

Bending beam load cell LC Nito PR 79 and mounting kit PR 95

For weighing process vessels and use in belt and platform scales



ⓘ Benefits

- Reliable weighing results
- Welded hermetic seal
- Mounting accessories for a wide range of applications
- Versatile optional weighing electronics
- Design-in support from specialists

The bending beam load cells of the LC Nito series have been specially designed for weighing process vessels and use in belt and platform scales. The mounting kit PR 95 enables high precision vessel weighing.

Verifiable load cells for a variety of industrial applications

- ⓘ The load cells guarantee highly accurate weighing results. **All load cells are verifiable according to OIML and NTEP.**
- ⓘ **The hermetically sealed load cell LC Nito** has a protection class of IP68 / IP69 so it provides highly accurate results even under the harshest ambient conditions.
- ⓘ A comprehensive optional portfolio of **transmitters, indicators and controllers** ensures reliable continuous processing of the measurement signals as desired.
- ⓘ Comprehensive expertise in scale production ensures **high-quality advice** for individual projects.

Technical specifications

Bending beam load cell LC Nito				
Parameter	Description	Abbr.	PR 79 C3MR	Unit
Accuracy level			0.02	% E_{max}
Minimum dead load	Lowest limit of specified measuring range	E_{min}	0	% E_{max}
Maximum capacity	Highest limit of specified measuring range	E_{max}	91, 227, 454, 1134, 1760, 2268, 5099	
Maximum usable load	Upper limit for measurements	E_{lim}	150	% E_{max}
Destructive load	Danger of mechanical destruction	E_d	300	% E_{max}
Minimum LC verification	Minimum load cell scale interval, $v_{min} = E_{max}/Y$	Y	12000	
Deadload output return	Factor for deadload output return after load ($DR = 1/2 * E_{max}/Z$)	Z	3000	
Rated output	Relative output at maximum capacity	C_n	2	mV/V
Tolerance on rated output	Permissible deviation from rated output	d_c	± 0.07	% C_n
Zero output signal	Load cell output signal under unloaded condition	S_{min}	0 ± 1	% C_n
Repeatability error	Max. change in load cell output for repeated loading	ϵ_R	<0.01	% C_n
Creep	Max. change of output signal at E_{max} during 30 min.	d_{cr}	<0.0166	% C_n
Non-linearity ¹⁾	Deviation from best straight line through zero	d_{lin}	<0.0166	% C_n
Hysteresis ¹⁾	Max. difference in LC output between loading and unloading	d_{hy}	<0.0166	% C_n
Temperature effect (TK) on S_{min}	Max. change related to C_n of S_{min} per 10K in B_T	TK_{Smin}	<0.0117	% $C_n/10K$
TK on parameter ¹⁾	Max. change related to C_n of C per 10K in B_T	TK_C	<0.0117	% $C_n/10K$
Input impedance	Between supply terminals	R_{LC}	1100 ± 10	Ω
Output impedance	Between measuring terminals	R_O	1000 ± 1	Ω
Insulation impedance	Between measuring circuit and housing at $U_{DC} = 100 V$	R_{IS}	$> 5,000 \times 10^6$	Ω
Nominal supply voltage range	in compliance with technical data	B_u	≤ 12	V_{DC}
Max. supply voltage	Continuous operation without damage	U_{max}	15	V_{DC}
Nominal ambient temp. range	in compliance with technical data	B_T	-10...+40	$^{\circ}C$
Usable ambient temp. range	Continuous operation without damage	B_{Tu}	-40...+80	$^{\circ}C$
Storage temperature range	Without electrical and mechanical stress	B_{Ti}	-40...+80	$^{\circ}C$
Barometric pressure influence	Influence of barometric pressure on output		<0.003	% C_n/kPa
Nominal deflection	Max. elastic deformation under maximum capacity	S_{nom}	<0.3 (91 kg...1760 kg); <0.5 (2268 kg); <0.6 (5099 kg)	mm
Material	Stainless steel			
Cable length			5	m
IP protection class	According to EN 60529		IP66 / IP67 (91 kg) IP66 / IP68 / IP69 (227 kg...5099 kg)	

