Minebea intec
The true measure

Installation Manual

Truck scale load cell PR 6221

Translation of the Original Installation Manual 9499 053 46800 Edition 1.13.0 11/27/2023

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Foreword

Must be followed!

Any information in this document is subject to change without notice and does not represent a commitment on the part of Minebea Intec unless legally prescribed. This product should only be operated/installed by trained and qualified personnel. In correspondence concerning this product, the type, name, and release number/serial number as well as all license numbers relating to the product have to be cited.

Note

Table of contents

1 Introduction

1.1 Read the manual

- Please read this manual carefully and completely before using the product.
- This manual is part of the product. Keep it in a safe and easily accessible location.

1.2 This is what operating instructions look like

1. - n. are placed before steps that must be done in sequence.

▶ is placed before a step.

▷ describes the result of a step.

1.3 This is what lists look like

- indicates an item in a list.

1.4 This is what menu items and softkeys look like

[ ] frame menu items and softkeys.

Example:

[Start]- [Applications]- [Excel]

1.5 This is what the safety instructions look like

Signal words indicate the severity of the danger involved when measures for preventing hazards are not followed.

⚠ DANGER

Warning of personal injury

DANGER indicates death or severe, irreversible personal injury which will occur if the corresponding safety measures are not observed.

▶ Take the corresponding safety precautions.

⚠ WARNING

Warning of hazardous area and/or personal injury

WARNING indicates that death or severe, irreversible injury may occur if appropriate safety measures are not observed.

▶ Take the corresponding safety precautions.

⚠ CAUTION

Warning of personal injury.

CAUTION indicates that minor, reversible injury may occur if appropriate safety measures are not observed.

▶ Take the corresponding safety precautions.

NOTICE

Warning of damage to property and/or the environment.

NOTICE indicates that damage to property and/or the environment may occur if appropriate safety measures are not observed.

▶ Take the corresponding safety precautions.

Note:

User tips, useful information, and notes.

1.6 Hotline

Phone: +49.40.67960.444

Fax: +49.40.67960.474

eMail: help@minebea-intec.com

2 Safety instructions

2.1 General notes

NOTICE

Warning of damage to property and/or the environment.

The product was in perfect condition with regard to safety features when it left the factory.

- To maintain this condition and to ensure safe operation, the user must follow the instructions and observe the warnings in this manual.

2.2 Intended use

The load cell PR 6221 has been designed especially for use in truck scales.

The load cell PR 6221 may be used only for weighing tasks in truck scales as intended.

In intrinsically safe circuits, only load cells PR 6221/..E may be used.

The dimensions of all mounting and structural components must be calculated so that sufficient overload capacity is ensured for all loads which may occur while taking the relevant standards into account. In particular, upright weighing objects must be safeguarded against the weighing installation turning over or being shifted, thus eliminating danger to people, animals, or goods even in the case of a break in a load cell or mounting element.

Installation and repair work must only be carried out by expert/qualified personnel.

The load cell reflects the state of the art. The manufacturer does not accept any liability for damage caused by third-party system components or due to incorrect use of the product.

2.3 Initial inspection

Check the contents of the consignment for completeness. Check the contents visually to determine whether any damage has occurred during transport. If there are grounds for rejection of the goods, a claim must be filed with the carrier immediately. The Minebea Intec sales or service organization must also be notified.

2.4 Before operational startup

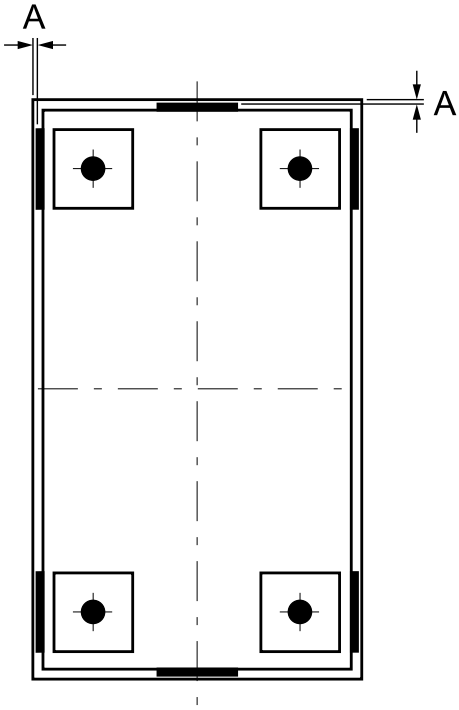
NOTICE

Perform visual inspection.

- Before operational startup as well as after storage or transport, inspect the load cell visually for signs of mechanical damage.

3 Setup instructions

3.1 Load cell arrangement



Key

⌖	Load application
▬	Stop
A	5 mm

- The supporting structure of the scale (and thus the load cells) as well as the weighbridge must be stable enough to withstand the specified loads, horizontal (check with spirit level!) and flat.
- Transverse and/or horizontal forces and torques exceeding the permissible limits are disturbances which can generate measuring errors and, in the worst case, may damage the load cell.
- If stops are used, damage and measuring errors can be prevented without affecting the required space for movement in the direction of the measurement.

  The lateral play of the weighbridge must always be restricted to the distance "A" (see figure) in the longitudinal and transverse direction by appropriate stops.

  Consideration should be given to the fact that thermal expansion and contractions may constrict the required space for movement of the object to be weighed and could thereby lead to significant falsification of the measuring results.

3.2 Selecting maximum capacity

Forces exceeding the safe load limit E_{lim} in the measuring direction may change the characteristics of the load cell or damage it.

If the safe load limit E_{lim} of the load cell can be exceeded, e.g. by falling loads, then mechanical limiting in load direction is strongly recommended.

If the destructive load E_d of the load cell is exceeded, there is danger of mechanical destruction.

4 Specifications

4.1 Load cells

4.1.1 Equipment supplied with the load cell

No.	Description
1	Load cell
2	Quick guide
3	Calibration Certificate
4	Only with Ex-load cells: Safety information for Ex-load cells

4.1.2 General information

Restoring force	For each mm of displacement that the top of the load cell is shifted from the vertical axis, a horizontal restoring force of 1.55 % of the load resting vertically on the load cell is generated per millimeter deflection (measured at the load cell head).
Material for load cell housing	Stainless steel 1.4301 acc. to DIN EN 10088-3 (corresponds to AISI 304, B.S. 304S11/S15)
Protection against environmental influences	Hermetically sealed by welding. Filled with inert gas.
Protection classes	in compliance with IEC 529 or DIN EN 60529 **IP66**/**IP68**/**IP69**, in compliance with ISO 20653 **IP6K6K**/**IP6K8**/**IP6K9K**: Dust-proof and leak-tight against water, with harmful effects when immersed, (1.5 m water depth, 10,000 h) and water jets (high pressure and temperature). **Explosion:** Suitable for explosion subgroup IIC and IIIC.
Protection type	Intrinsic safety for PR 6221/..E
Ambient temperature in the Ex area	see additional information “safety instructions for Ex load cells”
Cable diameter	5 mm
Cable length	Standard version: 16 m Ex version: 20 m
Cable gauge	4×0.35 mm^2
Cable bend radius	≥25 mm (fixed installation) ≥75 mm (flexible installation)
Cable sheath material	Thermoplastic elastomer (TPE)
Cable sheath color	Green (standard version) Blue (Ex version)

4.1.3 Possible marking of the load cell for the Ex area

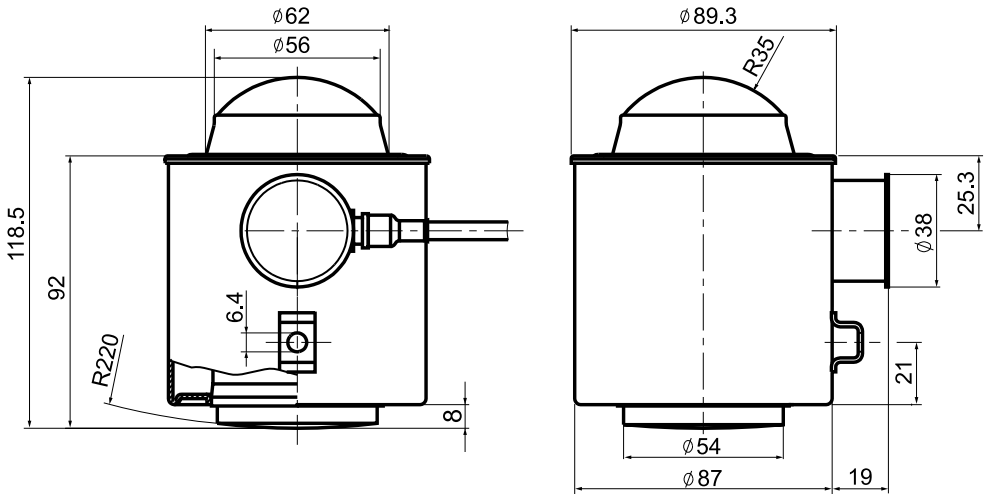
Zone	Marking	Certificate no.	for
0 and 1	II 1G Ex ia IIC T6 Ga Ex ia IIC T6 Ga	BVS 16 ATEX E 005 IECEx BVS 16.0005	only PR 6221/..E
20 and 21	II 1D Ex ta IIIC T160 °C Da Ex ta IIIC T160 °C Da	TÜV 03 ATEX 2301X IECEx TUN 17.0025X	all PR 6221 without /..E
2	II 3G Ex nA IIC T6 Gc	MIN16ATEX001X	all PR 6221 without /..E
22	II 3D Ex tc IIIC T85 °C Dc	MIN16ATEX001X	all PR 6221 without /..E
	IS CL I, II, III, DIV 1, GP A, B, C, D, E, F, G Entity - 4012 101 5688 NI CL I, II, III, DIV 2, GP A, B, C, D, E, F, G - 4012 101 5688; NIFW T4A Ta= -40°C to 70°C; T5 Ta= -40°C to 55°C	FM17US0276	all PR 6221 without /..E
	IS CL I, II, III, DIV 1, GP A, B, C, D, E, F, G Entity - 4012 101 5688 NI CL I, II, III, DIV 2, GP A, B, C, D, E, F, G - 4012 101 5688; NIFW T4A Ta= -40°C to 70°C; T5 Ta= -40°C to 55°C	FM17CA0138	all PR 6221 without /..E

NOTICE

Installation in the Ex area

▶ For installations in the Ex area, it is imperative to observe the Ex safety instructions in the installation manuals.

4.1.4 Dimensions



all dimensions in mm

4.1.5 Ordering information

Model	Max. capacity E_{max}	Type	Type with stainless steel reinforcement
PR 6221/12.5 t	12.5 t	..C3/C3E/C4/C4E	
PR 6221/20 t	20 t	..C3/C3E/C4/C4E/C5/C5E/C6/C6E	..C3 A
PR 6221/25 t	25 t	..C3/C3E/C4/C4E/C5/C5E/C6/C6E	..C3 A
PR 6221/30 t	30 t	..C3/C3E/C4/C4E/C5/C5E/C6/C6E	..C3 A
PR 6221/50 t	50 t	..C3/C3E/C4/C4E/C5/C5E/C6/C6E	..C3 A
PR 6221/60 t	60 t	..C3/C3E/C4/C4E/C5/C5E/C6/C6E	
PR 6221/75 t	75 t	..C3/C3E/C4/C4E/C5/C5E/C6/C6E	

4.1.6 Technical data

Designation	Description	Abbr.	C3	C4	C5	C6	Unit
Accuracy class			0.015	0.012	0.010	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}	see Chapter 4.1.5				
Safe load limit	Highest load without irreversible damage E_{max} = 12.5 t	E_{lim}	37.5	37.5	...	...	t
	E_{max} = 20 t	E_{lim}	40				t
	E_{max} = 25 t	E_{lim}	37.5				t
	E_{max} = 30 t	E_{lim}	60				t
	E_{max} = 50, 60, 75 t	E_{lim}	75				t
Destructive load	danger of mechan. destruction E_{max} = 12.5 t	E_d	>75	>75	...	...	t
	E_{max} = 20 t	E_d	>100				t
	E_{max} = 25 t	E_d	>75				t
	E_{max} = 30 t	E_d	>150				t
	E_{max} = 50, 60, 75 t	E_d	>150				t
Minimum LC verification	minimum load cell scale interval, $v_{min} = E_{max}/Y$	Y	14000	20000	20000	20000	
Minimum preload signal recurrence	recurrence of the minimum preload signal (DR = ½×E_{max}/Z)	Z	6000	8000*	8000*	8000*	
	E_{max} ≥50 t	Z	6000	6000	6000		
		* Z = 8000 at -10°C...+40°C; Z = 6000 above +40°C					

Designation	Description	Abbr.	C3	C4	C5	C6	Unit
Rated output	relative output signal at maximum capacity						
	E_{max} = 12.5 t	C_n	1.0	1.0	...	...	mV/V
	E_{max} = 20, 30 t	C_n		1.0			mV/V
	E_{max} = 25 t	C_n		2.0			mV/V
	E_{max} = 50 t	C_n	2.0	2.0	1.5	1.5	mV/V
	E_{max} = 60 t	C_n	2.4	1.5	1.5	1.5	mV/V
	E_{max} = 75 t	C_n	3.0	1.5	1.5	1.5	mV/V
Tolerance on rated output	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
Reproducibility	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 minutes	d_{cr}	<0.015	<0.0125	<0.010	<0.008	% C_n
Non-linearity[1)]	Deviation from the best straight lines through zero	d_{Lin}	<0.01	<0.01	<0.01	<0.01	% C_n
Hysteresis[1)]	max. difference in LC output between loading and unloading	d_{hy}	<0.0165	<0.0125	<0.010	<0.008	% C_n
Temperature effect of the S_{min}	max. change of S_{min} in B_T	TK_{Smin}	<0.01	<0.007	<0.007	<0.007	% C_n/10 K
Temperature effect on C[1)]	max. change of C in B_T	TK_C	<0.01	<0.008	<0.007	<0.005	% C_n/10 K
Input impedance	between supply terminals	R_{LC}		1080±10			Ω
Output impedance	between measuring terminals	R_O		1010±1			Ω
	E_{max} = 50 t	R_O	1010±1	1010±1	760 ±1	760 ±1	Ω
	E_{max} = 60 t	R_O	1010±1		635 ±1		Ω
	E_{max} = 75 t	R_O	1010±1		510 ±1		Ω
Insulation impedance	between measuring circuit and housing, U_{DC} = 100 V	R_{IS}		>5000			MΩ
Insulation voltage	between circuit and housing (PR 6221/..E only)			500			V
Recommended supply voltage	to hold the specified performance	B_u		4 to 24			V
Max. supply voltage	permissible for continuous operation without damage	U_{max}		32			V
	for PR 6221/..E:	U_{max}		25			V

Designation	Description	Abbr.	C3	C4	C5	C6	Unit
Nominal ambient temp. range	to hold the specified performance	B_T		-10 to +55			°C
Service temperature range	permissible for continuous operation without damage	B_{Tu}		-40 to +95			°C
Storage temperature range	without electrical and mechanical stress	B_{Ti}		-40 to +95			°C
Permissible eccentricity	permissible displacement from nominal load line at the head of the load cell	S_{ex}		5			mm
Vibration resistance	Resistance against oscillations (IEC 60068-2-6 Fc)			20 g, 100 h, 10 to 150 Hz			
Barometric pressure influence	influence of barometric pressure on output	PK_{Smin}		420			g/kPa
Nominal deflection	elastic deformation under maximum capacity						
	E_{max} = 12.5 t	S_{nom}	0.2	0.2	...	...	mm
	E_{max} = 20 t	S_{nom}		0.4			mm
	E_{max} = 25 t	S_{nom}		0.5			mm
	E_{max} = 30 t	S_{nom}		0.5			mm
	E_{max} = 50 t	S_{nom}		0.8			mm
	E_{max} = 60 t	S_{nom}		0.9			mm
	E_{max} = 75 t	S_{nom}		1.1			mm

1) The data for non-linearity (d_{Lin}), hysteresis (d_{hy}) and and temperature effect on C (TK_C) are typical values.
For OIML R60 or NTEP approved load cells the sum of these values is within the permissible cumulative error limits.

Definitions acc. to OIML R60

The technical data given are intended solely as a product description and should not be interpreted as guaranteed properties in the legal sense.

NTEP: min. scale interval of the load cells v_{min}

	Type	Divisions n_{max}	12.5 t	20 t	25 t	30 t	50 t	60 t	75 t	Unit
Cl. III L Multiple	C3	10000	0.43	0.48	0.60	0.71	1.19	1.43	1.79	kg

4.2 Load disc kits

4.2.1 General notes

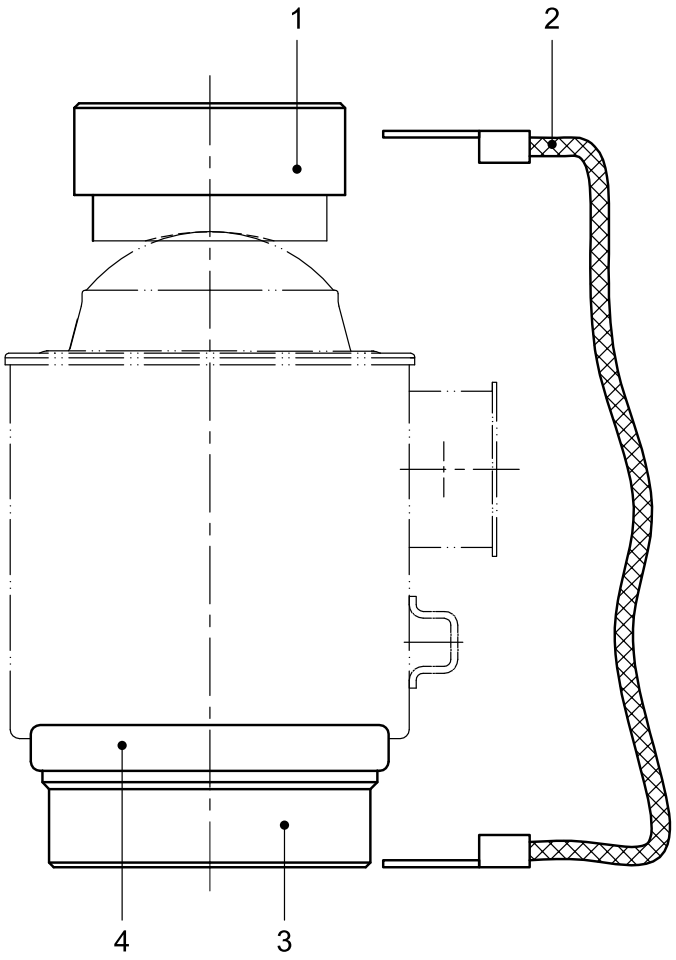
Note:

The load disc kit is **not** included in the equipment supplied with your load cell.

For the order numbers of the load disc kits, please refer to Chapter 11.2.2.

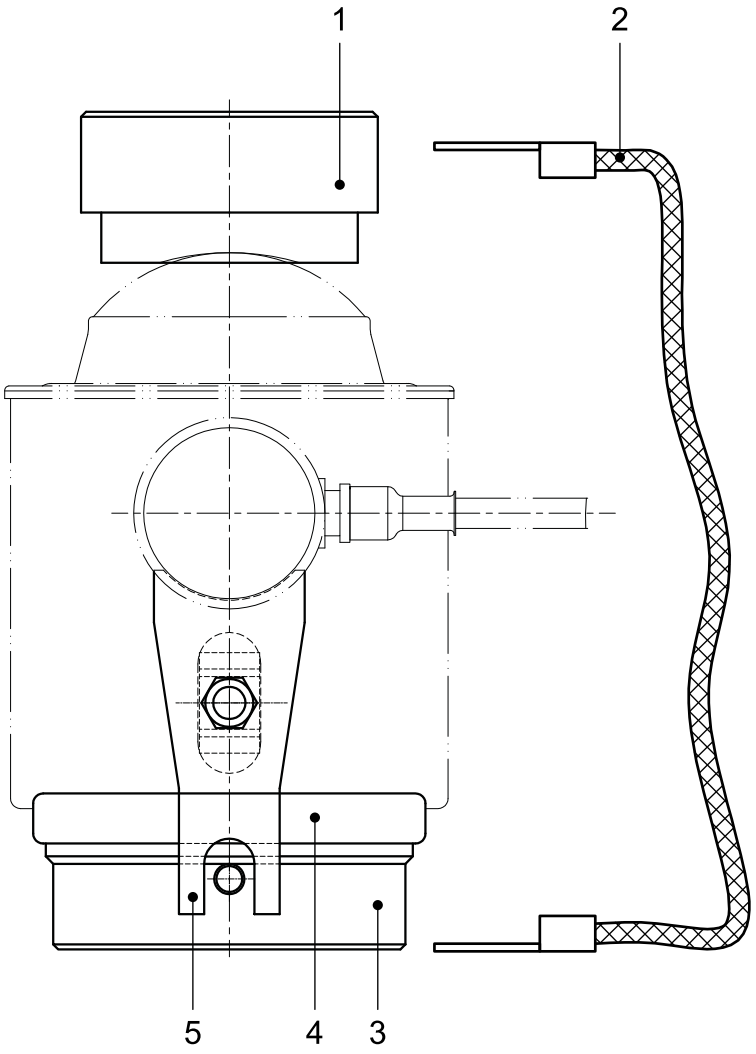
4.2.2 Equipment supplied

4.2.2.1 Load disc kit PR 6021/00N



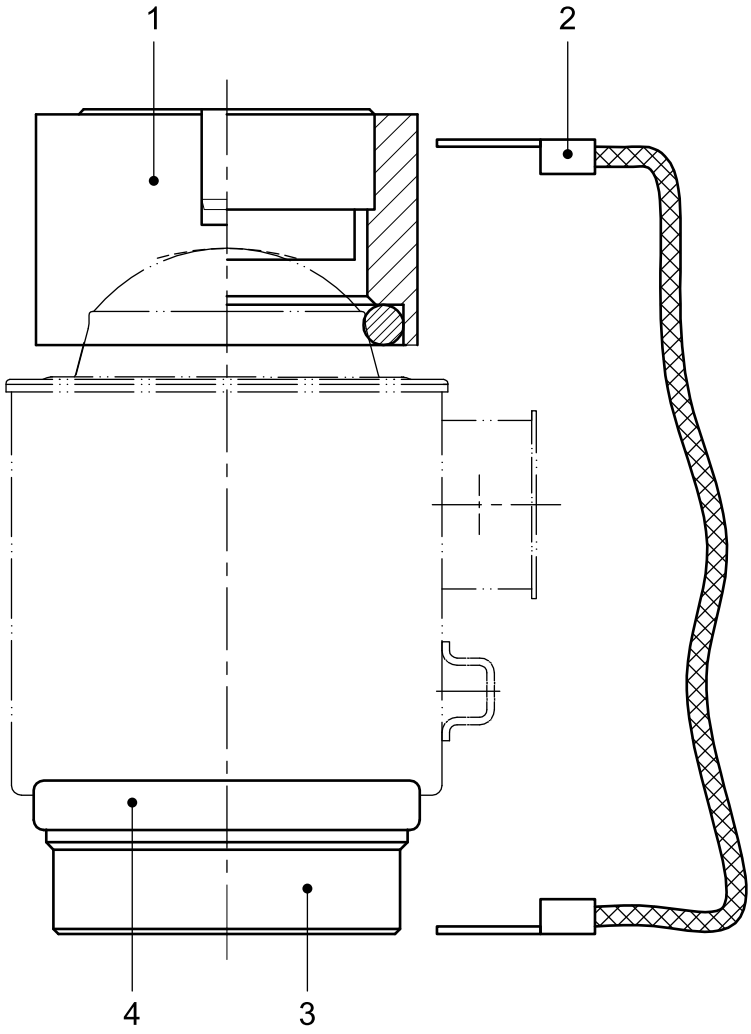
No.	Description
1	Upper load disc
2	Flexible copper strap
3	Lower load disc
4	Supporting ring

4.2.2.2 Load disc kit PR 6021/02N



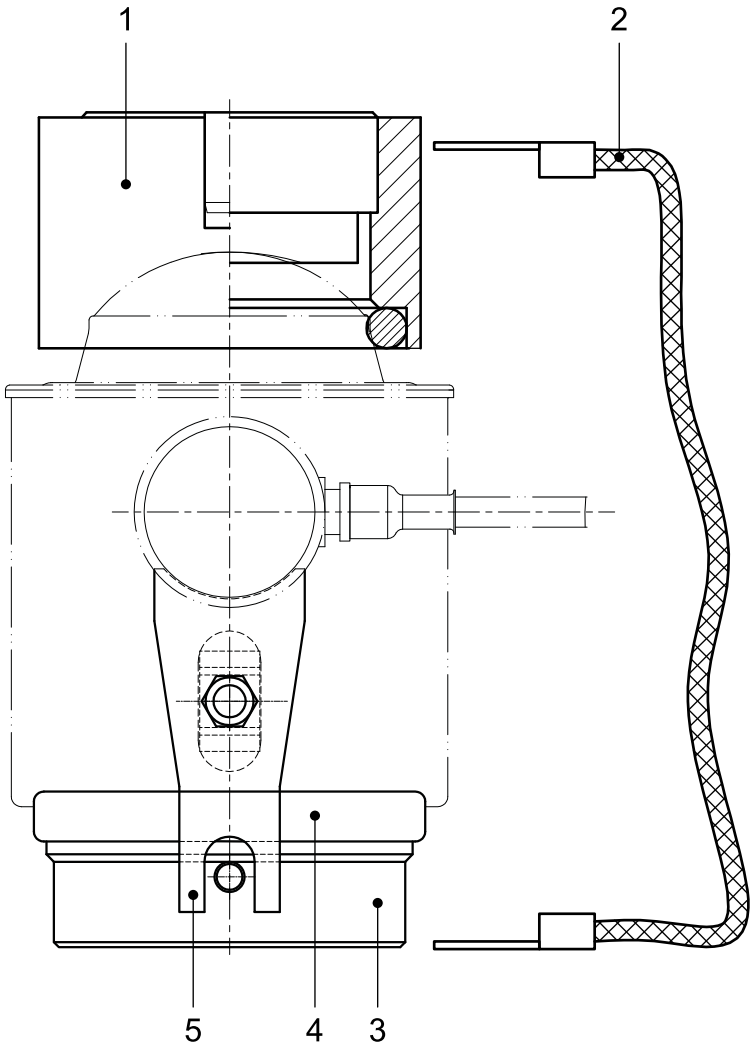
No.	Description
1	Upper load disc
2	Flexible copper strap
3	Lower load disc
4	Supporting ring
5	Anti-twist protection

4.2.2.3 Load disc kit PR 6021/04N



No.	Description
1	Turbo Load disc
2	Flexible copper strap
3	Lower load disc
4	Supporting ring

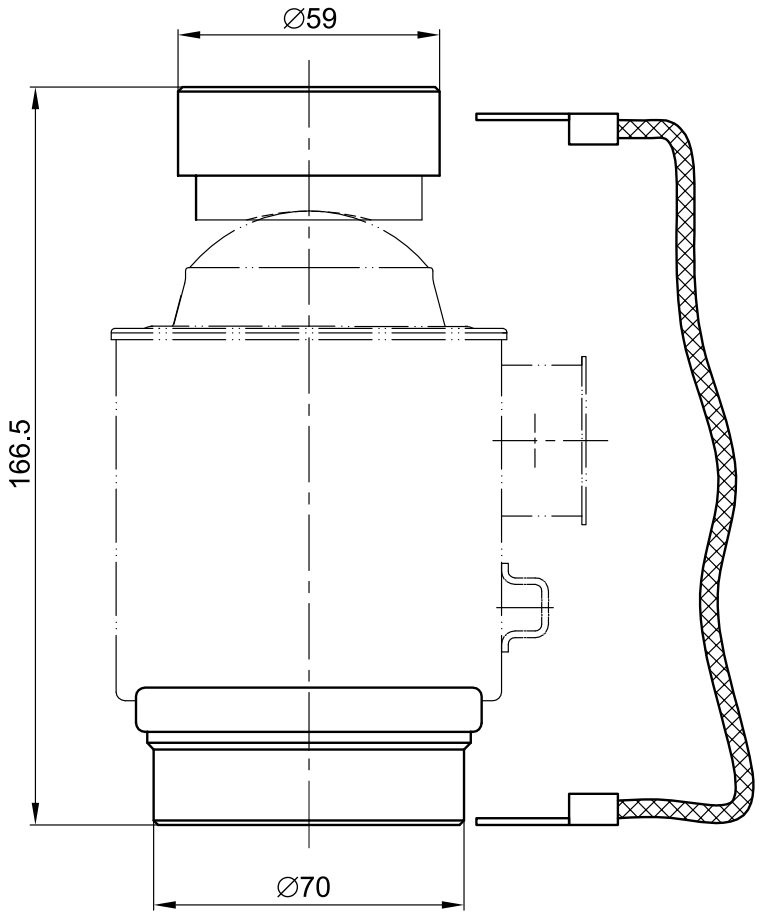
4.2.2.4 Load disc kit PR 6021/06N



No.	Description
1	Turbo Load disc
2	Flexible copper strap
3	Lower load disc
4	Supporting ring
5	Anti-twist protection

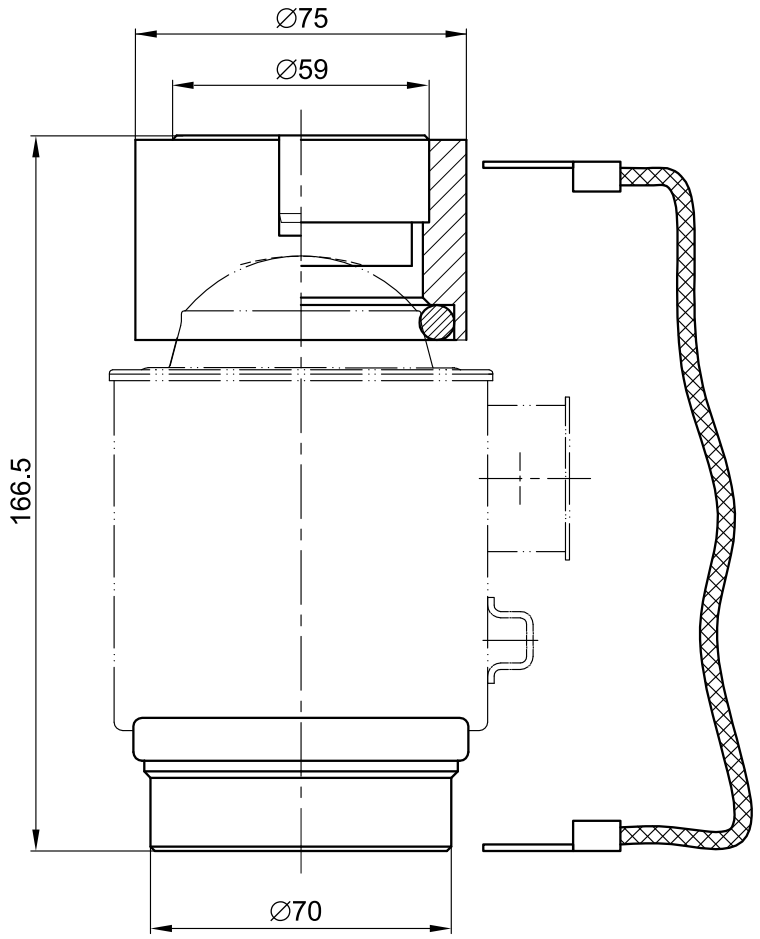
4.2.3 Dimensions

PR 6021/00N, ../02N



all dimensions in mm

PR 6021/04N, ../06N



all dimensions in mm

4.2.4 Technical data

Load disc kits PR 6021/00N, ../02N, ../04N, ../06N

	PR 6021/00N	PR 6021/02N	PR 6021/04N	PR 6021/06N
Max. capacity of load cell	12.5–75 t		12.5–75 t	
Permissible temperature range	-40°C–+100°C		-40°C–+100°C	
Material	Steel; zinc-plated, chromated, and sealed (RoHS-compliant)			
Net weight	1.2 kg	1.3 kg	1.8 kg	2.0 kg
Gross weight	1.3 kg	1.4 kg	1.9 kg	2.1 kg

Note:

The load disc kits PR 6021/04N and PR 6021/06N do **not** fit into the mounting kits PR 6021/01N and PR 6021/03N. They **only** fit into the mounting kits PR 6021/05N and PR 6021/07N.

