

NR 4000 Accessories

Material for mounting

Mounting bracket ⁽¹⁾

Material 1.4404 (316L). Required counter nut G 1" made of plastics PP is included in sensor NR 4100

Incl.: 4 screws ø6 x 40 mm, washers, dowel ø8 x 40 mm

Suitable for installation with Ex-applications ⁽³⁾

zu400454	Mounting bracket, vertically rotatable	L=80mm (3.2")
zu400455	Mounting bracket, vertically rotatable	L=200mm (7.9")

Mounting plate rectangular ⁽¹⁾

Process pressure max. 0,1 bar (1.45 psi).

Required counter nut G 1" made of plastics PP is included in sensor NR 4100

Incl. flat sealing between mounting plate and G 1" process connection

Not intendend for installation with Ex-applications

	Mounting plate rectangular:	Material:	Fitting screws for counter flange (not included):
zu400461	Fitting to DN80 / 3"	1.4404 (316L)	M16x60 (4 pieces)
zu400462	Fitting to DN100 / 4"	1.4404 (316L)	M16x60 (4 pieces)
zu400463	Fitting to DN150 / 6"	1.4404 (316L)	M20x80 (4 pieces)

Mounting flange rectangular ^{(1) (2)}

Temperature range -40 ... 80 °C (-40 ... 176 °F), process pressure max. 0,1 bar (1.45 psi)

Incl. flat sealing between mounting plate and G 1" process connection

Not intendend for installation with Ex-applications

	Mounting flange rectangular:	Material:	Fitting screws for counter flange (not included):
zu400465	Fitting to DN80 / 3"	PP	M16x60 (4 pieces)
zu400466	Fitting to DN100 / 4"	PP	M16x60 (4 pieces)
zu400467	Fitting to DN150 / 6"	PP	M20x80 (4 pieces)

Aiming flange

For aiming of the antenna in solids

Temperature range -40 ... 80 °C (-40 ... 176 °F), process pressure max. 0,1 bar (1.45 psi)

Not intendend for installation with Ex-applications

	Aiming flange:	Female thread:	Material:	Fitting screws for counter flange (not included):
zu400470	Fitting to DN80 / 3"	G 1"	PP GF30	M16x60 (4 pieces)
zu400471	Fitting to DN100 / 4"	G 1"	PP GF30	M16x60 (4 pieces)
zu400472	Fitting to DN80 / 3"	NPT 1"	PP GF30	M16x60 (4 pieces)
zu400473	Fitting to DN100 / 4"	NPT 1"	PP GF30	M16x60 (4 pieces)

Standard flange ^{(1) (2)}

DN flanges: type A (flat faced) , ASME flanges: raised face

Suitable for installation with Ex-applications ⁽³⁾

	Flange:	Material:	Fitting screws for counter flange (not included):
zu400480	DN80 PN6, EN 1092-1	1.4541 (321)	M16x60 (4 pieces)
zu400481	DN80 PN6, EN 1092-1	1.4404 (316L)	M16x60 (4 pieces)
zu400482	DN80 PN16, EN 1092-1	1.4541 (321)	M16x60 (8 pieces)
zu400483	DN80 PN16, EN 1092-1	1.4404 (316L)	M16x60 (8 pieces)
zu400484	DN100 PN6, EN 1092-1	1.4541 (321)	M16x60 (4 pieces)
zu400485	DN100 PN6, EN 1092-1	1.4404 (316L)	M16x60 (4 pieces)
zu400486	DN100 PN16, EN 1092-1	1.4541 (321)	M16x60 (8 pieces)
zu400487	DN100 PN16, EN 1092-1	1.4404 (316L)	M16x60 (8 pieces)
zu400488	DN150 PN6, EN 1092-1	1.4541 (321)	M16x60 (8 pieces)
zu400489	DN150 PN6, EN 1092-1	1.4404 (316L)	M16x60 (8 pieces)
zu400490	DN150 PN16, EN 1092-1	1.4541 (321)	M20x80 (8 pieces)
zu400491	DN150 PN16, EN 1092-1	1.4404 (316L)	M20x80 (8 pieces)
zu400494	3" 150lbs ASME B16.5	1.4541 (321)	M16x100 (4 pieces)
zu400495	3" 150lbs ASME B16.5	1.4404 (316L)	M16x100 (4 pieces)
zu400496	4" 150lbs ASME B16.5	1.4541 (321)	M16x100 (8 pieces)
zu400497	4" 150lbs ASME B16.5	1.4404 (316L)	M16x100 (8 pieces)
zu400498	6" 150lbs ASME B16.5	1.4541 (321)	M20x80 (8 pieces)
zu400499	6" 150lbs ASME B16.5	1.4404 (316L)	M20x80 (8 pieces)