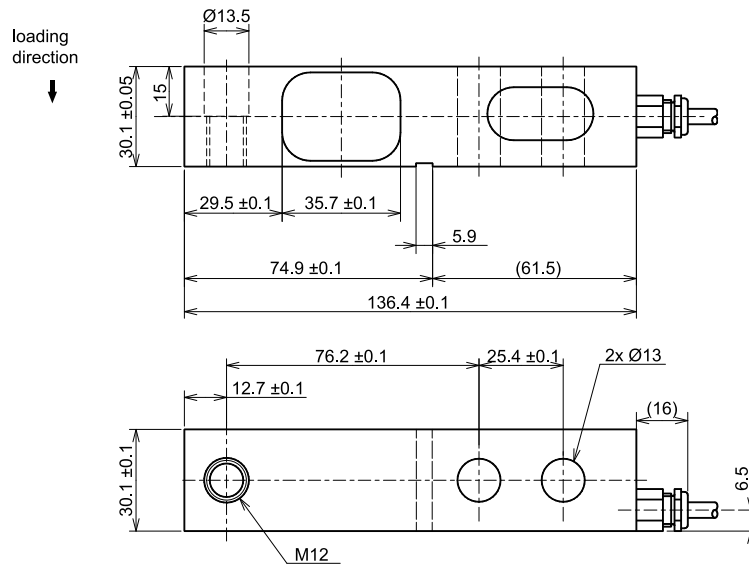
¹⁾Non-linearity (d_{lin}), hysteresis (d_{hy}) and parameter temperature effect (TK_C) are typical values. For OIML R60- and NTEP-approved load cells, the total of these values is within the permitted cumulative error limits.

Accuracy classes and minimum scale interval, v_{min}

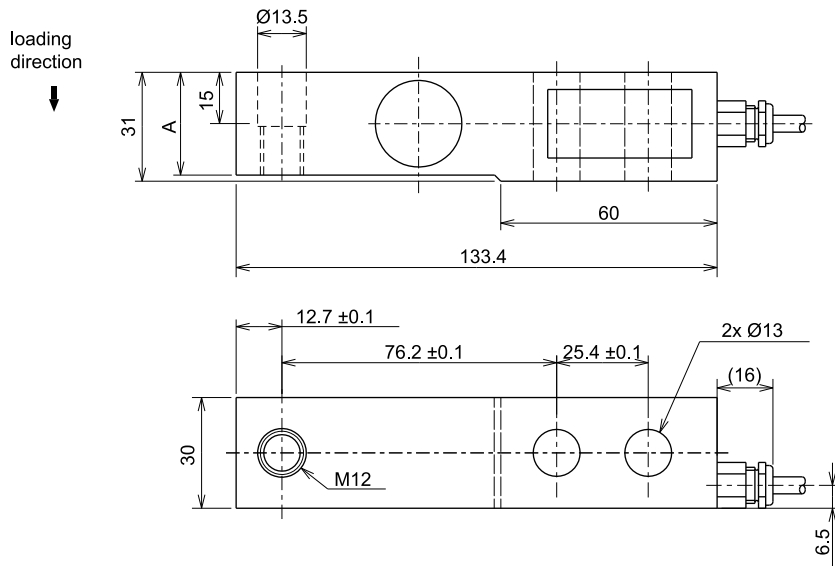
Maximum capacity	Divisions n_{max}	Minimum LC verification, v_{min}							Unit
		91 kg	227 kg	454 kg	1134 kg	1760 kg	2268 kg	5099 kg	
OIML	3000	0.008	0.019	0.038	0.095	0.147	0.189	0.425	kg
NTEP Class III Single/Multiple	5000	0.008	0.019	0.038	0.095	0.147	0.189	0.425	kg
NTEP Class III Multiple	10000	0.002	0.006	0.013	0.032	0.049	0.063	0.142	kg