5 Installation

5.1 Safety instructions

NOTICE

Welding or lightning strike current flowing through the cell can damage it.

All electrical welding on the weighing system must be finished before mounting the load cells.

▶ When installing the load cell, immediately bypass the load cell with the flexible copper strap provided for this purpose (see Chapter 11.1).

During any additional electrical welding work near the load cell:

- Disconnect the load cell cables.
- Bypass the load cell using the flexible copper strap.
- Make sure that the grounding clamp of the welding set is fitted as closely as possible to the welding joint.

The following must be observed during installation:

- Do not lift or transport the load cell by pulling on the cable.
- Avoid shock stress (falling down, hard shocks).
- The load cell must be installed vertically and centrally in the mounting kit.
- Load forces must act in the measuring direction of the load cell.
- The load disc must not be subjected to transverse forces.
- All contact points between load cell and load disc must be adequately greased.

  Load cell grease order no., see Chapter 11.1.

NOTICE

Changes of temperature >15 K/h may influence the measuring accuracy.

▶ Make sure to protect the load cells from direct heating or cooling effects (sun, wind, heat radiation, fan heaters), e.g., heat protection screens or heat protection housings are to be installed if necessary.

NOTICE

Force shunts may cause measuring errors.

▶ All incoming and outgoing lines (hoses, pipes, cables) must be coupled to the measured object as flexibly as possible.

5.2 Aligning the load cell

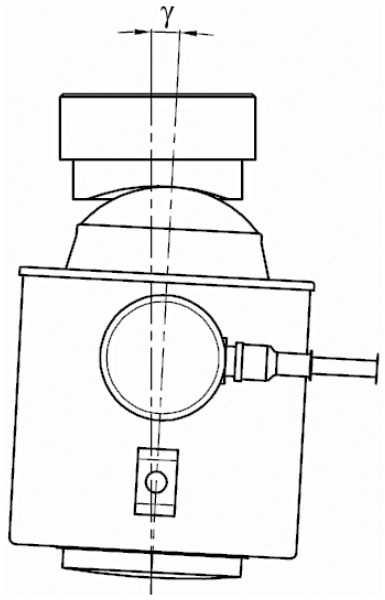
Load cells must be installed so that their axis is vertical when not in use.

Even minor deviations can lead to unexpected effects, particularly during the corner load or shift tests.

If the load cell is installed on a slant accidentally, then this changes its characteristic value.

Under no circumstances can this be compensated for electrically (e.g. by resistances in the junction box). Instead, all load cells have to be carefully aligned: Refer to figure.

To make it easier to get an exact vertical alignment, the PR 6021/.. mounting kit is equipped with a mounting aid.



$\gamma \leq 1°$

The maximum permissible inclination must be strictly observed so that measuring accuracy is not adversely overly affected (see figure).

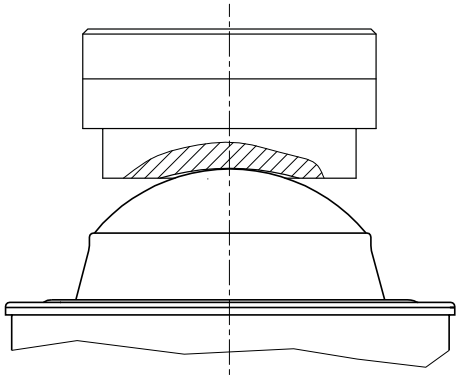
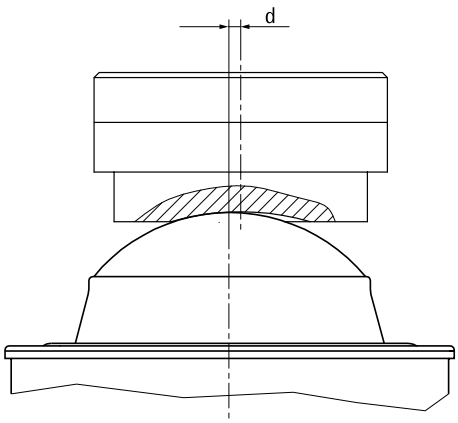
Note:

The material properties and the shape of the load cells and load discs are perfectly matched to one another. Always use load discs from Minebea Intec, see also Chapter 4.2.2.

Note:

Further installation instructions can be found in the manuals of the respective mounting kits.

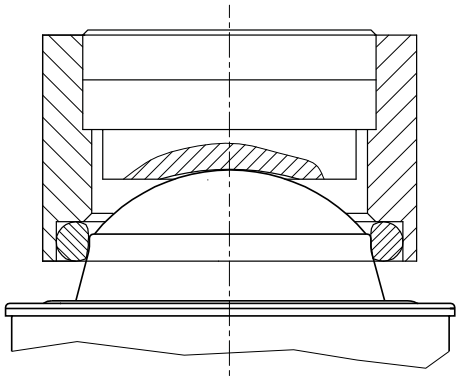
5.3 Positioning upper load disc

Center positioning	Off-center positioning
	

It is imperative that the load disc finds exact center positioning on the top of the load cell.

Any off-center positioning (d) will cause deviations in the corner load test and lead to errors in the shift test (see Chapter 7.6.2).

Turbo Load disc



In difficult cases, a specially designed upper load disc (Turbo Load disc) can facilitate positioning in the exact center on the top of the load cell. This uses an O-ring to ensure that the load disc is positioned in the exact center on the top of the load cell, see also Chapter 4.2.2.

6 Connection

6.1 General information

- Protect the cable ends against contamination. Moisture must not get into the open end of the cable.
- Do not shorten the load cell connecting cable. Connect the prepared cable end and roll up the remaining cable.
- The cable screening should not be in contact with the ground, except at the foreseen terminals; see Chapter 6.4.
- Keep the load cell cables away from power cables.
- The distance between measurement cables and power cables and/or components under high voltage should be at least 1 m (reference value).
- We recommend laying the load cell cables in separate cable trays or armored steel pipes.
- Power cables should be crossed at right angles while taking into account the minimum distance of 1 m (reference value).

Note:

If hum interference occurs, the cable screens should only be connected on one side.

Depending on the design of the cable junction box used, either the jumper J3 must be removed or the cable screens must be disconnected from the terminal contacts highlighted in yellow.

⚠ WARNING

When installing in potentially explosive atmospheres:

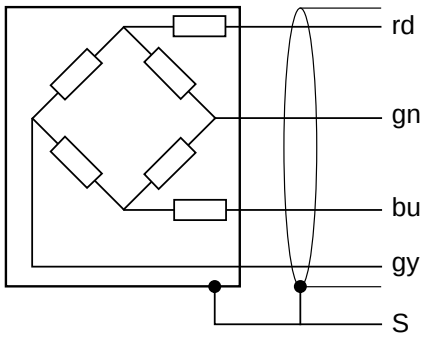
It is imperative that you follow the application-dependent installation instructions!

▶ Always check whether it is permissible to bilaterally connect the screens to the equipotential bonding.

6.2 Load cell

Color Code

rd	=	red
gn	=	green
bu	=	blue
gy	=	gray



rd =	+ supply/LC in	+ supply voltage/+ load cell input
gn =	+ meas./LC out	+ measuring voltage/+ load cell output
bu =	- supply/LC in	- supply voltage/+ load cell input
gy =	- meas./LC out	- measuring voltage/- load cell output
S =	screen	Screen

NOTICE

Ground loop

The cable screen is connected to the load cell housing.

▶ Make sure to use the PR 6021/08 or PR 6021/18 or PR 6021/68S cable junction box (see Chapter 11.2.4), whose special technology prevents a ground loop.

6.2.1 Load cell cable

The load cell cables are inseparably connected to the load cells in the factory and their individual resistance and temperature effect are equalized with the load cells.

Therefore, never shorten the cables, rather simply roll up the extra length and secure it.

The special sheathing material and the integrated strain relief with Kevlar thread ensure extremely long service life even under difficult operating conditions.

However, despite the robust nature of the materials used, the cable should be protected from excessive chemical and mechanical stresses. Preventing water from penetrating the end of the cable is also important "life insurance" for the system.

For protection against particularly difficult operating conditions, e.g., biting damage caused by rodents, a cable with stainless steel reinforcement is offered for some types (see Chapter 4.1.5).

6.3 Cable junction boxes

Special cable junction boxes are recommended for use (see Chapter 11.2.4). They have extremely high-quality screw terminals with high contact security and long-term stability along with a special conduit as well as integrated elements for lightning protection.

The circuit board with its milled grooves provides extraordinarily high insulation impedance, even in moist environments.

The special valve with a GoreTech semi-permeable membrane ensures permanent pressure compensation during fluctuating temperatures and weather conditions, and effectively prevents water from penetrating.

NOTICE

Defective cable junction box due to penetration of water.

- Special valve must not be removed.

6.3.1 Lightning protection

The load cell PR 6221 is equipped with a special SG that provides especially high insulation values and extremely high dielectric strength.

The shielding was adapted to the cable junction boxes PR 6021/08, PR 6021/18 and PR 6021/68S and offers extremely high dielectric strength.

The cable junction boxes have lightning protection elements, each optimized to the respective application. The accompanying conduit and switch are the result of extensive tests at various high-voltage laboratories and universities and provide the optimal lightning protection with a minimum retroactive effect on the measurement results.

The tests prove conclusively that the entire system must be considered as a whole, including the load cell, junction box and the conduit and shielding to the device. Insulation of only one element (load cell, junction box or device) leads to insufficient protection or even to worse protection of the system as a whole.

NOTICE

Additional lightning protection elements in the measuring circuit compromise the high measuring accuracy of the load cells or the lightning protection.

Always carry out the installation exclusively according to the instructions in order not to void any warranty claims.

- In particular, the entire installation, including the power supply, must be sufficiently protected against lightning! Simply connecting the protective grounding conductor is not enough!

6.4 Cable connections

Note:

All components are only shown schematically.

Color code

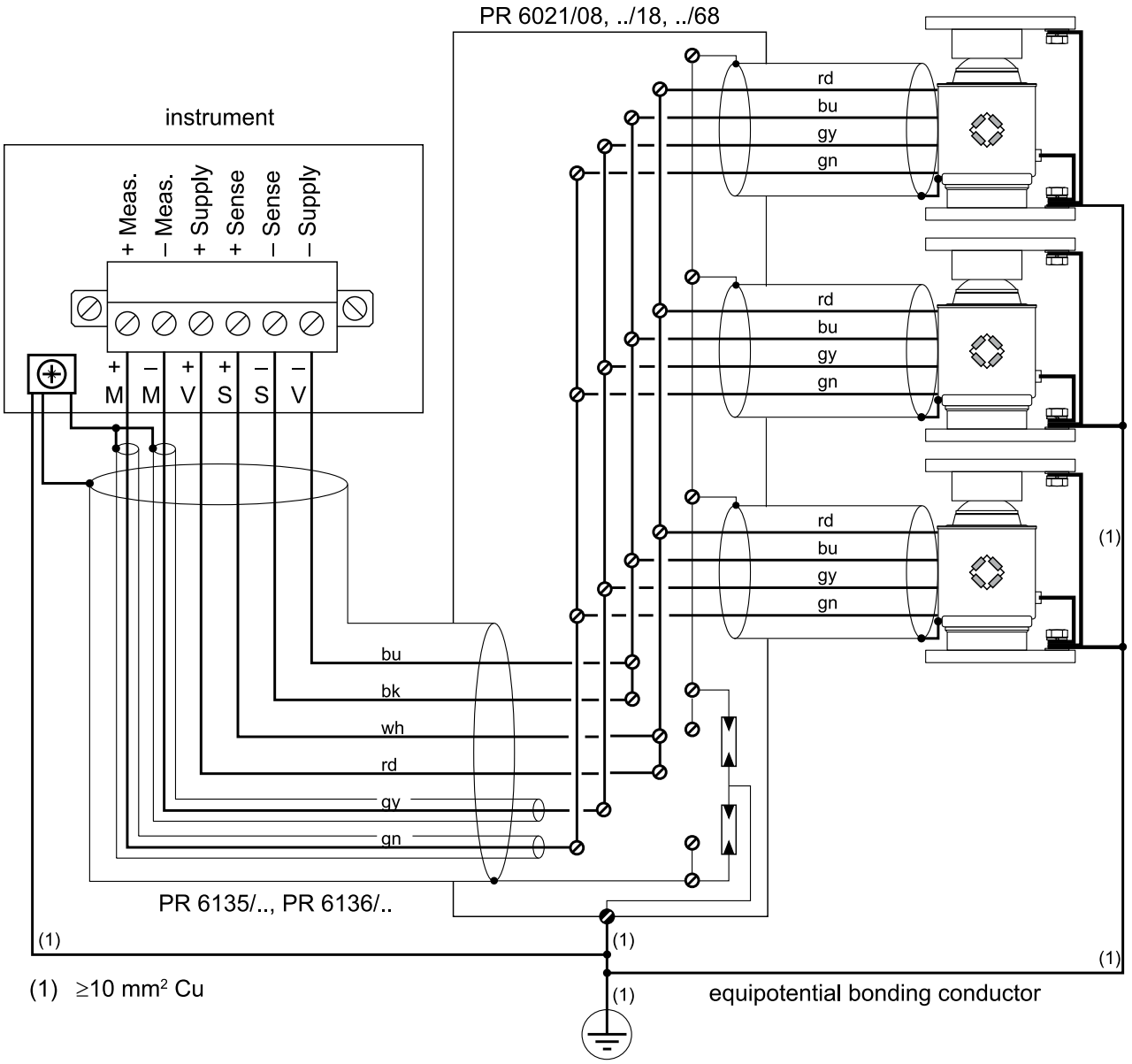
bk	=	black
bu	=	blue
gn	=	green
gy	=	gray
rd	=	red
wh	=	white

NOTICE

The functionality of the load cells is also threatened by lightning strikes near the scale.

- ▶ Make sure to use cable junction box PR 6021/08 or PR 6021/18 or PR 6021/68S (see Chapter 11.2.4).
- ▶ Connect the ground as shown in the illustrations.
- ▶ For more information, see the cable junction box installation manual.

Connection example



7 Preparing for calibration

7.1 General notes

The load cells PR 6221 are characterized by the fact that not only the output resistance (R_o) and rated output (C_n) of each load cell are each within a narrow tolerance band, but the ratio of these two values as well (= matched output).

In many cases, this considerably minimizes the adjustment effort with regards to the scale because only a mechanical height adjustment is required (see Chapter 7.3) and an electronic corner correction can be dispensed with.

In order to obtain a reproducible load application, however, the scale must be prevented from wobbling.

Note:

For calibration of the measuring system, please refer to the manual of the corresponding indicator.

7.2 Smart Calibration

When using Minebea Intec devices, we recommend always running "Smart Calibration" first.

This allows all required values to be extracted from the Calibration Certificate supplied.

- The "Hysteresis correction values for Smart Calibration" listed on the Calibration Certificate are entered for [Correction A] and [Correction B] under [Hysteresis error] - [specified] in the indicator.

  If the values are not available on the Calibration Certificate, [Hysteresis error] - [not specified] must be selected.

- The value listed under "Output at max. capacity" on the Calibration Certificate is entered in the indicator under [LC output at max. capacity].

- The value listed under "Output impedance" on the Calibration Certificate is entered in the indicator under [LC output impedance].

By performing these steps, a logical and highly accurate reading (typically better than 0.1%) is generated before the scale is even loaded for the first time.

7.3 Mechanical height adaptation

To distribute the load over the load cells as evenly as possible, height adaptation is required prior to calibration.

Procedure:

1. Place the dead load (e.g. unloaded platform) onto the load cells of the weighing system.
2. Energize the load cells in parallel with a stabilized voltage (e.g.: U_{DC} = 12 V).
3. Measure the output voltages of each individual load cell by means of a digital voltmeter and compare the individual values.
   ▷ Given deviation between the output voltages of the load cells, the load on the load cell with the lowest output voltage must be increased by putting shims between mounting plate and weighing construction.

4. Lift the weighing system immediately beside the concerned load cell.
5. Place thin, deburred sheets of metal (0.5–2 mm thick) between the upper mounting plate and the scale structure.
6. Measure the output voltages of the load cells again and adjust the height of this load cell or of another one.

7.4 Corner load test

The load cells come factory-set with an extremely accurate correlated adjustment of the characteristic value and the output impedance. Due to this special adjustment, all load cells also send the same output signal at the same dead load.

- Carry out a mechanical height adjustment; see Chapter 7.3.
- If the corners are now loaded in succession, the same value must always be displayed on the connected device. If this is not the case, first carefully check the vertical alignment of the load cells and ensure that the load disks are positioned in the middle (see Chapter 5.2) and then repeat the signal comparison of the load cells.
- If the signal deviations cannot be eliminated with a careful setup, the corners with signals that are too high can be damped by soldering additional resistors. In spite of the high SG resistance values and because of the correlated precision adjustment of the cells at the factory, only very small corrections are necessary here.

Note:

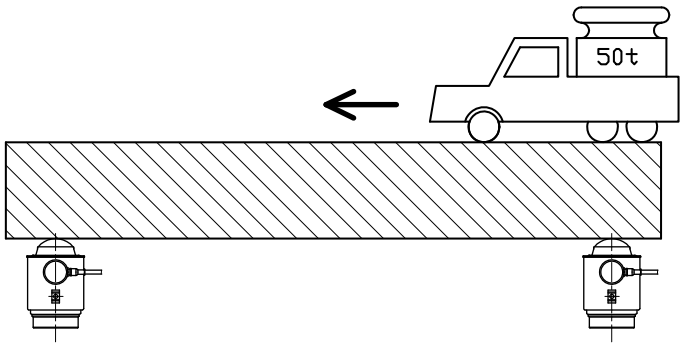
An excessive deviation almost always means that the scale is tilted or indicates force shunts or a defective load cell.

7.5 Electronic corner correction

For further information, see the installation manual relating to the junction boxes.

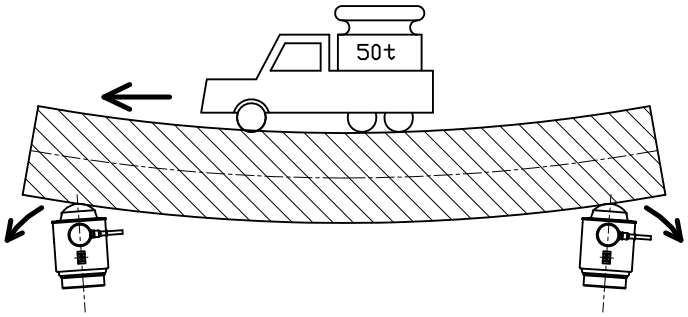
7.6 Full load test and shift test

7.6.1 Full load test



To perform adjustment, load the platform with the maximal capacity (Max).

7.6.2 Shift test

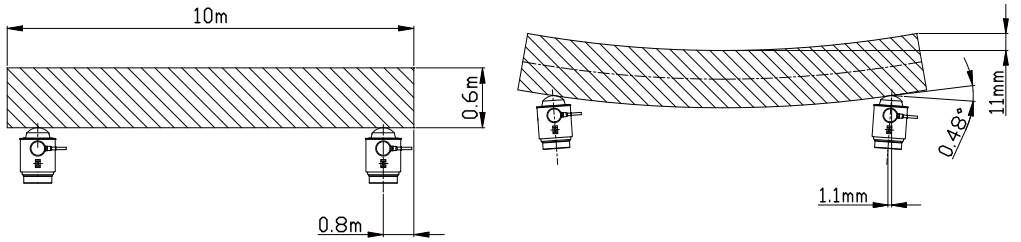


The shift test checks the behavior of the weighing instrument's mechanics and the effects of full bending of the platform.

On some constructions, this can, e. g., cause an undesirable incline of the load cell under loading. For that reason, the load cell is equipped with a special measuring element that sustainably counteracts this effect.

If the construction of the platform has been well designed, the force transmission point of the load cell is located at the "neutral fiber", i. e. the force transmission point does not shift to the horizontal when the platform bends under loading.

If the force transmission point is markedly above or below the neutral fiber, maximum bending of the platform shifts the force transmission point to the center of the platform (supporting point above) or to the edge of the platform (supporting point below). The resulting incline can change the sensitivity and thereby change the weight readout.

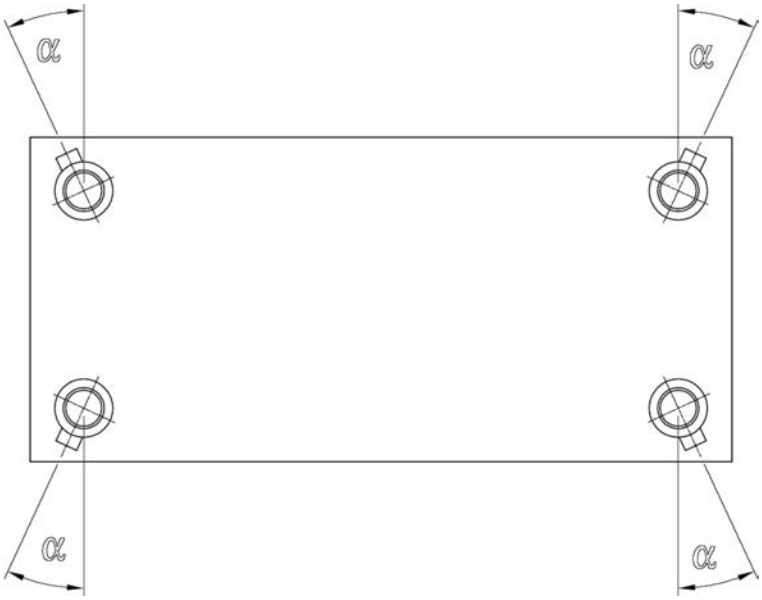


The measuring element is specially constructed to counteract this behavior (within limits) to ensure that even critical constructions maintain calibration error limits. This error can be eliminated almost completely by intentionally turning the load cells as described in the table below (derivation from the measured shift error).

The optionally available positioning device fixates the load cell in the desired position.

In most cases, full bending of the platform causes the load cells to incline outwards. Full bending of the platform and the resulting incline are hardly detectable by the naked eye.

That said, the actions described (see Chapter 7.6.3) will not be successful unless the load cells have been previously aligned vertically and the upper load disc is located in the absolute center on the top of the load cells.



The once-determined alignment will be typical for a particular platform construction; it will now only depend on the manufacturing tolerances of the platform and the care taken during installation (alignment!). This should be written down so that the determined installation position used for installation of this type of platform is optimal right from the beginning.

The effect is designed to enable the load cell to offer two zero crosses when turned around its central axis. When doing so, the sensitivity can be increased or decreased by turning from around the zero point. That means that the shift errors can actually be adjusted to the value of 0.0 kg, depending on the platform's construction. This increases the play for stack and off-center loading errors.

7.6.3 Systematically minimizing shift error

Result	Recommended action
Step 1:	
No previous measurement	The load cells are installed in such a way that all adjustment chambers point slightly outwards, i. e. To the longitudinal edge of the weighbridge, α = +20°.
Step 2: If, after corner load correction, the first shift test does not produce satisfactory results:	
In the center, lower readout than at the beginning and end of the weighbridge.	Rotate all load cells outwards by approx. -20° to position α = 0°.
In the center, higher readout than at the beginning and end of the weighbridge.	Rotate all load cells by another +20° to position α = 40°.
Step 3: If, after repeating the corner load correction, the second shift test still does not produce satisfactory results:	
In the center, the readout continues to be lower than at the beginning and end of the weighbridge.	Serious mechanical problems. The platform designed with an overcritical range!
In the center, the readout is now higher than at the beginning and end of the weighbridge.	Rotate all load cells back somewhat (to approx. α = 10°).
In the center, the readout is now lower than at the beginning and end of the weighbridge.	Rotate all load cells back somewhat (to approx. α = 30°).
In the center, the readout continues to be higher than at the beginning and end of the weighbridge.	Rotate all load cells by another 20° so that all adjustment chambers are in the α = +60° position, i. e. nearly longitudinally along the platform.

8 Troubleshooting

8.1 General Notes

The following hints will enable a technician to do an initial diagnostic or help in case of incorrect or non-reproducible weighing results after commissioning and calibration.

8.2 Visual inspection

Component	Possible errors
Weighbridges	Are elements with a solid connection to the scale in direct contact with the surroundings? Has friction developed between the weighbridge and its surroundings (e. g. dusty openings, ...)?
Cable junction box	Has moisture intruded? Do all soldering and screw connections have secure contact?
Connecting cables	Is the sheath damaged? Has moisture intruded?
Load cell	Is the load cell vertical? Is the adjustment chamber cover damaged? Is the sheath of the load cell cable damaged? Has moisture penetrated into the load cell cable?

8.3 Metrological controls

8.3.1 Checking the zero output signal of the load cell

- Unload load cell.
- Disconnect the load cell measuring outputs.
- Check whether the output voltage without load is within the limits.

Model	Type	Output voltage
PR 6221/12.5 t	C3, C4	0 mV ±0.010 mV/V
PR 6221/20 t, ../30 t	C3, C4, C5, C6	0 mV ±0.010 mV/V
PR 6221/25 t	C3, C4, C5, C6	0 mV ±0.020 mV/V
PR 6221/50 t	C3, C4	0 mV ±0.020 mV/V
	C5, C6	0 mV ±0.015 mV/V
PR 6221/60 t	C3	0 mV ±0.024 mV/V
	C4, C5, C6	0 mV ±0.015 mV/V
PR 6221/75 t	C3	0 mV ±0.030 mV/V
	C4, C5, C6	0 mV ±0.015 mV/V

8.3.2 Checking the strain gauge bridge of the load cell

- Do not exceed the test voltage.
- Check whether the values of the resistors are within the permissible limits.

