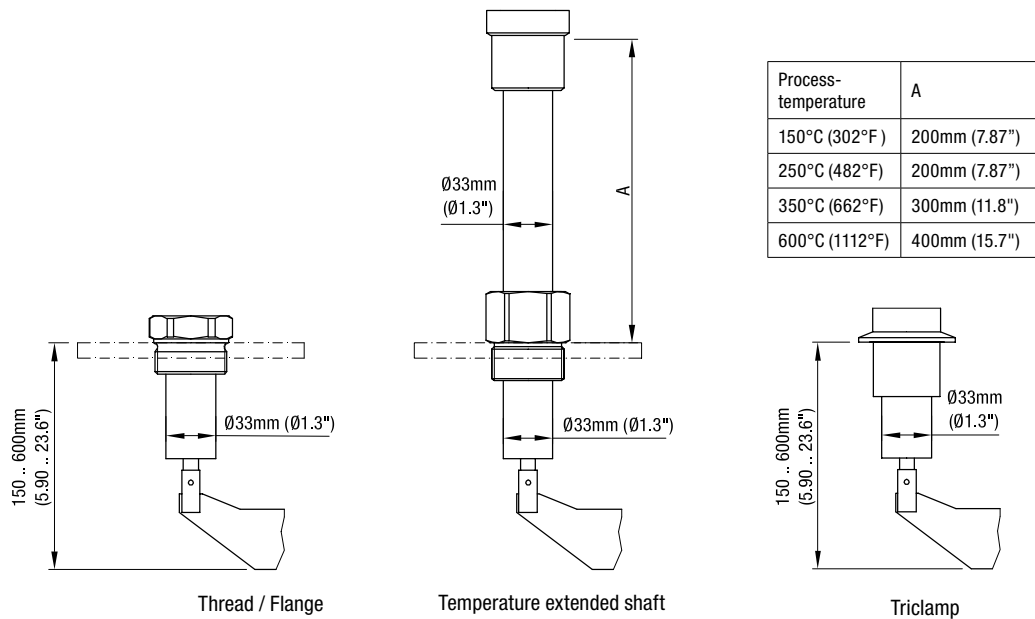


Process temperature	B
80°C (176°F) 0.8 bar (11.6psi)	10mm (0.39")
80°C (176°F) 5/ 10bar (73/ 145psi)	75mm (2.95")
150/ 250°C (302/ 482°F) 0.8/5/10 bar (11.6/73/145psi)	210mm (8.27")

Material	C
steel	ø55mm (2.17")
aluminium	ø60mm (2.36")

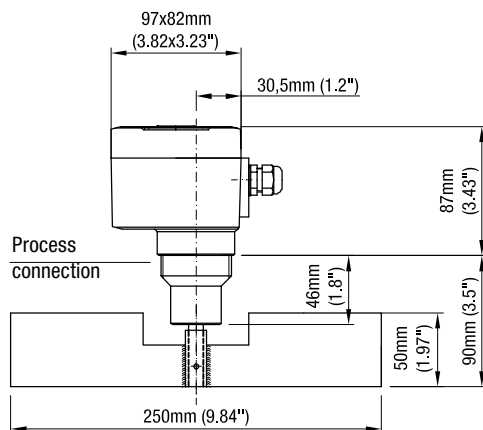
Vane	D
50mm x ..mm (1.97" x ..")	139mm (5.47")
98mm x ..mm (3.86" x ..")	187mm (7.36")

### RN ..004



Process-temperature	A
150°C (302°F)	200mm (7.87")
250°C (482°F)	200mm (7.87")
350°C (662°F)	300mm (11.8")
600°C (1112°F)	400mm (15.7")

