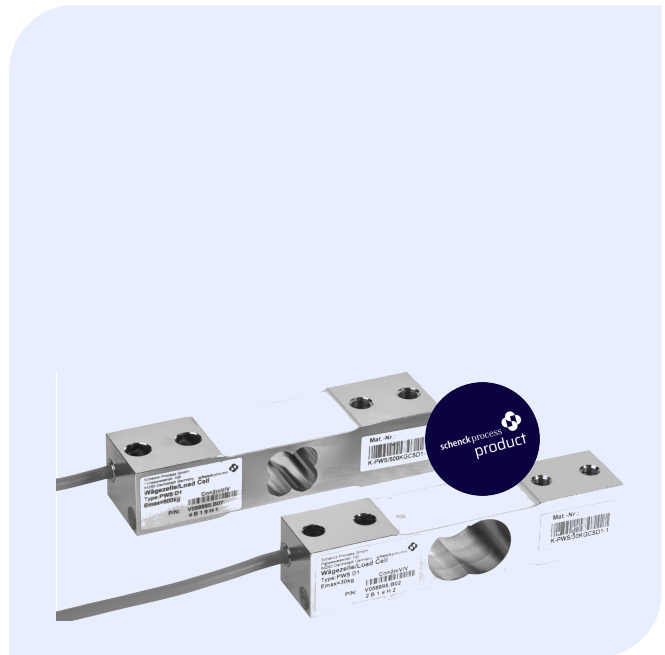


SENSiQ Platform Weighing Sensor PWS 10 ... 700 kg

- Very low corner load error
- Available in accuracy 0.05 % and in able for legal-for-trade design
- Option PWS Plus — better protection against elevated humidity levels
- Approvals for potentially hazardous areas available globally
- Optimized by exact calibration for parallel circuits
- 100 % stainless steel



Application

SENSiQ PWS 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.

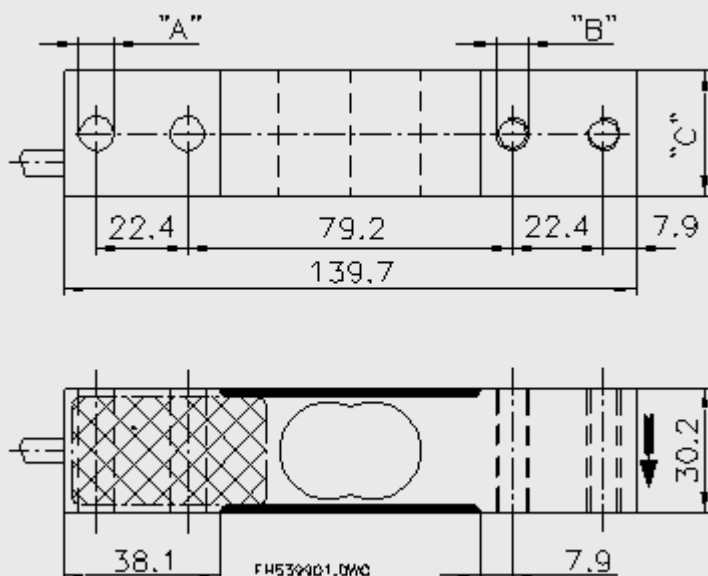
Construction

The PWS load cells are produced entirely from stainless steel. They are electrically connected using a high-quality, 6-core shielded PVC cable. The six-wire circuitry makes the measuring signal insensitive to differences in lengths of the connection cables.