Max. test voltage

- Standard version U_{DC} = 32 V
- Intrinsically safe version (PR ../..E) U_{DC} = 25 V

Maximum capacity	Input impedance (red core, blue core)	Output impedance (green core, gray core)			
E_{max}	C3...C6	C3	C4	C5	C6
12.5 t 20 t 25 t 30 t	1080 Ω ±10 Ω	1010 Ω ±1 Ω	1010 Ω ±1 Ω	1010 Ω ±1 Ω	1010 Ω ±1 Ω
50 t	1080 Ω ±10 Ω	1010 Ω ±1 Ω	1010 Ω ±1 Ω	760 Ω ±1 Ω	760 Ω ±1 Ω
60 t	1080 Ω ±10 Ω	1010 Ω ±1 Ω	635 Ω ±1 Ω	635 Ω ±1 Ω	635 Ω ±1 Ω
75 t	1080 Ω ±10 Ω	1010 Ω ±1 Ω	510 Ω ±1 Ω	510 Ω ±1 Ω	510 Ω ±1 Ω

8.3.3 Checking the insulation impedance of the load cell

NOTICE

Possible destruction of load cell

- ▶ Never apply test voltage between two cores of the load cell cable.
- ▶ Insulate the load cell cores.

Max. test voltage

- Standard version U_{DC} = 100 V
- Intrinsically safe version (PR ../..E) U_{AC} = 500 V

Insulation impedance	Core – housing	>5000 MΩ
	Core – screen	>5000 MΩ
	Screen – housing	<0.2 Ω

8.3.4 Checking the insulation impedance of the connecting cable

- Disconnect connecting cable from measuring instrument and load cells.
- Insulate the cores of the connecting cable.

Insulation impedance	Core – core	>120 MΩ × km
	Core – screen	>120 MΩ × km

9 Maintenance/repairs/cleaning

9.1 Maintenance

The load cell PR 6221 is maintenance-free.

Load cell grease must be applied to the contact surfaces between the load cell and load discs. Load cell grease order number, see Chapter 11.1.

The load cell can be extensively sprayed with off-shore all-weather protection spray in aggressive environments.

Load cell grease specification

- good water/media resistance
- good corrosion protection properties
- good oxidization and aging stability
- good temperature resistance
- and, where appropriate, good compatibility with foodstuffs

The requirements referred to apply when taking into account the specific operating/ usage conditions.

The grease also serves as protection against wear (low friction).

9.2 Repairs

The load cell PR 6221 is designed to be as robust as possible for the required measuring accuracy and is highly reliable.

Should an electrical or mechanical defect nevertheless occur, the load cell must be replaced.

Load cell repair is not possible.

9.3 Cleaning

Dirt on the load cell and movable parts of the scale must be cleaned as quickly as possible

- if it influences weighing, or
- if it is corrosive to the cell or cable material.

NOTICE

Some cleaning agents may not be compatible with the load cell material.

▶ When using cleaning agents, ensure that their compatibility with the load cell material has been tested and approved (see Chapter 4.1.2).

10 Disposal

Our products and their packaging should not be disposed of in municipal waste (e.g. garbage can for recyclable packaging, garbage can for paper packaging, etc.). They can either be recycled by the customer themselves, providing this complies with requirements set out by electrical or electronic waste or packaging waste laws, or sent back to Minebea Intec at a charge.

This option of returning the product is intended to provide proper recycling or reuse in a manner that is collected separately from municipal waste.

Before disposing of or scrapping the old products, any single-use or rechargeable batteries should be removed and taken to a suitable collection point. The type of battery used is specified in the technical data.

Please see our General Terms and Conditions for further information.

Service addresses for repair acceptance and collection points can be found on the product information enclosed with the product as well as on our website (www.minebea-intec.com).

Should you have any further questions, please contact your local service representative or our service center.

Minebea Intec GmbH

Repair center

Meiendorfer Strasse 205 A

22145 Hamburg, Germany

Phone: +49.40.67960.333

service.HH@minebea-intec.com

We reserve the right not to accept products that are contaminated with hazardous substances (ABC contamination).

11 Spare parts and accessories

11.1 Replacement parts

No.	Description	Order no.
1	Flexible copper strap, 250 mm long	5312 321 28056
2	Load cell grease 4× 5 g	5312 390 12001
3	Fastening set incl. connector (Connexx modul)	5312 693 98162

11.2 Accessories

11.2.1 Mounting kits

To install the load cell, the following mounting kits / pivots are recommended:

No.	Description	Perm. horizontal force	Order no.
1	Mounting kit PR 6021/01N (including upper load disc, lower load disc with supporting ring and flexible copper strap 10 mm^2, 250 mm long)		9405 360 21011
2	Mounting kit PR 6021/03N (including upper load disc, lower load disc with supporting ring, anti-twist protection and flexible copper strap 10 mm^2, 250 mm long)		9405 360 21031
3	Mounting kit PR 6021/05N (including upper Turbo Load disc, lower load disc with supporting ring and flexible copper strap 10 mm^2, 250 mm long)		9405 360 21051
4	Mounting kit PR 6021/07N (upper Turbo Load disc, lower load disc with supporting ring, anti-twist protection and flexible copper strap 10 mm^2, 250 mm long)		9405 360 21071
5	Horizontal constrainer PR 6152/02	≤200 kN	9405 361 52021

N = steel zinc plated, passivated and sealed (RoHS-compliant)

11.2.2 Load discs

To install the load cell, the following load discs are recommended:

No.	Description	Order no.
1	Load disc kit PR 6021/00N (upper load disc, lower load disc with supporting ring and flexible copper strap 10 mm^2, 250 mm long)	9405 360 21001
2	Load disc kit PR 6021/02N (upper load disc, lower load disc with supporting ring, anti-twist protection and flexible copper strap 10 mm^2, 250 mm long)	9405 360 21021
3	Load disc kit PR 6021/04N (upper Turbo Load disc, lower load disc with supporting ring and flexible copper strap 10 mm^2, 250 mm long)	9405 360 21041
4	Load disc kit PR 6021/06N (upper Turbo Load disc, lower load disc with supporting ring, anti-twist protection and flexible copper strap 10 mm^2, 250 mm long)	9405 360 21061

N = steel zinc plated, passivated and sealed (RoHS-compliant)

11.2.3 Connecting cables

To connect the junction box to the weighing electronics, we recommend using the following connecting cables:

No.	Description	Order no.
1	PR 6135/××	9405 361 35××2
2	PR 6135/01A (armored)	9405 361 35019
3	PR 6136/×× (for installation inside the explosion-hazarded area)	9405 361 36××1
4	PR 6136/01A (armored, for installation inside the explosion-hazarded area)	9405 361 36019

11.2.4 Cable junction boxes

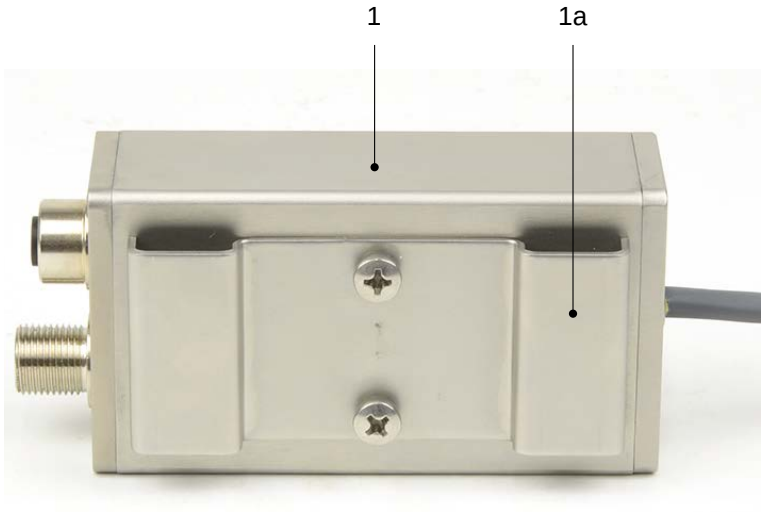
We recommend using the following junction boxes:

No.	Description	Order no.
1	PR 6021/08 (polycarbonate, 1–8 load cells, IP66/IP67; not for PR 6221/..E)	9405 360 21084
2	PR 6021/18 (polycarbonate, 1–8 load cells, IP66/IP67; not for PR 6221/..E)	9405 360 21184
3	PR 6021/68S (1.4404, 1–8 load cells, IP68, IP69, verifiable)	9405 360 21684

11.2.5 Connexx module

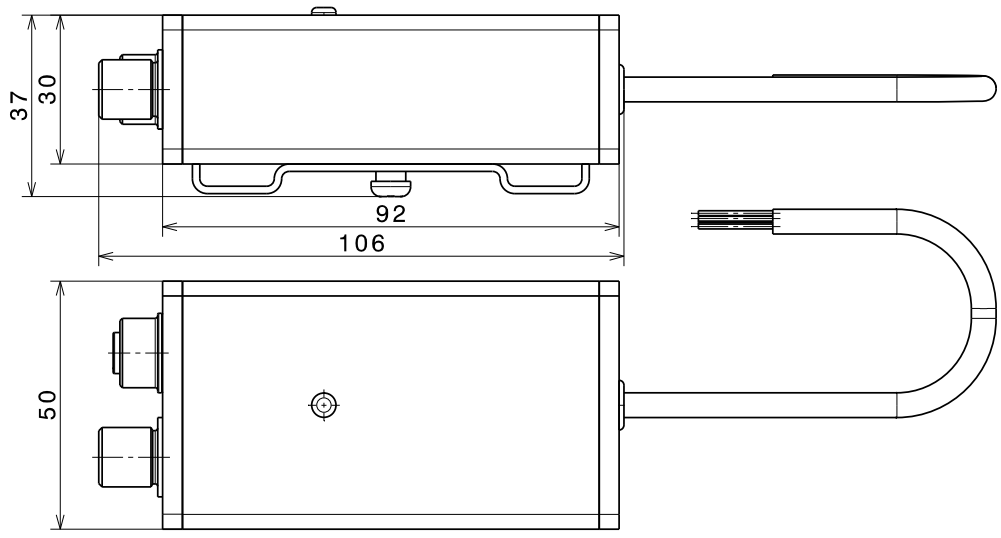
11.2.5.1 Specifications

11.2.5.1.1 Equipment supplied



No.	Description
1	Connexx module incl. retaining plate (1a)
Not shown:	
2	Fixing bracket incl. knurled screw
3	Washers (4×; for various screw sizes)
4	Rail holder

11.2.5.1.2 Dimensions



All dimensions in mm

11.2.5.2 Connection of Connexx modules

The load cell is firmly attached to the Connexx module.

The load cell cable is 0.7...1.0 m long.

The mounting options for the module are described in Chapter 11.2.5.3.

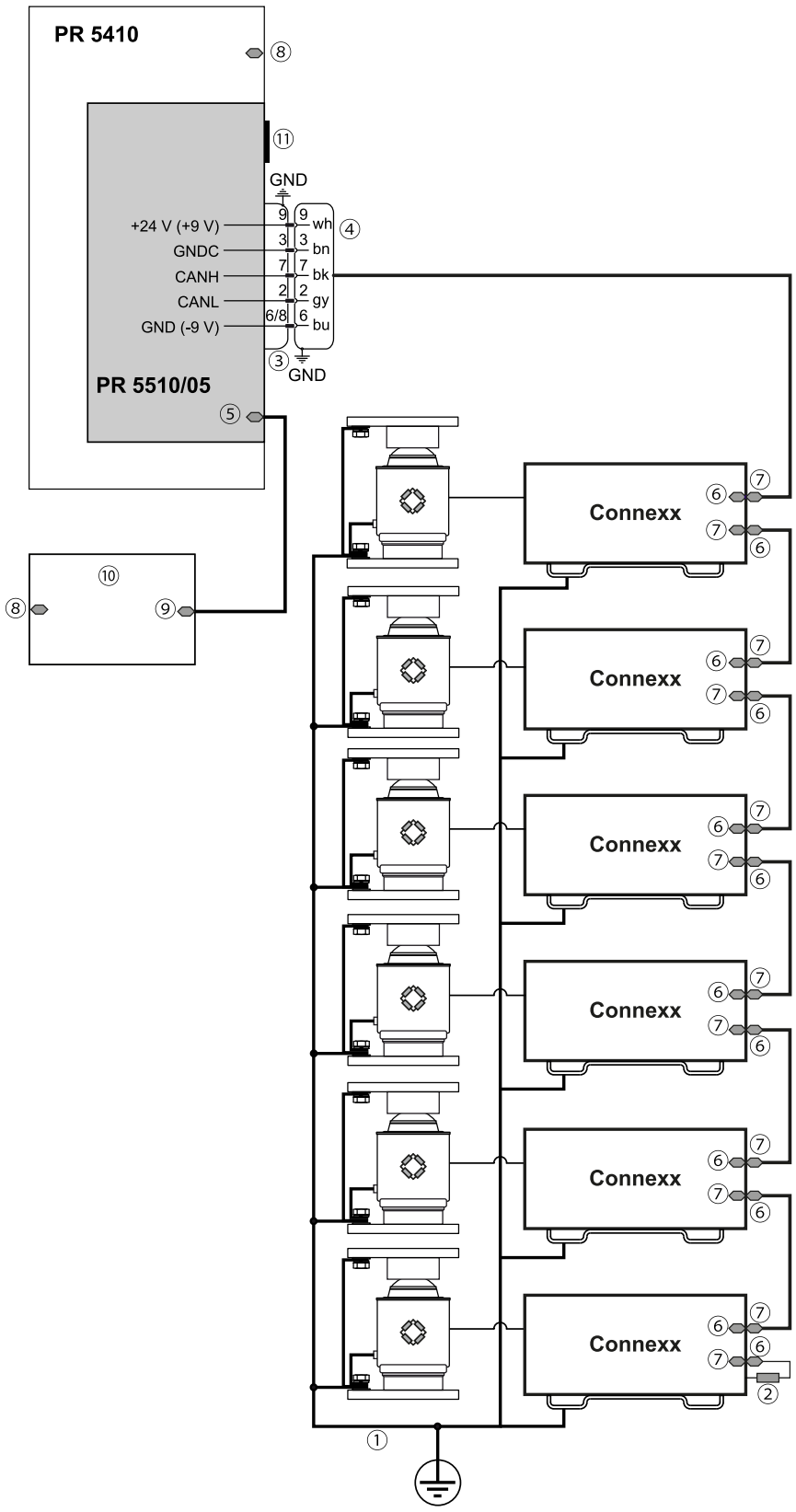
Cable lengths

Connecting part	Recommended length
Between the individual Connexx modules	max. 10 m

Connections

Color abbreviations	Color	Description
wh	white	+ Supply voltage
bu	blue	- Supply voltage
bn	brown	GNDC
gy gr/ye	gray green/yellow	CAN_L bus signal (material PUR) CAN_L bus signal (material PVC)
bk	black	CAN_H bus signal

Connection example, shown as a diagram



① Potential equalization

② Terminating resistor

③ D-Sub 9-pin plug connector, male

④ D-Sub 9-pin plug connector, female

⑤ Input voltage U_{DC} = 24 V (only for connected external voltage supply)

⑥ M12 plug connector, male

⑦ M12 plug connector, female

⑧ Voltage supply U_{AC} = 230 V

⑨ Output voltage U_{DC} = 24 V (only for connected external voltage supply)

⑩ External voltage supply (only required when connecting >4 Connexx modules)

⑪ Switch to turn on a bus-terminating resistor

11.2.5.3 Mounting options

The Connexx module is delivered with mounting elements.

It is possible to mount the Connexx module in the following ways:

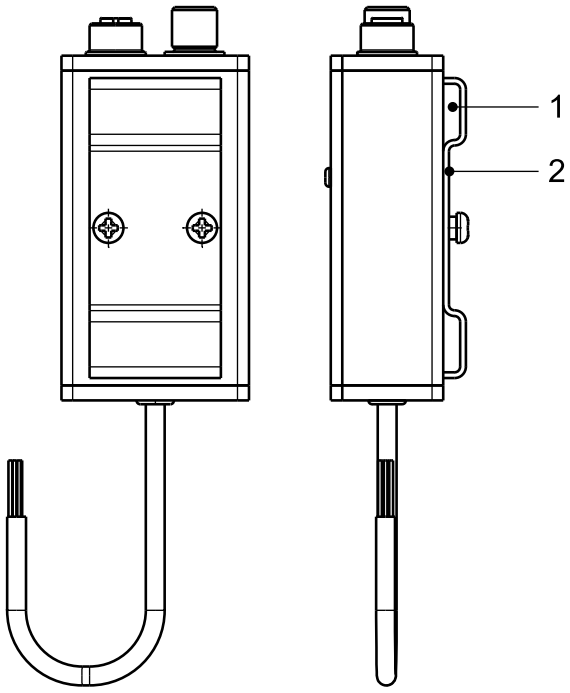
- Mounting using a retaining plate, see Chapter 11.2.5.3.1
- Mounting using a mounting bracket, see Chapter 11.2.5.3.2
- Mounting using a mounting rail holder, see Chapter 11.2.5.3.3

11.2.5.3.1 Mounting using a retaining plate

When using a retaining plate, the Connexx module is attached to the weighing device (e.g. the leg of a container).

Note:

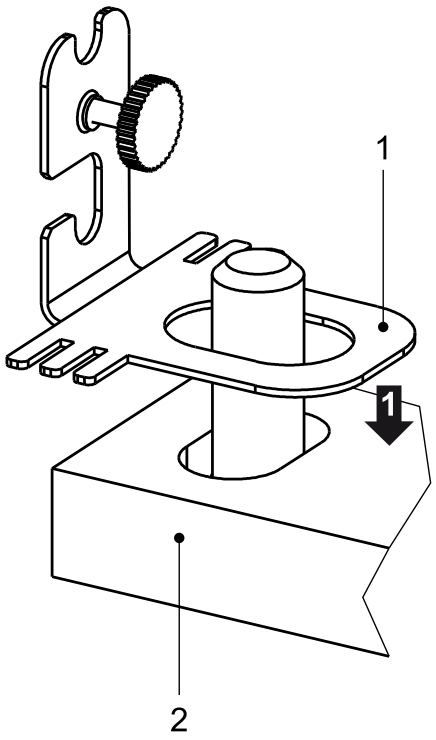
Minebea Intec recommends using a stainless-steel cable tie when mounting using a retaining plate.



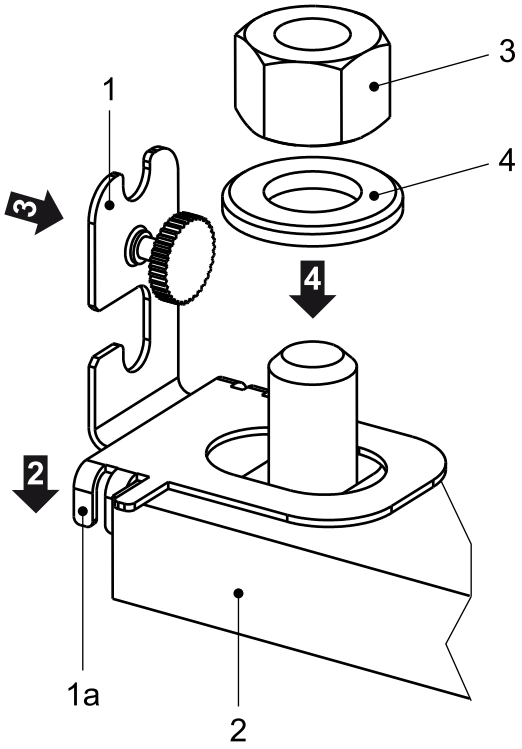
▶ Thread the stainless-steel cable tie through the lugs (1) on the retaining plate (2) and attach to the weighing device.

11.2.5.3.2 Mounting using a fixing bracket

When using a fixing bracket, the Connexx module is attached to the mounting kit.

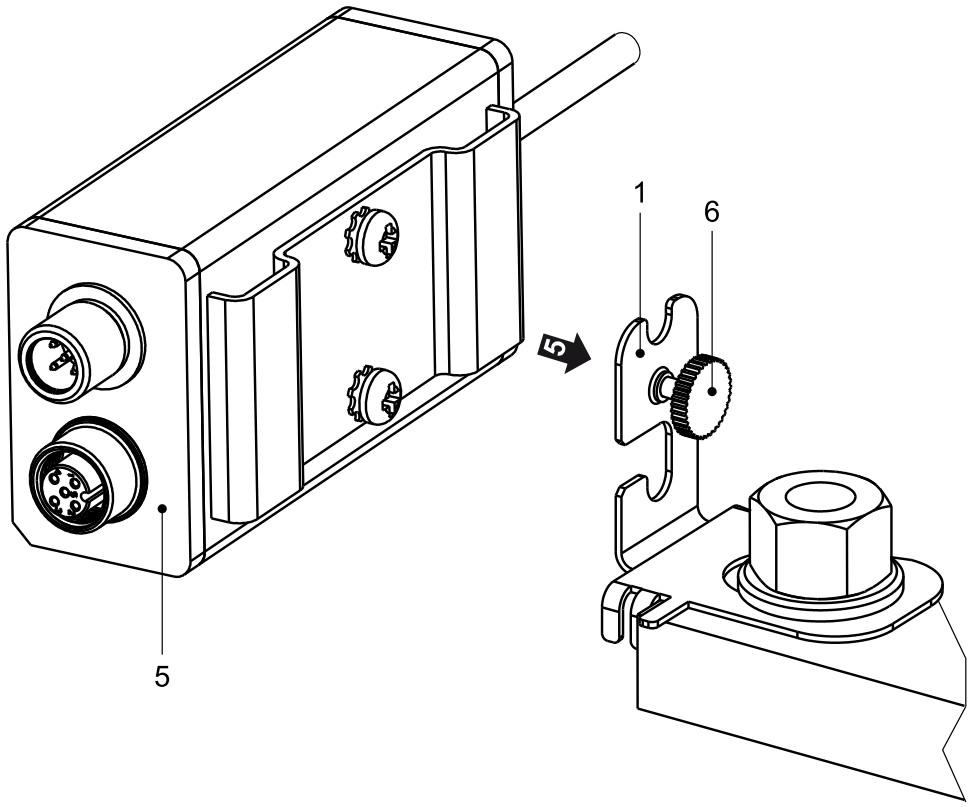


1. Place the fixing bracket (1) on the lower plate (2) of the mounting kit.



2. Depending on the mounting kit, bend the appropriate lugs (1a) downwards using a tool to prevent the fixing bracket from twisting.
3. Slide the fixing bracket (1) onto the lower plate (2) of the mounting kit.
4. Place one of the enclosed washers (4) over the bolt and tighten the nut (3).

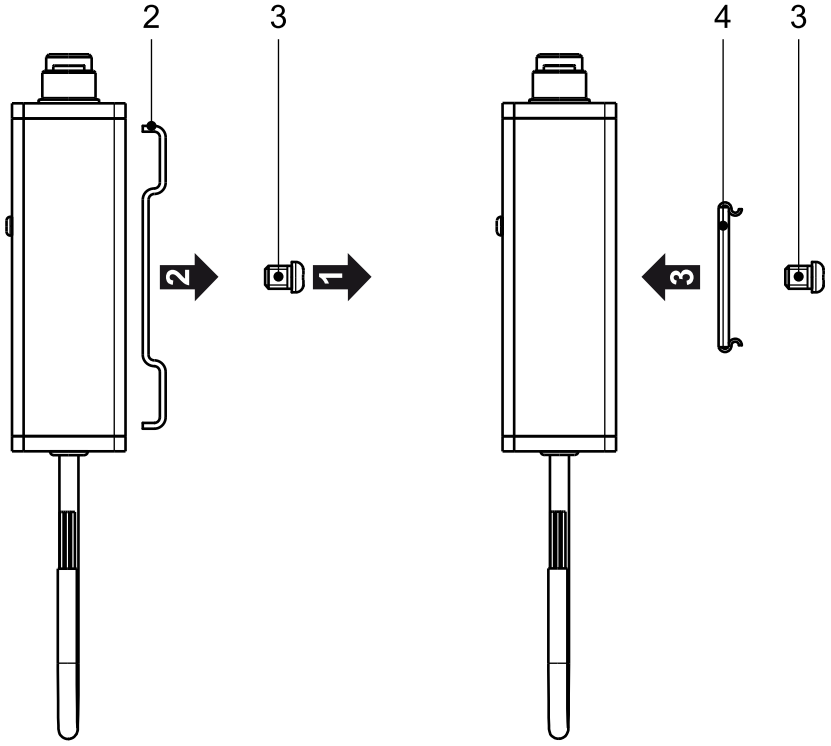
   The fixing bracket is now secured against twisting.



5. Mount the Connexx module (5) on the fixing bracket (1).
6. Tighten the knurled screw (6) by hand to fix the module in place.

11.2.5.3.3 Mounting using a mounting rail holder

When using a mounting rail holder, the Connexx module is attached to the weighing device (e.g. frame with a mounting rail).



1. Remove the screw (3).
2. Remove the retaining plate (2).
3. Install the rail holder (4) and tighten the screws (3).
4. Click the Connexx Module into the rail holder.

11.2.5.4 Connecting parts for the Connexx module

To connect the Connexx module, the following connecting parts are required:

No.	Description	Order no.
1	PR 5510/05 CANopen interface for PR 5410	9405 355 10051
2	PR 6154/03 Connexx connecting kit for three load cells (comprising: 2× PR 6155/05, 1× PR 6152/25, 1× PR 6153/99)	9405 361 54031
3	PR 6154/04 Connexx connecting kit for four load cells (comprising: 3× PR 6155/05, 1× PR 6152/25, 1× PR 6153/99)	9405 361 54041
4	PR 6154/06 Connexx connecting kit for six load cells (comprising: 5× PR 6155/10, 1× PR 6152/25, 1× PR 6153/99)	9405 361 54061
5	PR 6154/08 Connexx connecting kit for eight load cells (comprising: 7× PR 6155/10, 1× PR 6152/25, 1× PR 6153/99)	9405 361 54081
6	PR 6155/05 Connecting cable between individual Connexx modules (M12 plug connector, male → M12 plug connector, female); 5 m	9405 361 55051
7	PR 6155/10 Connecting cable between individual Connexx modules (M12 plug connector, male → M12 plug connector, female); 10 m	9405 361 55101
8	PR 6152/10 Connecting cable between Connexx module and CANopen interface (M12 plug connector, female → D-Sub 9-pin plug connector, female); 10 m	9405 361 52101
9	PR 6152/11 Connecting cable between Connexx module and CANopen interface (M12 female → open cable ends incl. D-Sub 9-pin plug connector, female with screw connectors); 10 m	9405 361 52111
10	PR 6152/25 Connecting cable between Connexx module and CANopen interface (M12 plug connector, female → D-Sub 9-pin plug connector, female); 25 m	9405 361 52251
11	PR 6152/26 Connecting cable between Connexx module and CANopen interface (M12 plug connector, female → open cable ends incl. D-Sub 9-pin plug connector, female with screw connectors); 25 m	9405 361 52261
12	PR 6152/40 Connecting cable between Connexx module and CANopen interface (M12 plug connector, female → D-Sub 9-pin plug connector, female); 40 m	9405 361 52401
13	PR 6152/41 Connecting cable between Connexx module and CANopen interface (M12 plug connector, female → open cable ends incl. D-Sub 9-pin plug connector, female with screw connectors); 40 m	9405 361 52411
14	PR 6153/98 Split cable gland for connecting cable PR 6152/.. with D-Sub plug connector, female	9405 361 53981
15	PR 6153/ 99 Terminating resistor for Connexx module (M12 plug connector, male)	9405 361 53991

12 Certificates/safety instructions/control drawing

Ser. no.	Description	Document no.	see Chapter
1	EC-Type Examination Certificate	BVS 16 ATEX E 005	12.1
2	Certificate of Conformity	IECEx BVS 16.0005	12.2
3	EU-Type Examination Certificate	TÜV 03 ATEX 2301X	12.3
4	Certificate of Conformity	IECEx TUN 17.0025X	12.4
5	Manufacturer's Certificate	MIN16ATEX001X	12.5
6	Certificate of Conformity FM	FM17CA0138 FM17US0276	12.6 12.7
7	Control drawing FM	4012 101 5688	12.8
8	EU-Declaration of Conformity	MEU17025	12.9
9	Test Certificate (PTB)	D09-03.15	12.11
10	Test Certificate (PTB)	D09-00.23	12.12
11	OIML Certificate of Conformity (PTB)	R60/2000-DE1-08.11	12.13
12	Supplementary Certificate of Approval	NMI S333A	12.14
13	Certificate of Conformance (NTEP)	14-024A1	12.15
14	Certificate of Approval (NTEP-New York)	10001	12.16

12.1 BVS 16 ATEX E 005

EG-Baumusterprüfbescheinigung

(1)

(2) Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen - Richtlinie 94/9/EG

(3) Nr. der EG-Baumusterprüfbescheinigung: **BVS 16 ATEX E 005**

(4) Gerät: **Wägezelle Typ PR62**/**E**

(5) Hersteller: **Sartorius Mechatronics T&H GmbH**

(6) Anschrift: **Meiendorfer Straße 205, 22145 Hamburg**

(7) Die Bauart dieses Gerätes sowie die verschiedenen zulässigen Ausführungen sind in der Anlage zu dieser Baumusterprüfbescheinigung festgelegt.

