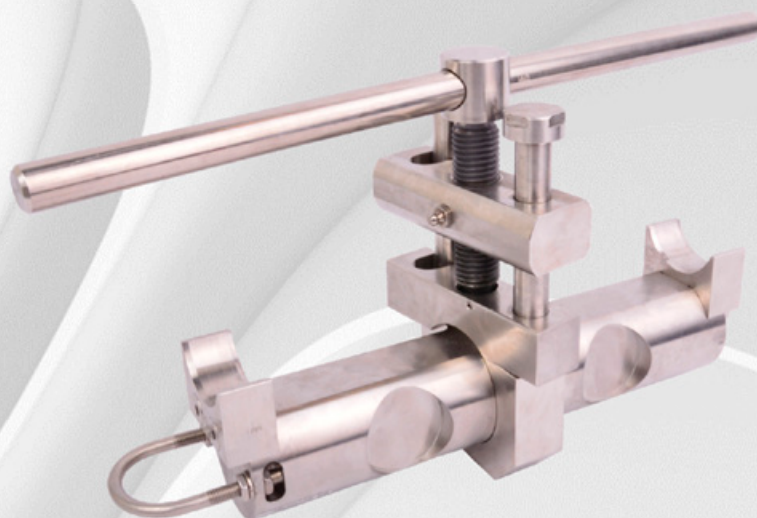


ABB MEASUREMENT & ANALYTICS | DATA SHEET

9QGPS5560S

Static line tensiometer



Measurement made easy

Load cell specially designed to measure the tension force applied to a cable or a rope.

Easy and fast mounting

Designed for static rope tension measurement

IP rating IP 67

Wide range of cables diameters: 3 to 90 mm (0.11 to 3.5 in.)

Stainless steel

Available options (non exhaustive list)

- ATEX intrinsic safety
- Amplified output (V or mA) and digital output signal (RS-232C, RS-485, USB)
- Dual Wheatstone bridge
- IP rating IP 68
- High service temperature -50 to 180 °C (-58 to 356 °F)

Applications

The load cell 9QGPS5560S is perfectly designed to the following applications:

- Hookload sensor for drilling, mud-logging
- Tension measurement of cables, ropes, shrouds and riggings of electric pylons, transmission antenna's, towers, flare masts, barge mooring lines
- Tension measurement for suspended bridges and foot-bridges, big tops

Capacities

5 to 75 t on cable

Explosion protection (Option)

ATEX intrinsic safety

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

Specification

	2 to 5 %
Temperature coefficient of the sensitivity	$< \pm 0.1 \% \text{ F.S.} / 10^{\circ}\text{C}$
Temperature coefficient of zero signal	$< \pm 0.1 \% \text{ F.S.} / 10^{\circ}\text{C}$
Reference temperature	23 °C (73.4 °F)
Temperature data	
Nominal temperature range	-10 to 45 °C (14 to 113 °F)
Service temperature range	-25 to 70 °C (-13 to 158 °F)
Storage temperature range	-50 to 85 °C (-58 to 185 °F)
Electrical data	
Input resistance	352 $\Omega \pm 2 \Omega$
Output resistance	352 $\Omega \pm 2 \Omega$
Insulation resistance (50 V)	> 5000 M Ω
Reference excitation voltage	10 V
Nominal range of excitation voltage	3 to 12 V
Nominal sensitivity	$\pm 1 \text{ mV/V}^*$
Load limits	
Safe load limit	200 % F.S.
Breaking load	> 300 % F.S.
Permissible dynamic loading	70 % F.S.

Table 1: (F.S.: full scale)

* Can be different (according to the wire rope)

Combined error depends on rope material and on site calibration

Specifications subject to change without notice



Dimensions

Load cell model 9QGPS5560S (stainless steel)

All specified dimensions are in mm (in.)