Technical diagrams

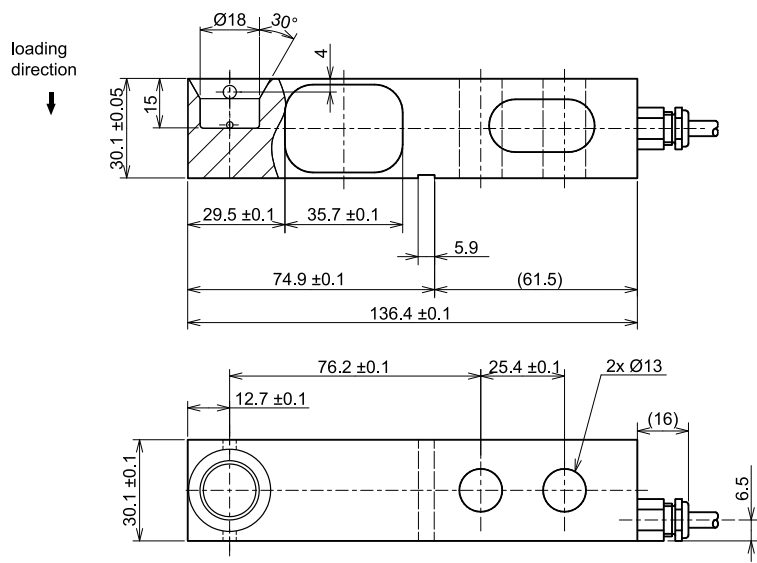
Bending beam load cell LC Nito



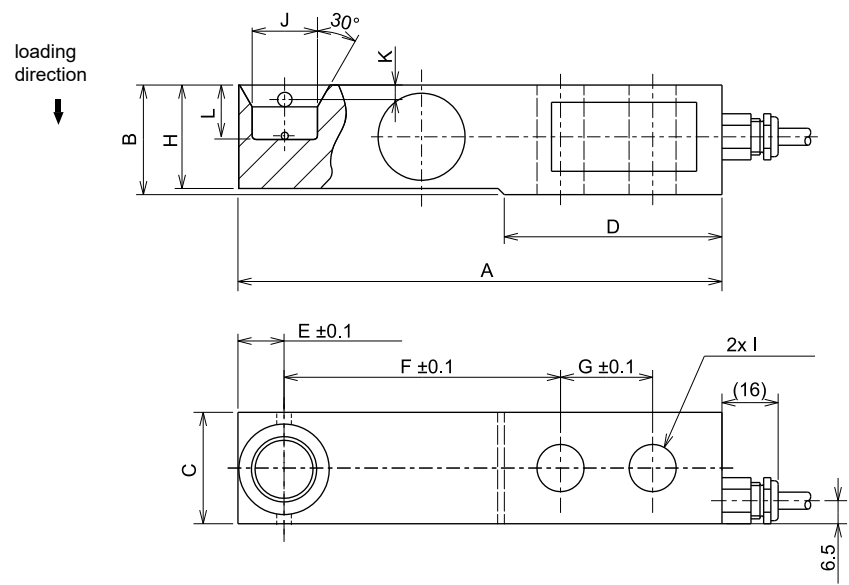
PR 79/91 kg



PR 79/227 kg...2268 kg



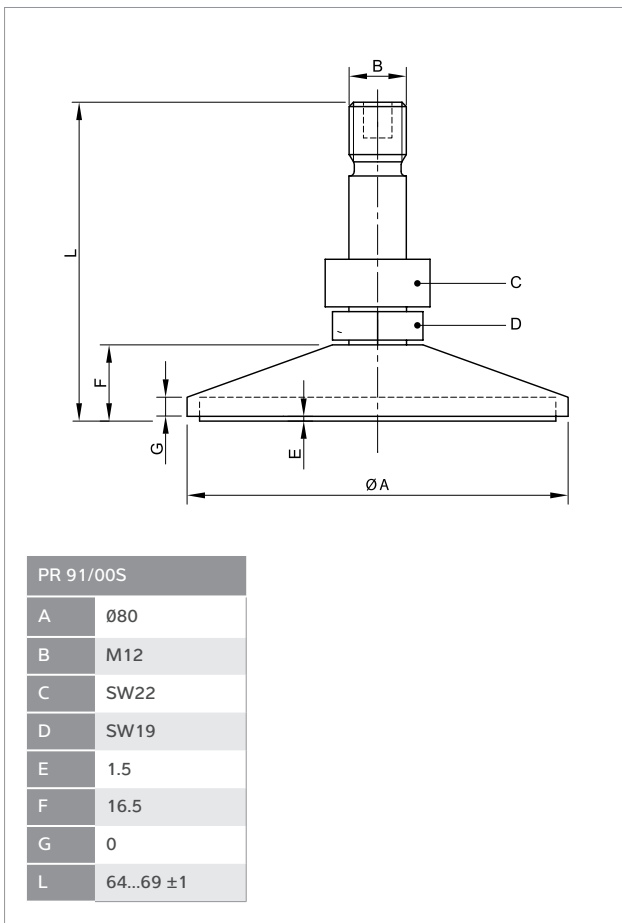
PR 79T/91 kg



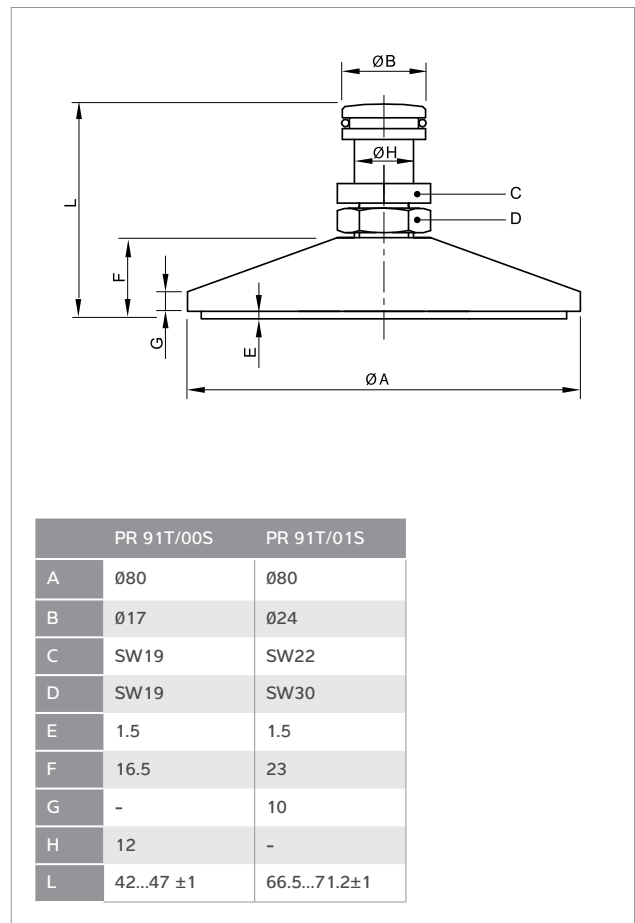
Maximum capacity	A	B	C	D	E	F	G	H	I	J	K	L
227 kg, 454 kg	133.4	31	30	60	12.7	76.2	25.4	28.8	Ø13	Ø18	4	15
1134 kg	133.4	31	30	60	12.7	76.2	25.4	28.5	Ø13	Ø18	4	15
1760 kg, 2268 kg	133.4	31	30	60	12.7	76.2	25.4	30.5	Ø13	Ø18	4	15
5099 kg	190	49	43	93	21	105	40	41	Ø21	Ø25	8	20.5

