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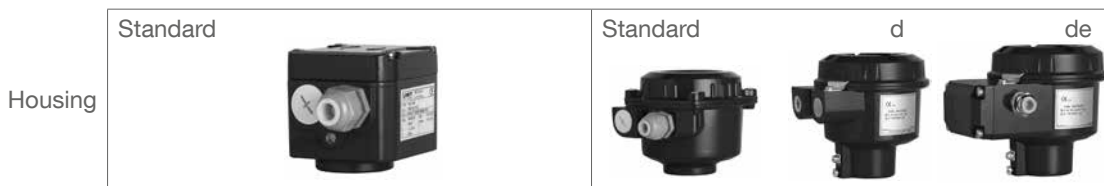
Overview

- 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, TR-CU, INMETRO
- SIL 2
- 1935/2004/EC
- 2011/65/EU

- Gas Ex and Dust Ex approvals
- Functional safety
- Food grade material
- RoHS Conform

Series	RN 3000	RN 6000
	ATEX/ IEC-Ex/ TR-CU/ INMETRO	ATEX/ IEC-Ex/ FM/ CSA/ TR-CU/ INMETRO/ SIL 2
	Small housing Sensitivity >15 g/l (0.9 lb/ft³)	Spacious housing Sensitivity >15 g/l (0.9 lb/ft³)



Overview

<p>RN ..002-rope Rope extension</p>	<p>RN 3002-rope</p> 	<p>RN 6002-rope</p> 
<p>RN ..003 Angled extension</p>	<p>RN 3003</p> 	<p>RN 6003</p> 
<p>RN ..004 Pipe extension horizontal</p>	<p>RN 3004</p> 	<p>RN 6004</p> 
<p>RN 3005 Extra short version for use in loading bellow</p>	<p>RN 3005</p> 	

Specifications

Series		RN 3000	RN 6000	
Approvals	CE	•	•	
	ATEX/ IEC-Ex/ INMETRO:			
	Zone 20/21	Dust Ignition Proof	•	•
	Zone 1	Flameproof/ Increased Safety		•
	FM/ CSA:			
	Ordinary Locations			•
	Cl. II, III Div. 1	Dust Ignition Proof		•
	Cl. I Div. 1	Explosionproof		•
	Zone 1	Flameproof/ Increased Safety		•
	TR-CU:			
	Ordinary Locations		•	
	Zone 20/21	Dust Ignition Proof	•	•
	Zone 1	Flameproof/ Increased Safety		•
Functional safety		SIL 2 (IEC 61508)		

Technical data	Ambient temperature		-20°C .. +70°C (-4°F .. +158°F) CE -20°C .. +60°C (-4°F .. +140°F) EX -40°C (-40°F) with heating	-20°C .. +50°C (-4°F .. +122°F) -40°C (-40°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 (303)/ 1.4541 (321) or 1.4404 (316L)	
	Material of measuring vane and shaft		1.4301 (SS 304)/ 1.4305 (303) or 1.4404 (316L)	

Electronics	RN 3000							
	Power supply		Output signal					
			SPDT ⁽¹⁾	DPDT	PNP	FSH/ FSL ⁽²⁾	Adjustable delay	Fail safe alarm
	AC version	24 V or 48 V or 115 V or 230 V AC	•	-	-	-	-	-
	DC version	24 V DC	•	-	-	-	-	-
	DC version	24 V DC PNP	-	-	•	•	•	-
	Universal voltage	24 V DC/ 22 .. 230 V AC	•	-	-	•	•	option
	RN 6000							
	Power supply		Output signal					
			SPST	SPDT ⁽¹⁾	DPDT	PNP	FSH/ FSL ⁽²⁾	Adjustable delay	Fail safe alarm
	AC version	24 V or 48 V or 115 V or 230 V AC	-	•	-	-	-	-
	DC version	24 V DC	-	•	-	-	-	-
	Universal voltage	24 V DC/ 22 .. 230 V AC	-	-	• ⁽³⁾	-	•	• option
Universal voltage SIL 2	24 V DC/ 22 .. 230 V AC	•	• ⁽⁴⁾	-	-	•	-	

⁽¹⁾ Micro switch, with Universal voltage Relais

⁽²⁾ Switchable signal output (Fail safe high/ low)

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

⁽⁴⁾ Additional output, not SIL conform

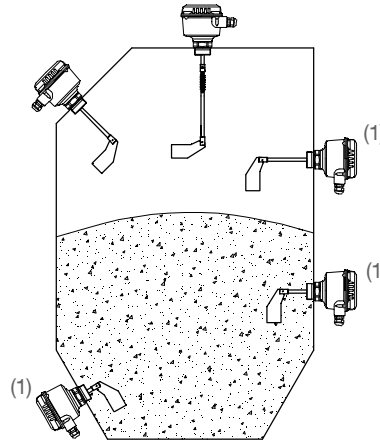
Specifications

Extensions	RN .001	Process temperature	-40/ -25 .. +80/ 150/ 250/ 350/ 600/ 1,100°C (-40/ -13 .. +176/ 302/ 482/ 662/ 1,112/ 2,012°F)
		Process pressure	-0.9 .. +0.8bar; -0.9 .. +5/ 10 bar (-13.1 .. +11.6; -13.1 .. +72.5/ 145 psi)
		Length of extension	
		Full detector vertical from the top	70 .. 1,000 mm (2.76 .. 39.4")
		Full detector with pendulum shaft, vertical from the top	300 .. 1,000 mm (11.8 .. 39.4")
		Full detector oblique from the top	70 .. 300 mm (2.76 .. 11.8")
		Full detector horizontal	70 .. 300 mm (2.76 .. 11.8")
		Demand or empty detector horizontal	70 .. 150 mm (2.76 .. 5.9") *
		Empty detector oblique from the bottom	70 .. 150 mm (2.76 .. 5.9") *
	RN .002	Process temperature	-40/ -25 .. +80/ 150/ 250/ 350/ 600/ 1,100°C (-40/ -13 .. +176/ 302/ 482/ 662/ 1,112/ 2,012°F)
		Process pressure	-0.9 .. +0.8 bar; -0.9 .. +5/ 10 bar (-13.1 .. +11.6; -13.1 .. +72.5/ 145 psi)
		Length of extension	
		Full detector vertical from the top	250 .. 3,000 mm (9.84 .. 118")/ 4,000 mm (158") with support of the extension pipe
	Full detector oblique from the top	250 .. 3,000 mm (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/ 1,112°F)
		Process pressure	-0.9 .. +0.8 bar; -0.9 .. +5/ 10 bar (-13.1 .. +11.6; -13.1 .. +72.5/ 145 psi)
		Length of extension	
		Full detector vertical from the top	500 .. 10,000 mm (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 .. +0.8 bar; -0.9 .. +5/ 10 bar (-13.1 .. +11.6; -13.1 .. +72.5/ 145 psi)
		Length of extension	
		Demand or empty detector horizontal	125 .. 600 mm (4.92 .. 23.6")
		Empty detector oblique from the bottom	125 .. 600 mm (4.92 .. 23.6")
	RN .004	Process temperature	-40/ -25 .. +80/ 150/ 250/ 350/ 600°C (-40/ -13 .. +176/ 302/ 482/ 662/ 1,112°F)
Process pressure		-0.9 .. +0.8 bar; -0.9 .. +5/ 10 bar (-13.1 .. +11.6; -13.1 .. +72.5/ 145 psi)	
Length of extension			
Full detector vertical from the top		150 .. 600 mm (5.90 .. 23.6")	
Full detector oblique from the top		150 .. 300 mm (5.90 .. 11.8")	
Full detector horizontal		150 .. 300 mm (5.90 .. 11.8")	
Demand or empty detector horizontal		150 .. 300 mm (5.90 .. 11.8") *	
Empty detector oblique from the bottom		150 .. 300 mm (5.90 .. 11.8") *	
RN 3005	Process temperature	-40/ -25 .. +80°C (-40/ -13 .. +176°F)	
	Process pressure	-0.9 .. +0.8 bar (-13.1 .. +11.6 psi)	
	Length of extension		
	Application "Loading bellow"	90 mm (3.5")	

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

Applications

RN ..001
 Short extension length

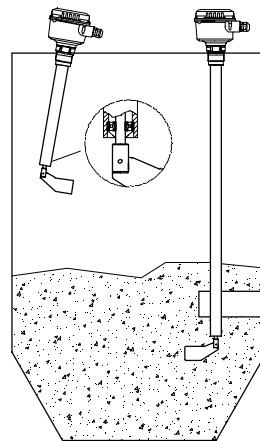


Extension for vertical
 instalation with pendulum shaft

(1) Not for version 1,100°C

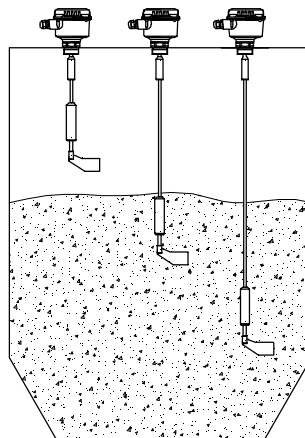
Horizontal mounting:
 Boot shaped vane
 recommended
 (min. mech. loading as
 the vane aligns itself to
 the material flow).

RN ..002
 Pipe extension vertical



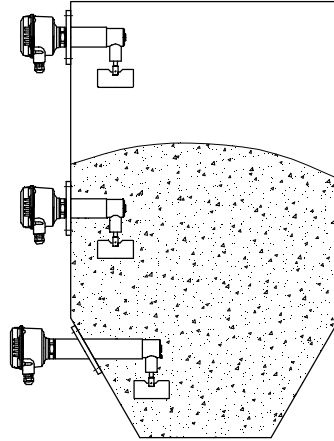
Deviation up to max.
 10° from vertical
 instalation only with
 option „bearing at
 tube end“ possible

RN ..002 - rope
 Rope extension

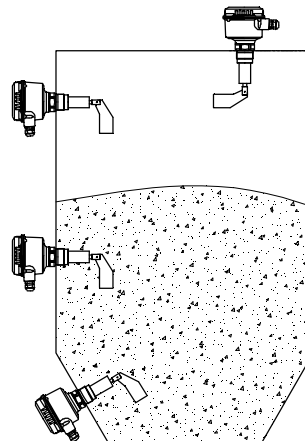


Applications

RN ..003
 Angled extension

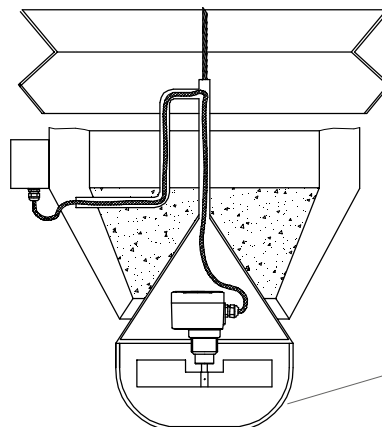


RN ..004
 Pipe extension horizontal



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	M20 x 1.5 (1x open conduit + 1x Ex-d blind plug) NPT ½" tapered ANSI B1.20.1 (1x open conduit + 1x Ex-d blind plug) M20 x 1.5 (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 29)

Certificate	Zone/ Div		Protection method
	Dust	Gas	
0 CE/ TR-CU	-	-	
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/ INMETRO	Zone 20/21	-	Dust Ignition Proof
C IEC-Ex/ INMETRO	Zone 20/21	Zone 1	Flameproof/ Increased Safety/ Dust Ignition Proof
D IEC-Ex/ INMETRO	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		
E TR-CU	Zone 20/21	-	Dust Ignition Proof
K TR-CU	Zone 20/21	Zone 1	Flameproof/ Increased Safety/ Dust Ignition Proof
L TR-CU	Zone 20/21	Zone 1	Flameproof/ Dust Ignition Proof