NR 4000 Accessories

Screws for flange fixing

Suitable for installation with Ex-applications ⁽³⁾

		Screws:	Nuts:	Washers:	Material:
zu107002	M12 x 60	4 pieces	4 pieces	8 pieces	Stainless steel
zu107000	M16 x 60	4 pieces	4 pieces	8 pieces	Stainless steel
zu107010	M16 x 60	8 pieces	8 pieces	16 pieces	Stainless steel
zu107011	M16 x 100	4 pieces	4 pieces	8 pieces	Stainless steel
zu107012	M16 x 100	8 pieces	8 pieces	16 pieces	Stainless steel
zu107020	M20 x 60	8 pieces	8 pieces	16 pieces	Stainless steel
zu107018	M20 x 80	4 pieces	4 pieces	8 pieces	Stainless steel
zu107019	M20 x 80	8 pieces	8 pieces	16 pieces	Stainless steel

Flange sealings

Fitting to mounting plates, mounting flanges, standard flanges EN 1092-1 (PN6, PN16), ASME B16.5 (150 lbs)

Temperature range -40 ... 200 °C (-40 ... 392 °F)

Not intended for installation with Ex-applications

	Flange sealing:	Material:
di300145	DN80 / 3"	AFM30
di300123	DN80 / 3"	Silicone
di300146	DN100 / 4"	AFM30
di300124	DN100 / 4"	Silicone
di300147	DN150 / 6"	AFM30
di300126	DN150 / 6"	Silicone

⁽¹⁾ Fitting to process connection NR 4100 with thread G 1" DIN ISO 228-1 (Pos.6 D).⁽²⁾ Flanges are delivered with thread G 1". They are threaded on the G 1" process connection of NR 4100.
Sealing between flange and G 1" process connection is done by a flat sealing (included).⁽³⁾ Mounting with Ex applications: The components must be professionally mounted and installed in accordance with the manufacturer specification and the applicable national regulations, e.g. planning and installation in accordance with IEC/EN 60079-14.

Complementary products (from outside companies)

Terminal box / Conduct connector for extension of NR 4100 connection cable

Including 2 cable glands and connecting terminals

Possible manufacturer	Product	Series	Type	Protection method	For mounting in Ex area
Steute	Terminal box	Ex AD	Ex AD 85 e MK4 3xM20	Ex t	Zone 21
			Ex AD 85 i MK4 3xM20	Ex i	Zone 1
Stahl	Terminal box	8102	8102/21-32	Ex t	Zone 21
			8102/22-32	Ex i	Zone 1
Bartec	Terminal box	07-53	07-5311-9014	Ex t	Zone 21
			07-5312-9014	Ex i	Zone 1
Phoenix Contact	Conduct connector	Quickon	1414696	IP66/68	-

Isolated barrier

Connection to NR 4100 with protection method Intrinsically Safe.

