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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 01.04.2012 until 31.03.2013, 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

Series	RN 3000		RN 6000	
	ATEX / IEC-Ex / GOST-R Ex / RTN Ex approval Small housing Sensitivity > 15 g/l (0.9lb/ft³)		ATEX / IEC-Ex / FM / CSA approval Spacious housing Sensitivity > 15 g/l (0.9lb/ft³)	
Housing	Standard		Standard	  
RN ..001 Short extension length	RN 3001		RN 6001	
	RN 3002		RN 6002	
RN ..002 Pipe extension vertical				

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				
Approvals	CE		•	•				
	ATEX / IEC-Ex:							
	Zone 20/21	Dust Ignition Proof	•	•				
	Zone 1	Flameproof / Increased Safety		•				
	FM / CSA:							
	General purp.			•				
	Cl. II, III Div. 1	Dust Ignition Proof		•				
	Cl. I Div. 1	Explosionproof		•				
	Zone 1	Flameproof / Increased Safety		•				
	GOST-R Ex / RTN Ex:							
Dust Ignition Proof		•						
Technical data	Ambient temperature		-20 .. +60°C (-4 .. +140°F) -40 .. +60°C (-40 .. +140°F) with heating					
	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)					
Electronics	RN 3000							
	Power supply		Output signal					
			SPDT ⁽¹⁾	DPDT	PNP	FSH/FSL ⁽²⁾	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 (±10%) AC	•	-	-	•	•	option
	Multivoltage	24V DC / 115V AC/ 230V AC	•	-	-	-	-	-
	RN 6000							
	Power supply		Output signal					
			SPDT ⁽¹⁾	DPDT	PNP	FSH/FSL ⁽²⁾	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 (±10%) AC	-	•	-	•	•	option
	Multivoltage	24V DC / 115V AC/ 230V AC	•	-	-	-	-	-

⁽¹⁾ Micro switch, with Universal voltage Relais

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

Specifications

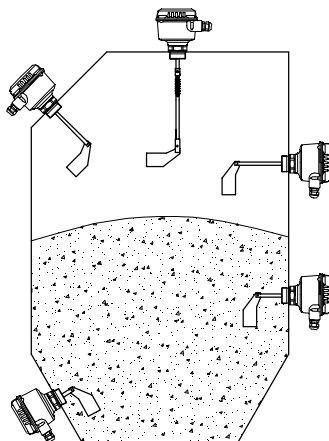
		RN 3000	RN 6000
Extensions	RN ..001	Process temperature	-40/ -25 .. +80 /150 /250 /600°C (-40/-13 .. +176 /302 /482 /1112°F)
		Process pressure	-0.9 .. +0.8bar; -0.9 .. +5 / 10bar (-13.1 ..+11.6; -13.1 .. +72.5 / 145psi)
		Length of extension	
		Full detector vertical from the top	70 .. 300mm (2.76 .. 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)
		Length of extension	
		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)
		Length of extension	
		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)
		Length of extension	
		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)
		Length of extension	
		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)
		Length of extension	
		Application "Loading bellow"	90mm (3.5")

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

Applications

RN..001

Short extension length

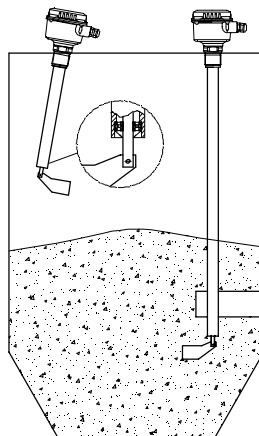


Extension for vertical installation
 with pendulum shaft

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

RN..002

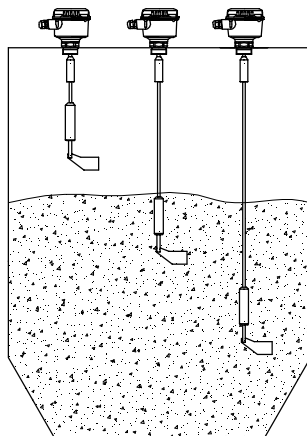
Pipe extension vertical



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

RN..002 - rope

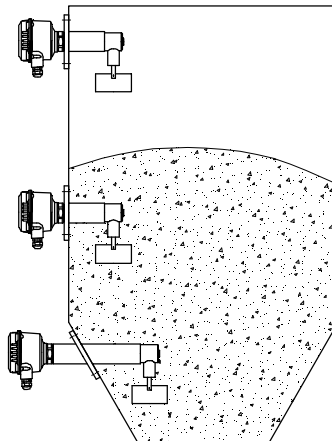
Rope extension



Applications

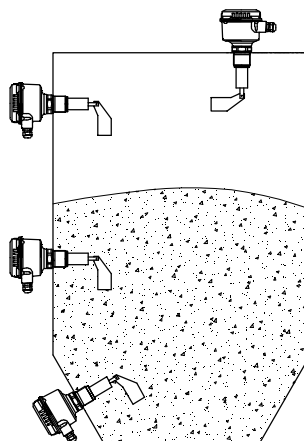
RN ..003

Angled extension



RN ..004

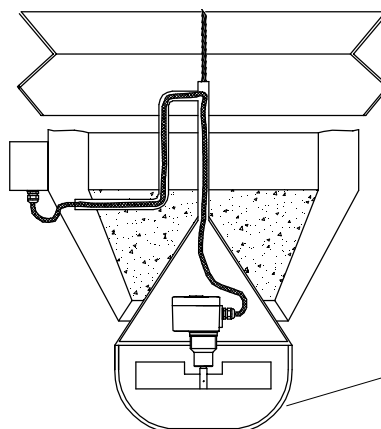
Pipe extension horizontal



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)	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 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		

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) on request
- 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	Power supply		
• •	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 ⁽¹⁾	Motor Speed: F=1/min X= 5/min
• •	M / Y	230V AC/115V AC/24V DC multivoltage	Motor Speed: M=1/min Y= 5/min
pos. 6	Process connection		
• •	A	thread G 1½ inch, DIN 228	
• •	B	thread G 1¼ inch, DIN 228	(max. 250°C (482°F))
• •	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	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, 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 (59")
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)
pos. 10	Measuring vane		
• •	A	boot-shaped ⁽²⁾ 40 x 98mm (1.57 x 3.86")	for 1 1/2" socket (with pos.9.7 L=10mm)
• •	D	boot-shaped ⁽²⁾ 35 x 106mm (1.38 x 4.17")	for 1 1/4" socket ("L"=10mm longer)
• •	R	boot-shaped ⁽²⁾ 28 x 98mm (1.10 x 3.86")	for 1" and M32 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)
• •	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)
• •	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