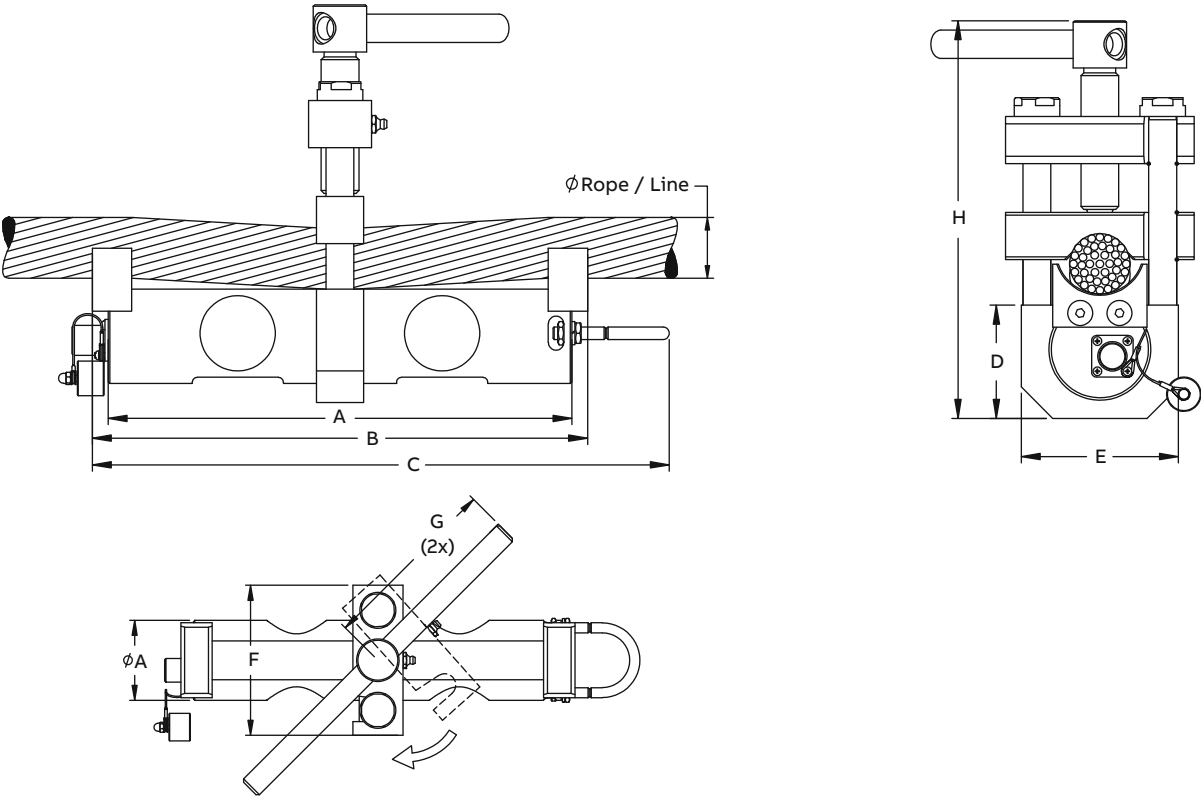


Figure 1: Dimensions

Ref. Item	Capacities t	ØRope / Line		ØA	A	B	C	D	E	F	G	H (min)	H (max)	Weight kg (lb)
		min	max											
5560S-A	5 to 6	12	20	64	295	315	367	72	100	120	217	224	264	≈ 10.4
		(0.47)	(0.79)	(2.52)	(11.61)	(12.40)	(14.45)	(2.83)	(3.94)	(4.72)	(8.54)	(8.82)	(10.39)	(22.93)
5560S-B	5 to 6	18	26	64	295	315	367	72	100	120	217	224	264	≈ 10.4
		(0.71)	(1.02)	(2.52)	(11.61)	(12.40)	(14.45)	(2.83)	(3.94)	(4.72)	(8.54)	(8.82)	(10.39)	(22.93)
5560S-C	10	8	20	64	295	315	367	72	100	120	217	224	264	≈ 10.4
		(0.32)	(0.79)	(2.52)	(11.61)	(12.40)	(14.45)	(2.83)	(3.94)	(4.72)	(8.54)	(8.82)	(10.39)	(22.93)
5560S-D	15 to 20	22	50.8	64	295	315	367	72	100	120	217	224	264	≈ 11
		(0.87)	(2.0)	(2.52)	(11.61)	(12.40)	(14.45)	(2.83)	(3.94)	(4.72)	(8.54)	(8.82)	(10.39)	(24.25)
5560S-E	30	22	50.8	64	295	315	367	72	100	120	217	224	284	≈ 11
		(0.87)	(2.0)	(2.52)	(11.61)	(12.40)	(14.45)	(2.83)	(3.94)	(4.72)	(8.54)	(8.82)	(11.18)	(24.25)
5560S-F	45	22	50.8	64	295	315	367	72	100	120	217	224	284	≈ 11
		(0.87)	(2.0)	(2.52)	(11.61)	(12.40)	(14.45)	(2.83)	(3.94)	(4.72)	(8.54)	(8.82)	(11.18)	(24.25)
5560S-G	75	38	58	74	405	415	472	89	150	147	324.5	296	365	≈ 26
		(1.50)	(2.28)	(2.91)	(15.94)	(16.34)	(18.58)	(3.50)	(5.91)	(5.79)	(12.78)	(11.65)	(14.37)	(57.32)

Table 2: Other capacities and dimensions available on request

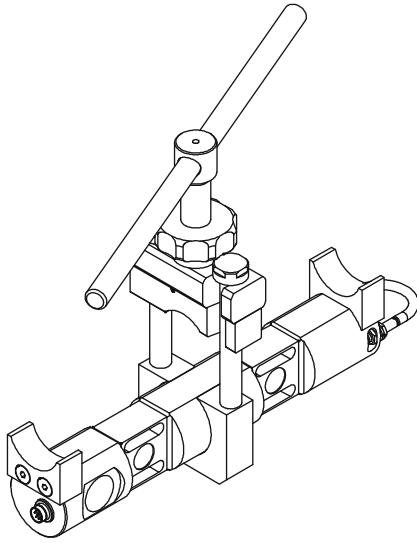
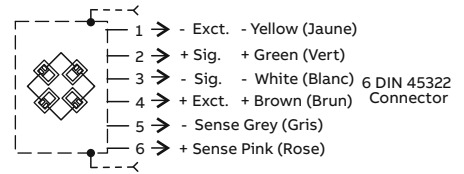


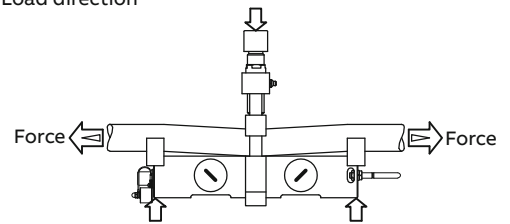
Figure 2: Other views

Wiring code



Standard: Cable screen not connected to transducer
Faradisation non connectée au capteur

Load direction





Notes

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