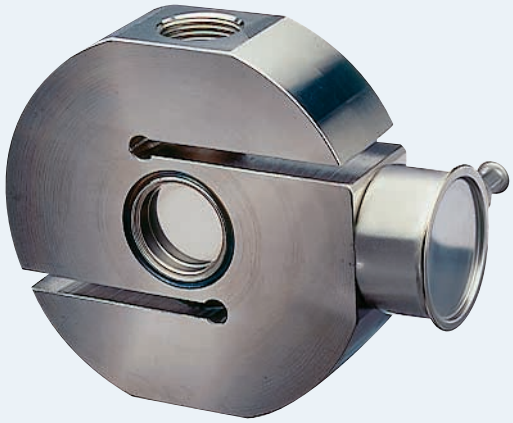
PR 6241

Compression S-Type Load Cell

100 kg...5 t Type D1 Industrial
200 kg...5 t Type C3 High Precision
200 kg...3 t Type C6 Ultra Precision

global weighing technologies



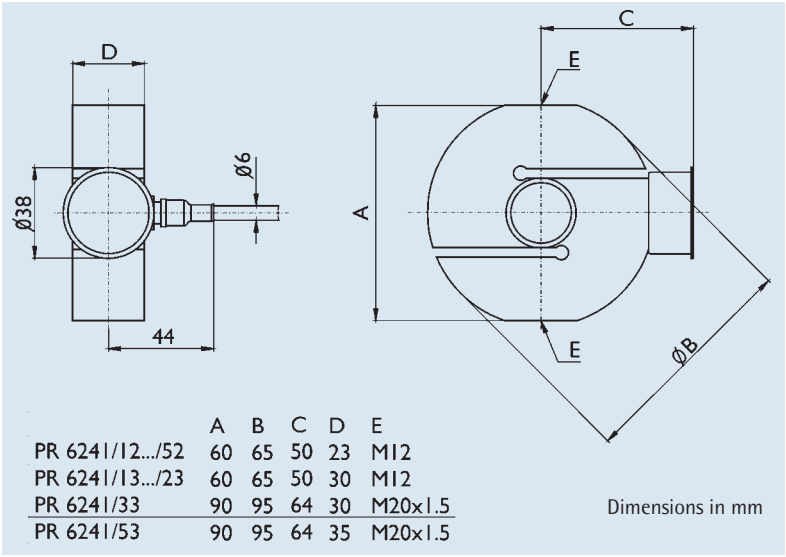
PR 6241

- Easy to install
- Full stainless steel construction
- Hermetically sealed, to IP68 (can be submerged in water to a depth of 1.5 m for 10,000 hrs.)
- Wide temperature range
- Resistant against vibration
- Weights and Measures approval (acc. to OIML R60, NTEP)
- Easy corner adjustment by matched load cell outputs
- CENELEC Ex-version available

Technical Data			D1	C3	C6	
Accuracy class			0.04	0.015	0.008	% 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}		s.table next page		
Max. usable load	upper limit for measurements	E_u		150		% E_{max}
Destructive load	danger of mechanical destruction	E_d		>300		% E_{max}
Min. LC verification interval	minimum load cell verification interval, ($v_{min} = E_{max}/Y$)	Y	5000	14000	20000	
Rated output	relative output at nominal load	C_n		2		mV/V
Tolerance on rated output	permissible deviation from rated output	d_c	< 0.25	< 0.07	< 0.07	% C_n
Zero output signal	load cell output signal under unloaded condition	S_{min}	< 1.0	< 1.0	< 1.0	% C_n
Repeatability error	max. change in load cell output for repeated loading	ε_R	< 0.01	< 0.005	< 0.005	% C_n
Creep, during 30 min	max. change in load cell output under nominal load	d_{cr}	< 0.03	< 0.015	< 0.008	% C_n
Non - Linearity	max. deviation from best straight line through zero	d_{Lin}	< 0.03	< 0.01	< 0.01	% C_n
Hysteresis	max. difference in load cell output when loading from zero to nominal load and unloading back to zero	d_{hy}	< 0.04	< 0.015	< 0.008	% C_n
Temperature effect on S_{min} C_n/10K	max. change of S_{min}/10K Δ_T over B_T referred to C_n	TK_{Smin}	< 0.028	< 0.01	< 0.007	%
Temperature effect on C C_n/10K	max. change of C /10K Δ_T over B_T referred to C_n	TK_c	< 0.03	< 0.01	< 0.005	%
Input impedance	between supply terminals	R_{LC}		650 ± 6		Ω
Output impedance	between measuring terminals	R_O	610 ± 1	610 ± 0.5		Ω
Insulation impedance	between measuring circuit and housing 100VDC	R_{IS}		>5000 x 10^6		Ω
Recommended supply voltage	to hold the specified performance	B_u		4...24		V
Max. supply voltage	permissible for continuous operation without damage	U_{max}		28		V
Nominal ambient temp. range	to hold the specified performance	B_T	-10...+55	-10...+55		°C
Usable ambient temp. range	permissible for continuous operation without damage	B_{Tu}		-30...+95		°C
Storage temperature range	Transportation and storage	B_{Tl}		-40...+95		°C
Vibration resistance	resistance against oscillation (IEC 68-2-6 Fc)	–		20 g, 100 h, 10...150 Hz		
Air pressure effects C_n/kPa	influence of ambient air pressure on S_{min}	PK_{Smin}	0.005	0.0025		%
Nominal deflection	max. elastic deformation under nominal load	S_{nom}	< 0.5	< 0.3		mm