(8) Die Zertifizierungsstelle der DEKRA EXAM GmbH, benannte Stelle Nr. 0158 gemäß Artikel 9 der Richtlinie 94/9/EG des Europäischen Parlaments und des Rates vom 23. März 1994, bescheinigt, dass das Gerät die grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie erfüllt. Die Ergebnisse der Prüfung sind in dem Prüfprotokoll BVS PP 16.2012 EG niedergelegt.

(9) Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit

EN 60079-0:2012 + A11:2013 Allgemeine Anforderungen
EN 60079-11:2012 Eigensicherheit „i"

(10) Falls das Zeichen „X" hinter der Bescheinigungsnummer steht, wird in der Anlage zu dieser Bescheinigung auf besondere Bedingungen für die sichere Anwendung des Gerätes hingewiesen.

(11) Diese EG-Baumusterprüfbescheinigung bezieht sich nur auf die Konzeption und die Baumusterprüfung des beschriebenen Gerätes in Übereinstimmung mit der Richtlinie 94/9/EG. Für Herstellung und Inverkehrbringen des Gerätes sind weitere Anforderungen der Richtlinie zu erfüllen, die nicht durch diese Bescheinigung abgedeckt sind.

(12) Die Kennzeichnung des Gerätes muss die folgenden Angaben enthalten:

II 1G Ex ia IIC T6 Ga

DEKRA EXAM GmbH
Bochum, den 20.01.2016

Zertifizierungsstelle Fachbereich

Seite 1 von 2 zu BVS 16 ATEX E 005
Dieses Zertifikat darf nur vollständig und unverändert weiterverbreitet werden.

DEKRA EXAM GmbH, Dinnendahlstraße 9, 44809 Bochum, Deutschland
Telefon +49.234.3696-105, Telefax +49.234.3696-110, zs-exam@dekra.com

(13) Anlage zur

(14) **EG-Baumusterprüfbescheinigung**
BVS 16 ATEX E 005

(15) 15.1 Gegenstand und Typ

Wägezelle Typ PR62**/**E

Anstelle der *** werden in der vollständigen Benennung Buchstaben und Ziffern eingefügt, die unterschiedliche Typen kennzeichnen:

Wägezelle Typ PR62 [*][*] / [*][*][E]

Unterschiedliche Ausführungen (01, 02, 11, 12, 21, 41, 46, 51, 61), die sich elektrisch und / oder mechanisch unterscheiden

Laststufe (nicht Ex-relevant, nur für Informationszwecke)

15.2 Beschreibung

Die Wägezellen dienen zur Umwandlung von Kraft in ein elektrisches Signal.
Die Zellen haben ein Metallgehäuse mit eingebauten Dehnungsmessstreifen.
Der elektrische Anschluss erfolgt über eine fest angeschlossene Leitung.
Die Zellen sind „einfache elektrische Betriebsmittel".

15.3 Kenngrößen

Spannung	Ui	DC 25	V
Strom	Ii	160	mA
Leistung	Pi	2	W
Umgebungstemperaturbereich	Ta	-30 °C bis +55 °C	

(16) Prüfprotokoll

BVS PP 16.2012 EG, Stand 20.01.2016

(17) Besondere Bedingungen für die sichere Anwendung

Keine

DEKRA EXAM GmbH, Dinnendahlstraße 9, 44809 Bochum, Deutschland
Telefon +49.234.3696-105, Telefax +49.234.3696-110, zs-exam@dekra.com

Translation

(1) EC-Type Examination Certificate

(2) Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC

(3) No. of EC-Type Examination Certificate: **BVS 16 ATEX E 005**

(4) Equipment: **Load cell type PR62**/**E**

(5) Manufacturer: **Sartorius Mechatronics T&H GmbH**

(6) Address: **Meiendorfer Straße 205, 22145 Hamburg, Germany**

(7) The design and construction of this equipment and any acceptable variation thereto are specified in the appendix to this type examination certificate.

(8) The certification body of DEKRA EXAM GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive. The examination and test results are recorded in the Test and Assessment Report BVS PP 16.2012 EG.

(9) The Essential Health and Safety Requirements are assured by compliance with:

EN 60079-0:2012 + A11:2013 General requirements
EN 60079-11:2012 Intrinsic Safety "i"

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the appendix to this certificate.

(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

Ex **II 1G Ex ia IIC T6 Ga**

DEKRA EXAM GmbH
Bochum, dated 2016-01-20

Signed: Dr. Eickhoff
Certification body

Signed: Dr. Wittler
Special services unit

DEKRA EXAM GmbH, Dinnendahlstrasse 9, 44809 Bochum, Germany,
telephone +49.234.3696-105, Fax +49.234.3696-110, zs-exam@dekra.com

(13) Appendix to

(14) **EC-Type Examination Certificate**
BVS 16 ATEX E 005

(15) 15.1 Subject and type

Load cell type PR62**/**E

Instead of the *** in the complete denomination letters and numerals will be inserted which characterize different cell types:

Load cell type PR62 | * | * | / | * | * | E |

Different versions (01, 02, 11, 12, 21, 41, 46, 51, 61) which differ electrically and / or mechanically

Load level (not Ex relevant, for information purposes only)

15.2 Description

The load cells are used for converting a load into an electrical signal.
The cells have a metal enclosure with inside fixed resistance strain gauges.
The electrical connection is carried out by a permanently connected cable.
The cells are "simple apparatus".

15.3 Parameters

Voltage	Ui	DC	25 V
Current	Ii		160 mA
Power	Pi		2 W
Ambient temperature range	Ta	-30 °C up to +55 °C	

(16) Test and Assessment Report

BVS PP 16.2012 EG as of 2016-01-20

(17) Special conditions for safe use

None

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

DEKRA EXAM GmbH
44809 Bochum, 2016-01-20
BVS-/Hil/Schu/Mu A 20150360

Certification body

Special services unit

DEKRA EXAM GmbH, Dinnendahlstrasse 9, 44809 Bochum, Germany,
telephone +49.234.3696-105, Fax +49.234.3696-110, zs-exam@dekra.com

12.2 IECEx BVS 16.0005

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BVS 16.0005 issue No.:1	Certificate history: Issue No. 1 (2017-7-6) Issue No. 0 (2016-1-21)
Status:	**Current**	
Date of Issue:	**2017-07-06** Page 1 of 4	
Applicant:	**Minebea Intec GmbH** Meiendorfer Straße 205 22145 Hamburg **Germany**	
Equipment: *Optional accessory:*	**Load cell type PR 62**/**E**	
Type of Protection:	**Equipment protection by intrinsic safety "i"**	
Marking:	Ex ia IIC T6 Ga	
Approved for issue on behalf of the IECEx Certification Body:	Dr. F. Eickhoff	
Position:	Deputy Head of Certification Body	
Signature: *(for printed version)*		
Date:	2017-07-06	

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
On the safe side.

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 16.0005

Date of Issue: **2017-07-06** Issue No.: **1**

Page 2 of 4

Manufacturer: **Minebea Intec GmbH**
Meiendorfer Straße 205
22145 Hamburg
Germany

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
DE/BVS/ExTR16.0007/00

Quality Assessment Report:

DE/PTB/QAR13.0007/02

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 16.0005

Date of Issue: **2017-07-06** Issue No.: **1**

Page 3 of 4

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

General product information:

The load cells are used for converting a load into an electrical signal.
The cells have a metal enclosure with inside fixed resistance strain gauges.
The electrical connection is carried out by a permanently connected cable.
The cells are "simple apparatus".

Technical parameters

Voltage	Ui DC	25 V
Current	Ii	160 mA
Power	Pi	2 W
Ambient temperature range	Ta	-30 °C up to +55 °C

Type Designation

See Annex

SPECIFIC CONDITIONS OF USE: NO

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 16.0005

Date of Issue: **2017-07-06** Issue No.: **1**

Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

The reason for this new issue is the change of the company's name from Sartorius Mechatronics T&H GmbH to Minebea Intec GmbH. Therefore the appropriate QAR was linked to this certificate.

Annex: BVS_16_0005_Minebea_Annex_issue1.pdf

12.3 TÜV 03 ATEX 2301X

(1) **EU-Baumusterprüfbescheinigung**

(2) Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen, **Richtlinie 2014/34/EU**

(3) **Bescheinigungsnummer:** **TÜV 03 ATEX 2301 X** **Ausgabe:** 00

(4) für das Produkt: Wägezellen Typ PR 62.../.. und MP76/...

(5) des Herstellers: Minebea Intec GmbH

(6) Anschrift: Meiendorfer Str. 205 A, 22145 Hamburg

Auftragsnummer: 8000475687

Ausstellungsdatum: 14.11.2017

(7) Die Bauart dieses Produktes sowie die verschiedenen zulässigen Ausführungen sind in der Anlage und den darin aufgeführten Unterlagen zu dieser EU-Baumusterprüfbescheinigung festgelegt.

(8) Die TÜV NORD CERT GmbH bescheinigt als notifizierte Stelle Nr. 0044 nach Artikel 17 der Richtlinie 2014/34/EU des Europäischen Parlaments und des Rates vom 26. Februar 2014 die Erfüllung der wesentlichen Gesundheits- und Sicherheitsanforderungen für die Konzeption und den Bau dieses Produktes zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie.
Die Ergebnisse der Prüfung sind in dem vertraulichen ATEX Prüfungsbericht Nr. 17 203 206448 festgelegt.

9) Die wesentlichen Gesundheits- und Sicherheitsanforderungen werden erfüllt durch Übereinstimmung mit:
EN 60079-0:2012+A11:2013 EN 60079-31:2014
ausgenommen die unter Abschnitt 18 der Anlage gelisteten Anforderungen.

(10) Falls das Zeichen "X" hinter der Bescheinigungsnummer steht, wird auf die Besonderen Bedingungen für die Verwendung des Produktes in der Anlage zu dieser Bescheinigung hingewiesen.

(11) Diese EU-Baumusterprüfbescheinigung bezieht sich nur auf Konzeption und Prüfung des festgelegten Produktes. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und das Bereitstellen dieses Produktes. Diese Anforderungen werden nicht durch diese Bescheinigung abgedeckt.

(12) Die Kennzeichnung des Produktes muss die folgenden Angaben enthalten:

Ex II 1 D Ex ta IIIC T160 °C Da

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, notifiziert durch die Zentralstelle der Länder für Sicherheitstechnik (ZLS), Ident. Nr. 0044, Rechtsnachfolger der TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

Der Leiter der notifizierten Stelle

Meyer

Geschäftsstelle Hannover, Am TÜV 1, 30519 Hannover, Tel. +49 511 998-61455, Fax +49 511 998-61590

Diese Bescheinigung darf nur unverändert weiterverbreitet werden.
Auszüge oder Änderungen bedürfen der Genehmigung der TÜV NORD CERT GmbH

P17-F-001 Rev. 01/014.16 Seite 1/3

(13) **ANLAGE**

(14) **EU-Baumusterprüfbescheinigung Nr. TÜV 03 ATEX 2301 X Ausgabe 00**

(15) Beschreibung des Produktes

Die Wägezellen Typen PR62../... und MP76/... gemäß der unten aufgeführten Tabelle dienen zur Messung von Kräften mittels einer DMS Brücke mit Kompensations- und Abgleichwiderständen.
Die Gehäuse der Wägezellen sowie die eingesetzten Membranen bestehen aus Edelstahl. Alle Gehäuseteile und die Membranen sind gasdicht verschweißt.
Die Wägezellen dürfen in durch Staub explosionsgefährdeten Bereichen für EPL Da-Betriebsmittel bzw. EPL Db-Betriebsmittel installiert werden.

Der zulässige Umgebungstemperaturbereich beträgt -20 °C ... 55°C.

Auflistung der Typen und Gehäuseformen

Typen	Gehäuseform
PR 6201/...	Zylinder
PR 6202/...	Zylinder
PR 6203/...	Zylinder
PR 6221/...	Zylinder
PR 6211/...	Kreisplatte
PR 6212/...	Kreisplatte
PR 6251/...	Kreisplatte
PR 6261/...	Kreisplatte
PR 6241/...	S-Form
PR 6246/...	S-Form
MP 76/...	S-Form

Elektrische Daten

Versorgungs- und Signalstromkreis ..... (fest angeschlossenes Kabel)

nur zum Anschluss an einen bescheinigten eigensicheren Stromkreis

Höchstwert:
P_i = 2 W
Die wirksame innere Induktivität und Kapazität sind vernachlässigbar klein.

Verwendung als EPL Da-Betriebsmittel
Schutzniveau des Stromkreises: ia

Verwendung als EPL Db-Betriebsmittel
Schutzniveau des Stromkreises: ia oder ib

(16) Zeichnungen und Dokumente sind im ATEX Prüfungsbericht Nr. 17 203 206448 aufgelistet.

Seite 2/3

Anlage zur EU-Baumusterprüfbescheinigung Nr. TÜV 03 ATEX 2103 X Ausgabe 00

(17) Besondere Bedingungen für die Verwendung

1. Die freien Leitungsenden der Anschlüsse sind außerhalb des explosionsgefährdeten Bereiches oder in einem geeigneten, für den Einsatz in durch Staub explosionsgefährdeten Bereichen bescheinigten Klemmenkasten zu verdrahten.

2. Der Anschluss von nichteigensicheren Stromkreisen
- mit einer sicheren Begrenzung der verfügbaren Leistung auf 2W und
- einer sicheren galvanischen Trennung vom Erdpotential (für Wägezellen ohne zusätzlichen Erdanschluss erforderlich)

an die Wägezellen mit EPL Db ist zulässig.

3. Die Wägezellen sind so zu errichten, dass die Gehäuse sicher mit Erdpotential verbunden sind (z. B. über die Erdungsklemme; die Betriebsanleitung des Herstellers ist zu beachten).

(18) Wesentliche Gesundheits- und Sicherheitsanforderungen

keine zusätzlichen

- Ende der Bescheinigung -

Seite 3/3

Translation

(1) **EU-Type Examination Certificate**

(2) Equipment and protective systems intended for use in potentially explosive atmospheres, **Directive 2014/34/EU**

(3) **Certificate Number** **TÜV 03 ATEX 2301 X** **issue:** 00

(4) for the product: Load cell type PR 62../... and MP76/...

(5) of the manufacturer: Minebea Intec GmbH

(6) Address: Meiendorfer Str. 205 A, 22145 Hamburg

Order number: 8000475687

Date of issue: 2017-11-14

(7) The design of this product and any acceptable variation thereto are specified in the schedule to this EU-Type Examination Certificate and the documents therein referred to.

(8) The TÜV NORD CERT GmbH, Notified Body No. 0044, in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in the confidential ATEX Assessment Report No. 17 203 206448.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012+A11:2013 EN 60079-31:2012
except in respect of those requirements listed at item 18 of the schedule.

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions for Use specified in the schedule to this certificate.

11) This EU-Type Examination Certificate relates only to the design, and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the product shall include the following:
Ex II 1 D Ex ta IIIC T160 °C Da

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, notified by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the notified body

Meyer

Hanover office, Am TÜV 1, 30519 Hannover, Tel. +49 511 998-61455, Fax +49 511 998-61590

(13) **SCHEDULE**

(14) **EU-Type Examination Certificate No. TÜV 03 ATEX 2301 X issue 00**

(15) Description of product

The load cells type PR62../... and MP76/... according to the table mentioned below are used for measuring forces by means of a strain gauge with resistors for compensation and adjustment.
The housings of the load cells as well as the used membranes consist of stainless steel. All parts of the housing and the membranes are welded gas-tight.
The load cells are allowed to be installed in explosion hazardous areas caused by dust for EPL Da apparatus resp. for EPL Db apparatus.
The permissible ambient temperature range is -20 °C ... 55 °C.

Listing of types and shape of housings

Types	Shape of housing
PR 6201/...	Cylinder
PR 6202/...	Cylinder
PR 6203/...	Cylinder
PR 6221/...	Cylinder
PR 6211/...	Circle plate
PR 6212/...	Circle plate
PR 6251/...	Circle plate
PR 6261/...	Circle plate
PR 6241/...	S-shape
PR 6246/...	S-shape
MP 76/...	S-shape

Supply- and signal circuit ..... (Cable connected fixed)

only for connection to a certified intrinsically safe circuit

Maximum value:
P_i = 2 W
The effective internal inductance and capacitance are negligibly small.

Use as EPL Da apparatus
Level of protection of the circuit: ia

Use as EPL Db apparatus
Level of protection of the circuit: ia or ib

(16) Drawings and documents are listed in the ATEX Assessment Report No. 17 203 206448

page 2/3

Schedule to EU-Type Examination Certificate No. TÜV 03 ATEX 2301 X issue 00

(17) Specific Conditions for Use

1. The free cable ends of the connections have to be wired outside of the explosion hazardous area or in a suitable terminal box, suitably certified for the application in explosion hazardous areas caused by dust.

2. The connection of non-intrinsically safe circuits
- with a safe limitation of the available power of 2 W and
- a safe galvanic separation from earth potential (necessary for load cells without an additional earth connection)
to the load cells of EPL Db is permissible.

3. The load cells have to be installed in such a way, that the housings are safely connected with earth potential (e. g. via the earth terminal; observe manual of the manufacturer).

(18) Essential Health and Safety Requirements
no additional ones

- End of Certificate -

page 3/3

12.4 IECEx TUN 17.0025X

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx TUN 17.0025X issue No.:0	Certificate history:
Status:	Current	
Date of Issue:	2017-11-14 Page 1 of 3	
Applicant:	**Minebea Intec GmbH** Meiendorfer Str. 205 22145 Hamburg **Germany**	
Equipment: *Optional accessory:*	**Weighing cells type PR 62.. /... and MP76/...**	
Type of Protection:	**Equipment dust ignition protection by enclosure "t"**	
Marking:	Ex ta IIIC T160°C Da	
Approved for issue on behalf of the IECEx Certification Body:	Andreas Meyer	
Position:	Head of IECEx Certification Body	
Signature: *(for printed version)*		
Date:	2017-11-14	

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

TÜV NORD CERT GmbH
Hanover Office
Am TÜV 1, 30519 Hannover
Germany

TUV NORD

IECEx Certificate of Conformity

Certificate No.: IECEx TUN 17.0025X

Date of Issue: **2017-11-14** Issue No.: **0**

Page 2 of 3

Manufacturer: **Minebea Intec GmbH**
Meiendorfer Str. 205
22145 Hamburg
Germany

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-31 : 2013 Edition: 2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
DE/TUN/ExTR17.0023/00

Quality Assessment Report:

DE/PTB/QAR13.0007/02

IECEx Certificate of Conformity

Certificate No.: IECEx TUN 17.0025X

Date of Issue: **2017-11-14** Issue No.: **0**

Page 3 of 3

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The load cells type PR62../... and MP76/... according to the table mentioned below are used for measuring forces by means of a strain gauge with resistors for compensation and adjustment.
The housings of the load cells as well as the used membranes consist of stainless steel. All parts of the housing and the membranes are welded gas-tight.
The load cells are allowed to be installed in explosion hazardous areas caused by dust for EPL Da apparatus resp. for EPL Db apparatus.
The permissible ambient temperature range is -20 °C ... +55 °C.

See attachment for further details.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1.The free cable ends of the connections have to be wired outside of the explosion hazardous area or in a suitable terminal box, certified for the application in explosion hazardous areas caused by dust.

2.The connection of non intrinsically safe circuits
- with a safe limitation of the available power of 2W and
- a safe galvanic separation from earth potential (necessary for load cells without an additional earth connection)
to the load cells of the category 2 is permissible.

3.The load cells have to be installed in such a way, that the housings are connected with earth potential.

Annex: _Attachment_load cells TUN 17.0025 X (2).pdf

TÜV NORD CERT GmbH
Hanover Office
Am TÜV 1
30519 Hannover
Germany

Attachment to IECEx TUN 17.0025 X issue 00

The load cells type PR62../... and MP76/... according to the table mentioned below are used for measuring forces by means of a strain gauge with resistors for compensation and adjustment. The housings of the load cells as well as the used membranes consist of stainless steel. All parts of the housing and the membranes are welded gas-tight.
The load cells are allowed to be installed in explosion hazardous areas caused by dust for category 1 apparatus resp. for category 2 apparatus.
The permissible ambient temperature range is -20 °C ... 55 °C.

Listing of types and shape of housings

Types	Shape of housing
PR 6201/...	Cylinder
PR 6202/...	Cylinder
PR 6203/...	Cylinder
PR 6221/...	Cylinder
PR 6211/...	Circle plate
PR 6212/...	Circle plate
PR 6251/...	Circle plate
PR 6261/...	Circle plate
PR 6241/...	S-shape
PR 6246/...	S-shape
MP 76/...	S-shape

Supply- and signal circuit ..... (Cable connected fixed)

only for connection to a certified intrinsically safe circuit
Maximum value:
P_i = 2 W
The effective internal inductance and capacitance are negligibly small.
Use as category 1 apparatus
Level of protection of the circuit: ia
Use as category 2 apparatus
Level of protection of the circuit: ia or ib

Specific Conditions of Use

1.The free cable ends of the connections have to be wired outside of the explosion hazardous area or in a suitable terminal box, suitably certified for the application in explosion hazardous areas caused by dust.

2.The connection of non intrinsically safe circuits
- with a safe limitation of the available power of 2 W and
- a safe galvanic separation from earth potential (necessary for load cells without an additional earth connection)
to the load cells of the category 2 is permissible.

3.The load cells have to be installed in such a way, that the housings are safely connected with earth potential (e. g. via the earth terminal; observe manual of the manufacturer).

12.5 MIN16ATEX001X

Herstellerbescheinigung
Manufacturer´s certificate

Minebea intec
The true measure

Nummer *Number*	MIN16ATEX001X
Hersteller *Manufacturer*	Minebea Intec GmbH Meiendorfer Straße 205A 22145 Hamburg, Germany

erklärt in alleiniger Verantwortung, dass das Produkt
declares under sole responsibility that the product

Geräteart *Device type*	Wägezelle *Load cell*
Baureihe *Type series*	PR 6201, PR 6202, PR 6203, PR 6207, PR 6211 D1(500kg-10t), PR 6212, PR 6221, PR 6241, PR 6246, PR 6251, PR 6261 | (ohne Typ / without type LA or LT)

auf das sich diese Bescheinigung bezieht, mit der/den folgenden Norm(en) oder normativen Dokument(en) übereinstimmt (siehe Seite 2) gemäß den Bestimmungen der „Richtlinie **2014/34/EU** des Europäischen Parlaments und des Rates vom 26. Februar 2014 zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten für Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen". Das Produkt wird wie folgt gekennzeichnet:
*to which this certification relates is in conformity with the following standard(s) or other normative document(s) (see page 2) pursuant to the provisions of the "Directive **2014/34/EU** of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to equipment and protective systems intended for use in potentially explosive atmospheres ". This product is labelled as follows:*

Kennzeichnung *Marking*	II 3G Ex nA IIC T6 Gc II 3D Ex tc IIIC T85°C Dc MIN16ATEX001X

Minebea Intec GmbH
Hamburg, 14.07.2022

Dr. K. Sommer Managing Director	Dr. A. Böttger CTO	Torben Hiller Ex Approval Manager

Diese Erklärung bescheinigt die Übereinstimmung mit den genannten EU-Richtlinien, ist jedoch keine Zusicherung von Eigenschaften. Bei einer mit uns nicht abgestimmten Änderung des Produktes verliert diese Erklärung ihre Gültigkeit. Die Sicherheitshinweise der zugehörigen Produktdokumentation sind zu beachten.
This declaration certifies conformity with the above mentioned EC Directives, but does not guarantee product attributes. Unauthorized product modifications make this declaration invalid. The safety information in the associated product documentation must be observed.

1/2
MIN16ATEX001X Rev. 6

Herstellerbescheinigung
Manufacturer´s certificate

Minebea intec
The true measure

Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit:
Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

Normen ***Standards***	**EN IEC 60079-0:2018** Explosionsgefährdete Bereiche – Teil 0: Geräte - Allgemeine Anforderungen *Explosive atmospheres – Part 0: Equipment - General requirements* **EN 60079-15:2010** Explosionsfähige Atmosphäre – Teil 15: Geräteschutz durch Zündschutzart „n" *Explosive atmospheres – Part 15: Equipment protection by type of protection „n"* **EN 60079-31:2014** Explosionsfähige Atmosphäre – Teil 31: Geräte-Staubexplosionsschutz durch Gehäuse „t" *Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure „t"*

Diese Bescheinigung wurde auf Basis des folgenden Prüfberichts erstellt:
This certificate was drawn on the basis of the following test report:

Prüfbericht ***Test Report***	**MTR17001** Minebea Intec GmbH, Hamburg, Germany
Sicherheitshinweise ***Safety instructions***	**949905947901**
Umgebungstemperatur **Ambient temperature**	**-30°C ... +55°C**
IP-Schutz ***IP protection***	**IP6X**

Für diese Produkt gelten folgende besonderen Bedingungen für den sicheren Gebrauch:
For this product the following special conditions for safe use apply:

besondere Bedingungen ***special Conditions***	Für Anwendungen in Umgebungen mit brennbaren Stäuben ist eine elektrostatische Aufladung zu vermeiden. *For application in environments with combustible dust, electrostatic charging shall be avoided.* Bei Verwendung der Zündschutzart "Ex nA" ist eine Transientenschutzeinrichtung vorzusehen welche einen Maximalwert von 140% des Spitzenspannungswertes von 85V sicherstellt. *When applied in type of protection non sparking "Ex nA", a transient protection device shall be set at a level not exceeding 140% of the peak rated voltage value of 85 V.*

2/2
MIN16ATEX001X Rev. 6

12.6 FM17CA0138

CERTIFICATE OF CONFORMITY

1. HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS
2. Certificate No: FM17CA0138
3. Equipment: (Type Reference and Name) Model PR 6201, PR 6202, PR 6203, PR 6211, PR 6212, PR 6221, PR 6241, PR 6246, PR 6251, PR 6261 Load Cells
4. Name of Listing Company: Minebea Intec GmbH
5. Address of Listing Company: Meiendorfer Str. 205A
22145 Hamburg
Germany
6. The examination and test results are recorded in confidential report number:

   3053046 dated 22nd July 2014
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

   CAN/CSA-C22.2 No. 213: 2013, CAN-C22.2 No. 157-92: 2012,
CSA-C22.2 No. 1010.1: 2004, CAN/CSA-C22.2 No. 25: 2009
8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.
9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.
10. Equipment Ratings:

    Intrinsically safe (Entity) for use in Class I,II and III Division 1, Groups A, B, C, D, E, F and G indoor and outdoor Hazardous Locations, Temperature Class T4A Ta= -40°C to +70°C and T5 Ta= -40°C to +55°C when installed per Control Drawing 4012 101 5688.
    Nonincendive (NIFW) for use in Class I, Division 2, Groups A, B, C, and D indoor and outdoor Hazardous Locations, Temperature Class T4A Ta= -40°C to +70°C and T5 Ta= -40°C to +55°C when installed per Control Drawing 4012 101 5688.

Certificate issued by:

J/E. Marquedant
VP, Manager - Electrical Systems

30 July 2020
Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmapprovals.com www.fmapprovals.com

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SCHEDULE

Canadian Certificate Of Conformity No: FM17CA0138

Dust Ignition protected for Class II, III Division 2, Groups E, F and G indoor and outdoor Hazardous Locations, Temperature Class T4A Ta= -40°C to +70°C and T5 Ta= -40°C to +55°C when installed per Control Drawing 4012 101 5688

11. The marking of the equipment shall include:

IS CL I, II, III, DIV 1, GP A,B,C,D,E,F,G Entity - 4012 101 5688
NI CL I, II, III, DIV 2, GP A,B,C,D, E, F, G - 4012 101 5688; NIFW
T4A Ta= -40°C to 70°C; T5 Ta= -40°C to 55°C

12. **Description of Equipment:**

General - The Model PR 62xx Series Load Cells are precision compression load cells designed to meet the specific requirements of a wide range of weighing installations.

Construction - The Model PR 62xx Series Load Cells are contructed of welded stainless steel, hermetically sealed, and filled with inert gas.

Ratings - The Model PR 62xx Series Load Cells are rated for an operating temperature range of -40°C to 70°C. Entity and Nonincendive Field Wiring parameters are as defined below.

PR 62a/bc d e. Load Cell.

