

## Platform Load Cell, PWS Type 10 ... 700 kg



- Very low corner load error
- Good cost-benefit ratio
- Available with 0.05 % accuracy and in a legal-for-trade version
- Use in hazardous zone with protection class Ex ia IIC T4 Gb / Ex ia IIIC T125 °C Da or protection class Ex nA IIC T4 Gc / Ex tc IIIC T125 °C Dc
- ATEX and IECEx certification
- Optimized by exact calibration for parallel circuits
- Six-wire circuitry
- 100 % Stainless steel

### Application

PWS-type load cells convert proportionally the mechanical input variable force into the electrical variable voltage.

They are ideal for use in platform scales, weighfeeders and bin weighers. The compact design facilitates planning into any given construction.

### Construction

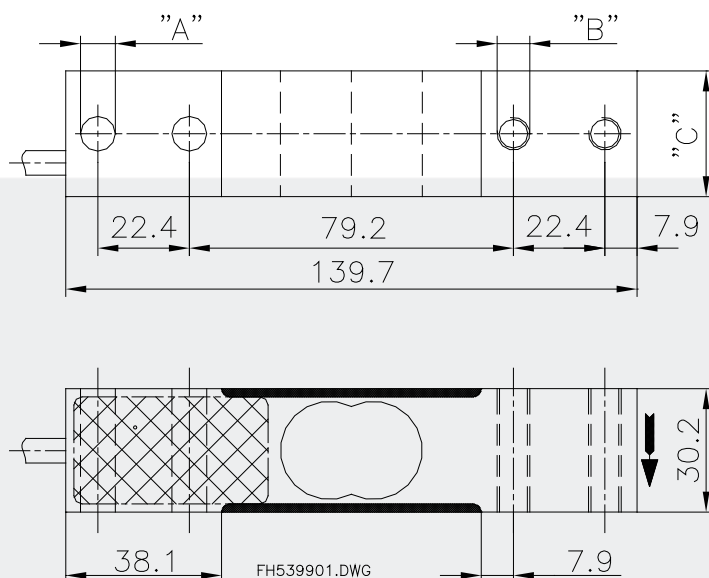
The PWS load cells are produced entirely from stainless steel. They are connected electrically by a high-quality, 6-wire screened PVC cable.

The six-wire circuitry makes the measuring signal insensitive to differences in lengths of the connection cables.

### Functions

- High calibration accuracy which provides ideal conditions for the parallel arrangement of load cells
- High reproducibility of the measuring signals
- Extremely low interference by transverse loads of the measured values

## Dimensions [mm]



Arrow-head on front side = Measuring force direction

$E_{\max}$ = Nominal load	Accuracy class	Part No.	"A"	"B"	"C"	Tightening torque	Nominal measuring route	ATEX Category
10 kg	0,05 %	V058895.B01	8,5	M8	23,8	32 N m	0,30 mm	-
30 kg	0,05 %	V058895.B02	8,5	M8	30,7	32 N m	0,35 mm	-
60 kg	0,05 %	V058895.B03	8,5	M8	30,7	32 N m	0,35 mm	-
100 kg	0,05 %	V058895.B04	8,5	M8	30,7	32 N m	0,45 mm	-
150 kg	0,05 %	V058895.B05	8,5	M8	30,7	39 N m	0,45 mm	-
300 kg	0,05 %	V058895.B06	8,5	M8	30,7	39 N m	0,50 mm	-
500 kg	0,05 %	V058895.B07	10,4	M10	36,5	79 N m	0,50 mm	-
700 kg	0,05 %	V058895.B08	10,4	M10	36,5	79 N m	0,50 mm	-
10 kg	C3	V058896.B01	8,5	M8	23,8	32 N m	0,30 mm	-
30 kg	C3	V058896.B02	8,5	M8	30,7	32 N m	0,35 mm	-
60 kg	C3	V058896.B03	8,5	M8	30,7	32 N m	0,35 mm	-
100 kg	C3	V058896.B04	8,5	M8	30,7	32 N m	0,45 mm	-
150 kg	C3	V058896.B05	8,5	M8	30,7	39 N m	0,45 mm	-
300 kg	C3	V058896.B06	8,5	M8	30,7	39 N m	0,50 mm	-
10 kg	0,05 %	V058895.B31	8,5	M8	23,8	32 N m	0,30 mm	1D/2G
30 kg	0,05 %	V058895.B32	8,5	M8	30,7	32 N m	0,35 mm	1D/2G
60 kg	0,05 %	V058895.B33	8,5	M8	30,7	32 N m	0,35 mm	1D/2G
100 kg	0,05 %	V058895.B34	8,5	M8	30,7	32 N m	0,45 mm	1D/2G
150 kg	0,05 %	V058895.B35	8,5	M8	30,7	39 N m	0,45 mm	1D/2G
300 kg	0,05 %	V058895.B36	8,5	M8	30,7	39 N m	0,50 mm	1D/2G
500 kg	0,05 %	V058895.B37	10,4	M10	36,5	79 N m	0,50 mm	1D/2G
700 kg	0,05 %	V058895.B38	10,4	M10	36,5	79 N m	0,50 mm	3GD
10 kg	0,05 %	V058895.B41	8,5	M8	23,8	32 N m	0,30 mm	3GD
30 kg	0,05 %	V058895.B42	8,5	M8	30,7	32 N m	0,35 mm	3GD
60 kg	0,05 %	V058895.B43	8,5	M8	30,7	32 N m	0,35 mm	3GD
100 kg	0,05 %	V058895.B44	8,5	M8	30,7	32 N m	0,45 mm	3GD
150 kg	0,05 %	V058895.B45	8,5	M8	30,7	39 N m	0,45 mm	3GD
300 kg	0,05 %	V058895.B46	8,5	M8	30,7	39 N m	0,50 mm	3GD
500 kg	0,05 %	V058895.B47	10,4	M10	36,5	79 N m	0,50 mm	3GD
700 kg	0,05 %	V058895.B48	10,4	M10	36,5	79 N m	0,50 mm	3GD