Supply 18-30V DC, interface 4-20mA/4-20mA, galvanic isolation

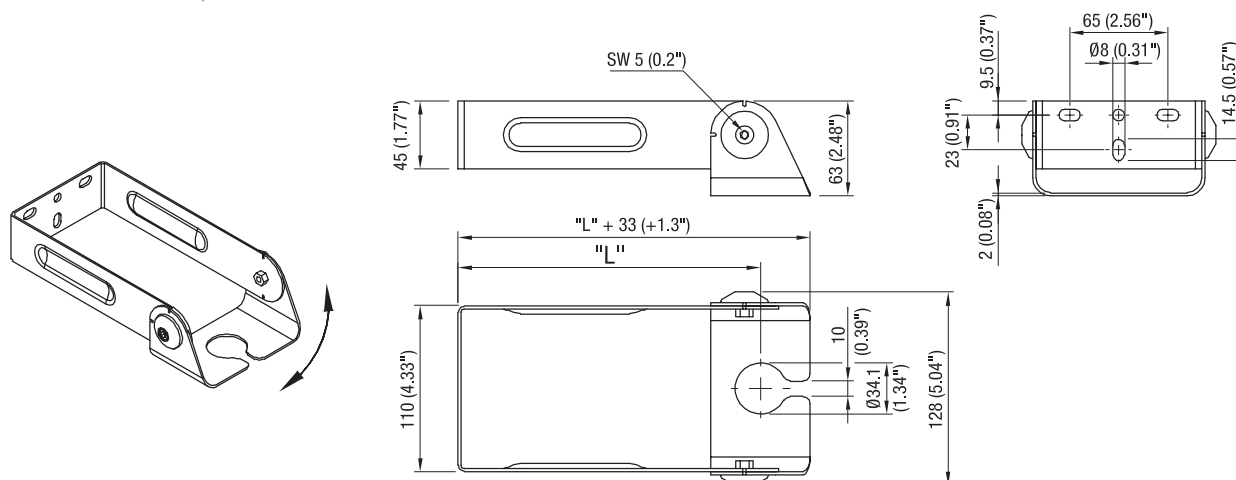
Possible manufacturer	Product / series	Type	Amount of channels	Protection method	Ex ratings for connection NR 4100 (field side)
Pepperl+Fuchs	Isolated barrier, K-System, Transmitter Power Supply	KCD2-STC-Ex1	1	[Ex ia Ga] [Ex ia Da]	U ₀ =25,2 V I ₀ =100 mA P ₀ =630mW
		KFD2-STC5-Ex2	2	[Ex ia Ga] [Ex ia Da]	U ₀ =26,2 V I ₀ =115 mA P ₀ =784mW

NR 4000 Accessories

Mounting bracket

Mounting bracket, vertically rotatable

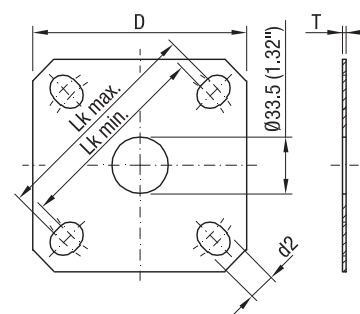
Article number: zu400454, zu400455



Mounting plate

Mounting plate rectangular, 1.4404 (316L), 2 .. 3mm (0.08 .. 0.12")

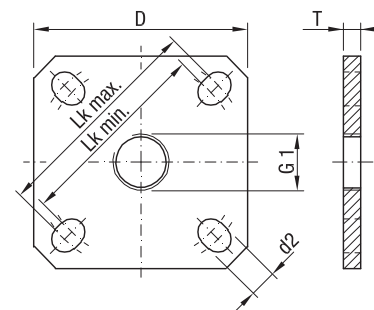
Article-number	d2 mm (Inch)	Lk min. mm (Inch)	Lk max. mm (Inch)	D mm (Inch)	T (thickness) mm (Inch)	Fitting to counter flanges
zu400461	19,1 (0.75)	150,0 (5.90)	160,0 (6.3)	150,0 (5.90)	2 (0.08)	DN80 PN6 EN 1092-1 DN80 PN16 EN 1092-1 3" ASME B16.5 150 lb
zu400462	19,1 (0.75)	170,0 (6.69)	190,5 (7.5)	170,0 (6.69)	2 (0.08)	DN100 PN6 EN 1092-1 DN100 PN16 EN 1092-1 4" ASME B16.5 150 lb
zu400463	21,0 (0.82)	225,0 (8.86)	241,3 (9.5)	215,0 (8.46)	3 (0.12)	DN150 PN6 EN 1092-1 DN150 PN16 EN 1092-1 6" ASME B16.5 150 lb