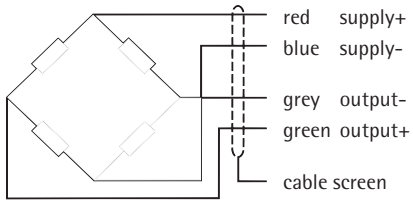
sartorius group

Nominal Load E_{max}	Order Codes Type	Versions			Ex-Versions			Packing Size mm	Weight net	shipping
100 kg	PR 6241/12..	/..D1			/..D1E			220 x 215 x 135	0.8 kg	1.2 kg
200 kg	PR 6241/22..	/..D1	/..C3	/..C6	/..D1E	/..C3E	/C6E	220 x 215 x 135	0.8 kg	1.2 kg
300 kg	PR 6241/32..	/..D1	/..C3	/..C6	/..D1E	/..C3E	/C6E	220 x 215 x 135	0.8 kg	1.2 kg
500 kg	PR 6241/52..	/..D1	/..C3	/..C6	/..D1E	/..C3E	/C6E	220 x 215 x 135	0.8 kg	1.2 kg
1 t	PR 6241/13..	/..D1	/..C3	/..C6	/..D1E	/..C3E	/C6E	220 x 215 x 135	0.9 kg	1.2 kg
2 t	PR 6241/23..	/..D1	/..C3	/..C6	/..D1E	/..C3E	/C6E	220 x 215 x 135	0.9 kg	1.2 kg
3 t	PR 6241/33..	/..D1	/..C3	/..C6	/..D1E	/..C3E	/C6E	220 x 215 x 135	1.7 kg	2.0 kg
5 t	PR 6241/53..	/..D1	/..C3		/..D1E	/..C3E		220 x 215 x 135	1.9 kg	2.4 kg



	A	B	C	D	E
PR 6241/12.../52	60	65	50	23	M12
PR 6241/13.../23	60	65	50	30	M12
PR 6241/33	90	95	64	30	M20x1.5
PR 6241/53	90	95	64	35	M20x1.5

Dimensions in mm



Load cell construction

S - shape design with integrated load return. Full stainless steel construction, hermetically sealed, welded, filled with inert gas.
Material load cell: 1.4542 (DIN 17 440)
similar to S604, S622 (B.S.), 17 - 4PH

Cable

robust, flexible, screened, TPE Thermopl. Elastomer, grey, (Ex: blue), 4x0.35 mm², diameter: 5 mm, length: 5 m
bending radius:
fixed installation: ≥ 50 mm
with repeated bending: ≥ 150 mm

Protection

IP68, IEC 529 (equivalent to NEMA 6). The load cell can be submerged in water to a depth of 1.5 m for 10,000 hours.

Certificate of conformity

EEx ib IIC T6 (PTB Nr. Ex-92.C.2137)
II 1G EEx ia IIC T6 (PTB 02 ATEX 2059)

Further options		Dimensions WxHxD	Type	Order Number
Plastic cable junction box	for all industrial applications, max. 8 load cells	200x120x75 mm	PR 6130/08	9405 361 30081
Cable junction box	for all industrial, intrinsic safe, W&M applications	200x160x100 mm	PR 6130/60N	9405 361 30604
Stainless steel cable junction box	material 1.4404, for all industrial, intrinsic safe, W&M applications	228x196x74 mm	PR 6130/60S	9405 361 30602
Extension cable	for all applications	D=11 mm	PR 6135	9405 361 35 . .2
Extension cable (Ex)	for all Ex applications	D=11 mm	PR 6136	9405 361 36 . .1
Stainless steel platform foot	material 1.4542, special mounting solution for platforms	(100 kg... 2 t load cells)	PR 6041/51S	9405 360 41512
Plate mounting kit	mild steel, zinc plated, without constraining	(100 kg... 2 t load cells)	PR 6041/30N	9405 360 41301
Stainless steel plate mounting kit	material 1.4301, stainless steel, without constraining	(100 kg... 2 t load cells)	PR 6041/30S	9405 360 41302
Plate mounting kit	mild steel, zinc plated, without constraining	(3 t, 5 t load cells)	PR 6041/40N	9405 360 41401
Stainless steel plate mounting kit	material 1.4301, without constraining	(3 t, 5 t load cells)	PR 6041/40S	9405 360 41402
Pivoting rod	up to 2 kN horizontal force, mild steel, zinc plated		PR 6143/80N	9405 361 43801
Pivoting rod	up to 20 kN horizontal force, mild steel, zinc plated		PR 6143/83N	9405 361 43831
MiniFLEXLOCK	mounting kit, incl. constrainer up to 6kN horiz. force	(100 kg... 2 t load cells)	PR 6043/30N	9405 360 43301
Stainless steel MiniFLEXLOCK	material 1.4301, mounting kit, incl. constrainer up to 6 kN horiz. force	(100 kg... 2 t load cells)	PR 6043/30S	9405 360 43302
Stainless steel loadbutton set	material 1.4542, special load button set	(100 kg... 2 t load cells)	PR 6043/31S	9405 360 43312
MiniFLEXLOCK	mounting kit, incl. constrainer up to 18 kN horiz. force	(3 t, 5 t load cells)	PR 6043/40N	9405 360 43401
Stainless steel MiniFLEXLOCK	material 1.4301, mounting kit, incl. constrainer up to 13 kN horiz. force	(3 t, 5 t load cells)	PR 6043/40S	9405 360 43402

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