Minebea intec
The true measure

Installation Manual

Compact Compression Load Cell PR 6212

Translation of the Original Installation Manual 9499 053 21200 Edition 1.15.0 09/30/2022

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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

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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 6212 has been designed especially for weighing silos and process vessels.

The load cell PR 6212 may only be used as intended for weighing tasks.

In intrinsically safe circuits, only load cells PR 6212/..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

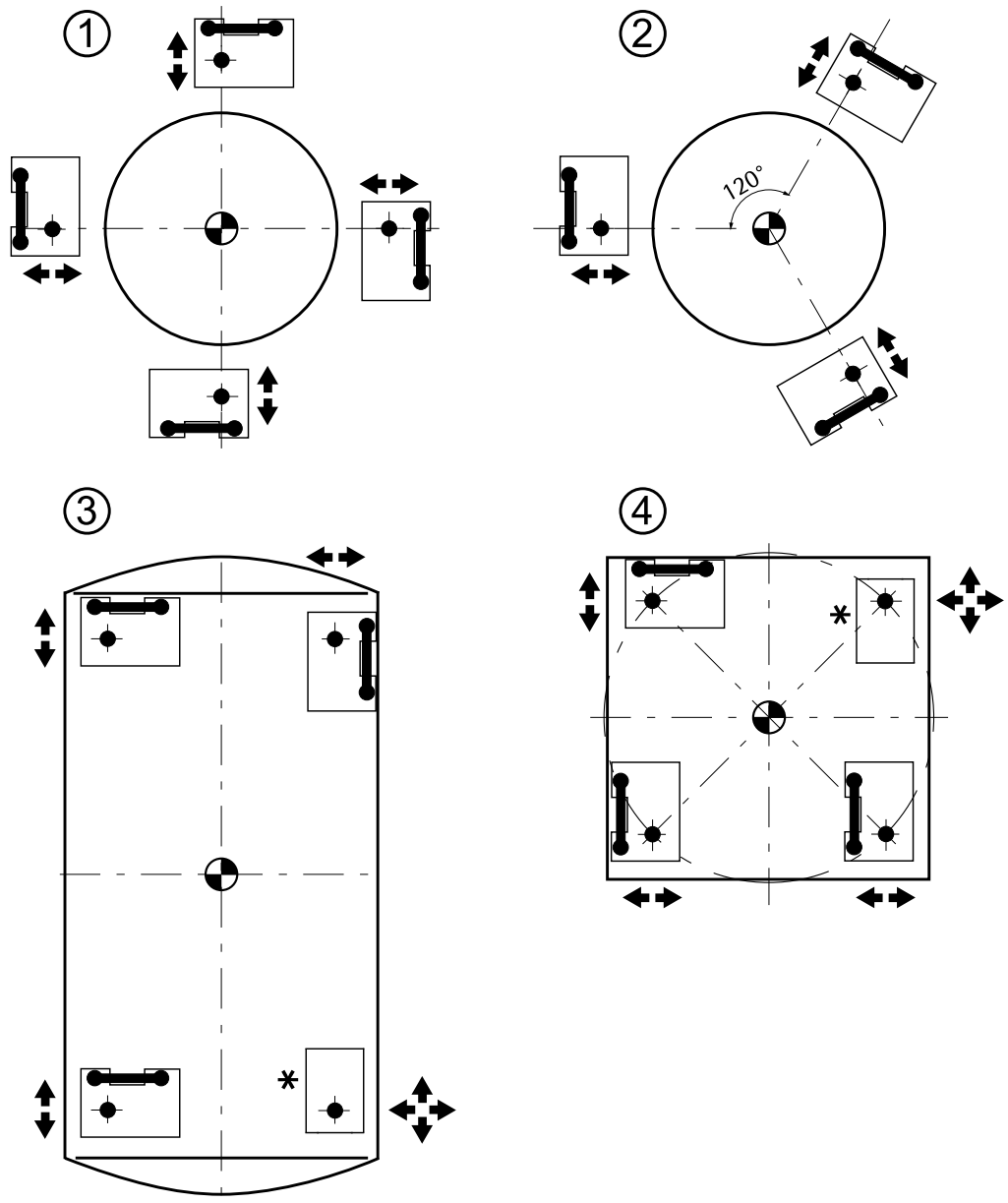
Perform visual inspection.

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

3 Recommendations for installation

3.1 Load cell and constrainer arrangement

Examples:



Key

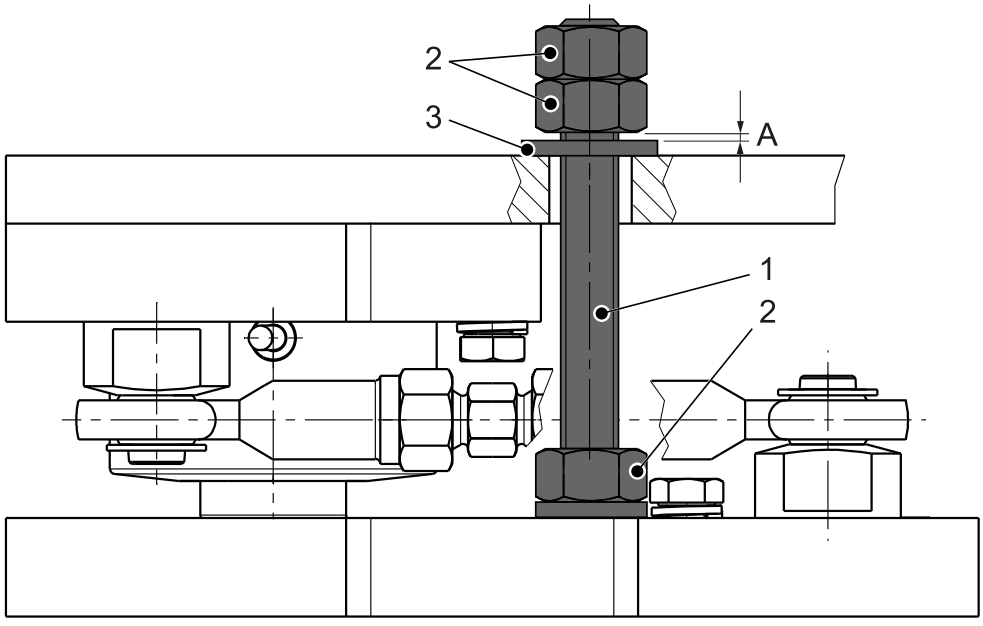
*	Do not constrain this position.
	Constrainer
	Load application
	Possible direction of movement

- The supporting structure of the scale (i.e. the load cell support) and the vessel must be stable enough to withstand the specified loads, be horizontal (water level!) and flat.
- Vessels should preferably be supported by 3 load cells, platforms by 4 or 6 load cells (see figure).
- 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 the object to be measured is constrained properly, damage and measuring errors can be prevented without affecting the required space for movement in the direction of the measurement.

  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.

  Therefore, special attention should be paid to the design, arrangement, and condition of the constrainers.

3.2 Additional lift-off protection



For safety reasons, a lift-off protection has to be generally provided on vessels. This can be constructed separately or additionally installed in the mounting kit (see Chapter 11.2.1).

Assembly:

- Mount the threaded bar (1) so that it has sufficient free moving space in the drill hole.
- Lock the nuts (2) so that there is a remaining distance A* from the washer (3).

  * A = 2 mm

  This distance is essential to avoid force shunts.

3.3 Selecting maximum capacity

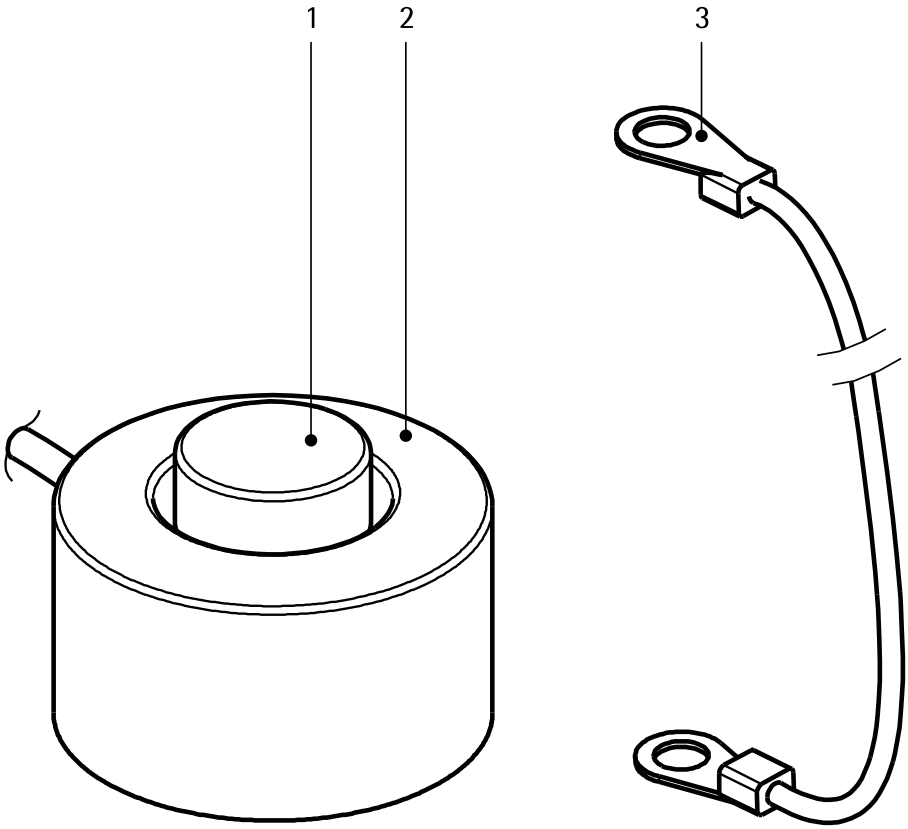
The resistance level of 650 Ω or 1200 Ω has a minimal power consumption that is especially important for high stability and intrinsically safe explosion hazardous installations.

If there is a risk of the safe load limit E_{lim} being exceeded (even only temporarily, e.g. by falling loads), mechanical limiting in load direction is required or an appropriate rubber damping mechanism must be provided.

If the maximum capacity can be expected to be exceeded, it is recommended to use a PR 6212 load cell with the next higher maximum capacity.

4 Specifications

4.1 Equipment supplied with the load cell



No.	Description
1	Load disc
2	Load cell
3	Flexible copper strap
The following are not shown:	
4	Quick guide
5	Calibration Certificate
6	Additional information 9499 059 21201
7	Only with Ex-load cells: Safety information for Ex-load cells
The following items in the bag provided are required for the installation of the load cell PR 6212/..LT in the mounting kits:	
8	Load disc (LT)
9	Load disc
10	Adapter plate
11	O-ring

4.2 General information

Material (Sensor)	PR 6212/.. and PR 6212/..E: Stainless steel 1.4418 acc. to DIN EN 10088-3 PR 6212/..LT: Stainless steel 1.4542 acc. to DIN EN 10088-3
Protection against environmental influences	Hermetically sealed by welding. Filled with inert gas and sealed with polyurethane.
Protection classes	in compliance with IEC 529 or DIN EN 60529 **IP66/IP68/IP69:** 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 6212/..E
Ambient temperature in the Ex area	see additional information “safety instructions for Ex load cells” only with approval RU C-DE.МЮ62.B.05836: -52...+55 °C
Cable diameter	5 mm
Cable length	5 m
Cable gauge	C1 and C1E: 4×0.355 mm^2 LT: 4×0.38 mm^2
Cable bend radius	≥25 mm (fixed installation) ≥75 mm (flexible installation)
Cable sheath material	C1 and C1E: thermoplastic elastomer (TPE) LT: PFA
Cable sheath color	Gray (standard version) Blue (Ex version) Red (LT version)

4.3 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 0Ex ia IIC T6	BVS 16 ATEX E 005 IECEx BVS 16.0005 RU C-DE.МЮ62.B.05836*	only PR 6212/..E
20 and 21	II 1D Ex ta IIIC T160 °C Da Ex ta IIIC T160 °C Da Ex ta IIIC T160 °C X	TÜV 03 ATEX 2301X IECEx TUN 17.0025X RU C-DE.МЮ62.B.05836*	all PR 6212 without /..LT, /..E
2	II 3G Ex nA IIC T6 Gc 2Ex nA IIC T6 X	MIN16ATEX001X RU C-DE.МЮ62.B.05836*	all PR 6212 without /..LT, /..E
22	II 3D Ex tc IIIC T85 °C Dc Ex tc IIIC T85 °C X	MIN16ATEX001X RU C-DE.МЮ62.B.05836*	all PR 6212 without /..LT, /..E