PR 79T/227 kg...5099 kg

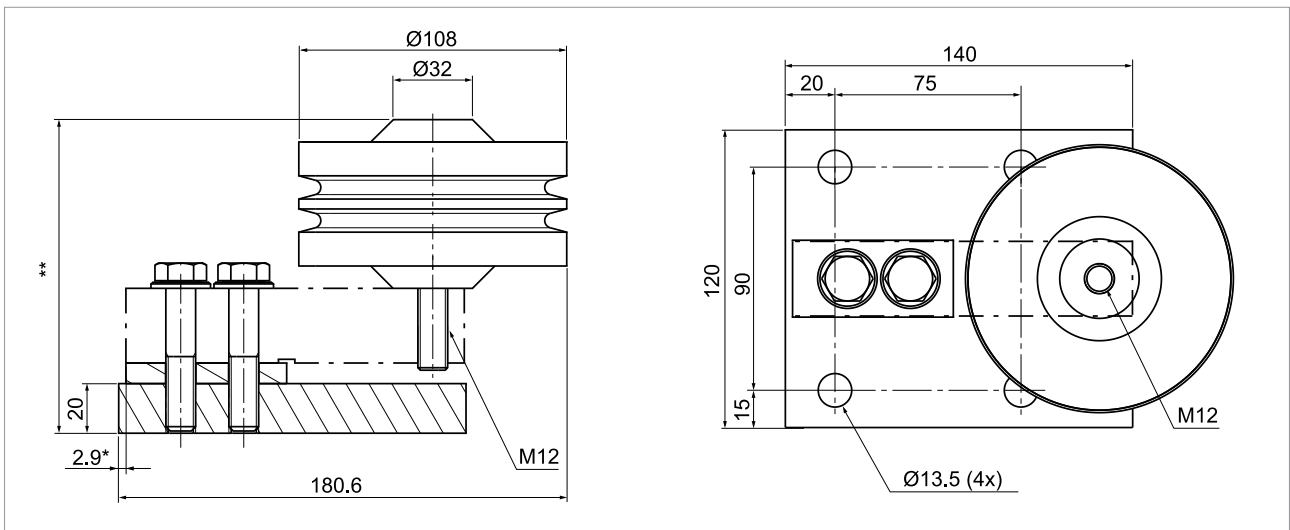
Load cell accessories Bending beam load cell LC Nito (PR 79)