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 pos.10 K,S in 1.4404; not for Ex, only with pos.4 1, L min=200 mm) .
- 5 max. +600°C (1,112°F) (not for pos.10 K,S in 1.4404; not for Ex, only with pos.4 1)
- 6 max. +1,100°C (2,012°F) Installation vertical/ obliquely downward on request

pos.4 **Process overpressure**

- 1 max. 0.8 bar (11.6 psi) (0.1 bar (1.45 psi) with Pos.3 5 and pos.3 6)
- 2 max. 5 bar (73 psi)
- 3 max. 10 bar (145 psi)

RN ..001 Short extension length

pos.5	Power supply			
• •	A / S 230 V AC 50 - 60 Hz	Motor Speed: A=1/min S=5/min	• / •	
• •	B / T 115 V AC 50 - 60 Hz	Motor Speed: B=1/min T=5/min	• / •	
• •	C / U 48 V AC 50 - 60 Hz	Motor Speed: C=1/min U=5/min	• / •	
• •	D / V 24 V AC 50 - 60 Hz	Motor Speed: D=1/min V=5/min	• / •	
• •	E / W 24 V DC	Motor Speed: E=1/min W=5/min	• / •	
• •	G / H 24 V DC PNP	Motor Speed: G=1/min H=5/min	• / •	
• •	F / X 24 V DC/ 22 .. 230 V AC universal voltage	Motor Speed: F=1/min X=5/min	• / •	
pos.6	Process connection			
• •	A thread G 1½", DIN 228		• • •	
• •	B thread G 1¼", DIN 228	(max. 250°C (482°F))	• • •	
• •	C thread G 1", DIN 228	(max. 250°C (482°F))	• • •	
• •	D thread M32 x 1.5	(max. 250°C (482°F))	• • •	
• •	E thread M30 x 1.5	(max. 0.8 bar (11.6 psi)/ 80°C (176°F))	• • •	
• •	F thread NPT 1½", conical ANSI B1.20.1		• • •	
• •	Q thread NPT 1¼", conical ANSI B1.20.1	(max. 250°C (482°F))	• • •	
• •	G thread NPT 1", conical ANSI B1.20.1	(max. 250°C; not for pos.2 R,S,T,U)	• • •	
• •	P Triclamp 2" (DN50) ISO 2852	(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))	• • •	
• •	N flange DN50 PN16, EN 1092-1		• • •	
• •	L flange DN100 PN6, EN 1092-1	(max. 5 bar (73 psi))	• • •	
• •	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	Material Process connection			
• •	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	Length of extension "L"			
• •	K 70 mm (2.76")	(only with vane P)	• • •	
• •	A 100 mm (3.93")	(only with vane A,D,R,J,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 50 mm (1.97") or part thereof (starting from 0 mm)	min. 350 mm (13.8"), max. 1,000 mm (39.4")	• • •	
pos.9	Material of extension "L"			
• •	3 stainless steel 1.4305 (303)		• • •	
• •	7 stainless steel 1.4404 (316L)	(only with pos.7 7 and 10 A,D,R,F,K,S,P)	• • •	
pos.10	Measuring vane			
• •	A boot-shaped ⁽¹⁾ 40 x 98 mm (1.57 x 3.86")	for 1½" socket (with pos.9 7 L=10 mm longer)	• • •	
• •	D boot-shaped ⁽¹⁾ 35 x 106 mm (1.38 x 4.17")	for 1¼" socket (L=10 mm longer)	• • •	
• •	R boot-shaped ⁽¹⁾ 28 x 98 mm (1.10 x 3.86")	for 1" and M32 socket	• • •	
• •	J boot-shaped ⁽¹⁾ 26 x 77 mm (1.02 x 3.03")	for M30 socket	• • •	
• •	B rectangular 50 x 98 mm (1.97 x 3.86")		• • •	
• •	C rectangular 50 x 150 mm (1.97 x 5.90")		• • •	
• •	E rectangular 50 x 250 mm (1.97 x 9.84")		• • •	
• •	F rectangular 98 x 98 mm (3.86 x 3.86")		• • •	
• •	G rectangular 98 x 150 mm (3.86 x 5.90")		• • •	
• •	I rectangular 98 x 250 mm (3.86 x 9.84")		• • •	
• •	K hinged vane 98 x 200 mm (3.86 x 7.87")	double sided (L=10mm longer) 1.4301/ 1.4404	• / •	(1.4404)
• •	S hinged vane 98 x 100 mm (3.86 x 3.93")	single sided (L=10mm longer) 1.4301/ 1.4404	• / •	(1.4404)
• •	M rubber vane 98 x 250 mm (3.86 x 9.84")	(max. 80°C (176°F))	• • •	
• •	P notched 40 x 80 mm (1.57 x 3.15")	(only with pos.8 K) 1.4301/ 1.4404	• / •	(1.4404)
• •	Y without	including splint pin for fixation	• • •	

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

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

← **Order code**

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

⁽¹⁾ 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)	M20 x 1.5 (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	M20 x 1.5 (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 29)

Certificate	Zone/ Div		Protection method
	Dust	Gas	
0 CE/ TR-CU	-	-	
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/ INMETRO	Zone 20/21	-	Dust Ignition Proof
C IEC-Ex/ INMETRO	Zone 20/21	Zone 1	Flameproof/ Increased Safety/ Dust Ignition Proof
D IEC-Ex/ INMETRO	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		
E TR-CU	Zone 20/21	-	Dust Ignition Proof
K TR-CU	Zone 20/21	Zone 1	Flameproof/ Increased Safety/ Dust Ignition Proof
L TR-CU	Zone 20/21	Zone 1	Flameproof/ Dust Ignition Proof

RN ..002 Pipe extension vertical

pos.3	Process temperature			
• •	1	max. +80°C (176°F)	.....	•
• •	2	max. +150°C (302°F)	.....	•
• •	3	max. +250°C (482°F)	.....	•
• •	5	max. +600°C (1,112°F)	..... (not for pos.10 K,S in 1.4404; not for Ex, only with pos.4 1)	•
• •	6	max. +1,100°C (2,012°F)	..... Installation vertical/ obliquely downward on request	•
pos.4	Process overpressure			
• •	1	max. 0.8 bar (11.6 psi)	..... (0.1 bar (1.45 psi) with pos.3 5, pos.3 6)	•
• •	2	max. 5 bar (73 psi)	.....	•
• •	3	max. 10 bar (145 psi)	.....	•
pos.5	Power supply			
• •	A / S	230 V AC 50 - 60 Hz	..... Motor Speed: A=1/min S=5/min	• / •
• •	B / T	115 V AC 50 - 60 Hz	..... Motor Speed: B=1/min T=5/min	• / •
• •	C / U	48 V AC 50 - 60 Hz	..... Motor Speed: C=1/min U=5/min	• / •
• •	D / V	24 V AC 50 - 60 Hz	..... Motor Speed: D=1/min V=5/min	• / •
• •	E / W	24 V DC	..... Motor Speed: E=1/min W=5/min	• / •
• •	G / H	24 V DC PNP	..... Motor Speed: G=1/min H=5/min	• / •
• •	F / X	24 V DC/ 22 .. 230 V AC universal voltage	..... Motor Speed: F=1/min X=5/min	• / •
pos.6	Process connection			
• •	A	thread G 1½", DIN 228	.....	• • •
• •	B	thread G 1¼", DIN 228	..... (max. 250°C (482°F))	• • •
• •	F	thread NPT 1½", conical ANSI B1.20.1	.....	• • •
• •	Q	thread NPT 1¼", conical ANSI B1.20.1	..... (max. 250°C (482°F))	• • •
• •	P	Triclamp 2" (DN50) ISO 2852	..... (max. 250°C (482°F))	• • •
• •	H	flange 150x150, 4x ø18 LK-ø170	..... (max. 0.8 bar (11.6 psi))	• • •
• •	I	flange 150x150, 4x ø14 LK-ø170	..... (max. 0.8 bar (11.6 psi))	• • •
• •	K	flange DN32 PN6, EN 1092-1	..... (max. 5 bar (73 psi))	• • •
• •	N	flange DN50 PN16, EN 1092-1	.....	• • •
• •	L	flange DN100 PN6, EN 1092-1	..... (max. 5 bar (73 psi))	• • •
• •	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	Material Process connection			
• •	1	aluminium	..... (max. 0.8 bar (11.6 psi)/ 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	Length of extension "L"			
• •	Z	price per 100 mm (3.94") or part thereof (starting from 0 mm)	.....	• • •
		min. 250 mm (9.84"), max. 4,000 mm (158")		
pos.9	Material of extension "L"			
• •	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,P and 32x)	• • •
pos.10	Measuring vane			
• •	A	boot-shaped ⁽¹⁾ 40 x 98 mm (1.57 x 3.86")	for 1½" socket (with pos.9 7 L=10 mm)	•
• •	D	boot-shaped ⁽¹⁾ 35 x 106 mm (1.38 x 4.17")	for 1¼" socket (L=10 mm longer)	•
• •	B	rectangular 50 x 98 mm (1.97 x 3.86")	.....	•
• •	C	rectangular 50 x 150 mm (1.97 x 5.90")	.....	•
• •	E	rectangular 50 x 250 mm (1.97 x 9.84")	.....	•
• •	F	rectangular 98 x 98 mm (3.86 x 3.86")	.....	•
• •	G	rectangular 98 x 150 mm (3.86 x 5.90")	.....	•
• •	I	rectangular 98 x 250 mm (3.86 x 9.84")	.....	•
• •	K	hinged vane 98 x 200 mm (3.86 x 7.87")	double sided (L=10 mm longer) 1.4301/ 1.4404 ...	• / • (1.4404)
• •	S	hinged vane 98 x 100 mm (3.86 x 3.93")	single sided (L=10 mm longer) 1.4301/ 1.4404 ...	• / • (1.4404)
• •	M	rubber vane 98 x 250 mm (3.86 x 9.84")	..... (max.80°C (176°F))	•
• •	Y	without	including splint pin for fixation	•

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

B
Z
L = mm
← Order code

Position 1 2 3 4 5 6 7 8 9 10
 All positions are available in special design (use code "Z").

⁽¹⁾ maximum length of socket 40 mm

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	M20 x 1.5 (1x open conduit + 1x Ex-d blind plug) NPT 1/2" tapered ANSI B1.20.1 (1x open conduit + 1x Ex-d blind plug) M20 x 1.5 (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. 4 kN load) •
- H Strengthened (max. 28 kN load) (max. 80°C (176°F), only with pos.7 3, with pos.2 R,S,T,U on request) •

pos.2 Certificate (detailed Ex-markings: see page 29)

Certificate	Zone/ Div		Protection method
	Dust	Gas	
0 CE/ TR-CU	-	-	
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/ INMETRO	Zone 20/21	-	Dust Ignition Proof
C IEC-Ex/ INMETRO	Zone 20/21	Zone 1	Flameproof/ Increased Safety/ Dust Ignition Proof
D IEC-Ex/ INMETRO	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		
E TR-CU	Zone 20/21	-	Dust Ignition Proof
K TR-CU	Zone 20/21	Zone 1	Flameproof/ Increased Safety/ Dust Ignition Proof
L TR-CU	Zone 20/21	Zone 1	Flameproof/ Dust Ignition Proof