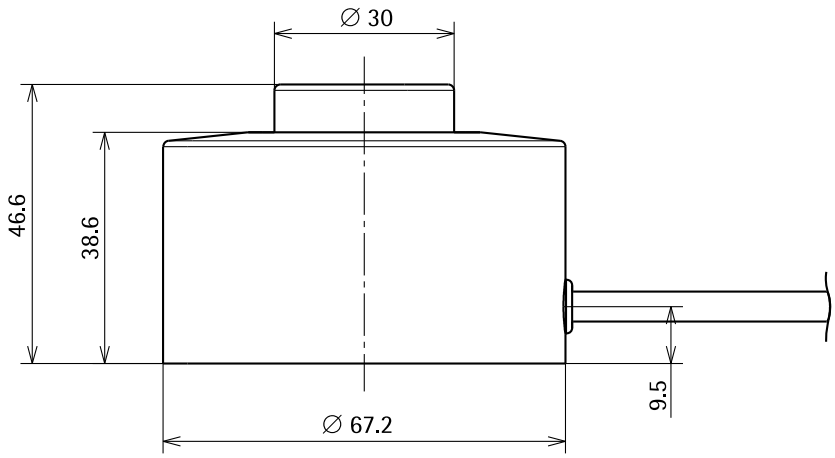
Zone	Marking	Certificate no.	for
		* Certification body: Prommash Test LLC (Accrediting code MЮ62)	
	IS CL I, II, III, DIV 1, GP A, B, C, D, E, F, G Entity - 4012 101 5688 NI CL I, II, III, DIV 2, GP A, B, C, D, E, F, G - 4012 101 5688; NIFW T4A Ta= -40°C to 70°C; T5 Ta= -40°C to 55°C	FM17US0276	all PR 6212 without /..LT, /..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 6212 without /..LT, /..E

NOTICE

Installation in the Ex area

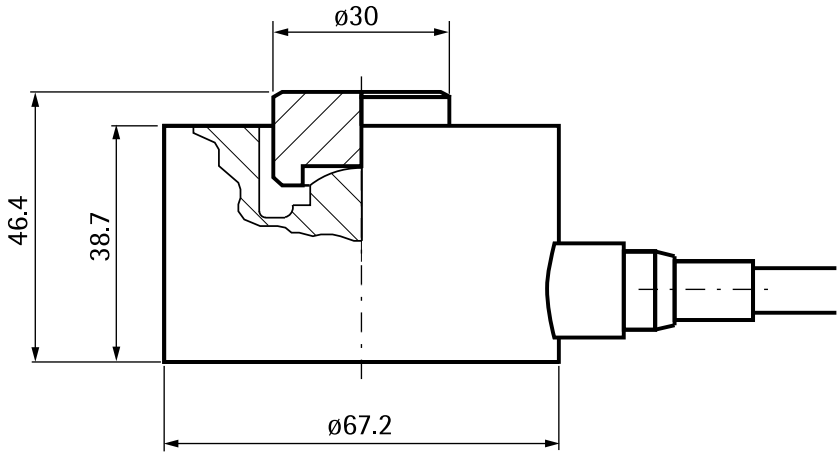
▶ For installations in the Ex area, it is imperative to observe the Ex safety instructions in the installation manuals.

4.4 Dimensions



all dimensions in mm

Type LT only



all dimensions in mm

4.5 Ordering information

Model	Max. capacity E_{max}	Type
PR 6212/500 kg	500 kg	..C1/C1E/LT
PR 6212/1 t	1 t	..C1/C1E/LT
PR 6212/2 t	2 t	..C1/C1E/LT
PR 6212/3 t	3 t	..C1/C1E/LT
PR 6212/5 t	5 t	..C1/C1E/LT
PR 6212/10 t	10 t	..C1/C1E

4.6 Technical data

Designation	Description	Abbr.	0.5 to 5 t LT	0.5 to 10 t C1, C1E	Unit
Accuracy class			0.25	0.04	% E_{max}
Minimum dead load	lowest limit of specified measuring range	E_{min}	0	0	% E_{max}
Maximum capacity	highest limit of specified measuring range	E_{max}	see Chapter 4.5		
Safe load limit	highest load without irreversible damage	E_{lim}	150	150	% E_{max}
Destructive load	danger of mechanical destruction	E_d	>300	>300	% E_{max}
Minimum LC verification	minimum load cell scale interval, $v_{min} = E_{max}/Y$	Y		5000	

Designation	Description	Abbr.	0.5 to 5 t LT	0.5 to 10 t C1, C1E	Unit
Rated output	relative output signal at maximum capacity	C_n	2	2	mV/V
Tolerance on rated output	permissible deviation from rated output C_n	d_c	<1.5	<0.25	% C_n
Zero output signal	load cell output signal under unloaded condition	S_{min}	0 to 2	0 to 2	% C_n
Reproducibility	max. change in load cell output for repeated loading	ε_R	<0.1	<0.01	% C_n
Creep	max. change of output signal at E_{max} during 30 minutes	d_{cr}	<0.1	<0.035	% C_n
Linearity deviation[1)]	deviation from the best straight lines through zero	d_{Lin}	<0.25	<0.03	% C_n
Hysteresis[1)]	max. difference in LC output between loading and unloading	d_{hy}	<0.25	<0.035	% C_n
Temperature effect of the S_{min}	max. change of S_{min} in B_T	TK_{Smin}	<0.1	<0.028	% C_n/10 K
Temperature effect on C[1)]	max. change of C in B_T	TK_C	<0.07	<0.02	% C_n/10 K
Input impedance	between supply terminals	R_{LC}	1200 ±200	650 ±6	Ω
Output impedance	between measuring terminals	R_O	1200 ±6	610 ±1	Ω
Insulation impedance	between the measuring circuit and housing at U_{DC} = 100 V	R_{IS}	>5000	>5000	MΩ
Insulation voltage	between circuit and housing (not for PR 6212/..E)			500	V
Recommended supply voltage	to hold the specified performance	B_u	4 to 24	4 to 24	V
Max. supply voltage	permissible for continuous operation without damage	U_{max}	32	32	V
	PR 6212/..E:	U_{max}	...	25	V
Nominal ambient temp. range	to hold the specified performance	B_T	-10 to +155	-10 to +40	°C
Service temperature range	permissible for continuous operation without damage	B_{Tu}	-30 to +180	-40 to +95	°C
Storage temperature range	without electrical and mechanical stress	B_{Ti}	-40 to +180	-40 to +95	°C
Permissible eccentricity	permissible distance from the measuring axis	S_{ex}	3	3	mm
Vibration resistance	resistance against oscillations (IEC 60068-2-6 Fc)		20 g, 100 h, 10 to 150 Hz	20 g, 100 h, 10 to 150 Hz	

Designation	Description	Abbr.	0.5 to 5 t LT	0.5 to 10 t C1, C1E	Unit
Barometric pressure influence	influence of barometric pressure on output	PK_{Smin}	≤70	≤60	g/kPa
Nominal deflection	elastic deformation under maximum capacity	S_{nom}	<0.2	<0.2	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}	0.5 t	1 t	2 t	3 t	5 t	10 t	Unit
Class III multiple	C1/C1E	2000	100	200	400	600	1000	2000	g
Class III L multiple	C1/C1E	2000	...	...	...	200	333	666	
		5000	62.5	66.6	133.3	...	...	...	g

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 (included in the equipment supplied, see Chapter 4.1).

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.
- The membrane on the underside of the load cell is thin and, consequently, sensitive. The surface in the mounting plate supporting the load cell must be clean, i.e., free of grains of sand, material residues, etc.

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.

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 screen of the load cell cable and the screen of the connecting cable must not be connected inside the cable junction box if connection of both ends is not permissible according to the regulations for installation in the explosion-prone area.
- 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!

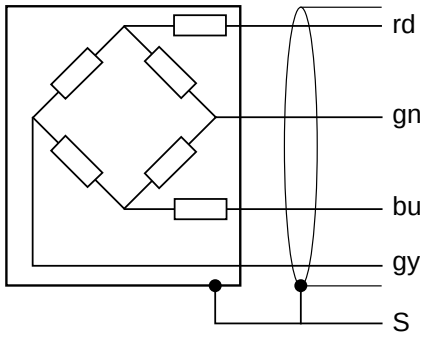
▶ Always check whether it is permissible to bilaterally connect the screens to the equipotential bonding.

6.2 Load cell

Color Code

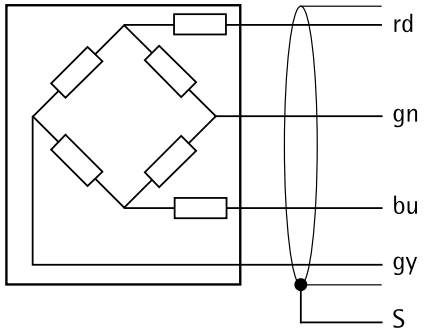
rd	=	red
gn	=	green
bu	=	blue
gy	=	gray

Type C1, C1E



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

Type LT



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

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.

6.3 Cable connections

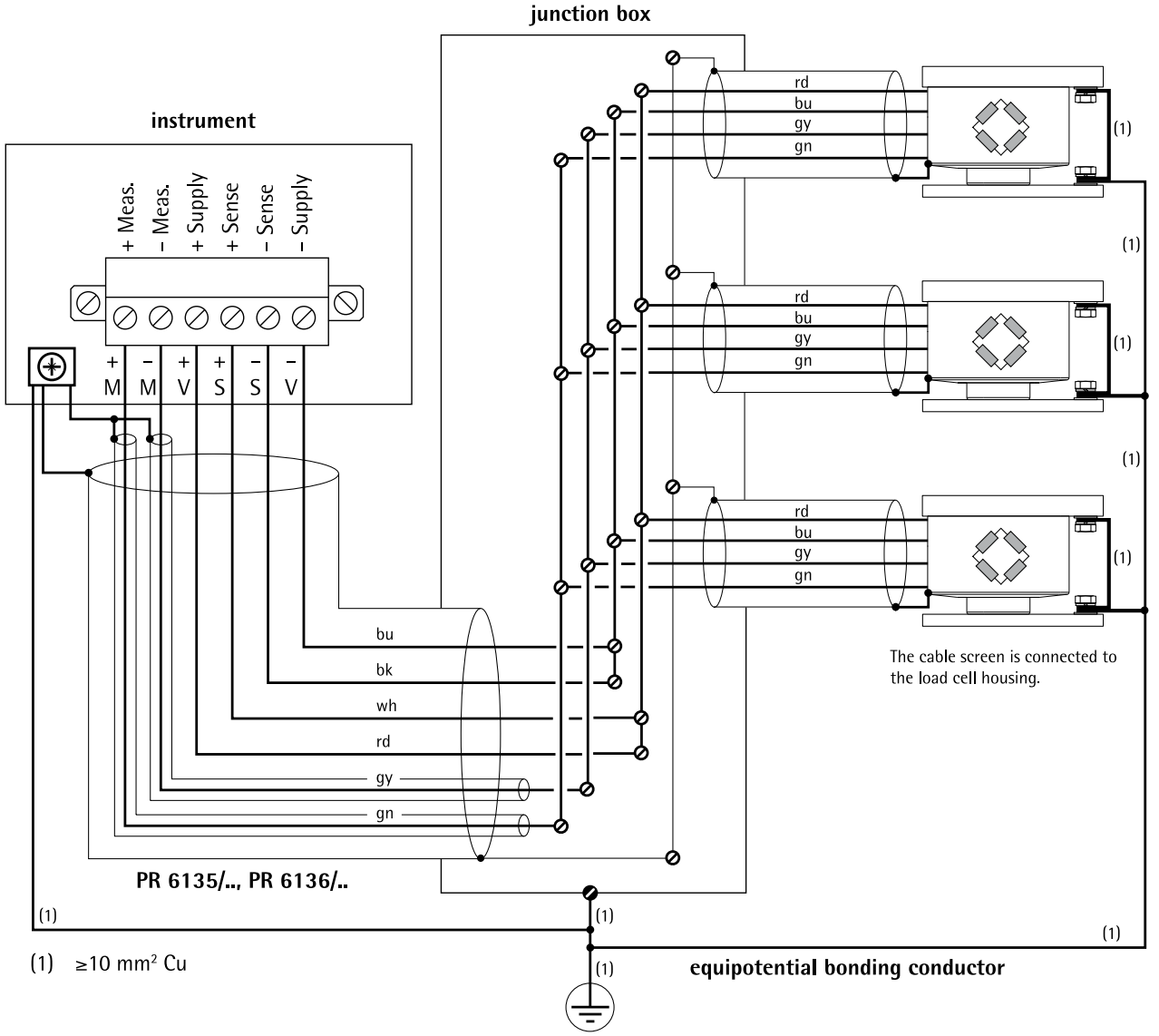
Note:

All components are only shown schematically.

