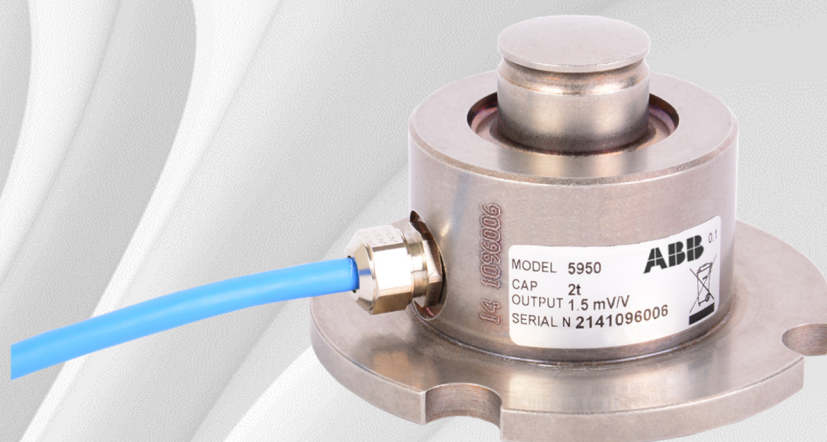


ABB MEASUREMENT & ANALYTICS | DATA SHEET

9QGPS5950

Low profile compression load cell



Measurement made easy

Load cell combining high capacity, low design and cost effective solution

Stainless steel

IP rating IP 67

Low design

Cost effective solution

Sturdy design

Easy to install

Whole range of mounting kits available

Available options (non exhaustive list)

- ATEX intrinsic safety
- High service temperature (up to 150 °C [302 F])

Applications

The load cell 9QGPS5950 is perfectly designed to the following applications:

- Silos, tanks or hoppers weighing
- Reactors weighing
- Industrial force measurement where space is limited

Capacities

(0.3) - (0.5) - (0.75) - (1) - (1.5) - 2 - 3 - 5 - 7.5 - 10 - (15) - 20 t*

* 20 t only available with 0.5 % accuracy class

Explosion protection (Option)

ATEX intrinsic safety:

- Ex II 1GD Ex ia IIC T6 or T4 Ga Ex ia IIIC T80°C Da

Materials

Model 5950	Model 5955
Stainless steel	Coated steel

Specification

	0.5	0.25	0.1
Measuring accuracy			
Accuracy class	0.5 % F.S.	0.25 % F.S.	0.1 % F.S.
Combined error (non-linearity + hysteresis)	< ±0.5 % F.S.	< ±0.25 % F.S.	< ±0.10 % F.S.
Repeatability error	< ±0.25 % F.S.	< ±0.1 % F.S.	< ±0.03 % F.S.
Creep error over 30 min.	< ±0.2 % F.S.	< ±0.1 % F.S.	< ±0.06 % F.S.
Sensitivity tolerance	< ±0.5 %	< ±0.3 %	< ±0.3 %
Temperature coefficient of the sensitivity	< ±0.1 % F.S./10 °C	< ±0.05 % F.S./10 °C	< ±0.05 % F.S./10 °C
Temperature coefficient of zero signal	< ±0.1 % F.S./10 °C	< ±0.035 % F.S./10 °C	< ±0.035 % F.S./10 °C
Reference temperature	23 °C (73.4 °F)	23 °C (73.4 °F)	23 °C (73.4 °F)
Temperature data			
Compensated temperature range	-10 to 45 °C (14 to 113 °F)	-10 to 45 °C (14 to 113 °F)	-10 to 45 °C (14 to 113 °F)
Service temperature range	-25 to 70 °C (-13 to 158 °F)	-25 to 70 °C (-13 to 158 °F)	-25 to 70 °C (-13 to 158 °F)
Storage temperature range	-50 to 85 °C (-58 to 185 °F)	-50 to 85 °C (-58 to 185 °F)	-50 to 85 °C (-58 to 185 °F)
Electrical Data			
Input resistance	700 Ω ±2 Ω	700 Ω ±2 Ω	700 Ω ±2 Ω
Output resistance	700 Ω ±2 Ω	700 Ω ±2 Ω	700 Ω ±2 Ω
Insulation resistance (50 V)	> 5000 MΩ	> 5000 MΩ	> 5000 MΩ
Reference excitation voltage	10 V DC	10 V DC	10 V DC
Nominal range of excitation voltage	3 to 12 V DC	3 to 12 V DC	3 to 12 V DC
Nominal sensitivity	1.5 mV/V	1.5 mV/V	1.5 mV/V
Load limits			
Safe load limit	150 % F.S.	150 % F.S.	150 % F.S.
Breaking load	> 300 % F.S.	> 300 % F.S.	> 300 % F.S.
Static lateral force limit	10 % F.S.	10 % F.S.	10 % F.S.
Permissible dynamic loading	40 % F.S.	40 % F.S.	40 % F.S.

