Minebea intec
The true measure

Truck scale load cell LC Tiro®

Precise, fail-safe and extremely durable



Benefits

- Precise measurement results contribute to accurate billing
- Resistant to environmental impact and corrosion
- Attractive price combined with German engineering
- Global service organisation

The analogue load cell LC Tiro®/PR 6225 was designed specifically for use in truck scales. Its long product lifetime minimises the downtime of your truck scale and thus ensures reliable and uninterrupted processes in the long term.

LC Tiro® – reliable even in difficult ambient conditions

- The load cell guarantees the most accurate measurement results thanks to its optimised measuring element geometry.
- Developed for the harshest ambient conditions, the truck scale load cell LC Tiro® can also deal with difficult environmental impacts.
- A high-quality product at an attractive price and high availability.
- With many years of experience in weighing technology, we understand our customers' requirements and can provide you with specialist advice at any time courtesy of our expert knowledge.
- Engineering support and a global service organisation – for optimal and the quickest possible solutions.

Technical specifications

Truck scale load cell LC Tiro®

Designation	Description	Abbr.	PR 6225 C3	Unit
Accuracy class			0.017	% 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}	20, 30, 50	t
Safe load limit	Maximum load possible without irreversible damage	E_{lim}	150	% E_{max}
Destructive load	Danger of mechanical destruction	E_d	> 300	% E_{max}
Minimum LC verification	Minimum load cell verification interval, $v_{min} = E_{max}/Y$	Y	10,000	
Deadload output return	Factor for deadload output return after load (DR =1/2*E_{max}/Z)	Z	3,000	
Rated output	Relative output at maximum capacity	C_n	2	mV/V
Tolerance on rated output Zero output signal	Permissible deviation from rated output C_n	d_c	< 0.07	% C_n
Zero output signal	Load cell output signal under unloaded condition	S_{min}	0 ± 1.0	% C_n
Repeatability error	Max. change in load cell output for repeated loading	ε_R	< 0.005	% C_n
Creep	Max. change of output signal at E_{max} during 30 min.	d_{cr}	< 0.017	% C_n
Non-linearity[1)]	Deviation from best straight line through zero	d_{Lin}	< 0.01	% C_n
Hysteresis[1)]	Max. difference in LC output between loading and unloading	d_{hy}	< 0.017	% C_n
Temperature effect (TK) on S_{min}	Max. change of S_{min} in B_T	TK_{Smin}	< 0.014	% C_n/10K
TK on parameter[1)]	Max. change of C in B_T	TK_C	< 0.01	% C_n/10K
Input impedance	Between supply terminals	R_{LC}	1,080 ± 10	Ω
Output impedance	Between measuring terminals	R_O	1,010 ± 1	Ω
Insulation impedance	Between measuring circuit and housing at 100 U_{DC}	R_{IS}	> 5,000	MΩ
Nominal supply voltage range	To hold the specified performance	B_u	4...20	V_{DC}
Max. supply voltage	Continuous operation without damage	U_{max}	32	V_{DC}
Nominal ambient temp. range	To hold the specified performance	B_T	-10...+40	°C
Usable ambient temp. range	Continuous operation without damage	B_{Tu}	-30...+70	°C
Storage temperature range	Without electrical and mechanical stress	B_{Ti}	-40...+75	°C
Permissible eccentricity	Permissible displacement from nominal load line	S_{ex}	10	mm
Vibration resistance	Resistance against oscillations (IEC 68-2-6-Fc)		20 g,100 h,10...150 Hz	
Barometric pressure influence	Influence of barometric pressure on output	PK_{Smin}	480	g/kPa
Nominal deflection	Max. elastic deformation under maximum capacity For E_{max} = 20 t For E_{max} = 30 t For E_{max} = 50 t	S_{nom}	 20 t: < 0.50 mm 30 t: < 0.60 mm 50 t: < 0.85 mm	mm
Material (housing)	Stainless steel 1.4404 acc. DIN EN 10088-3 (conforms to 316L AISI/SAE)			
Protection class	According to EN 60529: IP66/IP68*/IP69 According to ISO 20653: IP6K6K / IP6K8 / IP6K9K			
Cable	TPE, colour: green, ø 5 mm, cable: 6 ×0.141 mm², length: 16 m			
Bending radius	≥ 25 mm in case of fixed installation ≥ 75 mm in case of flexible installation			

[1)] Non-linearity (d_{Lin}), hysteresis (d_{hy}) and parameter temperature effect (TK_C) are typical values with a total within the permitted error limit set out by OIML/NTEP.