### RN 3005

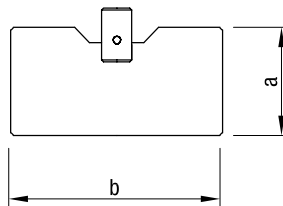


## Dimensions

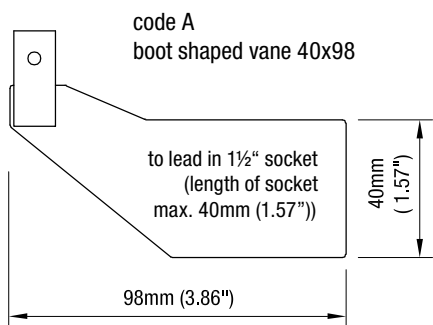
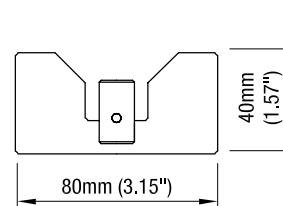
### Measuring vanes

code	type	a	b
B	rectangular	50mm (1.97")	98mm (3.86")
C	rectangular	50mm (1.97")	150mm (5.90")
E	rectangular	50mm (1.97")	250mm (9.84")
F	rectangular	98mm (3.86")	98mm (3.86")
G	rectangular	98mm (3.86")	150mm (5.90")
I	rectangular	98mm (3.86")	250mm (9.84")

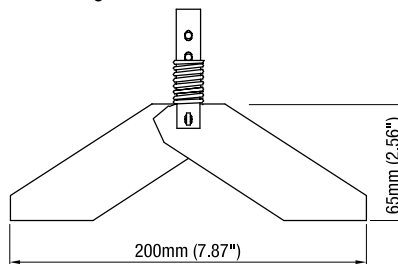
code B,C,E,F,G,I  
 rectangular vane



code P  
 notched 40x80

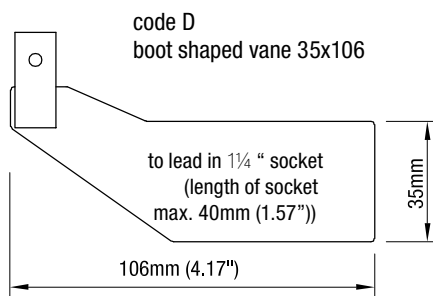
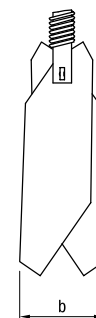


**code K**  
 hinged vane 98x200 double sided

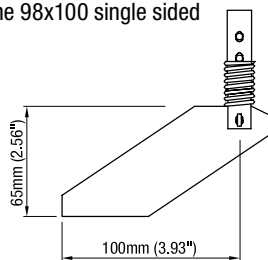


b=37mm (1,46")  
 for 1 1/2" / 1 1/4"

b=28mm (1,1")  
 for 1" / M32x1,5

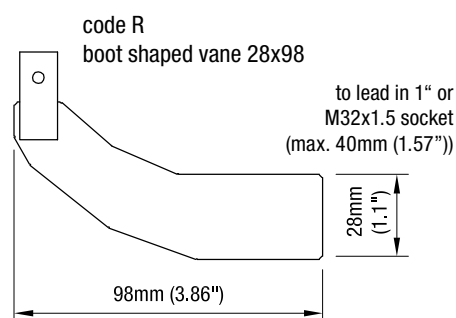


**code S**  
 hinged vane 98x100 single sided

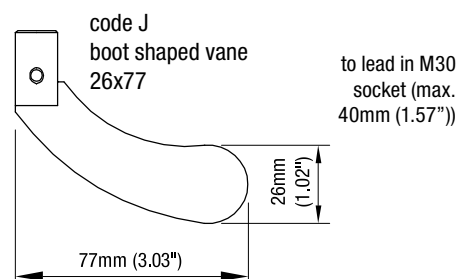
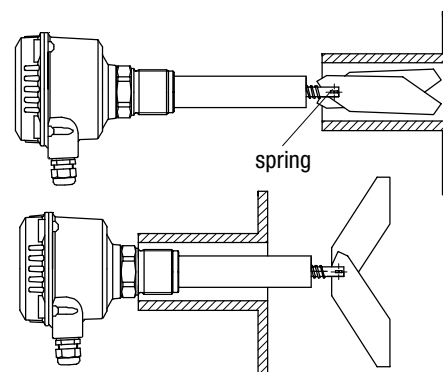


b=37mm (1,46")  
 für 1 1/2" / 1 1/4"