Entity/Nonincendive Field Wiring Parameters:
Ui = 25 V, Ii = 160 mA, Pi = 2 W; Ci= 0 µF, Li= 0 mH.

a = 01, 02, 03, 11, 12, 21, 41, 46, 51, 61
b = up to three numbers denoting the maximum capacity (may be separated by a dot)
c = Unit of measurement: blank or t
d = Accuracy: up to three numbers or letters (may be separated by dots)
e = Special: F or blank

13. **Specific Conditions of Use:**

None

14. **Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals Canadian Certification Scheme.

15. **Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

16. **Certificate History**

Details of the supplements to this certificate are described below:

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
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SCHEDULE

Canadian Certificate Of Conformity No: FM17CA0138

Date	Description
22nd July 2014	Original Issue.
6th October 2017	Supplement 3: Report Reference: – RR210028 dated 6th October 2017. Description of the Change: Company name change from Sartorius Mechatronics T&H GmbH. Certificate reformated.
10th November 2017	Supplement 4: Report Reference: – RR211742 dated 10th November 2017. Description of the Change: Addition of option a = 03.
24th October 2018	Supplement 5: Report Reference: – RR215447 dated 24th October 2018 . Description of the Change: Update lower operating temperatures from -30°C to -40°C.
30th July 2020	Supplement 6: Report Reference: – RR224030 dated 30th July 2020. Description of the Change: Added load cell variation PR 6261.

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmapprovals.com www.fmapprovals.com

12.7 FM17US0276

CERTIFICATE OF CONFORMITY

FM Approvals

1. HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS
2. Certificate No: FM17US0276
3. Equipment: (Type Reference and Name) Model PR 6201, PR 6202, PR 6203, PR 6211, PR 6212, PR 6221, PR 6241, PR 6246, PR 6251, PR 6261 Load Cells
4. Name of Listing Company: Minebea Intec GmbH
5. Address of Listing Company: Meiendorfer Str. 205A
   22145 Hamburg
   Germany
6. The examination and test results are recorded in confidential report number:

   3001200 dated 12th August 1999
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

   FM Class 3600:2018, FM Class 3610:2010, FM Class 3611:2004, FM Class 3810:2005
8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.
9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.
10. Equipment Ratings:

    Intrinsically safe (Entity) for use in Class I,II and III Division 1, Groups A, B, C, D, E, F and G indoor and outdoor Hazardous (Classified) Locations, Temperature Class T4A Ta= -40°C to +70°C and T5 Ta= -40°C to +55°C when installed per Control Drawing 4012 101 5688.
    Nonincendive (NIFW) for use in Class I, II and III Division 2, Groups A, B, C, D, E, F and G indoor and outdoor Hazardous (Classified) Locations, Temperature Class T4A Ta= -40°C to +70°C and T5 Ta= -40°C to +55°C when installed per Control Drawing 4012 101 5688.

Certificate issued by:

J.E. Marquedant
VP, Manager - Electrical Systems

30 July 2020
Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmapprovals.com www.fmapprovals.com

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SCHEDULE

US Certificate Of Conformity No: FM17US0276

11. The marking of the equipment shall include:

IS CL I, II, III, DIV 1, GP A,B,C,D,E,F,G Entity - 4012 101 5688
NI CL I, II, III, DIV 2, GP A,B,C,D,E,F,G - 4012 101 5688; NIFW
T4A Ta= -40°C to 70°C; T5 Ta= -40°C to 55°C

12. **Description of Equipment:**

General - The Model PR 62xx Series Load Cells are precision compression load cells designed to meet the specific requirements of a wide range of weighing installations.

Construction - The Model PR 62xx Series Load Cells are contructed of welded stainless steel, hermetically sealed, and filled with inert gas.

Ratings - The Model PR 62xx Series Load Cells are rated for an operating temperature range of -40°C to 70°C. Entity and Nonincendive Field Wiring parameters are as defined below.

PR 62a/bc d e. Load Cell.

Entity/Nonincendive Field Wiring Parameters:
Ui = 25 V, Ii = 160 mA, Pi = 2 W; Ci= 0 µF, Li= 0 mH.

a = 01, 02, 03, 11, 12, 21, 41, 46, 51, 61
b = up to three numbers denoting the maximum capacity (may be separated by a dot)
c = Unit of measurement: blank or t
d = Accuracy: up to three numbers or letters (may be separated by dots)
e = Special: F or blank

13. **Specific Conditions of Use:**

None

14. **Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. **Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmapprovals.com www.fmapprovals.com

SCHEDULE

US Certificate Of Conformity No: FM17US0276

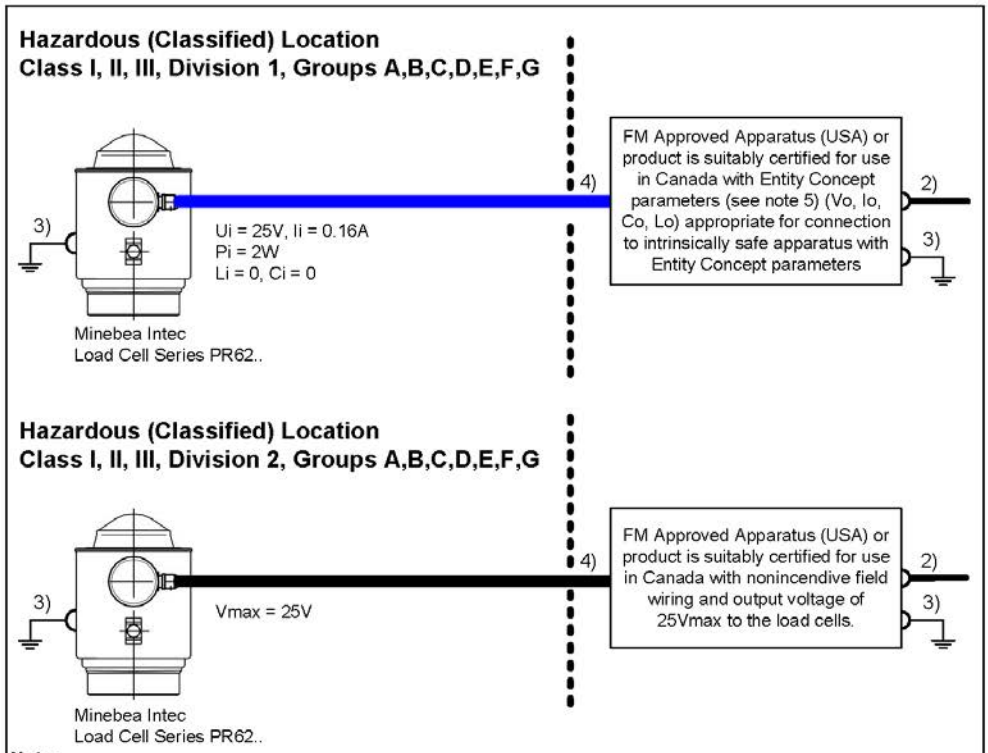
16. **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
12th August 1999	Original Issue.
6th October 2017	Supplement 7: Report Reference: – RR210028 dated 6th October 2017. Description of the Change: Company name change from Sartorius Mechatronics T&H GmbH. Certificate reformated.
10th November 2017	Supplement 8: Report Reference: – RR211742 dated 10th November 2017. Description of the Change: Addition of option a = 03.
24th October 2018	Supplement 9: Report Reference: – RR215447 dated 24th October 2018. Description of the Change: Update lower operating temperatures from -30°C to -40°C. Update FM Class 3600 from 2011 to 2018.
30th July 2020	Supplement 10: Report Reference: – RR224030 dated 30th July 2020. Description of the Change: Added load cell variation PR 6261.

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmapprovals.com www.fmapprovals.com

12.8 4012 101 5688



Notes

1) In the **USA**: The installation must be in accordance with the National Electrical Code ®, NFPA 70 and ANSI / ISA-RP 12.06.01.
   In **Canada**: The installation must be in accordance with the Canadian Electrical Code ®, Part 1.
2) The apparatus must not be connected to any device that uses or generates in excess of 250Vrms or DC.
   U_m = 250V.
3) In the **USA**: The Apparatus must be connected to a suitable ground electrode per National Electrical Code ®, NFPA 70, Article 504. The resistance of the ground pad must be less than 1 ohm.
   In **Canada**: The Apparatus must be connected to a suitable ground electrode per Canadian Electrical Code ®, Part 1. The resistance of the ground pad must be less than 1 ohm.
   The load cell ground (housing) must be insulated from the surface on which it is mounted or be at the same potential of the NRTL approved apparatus ground as per installation drawings.
4) **Connection must be made in accordance with the manufacturer's instructions** of the NRTL approved apparatus.
5) The Entity Concept allows interconnection of intrinsically safe apparatus with associated apparatus not specifically examined in combination as a system when the approved values of Vo and Io of the associated apparatus are less than or equal to Vi and Ii of the intrinsically safe apparatus and the approved values of Co and Lo of the associated apparatus are greater than Ci and Li of the intrinsically safe apparatus plus all cable parameters.
7) Ambient temperature range:
   -40°C .... +55°C (-40°F .... +131°F) for T5 and -40°C .... +70°C (-40°F .... +158°F) for T4A.
8) **WARNING:** SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY.
   AVERTISSEMENT: LA SUBSTITUTION DE COMPOSANTS PEUT COMPROMETTRE LA SÉCURITÉ INTRINSÈQUE.

	Datum Date	Name	Material		Maßstab / Scale
Erstellt Written by	20.08.18	Schallhorn	Minebea intec The true measure	Benennung / Title: Load Cells Series PR62..	1:1
Geprüft Reviewed by	20.08.18	Hiller			Blatt Sheet 1
Freigabe Released by	20.08.18	Schallhorn	Ausgabe / Revision 04 / Änderung / Alteration PA50180542	Zeichnungs-Nr. / Drawing number 4012 101 5688 / Teildok. Nr./ Part doc. no. 592	von of 1

12.9 MEU17025

CE

EU-Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

Minebea intec
The true measure

MEU17025 Rev.3

1. Product model / product number / solely valid for project number:
   - 1.1 Weighbridge Load Cell / PR 6221 / ----
   - 1.2 Weighbridge Load Cell + Converter Connexx® / PR 6221 + PR 6150 / ----

2. Name and address of the manufacturer (2.1) and his authorized representative (2.2):
   - 2.1 Minebea Intec GmbH, Meiendorfer Straße 205 A, 22145 Hamburg, Germany
   - 2.2 /

3. This declaration of conformity is issued under the sole responsibility of the manufacturer.

4. Object(s) of the declaration:
   - 4.1 PR 6221; PR 6221 + PR 6150
   - 4.2 PR 6221 (A.1)
   - 4.3 PR 6221 (A.2)
   - 4.4 PR 6221/____E

5. The object(s) of the declaration described above is in conformity with the relevant Union harmonization legislation:

		(4.1)	(4.2)	(4.3)	(4.4)
5.1	2014/30/EU	(6.1)	(6.1)	(6.1)	(6.1)
5.2	2011/65/EU	(6.2)	(6.2)	(6.2)	(6.2)
5.3	2014/34/EU		(6.3)	(6.4)	(6.5)

6. References to the relevant harmonized standards used or references to the other technical specifications in relation to which conformity is declared:

6.1	2014/30/EU	EN 61326-1:2013, EN 61000-4-20:2010
6.2	2011/65/EU	EN IEC 63000:2018
6.3	2014/34/EU	EN IEC 60079-0:2018, EN 60079-15:2010, EN 60079-31:2014
6.4	2014/34/EU	EN 60079-0:2012+A11:2013, EN 60079-31:2014
6.5	2014/34/EU	EN 60079-0:2012+A11:2013, EN 60079-11:2012

7. The notified body w performed x and issued the certificate y relevant for z:

	w	x	y	z
7.1	/	Manufacturer's certificate	MIN16ATEX001X	(4.2)
7.2	0032	EC-Type Examination Certificate	TÜV 03 ATEX 2301 X	(4.3)
7.3	0158	EC-Type Examination Certificate	BVS 16 ATEX E 005	(4.4)
7.4	0102	Production Quality Assessment Notification	PTB 02 ATEX Q010	(4.3), (4.4)

Minebea Intec GmbH
Hamburg, 20. Jan. 2023

	p.p.a	i.A.
Dr. Karl Sommer	Dr. Axel Böttger	Oliver Freitag
COO	CTO	CE Certification

1/6

EU-Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

MEU17025 Rev.3

Minebea intec
The true measure

A. Additional information on ( ):

A.1	(7.1)	Marking	II 3G Ex nA IIC T6 Gc II 3D Ex tc IIIC T85°C Dc MIN16ATEX001X
A.2	(7.2)	Marking	II 1 D Ex ta IIIC T160°C Da TÜV 03 ATEX 2301 X
A.3	(7.3)	Marking	II 1G Ex ia IIC T6 Ga BVS 16 ATEX E 005
A.4	(6.4)	The above-mentioned product is in line with the requirements of the directive 2014/34/EU. One or more of the European Standards mentioned are already replaced by new editions. The manufacturer declares that the product also complies with these new editions, as the changed requirements of the new Standards do not affect the product.	

2/6

EU-Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

MEU17025 Rev.3

Minebea intec
The true measure

български (bg)

Декларация за съответствие
1. Модел на продукта / Номер на продукта / валидно само за номера на проекта:
2. Наименование и адрес на производителя (2.1) и на неговия упълномощен представител (2.2):
3. Настоящата декларация за съответствие е издадена на отговорността на производителя.
4. Предмет(и) на декларацията:
5. Предметът (ите) на декларацията, описан(и) по-горе отговаря(т) на съответното законодателство на Съюза за хармонизация:
6. Позоваване на използваните хармонизирани стандарти или позоваване на други технически спецификации, по отношение на които се декларира съответствие:
7. Нотифицираният орган w извърши x и издаде сертификата y, отнасящ се за z:
A. Допълнителна информация за ( ):
A.1 Маркировка
A.2 Маркировка
A.3 Маркировка
A.4 Горепосоченият продукт съответства на изискванията на Директива 2014/34/ЕС. Един или повече от упоменатите европейски стандарти вече са заменени от нови издания. Производителят декларира, че продуктът съответства и на тези нови издания, тъй като промененните изисквания на новите стандарти не засягат продукта.

čeština (cs)

Prohlášení o shodě
1. Model výrobku / číslo výrobku / platné pouze pro číslo projektu:
2. Jméno a adresa výrobce (2.1) a jeho zplnomocněného zástupce (2.2):
3. Toto prohlášení o shodě se vydává na výhradní odpovědnost výrobce.
4. Předmět(y) prohlášení:
5. Výše popsaný předmět / Výše popsané předměty prohlášení je/jsou ve shodě s příslušnými harmonizačními právními předpisy Unie:
6. Odkazy na příslušné harmonizované normy, které byly použity, nebo na jiné technické specifikace, na jejichž základě se shoda prohlašuje:
7. Oznámený subjekt w provedl x a vydal certifikát y relevantní z hlediska z:
A. Další informace o ( ):
A.1 Označení
A.2 Označení
A.3 Označení
A.4 Výše uvedený výrobek je v souladu s požadavky směrnice Evropského parlamentu a Rady 2014/34/EU. Jedna nebo více uvedených evropských norem již byly nahrazeny novými vydáními. Výrobce prohlašuje, že výrobek je v souladu i s těmito novými vydáními, neboť upravené požadavky těchto nových norem nemají na výrobek vliv.

dansk (da)

Overensstemmelseserklæring
1. Produktmodel / produktnummer / gælder kun for projektnummer:
2. Fabrikantens (2.1) og dennes bemyndigede repræsentants (2.2) navn og adresse:
3. Denne overensstemmelseserklæring udstedes på fabrikantens ansvar.
4. Genstand(ene) for erklæringen:
5. Genstanden(e) for erklæringen, som beskrevet ovenfor, er i overensstemmelse med den relevante EU-harmoniseringslovgivning:
6. Referencer til de relevante anvendte harmoniserede standarder eller til de andre tekniske specifikationer, som der erklæres overensstemmelse med:
7. Det bemyndigede organ w har foretaget x og udstedt attesten y, der gælder for z:
A. Supplerende oplysninger om ( ):
A.1 Mærkning
A.2 Mærkning
A.3 Mærkning
A.4 Ovenstående produkt opfylder kravene i direktiv 2014/34/EU. En eller flere af de anførte europæiske standarder er allerede blevet erstattet af nye udgaver. Fabrikanten erklærer, at produktet også er i overensstemmelse med de nye udgaver, idet de ændrede krav i de nye standarder ikke berører produktet.

Deutsch (de)

Konformitätserklärung
1. Produktmodell / Produktnummer / gilt ausschließlich für Projekt-Nr.:
2. Name und Anschrift des Herstellers (2.1) und seines Bevollmächtigten (2.2):
3. Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller.
4. Gegenstände der Erklärung:
5. Die oben beschriebenen Gegenstände der Erklärung erfüllen die einschlägigen Harmonisierungsrechtsvorschriften der Union:
6. Angabe der einschlägigen harmonisierten Normen oder der anderen technischen Spezifikationen, die der Konformitätserklärung zugrunde gelegt wurden:
7. Die notifizierte Stelle w hat x und die für z relevante Bescheinigung y ausgestellt:
A. Zusatzangaben zu ( ):
A.1 Kennzeichnung
A.2 Kennzeichnung
A.3 Kennzeichnung
A.4 Das oben genannte Produkt erfüllt die Anforderungen der Richtlinie 2014/34/EU. Mindestens eine der aufgeführten europäischen Normen ist bereits durch eine neue Ausgabe ersetzt worden. Der Hersteller erklärt, dass das Produkt mit diesen neuen Ausgaben ebenfalls konform ist, da die geänderten Anforderungen der neuen Normen das Produkt nicht betreffen.

Ελληνικά (el)

Δήλωση συμμόρφωσης
1. Μοντέλο προϊόντος / αριθμός προϊόντος / ισχύει μόνο για τον αριθμό του έργου:
2. Όνομα και διεύθυνση του κατασκευαστή (2.1) και του εξουσιοδοτημένου αντιπροσώπου του (2.2):
3. Η παρούσα δήλωση συμμόρφωσης εκδίδεται με αποκλειστική ευθύνη του κατασκευαστή.
4. Στόχος της δήλωσης:
5. Ο στόχος της δήλωσης που περιγράφεται παραπάνω είναι σύμφωνος με τη σχετική ενωσιακή νομοθεσία εναρμόνισης:
6. Παραπομπές στα σχετικά εναρμονισμένα πρότυπα που χρησιμοποιήθηκαν ή παραπομπές στις λοιπές τεχνικές προδιαγραφές σε σχέση με τις οποίες δηλώνεται η συμμόρφωση:
7. Ο κοινοποιημένος οργανισμός w διεξήγε x και εξέδωσε το πιστοποιητικό y όπως απαιτείται για z:
A. Πρόσθετες πληροφορίες σχετικά με ( ):
A.1 Σήμανση
A.2 Σήμανση
A.3 Σήμανση
A.4 Το προαναφερθέν προϊόν συμμορφώνεται με τις απαιτήσεις της οδηγίας 2014/34/ΕΕ. Ένα ή περισσότερα από τα αναφερόμενα ευρωπαϊκά πρότυπα έχουν αντικατασταθεί ήδη από νέες εκδόσεις. Ο κατασκευαστής δηλώνει ότι το προϊόν συμμορφώνεται επίσης με τις εν λόγω νέες εκδόσεις, καθώς οι τροποποιημένες απαιτήσεις των νέων προτύπων δεν επηρεάζουν το προϊόν.

español (es)

Declaración de conformidad
1. Modelo de producto/número de producto / únicamente válido para el número de proyecto:
2. Nombre y dirección del fabricante (2.1) y de su representante autorizado (2.2):
3. La presente declaración de conformidad se expide bajo la exclusiva responsabilidad del fabricante.
4. Objeto(s) de la declaración:
5. El/Los objeto(s) de la declaración descritos anteriormente son conformes con la legislación de armonización pertinente de la Unión Europea:
6. Referencias a las normas armonizadas pertinentes utilizadas o referencias a las otras especificaciones técnicas respecto a las cuales se declara la conformidad:
7. El organismo notificado W ha efectuado X y expedido el certificado Y relevante para Z:
A. Información adicional en ( ):
A.1 Marcado
A.2 Marcado
A.3 Marcado
A.4 El producto mencionado anteriormente cumple con los requisitos de la directiva 2014/34/UE. Una o más de las normas europeas mencionadas ya se han substituido por nuevas ediciones. El fabricante declara que el producto también cumple con estas nuevas ediciones, ya que los requisitos modificados de las nuevas normas no afectan al producto.

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Minebea intec
The true measure

eesti keel (et)

Vastavusdeklaratsioon
1. Tootemudel / tootenumber / kehtib vaid järgmise projekti puhul:
2. Tootja nimi ja aadress (2.1) ning tema volitatud esindaja (2.2):
3. Käesolev vastavusdeklaratsioon on välja antud tootja ainuvastutusel.
4. Deklareeritav toode:
5. Ülalkirjeldatud deklareeritav toode on kooskõlas asjaomaste liidu ühtlustamisaktidega:
6. Viited kasutatud harmoneeritud standarditele või viited muudele tehnilistele spetsifikatsioonidele, millele vastavust deklareeritakse:
7. Teavitatud asutus w teostas x ja andis välja tõendi z, mis on asjakohane y-le:
A. Lisateave järgmise kohta ( ):
A.1 Märgistus
A.2 Märgistus
A.3 Märgistus
A.4 Ülalmainitud toode on kooskõlas direktiivi 2014/34/EL nõuetega. Ühs või mitu nimetatud Euroopa standardit on asendatud juba uute väljaannetega. Tootja kinnitab, et toode on kooskõlas ka nende uute väljaannetega, kuna uute standardite muudetud nõuded ei mõjuta toodet.

français (fr)

Déclaration de conformité
1. Modèle / numéro de produit / valable uniquement pour le numéro de projet:
2. Nom et adresse du fabricant (2.1) et de son mandataire (2.2) :
3. La présente déclaration de conformité est établie sous la seule responsabilité du fabricant.
4. Objet(s) de la déclaration :
5. Le ou les objets de la déclaration décrite ci-dessus est/sont conforme(s) à la législation d'harmonisation de l'Union applicable :
6. Références des normes harmonisées pertinentes appliquées ou des autres spécifications techniques par rapport auxquelles la conformité est déclarée :
7. L'organisme notifié w a effectué x et a établi l'attestation y applicable à z :
A. Informations complémentaires relatives à ( ) :
A.1 Marquage
A.2 Marquage
A.3 Marquage
A.4 Le produit susmentionné est conforme aux exigences de la directive 2014/34/UE. Une ou plusieurs des normes européennes mentionnées ont déjà été remplacées par de nouvelles éditions. Le fabricant déclare que le produit est également conforme à ces nouvelles éditions, dans la mesure où les exigences modifiées des nouvelles normes n'affectent pas le produit.

hrvatski (hr)

Izjava o sukladnosti
1. Model proizvoda / broj proizvoda / vrijedi samo za broj projekta:
2. Naziv i adresa proizvođača (2.1) i njegovog ovlaštenog zastupnika (2.2):
3. Za izdavanje ove izjave o sukladnosti odgovoran je isključivo proizvođač.
4. Predmet(i) izjave:
5. Predmet(i) navedene izjave je/su u skladu s mjerodavnim zakonodavstvom Unije o uskladivanju:
6. Pozivanja na relevantne primjenjene usklađene norme ili pozivanja na ostale tehničke specifikacije u vezi s kojima se izjavljuje sukladnost:
7. Prijavljeno tijelo w provelo je x i izdalo certifikat y koji je relevantan za z:
A. Dodatne informacije o proizvodu ( ):
A.1 Označavanje
A.2 Označavanje
A.3 Označavanje
A.4 Prethodno navedeni proizvod u skladu je sa zahtjevima Direktive 2014/34/EU. Jedna ili više navedenih europskih normi već je zamijenjeno novim izdanjima. Proizvođač izjavljuje da je proizvod u skladu i s tim novim izdanjima, jer se izmijenjeni zahtjevi tih novih normi ne odnose na proizvod.

magyar (hu)

Megfelelőségi nyilatkozat
1. Termékmodell / termékszám / kizárólag az alábbi projektszámhoz érvényes:
2. A gyártó (2.1) vagy adott esetben meghatalmazott képviselőjének (2.2) neve és címe:
3. Ezt a megfelelőségi nyilatkozatot a gyártó kizárólagos felelőssége mellett adják ki.
4. A nyilatkozat tárgya(i):
5. A fent ismertetett nyilatkozat tárgya megfelel a vonatkozó uniós harmonizációs jogszabályoknak:
6. Az alkalmazott harmonizált szabványokra való hivatkozás vagy az azokra az egyéb műszaki leírásokra való hivatkozás, amelyekkel kapcsolatban megfelelőségi nyilatkozatot tettek:
7. A(z) w bejelentett szervezet elvégezte a(z) x eljárást, és kiállította a(z) z kapcsolódó y tanúsítványát:
A. További információk ( ):
A.1 Jelölés
A.2 Jelölés
A.3 Jelölés
A.4 A fentebb megnevezett termék megfelel a 2014/34/EU irányelvben foglalt követelményeknek. Egy vagy több említett Európai szabvány a kiállítás óta frissült. A gyártó kijelenti, hogy a termék megfelel a szabványok legújabb kiadásában foglalt követelményeknek, mivel a szabvány módosításai nem érintik az adott terméket.

italiano (it)

Dichiarazione di conformità
1. Modello di prodotto / numero di prodotto / valido unicamente per numero di progetto:
2. Nome e indirizzo del fabbricante (2.1) e del relativo rappresentante autorizzato (2.2):
3. La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante.
4. Oggetto/i della dichiarazione:
5. L'oggetto o gli oggetti della dichiarazione di cui sopra sono conformi alla pertinente normativa di armonizzazione dell'Unione:
6. Riferimento alle pertinenti norme armonizzate utilizzate o riferimenti alle altre specifiche tecniche in relazione alle quali è dichiarata la conformità:
7. L'organismo notificato w ha effettuato x e rilasciato il certificato y pertinente a z:
A. Informazioni aggiuntive su ( ):
A.1 Marcatura
A.2 Marcatura
A.3 Marcatura
A.4 Il prodotto menzionato in precedenza è conforme alle prescrizioni della direttiva 2014/34/UE. Una o più norme UE menzionate sono già state sostituite da nuove versioni. Il fabbricante dichiara che il prodotto è conforme anche alle nuove versioni in quanto le prescrizioni modificate delle nuove norme non interessano il prodotto.

Latvių kalba (lt)

Atitikties deklaracija
1. Gaminio modelis / gaminio numeris / galioja tik projekto numeriui:
2. Gamintojo (2.1) ir jo įgaliotojo atstovo (2.2) pavadinimas ir adresas:
3. Ši atitikties deklaracija išduota tik gamintojo atsakomybe.
4. Deklaracijos objektas (objektai):
5. Pirmiau aprašytas deklaracijos objektas (objektai) atitinka susijusius derinamuosius Sąjungos teisės aktus:
6. Susijusių taikytų darniųjų standartų nuorodos arba kitų techninių specifikacijų, pagal kurias buvo deklaruota atitiktis, nuorodos:
7. Notifikuotoji įstaiga w atliko x ir išdavė sertifikatą y dėl z:
A. Papildoma informacija ( ):
A.1 Ženklinimas
A.2 Ženklinimas
A.3 Ženklinimas
A.4 Pirmiau nurodytas gaminys atitinka Direktyvos 2014/34/ES reikalavimus. Vienas ar keli nurodyti Europos standartai jau pakeisti nauja redakcija. Gamintojas patvirtina, kad gaminys taip pat atitinka naujają redakciją, nes pakeisti naujųjų standartų reikalavimai gaminiui poveikio neturi.