F.S.: Full scale

Dimensions

Load cell model 9QGPS5950

Compression, Range 0.3 to 15 t (20 t)
All dimensions in mm (in)

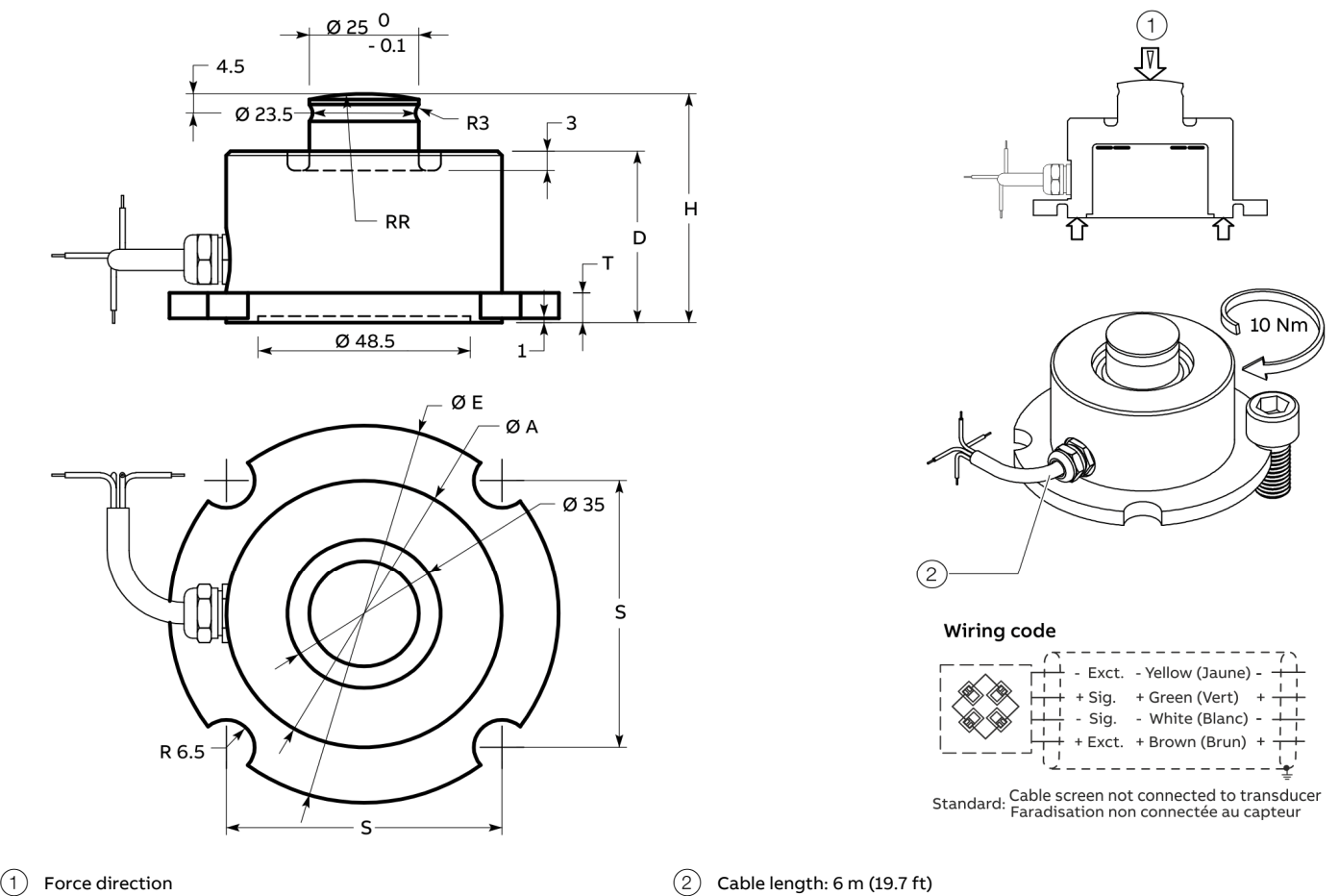


Figure 1: Dimensions load cell model 9QGPS5950

Capacities	Ø A	D	H	S	T	Ø E	RR	Max deflection	Weight
t									kg (lb)
0.3 to 5	54.5 (2.1)	38.5 (1.5)	54 (2.1)	62.9 (2.48)	7 (0.3)	89 (3.5)	60	0.04 to 0.07 (0.0016 to 0.0028)	±1.4 (3.09)