RN ..002-rope Rope extension

pos.3	Process temperature		
• •	1 max. +80°C (176°F)	.....	•
• •	2 max. +150°C (302°F)	.....	•
• •	3 max. +250°C (482°F)	.....	•
• •	5 max. +600°C (1,112°F)	..... (not for pos.10 K,S in 1.4404; not for Ex, only with pos.4 1)	•
pos.4	Process overpressure		
• •	1 max. 0.8 bar (11.6 psi)	..... (0.1 bar (1.45 psi) with pos.3 5)	•
• •	2 max. 5 bar (73 psi)	.....	•
• •	3 max. 10 bar (145 psi)	.....	•
pos.5	Power supply		
• •	A / S 230 V AC 50 - 60 Hz	..... Motor Speed: A=1/min S=5/min	• / •
• •	B / T 115 V AC 50 - 60 Hz	..... Motor Speed: B=1/min T=5/min	• / •
• •	C / U 48 V AC 50 - 60 Hz	..... Motor Speed: C=1/min U=5/min	• / •
• •	D / V 24 V AC 50 - 60 Hz	..... Motor Speed: D=1/min V=5/min	• / •
• •	E / W 24 V DC	..... Motor Speed: E=1/min W=5/min	• / •
• •	G / H 24 V DC PNP	..... Motor Speed: G=1/min H=5/min	• / •
• •	F / X 24 V DC/ 22 .. 230 V AC universal voltage	..... Motor Speed: F=1/min X=5/min	• / •
pos.6	Process connection		
• •	A thread G 1½", DIN 228	.....	• •
• •	B thread G 1¼", DIN 228	..... (max. 250°C (482°F))	• •
• •	F thread NPT 1½", conical ANSI B1.20.1	.....	• •
• •	Q thread NPT 1¼", conical ANSI B1.20.1	..... (max. 250°C (482°F))	• •
• •	H flange 150x150, 4x ø18 LK-ø170	..... (max. 0.8 bar (11.6 psi))	• •
• •	I flange 150x150, 4x ø14 LK-ø170	..... (max. 0.8 bar (11.6 psi))	• •
• •	K flange DN32 PN6, EN 1092-1	..... (max. 5 bar (73 psi)/ 250°C (482°F))	• •
• •	N flange DN50 PN16, EN 1092-1	.....	• •
• •	L flange DN100 PN6, EN 1092-1	..... (max. 5 bar (73 psi))	• •
• •	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	Material Process connection		
• •	1 aluminium	..... (max. 0.8 bar (11.6 psi)/ 80°C (176°F))	•
• •	3 stainless steel	..... 1.4305 (303) A-Q/ 1.4301 (304) P-I/ 1.4541 (321) K-U	•
pos.8	Length of extension "L"		
• •	Z price per 100 mm (3.94") or part thereof (starting from 0 mm)	.....	•
• •	pos.1 C min. 500 mm (19.69")/ pos.1 H min. 1,000 mm (39.4"); max. 10,000 mm (394")		
• •	Y without rope (incl. rope fixing parts) (only with pos.1 C)	.....	•
pos.10	Measuring vane		
• •	A boot-shaped ⁽¹⁾ 40 x 98 mm (1.57 x 3.86")	..... for 1½" socket	•
• •	D boot-shaped ⁽¹⁾ 35 x 106 mm (1.38 x 4.17")	..... for 1¼" socket (L=10 mm longer)	•
• •	B rectangular 50 x 98 mm (1.97 x 3.86")	.....	•
• •	C rectangular 50 x 150 mm (1.97 x 5.90")	.....	•
• •	E rectangular 50 x 250 mm (1.97 x 9.84")	.....	•
• •	F rectangular 98 x 98 mm (3.86 x 3.86")	.....	•
• •	G rectangular 98 x 150 mm (3.86 x 5.90")	.....	•
• •	I rectangular 98 x 250 mm (3.86 x 9.84")	.....	•
• •	K hinged vane 98 x 200 mm (3.86 x 7.87") double sided (L=10 mm)	.....	•
• •	S hinged vane 98 x 100 mm (3.86 x 3.93") single sided (L=10 mm longer)	.....	•
• •	M rubber vane 98 x 250 mm (3.86 x 9.84")	..... (max.80°C (176°F))	•
• •	Y without	..... including splint pin for fixation	•

Further options and accessories: see page 20

Basic Type

Position	1	2	3	4	5	6	7	8	9	10

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

Z 3

—

L = mm

←

Order code

⁽¹⁾ maximum length of socket 40 mm

RN ..003 Angled extension

RN 3003



RN 6003



Housings RN 6003



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	M20 x 1.5 (1x open conduit + 1x Ex-d blind plug) NPT ½" tapered ANSI B1.20.1 (1x open conduit + 1x Ex-d blind plug) M20 x 1.5 (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 29)

Certificate	Zone/ Div		Protection method
	Dust	Gas	
0 CE/ TR-CU	-	-	
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/ INMETRO	Zone 20/21	-	Dust Ignition Proof
C IEC-Ex/ INMETRO	Zone 20/21	Zone 1	Flameproof/ Increased Safety/ Dust Ignition Proof
D IEC-Ex/ INMETRO	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	
E TR-CU	Zone 20/21	-	Dust Ignition Proof
K TR-CU	Zone 20/21	Zone 1	Flameproof/ Increased Safety/ Dust Ignition Proof
L TR-CU	Zone 20/21	Zone 1	Flameproof/ Dust Ignition Proof

RN ..003 Angled extension

• •	pos.3	Process temperature		
• •		1 max. +80°C (176°F)	•	•
• •		2 max. +150°C (302°F)	•	•
• •		3 max. +250°C (482°F)	•	•
• •	pos.4	Process overpressure		
• •		1 max. 0.8 bar (11.6 psi)	•	•
• •		2 max. 5 bar (73 psi)	•	•
• •		3 max. 10 bar (145 psi)	•	•
• •	pos.5	Power supply		
• •		A / S 230 V AC 50 - 60 Hz	Motor Speed: A=1/min S=5/min	• / •
• •		B / T 115 V AC 50 - 60 Hz	Motor Speed: B=1/min T=5/min	• / •
• •		C / U 48 V AC 50 - 60 Hz	Motor Speed: C=1/min U=5/min	• / •
• •		D / V 24 V AC 50 - 60 Hz	Motor Speed: D=1/min V=5/min	• / •
• •		E / W 24 V DC	Motor Speed: E=1/min W=5/min	• / •
• •		G / H 24 V DC PNP	Motor Speed: G=1/min H=5/min	• / •
• •		F / X 24 V DC / 20 .. 230 AC universal voltage	Motor Speed: F=1/min X=5/min	• / •
• •	pos.6	Process connection		
• •		H flange 150x150, 4x ø18 LK-ø170	(max. 0.8 bar (11.6 psi))	• •
• •		I flange 150x150, 4x ø14 LK-ø170	(max. 0.8 bar (11.6 psi))	• •
• •		L flange DN100 PN6, EN 1092-1	(max. 5 bar (73 psi))	• •
• •		M flange DN100 PN16, EN 1092-1		• •
• •		U flange 4" 150lbs ANSI B16.5		• •
• •	pos.7	Material Process connection		
• •		1 aluminium	(max. 0.8 bar (11.6 psi)/ 80°C (176°F))	• •
• •		3 stainless steel	1.4301 (304)/ 1.4541 (321)	• •
• •	pos.8	Length of extension "L"		
• •		1 125 mm (4.92")	•	•
• •		2 150 mm (5.90")	•	•
• •		3 200 mm (7.87")	•	•
• •		4 250 mm (9.84")	•	•
• •		5 300 mm (11.8")	•	•
• •		Z other lengthes	Price per 50 mm (1.97") or part thereof (starting from 0 mm)	• •
			min. 350 mm (13.8"), max. 600 mm (23.6")	
• •	pos.9	Material of extension "L"		
• •		(must be the same material as pos.7)		
• •		1 aluminium		• •
• •		3 stainless steel	1.4305 (303)/ 1.4301 (304)	• •
• •	pos.10	Measuring vane		
• •		A boot-shaped ⁽¹⁾ 40 x 98 mm (1.57 x 3.86")		•
• •		B rectangular 50 x 98 mm (1.97 x 3.86")		•
• •		C rectangular 50 x 150 mm (1.97 x 5.90")		•
• •		E rectangular 50 x 250 mm (1.97 x 9.84")		•
• •		F rectangular 98 x 98 mm (3.86 x 3.86")		•
• •		G rectangular 98 x 150 mm (3.86 x 5.90")		•
• •		I rectangular 98 x 250 mm (3.86 x 9.84")		•
• •		K hinged vane 98 x 200 mm (3.86 x 7.87") double sided		•
• •		S hinged vane 98 x 100 mm (3.86 x 3.93") single sided		•
• •		M rubber vane 98 x 250 mm (3.86 x 9.84")	(max. 80°C (176°F))	•
• •		Y 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").

⁽¹⁾ maximum length of socket 40 mm

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) FM and CSA (pos.2 M,N,S,U) All other versions	M20 x 1.5 (1x open conduit + 1x Ex-d blind plug) NPT 1/2" tapered ANSI B1.20.1 (1x open conduit + 1x Ex-d blind plug) M20 x 1.5 (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 29)

Certificate	Zone/ Div		Protection method
	Dust	Gas	
0 CE/ TR-CU	-	-	
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/ INMETRO	Zone 20/21	-	Dust Ignition Proof
C IEC-Ex/ INMETRO	Zone 20/21	Zone 1	Flameproof/ Increased Safety/ Dust Ignition Proof
D IEC-Ex/ INMETRO	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		
E TR-CU	Zone 20/21	-	Dust Ignition Proof
K TR-CU	Zone 20/21	Zone 1	Flameproof/ Increased Safety/ Dust Ignition Proof
L TR-CU	Zone 20/21	Zone 1	Flameproof/ Dust Ignition Proof

RN ..004 Pipe extension horizontal

• •	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 pos.10 K,S in 1.4404; not for Ex, only with pos.4 1) (L min=200 mm)	•		
5	max. +600°C (1,112°F)	(not for pos.10 K,S in 1.4404; not for Ex, only with pos.4 1)	•				
• •	pos.4	Process overpressure					
		1	max. 0.8 bar (11.6 psi)	..... (0.1 bar (1.45 psi) with pos.3 5)	•		
		2	max. 5 bar (73 psi)	.....	•	
3	max. 10 bar (145 psi)	.....	•			
• •	pos.5	Power supply					
		A / S	230 V AC 50 - 60 Hz	..... Motor Speed: A=1/min S=5/min	•	/	•
		B / T	115 V AC 50 - 60 Hz	..... Motor Speed: B=1/min T=5/min	•	/	•
		C / U	48 V AC 50 - 60 Hz	..... Motor Speed: C=1/min U=5/min	•	/	•
		D / V	24 V AC 50 - 60 Hz	..... Motor Speed: D=1/min V=5/min	•	/	•
		E / W	24 V DC	..... Motor Speed: E=1/min W=5/min	•	/	•
		G / H	24 V DC PNP	..... Motor Speed: G=1/min H=5/min	•	/	•
F / X	24 V DC/ 22 .. 230 V AC universal voltage	..... Motor Speed: F=1/min X=5/min	•	/	•		
• •	pos.6	Process connection					
		A	thread G 1½", DIN 228	.....	•	•	•
		B	thread G 1¼", DIN 228	..... (max. 250°C (482°F))	•	•	•
		F	thread NPT 1½", conical ANSI B1.20.1	.....	•	•	•
		Q	thread NPT 1¼", conical ANSI B1.20.1	..... (max. 250°C (482°F))	•	•	•
		P	Triclamp 2" (DN50) ISO 2852	..... (max. 250°C (482°F))	•	•	•
		H	flange 150x150, 4x ø18 LK-ø170	..... (max. 0.8 bar (11.6 psi))	•	•	•
		I	flange 150x150, 4x ø14 LK-ø170	..... (max. 0.8 bar (11.6 psi))	•	•	•
		K	flange DN32 PN6, EN 1092-1	..... (max. 5 bar/ 250°C)	•	•	•
		N	flange DN50 PN16, EN 1092-1	.....	•	•	•
		L	flange DN100 PN6, EN 1092-1	..... (max. 5 bar (73 psi))	•	•	•
		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	Material Process connection					
		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	Length of extension "L"					
		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 50 mm (1.97") or part thereof (starting from 0 mm) min. 350 mm (13.8"), max. 600 mm (23.6")	.....	•	•	•
• •	pos.9	Material of extension "L"					
		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 pos.10 A,D,F,K,S,P)	•	•	•		
• •	pos.10	Measuring vane					
		A	boot-shaped ⁽¹⁾ 40 x 98 mm (1.57 x 3.86")	for 1½" socket (with pos.9 7 L=10 mm)	•		
		D	boot-shaped ⁽¹⁾ 35 x 106 mm (1.38 x 4.17")	for 1¼" socket (L=10 mm longer)	•		
		B	rectangular 50 x 98 mm (1.97 x 3.86")	.....	•	
		C	rectangular 50 x 150 mm (1.97 x 5.90")	.....	•	
		E	rectangular 50 x 250 mm (1.97 x 9.84")	.....	•	
		F	rectangular 98 x 98 mm (3.86 x 3.86")	.....	•	
		G	rectangular 98 x 150 mm (3.86 x 5.90")	.....	•	
		I	rectangular 98 x 250 mm (3.86 x 9.84")	.....	•	
		K	hinged vane 98 x 200 mm (3.86 x 7.87")	double sided (L=10 mm longer) 1.4301/ 1.4404	•	/	• 1.4404
		S	hinged vane 98 x 100 mm (3.86 x 3.93")	single sided (L=10 mm longer) 1.4301/ 1.4404	•	/	• 1.4404
M	rubber vane 98 x 250 mm (3.86 x 9.84")	..... (max. 80°C (176°F))	•				
Y	without	..... including splint pin for fixation	•				