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

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

⁽¹⁾ not for FM/CSA

⁽²⁾ maximum length of socket 40mm

Order code

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)	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 3002

RN 6002

pos. 2

Certificate (detailed Ex-markings: see page 28)

Certi- ficate	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		

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 (1112°F) (not für 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)
pos. 5	Power supply	
• •	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 ⁽¹⁾ Motor Speed: F=1/min X= 5/min
• •	M / Y	230V AC/115V AC/24V DC multivoltage Motor Speed: M=1/min Y= 5/min
pos. 6	Process connection	
• •	A	thread G 1½ inch, DIN 228 (max. 250°C (482°F))
• •	B	thread G 1¼ inch, DIN 228 (max. 250°C (482°F))
• •	F	thread NPT 1½ inch, conical ANSI B1.20.1 (max. 250°C (482°F))
• •	Q	thread NPT 1¼ inch, conical ANSI B1.20.1 (max. 250°C (482°F))
• •	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))
• •	L	flange DN100 PN6, EN 1092-1 (max. 5 bar (73psi))
• •	M	flange DN100 PN16, EN 1092-1 (max. 5 bar (73psi))
• •	S	flange 2" 150lbs ANSI B16.5 (max. 0.8 bar (11.6psi))
• •	T	flange 3" 150lbs ANSI B16.5 (max. 5 bar (73psi))
• •	U	flange 4" 150lbs ANSI B16.5 (max. 5 bar (73psi))
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"	
• •	Z	price per 100mm (3.94") or part thereof (starting from 0mm) min. 250mm (9.84"), max. 4.000mm (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 and 32x)
pos. 10	Measuring vane	
• •	A	boot-shaped ⁽²⁾ 40 x 98mm (1.57 x 3.86") for 1 1/2" socket (with pos.9.7 L=10mm)
• •	D	boot-shaped ⁽²⁾ 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)
• •	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

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⁾ not for FM/CSA

⁽²⁾ 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)	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 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		

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 (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)
pos. 5	Power supply	
•	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 ⁽¹⁾ Motor Speed: F=1/min X= 5/min
•	M / Y	230V AC/115V AC/24V DC multivoltage Motor Speed: M=1/min Y= 5/min
pos. 6	Process connection	
•	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	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
pos. 8	Length of extension "L"	
•	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	Measuring vane	
•	A	boot-shaped ⁽²⁾ 40 x 98mm (1.57 x 3.86") for 1 1/2" socket
•	D	boot-shaped ⁽²⁾ 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

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

L = mm

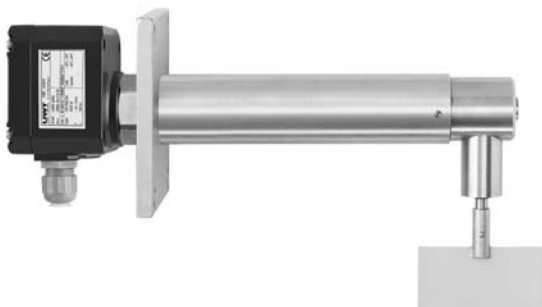
Order code

⁽¹⁾ not for FM/CSA

⁽²⁾ maximum length of socket 40mm

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)	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	
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		

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)	 (220°C (428°F) for RN 3003 ATEX)
pos. 4	Process overpressure	
• •	1 max. 0,8 bar (11,6psi)	.....
• •	2 max. 5 bar (73psi)	.....
• •	3 max. 10 bar (145psi)	.....
pos. 5	Power supply	
• •	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 / 20...230V AC universal voltage ⁽¹⁾	 Motor Speed: F=1/min X= 5/min
• •	M / Y 230V AC/115V AC/24V DC multivoltage	 Motor Speed: M=1/min Y= 5/min
pos. 6	Process connection	
• •	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))
• •	L flange DN100 PN6, EN 1092-1	 (max. 5 bar (73psi))
• •	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 (11.6psi) / 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 lengths	price per 50mm (1.97") or part thereof (starting from 0mm) min. 350 mm (13.8"), max. 600mm (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 ⁽²⁾ 40 x 98mm (1.57 x 3.86")	.....
• •	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	.....
• •	S hinged vane 98 x 100mm (3.86 x 3.93") single sided	.....
• •	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

	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⁾ not for FM/CSA

⁽²⁾ maximum length of socket 40mm

RN ..004 Pipe extension horizontal

RN 3004



RN 6004



Housings RN 6004



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)	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	
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		

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) on request
• •	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)
pos. 5	Power supply	
• •	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 ⁽¹⁾ Motor Speed: F=1/min X= 5/min
• •	M / Y	230V AC/115V AC/24V DC multivoltage Motor Speed: M=1/min Y= 5/min
pos. 6	Process connection	
• •	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	Triclamp 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	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 50mm (1.97") or part thereof (starting from 0mm) min. 350 mm (13.8"), max. 600mm (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 10.A,D)
pos. 10	Measuring vane	
• •	A	boot-shaped ⁽²⁾ 40 x 98mm (1.57 x 3.86") for 1 1/2" socket (with pos.9.7 L=10mm
• •	D	boot-shaped ⁽²⁾ 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).....
• •	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

Basic Type

Further options and accessories: see page 20

	E								
--	---	--	--	--	--	--	--	--	--

Position 1 2 3 4 5 6 7 8 9 10

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

Order code

⁽¹⁾ not for FM/CSA

⁽²⁾ 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

Certificate

- 0 CE
- W ATEX Zone 20/21 Dust Ignition Proof (ATEX II 1/2D)
- A IEC-Ex Zone 20/21 Dust Ignition Proof (ta/tb IIIC)

pos. 5

Power supply

- | | | |
|-------|---|-------------------------------|
| 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 |
| M / Y | 230V AC/115V AC/24V DC multivoltage | Motor Speed: M=1/min Y= 5/min |

pos. 6

Process connection

- A thread G 1½ inch, DIN 228
- F thread NPT 1½ inch, 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