7.5 to 15	59 (2.3)	38.5 (1.5)	54 (2.1)	62.9 (2.48)	7 (0.3)	89 (3.5)	60	0.08 to 0.15 (0.0031 to 0.0059)	±1.4 (3.09)
20	59 (2.3)	38.5 (1.5)	54 (2.1)	62.9 (2.48)	7 (0.3)	89 (3.5)	60	0.2 (0.0079)	±1.4 (3.09)

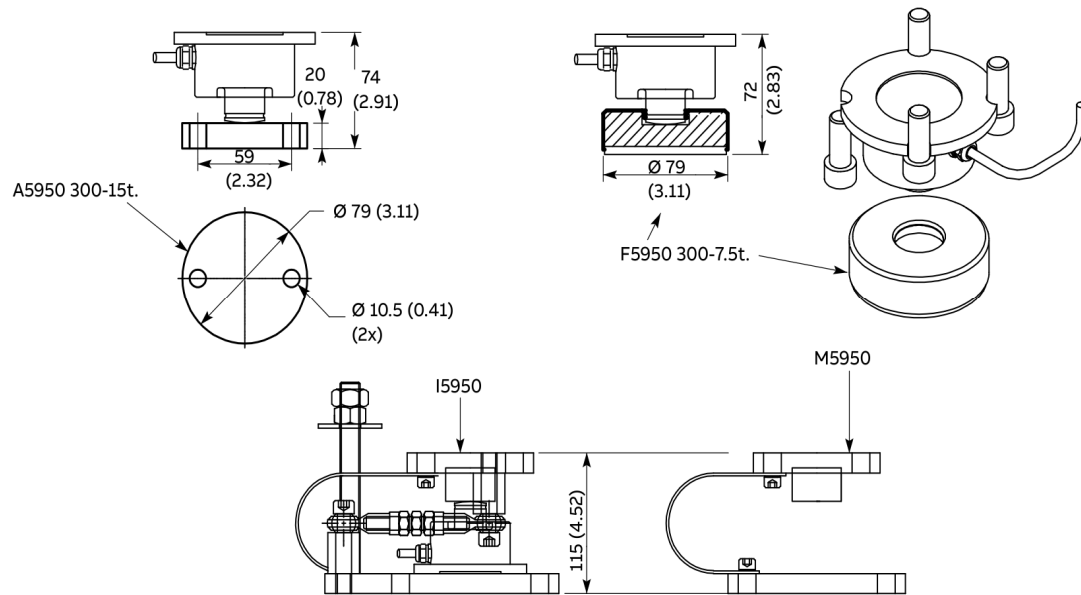


Figure 2: Accessories

... Dimensions

Loading plates for model 9QGPS5950, A5950

All dimensions in mm (in)