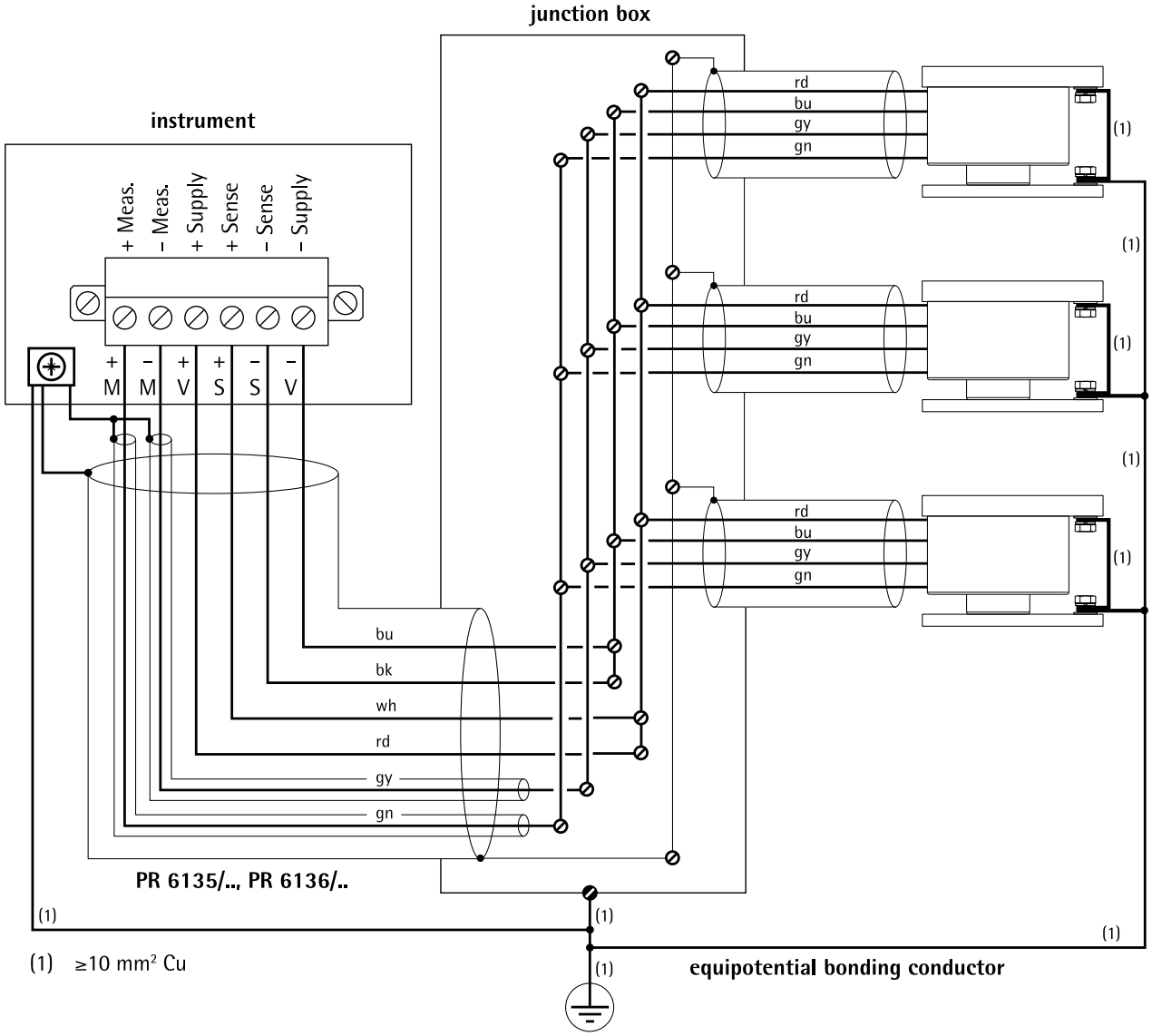
Color code

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

Connection example: Type C1, C1E



Connection example: Type LT



7 Preparing for calibration

7.1 General notes

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 in systems with more than 3 load cells prior to calibration.

Procedure:

1. Place the dead load (e.g. empty vessel) onto the load cells of the scale structure.
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 object immediately beside the affected 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.

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
Weighing object	Are all pipes, hoses and cables free from shunt forces? Are the connections pliable and connected horizontally? Are elements with a solid connection to the scale in direct contact with the surroundings? Has friction developed between the weighing object 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?
Mounting kit	Is the lift-off protection in contact with the scale? Are the constrainers stuck?
Load cell	Is the load cell parallel to the contact area? 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.

Type	Output voltage
LT	0... +0.04 mV/V
C1, C1E	0... +0.04 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

Type	Input impedance (red core, blue core)	Output impedance (green core, gray core)
LT	1200 Ω ±200 Ω	1200 Ω ±6 Ω
C1	650 Ω ±6 Ω	610 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 Core – screen Screen – housing	>5000 MΩ >5000 MΩ >5000 MΩ (type LT only) <0.2 Ω (types C1, C1E only)

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 Core – screen	>120 MΩ × km >120 MΩ × km

9 Maintenance/repairs/cleaning

9.1 Maintenance

The load cell PR 6212 is maintenance-free.

Load cell grease must be applied to the load disc and the tip of the load cell.

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 6212 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 4.2).

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	Max. capacity	Order no.
1	Flexible copper strap, 250 mm long		5312 321 28056
2	Load disc (for PR 6212/..LT)	500 kg...5 t	5312 693 98069
3	Load disc (for PR 6212/.., /..E)	500 kg...10 t	5312 693 98155
4	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	Mini FLEX mounting kit PR 6012/01N (without constrainer; can be used in combination with Mini FLEXLOCK PR 6012/31N)		9405 360 12011
2	Mini FLEX mounting kit PR 6012/01S (without constrainer; can be used in combination with Mini FLEXLOCK PR 6012/31S)		9405 960 12012
3	Mini FLEXLOCK mounting kit PR 6012/31N	5 kN	9405 360 12311
4	Mini FLEXLOCK mounting kit PR 6012/31S	5 kN	9405 960 12312
5	Mini FLEXLOCK mounting kit PR 6012/41N	20 kN	9405 360 12411
6	Mini FLEXLOCK mounting kit PR 6012/41S	20 kN	9405 960 12412
7	Maxi FLEX mounting kit PR 6012/02N (without constrainer; can be used in combination with Maxi FLEXLOCK PR 6012/32N)		9405 360 12021
8	Maxi FLEX mounting kit PR 6012/02S (without constrainer; can be used in combination with Maxi FLEXLOCK PR 6012/32S)		9405 360 12022
9	Maxi FLEXLOCK mounting kit PR 6012/32N	5 kN	9405 360 12321
10	Maxi FLEXLOCK mounting kit PR 6012/32S	5 kN	9405 360 12322
11	Maxi FLEXLOCK mounting kit PR 6012/42N	20 kN	9405 360 12421
12	Maxi FLEXLOCK mounting kit PR 6012/42S	20 kN	9405 360 12422
13	Optional extension of lift-off protection M12 PR 6012/53S (for PR 6012/31, PR 6012/02 and PR 6012/32)		9405 360 12532
14	Optional extension of lift-off protection M16 PR 6012/54S (for PR 6012/41 and PR 6012/42)		9405 360 12542
15	Pivot PR 6012/63S		9405 360 12632

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

S = stainless steel

11.2.2 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

11.2.3 Cable junction boxes

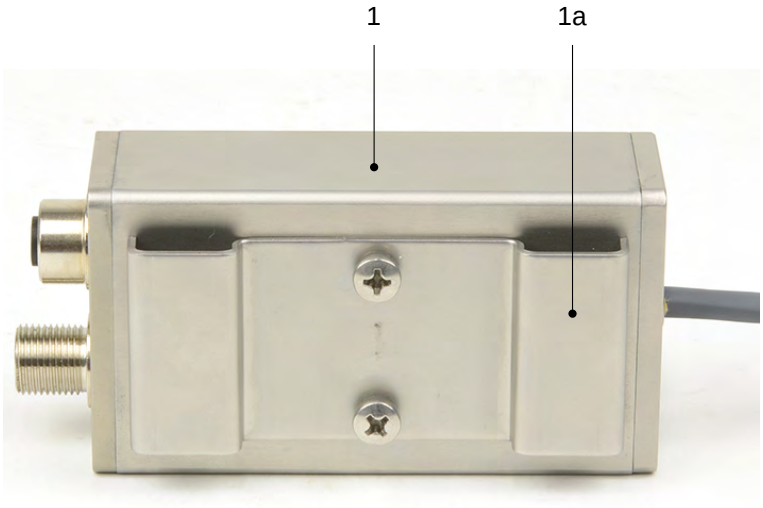
We recommend using the following junction boxes:

No.	Description	Order no.
1	PR 6130/04 (aluminum, 1–4 load cells, IP67; not for PR 6212/..C1E)	9405 361 30044
2	PR 6130/08 (polycarbonate, 1–8 load cells, IP66; only for PR 6212/..C1)	9405 361 30084
3	PR 6130/34Sa (1.4301, 1–4 load cells, IP68, IP69, verifiable; not for PR 6212/..C1E)	9405 361 30344
4	PR 6130/35S (1.4301, 1–4 load cells, IP68, IP69, verifiable; not for PR 6212/..C1E)	9405 361 30354
5	PR 6130/38S (1.4404, 1–8 load cells, IP68, IP69, verifiable; not for PR 6212/..C1E)	9405 361 30384
6	PR 6130/64Sa (1.4301, 1–4 load cells, IP68, IP69, verifiable, ATEX, IECEx, FM)	9405 361 30644
7	PR 6130/65S (1.4301, 1–4 load cells, IP68, IP69, verifiable, ATEX, IECEx, FM)	9405 361 30654
8	PR 6130/68S (1.4404, 1–8 load cells, IP68, IP69, verifiable, ATEX, IECEx, FM)	9405 361 30684

11.2.4 Connexx module

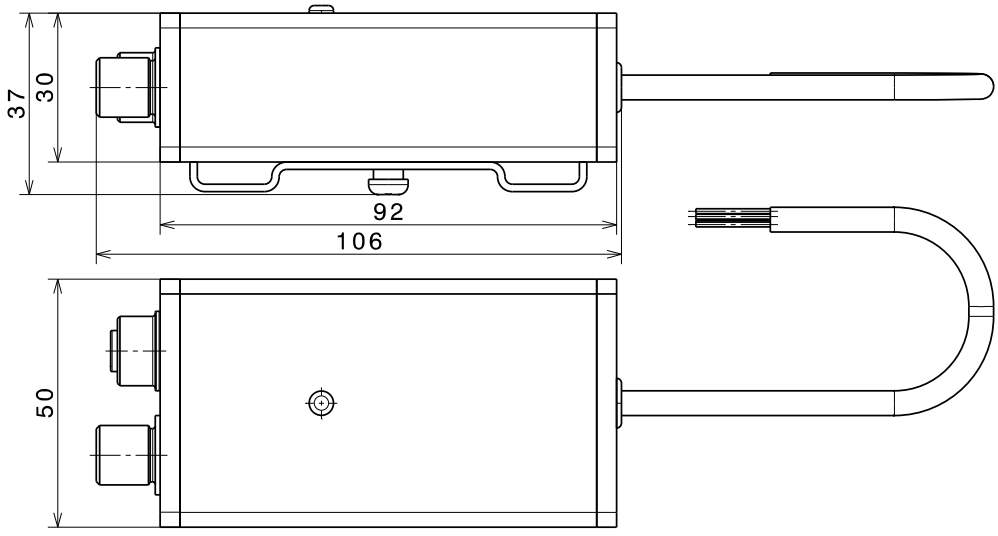
11.2.4.1 Specifications

11.2.4.1.1 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

11.2.4.1.2 Dimensions



All dimensions in mm

11.2.4.1.3 Technical data

Designation	Description	Abbr.	Temperature
Nominal ambient temp. range	to hold the specified performance	B_T	-10...+40 °C
Usable ambient temp. range	permissible for continuous operation without damage	B_{Tu}	-30...+60 °C
Storage temperature range	without electrical and mechanical stress	B_{Ti}	-30...+70 °C

11.2.4.2 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 11.2.4.3.