Mounting flange

Mounting flange rectangular, PP, 10 .. 18mm (0.39 .. 0.71")

Article-number	d2 mm (Inch)	Lk min. mm (Inch)	Lk max. mm (Inch)	D mm (Inch)	T (thickness) mm (Inch)	Fitting to counter flanges
zu400465	19,1 (0.75)	150,0 (5.90)	160,0 (6.3)	150,0 (5.90)	10...12 (0.39...0.47)	DN80 PN6 EN 1092-1 DN80 PN16 EN 1092-1 3" ASME B16.5 150 lb
zu400466	19,1 (0.75)	170,0 (6.69)	190,5 (7.5)	170,0 (6.69)	10...12 (0.39...0.47)	DN100 PN6 EN 1092-1 DN100 PN16 EN 1092-1 4" ASME B16.5 150 lb
zu400467	21,0 (0.82)	225,0 (8.86)	241,3 (9.5)	215,0 (8.46)	15...18 (0.59...0.71)	DN150 PN6 EN 1092-1 DN150 PN16 EN 1092-1 6" ASME B16.5 150 lb



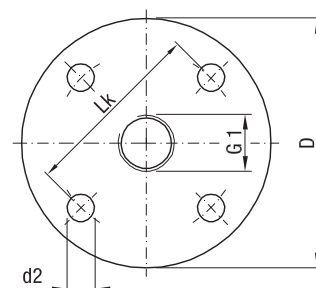
NR 4000 Accessories

Standard flange

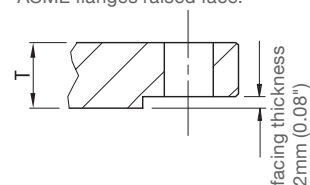
Article-number	Type	Number of holes	d2 mm (Inch)	Lk mm (Inch)	D mm (Inch)	T (thickness) mm (Inch)
zu400480/ -481	DN80 PN6	4	18,0 (0.71)	150,0 (5.91)	190,0 (7.48)	16,0 (0.63)
zu400482/ -483	DN80 PN16	8	18,0 (0.71)	160,0 (6.3)	200,0 (7.87)	20,0 (0.79)
zu400484/ -485	DN100 PN6	4	18,0 (0.71)	170,0 (6.69)	210,0 (8.27)	16,0 (0.63)
zu400486/ -487	DN100 PN16	8	18,0 (0.71)	180,0 (7.09)	220,0 (8.66)	20,0 (0.79)
zu400488/ -489	DN150 PN6	8	18,0 (0.71)	225 (8.85)	265 (10.43)	18,0 (0.71)
zu400490/ -491	DN150 PN16	8	22,0 (0.87)	240,0 (9.45)	285,0 (11.2)	22,0 (0.87)
zu400494/ -495	ASME 3" 150 lbs	4	19,1 (0.75)	152,4 (6.01)	190,5 (7.5)	23,9 (0.94)
zu400496/ -497	ASME 4" 150 lbs	8	19,1 (0.75)	190,5 (7.5)	228,6 (9.0)	23,9 (0.94)
zu400498/ -499	ASME 6" 150 lbs	8	22,2 (0.87)	241,3 (9.5)	279,4 (11.0)	25,4 (1.0)

DN flanges: EN 1092-1 type A, flat faced

ASME flanges: B16.5 raised face



ASME flanges raised face:

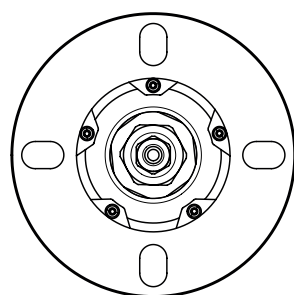
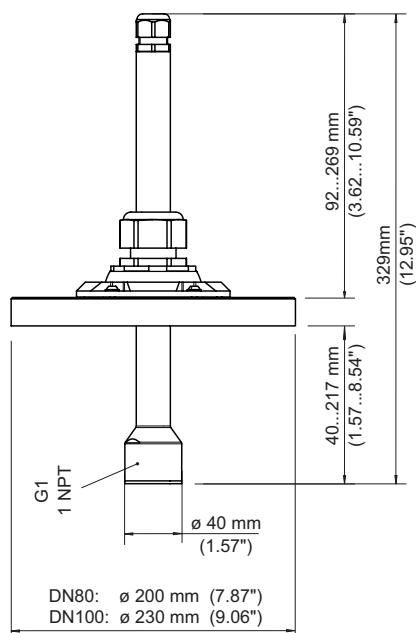


NR 4000 Accessories

Aiming flange

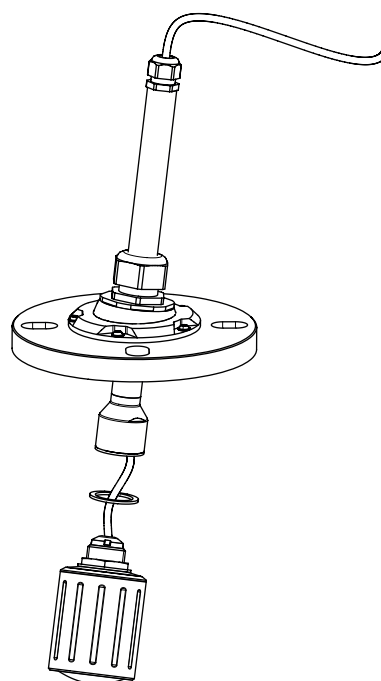
Aiming flange Article-number	Fitting to counter flanges	Female thread to fix NR 4100	Fitting NR 4100
zu400470	DN80 PN6 - PN40 EN 1092-1 3" ASME B16.5 150 lb	G1"	With tread G 1" DIN ISO 228-1 (Pos.6 D)
zu400471	DN100 PN6 - PN16 EN 1092-1 4" ASME B16.5 150 lb	G1"	With tread G 1" DIN ISO 228-1 (Pos.6 D)
zu400472	DN80 PN6 - PN40 EN 1092-1 3" ASME B16.5 150 lb	NPT 1"	With tread NPT 1" ANSI B 1.20.1 (Pos.6 E)
zu400473	DN100 PN6 - PN16 EN 1092-1 4" ASME B16.5 150 lb	NPT 1"	With tread NPT 1" ANSI B 1.20.1 (Pos.6 E)

Aiming flange



The aiming flange allows to continuously adjust an angle from 0° bis 13°. The vertical adjustment varies between 0 to 177mm (7.0").

Mounting



1. Loosen and remove the counter nut delivered with the sensor. The counter nut is no longer required.
2. Thread the enclosed seal (only with G-thread) onto the connecting cable and place the seal on the sensor.
3. Feed the sensor connecting cable completely through the tube of the alignment device.
4. Screw in the sensor (torque: maximum 5 Nm).
5. Tighten the upper cable gland.
6. Place and fix the alignment device on the tank flange. Make sure that the seal is sitting correctly.
7. Set the vertical position of the sensor:
Loosen the lower cable gland, shift the tube and re-tighten the lower cable gland.
8. Set the angle of the sensor:
Loosen the screw, set the angle of the sensor and re-tighten the screws. Always tighten the diagonally opposite screws alternately. This prevents uneven load distribution.