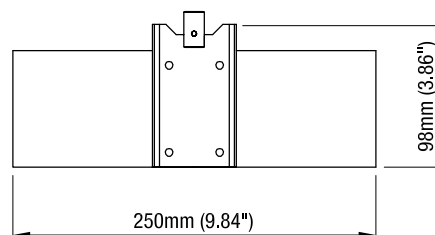
b=28mm (1,1")  
 for 1" / M32x1,5



Insertion of the hinged vane through a long socket



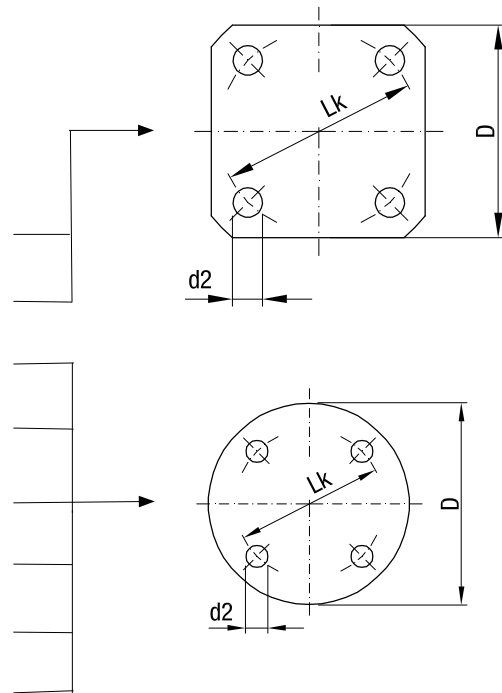
**code M**  
 rubber vane 98x250



## Dimensions / Detailed Ex-markings

### Flanges

Code	Type	Number of holes	d2	Lk	D	T (thickness)
H	flange 150x150	4	18mm (0.71")	170mm (6.69")	150mm (5.90")	10mm (0.39")
I	flange 150x150	4	14mm (0.55")	170mm (6.69")	150mm (5.90")	10mm (0.39")
K	flange DN32 PN6	4	14mm (0.55")	90mm (3.54")	120mm (4.72")	14mm (0.55")
L	flange DN100 PN6	4	18mm (0.71")	170mm (6.69")	210mm (8.27")	16mm (0.63")
M	flange DN100 PN16	8	18mm (0.71")	180mm (7.09")	220mm (8.66")	20mm (0.79")
S	flange 2" 150lbs	4	19.1mm (0.75")	120.7mm (4.75")	152.4mm (6.01")	19.1mm (0.75")
T	flange 3" 150lbs	4	19.1mm (0.75")	152.4mm (6.01")	190.5mm (7.5")	23.9mm (0.94")
U	flange 4" 150lbs	8	19.1mm (0.75")	190.5mm (7.5")	228.6mm (9")	23.9mm (0.94")



### Detailed Ex-markings

pos. 2	Certificate	Housing
0	CE	Standard
W	ATEX II 1/2D Ex t IIIC T! Da/Db IP6X	Standard
R	ATEX II 2G Ex de IIC T! Gb and ATEX II 1/2D Ex t IIIC T! Da/Db IP6X	de
T	ATEX II 2G Ex d IIC T! Gb and ATEX II 1/2D Ex t IIIC T! Da/Db IP6X	d
A	IEC-Ex t IIIC T! Da/Db IP6X	Standard
C	IEC-Ex de IIC T! Gb and t IIIC T! Da/Db IP6X	de
D	IEC-Ex d IIC T! Gb and t IIIC T! Da/Db IP6X	d
M	FM / CSA general purpose	Standard
N	FM / CSA DIP Cl. II, III Div. 1 Gr. E,F,G CSA Ex DIP A20/21	Standard
S	FM Cl. I Zone 1 AEx de IIC and FM / CSA DIP Cl. II,III Div. 1 Gr. E,F,G CSA Cl. I Zone 1 Ex de IIC and CSA Ex DIP A20/21	de
U	FM XP Cl. I,II,III Div. 1 Gr. B-G and FM Cl. I Zone 1 AEx d IIC CSA XP Cl. I,II,III Div. 1 Gr. B-G CSA Cl. I Zone 1 Ex d IIC and CSA Ex DIP A20/21	d