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

← **Order code**

Options

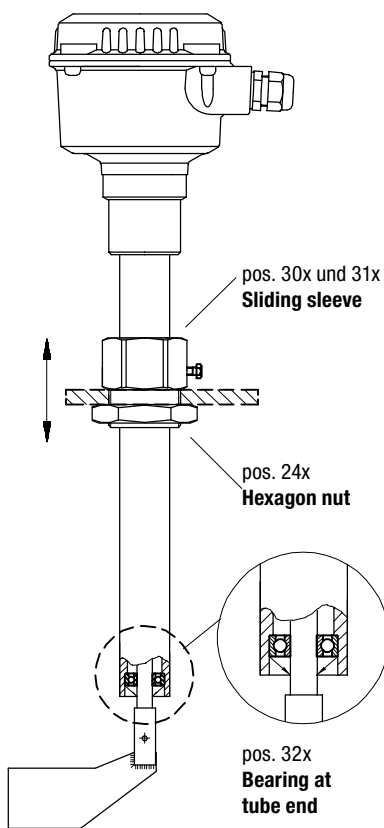
RN 3001	RN 6001	RN 3002	RN 6002	RN 3002-rope	RN 6002-rope	RN 3003	RN 6003	RN 3004	RN 6004	RN 3005	
•	•	•	•	•	•			•	•	•	Pos. 15a
•	•	•	•	•	•			•	•	•	Pos. 15b
•	•	•	•	•	•			•	•		Pos. 15c
1		1		1		1		1		1	Pos. 16a
2	2	2	2	2	2	2	2	2	2	2	pos. 17a
3	3	3	3	3	3	3	3	3	3	3	pos. 17b
											pos. 18x
4	4	4	4	4	4			4	4	•	Stainless steel ball bearing
						•	•				for RN ..001/ RN ..002/ RN ..004/ RN ..005
											for RN ..003
5	5	5	5	5	5	5	5	5	5	5	pos. 21x
											Weather protection cover
											(for Ex, only approved for Zone 2 or 22 or Div. 2)
											Mounting set for flange mounting

Options

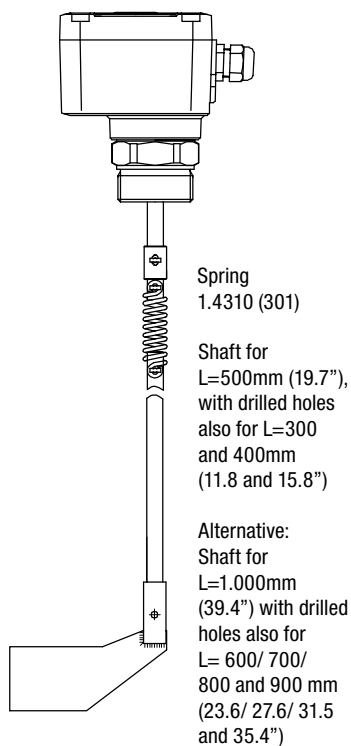
[illegible]

- 1 Available for certificated 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).
- 2 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.
- 3 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.
- 4 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.
- 5 Available for all versions except explosionproof / flameproof version (pos.2 R,T,S,U).
- 6 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.
- 7 Available with universal voltage (pos.5 F,X). Consider reduced switching sensitivity (see technical data).
Note: For temperatures down to -20°C (-4°F) the electronic "universal voltage" has "heating of housing" implemented by default (in this case option pos. 26x is not required).
- 8 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 multivoltage (pos.5 M, Y) and 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.
- 9 Available for all versions except explosionproof / flameproof version (pos.2 R,T,S,U) not in combination with weather protection cover (pos 21).
- 10 Available for all versions except flameproof version (pos.2 T,U).
- 11 Available for FM/CSA versions (pos.2 M,N,S) except flameproof version (pos.2 T,U).
- 12 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).
- 13 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.
- 14 Available for CE (pos.2 0). Process connection and material as choosen in pos.6 and 7.
- 15 Available for temperatures up to 250°C. Process connection as choosen in pos.6.
- 16 Available for CE (pos.2 0). Without connection of stranded wires for installation and internal terminals (standard) or according to customer specification.

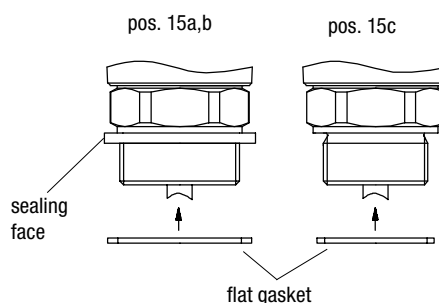
Options



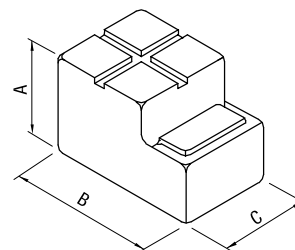
pos. 36
Kit "pendulum shaft"



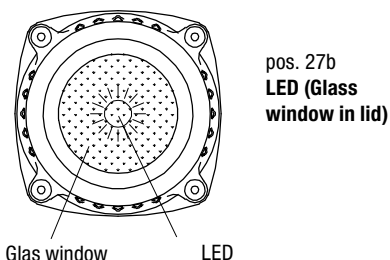
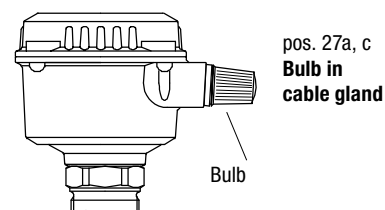
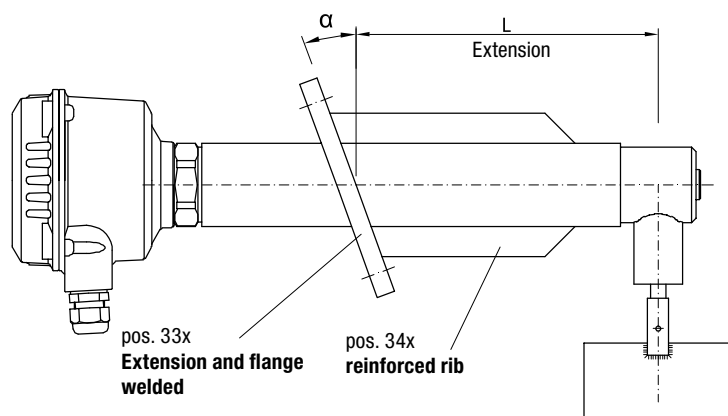
Pos. 15
Flat gasket