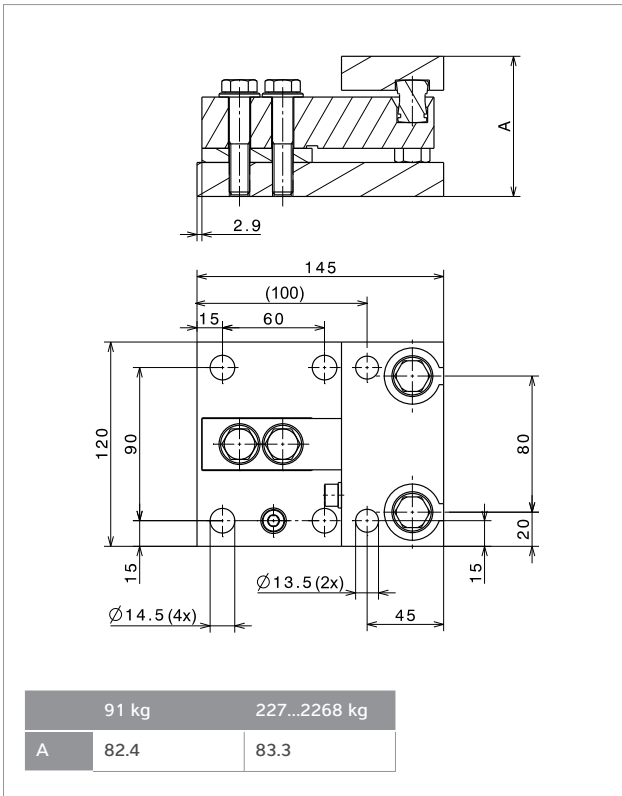
PR 91/00S



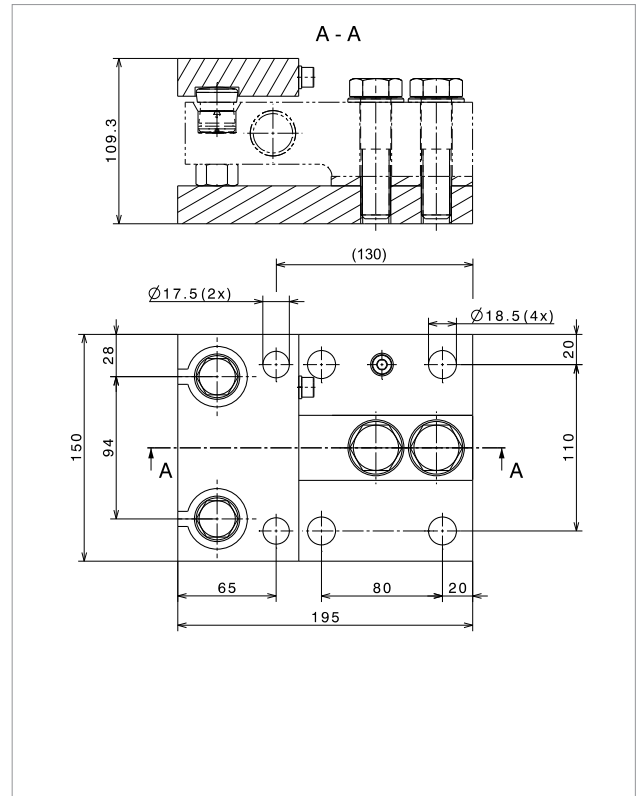
PR 91T/00S and PR 91T/01S



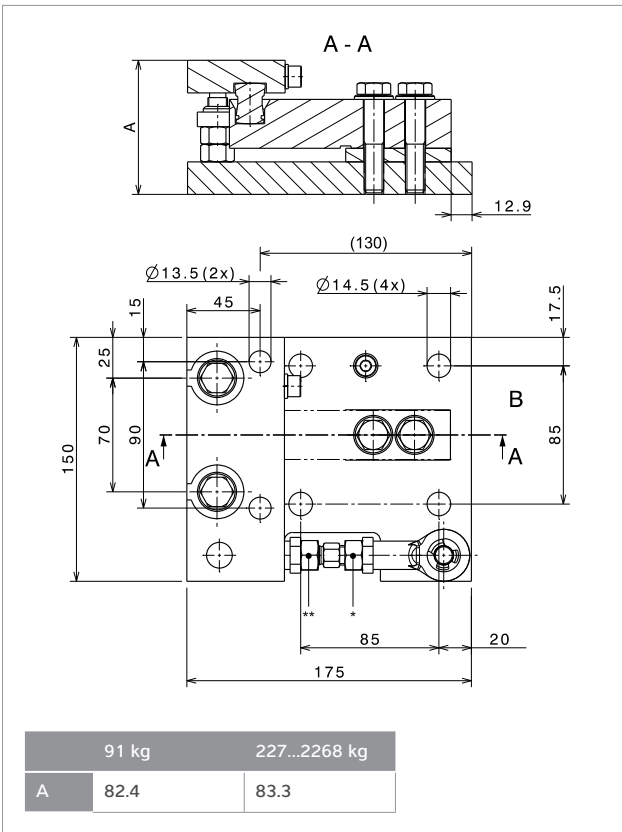
PR 92/00N