Basic Type

Further options and accessories: see page 20

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

← **Order code**

⁽¹⁾ maximum length of socket 40 mm

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

SOLUTIONS

RN 3005 Extra short version

RN 3005



RN 6005
not available

Cable entries (by default)
M20 x 1.5 (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	Certificate		
		0 CE ⁽¹⁾	•	
		W ATEX Zone 20/21 Dust Ignition Proof (ATEX II 1/2D)	•	
		A IEC-Ex ⁽²⁾ Zone 20/21 Dust Ignition Proof (ta/tb IIIC)	•	
		E TR-CU Zone 20/21 Dust Ignition Proof (DIP A20/ A21)	•	
• • • • • • •	pos.5	Power supply		
		A / S 230 V AC 50 - 60 Hz Motor Speed: A=1/min S=5/min	•	/ •
		B / T 115 V AC 50 - 60 Hz Motor Speed: B=1/min T=5/min	•	/ •
		C / U 48 V AC 50 - 60 Hz Motor Speed: C=1/min U=5/min	•	/ •
		D / V 24 V AC 50 - 60 Hz Motor Speed: D=1/min V=5/min	•	/ •
		E / W 24 V DC Motor Speed: E=1/min W=5/min	•	/ •
		G / H 24 V DC PNP Motor Speed: G=1/min H=5/min	•	/ •
		F / X 24 V DC/ 22 .. 230 V AC universal voltage Motor Speed: F=1/min X=5/min	•	/ •
• •	pos.6	Process connection		
		A thread G 1½", DIN 228	•	•
	F thread NPT 1½", conical ANSI B1.20.1		•	•
• • •	pos.7	Material process connection		
		1 aluminium		↑
		3 stainless steel (1.4305/ 303)		↑
• •	pos.10	Measuring vane		
		N VT-vane	•	
		others on request		

Further options and accessories: see page 20

Basic Type

RN	3005	F		1	1			A	3	
Position	1	2	3	4	5	6	7	8	9	10

← **Order code**

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

⁽¹⁾ TR-CU (Ordinary Locations) included

⁽²⁾ INMETRO included

Options

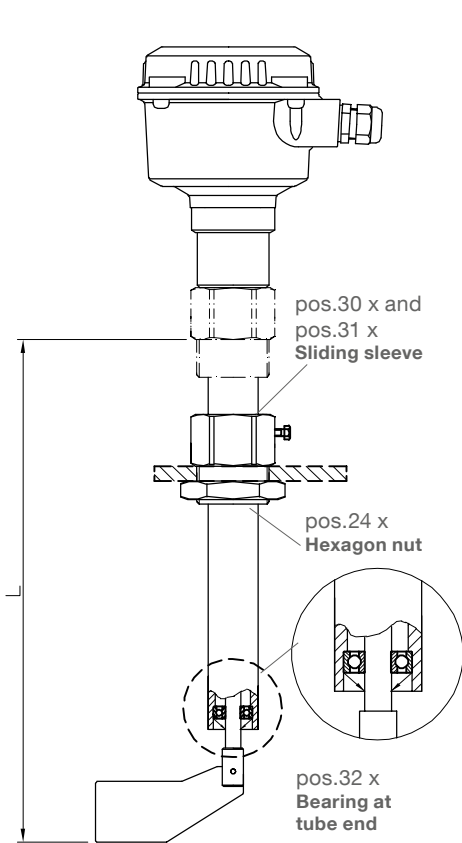
RN 3001	RN 6001	RN 3002	RN 6002	RN 3002- rope	RN 6002- rope	RN 3003	RN 6003	RN 3004	RN 6004	RN 3005																																															
1	1	1	1	1	1	1	1	1	1	1	pos.11 x Guarantee extension to 5 years																																														
•	•	•	•	•	•			•	•		Flat gasket (max. 250°C)																																														
•	•	•	•	•	•			•	•		pos.15 a for process connection thread 1½", incl. sealing face in aluminium																																														
•	•	•	•	•	•			•	•		pos.15 b for process connection thread 1½", incl. sealing face in 1.4404 (316L)																																														
								•	•		pos.15 c for process connection thread 1¼"/ 1"/ M32 x 1.5/ M30 x 1.5																																														
2		2		2		2		2		2	pos.16 a Material of housing plastics PA6																																														
											Radial shaft sealing																																														
3	3	3	3	3	3	3	3	3	3	3	pos.17 a FPM (Viton)																																														
4	4	4	4	4	4	4	4	4	4	4	pos.17 b PTFE (Teflon)																																														
											pos.18 x Stainless steel ball bearing																																														
5	5	5	5	5	5			5	5	•	for RN ..001/ RN ..002/ RN ..004/ RN ..005																																														
						•	•				for RN ..003																																														
6	6	6	6	6	6	6	6	6	6	6	pos.21 x Weather protection cover (for Ex, only for Zone 2/22/Div. 2)																																														
											Mounting set for flange mounting																																														
											<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>4x M16 x 50</td> <td>4x M16</td> <td>4 pcs</td> <td>1 piece</td> </tr> <tr> <td>H</td> <td>thread M16</td> <td>4x M16 x 30</td> <td></td> <td>4 pcs</td> <td>1 piece</td> </tr> <tr> <td>L</td> <td>hole ø18</td> <td>4x M16 x 60</td> <td>4x M16</td> <td>4 pcs</td> <td>1 piece</td> </tr> <tr> <td>L</td> <td>thread M16</td> <td>4x M16 x 40</td> <td></td> <td>4 pcs</td> <td>1 piece</td> </tr> <tr> <td>M</td> <td>hole ø18</td> <td>8x M16 x 60</td> <td>8x M16</td> <td>8 pcs</td> <td>1 piece</td> </tr> <tr> <td>M</td> <td>thread M16</td> <td>8x M16 x 40</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	4x M16 x 50	4x M16	4 pcs	1 piece	H	thread M16	4x M16 x 30		4 pcs	1 piece	L	hole ø18	4x M16 x 60	4x M16	4 pcs	1 piece	L	thread M16	4x M16 x 40		4 pcs	1 piece	M	hole ø18	8x M16 x 60	8x M16	8 pcs	1 piece	M	thread M16	8x M16 x 40		8 pcs	1 piece
for flange	for counter flange with	consists of																																																							
		screws*	nuts*	washers*	sealing**																																																				
H	hole ø18	4x M16 x 50	4x M16	4 pcs	1 piece																																																				
H	thread M16	4x M16 x 30		4 pcs	1 piece																																																				
L	hole ø18	4x M16 x 60	4x M16	4 pcs	1 piece																																																				
L	thread M16	4x M16 x 40		4 pcs	1 piece																																																				
M	hole ø18	8x M16 x 60	8x M16	8 pcs	1 piece																																																				
M	thread M16	8x M16 x 40		8 pcs	1 piece																																																				
•	•	•	•	•	•	•	•	•	•	•	pos.22 a																																														
•	•	•	•	•	•	•	•	•	•	•	pos.22 b																																														
•	•	•	•	•	•	•	•	•	•	•	pos.22 c																																														
•	•	•	•	•	•	•	•	•	•	•	pos.22 d																																														
•	•	•	•	•	•	•	•	•	•	•	pos.22 e																																														
•	•	•	•	•	•	•	•	•	•	•	pos.22 f																																														
											* material stainless A2 **max. 350°C																																														
											Hexagon nut																																														
•	•	•	•	•	•			•	•	•	pos.24 a aluminium 1 pc																																														
•	•	•	•	•	•			•	•	•	pos.24 b aluminium 2 pcs																																														
•	•	•	•	•	•			•	•	•	pos.24 e stainless steel 1.4305 (303) 1 pc																																														
•	•	•	•	•	•			•	•	•	pos.24 f stainless steel 1.4305 (303) 2 pcs																																														
	8	8		8		8		8		8	pos.25 b Functional safety SIL 2 (IEC 61508)																																														
•	9	9	•	9	•	9	•	9	•	9	pos.25 x Fail safe alarm (for 24 V DC/ 22 .. 230 V AC universal voltage)																																														
10	10	10	10	10	10	10	10	10	10	10	pos.26 x Heating of housing 2.5 watts for ambient/ process temp. to -40°C (-40°F)																																														
											Signal lamp																																														
11	11	11	11	11	11	11	11	11	11	11	pos.27 a Bulb, mounted in cable entry M20 x 1.5, 2 W green																																														
11	11	11	11	11	11	11	11	11	11	11	Pos.27 c Bulb, mounted in cable entry M20 x 1.5, 2 W red																																														
	12	12		12		12		12		12	pos.27 b LED (glass window in lid)																																														
13	13	13		13		13		13		13	pos.27 d LED (transparent lid section)																																														
											Cable entry optionally available:																																														
											Selection of the following options only necessary, if a deviation from the default cable gland/ conduit is required:																																														
•	14	•	14	•	14	•	14	•	14	•	pos.28 x M20 x 1.5 2x screwed cable gland																																														
	15		15		15		15		15		pos.28 d M20 x 1.5 1x screwed cable gland +1x blind plug																																														
•	16	•	16	•	16	•	16	•	16	•	pos.28 a NPT ½" tapered ANSI B1.20.1 (1x conduit + 1x Ex-d blind plug)																																														
											pos.28 c NPT ¾" tapered ANSI B1.20.1 (1x conduit + 1x Ex-d blind plug)																																														
17	17	17	17	17	17	17	17	17	17	17	pos.29 y Food grade materials (in contact with process)																																														
											(according to 1935/2004/EC, with FDA conform sealing)																																														
											EHEDG approval																																														
18	18	18	18					18	18		pos.29 a Process connection G 1½" (without flush welding socket)																																														
18	18	18	18					18	18		pos.29 b Process connection flush welding socket ø69/ G 1½" made of Aluminium																																														
18	18	18	18					18	18		pos.29 c Process connection flush welding socket ø69/ G 1½" made of 1.4301 (304)																																														
18	18	18	18					18	18		pos.29 d Process connection flush welding socket ø69/ G 1½" made of 1.4404 (316L)																																														