## Electrical installation Series RN 3000

**Version:**  
 - AC  
 - DC  
 - **Universal voltage**

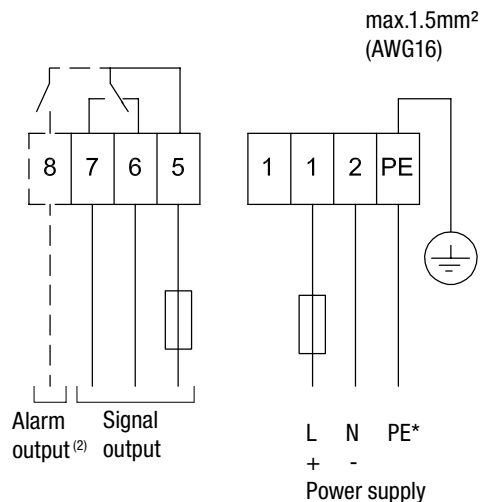
**Power supply:**

- **AC version:**  
 24V or 48V or 115V or 230V 50/60Hz max. 4VA  
 All voltages  $\pm 10\%$  <sup>(1)</sup>  
 Supply voltage as selected.  
 External fuse: max 10A, fast or slow, HBC, 250V
- **DC version:**  
 24V DC  $\pm 15\%$  <sup>(1)</sup> max. 2.5W  
 External fuse: not required
- **Universal voltage:**  
 24V DC  $\pm 15\%$  <sup>(1)</sup> max. 4W  
 22 .. 230V 50/60Hz  $\pm 10\%$  <sup>(1)</sup> max. 10VA  
 External fuse: not required

<sup>(1)</sup> including  $\pm 10\%$  of EN 61010

**Signal and alarm output:**

Micro switch or relay, SPDT contact  
 max. 250V AC, 2A, 500VA ( $\cos\phi = 1$ )  
 max. 300V DC, 2A, 60W  
 External fuse: max 10A, fast or slow, HBC, 250V



<sup>(2)</sup> With option Fail safe alarm (rotation control)  
 Contact open when de-energised

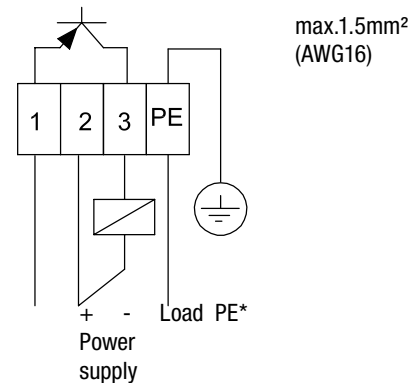
**Version:**  
 - PNP

**Power supply:**

24V DC  $\pm 15\%$  <sup>(1)</sup>  
<sup>(1)</sup> including  $\pm 10\%$  of EN 61010  
 Input current: max. 0.6A

**Signal output:**

Load max. 0.4A  
 Output voltage equal to input voltage, drop < 2,5V  
 Open collector  
 Protected against short circuit and overload



**\* Protection against static charge:**

The PE terminal of the unit must be grounded to avoid static charging of the unit.  
 This is particularly important for applications with pneumatic conveying.