pos. 21x
Weather protection cover



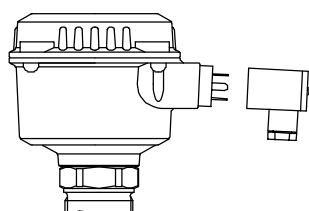
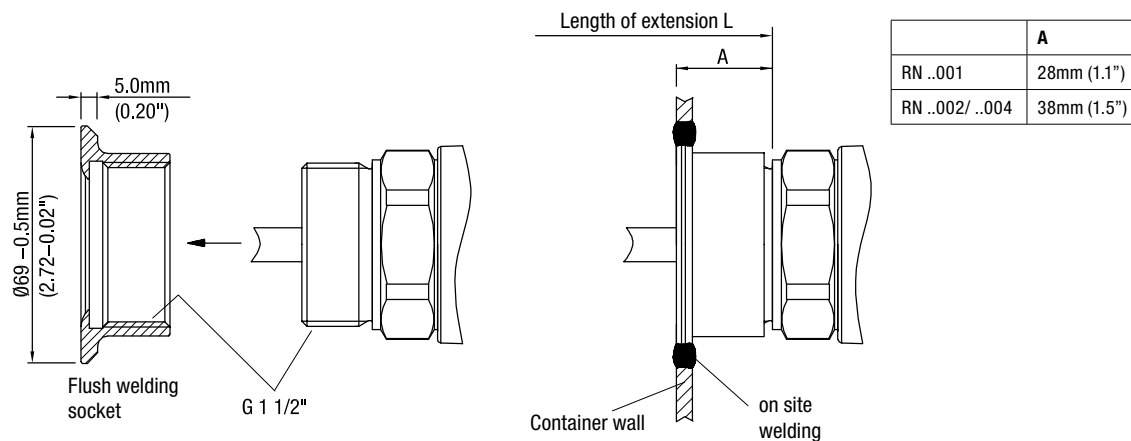
	RN 3000	RN 6000
A	100mm (3.9")	130mm (5.1")
B	165mm (6.5")	200mm (7.9")
C	95mm (3.7")	125mm (4.9")



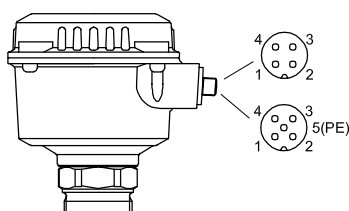
Options

Pos. 29

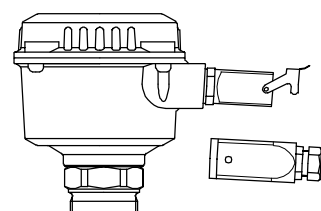
EHDG approval



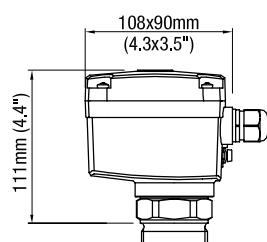
Pos. 35x
Valve connector
 Enclosure plastic
 Protection IP65



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



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

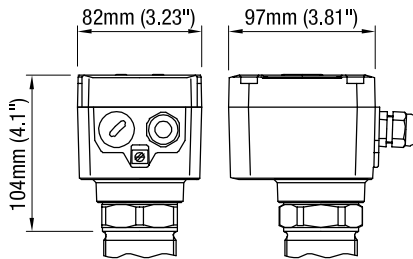


Pos. 16a
 Material of housing
 Plastics PA6

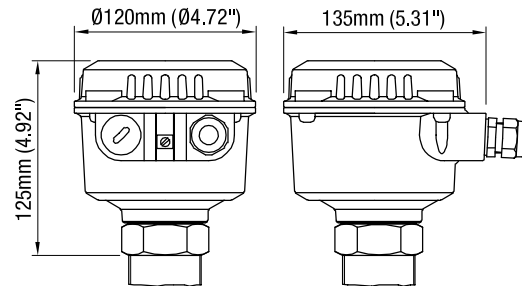
Dimensions

Housing versions

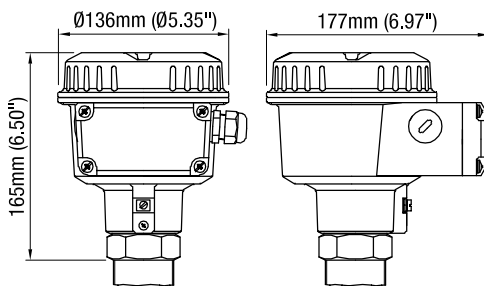
Series RN 3000
 Standard



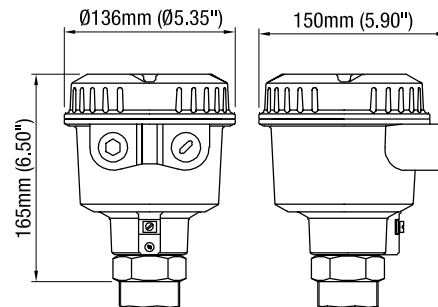
Series RN 6000
 Standard



Series RN 6000
 de explosionproof with increased
 safety terminal box



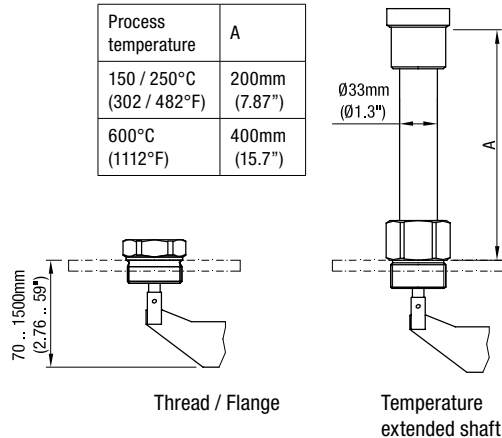
Series RN 6000
 d flameproof /explosionproof



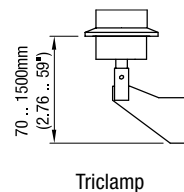
Extensions

RN ..001

Process temperature	A
150 / 250°C (302 / 482°F)	200mm (7.87")
600°C (1112°F)	400mm (15.7")