Options

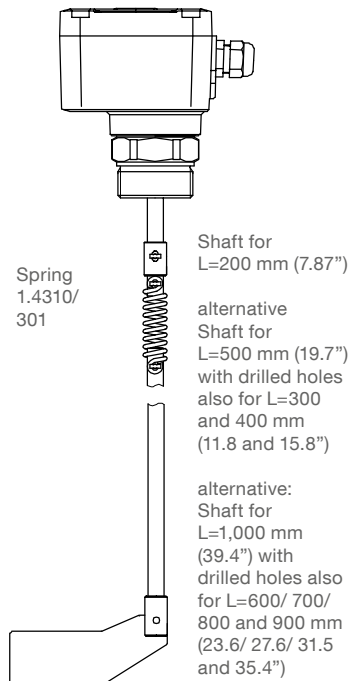
	19	19								pos.30 x	Sliding sleeve for applications without process overpressure	•	
	20	20								pos.31 x	Sliding sleeve for applications with process overpressure	•	
	21	21								pos.32 x	Bearing at tube end	•	
	•	•									max. +80°C (176°F)	•	
											max. +150°C (302°F)	•	
											max. +250°C (482°F)	•	
											max. +600°C (1,112°F)	•	
											max. +1,100°C (2,012°F)	•	
											on request		
										pos.33 x	Extension and flange welded $\alpha = \square^\circ$ min. 0° max. 45°	•	
											for aluminium (see pos.7/ 9)	•	
											for stainless steel (1.4305 (303)) (see pos.7/ 9)	•	
										pos.34 x	Reinforced rib (only with pos.33, max. $\alpha = 30^\circ$)	•	
											Plug		
22	22	22	22	22	22	22	22	22	22	pos.35 x	Valve connector (incl. mating plug)	4-pole (incl. PE) max. 230 V	•
22	22	22	22	22	22	22	22	22	22	pos.35 a	M12 (without mating plug)	4-pole max. 25 V	•
22	22	22	22	22	22	22	22	22	22	pos.35 b	M12 (without mating plug)	5-pole (incl. PE) max. 60 V	•
22	22	22	22	22	22	22	22	22	22	pos.35 c	Harting Han 4A (incl. mating plug)	5-pole (incl. PE) max. 230 V	•
											Kit pendulum shaft		
											Max. pulling force 400 N, only with pos.8 A		
											For vertical and horizontal installation:		
										pos.36 w	L=200 mm (7.87")	•	
											For vertical installation:		
										pos.36 x	L=500 mm (19.7") (drilled holes also for 300 and 400 mm (11.8 and 15.8"))	•	
										pos.36 y	L=1,000 mm (39.4") (drilled holes also for 600/ 700/ 800 and 900 mm (23.6/ 27.6/ 31.5 and 35.4"))	•	
23	23									pos.39 x	Kit rope extension	•	
											L=2 m, only available as full detector	•	

- Available for temperatures up to 250°C (pos.3 1,2,3).
- Available for certificat CE, ATEX, IEC-Ex and TR-CU dust explosionproof (pos.2 0,W,A,E). Not with cable entry NPT (pos.28 a,c) and control lamp LED (pos.27 b). For ATEX, IEC-Ex and TR-CU 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 M30 x 1.5 (pos.6 E). Note: 150°C version including FPM as standard.
- Available for temp. up to 150°C and for pressure up to 0.8 bar, except M30 x 1.5 (pos.6 E). Note: 250°C and 5 bar/ 10 bar PTFE included as standard.
- Available for temperature up to 250°C except M30 x 1.5 (pos.6 E), not for RN3002-rope strengthened (pos.1 H).
All bearings mounted in the extension are made of stainless steel.
- Available for all versions except explosionproof/ flameproof version (pos.2 R,T,C,D,S,U,K,L). Not with plug Harting Han 4A (pos.35 c).
- Available with universal voltage (pos.5 F,X). Not for CSA. Not in combination with fail safe alarm pos.25 x.
- Not with Ex-certification "increased safety" (pos.2 R,C,S,K).
- 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.26 x is not required).
- Available for CE (pos.2 0), not in combination with weather protection cover (pos.21 x) and cable entries pos.28 x,a,c.
In combination with universal voltage (pos.5 F, X) three bulbs (24 V, 115 V and 230 V) 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,C,D,S,U,K,L), not in combination with power supply AC (pos.5 A,B,C,D,S,T,U,V), not in combination with weather protection cover (pos.21 x).
- Available for certificate CE (pos. 2,0), not in combination with power supply AC (pos.5 A,B,C,D,S,T,U,V).
- Available for all versions except flameproof version (pos.2 T,D,U,L) not in combination with power supply AC (pos.5 A,B,C,D,S,T,U,V).
- Available for FM/ CSA versions (pos.2 M,N,S) except flameproof version (pos.2 T,D,U,L).
- Available for CE, ATEX, IEC-Ex, TR-CU (pos.2 0,W,R,T,A,C,D,E,K,L)
- Available up to max. 250°C. Not for M30 x 1.5 (pos.6 E), vane (pos.10 M), flange sealings (pos.22). RN 3002/ RN 6002 only with option bearing with tube end (pos.32 x). 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.29 a this socket must be manufactured on site.
Available up to max. 250°C. Only for G 1½" (pos.6 A). Not with vane pos.10 K,P,S,M,Y. Only vane D,R,J can be inserted through the flush welding socket. RN 3002/ RN 6002 only with bearing at tube end (pos.32 x). 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. Not with material process connection alu (pos.7 1).
- Available for length L>300 mm (pos.8 Z).
- Available for CE (pos.2 0). Without connection of stranded wires for installation and internal terminals (standard) or according to customer specification.
- Available for extension 100 mm (pos.8 A) and 1.4305 (pos.9 3).

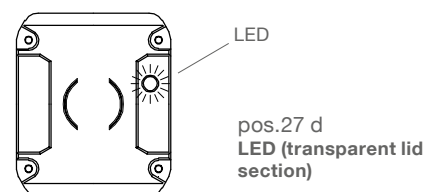
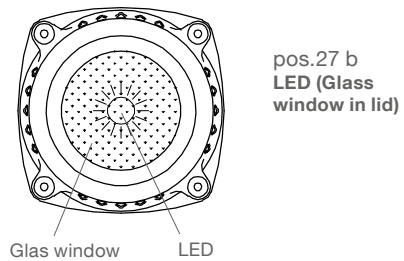
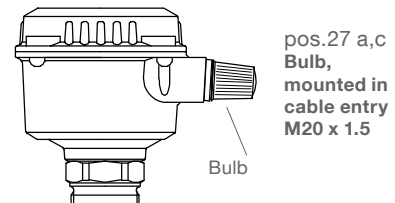
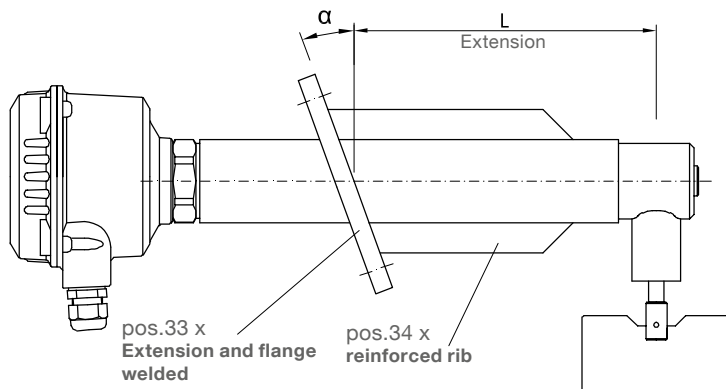
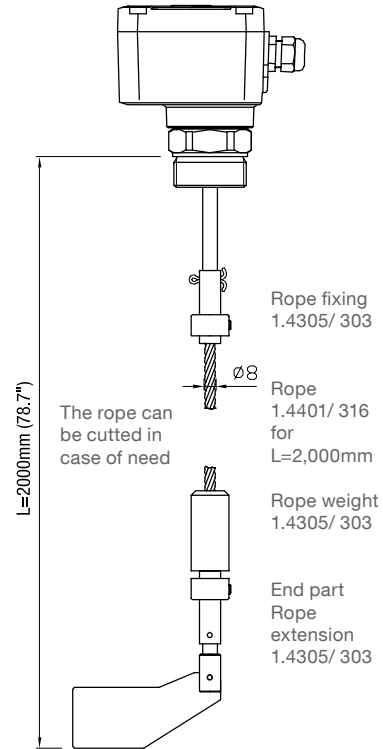
Options



pos.36
 Kit "pendulum shaft"

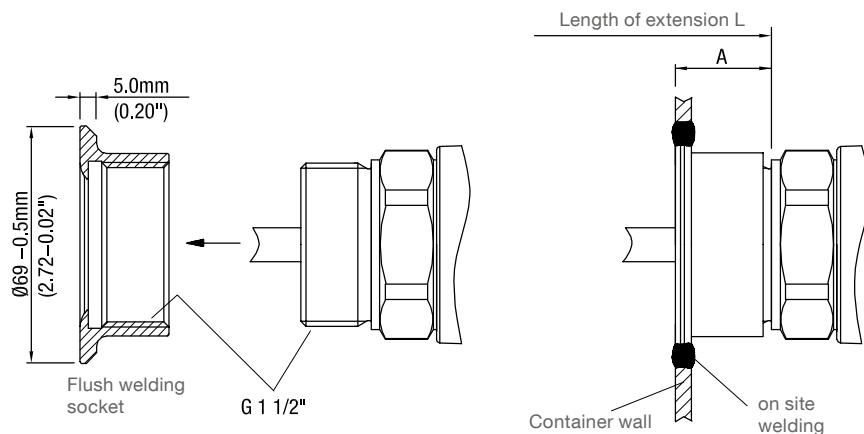


pos.39
 Kit „rope extension“

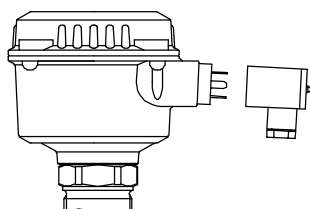


Options

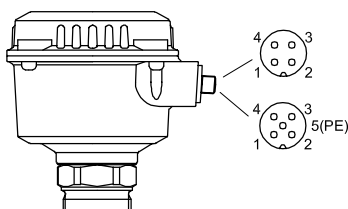
pos.29
 EHEDG approval



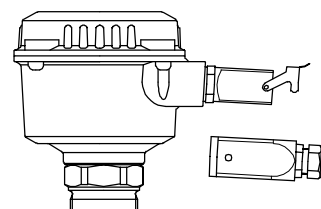
	A
RN ..001	28 mm (1.1")
RN ..002/ RN ..004	38 mm (1.5")