## Electrical installation Series RN 6000

### Version:

- AC
- DC

### Power supply:

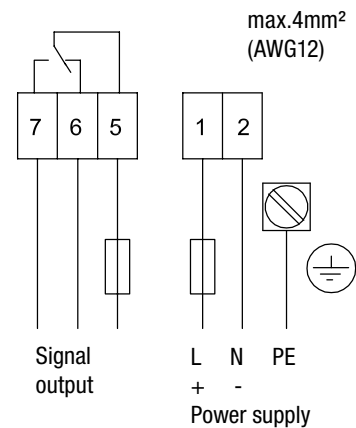
- **AC version:**  
 24V or 48V or 115V or 230V 50/60Hz max. 4VA  
 All voltages  $\pm 10\%$  <sup>(1)</sup>  
 Supply voltage as selected.  
 External fuse: max 10A, fast or slow, HBC, 250V

- **DC version:**  
 24V DC  $\pm 15\%$  <sup>(1)</sup> max. 2.5W  
 External fuse: not required

<sup>(1)</sup> including  $\pm 10\%$  of EN 61010

### Signal output:

Micro switch, SPDT contact  
 max. 250V AC, 5A, non inductive  
 max. 30V DC, 4A, non inductive  
 External fuse: max 10A, fast or slow, HBC, 250V



### Version:

- Universal voltage

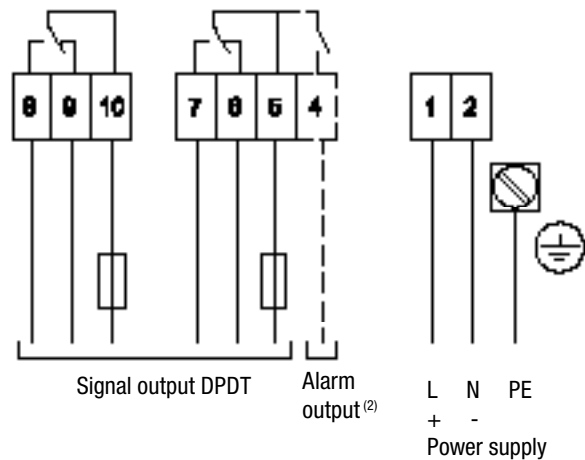
### Power supply:

24V DC  $\pm 15\%$  <sup>(1)</sup> max. 4W  
 22 .. 230V 50/60Hz  $\pm 10\%$  <sup>(1)</sup> max. 10VA

<sup>(1)</sup> including  $\pm 10\%$  of EN 61010

### Signal and alarm output:

Relay DPDT contact  
 max. 250V AC, 5A, non inductive;  
 max. 30V DC, 4A, non inductive  
 External fuse: max 10A, fast or slow, HBC, 250V

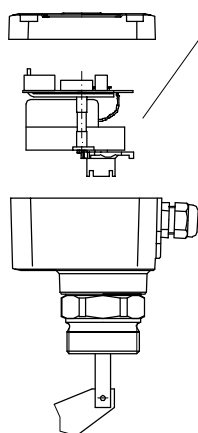


<sup>(2)</sup> With option Fail safe alarm (rotation control)  
 Contact open when de-energised

### \* Protection against static charge:

- The PE terminal of the unit must be grounded to avoid static charging of the unit.
- This is particularly important for applications with pneumatic conveying.