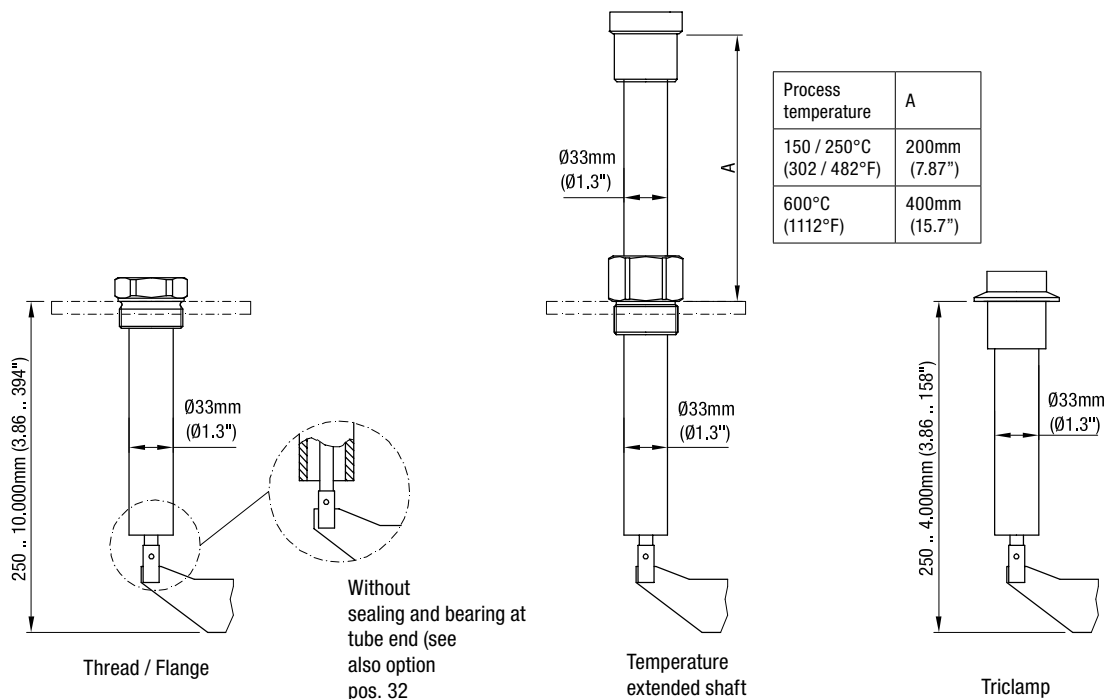


Temperature
 extended shaft

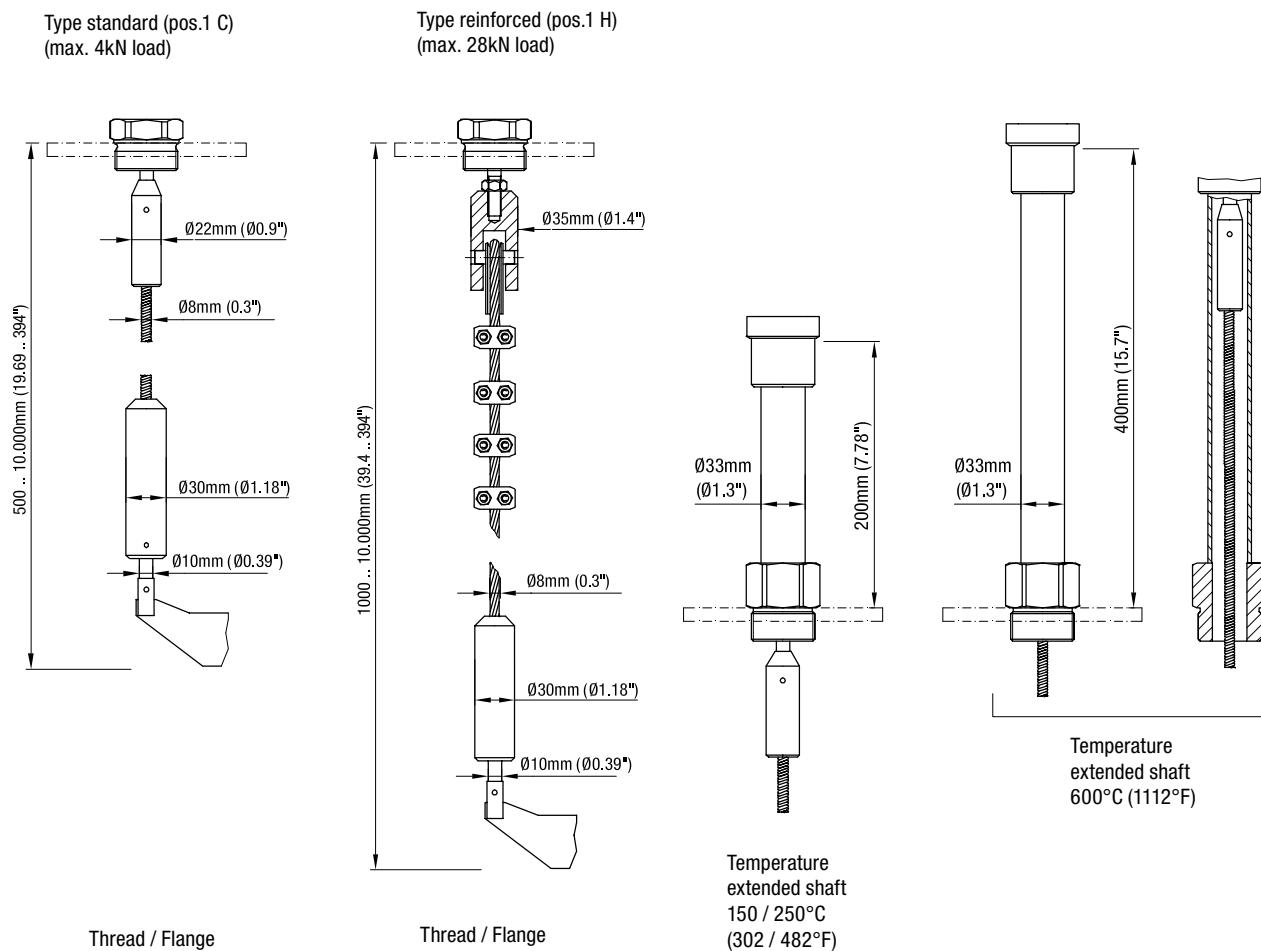


Dimensions

RN ..002

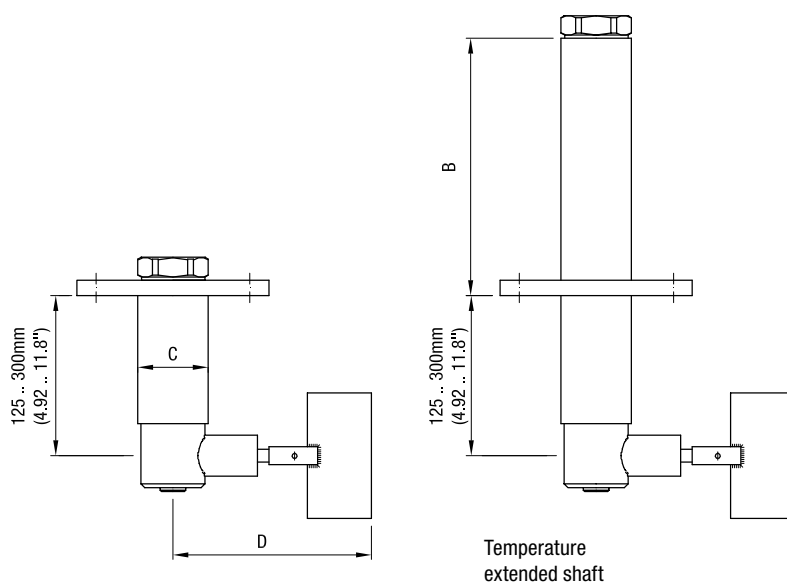


RN ..002 rope



Dimensions

RN ..003

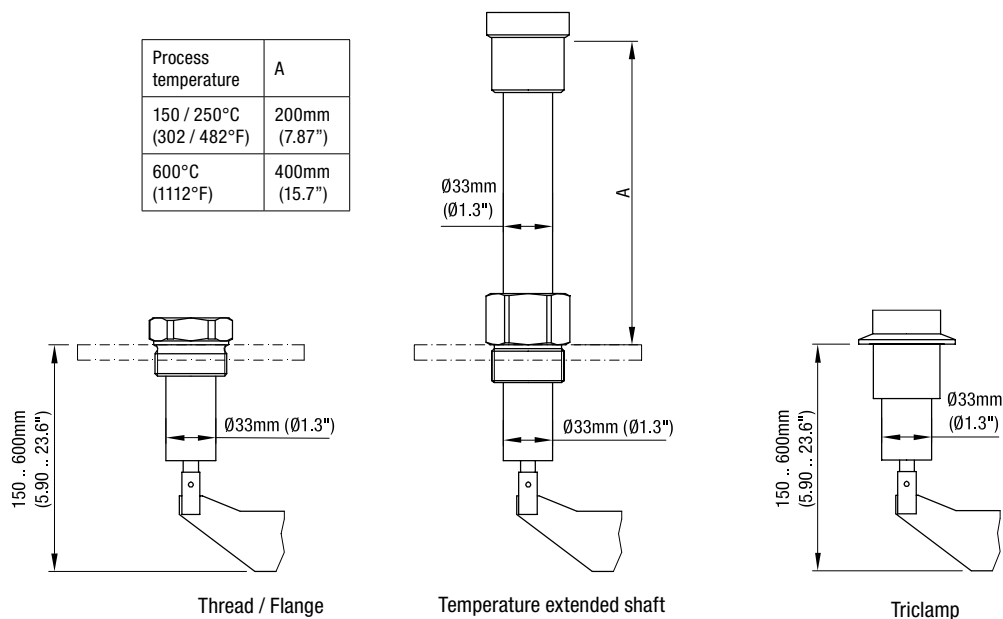


Process temperature	B
80°C (176°F) 0.8 bar (11.6psi)	10mm (0.39")
80°C (176°F) 5/ 10bar (73/ 145psi)	75mm (2.95")
150/ 250°C (302/ 482°F) 0.8/5/10 bar (11.6/73/145psi)	210mm (8.27")

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