## Technical Data

	D1	C3
Nominal characteristic value	2 ±0,002 mV/V	
Combined error	0,05 % *)	0,02 % *)
Sensitivity temperature coefficient, TK <sub>c</sub>	0,045 % / 10 K *)	0,018 % / 10 K *)
Zero signal temperature coefficient, TK <sub>o</sub>	0,045 % / 10 K *)	0,014 % / 10 K *)
Zero signal tolerance	≤ 2,0 % *)	
Max. number of increments	-	n = 3000
Min. utilization	-	Ba <sub>min.</sub> = 42 % (at 3000 d)
Min. load cell increment value ***)	-	$V \min_{wz} = \frac{\text{Nominal load}}{7143}$
Nominal temperature	-20 °C ... +40 °C	
Operating temperature	-40 °C ... +70 °C	
Explosion-proof design	-30 °C ... +70 °C	
Storage temperature	-50 °C ... +85 °C	
Max. excitation voltage.	15 V	
Input resistance	390 ±10 Ω	
Output resistance	350 ±2 Ω	
Isolation resistance	> 5000 MΩ	
Limit load rel. to nominal load	150 %	
Breaking load/ nominal load	300 %	
Corner load error at 50 % nominal load	0,05 % / 100 mm	
Corner load error at 50 % nominal load **)	0,5 % / 100 mm	
Material	Stainless steel	
Protection class	IP65	
Explosion-proof design	IP67	

\*) Error related to nominal characteristic value

\*\*\*) at nominal load 500 kg and 700 kg

\*\*\*) Example: PWS 100 kg  
min. utilization Ba<sub>min</sub> = 42 kg

$$\text{min. increment value } V \min_{wz} = \frac{100 \text{ kg}}{7143} = 14 \text{ g (theor. GröÙe)}$$

i. e., the weighing electronics increment value is the next possible increment = 20 g

Electrical cable: 6 conductor and shield, 5 m long

Cable colour code:

Input voltage +	green
Input voltage –	black
Measuring signal +	white
Measuring signal –	red
Sensor cable +	orange
Sensor cable –	blue

Shield                                    yellow, pigtail isolated over its entire length

The connecting cable shield is not connected to the measuring body. Therefore, load cell grounding has to be provided for, e.g. via the connecting structure.

### Optional feature ATEX/IECEX approval

Intrinsically safe ATEX explosion-proof design category 1D/2G and IECEX EPL Da, Gb  
 Gas-Ex                    II 2G Ex ia IIC T4 Gb (Zone 1)  
 Dust-Ex II                1D Ex ia IIIC T125 °C Da, IP67 (Zone 20)

Warning: The verification of intrinsically safe circuit must be verified. New barriers are provided in particular for new systems. The verifications of intrinsically safe circuit are available for all load cells and barriers.

Load cells marked as intrinsically safe - Ex "i" - are also operated intrinsically safely irrespective of the zone.

Non intrinsically safe ATEX explosion-proof design category 3GD and IECEX EPL Dc, Gc  
 Gas-Ex                    II 3G Ex nA IIC T4 Gc (Zone 2)  
 Dust-Ex                   II 3D Ex tc IIIC T125 °C Dc, IP67 (Zone 22)

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