## Spare parts

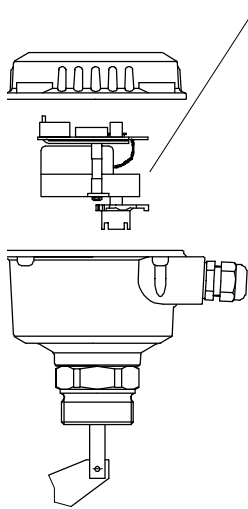


**Series RN 3000 Motor / PCB**

Order code				Voltage	Motor Speed	Spare part Articiel number
Pos. 5 Power supply	Pos. 25a FSH/FSL	Pos. 25x Fail safe alarm	Pos. 26x Heating of housing			
A	-	-	-	230V AC	1/min	gm402000
A	x	-	-		1/min	gm402003
A	-	x	-		1/min	gm404000
S	-	-	-		5/min	gm403000
S	x	-	-		5/min	gm403003
S	-	x	-		5/min	gm405000
B	-	-	-	115V AC	1/min	gm402005
B	x	-	-		1/min	gm402008
B	-	x	-		1/min	gm404005
T	-	-	-		5/min	gm403005
T	x	-	-		5/min	gm403008
T	-	x	-		5/min	gm405005
C	-	-	-	48V AC	1/min	gm402015
C	x	-	-		1/min	gm402018
C	-	x	-		1/min	gm404015
U	-	-	-		5/min	gm403015
U	x	-	-		5/min	gm403018
U	-	x	-		5/min	gm405015
D	-	-	-	24V AC	1/min	gm402010
D	x	-	-		1/min	gm402013
D	-	x	-		1/min	gm404010
V	-	-	-		5/min	gm403010
V	x	-	-		5/min	gm403013
V	-	x	-		5/min	gm405010
E	-	-	-	24V DC	1/min	gm402020
E	-	x	-		1/min	gm404020
W	-	-	-		5/min	gm403020
W	-	x	-		5/min	gm405020
G	-	-	-	24V DC PNP	1/min	gm402026*
H	-	-	-		5/min	gm403026*
F	-	-	-	24V DC / 22 ... 230V AC Universal voltage	1/min	gm402038*
F	-	x	-		1/min	gm404038*
F	-	-	x		1/min	gm402039*
F	-	x	x		1/min	gm404039*
X	-	-	-		5/min	gm403038*
X	-	x	-		5/min	gm405038*
X	-	-	x		5/min	gm403039*
X	-	x	x		5/min	gm405039*
M	-	-	-	230V AC/115V AC/24V DC Mutivoltage	1/min	gm402025
Y	-	-	-		5/min	gm403025

\* This module requires a higher housing lid than the other modules. Therefore it can not be mounted into a housing, where a different module was present before.

## Spare parts



**Series RN 6000 Motor / PCB**

Equipment code				Voltage	Motor Speed	Spare part Article number
Pos. 5 Power supply	Pos. 25a FSH/FSL	Pos. 25x Fail safe alarm	Pos. 26x Heating of housing			
A	-	-	-	230V AC	1/min	gm412000
A	x	-	-		1/min	gm412003
S	-	-	-		5/min	gm413000
S	x	-	-		5/min	gm413003
B	-	-	-	115V AC	1/min	gm412005
B	x	-	-		1/min	gm412008
T	-	-	-		5/min	gm413005
T	x	-	-		5/min	gm413008
C	-	-	-	48V AC	1/min	gm412015
C	x	-	-		1/min	gm412018
U	-	-	-		5/min	gm413015
U	x	-	-		5/min	gm413018
D	-	-	-	24V AC	1/min	gm412010
D	x	-	-		1/min	gm412013
V	-	-	-		5/min	gm413010
V	x	-	-		5/min	gm413013
E	-	-	-	24V DC	1/min	gm412020
W	-	-	-		5/min	gm413020
F	-	-	-	24V DC / 22 ... 230V AC Universal voltage	1/min	gm412038
F	-	x	-		1/min	gm414038
F	-	-	x		1/min	gm412039
F	-	x	x		1/min	gm414039
X	-	-	-		5/min	gm413038
X	-	x	-		5/min	gm415038
X	-	-	x		5/min	gm413039
X	-	x	x		5/min	gm415039
M	-	-	-	230V AC/115V AC/24V DC Mutivoltage	1/min	gm410000
Y	-	-	-		5/min	gm420000