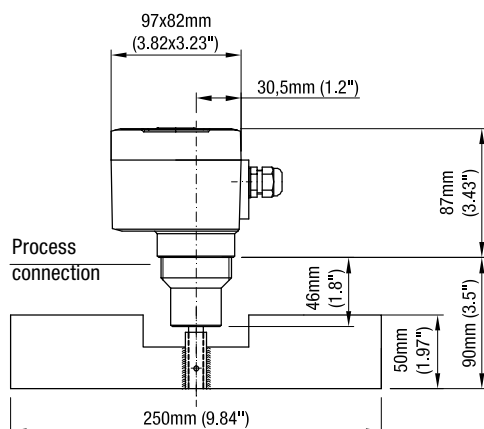
Vane	D
50mm x ..mm (1.97" x ..")	139mm (5.47")
98mm x ..mm (3.86" x ..")	187mm (7.36")

RN ..004



Process temperature	A
150 / 250°C (302 / 482°F)	200mm (7.87")
600°C (1112°F)	400mm (15.7")

RN 3005

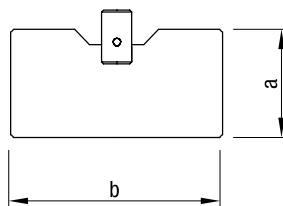


Dimensions

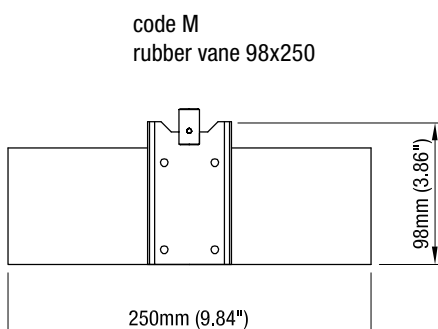
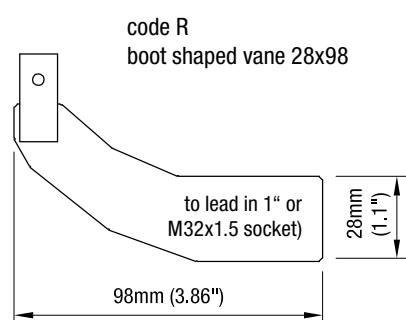
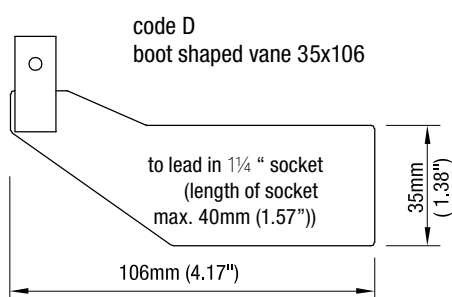
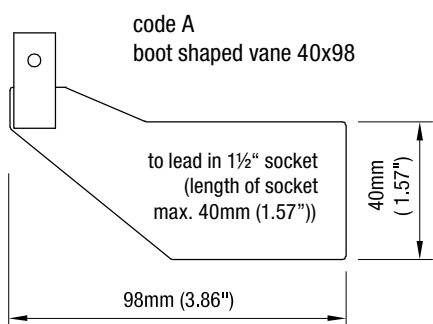
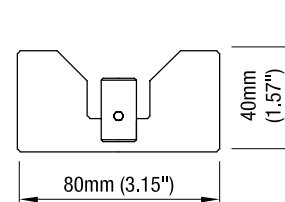
Measuring vanes