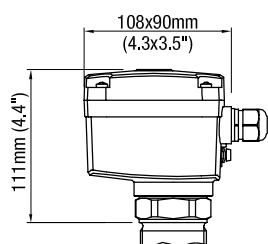
pos.35 x
Valve connector
 Enclosure plastic
 Protection IP65



pos.35 a,b
Plug M12
 Enclosure brass
 Protection IP67

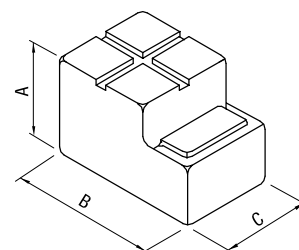


pos.35 c
Plug Han 4A
 Enclosure zinc
 Protection IP65



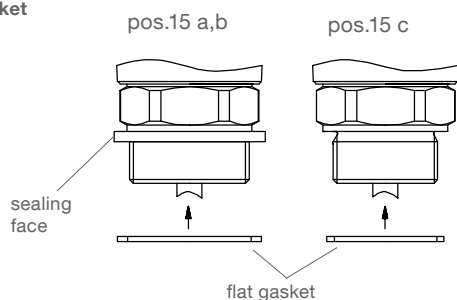
pos.16 a
 Material of housing
 Plastics PA6

pos.21 x
Weather protection cover



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

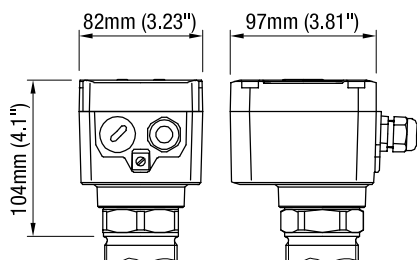
pos.15
Flat gasket



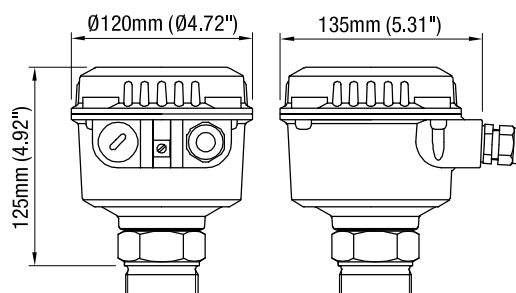
Dimensions

Housing versions

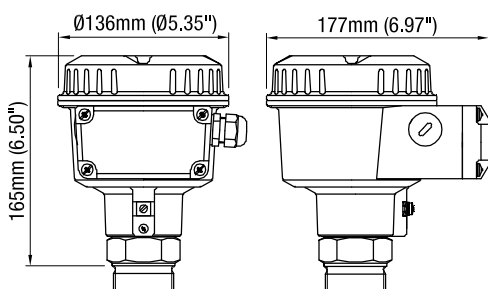
Series RN 3000
Standard



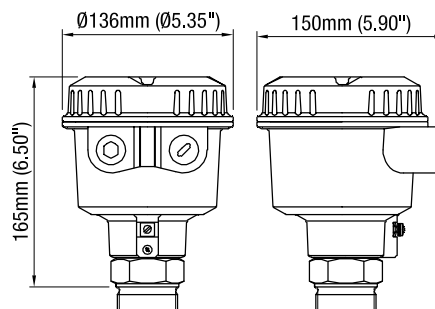
Series RN 6000
Standard



Series RN 6000
de explosionproof with increased
safety terminal box

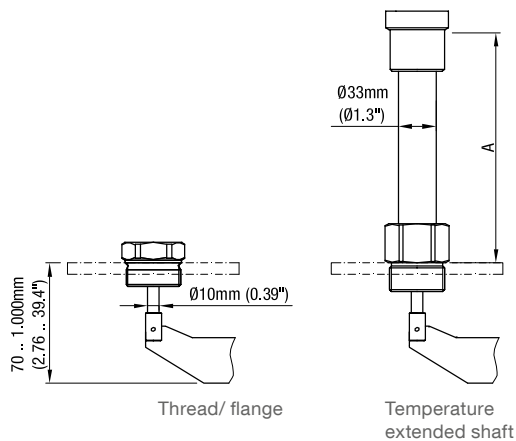


Series RN 6000
d flameproof/ explosionproof

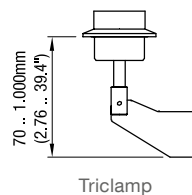


Extensions

RN ..001

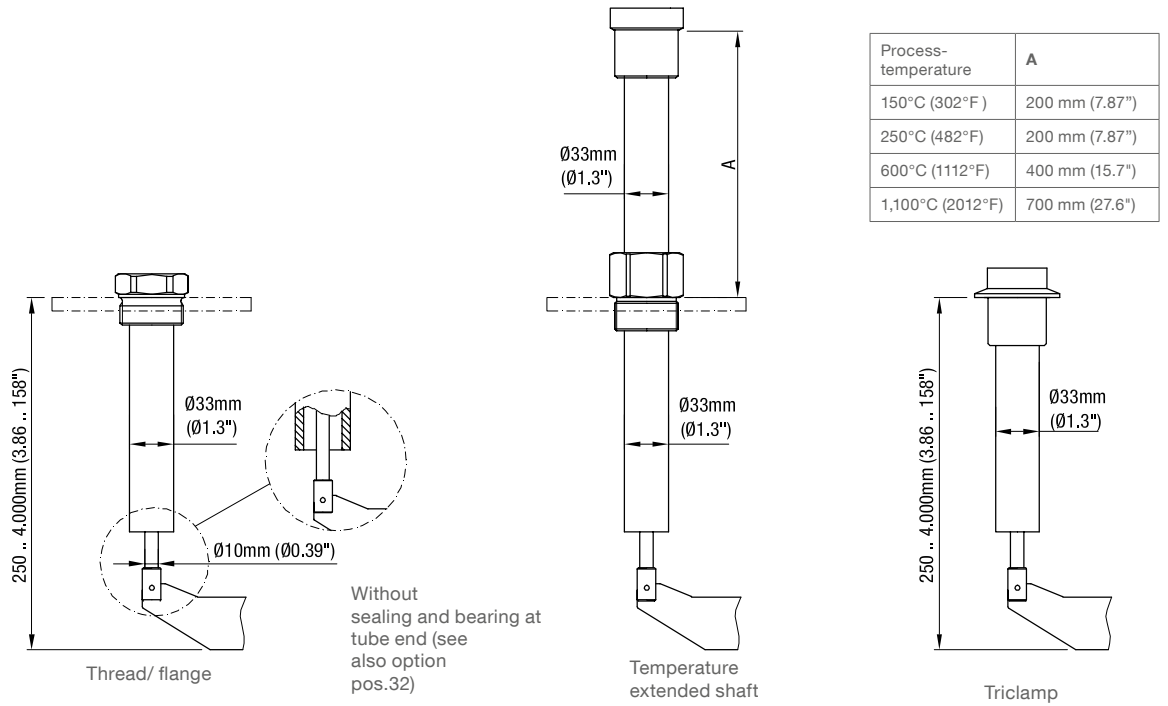


Process-temperature	A
150°C (302°F)	200 mm (7.87")
250°C (482°F)	200 mm (7.87")
350°C (662°F)	300 mm (11.8")
600°C (1,112°F)	400 mm (15.7")
1,100°C (2,012°F)	700 mm (27.6")

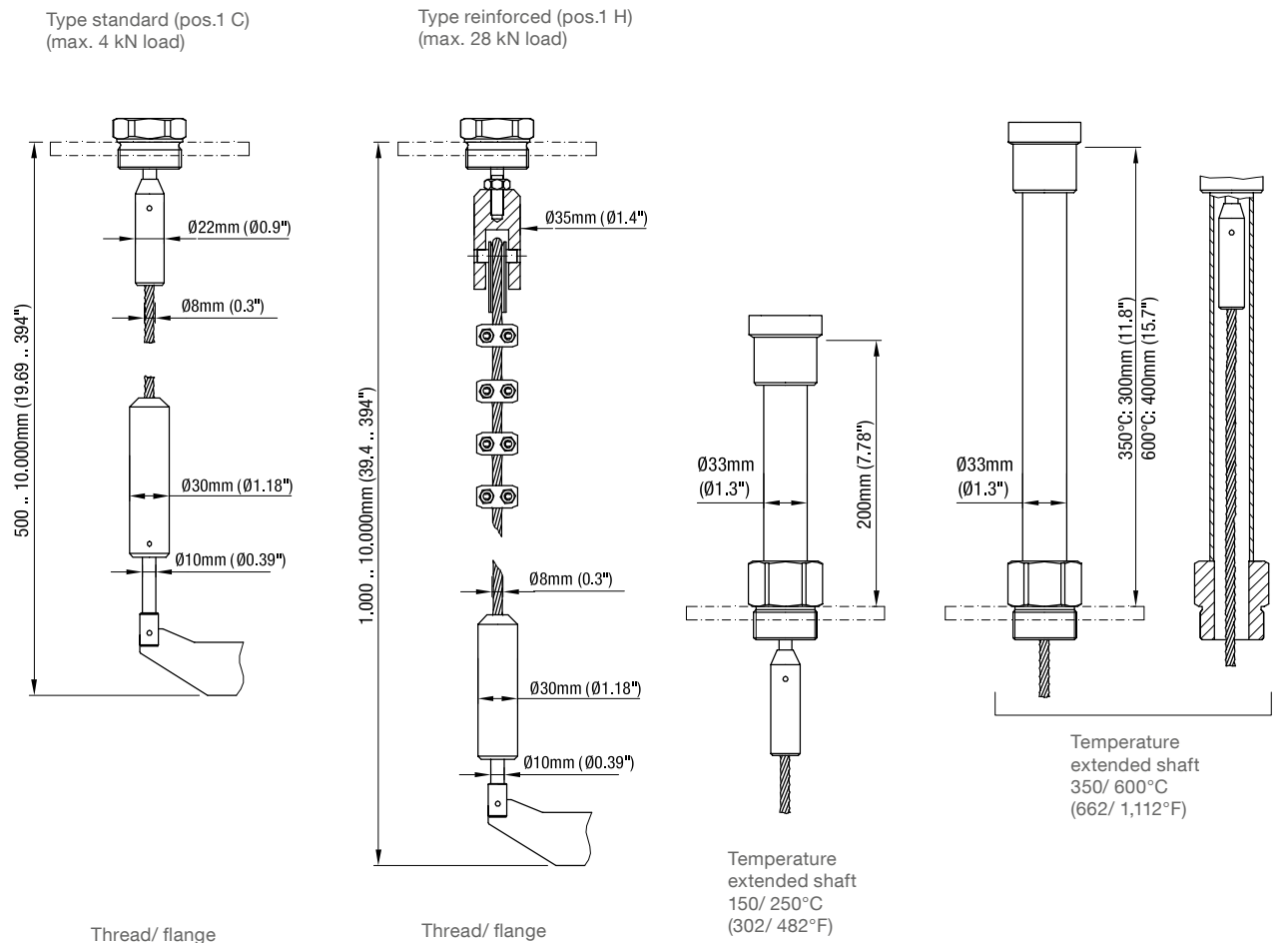


Dimensions

RN ..002

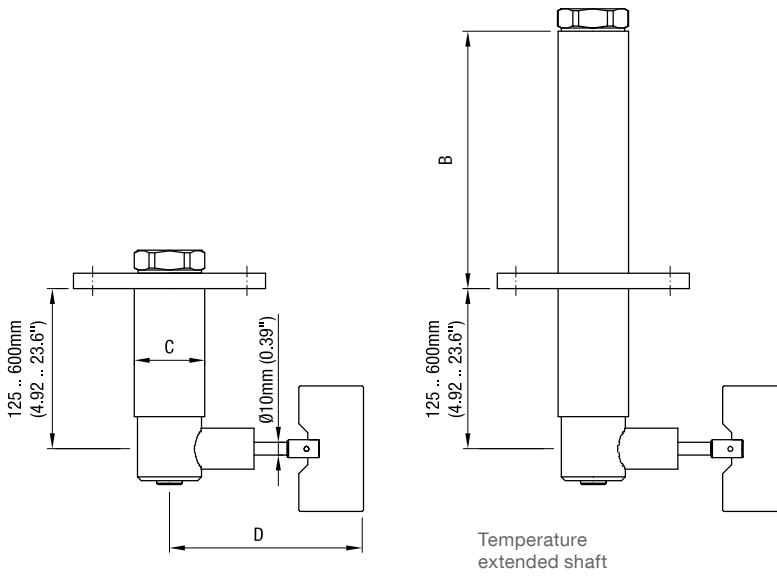


RN ..002 rope



Dimensions

RN ..003

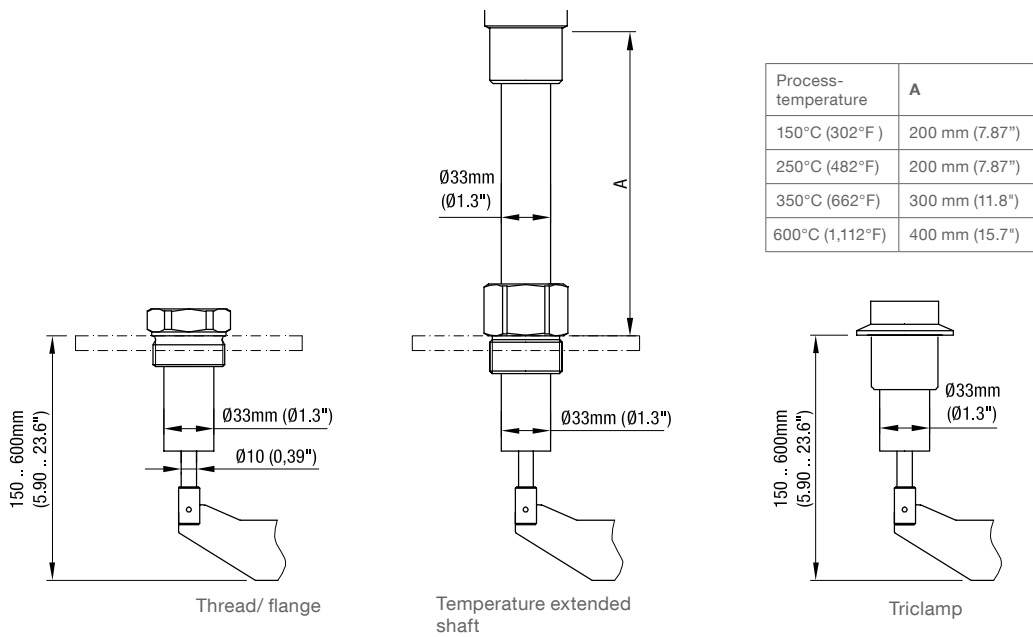


Process temperature	B
80°C (176°F) 0.8 bar (11.6 psi)	10 mm (0.39")
80°C (176°F) 5/ 10bar (73/ 145 psi)	75 mm (2.95")
150/ 250°C (302/ 482°F) 0.8/ 5/ 10 bar (11.6/ 73/ 145 psi)	210 mm (8.27")