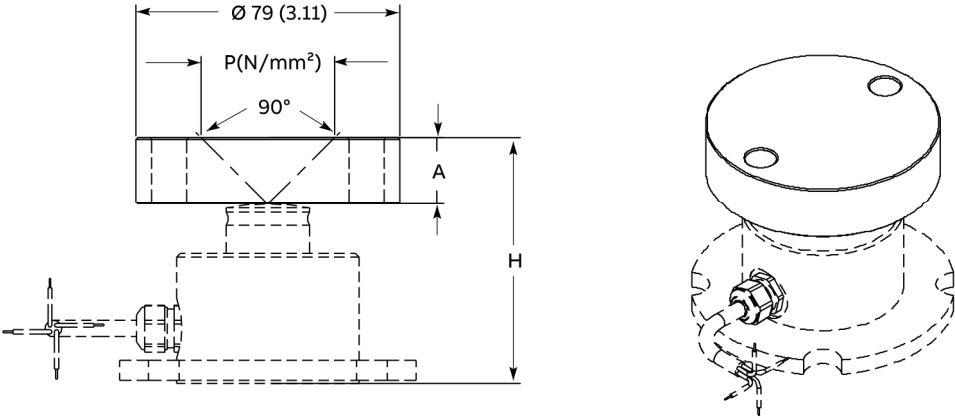


Figure 3: Dimensions loading plates for model 9QGPS5950

Ref. Item*	Capacities t	A	H	P (N/mm²)	Weight kg (lb)
A5950-AB	0.3 to 15	20 (0.79)	74 (2.91)	±120 (15 t)	±0.76 (1.68)
A5950-C	20	25 (0.98)	79 (3.11)	±100	±0.95 (2.09)