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")

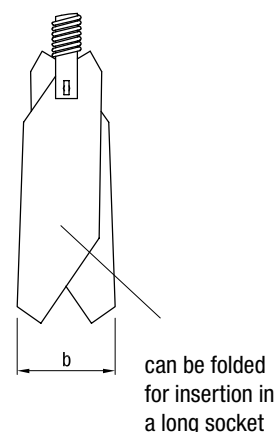
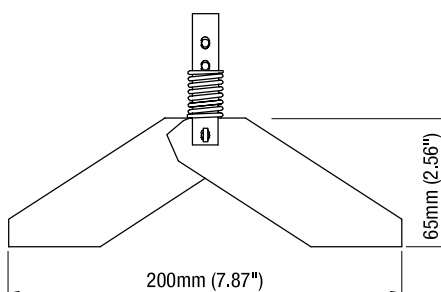
code B,C,E,F,G,I
rectangular vane



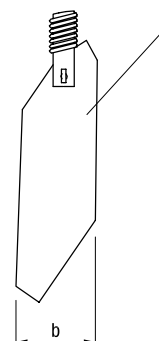
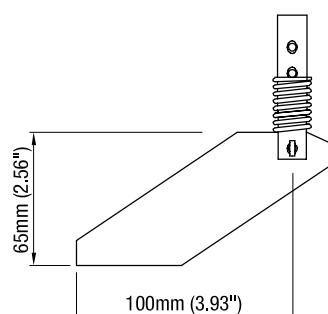
code P
notched 40x80



code K
hinged vane 98x200 double sided



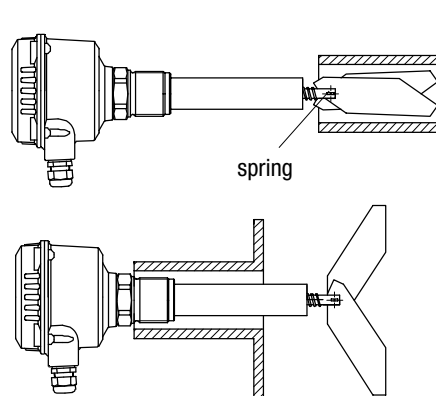
code S
hinged vane 98x100 single sided



socket	b*
1½" / 1¼"	37mm (1.46")
1" / M32x1.5	28mm (1.1")

*delivery according to selected thread size

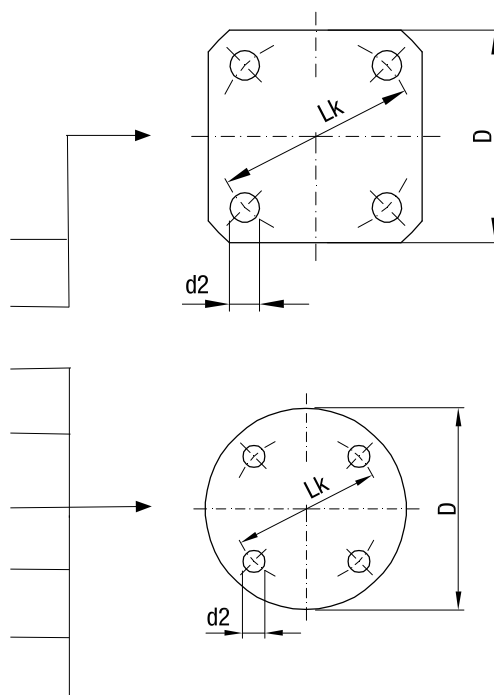
Insertion of the hinged vane through a long socket



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

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

Housing

Standard
Standard
de
d
Standard
de
d
Standard
Standard
de
d

Electrical installation Series RN 3000

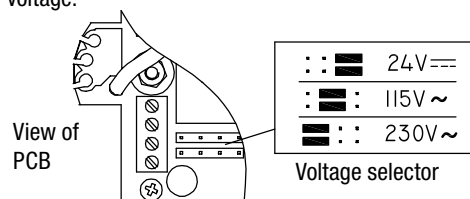
Version:

- AC
- DC
- Universal voltage
- Multivoltage

Power supply:

- **AC version:**
24V or 48V or 115V or 230V 50/60Hz max. 4VA
All voltages $\pm 15\%$ ⁽¹⁾
Supply voltage as selected.
External fuse (power supply): max 10A
- **DC version:**
24V DC $\pm 15\%$ ⁽¹⁾ max. 2.5W
External fuse: not required
- **Universal voltage:**
24V DC $\pm 15\%$ ⁽¹⁾ max. 4W
22 .. 230V 50/60Hz $\pm 10\%$ ⁽¹⁾ max. 10VA
External fuse (power supply): not required
- **Multivoltage:**
24V DC max. 2.5W or
115V 50/60Hz max. 4VA or
230V 50Hz max. 6VA
All voltages $\pm 15\%$ ⁽¹⁾
External fuse (power supply): not required

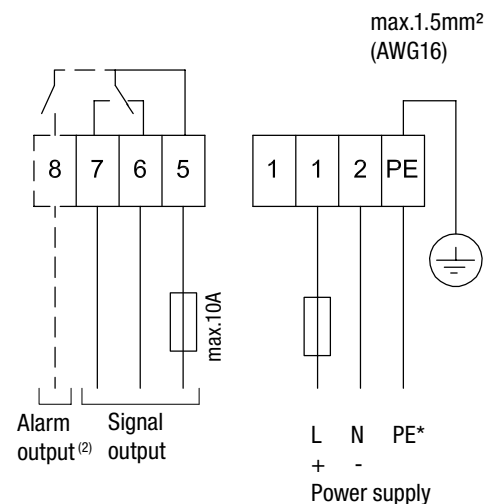
Set the voltage-selector on the PCB to the desired voltage.



