

PR 6221

Weighbridge Load Cell

20t, 30t, 50t, 60t, 75t

global weighing technologies



PR 6221

- Well-proven rocker pin design
- No corner adjustment necessary
- Best lightning protection when used with our cable junction boxes
- Resistant against high voltage surges acc. to DIN EN 61000-4-5
- High overload capability
- Highest reliability
- 100% Maintenance free
- IP 68 (10.000 hrs / 1.5 m)
IP 69 K (washdown cleaning)
Sealing equivalent to NEMA 6
- Ex - version available (optional)

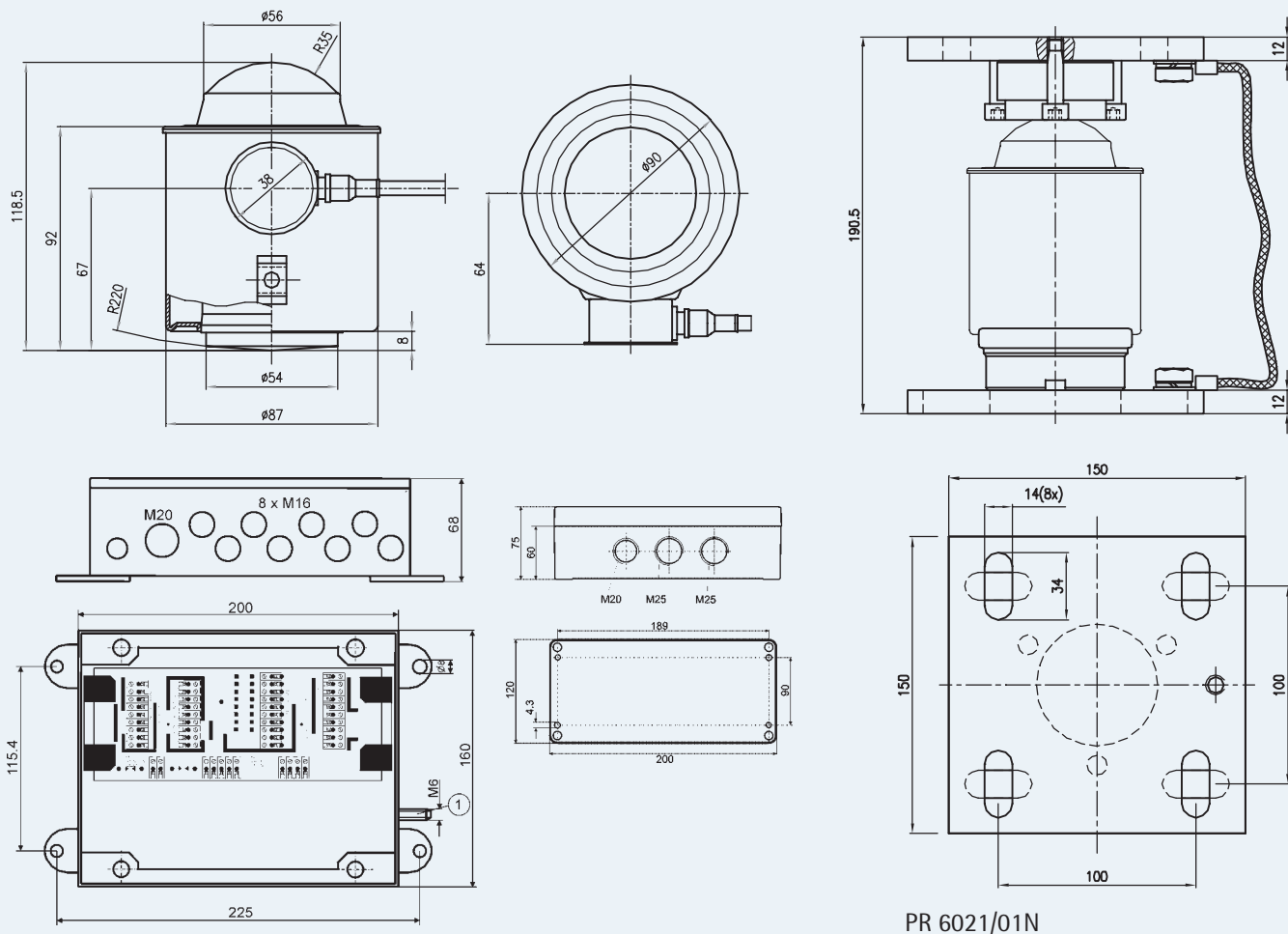
Technical Data

Maximum capacity	highest limit of specified measuring range	E_{max}	20	30	50	60	75	t
Max. usable load	upper limit for measurements	E_u	40	60	75	75	75	t
Destructive load	danger of mechanical destruction	E_d	>100	>150	>150	>150	>150	t
Rated output	relative output signal at nominal load	C_n	1	1	2	2,4	3	mV/V
	for accuracy classes C4 at $E_{max} \geq 60$ t C5 at $E_{max} \geq 50$ t				1,5	1,5	1,5	mV/V
Nominal deflection	max. elastic deformation under nominal load	S_{nom}	0,3	0,3	0,6	0,7	0,8	mm
Accuracy class			C3	C4	C5	C6*		
			0,015	0,012	0,010	0,008		% E_{max}
Minimum dead load	lowest limit of specified measuring range	E_{min}		0				% E_{max}
Min. LC verification interval	minimum load cell verification interval ($v_{min} = E_{max} / Y$)	Y	14000	20000	20000	20000		
Deadload Return	factor for min. dead load output return ($DR = 1/2 E_{max} / Z$ for $E_{max} \geq 50$ t:	Z	6000	8000	8000	8000		
		Z		6000	6000			
Tolerance on rated output	permissible deviation from rated output	d_c	<0,07	<0,07	<0,07	<0,07		% C_n
Zero output signal	load cell output signal under unloaded condition	S_{min}	<1,0	<1,0	<1,0	<1,0		% C_n
Repeatability error	max. change in load cell output for repeated loading	e_R	<0,005	<0,005	<0,005	<0,005		% C_n
Creep, during 30 min	max. change in load cell output under nominal load	d_{cr}	<0,015	<0,0125	<0,010	<0,008		% C_n
Non-linearity	max. deviation from best straight line through zero	d_{lin}	<0,01	<0,01	<0,01	<0,01		% C_n
Hysteresis	max. diff. in LC output between loading and unloading	d_{hy}	<0,0165	<0,0125	<0,010	<0,008		% C_n
Temperature effect on S_{min}	max. change of $S_{min} / 10K \Delta T$ over B_T referred to C_n	$TK_{S_{min}}$	<0,01	<0,07	<0,07	<0,07		% $C_n / 10K$
Temperature effect on C_n	max. change of $C_n / 10K \Delta T$ over B_T referred to C_n	TK_c	<0,01	<0,008	<0,007	<0,005		% $C_n / 10K$
Input impedance	between supply terminals	R_{LC}		1080 ± 10				Ω
Output impedance	between measuring terminals	R_0		1010 ± 1				Ω
	for accuracy classes C5 at $E_{max} = 50$ t			760 ± 1				Ω
	C4, C5 at $E_{max} = 60$ t			635 ± 1				Ω