*Material: stainless steel

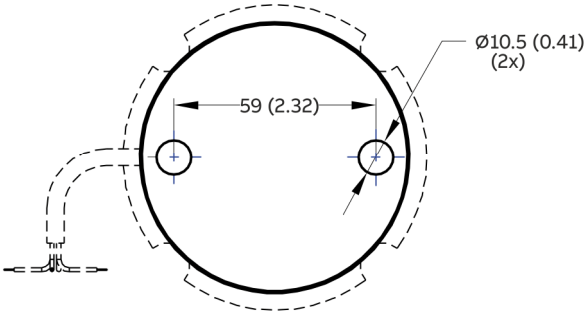


Figure 4: Other view

... Dimensions

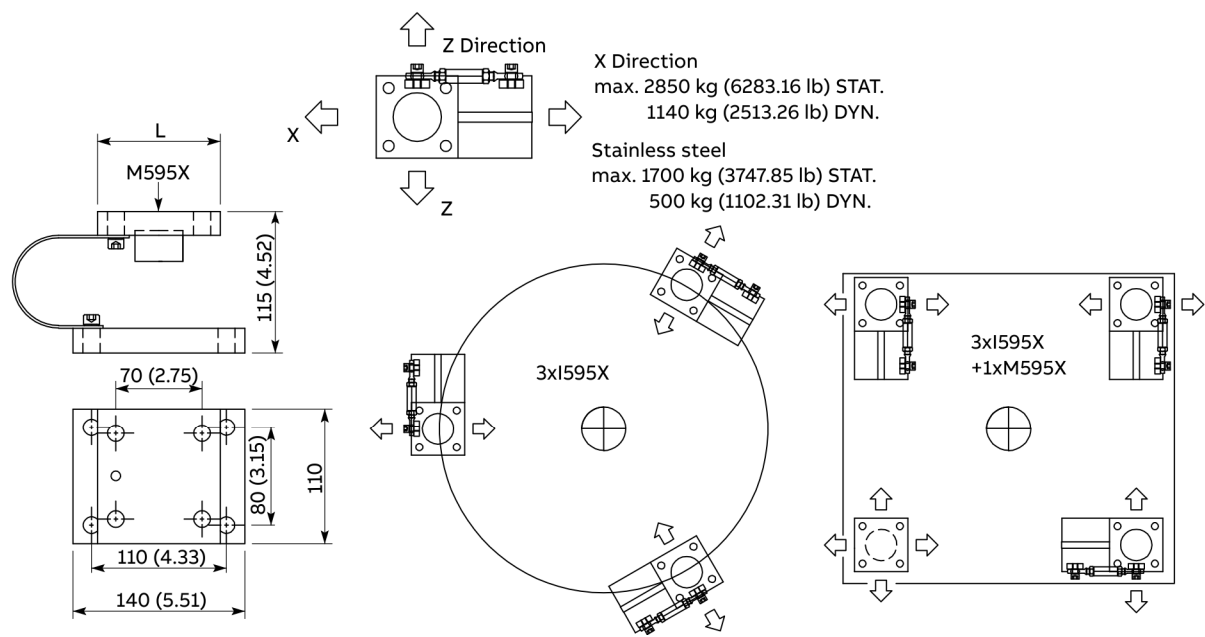


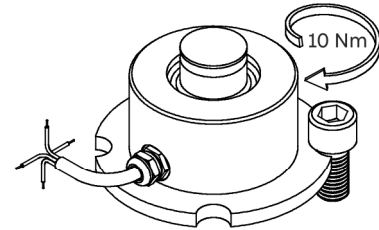
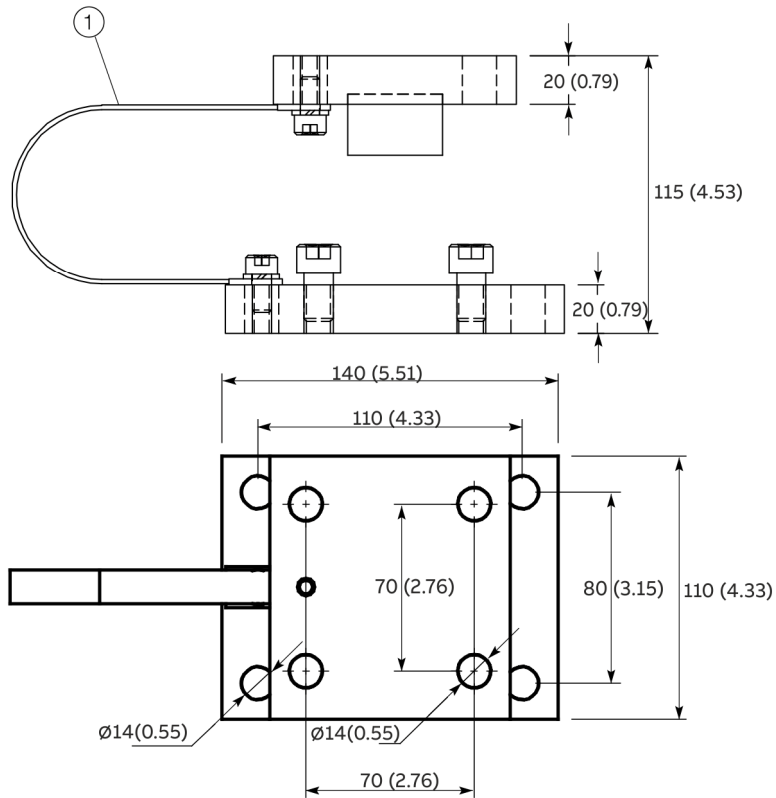
Figure 6: Other views

Mounting plates for model 9QGPS5950

Load cells model M5950 stainless steel, model M5955 alloy steel

Capacities 0.3 to 20 t

All dimensions in mm (in)



① Electrical ground strap

Figure 7: Mounting plates for model 9QGPS5950

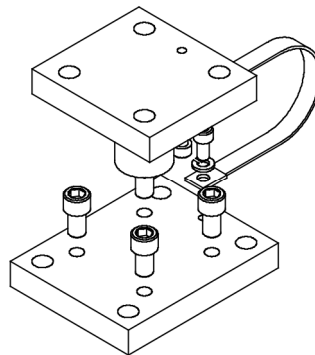


Figure 8: Other view



Notes

Notes

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