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Minebea intec
The true measure

latviešu valoda (lv)

Atbilstības deklarācija
1. Produkta modelis / produkta numurs / derīgs tikai projektam Nr.:
2. Ražotāja (2.1.) un tā pilnvarotā pārstāvja (2.2.) nosaukums un adrese:
3. Šī atbilstības deklarācija ir izdota vienīgi uz ražotāja atbildību.
4. Deklarācijas priekšmets vai priekšmeti:
5. Iepriekš aprakstītais deklarācijas priekšmets vai priekšmeti atbilst attiecīgajam Savienības saskaņošanas tiesību aktam:
6. Atsauces uz attiecīgajiem izmantojamiem saskaņotajiem standartiem vai uz citām tehniskajām specifikācijām, attiecībā uz ko tiek deklarēta atbilstība:
7. Paziņotā struktūra w ir veikusi x un izsniegusi sertifikātu y, kas attiecas uz z:
A. Papildu informācija par ( ):
A.1. Marķējums
A.2. Marķējums
A.3. Marķējums
A.4. Iepriekš minētais produkts atbilst Direktīvas 2014/34/ES prasībām. Viens vai vairāki no minētajiem Eiropas standartiem jau ir aizstāti ar jaunām versijām. Ražotājs apliecina, ka produkts atbilst arī šīm jaunajām versijām, jo jauno standartu mainītās prasības neietekmē produktu.

malti (mt)

Dikjarazzjoni ta' konformità
1. Mudell tal-prodott / numru tal-prodott / validu biss għan-numru tal-proġett:
2. L-isem u l-indirizz tal-manifattur (2.1) u tar-rappreżentant awtorizzat tiegħu (2.2):
3. Din id-dikjarazzjoni ta' konformità tinħareġ taħt ir-responsabbiltà unika tal-manifattur.
4. L-għan(ijiet) tad-dikjarazzjoni:
5. L-għan(ijiet) tad-dikjarazzjoni deskritt(i) hawn fuq huwa(huma) konformi mal-leġislazzjoni ta' armonizzazzjoni rilevanti tal-Unjoni:
6. Ir-referenzi għall-istandards armonizzati rilevanti li ntużaw, jew ir-referenzi għall-ispeċifikazzjonijiet tekniċi l-oħra li skonthom qed tiġi ddikjarata l-konformità:
7. Il-korp notifikat w wettaq x u ħareġ iċ-ċertifikat y rilevanti għal z:
A. Informazzjoni addizzjonali fuq ( ):
A.1 Immarkar
A.2 Immarkar
A.3 Immarkar
A.4 Il-prodott msemmi hawn fuq huwa f'konformità mar-rekwiżiti tad-Direttiva 2014/34/UE. Wieħed jew aktar mill-Istandards Ewropej imsemmija diġà ġew sostitwiti b'edizzjonijiet ġodda biss. Il-manifattur jiddikjara li l-prodott huwa konformi wkoll ma' dawn l-edizzjonijiet ġodda, għax ir-rekwiżiti tal-Istandards il-ġodda ma jaffettwawx il-prodott

nederlands (nl)

Conformiteitsverklaring
1. Productmodel / productnummer / uitsluitend geldig voor projectnummer:
2. Naam en adres van de fabrikant (2.1) en zijn gemachtigde (2.2):
3. Deze conformiteitsverklaring wordt verstrekt onder volledige verantwoordelijkheid van de fabrikant.
4. Voorwerp(en) van de verklaring:
5. Het (de) hierboven beschreven voorwerp(en) is (zijn) in overeenstemming met de desbetreffende harmonisatiewetgeving van de Unie:
6. Vermelding van de toegepaste relevante geharmoniseerde normen of van de overige technische specificaties waarop de conformiteitsverklaring betrekking heeft:
7. De aangemelde instantie w heeft een x uitgevoerd en het certificaat y verstrekt dat relevant is voor z:
A. Aanvullende informatie over ( ):
A.1 Markering
A.2 Markering
A.3 Markering
A.4 Het bovengenoemde product voldoet aan de eisen van Richtlijn 2014/34/EU. Een of meer van de genoemde Europese normen zijn inmiddels vervangen door nieuwe versies. De fabrikant verklaart dat het product ook aan deze nieuwe versies voldoet, aangezien de gewijzigde eisen van de nieuwe normen geen gevolgen hebben voor het product.

polski (pl)

Deklaracja zgodności
1. Model produktu / numer produktu / ważny wyłącznie dla projektu o numerze:
2. Nazwa i adres producenta (2.1) oraz jego upoważnionego przedstawiciela (2.2):
3. Niniejsza deklaracja zgodności wydana zostaje na wyłączną odpowiedzialność producenta.
4. Przedmiot(-y) deklaracji:
5. Wymieniony powyżej przedmiot (lub przedmioty) niniejszej deklaracji jest zgodny z odnośnymi wymaganiami unijnego prawodawstwa harmonizacyjnego:
6. Odwołania do odnośnych norm zharmonizowanych, które zastosowano, lub do innych specyfikacji technicznych, w stosunku do których deklarowana jest zgodność:
7. Jednostka notyfikowana w przeprowadziła x i wydała certyfikat y odpowiedni dla z:
A. Informacje dodatkowe o ( ):
A.1 Oznakowanie
A.2 Oznakowanie
A.3 Oznakowanie
A.4 Wyżej wymieniony produkt jest zgodny z wymaganiami Dyrektywy 2014/34/UE.
Co najmniej jedna wymieniona norma europejska została już zastąpiona nowym wydaniem.
Producent oświadcza, że produkt spełnia wymagania także takich nowych wydań norm, gdyż zmienione wymagania zawarte w nowych normach nie mają wpływu na produkt.

português (pt)

Declaração de conformidade
1. Modelo do produto / número do produto / somente válido para o número de projeto:
2. Nome e endereço do fabricante (2.1) e do seu mandatário (2.2):
3. A presente declaração de conformidade é emitida sob a exclusiva responsabilidade do fabricante.
4. Objeto(s) da declaração:
5. O(s) objeto(s) da declaração acima descrito(s) está(ão) em conformidade com a legislação aplicável de harmonização da União:
6. Referências às normas harmonizadas aplicáveis utilizadas ou às outras especificações técnicas em relação às quais é declarada a conformidade:
7. O organismo notificado w realizou x e emitiu o certificado y relevante para z:
A. Informações complementares relativa a ( ):
A.1 Marcação
A.2 Marcação
A.3 Marcação
A.4 O produto acima mencionado está em consonância com os requisitos da diretiva 2014/34/UE. Uma ou mais das Normas Europeias mencionadas acima já foram substituídas por novas edições. O fabricante declara que o produto também está em conformidade com essas novas edições, uma vez que os requisitos alterados dessas novas Nor,as não afetam o produto.

română (ro)

Declarație de conformitate
1. Modelul de produs / Număr produs / valabil numai pentru numărul proiectului:
2. Denumirea și adresa producătorului (2.1) și a reprezentantului său autorizat (2.2):
3. Prezenta declarație de conformitate este emisă pe răspunderea exclusivă a producătorului.
4. Obiectul (obiectele) declarației:
5. Obiectul (obiectele) declarației descrise mai sus sunt în conformitate cu legislația relevantă de armonizare a Uniunii:
6. Trimiteri la standardele armonizate relevante folosite sau trimiteri la celelalte specificații tehnice în legătură cu care se declară conformitatea:
7. Organismul notificat w a efectuat x și a emis certificatul y corespunzător pentru z:
A. Informații suplimentare despre ( ):
A.1 Marcaj
A.2 Marcaj
A.3 Marcaj
A.4 Produsul menționat anterior respectă cerințele directivei 2014/34/UE. Unul sau mai multe din standardele europene menționate sunt deja înlocuite de noi ediții. Producătorul declară faptul că produsul respectă de asemenea aceste noi ediții, așadar cerințele modificate ale noilor standarde nu afectează produsul.

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Minebea intec
The true measure

slovenčina (sk)

Vyhlásenie o zhode
1. Model výrobku / číslo výrobku / platné len pre číslo projektu:
2. Meno/názov a adresa výrobcu (2.1) a jeho splnomocneného zástupcu (2.2):
3. Toto vyhlásenie o zhode sa vydáva na vlastnú zodpovednosť výrobcu.
4. Predmet(-y) vyhlásenia:
5. Uvedený predmet či uvedené predmety vyhlásenia sú v zhode s príslušnými harmonizačnými právnymi predpismi Únie:
6. Odkazy na príslušné použité harmonizované normy alebo odkazy na iné technické špecifikácie, v súvislosti s ktorými sa zhoda vyhlasuje:
7. Notifikovaný orgán w vykonal x a vydal certifikát y relevantný pre z:
A. Doplňujúce informácie o ( ):
A.1 Označenie
A.2 Označenie
A.3 Označenie
A.4 Vyššie uvedený výrobok je v súlade s požiadavkami smernice 2014/34/EÚ. Jedna alebo viaceré z uvedených európskych noriem sú už nahradené novými vydaniami. Výrobca vyhlasuje, že výrobok je v zhode aj s týmto novými vydaniami, pretože zmenené požiadavky nových noriem nemajú na výrobok vplyv.

slovenščina (sl)

Izjava o skladnosti
1. Model proizvoda / serijska številka proizvoda / veljavno samo za številko projekta:
2. Ime in naslov proizvajalca (2.1) ter njegovega pooblaščenega zastopnika (2.2):
3. Za izdajo te izjave o skladnosti je odgovoren izključno proizvajalec.
4. Predmet(i) izjave:
5. Predmet(i) navedene izjave je (so) v skladu z ustrezno zakonodajo Unije o harmonizaciji:
6. Sklicevanja na uporabljene ustrezne harmonizirane standarde ali sklicevanja na druge tehnične specifikacije v zvezi s skladnostjo, ki je navedena v izjavi:
7. Priglašeni organ w je izvedel x in izdal certifikat y, pomemben za z:
A. Dodatne informacije o ( ):
A.1 Oznaka
A.2 Oznaka
A.3 Oznaka
A.4 Zgoraj navedeni proizvod je v skladu z zahtevami direktive 2014/34/EU. Enega ali več omenjenih evropskih standardov so že nadomestile nove izdaje. Proizvajalec izjavlja, da je proizvod skladen s temi novimi izdajami, saj spremenjene zahteve novih standardov ne vplivajo na proizvod.

suomi (fi)

Vaatimustenmukaisuusvakuutus
1. Tuotemalli / tuotenumero / koskee vain projektinumeroa:
2. Valmistajan (2.1) ja valtuutetun edustajan (2.2) nimi ja osoite:
3. Tämä vaatimustenmukaisuusvakuutus on annettu valmistajan yksinomaisella vastuulla.
4. Vakuutuksen kohde (kohteet):
5. Edellä kuvattu (kuvatut) vakuutuksen kohde (kohteet) on (ovat) asiaa koskevan unionin yhdenmukaistamislainsäädännön vaatimusten mukainen (mukaisia):
6. Viittaus niihin asiaa koskeviin yhdenmukaistettuihin standardeihin, joita on käytetty, tai viittaus muihin teknisiin eritelmiin, joiden perusteella vaatimustenmukaisuusvakuutus on annettu:
7. Ilmoitettu laitos w suoritti x ja antoi todistuksen y liittyen z:
A. Lisätietoja ( ):
A.1 Merkintä
A.2 Merkintä
A.3 Merkintä
A.4 Yllä mainittu tuote vastaa direktiivin 2014/34/EU vaatimuksia. Yksi tai useampi mainituista eurooppalaisista standardeista on jo korvattu uusilla painoksilla. Valmistaja vakuuttaa, että tuote vastaa myös näitä uusia painoksia, koska uusien standardien muutetut määräykset eivät vaikuta tuotteeseen.

svenska (sv)

Försäkran om överensstämmelse
1. Produktmodell / produktnummer / gäller endast för projektnummer:
2. Tillverkarens namn och adress (2.1) och dess auktoriserade representant (2.2):
3. Denna försäkran om överensstämmelse utfärdas på tillverkarens eget ansvar.
4. Föremål för försäkran:
5. Föremålet/föremålen för försäkran ovan överensstämmer med den relevanta harmoniserade unionslagstiftningen:
6. Hänvisningar till de relevanta harmoniserade standarder som använts eller hänvisningar till de andra tekniska specifikationer enligt vilka överensstämmelsen försäkras:
7. Det anmälda organet w har utfört x och utfärdat intyget y relevant för z:
A. Ytterligare information om ( ):
A.1 Märkning
A.2 Märkning
A.3 Märkning
A.4 Ovan nämnda produkt är i linje med kraven i direktiv 2014/34/EU. En eller flera av de nämnda europeiska standarderna har redan ersatts av nya upplagor. Tillverkaren försäkrar att produkten även överensstämmer med dessa nya upplagor, då de ändrade kraven i de nya standarderna inte påverkar produkten.

6/6

12.10 RU Д-DE.A301.B.05345

ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ
ДЕКЛАРАЦИЯ О СООТВЕТСТВИИ

Заявитель Общество с ограниченной ответственностью «ДС Компания».
Основной государственный регистрационный номер: 1107746937374.
Место нахождения: 105037, Российская Федерация, город Москва, улица 3-я Парковая, дом 9, квартира 18
Телефон: 89660273663, адрес электронной почты: dc.company2000@gmail.com
в лице Генерального директора Ежова Олега Олеговича
заявляет, что
Тензодатчики типов: PR6201, PR6202, PR6211, PR6212, PR6251, PR6221, PR6261, PR6224, PR6204, PR6246, PR6241, PR6207
Продукция изготовлена в соответствии с Директивой 2014/30/ЕС «Электромагнитная совместимость»
изготовитель Minebea Intec GmBH.
Место нахождения: ГЕРМАНИЯ, Meiendorfer Strasse 205, 22145 Hamburg

код ТН ВЭД ЕАЭС 9031 80 380 0
Серийный выпуск
соответствует требованиям
Технического регламента Таможенного союза ТР ТС 020/2011 "Электромагнитная совместимость технических средств"

Декларация о соответствии принята на основании
протокола испытаний № 314-04/12-СТ от 13.04.2017 года, выданного испытательной лабораторией «Серт-Тест» Общества с ограниченной ответственностью «Серт и Ко», регистрационный № РОСС RU.04ИДЮ0.002; руководства по эксплуатации; паспорта
Схема декларирования: 1д
Дополнительная информация
Условия хранения продукции в соответствии с требованиями ГОСТ 15150-69. Срок хранения (службы, годности) указан в прилагаемой к продукции эксплуатационной документации. Стандарты, обеспечивающие соблюдение требований Технического регламента Таможенного союза ТР ТС 020/2011 "Электромагнитная совместимость технических средств": ГОСТ 30804.3.2-2013 "Совместимость технических средств электромагнитная. Эмиссия гармонических составляющих тока техническими средствами с потребляемым током не более 16 А (в одной фазе). Нормы и методы испытаний", ГОСТ 30804.3.3-2013 "Совместимость технических средств электромагнитная. Ограничение изменений напряжения, колебаний напряжения и фликера в низковольтных системах электроснабжения общего назначения. Технические средства с потребляемым током не более 16 А (в одной фазе), подключаемые к электрической сети при несоблюдении определенных условий подключения. Нормы и методы испытаний"

Декларация о соответствии действительна с даты регистрации по 12.04.2022 включительно.

Ежов Олег Олегович
(инициалы и фамилия руководителя организации-заявителя или физического лица, зарегистрированного в качестве индивидуального предпринимателя)

М.П.

Сведения о регистрации декларации о соответствии:

Регистрационный номер декларации о соответствии: ЕАЭС № RU Д-DE.A301.B.05345
Дата регистрации декларации о соответствии 13.04.2017

12.11 D09-03.15

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

PTB

Prüfschein

Test certificate

Ausgestellt für: *Issued to:*	GWT Global Weighing Technologies GmbH Meiendorfer Straße 205 24145 Hamburg Deutschland
Prüfgrundlage: *In accordance with:*	EN 45501 (1992), para. 8.1 & 3.5.4 mit Fehleranteil / *with fraction* $p_{LC} = 0,7$ OIML R60 (2000), WELMEC 2.4 (2001)
Gegenstand: *Object*	DMS-Fahrzeugwaagen-Druck-Wägezelle *Strain gauge compression load cell for weighbridges* Typ / *type* **PR 6221** E_{max} 12,5 t & 25 t Genauigkeitsklassen / *accuracy classes* D1, C3, C4
Kennummer: *Serial number:*	---
Prüfscheinnummer: *Test certificate number:*	**D09-03.15**
Datum der Prüfung: *Date of Test:*	---
Anzahl der Seiten: *Number of pages:*	7
Geschäftszeichen: *Reference No.:*	1.14 – 03000450
Benannte Stelle *Notified Body*	102

Im Auftrag
By order

Dr. Meißner

PHYSIKALISCH-TECHNISCHE BUNDESANSTALT 40

Braunschweig, 11. April 2003

Siegel
Seal

392 00 f

Hinweise siehe letzte Seite der Anlage, die Bestandteil des Prüfscheines ist.
For notes, see last page of the Annex which forms an integral part of the test certificate.

Physikalisch-Technische Bundesanstalt

PTB

Anlage zum Prüfschein

Annex to test certificate

vom 11. April 2003, Prüfscheinnummer: D09-03.15

dated 11. April 2003, test certificate number: D09-03.15

1. Technische Daten / *Technical Data*

Die metrologischen Kenndaten der Wägezellen sind in Tabelle 1 angegeben, weitere technische Daten sind dem Datenblatt des Herstellers, Seite 5 bis 7 dieser Anlage, zu entnehmen.

The metrological characteristics of the load cells are listed in Table 1, further technical data are listed in the data sheet of the manufacturer at pages 5 to 7 of this annex.

Tabelle 1: Metrologische Kenndaten / *Table 1: Metrological data*

Genauigkeitsklasse *Accuracy*		D1	C3	C4
Max. Anzahl d. Teilungswerte *Max. number of load cell intervals*	n_{LC}	1000	3000	4000
Vorlastsignalrückkehr *Minimum dead load output return*	DR ($\frac{1}{2} E_{max}$ / Z)	$\frac{1}{2} E_{max}$ / 1000	$\frac{1}{2} E_{max}$ / 6000	$\frac{1}{2} E_{max}$ / 6000
Nennlast *Maximum capacity*	E_{max}	12,5t / 25t		
Mindestteilungswert der WZ *Minimum load cell verification interval*	v_{min} (E_{max} / Y)	E_{max} / 5000	E_{max} / 14000	E_{max} / 18000

Vorlast / *minimum dead load* 0% * E_{max}, Kennwert / *nominal output* 12,5 t = 1 mV/V, 25 t = 2 mV/V

2. Prüfungen / *Tests*

Die Richtigkeitsprüfungen und die Untersuchungen der Stabilität des Nullsignals, der Reproduzierbarkeit und des Kriechverhaltens im Temperaturbereich von -10 °C bis +55 °C wurden beim Hersteller in Absprache mit der PTB nach R60 an der Wägezelle Nr. 1/9, Klasse C4, E_{max} = 12,5 t durchgeführt, ebenso die barometrischen Prüfungen und der Nachweis der Meßbeständigkeit nach Beaufschlagung mit zyklischer Temperatur-Feuchte (CH) an den bauartgleichen Wägezellen Nr.: ME47853, Klasse C6, E_{max} = 20 t und Nr.: Prot3, Klasse C5, E_{max} = 50 t.

Die Prüfeinrichtungen des Herstellers sind dem Unterzeichner bekannt und nach DIN 9001 zertifiziert unter DQS Reg.Nr. 14310-2.

With the agreement of the PTB the manufacturer performed the determination of the load cell error, the stability of the dead load output, repeatability and creep in the temperature range of –10°C to +55°C according OIML R60 on the load cells N°: 1/9, class C4, E_{max} = 12.5 t, as well as tests of barometric pressure effects and the determination of the effects of temperature cycles and simultaneous humidity (CH) on the load cells N°: ME47853 , class C6, E_{max} = 20t und N°: Prot3, class C5, E_{max} = 50t.

The test equipment of the manufacturer is well-known to the PTB, and in accordance with DIN ISO 9001, certified under DQS Reg.No. 14310-2.

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Tabelle 2: Ausgeführte Prüfungen / *Table 2: Tests performed*

Prüfung / *Test*	R60 (2000)	Institut*(e)*	Ergebnis / *result*
Temperaturprüfung und Wiederholbarkeit bei *Temperature test and repeatability at* (20 / -10 / 40 / 55* / 20 °C)	5.1.1, 5.4 ; A.4.1	Hersteller / *manufacturer*	+
Temperatureinfluß auf Vorlastsignal bei *Temperature effect on minimum dead load output at* (20 / -10 / 40 / 55* / 20 °C)	5.5.1.3 ; A.4.1.16	Hersteller / *manufacturer*	+
Kriechprüfung bei *Creep test at* (20 / -10 / 40 / 55* °C)	5.3.1 ; A.4.2	Hersteller / *manufacturer*	+
Mindestvorlastsignalrückkehr bei *Minimum dead load output return at* (20 / -10 / 40 / 55* °C)	5.3.2 ; A.4.3	Hersteller / *manufacturer*	+
Auswirkung des Luftdrucks bei Umgebungstemperatur *Barometric pressure effects at room temperature*	5.5.2 ; A.4.4	Hersteller / *manufacturer*	+
Feuchteprüfung, zyklisch Kennzeichnung CH oder ohne *Damp heat test , cyclic marked CH or (not marked)*	5.5.3.1 ; A.4.5	Hersteller / *manufacturer*	+

*) zusätzliche, über Anforderung von R60 hinausgehende Prüfung / *additional test, more than requirement of R60*

3. Beschreibung der Wägezelle / *Description of the load cell*

Die Wägezellen der Baureihe PR 6221 sind kompakte Druckwägezellen für selbstzentrierenden pendelförmigen Einbau. Der DMS–Applikationsraum ist hermetisch metallisch gekapselt; das tiefgezogene Gehäuse der Wägezelle aus rostfreiem Edelstahl ist Mikroplasma gasdicht geschweißt und mit Schutzgas gefüllt.
Die wesentlichen Betriebsdaten sind im Datenblatt Seiten 5 bis 7 unter Nr. 6 angegeben.

Load cells of the series PR 6221 are compact compression load cells for self-centering pendulum applications. The strain gauge application is hermetically sealed; the deep-drawn and micro plasma welded housing is made of stainless steel and filled with inert gas.
Further essential characteristics are given in the data sheet, see No. 6 on pages 5 to 7.

Bild 1: Wägezelle Typ PR 6221/.. C3 / *Figure 1: Load cell type PR 6221/.. C3*

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Die Kurzkennzeichnung auf dem Typenschild erfolgt entsprechend dem Beispiel:

Excample of a complete type designation on the identification plate:

PR6221 / 25t C3 (1kΩ)

DMS-Widerstand	*strain gauge resistance*
für Waagen der Klasse (III), zulässige Anzahl der Teilungswerte in n_{LC} / 1000	*for weighing instruments class (III), max. number of load cell intervals in n_{LC} / 1000*
Nennlast E_{max}	*maximum capacity E_{max}*
Wägezellen Typ	*load cell type*

4. Dokumentation / *Documentation*

Die Messergebnisse und die nachfolgend aufgeführten Zeichnungen sind in der PTB hinterlegt.

The test results and the following drawings are kept at the PTB.

Datenblatt PR6221: *Data sheet PR6221:*	9498 762 21003 (deutsch) *9498 762 21001 (english)*	Daten *Data*
Prinzipzeichnungen Nr: *Principle drawing No :*	4012 101 5855. Bl./*sh.* 110-01, Bl./*sh.* 510-01.	Abmessungen, Daten *Dimensions, data*

5. Weitere Informationen / *Further informations*

Gültigkeit des Prüfberichtes. Fertigungsverfahren, Werkstoffe und Abdichtungen müssen den vorgestellten Mustern und der in der PTB hinterlegten Dokumentation entsprechen; wesentliche Änderungen sind nur mit Zustimmung der PTB erlaubt.

Die im Datenblatt hinsichtlich Linearität, Umkehrspanne und Temperaturgang angegebenen Fehlergrenzen sind typische Werte eines Musters; der für jedes Muster zulässige Gesamtfehler aus diesen Größen ist durch die Fehlergrenze nach OIML R60 Nr 5.1 (Hüllkurve) vorgegeben.

Die technischen Daten sowie die Abmessungen der Wägezellen und die Prinzipien der Krafteinleitung sind auf den Seiten 5 bis 7 in dieser Anlage enthalten und müssen beachtet werden. Die Wägezellen können nach DIN/EN 45501 Nr. 4.12 in Waagen der Klasse (III) und (IIII) eingesetzt werden.

Validity of this test certificate. The manufacturing process, material and sealings of the produced load cells have to be in accordance with the tested patterns; essential changes are only allowed with the permission of the PTB.

The typical errors related to linearity, hysteresis and temperature coefficient as indicated in the data sheet point out possible single errors of a pattern; however the overall error of each pattern is determined by the maximum permissible error according OIML R60 No 5.1.

The technical data, the dimensions of the load cell and the principle of load transmission are given on pages 5 to 7 of this annex, have to be complied with. The load cells can be used in weighing applications class (III) and (IIII) in accordance with DIN/EN 45501 No. 4.12.

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6. Datenblatt und Abmessungen / *Data sheet and dimensions (in english see next page)*

Auszug aus dem Datenblatt des Herstellers mit Daten und Abmessungen

Nennlast	obere Grenze des spezifizierten Meßbereichs	E_{max}	12,5	25		t
Nennkennwert	relatives Ausgangssignal bei Nennlast	C_n	1	2		mV/V
Nennmeßweg	max. elastische Verformung bei Nennlast	s_{nom}	0,2	0,4		mm

Genauigkeitsklasse gemäss OIML R60			**D1**	**C3**	**C4**	
Fehlerklasse			0,04	0,015	0,012	% E_{max}
Mindestvorlast	untere Grenze des spezifizierten Meßbereichs	E_{min}		0		% E_{max}
Nennlast	obere Grenze des spezifizierten Meßbereichs	E_{max}		s. o. Tabelle		
Gebrauchslast	obere Grenze für Messungen	E_u		37,5		t
Bruchlast	Gefahr mechanischer Zerstörung	E_d		> 75		t
Mindestteilungswert	kleinster Teilungswert der Wägezelle ($v_{min} = E_{max}/Y$)	Y	5000	14000	18000	
Kriech-Teilungsfaktor	Nullp.-Rückkehr nach 30 min. Nennl. ($DR = ½ E_{max}/Z$)	Z	1000	6000	6000	
Relative Kennwertabweichung	zulässige Abweichung vom Nennkennwert	d_c	< 0,25	< 0,07	< 0,07	% C_n
Nullsignal	Ausgangssignal der Wägezelle im unbelasteten Zustand	S_o	< 1,0	< 1,0	< 1,0	% C_n
Reproduzierbarkeit	max. Meßsignaländerung bei wiederholten Belastungen	ε_R	< 0,01	< 0,005	< 0,005	% C_n
Belastungskriechen	max. Ausgangssignaländerung bei E_{max} während 30 min	d_{cr}	< 0,03	< 0,015	< 0,0125	% C_n
Linearitätsabweichung	Abweichung von der besten Geraden durch Null	d_{Lin}	< 0,03	< 0,01	< 0,01	% C_n
Relative Umkehrspanne	max. Differenz zwischen Auf- und Abwärtskennlinie	d_{hy}	< 0,04	< 0,0165	< 0,0125	% C_n
Temperaturkoeffizient (TK) des Mindestvorlastsignals	max. auf C_n bezogene Änderung von S_{min}/10K ΔT im B_T	TK_{Smin}	< 0,028	< 0,01	< 0,007	%C_n/10K
TK des Kennwertes	max. auf C_n bezogene Änderung von C /10K ΔT im B_T	TK_c	< 0,03	< 0,01	< 0,008	%C_n/10K
Eingangswiderstand	zwischen den Speiseanschlüssen	R_{LC}		1080 ± 10		Ω
Ausgangswiderstand	zwischen den Meßanschlüssen	R_O	1010 ± 2	1010 ± 1		Ω
Isolationswiderstand	zwischen Innenschaltung und Gehäuse bei 100V_{DC}	R_{IS}		> 5000 x 10^6	Ω	
Isolationsfestigkeit	zwischen Schaltung und Gehäuse			500		V_{DC}
Nennversorgungsspg. bereich	unter Einhaltung der technischen Daten	B_u		4 ... 24		V
Max. Speisespannung	Dauerbetrieb ohne Schaden	U_{max}		32		V
Nennumgebungstemp.bereich	unter Einhaltung der technischen Daten	B_T		-10 ... +55		°C
Gebrauchstemperaturbereich	Dauerbetrieb ohne Schaden	B_{Tu}		-40 ... +95		°C
Lagerungstemperaturbereich	ohne elektrische und mechanische Beanspruchung	B_{Tl}		-40 ... +95		°C
Grenzexzentrizität	zulässiger Abstand von der Meßachse	S_{ex}		10		mm
Vibrationsbeständigkeit	Beständigkeit gegen Schwingungen (IEC68-2-6 Fc)			20 g, 100 h, 10 ... 150 Hz		
Umgebungsdruckeinfluß	Luftdruckeinfluß auf das Mindestvorlastsignal S_{min}	PK_{Smin}		< 0,5		kg/kPa

Definitionen nach VDI / VDE 2637

Die angegebenen technischen Daten dienen allein der Produktbeschreibung und sind nicht als zugesicherte Eigenschaften im Rechtssinne aufzufassen.