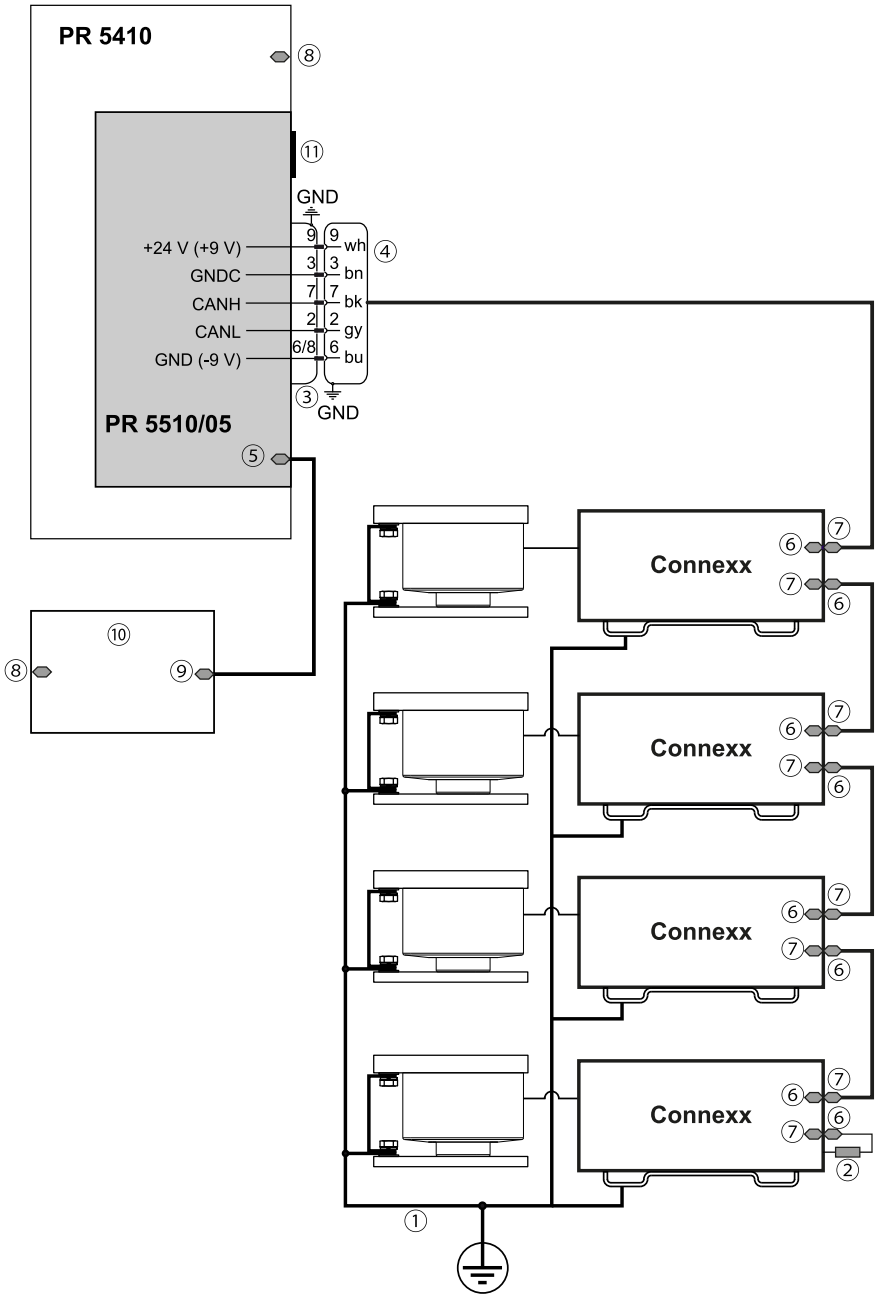
Cable lengths

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

11.2.4.3 Mounting options

The Connexx module is delivered with mounting elements.

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

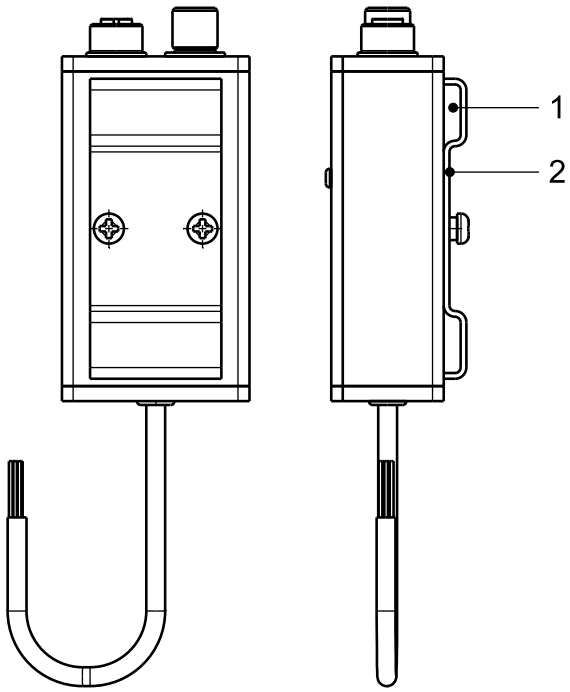
- Mounting using a retaining plate, see Chapter 11.2.4.3.1
- Mounting using a mounting bracket, see Chapter 11.2.4.3.2
- Mounting using a mounting rail holder, see Chapter 11.2.4.3.3

11.2.4.3.1 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:

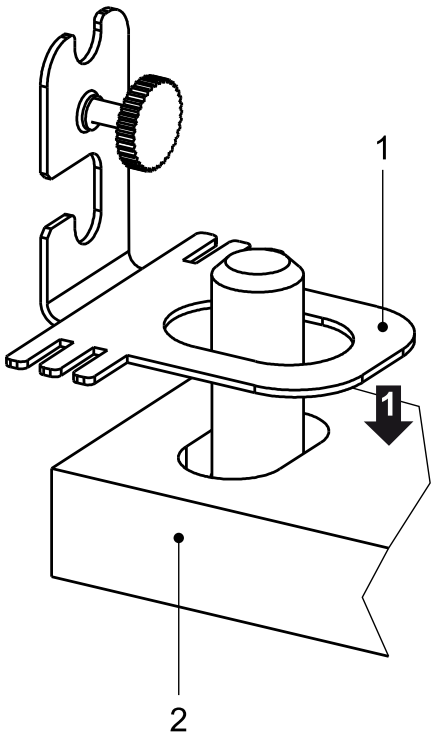
Minebea Intec recommends using a stainless-steel cable tie when mounting using a retaining plate.



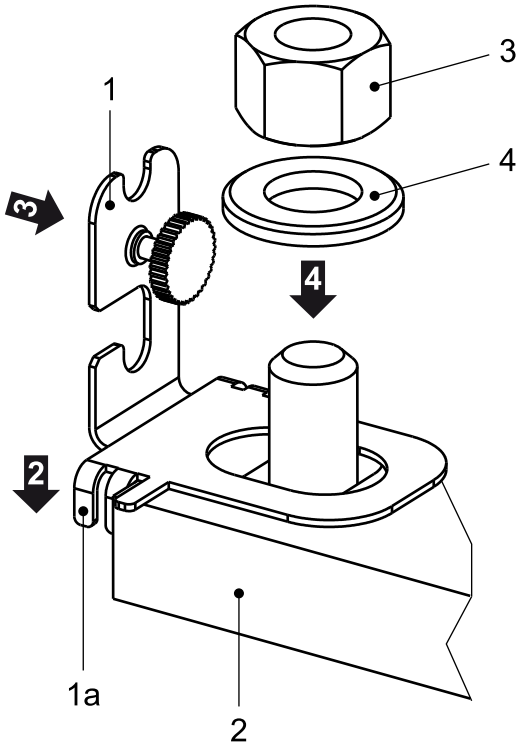
▶ Thread the stainless-steel cable tie through the lugs (1) on the retaining plate (2) and attach to the weighing device.

11.2.4.3.2 Mounting using a fixing bracket

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

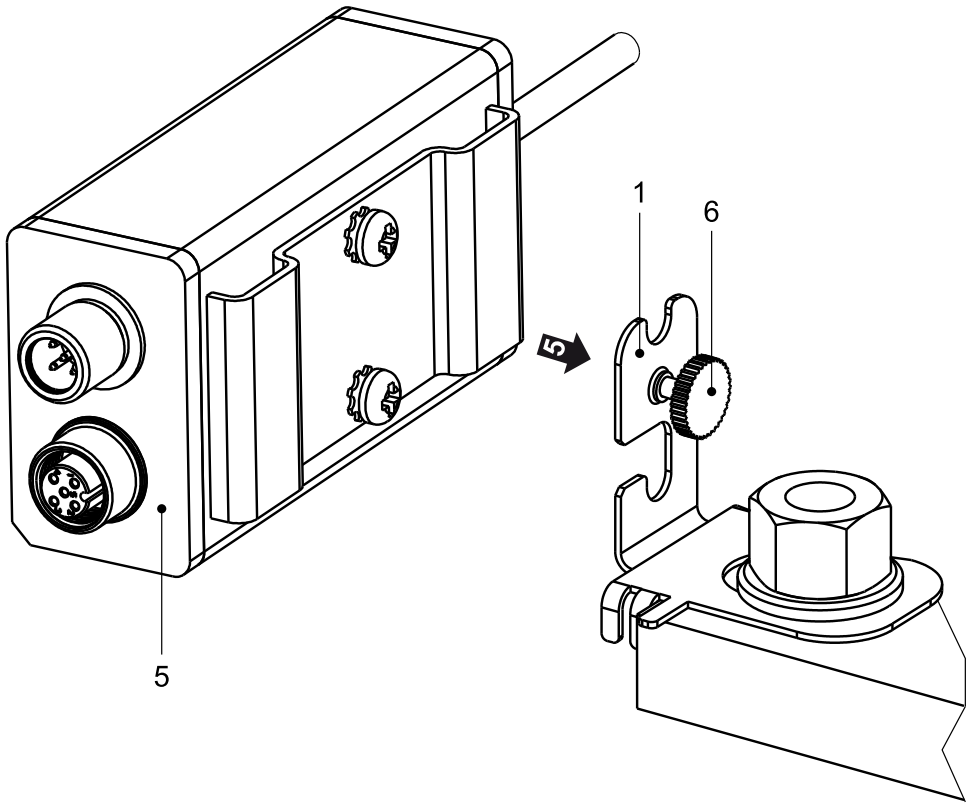


1. Place the fixing bracket (1) on the lower plate (2) of the mounting kit.



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).

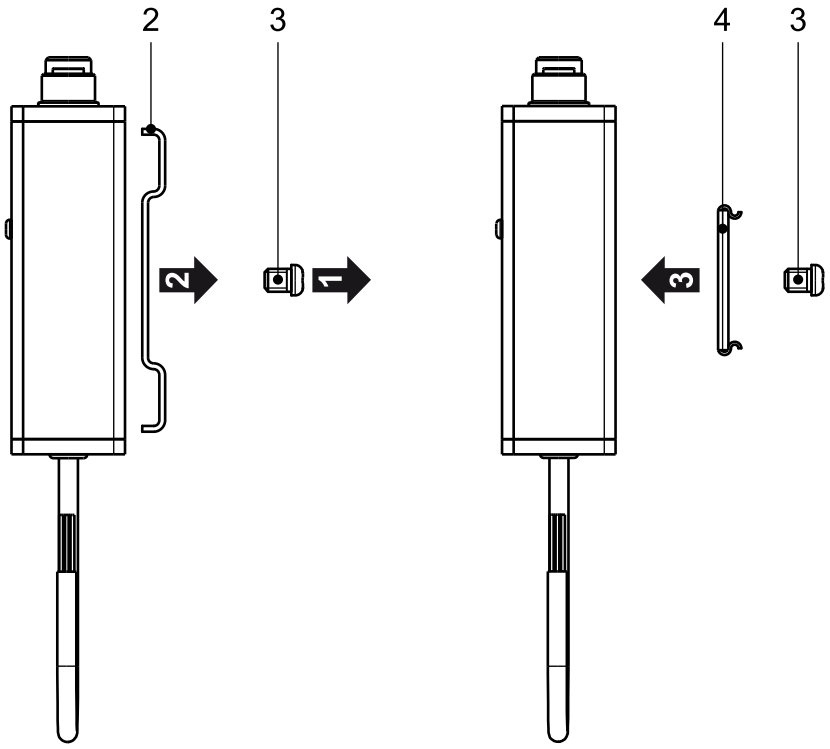
   The fixing bracket is now secured against twisting.