Function

- 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

Dimension



Variant accuracy class D1

Normal model

$E_{\max}$ = Nominal load	Accuracy class	Material no.	"A"	"B"	"C"	Tightening torque	Nominal measuring path
10 kg	D1	V058895.B01	8.5	M8	23.8	32 N m	0.30 mm
30 kg	D1	V058895.B02	8.5	M8	30.7	32 N m	0.35 mm
60 kg	D1	V058895.B03	8.5	M8	30.7	32 N m	0.35 mm
100 kg	D1	V058895.B04	8.5	M8	30.7	32 N m	0.45 mm
150 kg	D1	V058895.B05	8.5	M8	30.7	39 N m	0.45 mm
300 kg	D1	V058895.B06	8.5	M8	30.7	39 N m	0.50 mm
500 kg	D1	V058895.B07	10.4	M10	36.5	79 N m	0.50 mm
700 kg	D1	V058895.B08	10.4	M10	36.5	79 N m	0.50 mm

Version PLUS (Protection against elevated humidity)

$E_{\max}$ = Nominal load	Accuracy class	Material no.	"A"	"B"	"C"	Tightening torque	Nominal measuring path
100 kg	D1	V741556.B04	8.5	M8	23.8	32 N m	0.30 mm
150 kg	D1	V741556.B05	8.5	M8	23.8	32 N m	0.30 mm
300 kg	D1	V741556.B06	8.5	M8	23.8	32 N m	0.30 mm
500 kg	D1	V741556.B07	10.4	M10	36.5	79 N m	0.50 mm
700 kg	D1	V741556.B08	10.4	M10	36.5	79 N m	0.50 mm

ATEX model

E _{max} = Nominal load	Accuracy class	Material no.			“A”	“B”	“C”	Tighten- ing torque	Nominal measur- ing path
		1D 2G	1D 2G	3GD					
		ATEX / IECEx / EAC FM-Approval Canada / USA	KOSHA	ATEX / IECEx / EAC					
10 kg	D1	V058895.B31	-	V058895.B41	8.5	M8	23.8	32 N m	0.30 mm
30 kg	D1	V058895.B32	V058895.B92	V058895.B42	8.5	M8	30.7	32 N m	0.35 mm
60 kg	D1	V058895.B33	V058895.B93	V058895.B43	8.5	M8	30.7	32 N m	0.35 mm
100 kg	D1	V058895.B34	V058895.B94	V058895.B44	8.5	M8	30.7	32 N m	0.45 mm
150 kg	D1	V058895.B35	V058895.B95	V058895.B45	8.5	M8	30.7	39 N m	0.45 mm
300 kg	D1	V058895.B36	V058895.B96	V058895.B46	8.5	M8	30.7	39 N m	0.50 mm
500 kg	D1	V058895.B37	-	V058895.B47	10.4	M10	36.5	79 N m	0.50 mm
700 kg	D1	V058895.B38	-	V058895.B48	10.4	M10	36.5	79 N m	0.50 mm

Variant accuracy class C3

Normal model

E _{max} = Nominal load	Accuracy class	Material no.	“A”	“B”	“C”	Tightening torque	Nominal meas- uring path
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

ATEX model

E _{max} = Nominal load	Accuracy class	Material no.			“A”	“B”	“C”	Tighten- ing torque	Nominal measur- ing path
		1D 2G	1D 2G	3GD					
		ATEX / IECEx / EAC FM-Approval Canada / USA	KOSHA	ATEX / IECEx / EAC					
10 kg	C3	V058896.B21	-	V058896.B41	8.5	M8	23.8	32 N m	0.30 mm
30 kg	C3	V058896.B22	V058896.B92	V058896.B42	8.5	M8	30.7	32 N m	0.35 mm
60 kg	C3	V058896.B23	V058896.B93	V058896.B43	8.5	M8	30.7	32 N m	0.35 mm
100 kg	C3	V058896.B24	V058896.B94	V058896.B44	8.5	M8	30.7	32 N m	0.45 mm
150 kg	C3	V058896.B25	V058896.B95	V058896.B45	8.5	M8	30.7	39 N m	0.45 mm
300 kg	C3	V058896.B26	V058896.B96	V058896.B46	8.5	M8	30.7	39 N m	0.50 mm