## Spare parts

	Fitting to unit / model code	Description see page	Spare part Article number
<b>Measuring vane</b> (delivery incl. cotter pin)			
Boot shaped 40 x 98mm (1.4305)	Pos.10 A mit 9.3	P27	fg400605
Boot shaped 40 x 98mm (1.4404)	Pos.10 A mit 9.7	P27	fg400502
Boot shaped 35 x 106mm (1.4305)	Pos.10 D mit 9.3	P27	fg400508
Boot shaped 35 x 106mm (1.4404)	Pos.10 D mit 9.7	P27	fg400509
Boot shaped 28 x 98mm	Pos.10 R	P27	fg400603
Boot shaped 26 x 77mm	Pos.10 J	P27	fg400607
Rectangular 50 x 98mm	Pos.10 B	P27	fg400610
Rectangular 50 x 150mm	Pos.10 C	P27	fg400620
Rectangular 50 x 250mm	Pos.10 E	P27	fg400630
Rectangular 98 x 98mm (1.4305)	Pos.10 F with 9.3	P27	fg400635
Rectangular 98 x 98mm (1.4404)	Pos.10 F with 9.7	P27	fg400032
Rectangular 98 x 150mm	Pos.10 G	P27	fg400637
Rectangular 98 x 250mm	Pos.10 I	P27	fg400650
Hinged vane 98 x 200mm double sided (37mm for G 1 1/2" and G 1 1/4") (1.4305,max.250°C)	Pos.10 K with 9.3	P27	fg400081
Hinged vane 98 x 200mm double sided (37mm for G 1 1/2" and G 1 1/4") (1.4404,max.250°C)	Pos.10 K with 9.7	P27	fg400087
Hinged vane 98 x 200mm double sided (28mm for G 1" and M32) (1.4305,max.250°C)	Pos.10 K with 9.3	P27	fg400085
Hinged vane 98 x 100mm single sided (37mm for G 1 1/2" and G 1 1/4") (1.4305,max.250°C)	Pos.10 S with 9.3	P27	fg400084
Hinged vane 98 x 100mm single sided (37mm for G 1 1/2" and G 1 1/4") (1.4404,max.250°C)	Pos.10 S with 9.7	P27	fg400088
Hinged vane 98 x 100mm single sided (28mm for G 1" and M32) (1.4305,max.250°C)	Pos.10 S with 9.3	P27	fg400086
Rubber vane 98 x 250mm	Pos.10 M	P27	fg400565
Notched 40 x 80mm	Pos.10 P	P27	fg400614
VT vane	Pos.10 N	P18	fg400026

### Extension parts

Extension shaft ø10mm: (delivery incl. fixing parts)	by 50mm	RN 3001/6001	-	we400005
	by 100mm	RN 3001/6001	-	we401023
	by 150mm	RN 3001/6001	-	we401025
	by 200mm	RN 3001/6001	-	we401026
Pendular shaft L=500mm (delivery incl. fixing parts)		RN 3001/6001 / pos.36	P22	zu400131
Pendular shaft L=500mm (delivery incl. fixing parts)		RN 3001/6001 / pos.36	P22	zu400132
Rope extension light L=2000mm (delivery incl. fixing parts)		RN 3001/6001	-	zu400105
Single rope ø8mm (für RN3002/6002-Seil), price per meter		RN 3002/6002-rope	P25 below	mse-8-va
Rope weight ø30mm (delivery incl. fixing parts)		RN 3002/6002-rope	P25 below	we400720
Rope holder ø22mm (for version Pos.1C) (delivery incl. fixing parts)		RN 3002/6002-rope	P25 below	we400700

### Hexagon nut

1 1/2" aluminium	Pos.6 A	P22	zu300170
1 1/2" stainless steel 1.4305	Pos.6 A	P22	zu300180
1 1/4" aluminium	Pos.6 B	P22	zu300171
1 1/4" stainless steel 1.4305	Pos.6 B	P22	zu300181
1" aluminium	Pos.6 C	P22	zu200150
1" stainless steel 1.4305	Pos.6 C	P22	zu200160
M32 aluminium	Pos.6 D	P22	zu200120
M32 stainless steel 1.4305	Pos.6 D	P22	zu200130
M30 aluminium	Pos.6 E	P22	zu200170
M30 stainless steel 1.4305	Pos.6 E	P22	zu200180

## Spare parts

Fitting to unit / model code	Description see page	Spare part Article number
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### Weather protection cover

RN 3000 (for lower housing, dimension H = 66mm)	Pos.21 x	P23	zu300230
RN 3000 (for higher housing, dimension H = 70mm)	Pos.21 x	P23	zu300232
RN 6000 standard housing	Pos.21 x	P23	zu300240