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.

11.2.4.3.3 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.

11.2.4.4 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	MEU17044	12.9
9	Certificate of Conformity TR CU 020	RU Д-DE.A301.B.05345	12.10
10	Certificate of Conformity TR CU 012	RU C-DE.МЮ62.B.05836	12.11
11	MPA	DE.C.28.541.A No. 68244	12.12
13	OIML Certificate of Conformity (NMi)	R60/2000-NL1-16.33	12.13
13	Test Certificate (NMi)	TC10808	12.14
14	Certificate of Conformance (NTEP)	17-097	12.15
15	Certificate of Approval (NTEP-New York)	10033	12.16

12.1 BVS 16 ATEX E 005

(1) **EG-Baumusterprüfbescheinigung**

(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

DAkkS

This certificate may only be reproduced in its entirety and without any change.

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

This certificate may only be reproduced in its entirety and without any change.

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

(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

This certificate may only be reproduced without any change, schedule included.
Excerpts or changes shall be allowed by the TÜV NORD CERT GmbH

(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: **Weighing cells type PR 62.. /... and MP76/...**
Optional accessory:

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)

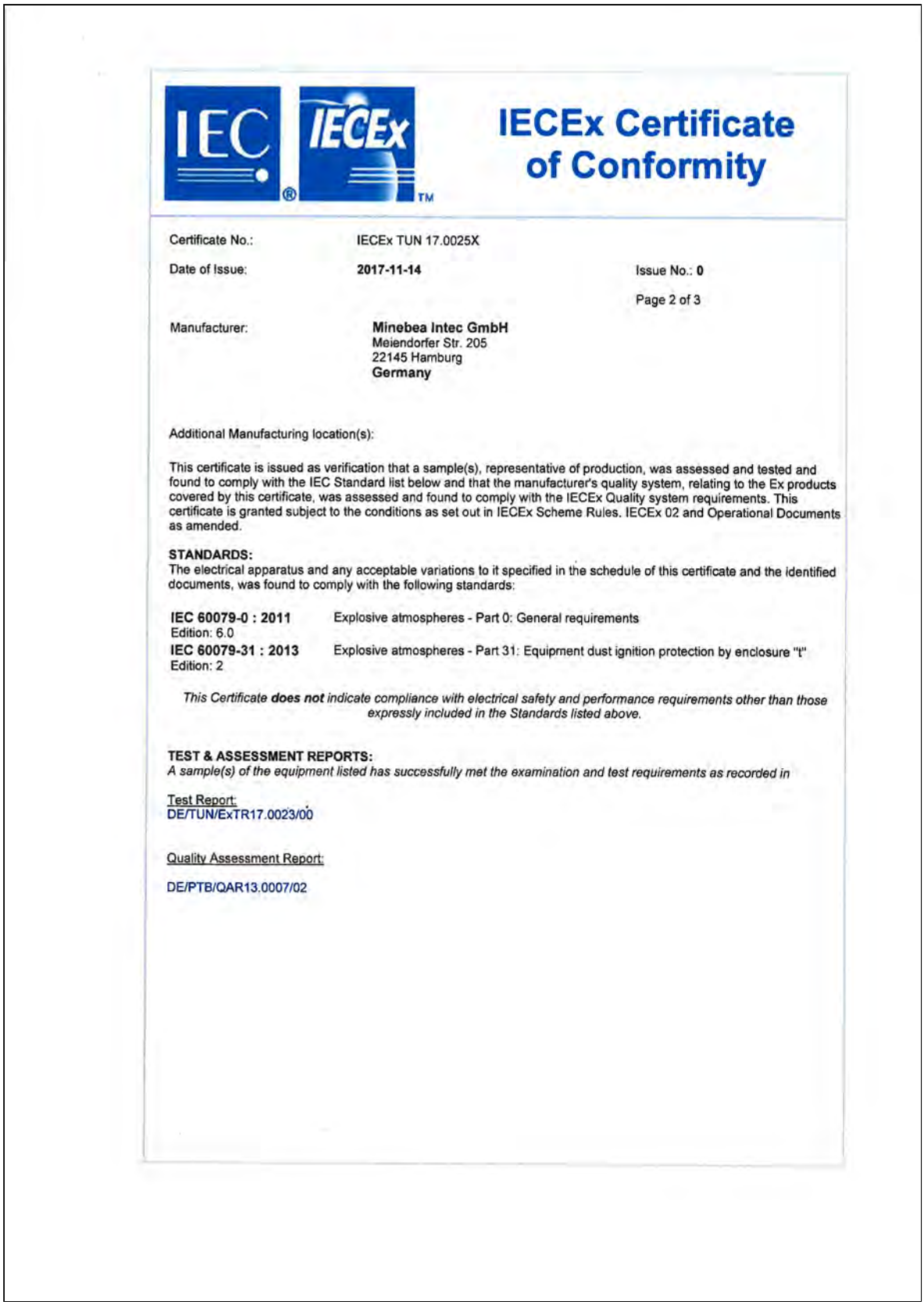
Date: 2017-11-14

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

Page 1 of 1
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

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

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:

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

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.

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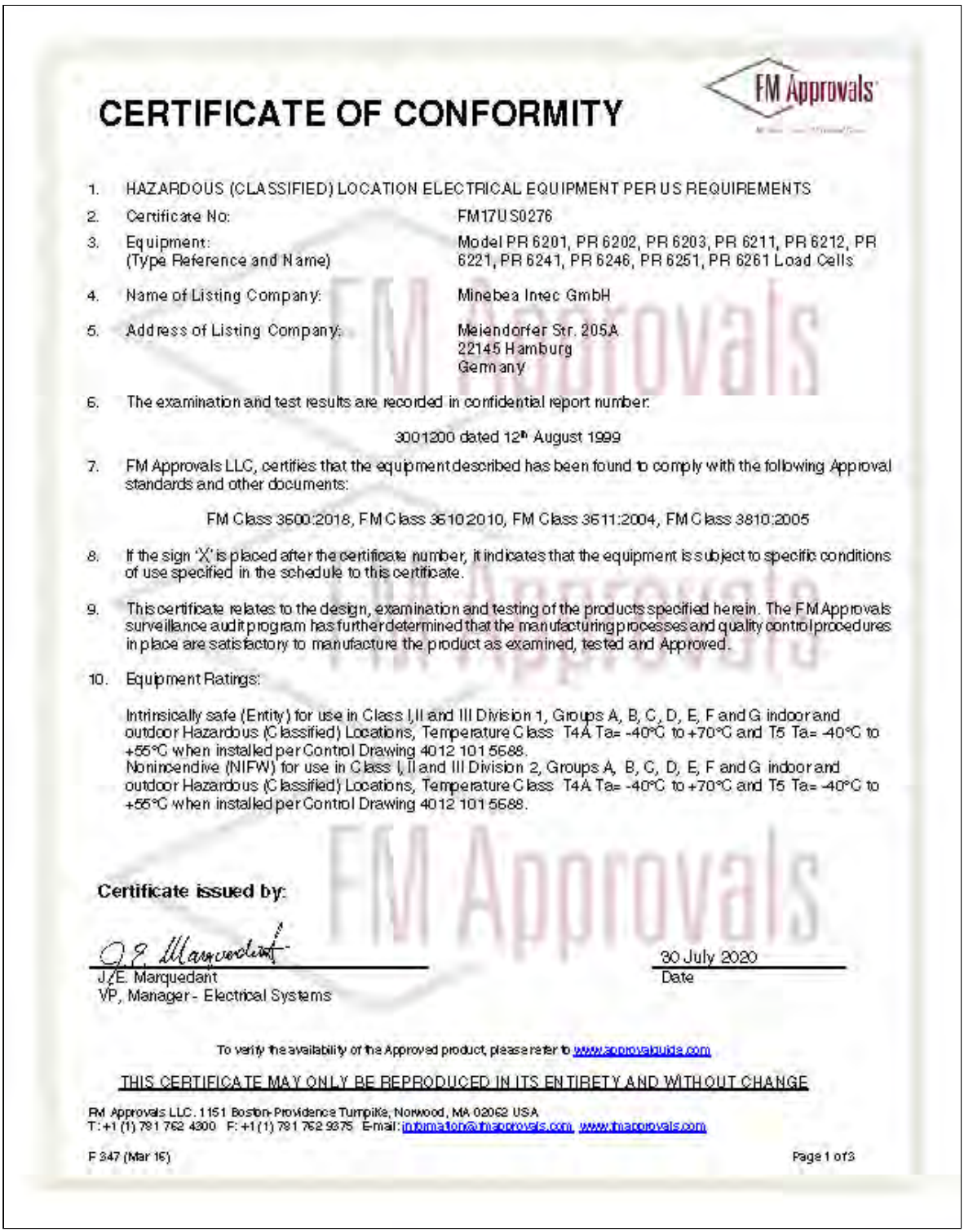
12.7 FM17US0276



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

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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.

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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.

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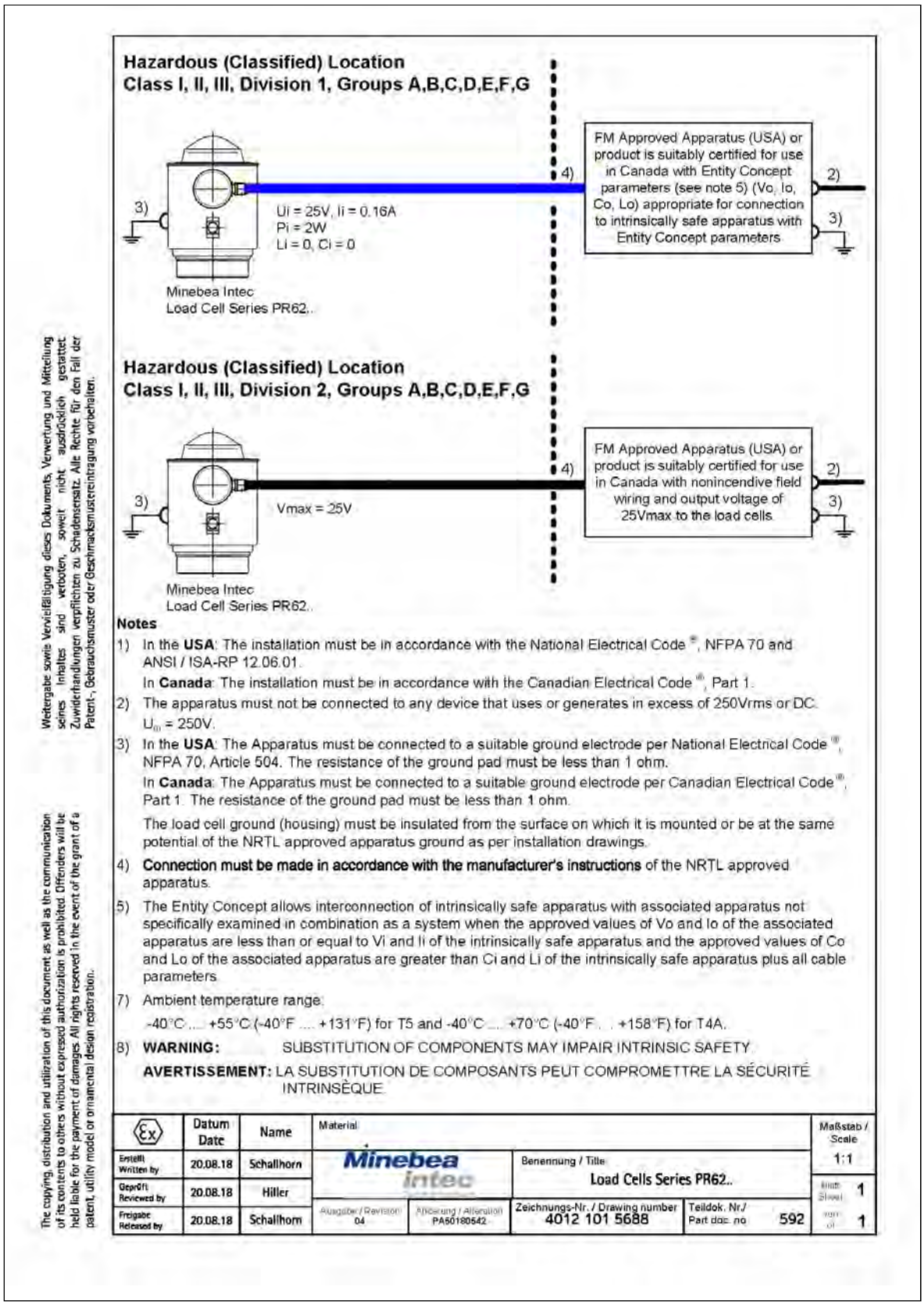
12.8 4012 101 5688