Technical Data

	D1	C3
Nominal characteristic value	2 ±0.002 mV/V	
Compound error	0.05 % *)	0.02 % *)
Temperature coefficient of the characteristic value, TK _c	0.045 % / 10 K *)	0.018 % / 10 K *)
Temperature coefficient of the zero point, TK _o	0.045 % / 10 K *)	0.014 % / 10 K *)
Zero signal tolerance	≤ 2.0 % *)	—
max. number of digits	—	n = 3000
min. load	—	Ba _{min} = 42 % (bei 3000 d)
min. increment value ***)	—	Vmin _{wz} = (Nominal load : 7143)
Operating temperature, complete		-10 °C ... +40 °C
Operating temperature range		-40 °C ... +70 °C
Operating temperature range explosion-proof design		-30 °C ... +70 °C (ATEX, IECEx, EAC, KOSHA) -30 °C ... +40 °C (FM-Approval Kanada und USA)
Storage temperature		-50 °C ... +85 °C
Supply voltage max.		15 V
Input resistance		390 ±10 Ω
Output resistance		350 ±2 Ω
Insulation resistance		> 5000 MΩ
Maximum capacity, based on nominal load		150 %
Breaking load, based on nominal load		300 %
Corner deviation at 50 % nominal load		0.05 % / 100 mm
Corner deviation at 50 % nominal load **)		0.5 % / 100 mm
Type of protection		IP67
Material		Stainless steel

*) Error based on nominal characteristic value

**) bei nominal load 500 kg and 700 kg

***) Example: PWS 100 kg

min. load Ba_{min} = 42 kg

min. increment value: Vmin_{wz} = (Nominal load / 7143) = 14 g (theoretical size)

i.e., the increment value of the evaluation electronics is the nearest possible digit step of 20 g

Connection cable PVC, 6 conductors + shield, 5 m long

Conductor color			
Input voltage +	green	Input voltage –	black
Measuring signal +	white	Measuring signal –	red
Sensor line +	orange	Sensor line –	blue
Shielding	yellow, connection wire insulated along the entire length		

The screen on the connecting cable does not have a connection to the measuring element. Earthing of the load cell, therefore, has to be via the connecting structure, for example.

Option — Explosion-proof approvals

	Intrinsically safe explosion-proof design Option 1D, 2G	Non-intrinsically safe explosion-proof design Option 3GD
ATEX / IECEx	II 2G Ex ia IIC T4 Gb (Zone 1) II 1D Ex ia IIIC T125°C Da, IP67 (Zone 20)	II 3G Ex ec IIC T4 Gc (Zone 2) II 3D Ex tc IIIC T125 °C Dc, IP67 (Zone 22)
FM-Approval Canada	I / O / Ex ia / IIC / T4; -30°C < Ta < 40°C / Ga; 20 / Ex ia / IIIC / T125°C; -30°C < Ta < 40°C / Da; IP67	not available
FM-Approval USA	IS / I, II, III / 1 / A, B, C, D, E, F, G / T4; -30°C < Ta < 40°C, I / O / AEx ia / IIC / T4; -30°C < Ta < 40°C / Ga; 20 / AEx ia / IIIC / T125°C; -30°C < Ta < 40°C / Da; IP67	not available
EAC	1Ex ia IIC T4 Gb (Zone 1) Ex ia IIIC T125°C Da X (Zone 20)	2Ex nA II T4 Gc (Zone 2) Ex tc IIIC T125 °C Dc X (Zone 22)
KOSHA	Ex ia IIC T4 Gb (Zone 1) Ex ia IIIC T125°C Db, IP67 (Zone 20)	not available

Load cells marked as intrinsically safe (Ex "i") are operated in an intrinsically safe manner regardless of the zone.

CAUTION! The verification of intrinsically safe circuit must be verified. New barriers are provided in particular for new systems. Verifications of intrinsic safety are available for all load cells and barriers.

Option PWS Plus — better protection against elevated humidity levels

A PWS version is available as an option, in which the strain gauge is protected against high humidity with an additional aluminum layer. This version should be used wherever high humidity can occur. This option is available **only in accuracy D1** and **not** as ATEX/IECEx version.



All information is without obligation. All specifications are subject to change. © by Qlar Europe GmbH