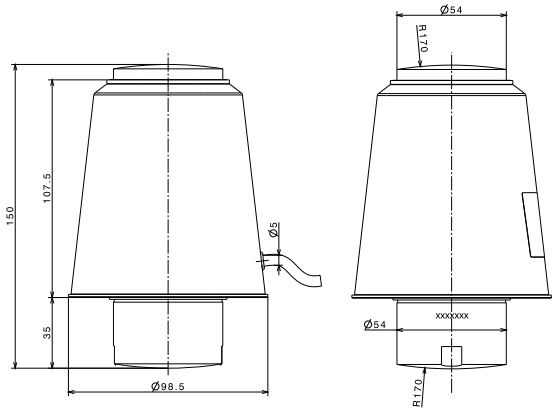
* IP68: The load cell can be submerged at a water depth of 1.5 m for 10,000 hours.

Accuracy classes and minimum verification interval, v_{min}

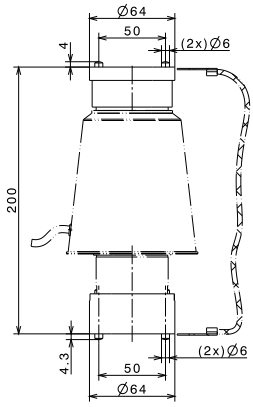
	OIML R60 C3	NTEP Class IIIL Multiple
Maximum number of verification intervals, n_{max}	3,000	10,000
20 t	2.00 kg	0.667 kg
30 t	3.00 kg	1.000 kg
50 t	5.00 kg	1.667 kg

Technical diagrams

Truck scale load cell LC Tiro® dimensions*

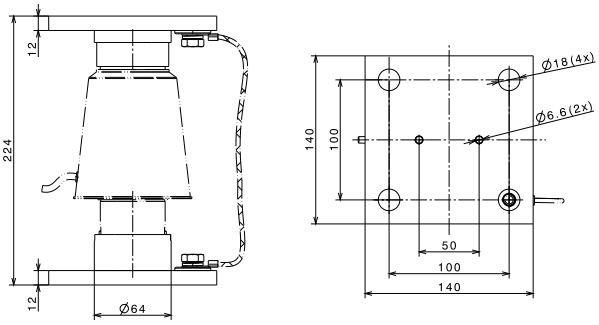


Truck scale load cell LC Tiro®



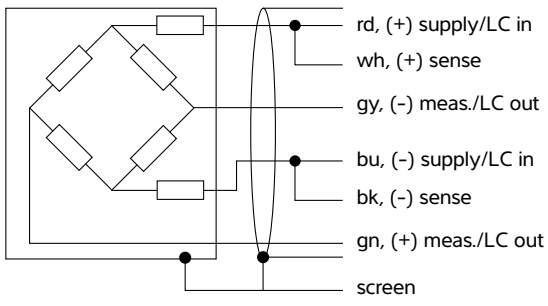
Truck scale load cell LC Tiro® with load disc kit PR 6025/00N

Mounting kit PR 6025/03N dimensions*



Truck scale load cell LC Tiro® in the mounting kit PR 6025/03N

Circuit diagram



* All dimensions in mm

Ordering information

Truck scale load cell LC Tiro®/PR 6225, OIML R60 accuracy class C3

Model	Packaging (mm)	Weight gross/net (kg)	Order number
PR 6225/20 t C3	250 x 245 x 190	3.9 / 3.3	9409 225 03320
PR 6225/30 t C3	250 x 245 x 190	3.9 / 3.3	9409 225 03330
PR 6225/50 t C3	250 x 245 x 190	4.3 / 3.7	9409 225 03350

Truck scale load cell LC Tiro®/PR 6225 accessories

Model	Description	Packaging (mm)	Weight gross/net (kg)	Order number
PR 6025/00N	Upper and lower load disc for PR 6225	195 x 140 x 35	1.3 / 1.2	9409 360 25001
PR 6025/03N	Mounting kit (includes PR 6025/00N) with anti-rotation protection	280 x 170 x 50	4.8 / 4.7	9409 360 25031
PR 6025/50N	Ground strap	162 x 114 x 5	0.03 / 0.03	9409 360 25501

Junction box

Type	Description	Order number
PR 6021/08	Junction box for truck scale with up to 8 load cells PR 6221 and LC Tiro®	9405 360 21084
PR 6021/18	Junction box with potentiometers for truck scale with up to 8 load cells PR 6221 and LC Tiro®	9405 360 21184

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



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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