12.9 MEU17044

CE

EU-Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

Minebea intec
The true measure

MEU17044 Rev. 2

1. Product model | product number | solely valid for project number:
   - 1.1 Compact Compression Type Load Cell | PR 6212 | ----
   - 1.2 Compact Compression Type Load Cell + Converter Connexx® | PR 6212 + 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 6212; PR 6212 + PR 6150/00
   - 4.2 PR 6212 (A.1)
   - 4.3 PR 6212 (A.2)
   - 4.4 PR 6212/__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
6.2	2011/65/EU	EN 50581:2012
6.3	2014/34/EU	EN 60079-0:2012+A11:2013, 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	0044	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, 27. Aug. 2019

Wolf Dieter Schulze
Managing Director

Oliver Freitag
CE Certification

Torben Hiller
Ex Approval Manager

1/6

CE

EU-Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

MEU17044 Rev. 2

Minebea intec
The true measure

A. Additional information on ( ):

A.1	(4.2)	Marking	II 3G Ex nA IIC T6 Gc II 3D Ex tc IIIC T85°C Dc MIN16ATEX001X
A.2	(4.3)	Marking	II 1D Ex ta IIIC T160°C Da TÜV 03 ATEX 2301 X
A.3	(4.4)	Marking	II 1G Ex ia IIC T6 Ga BVS 16 ATEX E 005

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EU-Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

MEU17044 Rev. 2

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

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

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

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

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 το:
A. Πρόσθετες πληροφορίες σχετικά με ( ):
A.1 Σήμανση
A.2 Σήμανση
A.3 Σήμανση

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

CE

EU-Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

MEU17044 Rev. 2

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. Ülalnimetatud deklareeritav toode on kooskõlas asjaomaste liidu ühtlustamisaktidega:
6. Viited kasutatud harmoneeritud standardatele või viited muudele tehnilistele spetsifikatsioonidele, millele vastavus deklareeritakse:
7. Teavitatud asutus w teostas x ja andis välja tõendi z, mis on aqalokhane y-le:
A. Lisateave järgmise kohta ( ):
A.1 Märgistus
A.2 Märgistus
A.3 Märgistus

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 décrits 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

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 usklađivanju.
6. Pozivanja na relevantne primijenjene 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

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) s eljárást, és kiállította a(z) z kapcsolódó y tanúsítványt:
A. További információk ( ):
A.1 Jelölés
A.2 Jelölés
A.3 Jelölés

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

Latvių kalba (lt)

Atitikties deklaracija
1. Gaminio modelis / gaminio numeris / galioja tik projekto numeriui:
2. Gamintojo (2.1) ir jo įgalioto 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

4/6

EU-Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

MEU17044 Rev. 2

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

malti (mt)

Dikjarazzjoni ta' konformità
1. Mudell tal-prodott / numru tal-prodott / validu biss ghan-numru tal-progett:
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-ghan(ijiet) tad-dikjarazzjoni:
5. L-ghan(ijiet) tad-dikjarazzjoni deskritt(i) huwa/huma konformi mal-legislazzjoni ta' armonizzazzjoni rilevanti tal-Unjoni:
6. Ir-referenzi ghall-istandards armonizzati rilevanti li nużaw, jew ir-referenzi ghall-ispecifikazzjonijiet tekniċi l-oħra li skonthom qed tiġi ddikjarata l-konformità:
7. Il-korp notifikat w wettaq x u hareġ iċ-certifikat y rilevanti ghal z:
A. Informazzjoni addizzjonali fuq ( ):
A.1 Immarkar
A.2 Immarkar
A.3 Immarkar

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

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

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

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

CE

EU-Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

MEU17044 Rev. 2

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

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

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

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

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.**

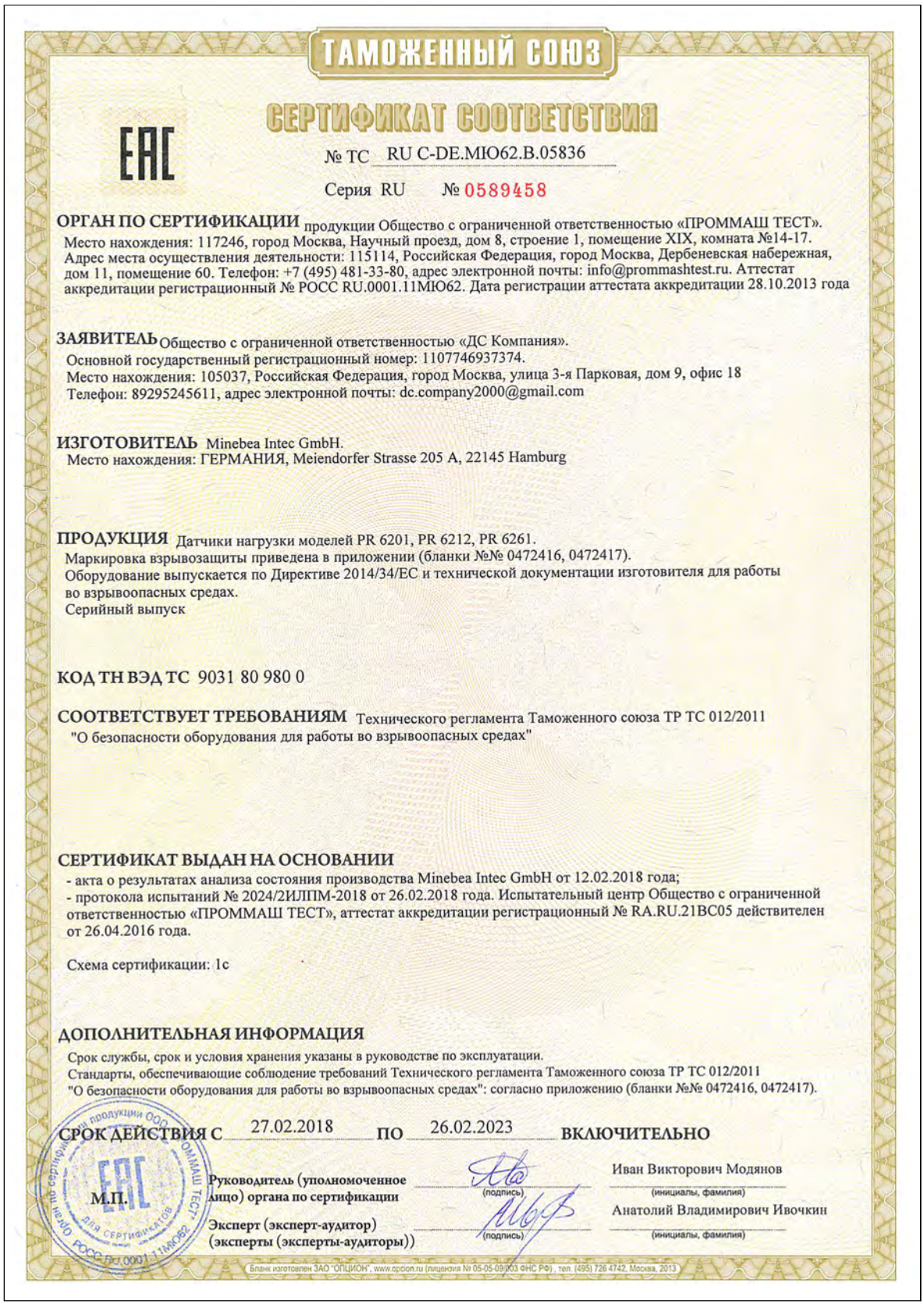
Ежов Олег Олегович

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 RU C-DE.МЮ62.B.05836



ТАМОЖЕННЫЙ СОЮЗ

СЕРТИФИКАТ СООТВЕТСТВИЯ

№ ТС RU C-DE.МЮ62.B.05836

Серия RU № 0589458

ОРГАН ПО СЕРТИФИКАЦИИ продукции Общество с ограниченной ответственностью «ПРОММАШ ТЕСТ».
Место нахождения: 117246, город Москва, Научный проезд, дом 8, строение 1, помещение XIX, комната №14-17.
Адрес места осуществления деятельности: 115114, Российская Федерация, город Москва, Дербеневская набережная, дом 11, помещение 60. Телефон: +7 (495) 481-33-80, адрес электронной почты: info@prommashtest.ru. Аттестат аккредитации регистрационный № РОСС RU.0001.11МЮ62. Дата регистрации аттестата аккредитации 28.10.2013 года

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, офис 18
Телефон: 89295245611, адрес электронной почты: dc.company2000@gmail.com

ИЗГОТОВИТЕЛЬ Minebea Intec GmbH.
Место нахождения: ГЕРМАНИЯ, Meiendorfer Strasse 205 A, 22145 Hamburg

ПРОДУКЦИЯ Датчики нагрузки моделей PR 6201, PR 6212, PR 6261.
Маркировка взрывозащиты приведена в приложении (бланки №№ 0472416, 0472417).
Оборудование выпускается по Директиве 2014/34/EC и технической документации изготовителя для работы во взрывоопасных средах.
Серийный выпуск

КОД ТН ВЭД ТС 9031 80 980 0

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ Технического регламента Таможенного союза ТР ТС 012/2011 "О безопасности оборудования для работы во взрывоопасных средах"

СЕРТИФИКАТ ВЫДАН НА ОСНОВАНИИ
- акта о результатах анализа состояния производства Minebea Intec GmbH от 12.02.2018 года;
- протокола испытаний № 2024/2ИЛПМ-2018 от 26.02.2018 года. Испытательный центр Общество с ограниченной ответственностью «ПРОММАШ ТЕСТ», аттестат аккредитации регистрационный № RA.RU.21BC05 действителен от 26.04.2016 года.

Схема сертификации: 1с

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ
Срок службы, срок и условия хранения указаны в руководстве по эксплуатации.
Стандарты, обеспечивающие соблюдение требований Технического регламента Таможенного союза ТР ТС 012/2011 "О безопасности оборудования для работы во взрывоопасных средах": согласно приложению (бланки №№ 0472416, 0472417).

СРОК ДЕЙСТВИЯ С 27.02.2018 **ПО** 26.02.2023 **ВКЛЮЧИТЕЛЬНО**

М.П.

Руководитель (уполномоченное лицо) органа по сертификации (подпись) Иван Викторович Модянов (инициалы, фамилия)

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) (подпись) Анатолий Владимирович Ивочкин (инициалы, фамилия)

Бланк изготовлен ЗАО "ОПЦИОН", www.opcion.ru (лицензия № 05-05-09/003 ФНС РФ), тел. (495) 726 4742, Москва, 2013

ТАМОЖЕННЫЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ТС RU C-DE.МЮ62.B.05836

Серия RU № 0472416

1. Назначение и область применения

Сертификат соответствия распространяется на датчики нагрузки моделей PR 6201, PR 6212, PR 6261, предназначенные для взвешивания бункеров, резервуаров и технологических емкостей.

Область применения - взрывоопасные зоны классов 0, 1, 2 по ГОСТ IEC 60079-10-1-2011 категорий взрывоопасных смесей IIA, IIB, IIC по ГОСТ Р МЭК 60079-20-1-2011, а также среды, содержащие взрывоопасную пыль подгрупп IIIA, IIIB, IIIC согласно маркировкам взрывозащиты.

2. Описание оборудования и средств обеспечения взрывозащиты

Датчики нагрузки моделей PR 6201, PR 6212, PR 6261 выполнены в цилиндрическом стальном корпусе со степенью защиты от внешних воздействий IP68 или IP69 в зависимости от исполнения. Устройства содержат мембрану и тензодатчик сопротивления, преобразующие механическую деформацию, возникающую при нагрузке датчика, в электрический сигнал.

Подключение датчиков осуществляется с помощью постоянно присоединенного кабеля из термопласта TPE.

Подробное описание конструкции датчиков приведено в руководствах по эксплуатации.