Physikalisch-Technische Bundesanstalt

PTB

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Data sheet and dimensions

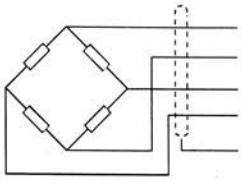
Summary of the data sheet of the manufacturer with data and dimensions

Maximum capacity	highest limit of specified measuring range	E_{max}	12.5	25		t
Rated output	relative output signal at nominal load	C_n	1	2		mV/V
Nominal deflection	max. elastic deformation under nominal load	s_{nom}	0.2	0.4		mm
Accuracy class according to OIML R60			**D1**	**C3**	**C4**	
Accuracy class			0.04	0.015	0.012	% 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}		see table above		
Max. usable load	upper limit for measurements	E_u		37.5		t
Destructive load	danger of mechanical destruction	E_d		> 75		t
Minimum LC verification	minimum load cell verification interval ($v_{min} = E_{max}/Y$)	Y	5000	14000	18000	
Creep divisions factor	factor for min. dead load output return (DR= ½ E_{max}/Z)	Z	1000	6000	6000	
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_o	< 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	< 0.0125	% C_n
Non-linearity	max. deviation from best straight line through zero	d_{Lin}	< 0.03	< 0.01	< 0.01	% C_n
Hysteresis	max. diff. in LC output between loading and unloading	d_{hy}	< 0.04	< 0.0165	< 0.0125	% C_n
Temperature effect on S_{min}	max. change of S_{min} /10K ΔT over B_T referred to C_n	TK_{Smin}	< 0.028	< 0.01	< 0.007	%C_n/10K
Temperature effect on C_n	max. change of C_n /10K ΔT over B_T referred to C_n	TK_c	< 0.03	< 0.01	< 0.008	%C_n/10K
Input impedance	between supply terminals	R_{LC}		1080 ± 10		Ω
Output impedance	between measuring terminals	R_O	1010 ± 2	1010 ± 1		Ω
Insulation impedance	between measuring cicuit 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 continous operation without damage	U_{max}		32		V
Nominal ambient temp. range	to hold the specified performance	B_T		-10 ... +55		°C
Usable ambient temp. range	permissible for continuos 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_{Smin}		< 0.5		kg/kPa

Definitions acc. to VDI / VDE 2637

The technical data given here serve only as a product description and must not be interpreted as guaranteed characteristics in the legal sense.

Anschlussbelegung / *Connecting diagram*



rot Speisung +	*red supply +*
blau Speisung -	*blue supply -*
grau Ausgang -	*grey output -*
grün Ausgang +	*green output +*
Kabelschirm, verbunden mit Gehäuse	*cable screen, connected to housing*

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Anlage zum Prüfschein

Annex to test certificate

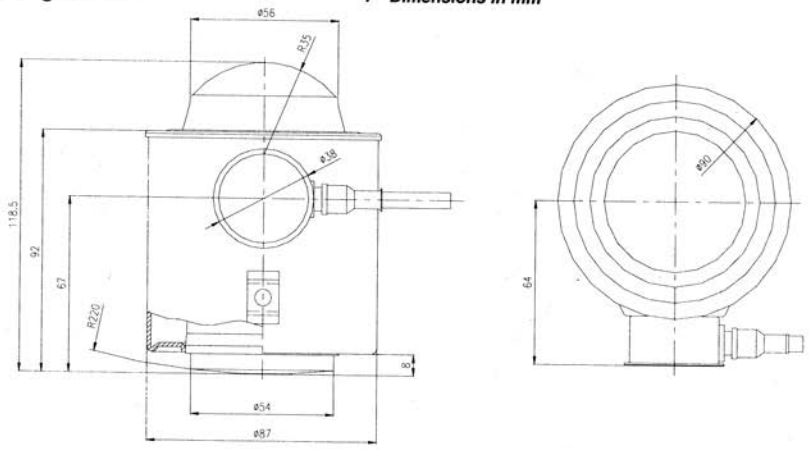
vom 11. April 2003, Prüfscheinnummer: D09-03.15

dated 11. April 2003, test certificate number: D09-03.15

Seite 7 von 7 Seiten

Page 7 of 7 pages

Abmessungen in mm / ***Dimensions in mm***



Rückstellkraft

Bei einer Auslenkung der Wägezelle aus der Vertikalen wird je Millimeter Auslenkung (gemessen am Wägezellenkopf) eine horizontal wirkende Rückstellkraft von 1,5% der vertikal auf der Wägezelle ruhenden Last wirksam.

Gehäusekonstruktion

Tiefziehgehäuse mit Membrandeckel und Meßelement hermetisch geschlossen, verschweißt, mit Schutzgas gefüllt.
Material-Nr.: 1.4301 (DIN 17440)
304 S15 (B.S.)

Kabel

robust, flexibel, geschirmt
Mantel: TPE Farbe: grün
Durchmesser: 5mm, Leitung: 4x AWG22
Länge: 16m

Schutzart

IP 68, IEC 529 / EN 60529: 1,5m Wassersäule / 10.000 h,
IP69K, DIN 40 050: Hochdruckwasser, Dampfstrahlreinigung.

Konformitätsbescheinigung

Geltungsbereich:	PR 6221/.. E
Kennzeichen:	Nummer:
EEx ib IIC T6	PTB Nr. Ex-92.C.2137
II 1G EEx ia IIC T6	PTB 02 ATEX 2059

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 vertical load is generated.

Load cell housing construction

Deep draw pulled housing, membrane and measuring element hermetically sealed, welded, filled with inert gas.
Material-no.: 304 S15 (B.S.)
1.4301 (DIN 17440)

Cable

robust, flexible, screened
sheath: TPE colour: green
diameter: 5 mm, wires: 4x AWG22
length: 16 m

Protection

IP 68, IEC 529 / EN 60529: 1.5m water column /10,000 h,
IP69K, DIN 40 050: water of high pressure, steam beam cleaning

Certificate of conformity

Range of recognition:	*PR 6221/.. E*
Feature:	*Registration number:*
EEx ib IIC T6	*PTB Nr. Ex-92.C.2137*
II 1G EEx ia IIC T6	*PTB 02 ATEX 2059*

Hinweise

Prüfscheine ohne Unterschrift und Siegel haben keine Gültigkeit. Dieser Prüfschein darf nur unverändert weiterverbreitet werden. Auszüge bedürfen der Genehmigung der Physikalisch-Technischen Bundesanstalt.

Notes

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D-38116 Braunschweig

Abbestraße 2-12
D-10587 Berlin

12.12 D09-00.23

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Prüfschein
Test Certificate

Ausgestellt für: *Issued to:*	Minebea Intec GmbH Meiendorfer Str. 205 A 22145 Hamburg
Prüfgrundlage: *In accordance with:*	DIN EN 45501 (1992) Nr. 8.1, WELMEC-Leitfaden 2.1 (2001), Richtlinie 2009/23/EG, OIML R 76-1
Gegenstand: *Object:*	Wägezelle *Load cell*
Typ: *Type:*	PR 6221
Kennnummer: *Serial No.:*	
Prüfscheinnummer: *Test Certificate No:*	D09-00.23 3. Revision *D09-00.23 Revision 3*
Datum der Prüfung: *Date of test:*	
Anzahl der Seiten: *Number of pages:*	9
Geschäftszeichen: *Reference No.:*	PTB-1.12-4087778
Benannte Stelle: *Notified Body*	0102

Im Auftrag
On behalf of PTB

Dr. Dorothea Knopf

Braunschweig, 18.10.2017

Siegel
Seal

Im Auftrag
On behalf of PTB

Dipl.-Ing. K. Schulz

R3-0025

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Page 2 of test certificate of 18.10.2017, Test Certificate No: D09-00.23, Revision 3

Zertifikatsgeschichte / *Certificate history*

Zertifikats-Ausgabe *Certificate release*	Datum *Date*	Wesentliche Änderungen *Essential changes*
D09-00.23 Revision 3	19.10.2017	2. Ergänzung im Rahmen der 3. Revision: *2nd addition within the scope of revision 3:* - Änderung des Inhabers des Prüfscheins *Owner of the certificate has been changed* - Änderung des Typenschilds *Modification of designation plate* - Änderung der Angabe zur Kabellänge *Modification of indication to cable length*
D09-00.23 Revision 2	26.05.2015	1. Ergänzung im Rahmen der 2. Revision: *1st addition within the scope of revision 2:* - Genauigkeitsklasse C6 auch für die Nennlasten 50, 60, 75 t *Accuracy class C6 also for the Maximum capacities of 50, 60, 75 t* - Für den Nenntemperaturbereich > 40 °C gilt Z=6000 *For nominal ambient temperature > 40 °C is Z = 6,000*
D09-00.23 Revision 1	30.07.2002	Weitere Nennlast von 25 t *Further Maximum capacity of 25 t*
D09-00.23	20.04.2000	Erstbescheinigung / *primary certificate*

1. Technische Daten / *Technical Data*

Die metrologischen Kenndaten der Wägezellen sind in Tabelle 1 angegeben, weitere technische Daten sind dem Datenblatt des Herstellers, Seite 5 bis 7 dieser Anlage, zu entnehmen.

The metrological characteristics of the load cells are listed in Table 1, further technical data are listed in the data sheet of the manufacturer at pages 5 to 7 of this annex.

Tabelle 1: Metrologische Kenndaten / *Table 1: Metrological data*

Genauigkeitsklasse **Accuracy class**		D 1	C 3	C 4	C 5	C4	C5	C 6
Max. Anzahl d. Teilungswerte *Max. number of load cell intervals*	n_{LC}	1000	3000	4000	5000	4000	5000	6000
Vorlastsignalrückkehr *Minimum dead load output return*	DR ($\frac{1}{2} E_{max}$ / Z)	½ E_{max} / 1 000	½ E_{max} / 6 000	½ E_{max} / 6 000	½ E_{max} / 6 000	½ E_{max} / 8 000	½ E_{max} / 8 000	½ E_{max} / 8 000
Nennlast *Maximum capacity*	E_{max}	20 / 25 / 30 / 50 / 60 / 75 t				20 / 25 / 30 t		
Mindestteilungswert der WZ *Minimum load cell verification interval*	v_{min} (E_{max} / Y)	E_{max} / 5 000	E_{max} / 14 000	E_{max} / 20 000				

Vorlast / *minimum dead load* 0% * E_{max}

1. Ergänzung im Rahmen der 2. Revision / *1st addition within the scope of revision 2:*

Tabelle 1 wird wie folgt ergänzt / *The table 1is supplemented as follows:*

Genauigkeitsklasse **Accuracy class**		C 4	C 5	C6
Vorlastsignalrückkehr ***Minimum dead load output return***	DR ($\frac{1}{2} E_{max}$ / Z)	½ E_{max} / 8 000 [1)]	½ E_{max} / 8 000 [1)]	½ E_{max} / 8 000 [1)]
Nennlast *Maximum capacity*	E_{max}	20 / 25 / 30 / 50 / 60 / 75 t		

[1)] Für den Nenntemperaturbereich > 40 °C gilt Z=6000
For nominal ambient temperature > 40 °C is Z = 6,000

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2. Prüfungen / *Tests*

Die Richtigkeitsprüfungen und die Untersuchungen der Stabilität des Nullsignals, der Reproduzierbarkeit und des Kriechverhaltens im Temperaturbereich von -10 °C bis +55 °C wurden beim Hersteller in Absprache mit der PTB nach R60 an den Wägezellen Nr.: ME47856, Klasse C6, E_{max} = 20 t, sowie Nr. 1/9, Klasse C6, E_{max} = 25 t und Nr.: ME59645, Klasse C5, E_{max} = 50 t durchgeführt, ebenso die barometrischen Prüfungen und der Nachweis der Messbeständigkeit nach Beaufschlagung mit zyklischer Temperatur-Feuchte (CH) an den bauartgleichen Wägezellen Nr.: ME47853, Klasse C6, E_{max} = 20 t und Nr.: Prot3, Klasse C5, E_{max} = 50 t. Weitere Richtigkeitsprüfungen und die Untersuchungen der Stabilität des Nullsignals, der Reproduzierbarkeit und des Kriechverhaltens im Temperaturbereich von -10°C bis +40°C wurden in der PTB nach R60 an der bauartgleichen Wägezelle Nr.: ME20186, Klasse C5, E_{max} = 75 t durchgeführt.

Die Prüfeinrichtungen des Herstellers sind dem Unterzeichner bekannt und nach DIN 9001 zertifiziert unter DQS Reg.Nr. 14310-2.

With the agreement of the PTB the manufacturer performed the determination of the load cell error, the stability of the dead load output, repeatability and creep in the temperature range of –10°C to +55°C according OIML R60 on the load cells Nº: ME47856, class C6, E_{max} = 20 t, plus Nº: 1/9, class C6, E_{max} = 25 t and Nº: ME59645, class C5, E_{max} = 50t, as well as tests of barometric pressure effects and the determination of the effects of temperature cycles and simultaneous humidity (CH) on the load cells Nº: ME47853 , class C6, E_{max} = 20t und Nº: Prot3, class C5, E_{max} = 50 t. Additionally load cell error tests, the stability of the dead load output, repeatability and creep in the temperature range of –10°C to +40°C have been performed by the PTB according OIML R60 on the load cell Nº: ME20186, class C5, E_{max} = 75 t.

The test equipment of the manufacturer is well-known to the PTB, and in accordance with DIN ISO 9001, certified under DQS Reg.No. 14310-2.

Tabelle 2: Ausgeführte Prüfungen / *Table 2: Tests performed*

Prüfung / *Test*	R60 (2000)	Institut*(e)*	Ergebnis / *result*
Temperaturprüfung und Wiederholbarkeit bei *Temperature test and repeatability at* (20 / -10 / 40 / 55* / 20 °C)	5.1.1, 5.4 ; A.4.1	Hersteller / *manufacturer* PTB	+
Temperatureinfluß auf Vorlastsignal bei *Temperature effect on minimum dead load output at* (20 / -10 / 40 / 55* / 20 °C)	5.5.1.3 ; A.4.1.16	Hersteller / *manufacturer* PTB	+
Kriechprüfung bei *Creep test at* (20 / -10 / 40 / 55* °C)	5.3.1 ; A.4.2	Hersteller / *manufacturer* PTB	+
Mindestvorlastsignalrückkehr bei *Minimum dead load output return at* (20 / -10 / 40 / 55* °C)	5.3.2 ; A.4.3	Hersteller / *manufacturer* PTB	+
Auswirkung des Luftdrucks bei Umgebungstemperatur *Barometric pressure effects at room temperature*	5.5.2 ; A.4.4	Hersteller / *manufacturer*	+
Feuchteprüfung, zyklisch *Damp heat test , cyclic* *Kennzeichnung CH oder ohne marked CH or (not marked)*	5.5.3.1 ; A.4.5	Hersteller / *manufacturer*	+

*) zusätzliche, über Anforderung von R60 hinausgehende Prüfung, nicht für ≥ 50t C4, C5 / *additional test, more than requirement of R60, not for ≥ 50t, C4, C5*

1. Ergänzung im Rahmen der 2. Revision:
1st addition within the scope of revision 2:

Die folgenden Messergebnisse sind in der PTB hinterlegt:
Following test results are kept at PTB:

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- Test Report No. PTB 1.12-4073823-1, 16.03.2015:
  E_{max}=25 t; SN: 1/9; C6; Y=20000; Z=8000; -10 °C – 40 °C ;
- Test Report No. PTB 1.12-4073823-2, 16.03.2015:
  E_{max}=25 t; SN: 1/9; C6; Y=20000; Z=6000; -10 °C – 55 °C ;

3. Beschreibung der Wägezelle / ***Description of the load cell***

Die Wägezellen der Baureihe PR 6221 sind kompakte Druckwägezellen für selbstzentrierenden pendelförmigen Einbau. Der DMS–Applikationsraum ist hermetisch metallisch gekapselt; das tiefgezogene Gehäuse der Wägezelle aus rostfreiem Edelstahl ist Mikroplasma gasdicht geschweißt und mit Schutzgas gefüllt.
Die wesentlichen Betriebsdaten sind im Datenblatt Seite 5 bis 7 unter Nr. 6 angegeben.

Load cells of the series PR 6221 are compact compression load cells for self-centering pendulum applications. The strain gauge application is hermetically sealed; the deep-drawn and micro plasma welded housing is made of stainless steel and filled with inert gas.
Further essential characteristics are given in the data sheet, see No. 6 on pages 5 to 7.

Bild 1: Wägezelle Typ PR 6221/.. / *Figure 1: Load cell type PR 6221/..*

Die Kurzkennzeichnung auf dem Typenschild erfolgt entsprechend den Beispielen:
Excample of a complete type designation on the identification plate:

PR6221 / 20t C3 (1kΩ)

DMS-Widerstand	*strain gauge resistance*
für Waagen der Klasse (III) , zulässige	*for weighing instruments class (III), max.*
Anzahl der Teilungswerte in n_{LC} / 1000	*number of load cell intervals in n_{LC} / 1000*
Nennlast E_{max}	*maximum capacity E_{max}*
Wägezellen Typ	*load cell type*

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2. Ergänzung im Rahmen der 3. Revision / *2nd addition within the scope of revision 3:*
Der DMS-Widerstand muss nicht auf dem Typenschild angegeben sein.
The strain gauge impedance need not be listed on the designation plate
Die Kabellänge wird auf dem Typenschild angegeben.
The cable length is indicated on the designation plate.

4. Dokumentation / ***Documentation***

Die Messergebnisse und die nachfolgend aufgeführten Zeichnungen sind in der PTB hinterlegt.
The test results and the following drawings are kept at the PTB.

Datenblatt PR6221: *Data sheet PR6221:*	9498 762 21003 (deutsch) *9498 762 21001 (english)*	Daten *Data*
Prinzipzeichnungen Nr: *Principle drawing No :*	4012 101 5855. Bl./*sh.* 110-01, Bl./*sh.* 510-01.	Abmessungen, Daten *Dimensions, data*

1. Ergänzung im Rahmen der 2. Revision:
1st addition within the scope of revision 2

- Die zu diesem Zertifikat gehörenden technischen Unterlagen des Zertifikatsinhabers, die das Zertifikat seit dieser Revision 2 ergänzen, sind im Zertifizierungs-Dokumentensatz ZDS-D09-00.23 der benannten Stelle hinterlegt. Ein von der benannten Stelle gestempeltes Inhaltsverzeichnis dieses Zertifizierungs-Dokumentensatzes wurde dem Zertifikatsinhaber zugeschickt.
The documents appendant to this certificate which amend the certificate with this 2nd revision are deposited at the notified body in the set of certification documentation No. ZDS-D09-00.23. The index of the set of certification documentation has been stamped by the notified body and it has been sent to the owner of the certificate.

5. Weitere Informationen / ***Further information***

Gültigkeit des Prüfberichtes. Fertigungsverfahren, Werkstoffe und Abdichtungen müssen den vorgestellten Mustern und der in der PTB hinterlegten Dokumentation entsprechen; wesentliche Änderungen sind nur mit Zustimmung der PTB erlaubt.

Die im Datenblatt hinsichtlich Linearität, Umkehrspanne und Temperaturgang angegebenen Fehlergrenzen sind typische Werte eines Musters; der für jedes Muster zulässige Gesamtfehler aus diesen Größen ist durch die Fehlergrenze nach OIML R60 Nr 5.1 (Hüllkurve) vorgegeben.
Die technischen Daten sowie die Abmessungen der Wägezellen und die Prinzipien der Krafteinleitung sind auf den Seiten 5 bis 7 in dieser Anlage enthalten und müssen beachtet werden. Die Wägezellen können nach DIN/EN 45501 Nr. 4.12 in Waagen der Klasse (III) und (IIII) eingesetzt werden.

Validity of this test certificate. The manufacturing process, material and sealings of the produced load cells have to be in accordance with the tested patterns; essential changes are only allowed with the permission of the PTB.

The typical errors related to linearity, hysteresis and temperature coefficient as indicated in the data sheet point out possible single errors of a pattern; however, the overall error of each pattern is determined by the maximum permissible error according OIML R60 No 5.1.

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The technical data, the dimensions of the load cell and the principle of load transmission are given on pages 5 to 7 of this annex, have to be complied with. The load cells can be used in weighing applications class (III) and (IIII) in accordance with DIN/EN 45501 No. 4.12.

6. Datenblatt und Abmessungen / *Data sheet and dimensions (see next page)*

Auszug aus dem Datenblatt des Herstellers mit Daten und Abmessungen

Nennlast	obere Grenze des spezifizierten Meßbereichs	E_{max}	**20**	**25**	**30**	**50**	**60**	**75**	**t**
Gebrauchslast	obere Grenze für Messungen	E_u	40	37,5	60	75	75	75	t
Bruchlast	Gefahr mechanischer Zerstörung	E_d	> 100	> 75	> 150	> 150	> 150	> 150	t
Nennkennwert	relatives Ausgangssignal bei Nennlast	C_n	**1**	**2**	**1**	**2**	**2,4**	3	
	mV/V für Genauigkeitsklassen C4 bei E_{max} = 60, 75 t						**1,5**	1,5	
	mV/V C5[1] bei $E_{max} \geq 50$ t					**1,5**	**1,5**	1,5	
	mV/V								
Nennmeßweg	max. elastische Verformung bei Nennlast	s_{nom}	0,3	0,4	0,3	0,6	0,7	0,8	mm

Genauigkeitsklasse			**D1**	**C3**	**C4**	**C5**	**C6*[1]** (* nur für E_{max} ...)	
20t, 25t, 30 t)								
Fehlerklasse			0,04	0,015	0,012	0,010	0,008	% E_{max}
Mindestvorlast	untere Grenze des spezifizierten Meßbereichs	E_{min}			0			% E_{max}
Nennlast	obere Grenze des spezifizierten Meßbereichs	E_{max}			s. o. Tabelle			
Gebrauchslast	obere Grenze für Messungen	E_u			s. o. Tabelle			
Bruchlast	Gefahr mechanischer Zerstörung	E_d			s. o. Tabelle			
Mindestteilungswert	kleinster Teilungswert der Wägezelle ($v_{min} = E_{max}/Y$)	Y	5000	14000	20000	20000	20000	
Kriech-Teilungsfaktor	Nullp.-Rückkehr nach 30 min. Nennl. ($DR = ½ E_{max}/Z$)	Z	1000	6000	8000 [2] 6000 [3]	8000 [2] 6000 [3]	8000 [2] [3]	
	bei $E_{max} \geq 50$ t							
Relative Kennwertabweichung	zulässige Abweichung vom Nennkennwert	d_c	< 0,25	< 0,07	< 0,07	< 0,07	< 0,07	% C_n
Nullsignal	Ausgangssignal der Wägezelle im unbelasteten Zustand	S_o	< 1,0	< 1,0	< 1,0	< 1,0	< 1,0	% C_n
Reproduzierbarkeit	max. Meßsignaländerung bei wiederholten Belastungen	ε_R	< 0,01	< 0,005	< 0,005	< 0,005	< 0,005	% C_n
Belastungskriechen	max. Ausgangssignaländerung bei E_{max} während 30 min	d_{cr}	< 0,03	< 0,015	< 0,0125	< 0,010	< 0,008	% C_n
[illegible]ritätsabweichung	Abweichung von der besten Geraden durch Null	d_{Lin}	< 0,03	< 0,01	< 0,01	< 0,01	< 0,01	% C_n
Relative Umkehrspanne	max. Differenz zwischen Auf- und Abwärtskennlinie	d_{hy}	< 0,04	< 0,0165	< 0,0125	< 0,010	< 0,008	% C_n
Temperaturkoeffizient (TK) des Mindestvorlastsignals	max. auf C_n bezogene Änderung von S_{min}/10K ΔT im B_T	TK_{Smin}	< 0,028	< 0,01	< 0,007	< 0,007	< 0,007	%C_n/10K
TK des Kennwertes	max. auf C_n bezogene Änderung von C /10K ΔT im B_T	TK_C	< 0,03	< 0,01	< 0,008	< 0,007	< 0,005	%C_n/10K
Eingangswiderstand	zwischen den Speiseanschlüssen	R_{LC}			1080 ± 10			Ω
Ausgangswiderstand	zwischen den Meßanschlüssen	R_O	1010 ± 2		1010 ± 1			Ω
	für Genauigkeitsklassen **C5 [1] bei E_{max} = 50 t**				760 ± 1			Ω
	C4, C5 [1] bei E_{max} = 60 t				635 ± 1			Ω
	C4, C5 [1] bei E_{max} = 75 t				510 ± 1			Ω
Isolationswiderstand	zwischen Innenschaltung und Gehäuse bei 100 V_{DC}	R_{IS}			> 5000 x 10^6			Ω
Isolationsfestigkeit	zwischen Schaltung und Gehäuse				500			V_{DC}
Nennversorgungsspg. bereich	unter Einhaltung der technischen Daten	B_u			4 ... 24			V
Max. Speisespannung	Dauerbetrieb ohne Schaden	U_{max}			32			V
Nennumgebungstemp bereich	unter Einhaltung der technischen Daten	B_T			-10 ... +55			°C
Gebrauchstemperaturbereich	Dauerbetrieb ohne Schaden	B_{Tu}			-40 ... +95			°C
Lagerungstemperaturbereich	ohne elektrische und mechanische Beanspruchung	B_{TI}			-40 ... +95			°C
Grenzexzentrizität	zulässiger Abstand von der Meßachse	S_{ex}			10			mm

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Vibrationsbeständigkeit	Beständigkeit gegen Schwingungen (IEC68-2-6 Fc)		20 g, 100 h, 10 ... 150 Hz	
Umgebungsdruckeinfluß	Luftdruckeinfluß auf das Mindestvorlastsignal S_{min}	PK_{Smin}	< 0,5	kg/kPa

Definitionen nach VDI / VDE 2637

Die angegebenen technischen Daten dienen allein der Produktbeschreibung und sind nicht als zugesicherte Eigenschaften im Rechtssinne aufzufassen.

Data sheet and dimensions

Summary of the data sheet of the manufacturer with data and dimensions

Maximum capacity	highest limit of specified measuring range	**E_{max}**	**20**	**25**	**30**	**50**	**60**	**75**	**t**
Max. usable load	upper limit for measurements	E_u	40	37.5	60	75	75	75	t
Destructive load	danger of mechanical destruction	E_d	> 100	> 75	> 150	> 150	> 150	> 150	t
Rated output	relative output signal at nominal load	C_n	**1**	**2**	**1**	**2**	**2.4**	**3**	
	mV/V								
	for accuracy classes C4, **E_{max} = 60, 75 t**						**1.5**	**1.5**	
	mV/V								
	C5 [1] **E_{max} ≥ 50 t**					**1.5**	**1.5**	**1.5**	
	mV/V								
Nominal deflection	max. elastic deformation under nominal load	s_{nom}	0.3	0.4	0.3	0.6	0.7	0.8	mm

Accuracy class			**D1**	**C3**	**C4**	**C5**	**C6* [1]** (* for E_{max} = 20t, 25t, 30t only)	
Accuracy class			0.04	0.015	0.012	0.010	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}			see table			
Max. usable load	upper limit for measurements	E_u			see table			
Destructive load	danger of mechanical destruction	E_d			see table			
Minimum LC verification	minimum load cell verification interval ($v_{min} = E_{max}/Y$)	Y	5000	14000	20000	20000	20000	
Creep divisions factor	factor for min. dead load output return (DR= ½ E_{max}/Z)	Z	1000	6000	8000 [2]	8000 [2]	8000 [2]	
	at E_{max} ≥ 50 t				6000 [3]	6000 [3]	[3]	
Tolerance on rated output	permissible deviation from rated output	d_c	< 0.25	< 0.07	< 0.07	< 0.07	< 0.07	% C_n
Zero output signal	load cell output signal under unloaded condition	S_o	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	% C_n
Repeatability error	max. change in load cell output for repeated loading	e_R	< 0.01	< 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}	< 0.03	< 0.015	< 0.0125	< 0.010	< 0.008	% C_n
Non-linearity	max. deviation from best straight line through zero	d_{Lin}	< 0.03	< 0.01	< 0.01	< 0.01	< 0.01	% C_n
Hysteresis	max. diff. in LC output between loading and unloading	d_{hy}	< 0.04	< 0.0165	< 0.0125	< 0.010	< 0.008	% C_n
Temperature effect on S_{min}	max. change of S_{min} /10K ΔT over B_T referred to C_n	TK_{Smin}	< 0.028	< 0.01	< 0.007	< 0.007	< 0.007	%C_n/10K
Temperature effect on C_n	max. change of C_n /10K ΔT over B_T referred to C_n	TK_c	< 0.03	< 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_O	1010 ± 2		1010 ± 1			Ω
	for accuracy classes C5 [1] **at E_{max} = 50 t**				760 ± 1			Ω
	C4, C5 [1] at E_{max} = 60 t				635 ± 1			Ω
	C4, C5 [1] 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 continous operation without damage	U_{max}			32			V
Nominal ambient temp. range	to hold the specified performance	B_T			-10 ... +55			°C
Usable ambient temp. range	permissible for continuos 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_{Smin}			< 0.5			kg/kPa

Definitions acc. to VDI / VDE 2637

The technical data given here serve only as a product description and must not be interpreted as guaranteed characteristics in the legal sense.

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Nationales Metrologieinstitut

KBS
Konformitätsbewertungsstelle

Seite 8 zum Prüfschein vom 18.10.2017, Prüfscheinnummer: D09-00.23, 3. Revision
Page 8 of test certificate of 18.10.2017, Test Certificate No: D09-00.23, Revision 3

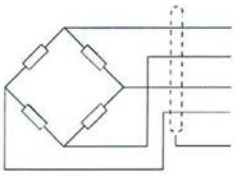
1. Ergänzung im Rahmen der 2. Revision:
1st addition within the scope of revision 2:

[1] Zusätzlich wird die Genauigkeitsklasse C6 für die Nennlasten 50, 60, 75 t aufgenommen.
In addition the accuracy class C6 applies also for the Maximum capacities of 50, 60, 75 t.