	C4, C5 at $E_{max} = 75$ t			510 ± 1				Ω
Insulation impedance	between measuring circuit and housing at 100V _{DC}	R_{IS}		>5000 x 10 ⁶				Ω
Insulation voltage	between circuit and housing			500				V _{DC}
Recommended supply voltage	to hold the specified performance	B_u		4 ... 24				V
Max. supply voltage	permissible for continuous operation without damage	$B_{T_{max}}$		32				V
Nominal ambient temp. range	to hold the specified performance	B_T		-10 ... +55				°C
Usable ambient temp. range	permissible for continuous operation without damage	B_{Tu}		-40 ... +95				°C
Storage temperature range	transportation and storage	B_{Tl}		-40 ... +95				°C
Permissible eccentricity	permissible displacement from nominal load line	S_{ex}		10				mm
Vibration resistance	resistance against oscillation (IEC68-2-6 Fc)			20 g, 100 h, 10 ... 150 Hz				
Air pressure effect	influence of ambient air pressure on S_{min}	$PK_{S_{min}}$		<0,5				kg/kPa

*) $E_{max} = 20t$ and $30t$ only

Definitions acc. to VDI / VDE 2637





PR 6021/01N

Restoring force

For each mm of movement that the top of the load cell shifts from the vertical axis, a horizontal restoring force of 1.5 % of the applied vertical load is generated.

Load cell housing construction

Deep draw pulled housing, membrane and measuring element hermetically sealed, welded, filled with inert gas, Material: 1.4301 (DIN 17440), 304 S15 (B.S.)

Ingress Protection

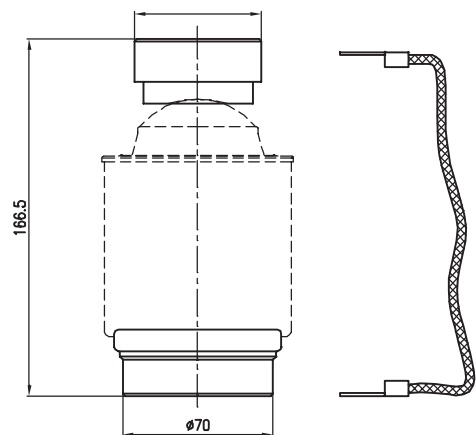
IP 68, IEC 529 / EN 60529: 1.5 m water column /10,000 h
 IP69K, DIN 40 050-9: water under high pressure, steam cleaning
 Sealing equivalent to NEMA 6

Cable

robust, flexible, screened, sheath: TPE, colour: green (for PR 6221/..E: colour: blue), diameter: 5 mm, 4 x AWG22 (0.35 mm²), length: 16 m, bending radius: 50 mm

Certificate of conformity

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



PR 6021/00N

Accessories

		Type	Order Number
Load and bottom disc	Set of top and bottom load disc, mild steel, zinc plated, yellow chromated	PR 6021/00N	9405 360 21001
Mounting Kit	Mounting Kit for PR 6221, including top and bottom load disc, mild steel, zinc plated	PR 6021/01N	9405 360 21011
Cable Junction Box	Plastic Cable Junction Box for PR 6221, including lightning protection circuit	PR 6021/08	9405 360 21081
Cable Junction Box Ex	S/S Cable Junction Box for PR 6221 for the use in EExi circuits in hazardous area Zone 1 and 2	PR 6021/68	9405 360 21682

Definitions according to VDI/VDE 2637, Technical data and dimensions for description only, subject to change without notice.

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