Основные технические данные:

Маркировка взрывозащиты ..... 0Ex ia IIC T6
2Ex nA IIC T6 X
Ex tc IIIC T85°C X
Ex ta IIIC T160°C X

Диапазон температур окружающей среды, °C ..... от -52 до +55

Степень защиты от внешних воздействий по ГОСТ 14254-2015 ..... IP68, IP69

Максимальное напряжение питания, В 25

Максимальная входная мощность, Вт 2

Параметры искробезопасных цепей приведены в таблице 2.1:

Таблица 2.1

Наименование	Значение
Максимальное входное напряжение U_i, В	25
Максимальный входной ток I_i, мА	160
Максимальная входная мощность P_i, Вт	2
Максимальная внутренняя емкость C_i, мкФ	0
Максимальная внутренняя индуктивность L_i, мГн	0

Взрывозащищенность датчиков обеспечивается выполнением их конструкции в соответствии с общими требованиями по ГОСТ 31610.0-2012, видом взрывозащиты «искробезопасная электрическая цепь «i» по ГОСТ 31610.11-2012, видом защиты «n» по ГОСТ 31610.15-2012 и видом взрывозащиты от воспламенения пыли «t» по ГОСТ Р МЭК 60079-31-2010.

Внесение изготовителем в конструкцию и техническую документацию изменений, влияющих на взрывобезопасность и соответствие газоанализаторов требованиям ТР ТС 012/2011, возможно только по согласованию с органом по сертификации ООО «ПРОММАШ ТЕСТ».

Данный сертификат соответствия подтверждает соответствие требованиям взрывобезопасности ТР ТС 012/2011 и не рассматривает любые другие виды безопасности газоанализаторов.

М.П.

Руководитель (уполномоченное лицо) органа по сертификации подпись Иван Викторович Модянов (инициалы, фамилия)

Эксперт-аудитор (эксперт) подпись Анатолий Владимирович Ивочкин (инициалы, фамилия)

АО «ОПЦИОН», Москва, 2016, «Б» лицензия № 05-05-09/003 ФНС РФ, тел. (495) 726 4742, www.opcion.ru

ТАМОЖЕННЫЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ТС RU C-DE.МЮ62.B.05836

Серия RU № 0472417

3. Оборудование соответствует требованиям:

ТР ТС 012/2011	Технический регламент Таможенного союза «О безопасности оборудования для работы во взрывоопасных средах»;
ГОСТ 31610.0-2012	Электрооборудование для взрывоопасных газовых сред. Часть 0. Общие требования;
ГОСТ 31610.11-2012	Электрооборудование для взрывоопасных газовых сред. Часть 11. Искробезопасная электрическая цепь «i»;
ГОСТ 31610.15-2012	Электрооборудование для взрывоопасных газовых сред. Часть 15. Конструкция, испытания и маркировка электрооборудования с видом защиты «n»;
ГОСТ Р МЭК 60079-31-2010	Взрывоопасные среды. Часть 31. Оборудование с видом взрывозащиты от воспламенения пыли «t».

4. Маркировка

Маркировка, наносимая на электрооборудование, должна включать следующие данные:

4.1 наименование предприятия-изготовителя или его зарегистрированный товарный знак;
4.2 обозначение типа оборудования;
4.3 порядковый номер по системе нумерации предприятия-изготовителя;
4.4 маркировку взрывозащиты см. п. 2 «Основные технические данные»;
4.5 наименование или знак органа по сертификации и номер сертификата соответствия;
4.6 предупредительные надписи;
4.7 единый знак EAC обращения продукции на рынке государств - членов Таможенного союза;
4.8 специальный знак взрывобезопасности Ex в соответствии с ТР ТС 012/2011;
4.9 Другие данные, которые должен отразить изготовитель, если это требуется технической документацией (диапазон температур окружающей среды, степень защиты оболочки и т.д.).

5. Специальные условия применения

Знак X, стоящий после Ex-маркировки, означает, что при эксплуатации необходимо соблюдать следующие специальные условия:
- для подключения гибкого вывода датчиков во взрывоопасной зоне должны применяться сертифицированные взрывозащищенные коробки;
- электрические параметры питания датчиков не должны превышать значений, приведенных в разделе 2;
- для оборудования предназначенного для установки во взрывоопасные пылевые зоны необходимо применять меры, препятствующие накоплению электростатического заряда.

М.П.

Руководитель (уполномоченное лицо) органа по сертификации — подпись — Иван Викторович Модянов (инициалы, фамилия)

Эксперт-аудитор (эксперт) — подпись — Анатолий Владимирович Ивочкин (инициалы, фамилия)

АО «ОПЦИОН», Москва, 2016, «Б» лицензия № 05-05-09/003 ФНС РФ, тел. (495) 726 4742, www.opcion.ru

12.12 DE.C.28.541.A No. 68244

ФЕДЕРАЛЬНОЕ АГЕНТСТВО
ПО ТЕХНИЧЕСКОМУ РЕГУЛИРОВАНИЮ И МЕТРОЛОГИИ

СВИДЕТЕЛЬСТВО

об утверждении типа средств измерений

DE.C.28.541.A № 68244

Срок действия до 04 декабря 2022 г.

НАИМЕНОВАНИЕ ТИПА СРЕДСТВ ИЗМЕРЕНИЙ
Датчики весоизмерительные PR 6201, PR 6212

ИЗГОТОВИТЕЛЬ
Фирма "Minebea Intec GmbH", Германия

РЕГИСТРАЦИОННЫЙ № **69603-17**

ДОКУМЕНТ НА ПОВЕРКУ
Приложение ДА "Методика поверки" ГОСТ 8.631-2013

ИНТЕРВАЛ МЕЖДУ ПОВЕРКАМИ **1 год**

Тип средств измерений утвержден приказом Федерального агентства по техническому регулированию и метрологии от **04 декабря 2017 г. № 2695**

Описание типа средств измерений является обязательным приложением к настоящему свидетельству.

Заместитель Руководителя
Федерального агентства С.С.Голубев

"14" 12 2017 г.

Серия СИ № 039773

Приложение к свидетельству № **68244** Лист № 1
об утверждении типа средств измерений Всего листов 5

ОПИСАНИЕ ТИПА СРЕДСТВА ИЗМЕРЕНИЙ

Датчики весоизмерительные PR 6201, PR 6212

Назначение средства измерений

Датчики весоизмерительные PR 6201, PR 6212 (далее - датчики) предназначены для измерений и преобразования воздействующей на датчик силы тяжести взвешиваемого объекта в аналоговый нормированный электрический измерительный сигнал.

Описание средства измерений

Принцип действия датчиков основан на изменении электрического сопротивления тензорезисторов, соединенных в мостовую схему, при их деформации, возникающей в местах наклейки тензорезисторов к упругому элементу датчика, под действием прилагаемой нагрузки. Изменение электрического сопротивления вызывает разбаланс мостовой схемы и появление в диагонали моста электрического сигнала, изменяющегося пропорционально нагрузке.

Датчики состоят из упругого элемента, кабеля питания и измерения, тензорезисторов на клеевой основе, соединенных по полной мостовой электрической схеме, и элементов герметизации. Места наклейки тензорезисторов и расположения элементов термокомпенсации и нормирования в датчиках находятся во внутренней полости упругого элемента и защищены крышками и герметиком.

Модификации датчиков отличаются максимальной нагрузкой, максимальным числом поверочных интервалов.

Рисунок 1 - Внешний вид датчика весоизмерительного PR6201

Лист № 2
Всего листов 5

Рисунок 2 - Внешний вид датчика весоизмерительного PR6212

Рисунок 2 - Маркировочная табличка датчиков весоизмерительных PR 6201, PR 6212

Пломбирование датчиков весоизмерительных PR 6201, PR 6212 не предусмотрено.

Программное обеспечение
отсутствует.

Метрологические и технические характеристики

Таблица 1 - Метрологические характеристики

Модификация PR 6201					
Наименование характеристики	Значение				
Класс точности по ГОСТ 8.631-2013	D1	C3	C4	C5	C6
Максимальное число поверочных интервалов, $n_{max} = E_{max} / v$	1000	3000	4000	5000	6000
Максимальная нагрузка, E_{max}, т	0,5; 1; 2; 3; 5; 10; 20; 30; 50; 60; 75	2, 3, 5, 10, 20, 30, 50, 60, 75	20, 30, 50, 60, 75	20, 30, 50, 60, 75	20, 30

Лист № 3
Всего листов 5

Модификация PR 6201				
Наименование характеристики	Значение			
Минимальная нагрузка, E_{min}, т	0			
Минимальный поверочный интервал, v_{min}, кг	E_{max} /1750 для E_{max}=0,5 т; E_{max} /3500 для E_{max}=1 т; E_{max} /5000 для E_{max}=2, 3, 5, 10, 20, 30, 50, 60, 75 т	E_{max} /7000 для E_{max}=2 т; E_{max} /9000 для E_{max}=3 т; E_{max} /14000для E_{max}=5, 10, 20, 30, 50, 60, 75 т	E_{max} /20000	
Доля от пределов допускаемой погрешности весов, p_{LC}	0,7			
Значение поверочного интервала v, кг	E_{max}/n_{max}			
Невозврат выходного сигнала при возврате к минимальной нагрузке DR, выраженный через поверочный интервал v	E_{max} /2000 для E_{max}=0,5 т	E_{max} /6000 для E_{max}=2, 3, 5, 10 т; E_{max} /12000 для E_{max}=20, 30, 50, 60, 75 т	E_{max} /16000 для E_{max}=20, 30 т; E_{max} /12000 для E_{max}=50, 60, 75 т	E_{max} /16000
Номинальный выходной сигнал, мВ/В	1,0 для E_{max}=0,5; 1; 2; 3; 5; 10, 20, 30 т; 2,0 для E_{max}=50 т; 2,4 для E_{max}=60 т; 3,0 для E_{max}=75 т	1,0 для E_{max}=2, 3, 5, 10, 20, 30 т; 2,0 для E_{max}=50 т; 2,4 для E_{max}=60 т; 3,0 для E_{max}=75 т		
Значение входного сопротивления датчиков, Ом	650 ±6			
Значение выходного сопротивления датчиков, Ом	610 ±1	610 ±0,5		
Предельные значения температуры, °С	от - 10 до + 55			
Обозначение по влажности	CH			

Таблица 2 - Метрологические характеристики

Модификация PR 6212		
Наименование характеристики	Значение	
Класс точности по ГОСТ 8.631-2013	C	
Максимальное число поверочных интервалов, $n_{max} = E_{max}/v$	2000	1000
Максимальная нагрузка, E_{max}, т	0,5; 1; 2	0,5; 1; 2; 3; 5; 10
Минимальная нагрузка, E_{min}, т	0	
Минимальный поверочный интервал, v_{min}, кг	E_{max} /8000	E_{max} /5000
Доля от пределов допускаемой погрешности весов, p_{LC}	0,7	
Значение поверочного интервала v, кг	E_{max}/n_{max}	

Лист № 4
Всего листов 5

Модификация PR 6212		
Наименование характеристики	Значение	
Невозврат выходного сигнала при возврате к минимальной нагрузке DR, выраженный через поверочный интервал v	E_{max} /4000	E_{max}/3000
Номинальный выходной сигнал, мВ/В	2,0	
Значение входного сопротивления датчиков, Ом	650±6	
Значение выходного сопротивления датчиков, Ом	610±1	
Предельные значения температуры, °С	от - 10 до + 40	
Обозначение по влажности	СН	

Таблица 3 - Основные технические характеристики

Наименование характеристики	Значение	
	Модификация	
	PR 6201	PR 6212
Габаритные размеры средства измерений, мм, не более - высота - диаметр	 138,5 90	 46,6 67,2
Масса, кг, не более	5,5	1,4
Напряжение питания, В	От 4 до 24	
Средний срок службы, лет	10	
Вероятность безотказной работы за 2000 ч	0,9	

Таблица 4 - Пределы допускаемых погрешностей датчиков различных модификаций

Интервалы измерений	Пределы допускаемой погрешности mpe
до 500v включ.	±0,35v
св. 500v до 2000v включ.	±0,70v
св. 2000v	±1,05v

Знак утверждения типа
наносится типографским способом на титульный лист паспорта и на маркировочную табличку на корпусе датчика.

Комплектность средства измерений

Таблица 5 - Комплектность средства измерений

Наименование	Обозначение	Количество
Датчик весоизмерительный	PR 6201 или PR6212	1 шт.
Паспорт	-	1 экз.

Поверка
осуществляется в соответствии с приложением ДА «Методика поверки» ГОСТ 8.631-2013.