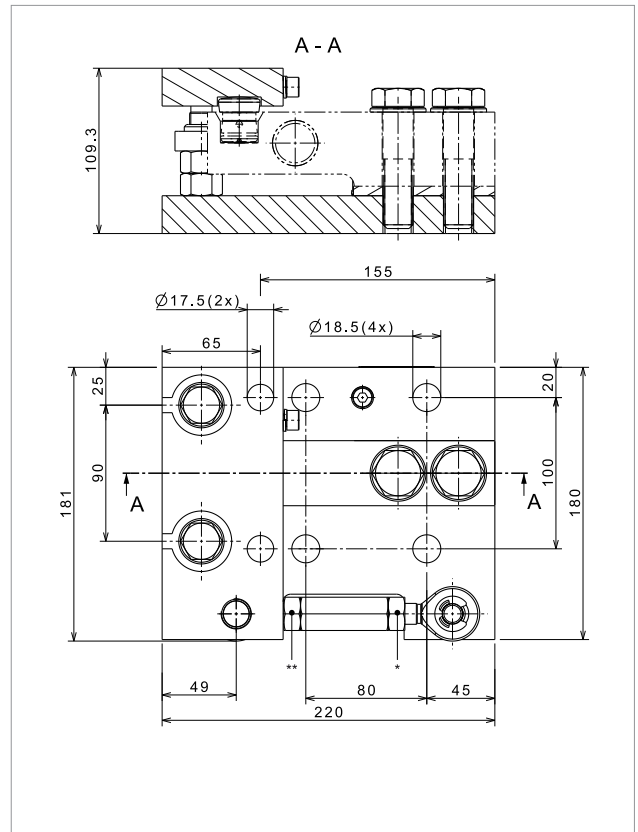
PR 95T/00S



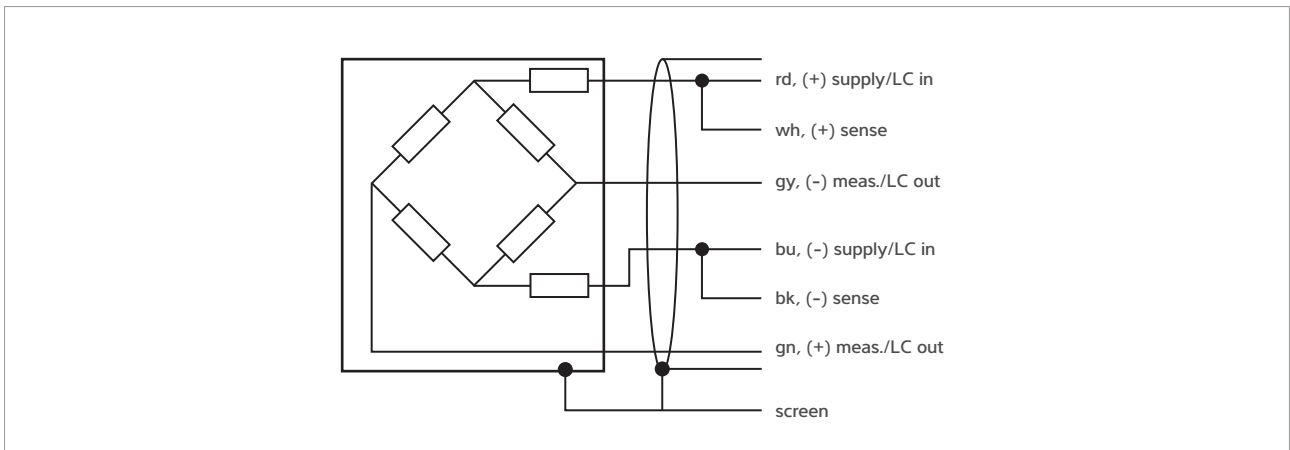
PR 95T/01S



PR 95T/10S



PR 95T/11S



Circuit diagram

Ex approval

Scope of validity:

Bending beam load cell LC Nito PR 79



Explosion protection

Certificates Bending beam load cell LC Nito PR 79			
Zone	Marking	Certificate number	For
0	II 1G Ex ia IIC T6/T4 Ga	BVS 21 ATEX E 023 X IECEX BVS 21.0024X	Only PR 7x/xx E
20	II 1D Ex ia IIIC T ₂₀₀ 165°C Da		
2	II 3G Ex ec IIC T6/T4 Gc		All PR 7x without E
21	II 2D Ex tb IIIC T110°C Db		

Ordering information

Bending beam load cell LC Nito (PR 79)	
Type	Order number
PR 79/91 kg C3MR	9409 279 07091
PR 79/227 kg C3MR	9409 279 07122
PR 79/454 kg C3MR	9409 279 07145
PR 79/1134 kg C3MR	9409 279 07211
PR 79/1760 kg C3MR	9409 279 07217
PR 79/2268 kg C3MR	9409 279 07222
PR 79T/91 kg C3MR	9409 279 17091
PR 79T/227 kg C3MR	9409 279 17122
PR 79T/454 kg C3MR	9409 279 17145
PR 79T/1134 kg C3MR	9409 279 17211
PR 79T/1760 kg C3MR	9409 279 17217
PR 79T/2268 kg C3MR	9409 279 17222
PR 79T/5099 kg C3MR	9409 279 17250

All load cells C3MR including NTEP Class III 5000 S/M and NTEP Class IIIL 10000 M.

Bending beam load cell LC Nito (PR 79) EX

Type	Order number
PR 79/91 kg C3MRE	9409 679 07091
PR 79/227 kg C3MRE	9409 679 07122
PR 79/454 kg C3MRE	9409 679 07145
PR 79/1134 kg C3MRE	9409 679 07211
PR 79/1760 kg C3MRE	9409 679 07217
PR 79/2268 kg C3MRE	9409 679 07222
PR 79T/91 kg C3MRE	9409 679 17091
PR 79T/227 kg C3MRE	9409 679 17122
PR 79T/454 kg C3MRE	9409 679 17145
PR 79T/1134 kg C3MRE	9409 679 17211
PR 79T/1760 kg C3MRE	9409 679 17217
PR 79T/2268 kg C3MRE	9409 679 17222
PR 79T/5099 kg C3MRE	9409 679 17250

All load cells C3MR including NTEP Class III 5000 S/M and NTEP Class III L 10000 M.

Load cell accessories Bending beam load cell LC Nito (PR 79)

Type	Description	Order number
PR 91/00S	Platform base for PR 79 to 2268 kg (M12), stainless	9405 300 91002
PR 91/01S	Platform base for PR 79 5099 kg (M20), stainless	9405 300 91012
PR 91T/00S	Platform base for PR 79T to 2268 kg (M12), stainless	9405 300 91004
PR 91T/01S	Platform base for PR 79T 5099 kg (M20), stainless	9405 300 91014
PR 92/00N	Mounting kit with elastomeric bearing for PR 79 to 2268 kg	9405 300 92001
PR 95T/00S	Maxi FLEX mounting kit for PR 79T to 2268 kg, stainless	9405 300 95004
PR 95T/01S	Maxi FLEX mounting kit for PR 79T to 5099 kg, stainless	9405 300 95014
PR 95T/10S	Maxi FLEXLOCK mounting kit for PR 79T to 2268 kg, stainless	9405 300 95104
PR 95T/11S	Maxi FLEXLOCK mounting kit for PR 79T 5099 kg, stainless	9405 300 95114
PR 98/00S	Spacer for PR 79 and PR 79T to 2268 kg	9405 300 98002
PR 98/01S	Spacer for PR 79 and PR 79T to 5099 kg	9405 300 98012

The products and solutions presented in this data sheet make major contributions in the following sectors:



Food and beverages



Chemistry



Agribusiness



Building materials



Machinery (OEM)

The technical data given serves as a product description only and should not be understood as guaranteed properties in the legal sense.

Specifications subject to change without notice.
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