Material	C
steel	ø55 mm (2.17")
aluminium	ø60 mm (2.36")

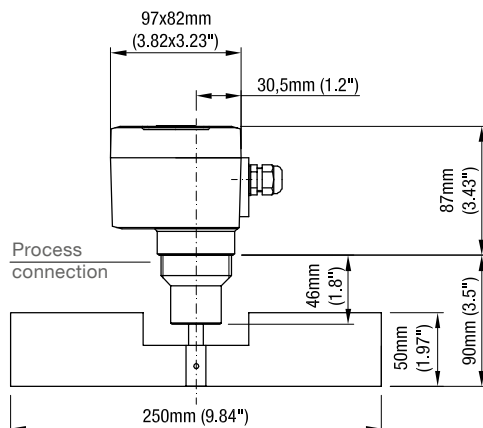
Vane	D
50 mm x .. mm (1.97" x ..")	139 mm (5.47")
98 mm x .. mm (3.86" x ..")	187 mm (7.36")

RN ..004



Process-temperature	A
150°C (302°F)	200 mm (7.87")
250°C (482°F)	200 mm (7.87")
350°C (662°F)	300 mm (11.8")
600°C (1,112°F)	400 mm (15.7")

RN 3005

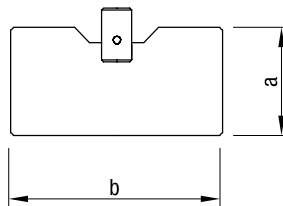


Dimensions

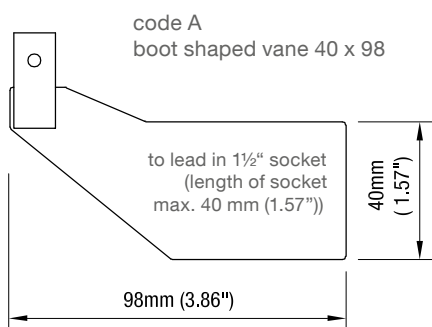
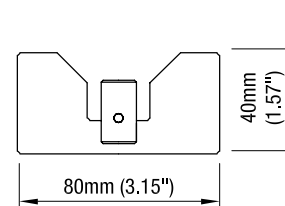
Measuring vanes

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

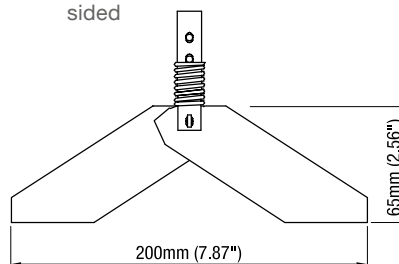
code B,C,E,F,G,I
 rectangular vane



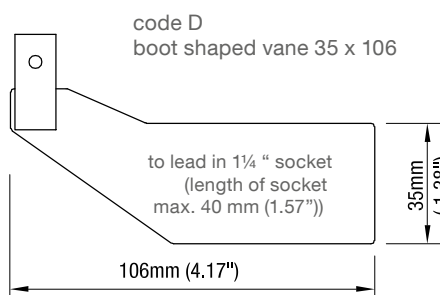
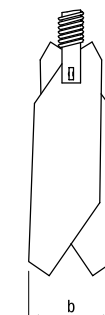
code P
 notched 40 x 80



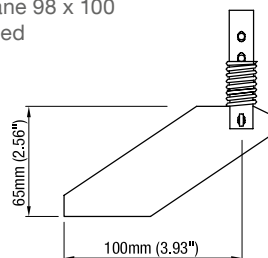
code K
 hinged vane 98 x 200 double
 sided



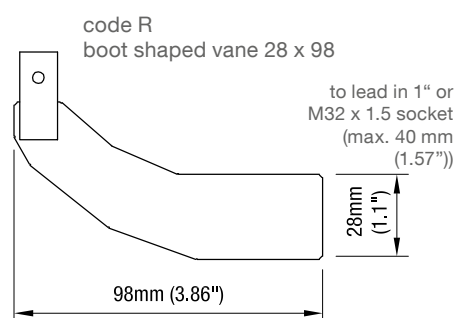
b=37 mm (1.46")
 for 1½" / 1¼"
 b=28 mm (1.1")
 for 1" / M32 x 1.5



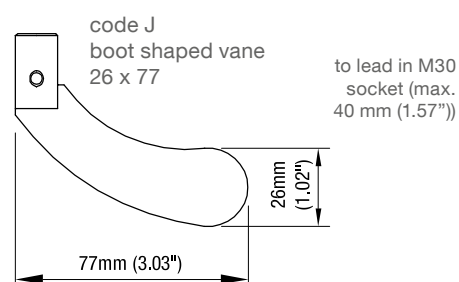
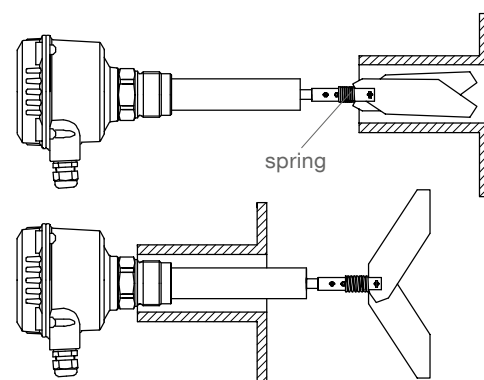
code S
 hinged vane 98 x 100
 single sided



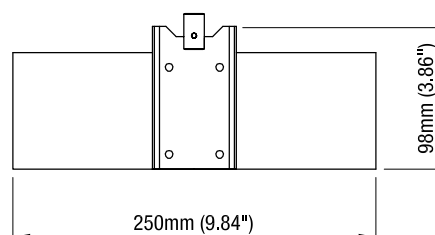
b=37 mm (1.46")
 für 1½" / 1¼"
 b=28mm (1.1")
 for 1" / M32 x 1.5



Insertion of the hinged vane
 through a long socket



code M
 rubber vane 98 x 250



Dimensions

Sensitivity

The table shows approximate values for the minimum densities, at which a normal function should be possible.

Vane	*Minimum density in g/l = kg/m ³ (lb/ft ³) (without guarantee)			
	Vane completely covered with bulk material		Bulk material covers vane up to 100 mm (3.9")	
	Spring adjustment		Spring adjustment	
	fine	medium (factory setting)	fine	medium (factory setting)
Boot shaped vane 40 x 98	200 (12)	300 (18)	100 (60)	150 (9)
Boot shaped vane 35 x 106	200 (12)	300 (18)	100 (60)	150 (9)
Boot shaped vane 28 x 98	300 (18)	500 (30)	150 (9)	200 (12)
Boot shaped 26 x 77	350 (21)	560 (33)	200 (12)	250 (15)
Vane 50 x 98	300 (18)	500 (30)	150 (9)	250 (15)
Vane 50 x 150	80 (4.8)	120 (7.2)	40 (2.4)	60 (3.6)
Vane 50 x 250	30 (1.8)	50 (3)	15 (0.9)	25 (1.5)
Vane 98 x 98	100 (60)	150 (9)	50 (3)	75 (4.5)
Vane 98 x 150	30 (1.8)	50 (3)	15 (0.9)	25 (15)
Vane 98 x 250	20 (1.2)	30 (1.8)	15 (0.9)	15 (0.9)
Hinged vane 98 x 200 b=37 double sided	70 (4.2)	100 (60)	35 (2.16)	50 (3)
Hinged vane 98 x 200 b=28 double sided	100 (60)	150 (9)	50 (3)	75 (4.5)
Hinged vane 98 x 100 b=37 single sided	200 (12)	300 (18)	100 (60)	150 (9)
Hinged vane 98 x 100 b=28 single sided	300 (18)	500 (30)	150 (9)	250 (15)

The above mentioned data is a guideline and is for loose, non compacted material.

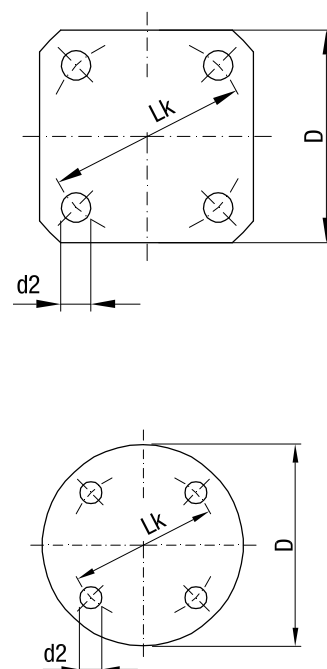
During the filling the bulk density can change (e. g. for fluidised material).

*For versions with option 26 (heating of housing) the above mentioned data must be multiplied by 1.5.

Dimensions / Detailed Ex-markings

Flanges

Code	Type	Number of holes	d2	Lk	D	T (thickness)
H	flange 150x150	4	18 mm (0.71")	170 mm (6.69")	150 mm (5.90")	10 mm (0.39")
I	flange 150x150	4	14 mm (0.55")	170 mm (6.69")	150 mm (5.90")	10 mm (0.39")
K	flange DN32 PN6	4	14 mm (0.55")	90 mm (3.54")	120 mm (4.72")	14 mm (0.55")
N	flange DN50 PN16	4	18 mm (0.71")	125 mm (4.92")	165 mm (6.50")	18 mm (0.71")
L	flange DN100 PN6	4	18 mm (0.71")	170 mm (6.69")	210 mm (8.27")	16 mm (0.63")
M	flange DN100 PN16	8	18 mm (0.71")	180 mm (7.09")	220 mm (8.66")	20 mm (0.79")
S	flange 2" 150lbs	4	19.1 mm (0.75")	120.7 mm (4.75")	152.4 mm (6.01")	19.1 mm (0.75")
T	flange 3" 150lbs	4	19.1 mm (0.75")	152.4 mm (6.01")	190.5 mm (7.5")	23.9 mm (0.94")
U	flange 4" 150lbs	8	19.1 mm (0.75")	190.5 mm (7.5")	228.6 mm (9.0")	23.9 mm (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
E	TR-CU Ex ta/tb IIIC T! Da/Db X	Standard
K	TR-CU Ex de IIC T! Gb X Ex ta/tb IIIC T! Da/Db X	de
L	TR-CU Ex d IIC T! Gb X Ex ta/tb IIIC T! Da/Db X	d

Electrical installation Series RN 3000

Version:

- AC
- DC
- **Universal voltage**

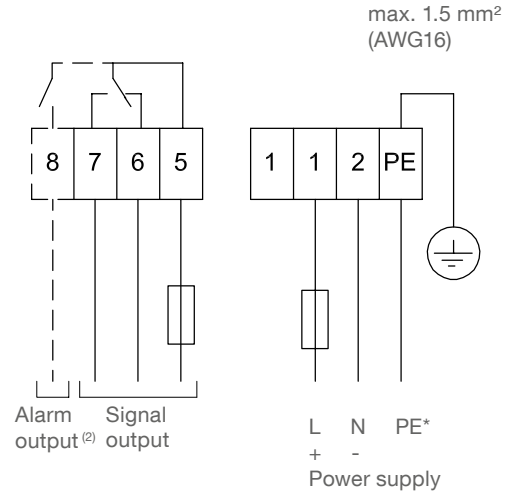
Power supply:

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

⁽¹⁾ including $\pm 10\%$ of EN 61010

Signal and alarm output:

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



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

Version:

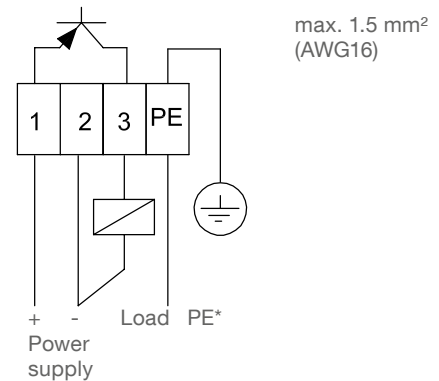
- PNP

Power supply:

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

Signal output:

Load max. 0.4 A
 Output voltage equal to input voltage, drop < 2.5 V
 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:

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

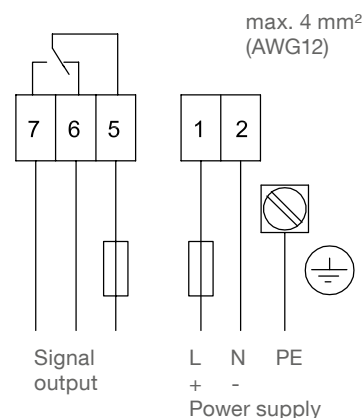
• DC version:

24 V DC $\pm 15\%$ ⁽¹⁾ max. 2.5 W
 External fuse: not required

⁽¹⁾ including $\pm 10\%$ of EN 61010

Signal output:

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



Version:

- Universal voltage
 (ohne SIL 2)

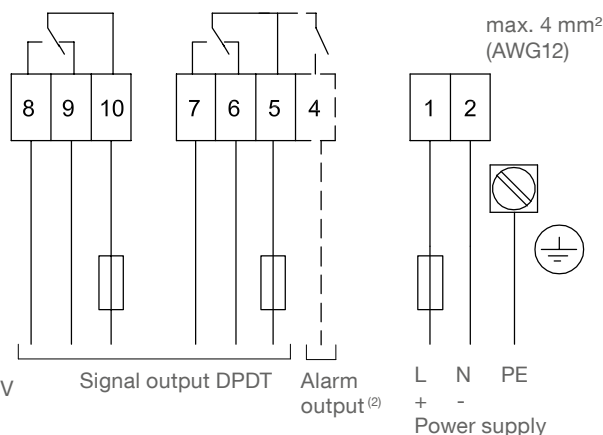
Power supply:

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

⁽¹⁾ including $\pm 10\%$ of EN 61010

Signal and alarm output:

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



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

Version:

- Universal voltage
 SIL 2

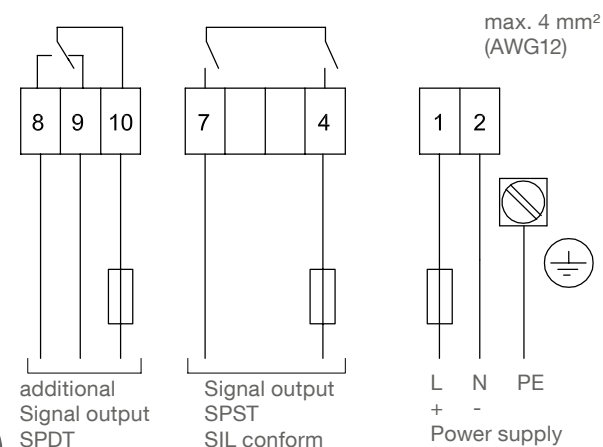
Power supply:

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

⁽¹⁾ including $\pm 10\%$ of EN 61010

Signal output:

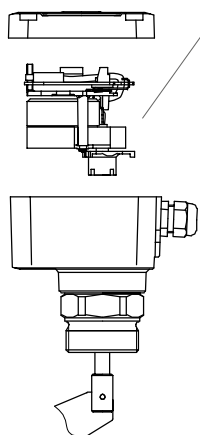
Relay SPST/ SPDT
 max. 250 V AC, 5 A, non inductive;
 max. 30 V DC, 4 A, non inductive
 External fuse:
 max. 10 A, fast or slow, HBC, 250 V



* 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



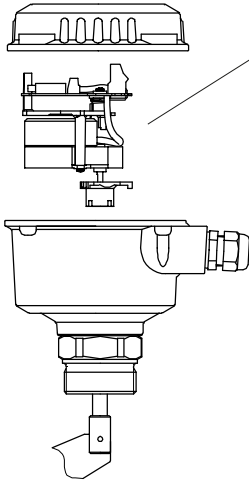
Series RN 3000 Motor/ PCB

Order code			Voltage	Motor Speed	Spare part Articiel number	
Pos.5 Power supply	Pos.25 x Fail safe alarm	Pos.26 x Heating of housing				
A	-	-	230 V AC	1/min	gm402000	•
S	-	-		5/min	gm403000	•
B	-	-	115 V AC	1/min	gm402005	•
T	-	-		5/min	gm403005	•
C	-	-	48 V AC	1/min	gm402015	•
U	-	-		5/min	gm403015	•
D	-	-	24 V AC	1/min	gm402010	•
V	-	-		5/min	gm403010	•
E	-	-	24 V DC	1/min	gm402020	•
W	-	-		5/min	gm403020	•
G	-	-	24 V DC PNP	1/min	gm402026*	•
H	-	-		5/min	gm403026*	•
F	-	-	24 V DC/ 22 .. 230 V 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	-	-	230 V AC/ 115 V AC/ 24 V 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.

** This module requires a sensor to detect the motor rotation, which is mounted inside the housing. 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.25 b SIL 2**	Pos.25 x Fail safe alarm	Pos.26 x Heating of housing				
A	-	-	-	230V AC	1/min	gm412000	•
S	-	-	-		5/min	gm413000	•
B	-	-	-	115V AC	1/min	gm412005	•
T	-	-	-		5/min	gm413005	•
C	-	-	-	48V AC	1/min	gm412015	•
U	-	-	-		5/min	gm413015	•
D	-	-	-	24V AC	1/min	gm412010	•
V	-	-	-		5/min	gm413010	•
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	•

* This module requires a sensor to detect the motor rotation, which is mounted inside the housing. Therefore it can not be mounted into a housing where a different module was present before.

** Moduls for units with SIL certificate must be replaced by the manufacturer.

Spare parts

	Fitting to unit/ model code	Description see page	Spare part Article number	
Measuring vane (delivery incl. cotter pin)				
Boot shaped 40 x 98 mm (1.4305)	Pos.10 A with pos.9 3	P27	fg400605	•
Boot shaped 40 x 98 mm (1.4404)	Pos.10 A with pos.9 7	P27	fg400502	•
Boot shaped 35 x 106 mm (1.4305)	Pos.10 D with pos.9 3	P27	fg400508	•
Boot shaped 35 x 106 mm (1.4404)	Pos.10 D with pos.9 7	P27	fg400509	•
Boot shaped 28 x 98 mm (1.4305)	Pos.10 R with pos.9 3	P27	fg400603	•
Boot shaped 28 x 98 mm (1.4404)	Pos.10 R with pos.9 7	P27	fg400604	•
Boot shaped 26 x 77 mm	Pos.10 J	P27	fg400607	•
Rectangular 50 x 98 mm	Pos.10 B	P27	fg400610	•
Rectangular 50 x 150 mm	Pos.10 C	P27	fg400620	•
Rectangular 50 x 250 mm	Pos.10 E	P27	fg400630	•
Rectangular 98 x 98 mm (1.4305)	Pos.10 F with pos.9 3	P27	fg400635	•
Rectangular 98 x 98 mm (1.4404)	Pos.10 F with pos.9 7	P27	fg400032	•
Rectangular 98 x 150 mm	Pos.10 G	P27	fg400637	•
Rectangular 98 x 250 mm	Pos.10 I	P27	fg400650	•
Hinged vane 98 x 200 mm double sided (37 mm for G 1½" and G 1¼") (1.4305, max. 250°C)	Pos.10 K with pos.9 3	P27	fg400081	•
Hinged vane 98 x 200 mm double sided (37 mm for G 1½" and G 1¼") (1.4404, max. 250°C)	Pos.10 K with pos.9 7	P27	fg400087	•
Hinged vane 98 x 200 mm double sided (28 mm for G 1" and M32) (1.4305, max. 250°C)	Pos.10 K with pos.9 3	P27	fg400085	•
Hinged vane 98 x 100 mm single sided (37 mm for G 1½" and G 1¼") (1.4305, max. 250°C)	Pos.10 S with pos.9 3	P27	fg400084	•
Hinged vane 98 x 100 mm single sided (37 mm for G 1½" and G 1¼") (1.4404, max. 250°C)	Pos.10 S with pos.9 7	P27	fg400088	•
Hinged vane 98 x 100 mm single sided (28 mm for G 1" and M32) (1.4305, max. 250°C)	Pos.10 S with pos.9 3	P27	fg400086	•
Rubber vane 98 x 250 mm	Pos.10 M	P27	fg400565	•
Notched 40 x 80 mm	Pos.10 P	P27	fg400614	•
VT-vane	Pos.10 N	P18	fg400026	•

Extension parts

Extension shaft ø10 mm: (delivery incl. fixing parts)	by 50 mm	RN 3001/ 6001	-	we400005	•
	by 100 mm	RN 3001/ 6001	-	we401023	•
	by 150 mm	RN 3001/ 6001	-	we401025	•
	by 200 mm	RN 3001/ 6001	-	we401026	•
Pendular shaft L=500 mm (delivery incl. fixing parts)		RN 3001/6001/pos.36	P22	zu400131	•
Pendular shaft L=1,000 mm (delivery incl. fixing parts)		RN 3001/6001/pos.36	P22	zu400132	•
Kit rope extension L=2,000 mm (implements 2 m single rope (zu400729) and rope fixing parts (zu400110))		RN 3001/6001/pos.39	P22	zu400100	•
Single rope ø8 mm, tail welded, price per meter		RN 3002/ 6002-rope RN3001/ RN6001/ pos.39	P25 P22	zu400729	•
Rope fixing parts, usable for kit rope extension		RN3001/ RN6001/ pos.39	P22	zu400110	•
Rope weight ø30 mm (delivery incl. fixing parts)		RN 3002/ 6002-rope	P25 below	we400720	•
Rope holder ø22 mm (for version Pos.1 C) (delivery incl. fixing parts)		RN 3002/ 6002-rope	P25 below	we400700	•

Spare parts

	Fitting to unit/ model code	Description see page	Spare part Article number	
Hexagon nut				
1½" aluminium	Pos.6 A	P22	zu300170	•
1½" stainless steel 1.4305	Pos.6 A	P22	zu300180	•
1¼" aluminium	Pos.6 B	P22	zu300171	•
1¼" 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	•

Flush welding socket

Flush welding socket ø69/ G 1½" made of Aluminium	Pos.29 b	P23	bu400500	•
Flush welding socket ø69/ G 1½" made of 1.4301 (304)	Pos.29 c	P23	bu400501	•
Flush welding socket ø69/ G 1½" made of 1.4404 (316L)	Pos.29 d	P23	bu400502	•

Weather protection cover

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