Основные средства поверки:

для датчиков с числом поверочных интервалов $n_{LC} \leq 3000$ рабочие эталоны 1-го разряда по ГОСТ 8.640-2014 с пределами допускаемых значений доверительных границ относительной погрешности $\delta = 0{,}01$ %;

для датчиков с числом поверочных интервалов $n_{LC} > 3000$ ГПЭ единицы силы ГЭТ 32-2011 ($S \leq 5 \cdot 10^{-6}$, $\theta \leq 1 \cdot 10^{-5}$, $W_A \leq 5 \cdot 10^{-6}$, $W_B \leq 6 \cdot 10^{-6}$).

Допускается применение аналогичных средств поверки, обеспечивающих определение метрологических характеристик поверяемых СИ с требуемой точностью.

Знак поверки наносится в паспорт.

Лист № 5
Всего листов 5

Сведения о методиках (методах) измерений
изложены в ГОСТ 8.631-2013 «ГСИ. Датчики весоизмерительные. Общие технические требования. Методы испытаний».

Нормативные и технические документы, устанавливающие требования к датчикам весоизмерительным PR 6201, PR 6212

ГОСТ 8.631-2013 ГСИ. Датчики весоизмерительные. Общие технические требования. Методы испытаний

ГОСТ 8.021-2015 ГСИ. Государственная поверочная схема для средств измерений массы

Техническая документация фирмы "Minebea Intec GmbH", Германия

Изготовитель

Фирма «Minebea Intec GmbH», Германия
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Телефон: +49.40.67960-238, факс: +49.40.67960-500
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Испытательный центр

Федеральное государственное унитарное предприятие «Всероссийский научно-исследовательский институт метрологии им. Д.И. Менделеева»
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Web-сайт: www.vniim.ru
E-mail: info@vniim.ru

Аттестат аккредитации ФГУП «ВНИИМ им. Д.И. Менделеева» по проведению испытаний средств измерений в целях утверждения типа № RA.RU.311541 от 23.03.2016 г.

Заместитель
Руководителя Федерального
агентства по техническому
регулированию и метрологии С.С. Голубев

М.п. «14» 12 2017 г.

12.13 R60/2000-NL1-16.33

OIML Certificate of Conformity

OIML Member State
The Netherlands

Number R60/2000-NL1-16.33
Project number 16200404
Page 1 of 2

Issuing authority	NMi Certin B.V. Person responsible: C. Oosterman
Applicant and Manufacturer	Sartorius Mechatronics T&H GmbH Meiendorfer Strasse 205 D-22145 Hamburg Germany
Identification of the certified type	A **compression load cell**, with strain gauges Type : PR 6212
Characteristics	See next page

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

OIML R60 - Edition 2000 (E) for accuracy class C

This Certificate relates only to the metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML International Recommendation above-identified. This Certificate does not bestow any form of legal international approval.

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

Issuing Authority **NMi Certin B.V., OIML Issuing Authority NL1**
10 October 2016

C. Oosterman
Head Certification Board

NMi Certin B.V.
Hugo de Grootplein 1
3314 EG Dordrecht
the Netherlands
T +31 78 6332332
certin@nmi.nl
www.nmi.nl

The notification of NMi Certin B.V. as Issuing Authority can be verified at www.oiml.org

This document is issued under the provision that no liability is accepted and that the applicant shall indemnify third-party liability

OIML MUTUAL ACCEPTANCE ARRANGEMENT

INSPECTION RvA I 122

OIML Certificate of Conformity

OIML Member State
The Netherlands

Number R60/2000-NL1-16.33
Project number 16200404

The conformity was established by the results of tests and examinations provided in the associated OIML Test Report(s):

- No. NMi-16200404-01 dated 6 October 2016 that includes 51 pages;
- No. NMi-16200404-02 dated 6 October 2016 that includes 48 pages.

Characteristics of the load cell:

Maximum capacity (E_{max})	500, 1000 and 2000 kg	500, 1000, 2000, 3000, 5000 and 10000 kg
Minimum dead load	0 kg	
Accuracy Class	C	
Rated Output	2,0 mV/V	
Maximum number of load cell intervals (n)	2000	1000
Ratio of minimum LC Verification interval $Y = E_{max} / v_{min}$	8000	5000
Ratio of minimum dead load output return $Z = E_{max} / (2 * DR)$	2000	1500
Input impedance	650 Ω ± 6 Ω	
Temperature range	-10 °C / + 40 °C	
Fraction p_{LC}	0,7	
Humidity Class	CH	
Safe overload	150 % of E_{max}	
Output impedance	610 Ω ± 1 Ω	
Recommended excitation	4 - 24 V AC / DC	
Excitation maximum	32 V AC / DC	
Transducer material	Stainless steel	
Atmospheric protection	Hermetically sealed	

The characteristics for n_{max} and Y can be reduced separately.

Each produced load cell is provided with an accompanying document with information about its characteristics.

The above identified Type (represented by the sample(s) identified in the OIML Test Report) have been found to comply with the additional national requirements established by the United States of America (NIST Handbook 44 and NCWM Publication 14), included in the MAA Declaration of Mutual Confidence:

- R 60 DoMC-01 rev.0, Additional requirements from the United States;
- R 60 DoMC-02 rev.0, Additional requirements from the United States.

12.14 TC10808

Test Certificate
Parts Certificate

Number **TC10808** revision 0
Project number 16200404
Page 1 of 1

Issued by	NMi Certin B.V.
In accordance with	WELMEC 8.8 Issue 2, WELMEC 2.4 Issue 2, OIML R 60 (2000), EN 45501:2015.
Producer	Sartorius Mechatronics T&H GmbH Meiendorfer Strasse 205 D-22145 Hamburg Germany
Measuring instrument	A **compression load cell**, with strain gauges, tested as a part of a weighing instrument.

Brand : Minebea Intec
Designation : PR 6212

Further properties are described in the annexes:
- Description TC10808 revision 0;
- Documentation folder TC10808-1.

An overview of performed tests is given in the annex:
- Description TC10808 revision 0.

Issuing Authority **NMi Certin B.V.**
10 October 2016

C. Oosterman
Head Certification Board

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www.nmi.nl

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INSPECTION
RvA I 122

Description

Number **TC10808** revision 0
Project number 16200404
Page 1 of 2

1 General information about the load cell

All properties of the load cell, whether mentioned or not, shall not be in conflict with the standards mentioned in this certificate.

This certificate is the positive result of the applied voluntary, modular approach, for a component of a measuring instrument, as described in WELMEC 8.8. The complete measuring system must be covered by an EC type-approval certificate, an EC-type examination certificate or an EU-type examination certificate.

1.1 Essential parts

Number	Pages	Description	Remark
10808/0-01	1	Outline drawing of the load cell	Mechanical
10808/0-02	1	Electrical drawing	Electrical

Cable:
- If the load cell is provided with a 4-wire system:
  - The cable length is mentioned in the accompanying load cell document / on the label;
  - The cable length shall not be modified.
- If the load cell is provided with a 6-wire system (="Remote-sensing"):
  - The cable length is not limited.

The cable shall be a shielded cable, the shield is connected to the load cell.

1.2 Essential characteristics

Maximum capacity (E_{max})	500, 1000 and 2000 kg	500, 1000, 2000, 3000, 5000 and 10000 kg
Minimum dead load	0 kg	
Accuracy Class	C	
Rated Output	2,0 mV/V	
Maximum number of load cell intervals (n)	2000	1000
Ratio of minimum LC Verification interval $Y = E_{max} / v_{min}$	8000	5000
Ratio of minimum dead load output return $Z = E_{max} / (2 * DR)$	2000	1500
Input impedance	650 Ω ± 6 Ω	
Temperature range	-10 °C / + 40 °C	
Fraction p_{LC}	0,7	
Humidity Class	CH	

Description

Number **TC10808** revision 0
Project number 16200404
Page 2 of 2

Safe overload	150 % of E_{max}
Output impedance	610 Ω ± 1 Ω
Recommended excitation	4 - 24 V AC / DC
Excitation maximum	32 V AC / DC
Transducer material	Stainless steel
Atmospheric protection	Hermetically sealed

The characteristics for n_{max} and Y can be reduced separately.

Each produced load cell is provided with an accompanying document with information about its characteristics.

1.3 Essential shapes

Number	Pages	Description	Remark
10808/0-01	1	Outline drawing of the load cell	Mechanical
10808/0-02	1	Electrical drawing	Electrical

The descriptive markings plate is secured against removal by sealing or will be destroyed when removed and contains at least the information and markings as described in OIML R 60 (2000) and:
- This certificate number TC10808 (in the countries where it is mandatory);
- Producers name or mark.

2 Seals

The connecting cable of the load cell or the junction box is provided with possibility to seal.

3 Conditions for conformity assessment

The compatibility of load cells and indicator is established by the manufacturer by means of the compatibility of modules form, contained in WELMEC 2, 2015 clause 10, at the time of putting into use.

Other parties may use this certificate without the written permission of the producer (WELMEC 8.8).

4 Reports

An overview of performed tests is given in the reports:
- No. NMi-16200404-01 dated 6 October 2016 that includes 51 pages;
- No. NMi-16200404-02 dated 6 October 2016 that includes 48 pages.

A report can be a test report, an evaluation report, a type evaluation report and/or a pattern evaluation report.

12.15 17-097

Certificate Number: 17-097
Page 1 of 2

NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:
Load Cell
Compression
Model: PR 6212 Series
n_{max}: 2000 to 3000, Class III, Multiple Cell
2000 to 5000, Class IIIL, Multiple Cell
Capacity: 500 kg to 10 000 kg
Accuracy Class: III/IIIL

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 load cell models, capacities and v_{min} values covered by this Certificate are listed in the table below.
- Nominal Output: 2.0 mV/V
- Stainless Steel
- 4 Wire Design
- Minimum Dead Load: 0 kg

Model	Capacity (kg)	Class III, Multiple Cell		Class IIIL, Multiple Cell	
		v_{min} (g)	n_{max}	v_{min} (g)	n_{max}
PR 6212 Series	500*	62.5	3000	62.5	5000
	1000	125	3000	62.5	5000
	2000	250	3000	83.3	5000
*load cells tested	3000*	600	2000	200	2000
	5000	1000	2000	333	2000
	10 000	2000	2000	666	2000

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: August 14, 2017

1135 M Street, Suite 110 / Lincoln, Nebraska 68508

The National Conference on Weights and Measures (NCWM) does not approve, recommend or endorse any proprietary product or material, either as a single item or as a class or group. Results shall not be used in advertising or sales promotion to indicate explicit or implicit endorsement of the product or material by the NCWM.

Certificate Number: 17-097
Page 2 of 2

Minebea Intec GmbH

Load Cell / PR 6212 Series

Application: The load cells may be used in multiple cell applications Class III and IIIL 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} value, and temperature range are suitable for the application. The manufacturer may market the load cell with fewer divisions (n_{max}) and with greater 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: A lasered identification label located on the cell, states manufacturer name, model, serial number, v_{min} and rated capacity. Other pertinent information will be specified on the Calibration Certificate accompanying the cell.

Test Conditions: A 500 kg and a 3000 kg capacity load cell were tested by the NMi Certain B.V. at The Netherlands facility. Testing was conducted in accordance with the OIML DoMC Mutual Acceptance Arrangement, signed by the NCWM as a utilizing participant for load cell testing. Testing was conducted using deadweights as the reference standard. The load cells were tested over a temperature range of -10 °C to 40 °C with tests 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 to determine sensitivity of the load cell design to changes in barometric pressure was conducted. The data were analyzed for multiple load cell applications. OIML R60 selection criteria were used to determine cells tested.

Evaluated By: M.M.J. Meijer, E. van der Grinten (NMi)

Type Evaluation Criteria Used: NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2017. NCWM, Publication 14: Weighing Devices, 2017.

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)

Example of Device:

12.16 10033

NEW YORK STATE OF OPPORTUNITY. Agriculture and Markets

10B Airline Drive
Albany, New York 12235
800-554-4501
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Certificate of Approval

for Weighing and Measuring Devices

New York State Certificate Number: 10033
Effective Date: November 2, 2017

NTEP Certificate of Conformance Number: 17-097

For:
Load Cell
Compression
Model: PR 6212 Series
n_{max}: 2000 to 3000, Class III, Multiple Cell
2000 to 5000, Class IIIL, Multiple Cell
Capacity: 500 kg to 10 000 kg
Accuracy Class: III/IIIL

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

Published by
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