⁽¹⁾ including $\pm 10\%$ of EN 61010

Signal and alarm output:

Micro switch (with version Universal voltage: relay)
SPDT contact
max. 250V AC, 2A, 500VA ($\cos \varphi = 1$)
max. 300V DC, 2A, 60W



⁽²⁾ With option
Rotation control

Version:

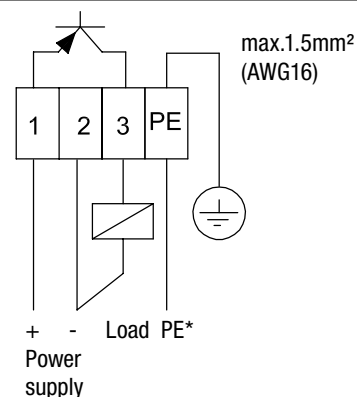
- PNP

Power supply:

24V DC $\pm 15\%$ ⁽¹⁾
⁽¹⁾ 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
- Multivoltage

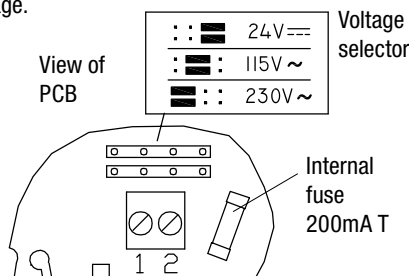
Power supply:

- **AC version:**
24V or 48V or 115V or 230V 50/60Hz max. 5VA
All voltages $\pm 15\%$ ⁽¹⁾
Supply voltage as selected.
External fuse (power supply): max 10A

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

- **Multivoltage:**
24V DC max. 2.5W or
115V 50/60Hz max. 4VA or
230V 50Hz max. 6VA
All voltages $\pm 15\%$ ⁽¹⁾
External fuse (power supply): not required

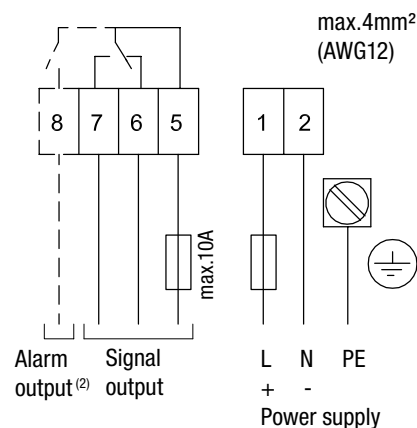
Set the voltage-selector on the PCB to the desired voltage.



⁽¹⁾ including $\pm 10\%$ of EN 61010

Signal and alarm output:

Micro switch SPDT contact
max. 250V AC, 5A, non inductive
max. 30V DC, 4A, non inductive



⁽²⁾ With option
Rotation control

Version:

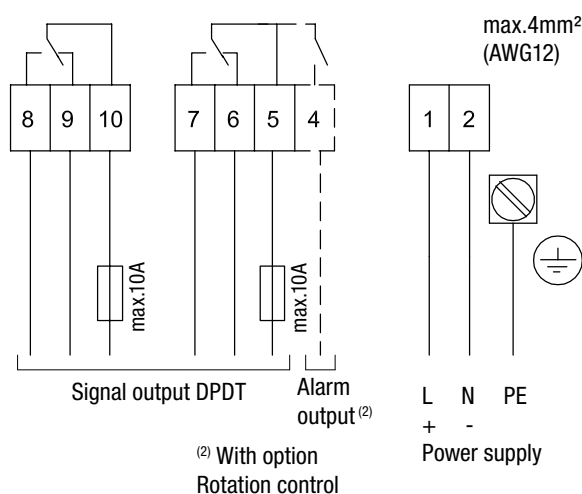
- Universal voltage

Power supply:

- 24V DC $\pm 15\%$ ⁽¹⁾ max. 4W
22 .. 230V 50/60Hz $\pm 10\%$ ⁽¹⁾ max. 10VA
⁽¹⁾ 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 (power supply): not required

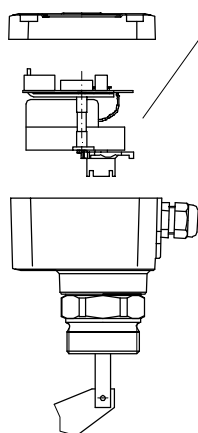


⁽²⁾ With option
Rotation control

* 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

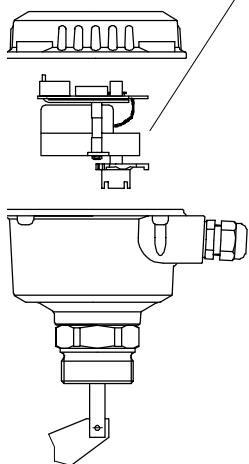


Series RN 3000 Motor / PCB

Order code				Voltage	Motor Speed	Spare part Articel 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
A	-	x	-		1/min	gm414000
S	-	-	-		5/min	gm413000
S	x	-	-		5/min	gm413003
S	-	x	-		5/min	gm415000
B	-	-	-	115V AC	1/min	gm412005
B	x	-	-		1/min	gm412008
B	-	x	-		1/min	gm414005
T	-	-	-		5/min	gm413005
T	x	-	-		5/min	gm413008
T	-	x	-		5/min	gm415005
C	-	-	-	48V AC	1/min	gm412015
C	x	-	-		1/min	gm412018
C	-	x	-		1/min	gm414015
U	-	-	-		5/min	gm413015
U	x	-	-		5/min	gm413018
U	-	x	-		5/min	gm415015
D	-	-	-	24V AC	1/min	gm412010
D	x	-	-		1/min	gm412013
D	-	x	-		1/min	gm414010
V	-	-	-		5/min	gm413010
V	x	-	-		5/min	gm413013
V	-	x	-		5/min	gm415010
E	-	-	-	24V DC	1/min	gm412020
E	-	x	-		1/min	gm414020
W	-	-	-		5/min	gm413020
W	-	x	-		5/min	gm415020
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
Measuring vane (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	Pos.10 D	P27	fg400508
Boot shaped 28 x 98mm	Pos.10 R	P27	fg400603
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	Pos.10 F	P27	fg400635
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")	Pos.10 K	P27	fg400081
Hinged vane 98 x 200mm double sided (28mm for G 1" and M32)	Pos.10 K	P27	fg400085
Hinged vane 98 x 100mm single sided (37mm for G 1 1/2" and G 1 1/4")	Pos.10 S	P27	fg400084
Hinged vane 98 x 100mm single sided (28mm for G 1" and M32)	Pos.10 S	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
---------------------------------	-------------------------	------------------------------

Weather protection cover

RN 3000 (for lower housing, dimension H = 66mm)	Pos.21 x	P22	zu300230
RN 3000 (for higher housing, dimension H = 70mm)	Pos.21 x	P22	zu300232
RN 6000 standard housing	Pos.21 x	P22	zu300240