[2] Für den Nenntemperaturbereich > 40 °C gilt Z=6000
For nominal ambient temperature > 40 °C is Z = 6,000

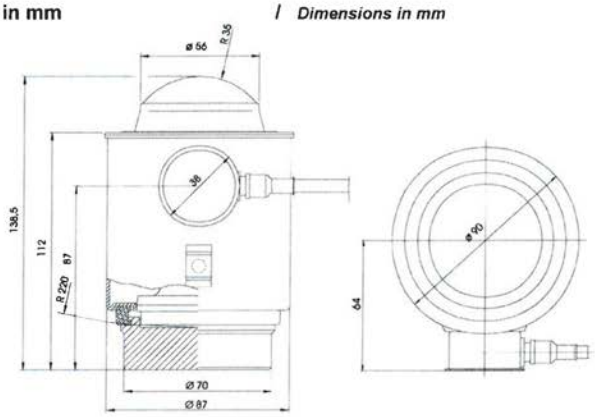
[3] Für Nennlasten ≥ 50 t gilt Z=8000 und [2]
For the Maximum capacities ≥ 50 t is Z = 8,000 and [2]

Anschlussbelegung / *Connecting diagram*



rot Speisung +	*red supply +*
blau Speisung -	*blue supply -*
grau Ausgang -	*grey output -*
grün Ausgang +	*green output +*
Kabelschirm, verbunden mit Gehäuse	*cable screen, connected to housing*

Abmessungen in mm / ***Dimensions in mm***



Rückstellkraft
Bei einer Auslenkung der Wägezelle aus der Vertikalen wird je Millimeter Auslenkung (gemessen am Wägezellenkopf) eine horizontal wirkende Rückstellkraft von 0.5% der vertikal auf der Wägezelle ruhenden Last wirksam.

Restoring force
For each mm of movement, the top of the load cell shifts from the vertical axis, a horizontal restoring force of 0.5% of the vertical load is generated.

Gehäusekonstruktion
Tiefziehgehäuse mit Membrandeckel und Meßelement hermetisch geschlossen, verschweißt, mit Schutzgas gefüllt.
Material-Nr.: 1.4301 (DIN 17440)
304 S15 (B.S.)

Load cell housing construction
Deep draw pulled housing, membrane and measuring element hermetically sealed, welded, filled with inert gas.
Material-no.: 304 S15 (B.S.)
1.4301 (DIN 17440)

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Seite 9 zum Prüfschein vom 18.10.2017, Prüfscheinnummer: D09-00.23, 3. Revision
Page 9 of test certificate of 18.10.2017, Test Certificate No: D09-00.23, Revision 3

Kabel
robust, flexibel, geschirmt
Mantel: TPE Farbe: grün
Durchmesser: 5mm, Leitung: 4x AWG22
Länge: 16m

Cable
robust, flexible, screened
sheath: TPE colour: green
diameter: 5 mm, wires: 4x AWG22
length: 16 m

Schutzart
IP 68, IEC 529 / EN 60529: 1.5m Wassersäule / 10.000 h,
IP69K, DIN 40 050: Hochdruckwasser, Dampfstrahlreinigung.

Protection
IP 68, IEC 529 / EN 60529: 1.5m water column /10.000 h,
IP69K, DIN 40 050: water of high pressure, steam beam cleaning

Konformitätsbescheinigung
Geltungsbereich: PR 6221/.. E
Kennzeichen: Nummer:
EEx ib IIC T6 PTB Nr. Ex-92.C.2137
II 1G EEx ia IIC T6 PTB 02 ATEX 2059

Certificate of conformity
Range of recognition: PR 6221/. E
Feature: Registration number:
EEx ib IIC T6 PTB Nr. Ex-92.C.2137
II 1G EEx ia IIC T6 PTB 02 ATEX 2059

1. Ergänzung im Rahmen der 2. Revision:
1st addition within the scope of revision 2:

Weiterhin gelten folgende Konformitätsbescheinigung:
Furthermore, the following certificate of conformity shall apply:

Konformitätsbescheinigung
Geltungsbereich: PR 6221/.. E
Kennzeichen: Nummer:
II 1D Ex t IIIC T_{500} 77°C TÜV 03 ATEX 2301x
II 1G Ex ia IIC T6 PTB 02 ATEX 2059

Certificate of conformity
Range of recognition: PR 6221/. E
Feature: Registration number:
II 1D Ex t IIIC T_{500} 77°C TÜV 03 ATEX 2301x
II 1G Ex ia IIC T6 PTB 02 ATEX 2059

2. Ergänzung im Rahmen der 3. Revision / *2nd addition within the scope of revision 3:*
Die angegebene Länge des Kabels von 16 m ist die Standardkabellänge. Sie darf variieren, die Wägezellen dürfen mit unterschiedlich langen Kabeln versehen werden.
The cable length of 16 m mentioned above is the standard cable length. It may vary; the load cells may be equipped with cables of varying lengths.

Die tatsächliche Kabellänge ist sowohl auf dem Typenschild also auch im mit der Wägezelle ausgelieferten "Calibration Certificate" angegeben.
The actual cable length is indicated on the designation plate, and it is listed in the "calibration certificate" accompanying the load cell.

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PTB / Physikalisch-Technische Bundesanstalt / National Metrology Institute
Konformitätsbewertungsstelle
Conformity Assessment Body

Bundesallee 100 • 38116 Braunschweig • DEUTSCHLAND
Abbestraße 2-12 • 10587 Berlin • DEUTSCHLAND

12.13 R60/2000-DE1-08.11

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

Member State of OIML
Germany

OIML Certificate No.
R60/2000-DE1-08.11
Revision 1

OIML CERTIFICATE OF CONFORMITY

Issuing Authority

Name:	Physikalisch-Technische Bundesanstalt
Address:	Bundesallee 100, 38116 Braunschweig
Person responsible:	Dr. O. Mack

Applicant

Name:	Sartorius Mechatronics T&H GmbH
Address:	Meiendorfer Str. 205, 22145 Hamburg

Manufacturer of the certified type is the applicant.

Identification of the certified type

Load cell
Strain gauge compression load cell for weighbridges

Type: PR 6221

Further characteristics see page 2

This Certificate attests the conformity of the above identified type (represented by the sample or samples identified in the associated Test Report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

R60, edition 2000
for accuracy class(es) C1 ÷ C6

This Certificate relates only to the metrological and technical characteristics of the type of instrument covered by the relevant OIML Recommendation identified above.

This Certificate does not bestow any form of legal international approval.

R3-0033

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

OIML Certificate No.
R60/2000-DE1-08.11
Revision 1

With the 1st revision the accuracy class C6 for the maximum capacities of 50 t, 60 t and 75 t were added.
The conformity was established by the results of tests and examinations provided in the associated Test Reports

No. 1.12-4073824/1 that includes 20 pages
No. 1.12-4073824/2 that includes 20 pages

The Issuing Authority

Dr. O. Mack
Head of Working Group

08.06.2015

The CIML Member

Dr. R. Schwartz

Vice-President

08.06.2015

The load cells (LC) of the series PR6221 are compact compression load cells for self-centering pendulum applications. The strain gauge application is hermetically sealed; the deep-drawn and micro plasma welded housing is made of stainless steel and filled with inert gas. The metrological characteristics for application in approved weighing instruments are listed in table 1.

Table 1: Essential data

Accuracy class			C3			
Maximum number of load cell intervals	n_{LC}		3000			
Maximum capacity	E_{max}	t	12.5 / 20 / 30	25 / 50	60	75
Rated output		mV/V	1	2	2.4	3
Temperature range		°C	-10 ... +55			
Minimum load cell verification interval	$v_{min} = (E_{max} / Y)$		E_{max} / 14000			
Minimum dead load output return	DR = (½ E_{max} / Z)		½ E_{max} / 6000			

Page 2 of 3 pages

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
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OIML Certificate No.
R60/2000-DE1-08.11
Revision 1

Accuracy class			C4				
Maximum number of load cell intervals	n_{LC}		4000				
Maximum capacity	E_{max}	t	12.5	20 / 30	25	50	60 / 75
Rated output		mV/V	1		2		1.5
Temperature range		°C	-10 ... +55				
Minimum load cell verification interval	$v_{min} = (E_{max} / Y)$		E_{max} / 18000	E_{max} / 20000			
Minimum dead load output return	DR = (½ E_{max} / Z)		½ E_{max} / 6000	½ E_{max} / 8000 [1]			

Accuracy class			C5			C6		
Maximum number of load cell intervals	n_{LC}		5000			6000		
Maximum capacity	E_{max}	t	20 / 30	25	50 / 60 / 75	20 / 30	25	50 / 60 / 75
Rated output		mV/V	1	2	1.5	1	2	1.5
Temperature range		°C	-10 ... +55					
Minimum load cell verification interval	$v_{min} = (E_{max} / Y)$		E_{max} / 20000					
Minimum dead load output return	DR = (½ E_{max} / Z)		½ E_{max} / 8000 [1]					

Maximum capacity	E_{max}	t	12.5	20 / 30	25 / 50	60	75
Safe load limit		$\%E_{max}$	300	200	150	125	100

[1] For the compensated temperature range > 40°C Z = 6000

Dead load: 0%·E_{max}; Input impedance: 1080 Ω; Fraction: p_{LC} = 0.7

Important note: Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate is issued, partial quotation of the Certificate and of the associated Test Report(s) is not permitted, although either may be reproduced in full.

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12.14 NMI S333A

NMI S333A
Rev 6

Australian Government
Department of Industry, Science and Resources

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval

NMI S333A

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that an approval for use for trade has been granted in respect of the instruments herein described.

GWT Global Weighing PR 6201 and PR 6221 Series Load Cells

submitted by Minebea Intec GmbH
(formerly Sartorius Mechatronics T&H GmbH)
Meiendorfer Strasse 205A
22145 Hamburg
Germany

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This approval has been granted with reference to document NMI R 60, *Metrological Regulation for Load Cells*, dated July 2004.

This approval is subject to review at the decision of the Chief Metrologist in accordance with the conditions specified in the document NMI P 106.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern approved – interim certificate issued	17/08/01
1	Pattern approved – certificate issued	18/02/02
2	Pattern amended (submittor details) & reviewed – notification of change issued	1/02/07
3	Pattern amended (submittor details) & reviewed – notification of change issued	31/05/11
4	Pattern updated – variant 1 approved – certificate issued	22/10/12
5	Pattern & variant 1 **reviewed**, amended (pattern & submittor details) – certificate issued	21/07/17
6	Review date removed & editorial correction – certificate issued	22/08/22

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Rev 6

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI (or NSC) S333A' and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI (or NSC) S333A' in addition to the approval number of the instrument, and only by persons authorised by the submittor.

It is the submittor's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with document NMI P 106.

The values of the performance criteria (maximum number of scale intervals etc.) applicable to an instrument incorporating the pattern approved herein shall be within the limits specified herein and in any approval documentation for the other components.

Signed by a person authorised by the Chief Metrologist to exercise their powers under Regulation 60 of the *National Measurement Regulations 1999*.

Darryl Hines
Manager
Policy and Regulatory Services

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Rev 6

TECHNICAL SCHEDULE No S333A

1. Description of Pattern **approved on 17/08/01**
amended on 21/07/17

The GWT Global Weighing PR 6201 and PR 6221 series of load cells of up to 30 000 kg maximum capacity (Tables 1 to 5) approved for use with up to 3000 verification intervals (C3 load cells) or with up to 4000 verification intervals (C4 load cells). May also be known as Sartorius or Minebea Intec instruments of the same models.

Figures 1 and 2 show examples of typical PR 6201 and PR 6221 series load cells.

1.1 Method of Mounting

Mounting is to be in accordance with the manufacturer's instructions and as shown in Figures 3 and 4. (Note that there are different load cell profiles for different models of load cell.)

1.2 Markings

Each load cell is marked with the following:

Manufacturer's mark, or name written in full	Minebea Intec, Germany
Model number	.....
Serial number	.....
Pattern approval mark	NMI or NSC S333A
Maximum capacity E_{max}	..... kg or t
Cable length	..... m

1.3 Table of Specifications

Specifications for the patterns are given in Tables 1 to 5.

2. Description of Variant 1 **approved on 22/10/12**
amended on 21/07/17

A Sartorius Mechatronics model PR6201/54 C3 load cell of 50 000 kg maximum capacity load cell (Table 6).

NMI S333A
Rev 6

TABLE 1

Manufacturer: GWT Global Weighing (aka Sartorius or Minebea Intec)

Type:		PR 6201/23 C3	PR 6201/33 C3	PR 6201/53 C3
Maximum capacity, E_{max}	kg	2000	3000	5000
Accuracy class		C	C	C
Maximum number of verification intervals		3000	3000	3000
Minimum value of verification interval, V_{min}	kg	0.29	0.33	0.35
Minimum dead load output return value (DR)	kg	0.33	0.5	0.83
Output rating (nominal)	mV/V	1	1	1
Input impedance (nominal)	Ω	650	650	650
Supply voltage (AC or DC)	V	4 - 24	4 - 24	4 - 24
Cable length	m	Manufactured in various lengths between 10 and 100 metres; the cable length is marked on the data plate.		
Number of leads (plus shield)		4 or 6	4 or 6	4 or 6

TABLE 2

Manufacturer: GWT Global Weighing (aka Sartorius or Minebea Intec)

Type:		PR 6201/14 C3	PR 6201/24 C3	PR 6201/34 C3
Maximum capacity, E_{max}	kg	10 000	20 000	30 000
Accuracy class		C	C	C
Maximum number of verification intervals		3000	3000	3000
Minimum value of verification interval, V_{min}	kg	0.71	1.43	2.14
Minimum dead load output return value (DR)	kg	1.67	1.67	2.5
Output rating (nominal)	mV/V	1	1	1
Input impedance (nominal)	Ω	650	650	650
Supply voltage (AC or DC)	V	4 - 24	4 - 24	4 - 24
Cable length	m	Manufactured in various lengths between 10 and 100 metres; the cable length is marked on the data plate.		
Number of leads (plus shield)		4 or 6	4 or 6	4 or 6

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TABLE 3

Manufacturer: GWT Global Weighing (aka Sartorius or Minebea Intec)

Type:		PR 6201/24 C4	PR 6201/34 C4
Maximum capacity, E_{max}	kg	20 000	30 000
Accuracy class		C	C
Maximum number of verification intervals		4000	4000
Minimum value of verification interval, V_{min}	kg	1.0	1.5
Minimum dead load output return value (DR)	kg	1.25	1.88
Output rating (nominal)	mV/V	1	1
Input impedance (nominal)	**Ω**	650	650
Supply voltage (AC or DC)	V	4 - 24	4 - 24
Cable length	m	Manufactured in various lengths between 12 and 100 metres; the cable length is marked on the data plate.	
Number of leads (plus shield)		4 or 6	4 or 6

TABLE 4

Manufacturer: GWT Global Weighing (aka Sartorius or Minebea Intec)

Type:		PR6221/20t C3	PR6221/30t C3
Maximum capacity, E_{max}	kg	20 000	30 000
Accuracy class		C	C
Maximum number of verification intervals		3000	3000
Minimum value of verification interval, V_{min}	kg	1.43	2.14
Minimum dead load output return value (DR)	kg	1.67	2.5
Output rating (nominal)	mV/V	1	1
Input impedance (nominal)	Ω	1080	1080
Supply voltage (AC or DC)	V	4 - 24	4 - 24
Cable length	m	Manufactured in various lengths between 16 and 100 metres; the cable length is marked on the data plate.	
Number of leads (plus shield)		4 or 6	4 or 6

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Rev 6

TABLE 5

Manufacturer: GWT Global Weighing (aka Sartorius or Minebea Intec)

Type:		PR6221/20t C4	PR6221/30t C4
Maximum capacity, E_{max}	kg	20 000	30 000
Accuracy class		C	C
Maximum number of verification intervals		4000	4000
Minimum value of verification interval, V_{min}	kg	1.0	1.5
Minimum dead load output return value (DR)	kg	1.25	1.88
Output rating (nominal)	mV/V	1	1
Input impedance (nominal)	Ω	1080	1080
Supply voltage (AC or DC)	V	4 - 24	4 - 24
Cable length	m	Manufactured in various lengths between 16 and 100 metres; the cable length is marked on the data plate.	
Number of leads (plus shield)		4 or 6	4 or 6

TABLE 6

Manufacturer: GWT Global Weighing (aka Sartorius or Minebea Intec)

Type:		PR 6201/54 C3
Maximum capacity, E_{max}	kg	50 000
Accuracy class		C
Maximum number of verification intervals		3000
Minimum value of verification interval, V_{min}	kg	3.57
Minimum dead load output return value (DR)	kg	4.17
Output rating (nominal)	mV/V	2
Input impedance (nominal)	**Ω**	650
Supply voltage (AC or DC)	V	4 - 24
Cable length	m	Manufactured in various lengths between 12 and 100 metres; the cable length is marked on the data plate.
Number of leads (plus shield)		4 or 6

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Rev 6

FIGURE S333A – 1

GWT Global Weighing Model PR 6201/23 C3 Load Cell

FIGURE S333A – 2

GWT Global Weighing Model 6221/20t Load Cell

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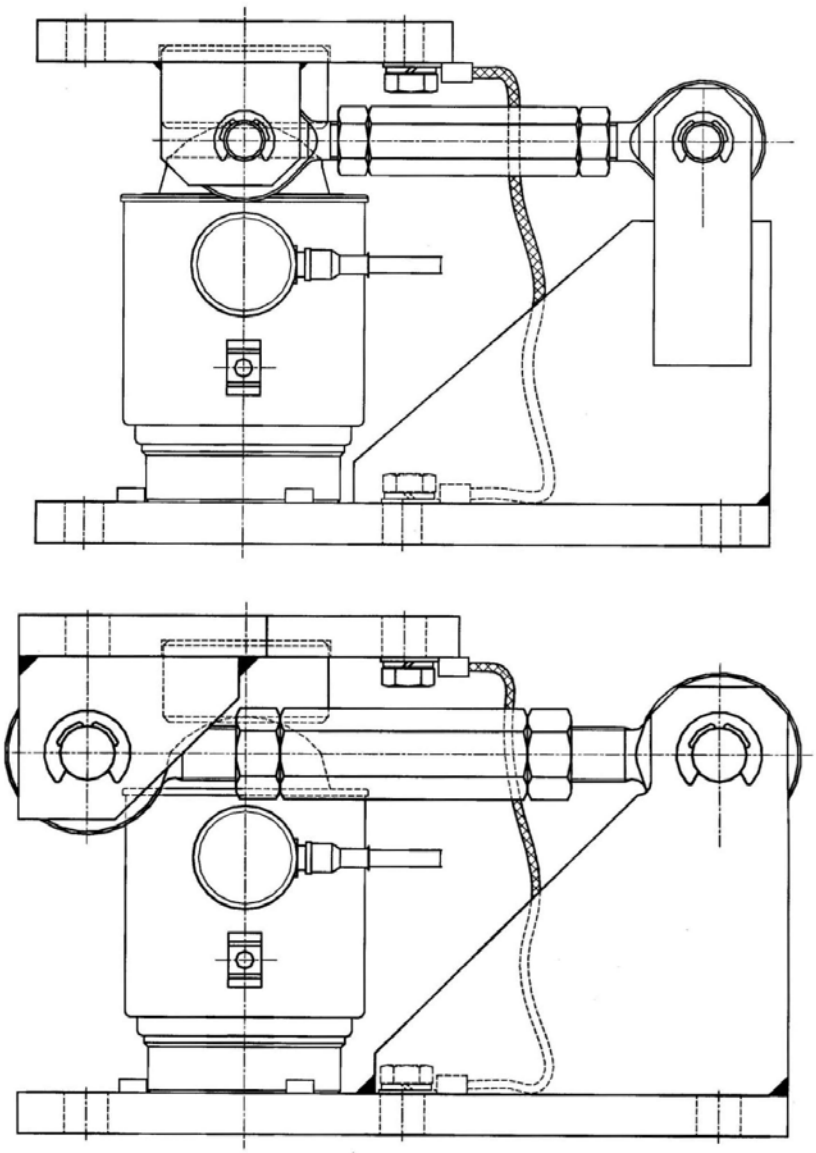
FIGURE S333A – 3



Typical Mounting Methods With Horizontal Constrainers

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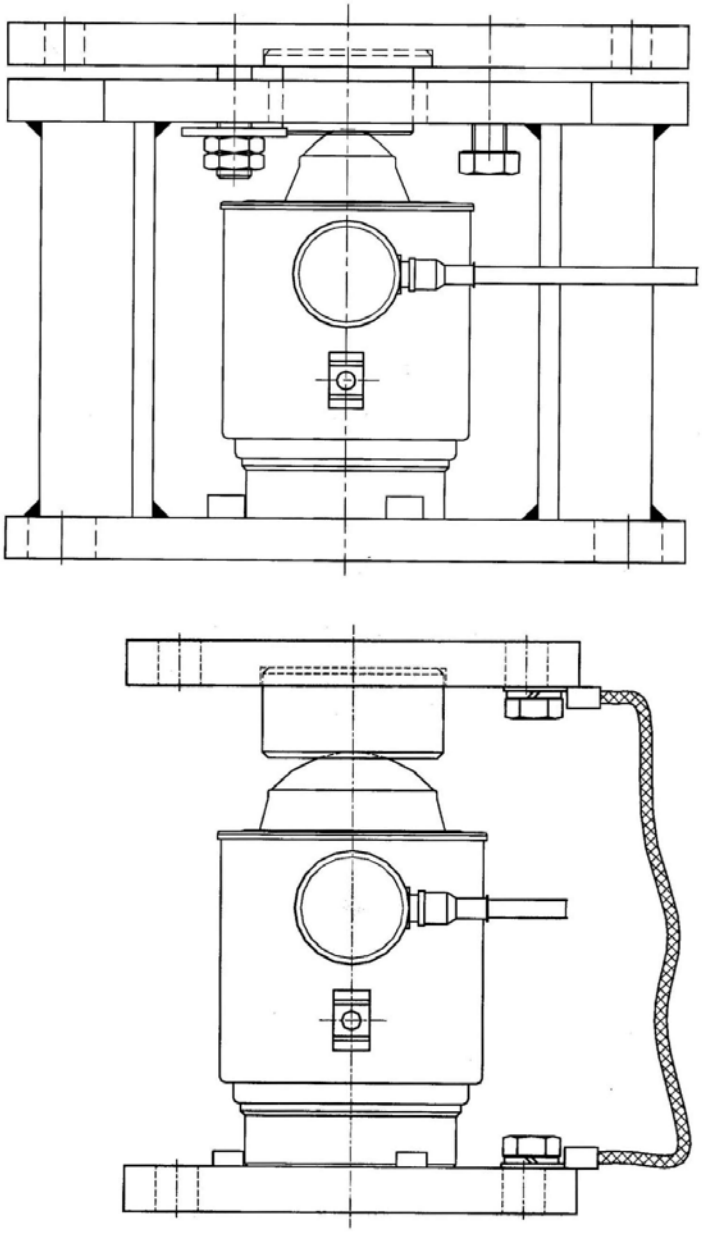
Rev 6

FIGURE S333A – 4



Typical Mounting Methods Without Horizontal Constrainers

~ End of Document ~

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12.15 14-024A1

Certificate Number: 14-024A1
Page 1 of 3

NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:
Load Cell
Compression
Model: PR6221/xxt C3 & PR6221/xxt C3 F
n_{max}: Multiple Cell, Class IIIL: 10 000
Capacity: 12.5t to 75t
Accuracy Class: III L

Submitted By:
Minebea Intec GmbH
Meiendorfer Strasse 205 A
22145 Hamburg, Germany
Tel: +49-40-67960-238
Fax: + 49-40-67960-500
Contact: Juergen Stolte
Email: juergen.stolte@minebea-intec.com
Web site: www.minebea-intec.com

Standard Features and Options

The specific models covered by this Certificate are listed on Page 2 and are identified by the model designation PR6221/xxt C3 F & PR6221/xxt C3, where the xx designates load cell capacity. Both models are metrologically equivalent.

The specific load cell capacities, v_{min} values, and minimum dead loads are listed on Page 2.

- Nominal Output: 1.0 to 3.0 mV/V
- 4-Wire Design
- Excitation Voltage: 4 to 24 volts
- Material: Stainless Steel

Temperature Range: -10 °C to 40 °C (14 °F to 104 °F)

This device was evaluated under the National Type Evaluation Program and was found to comply with the applicable technical requirements of "NIST Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

James Cassidy
Chairman, NCWM, Inc.

Kristin Macey
Chairman, National Type Evaluation Program Committee
Issued: July 31, 2017

1135 M Street, Suite 110 / Lincoln, Nebraska 68508

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Minebea Intec GmbH

Load Cell / PR6221/xxt C3 & PR6221/xxt C3 F Series

Application: The load cells may be used in Class III L scales for multiple cell applications consistent with the model designations, number of scale divisions, and parameters specified in this Certificate. Load cells of a given accuracy class may be used in applications with lower accuracy class requirements provided the number of scale divisions, the v_{min} values, and temperature range are suitable for the application. The manufacturer may market the load cell with fewer divisions (n_{max}) and with larger v_{min} values than those listed on the Certificate. However, the load cells must be marked with the appropriate n_{max} and v_{min} for which the load cell may be used.

Identification: An adhesive identification badge containing the manufacturer, model designation, accuracy class, capacity, n_{max} and serial number is located on the load cell. All other required information, if not marked on the load cell, must be on an accompanying document including the serial number of the load cell.

Load Cell Parameters:

Model	Capacity in metric ton (t)	Multiple 10 000 v_{min} Class III L (kg)	Minimum Dead Load (kg)
PR6221/12.5t C3 F & PR6221/12.5t C3	12.5	0.43	0
PR6221/20t C3 F & PR6221/20t C3	20	0.48	0
PR6221/25t C3 F & PR6221/25t C3*	25	0.60	0
PR6221/30t C3 F & PR6221/30t C3	30	0.71	0
PR6221/50t C3 F & PR6221/50t C3	50	1.19	0
PR6221/60t C3 F & PR6221/60t C3	60	1.43	0
PR6221/75t C3 F & PR6221/75t C3	75	1.79	0
*Load Cells Tested			

Test Conditions: This certificate supersedes Certificate of Conformance 14-024 and was issued to recognize transfer of the certificate from Sartorius Mechatronics T&H GmbH to Minebea Intec GmbH. No additional testing was necessary. Contact information has been updated. Previous test conditions are listed below for reference.

Certificate of Conformance Number 14-024: Two 25 metric ton capacity load cells were tested at NIST using dead weights as the reference standard. The data were analyzed for multiple load cell applications. The cells were tested over a temperature range of –10 °C to 40 °C. Tests were run on each cell at each temperature. The temperature effect on zero was measured and a time dependence (creep) test was performed. The barometric pressure test was also conducted due to the sensitivity of the load cell design to changes in barometric pressure. NCWM Pub 14 selection criteria was used to determine load cells to be tested.

Evaluated By: K. Chesnutwood (NIST Mass & Force Group) 14-024

Type Evaluation Criteria Used: NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2014. NCWM, Publication 14: Weighing Devices, 2013.

Conclusion: The results of the evaluation and information provided by the manufacturer indicate the device complies with applicable requirements.

Information Reviewed By: J. Truex (NCWM) 14-024, 14-024A1

Example of Device:

Certificate Number: 14-024A1
Page 3 of 3

Minebea Intec GmbH

Load Cell / PR6221/xxt C3 & PR6221/xxt C3 F Series

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Certificate of Approval
for Weighing and Measuring Devices

New York State Certificate Number: 10001
Effective Date: August 3, 2017

NTEP Certificate of Conformance Number: 14-024A1

For:
Load Cell
Compression
Model: PR6221/xxt C3 & PR6221/xxt C3 F
n_{max}: Multiple Cell, Class IIIL: 10 000
Capacity: 12.5t to 75t
Accuracy Class: III L

Submitted By:
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This certifies that the items specified in the above National Type Evaluation Program (NTEP) Certificate of Conformance are hereby approved for sale or use in the State of New York.

The NTEP Certificate of Conformance, as issued by the National Conference on Weights and Measures, is accepted under the terms of 1NYCRR Part 220.1. Evaluation results and device characteristics necessary for inspection and use in commerce are stated in the NTEP Certificate of Conformance. Copies of the NTEP Certificate of Conformance are available on request and are available for inspection at the Bureau's Metrology Office at 6 Harriman Campus Road, Albany, NY 12206.

Michael Sikula, Director
NYS Bureau of Weights and Measures

WM-23 (rev. 02/15) Duplicate Original NTEP

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