

ABB MEASUREMENT & ANALYTICS | DATA SHEET

9QGPS5000B

Load measuring wedge sockets



Measurement made easy

Load measuring wedge sockets designed to measure the force applied on a cable.

CE certified for hoisting applications

Sturdy design

Load pin: stainless steel

IP rating IP 65

Easy to install

Cable length: 6 m (19.7 ft)

Complete range of 'CE' certified electronics and load limiters

Available options (non exhaustive list)

- ATEX intrinsic safety
- High service temperature 150 °C (302 °F)
- IP rating IP 67(M)
- Amplified output (V or mA)
- Dual Wheatstone bridge
- SIL / PL ready

Applications

The load pins 9QGPS5000B are perfectly designed to the following applications:

- **SL-HOIST**
Hoisting devices and crane's security in combination with load limitation electronics.

Capacities

0.3 to 20 t
[for cables diameter from 9 to 32 mm (0.35 to 1.3 in.)]

Explosion protection (Option)

ATEX intrinsic safety:

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

Specification

	SL-HOIST
Combined error (nonlinearity and hysteresis)	0.5 to 2 % F.S.
Repeatability error	< ± 0.25 % F.S.
Creep error over 30 min.	< ± 0.3 % F.S.
Zero shift after loading	< ± 0.5 % F.S.
Temperature coefficient of the sensitivity	< ± 0.2 % F.S./10 °C
Temperature coefficient of zero signal	< ± 0.2 % F.S./10 °C
Reference temperature	23 °C (73.4 °F)
Temperature data	
Compensated 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	
Zero balance	± 0.02 mV/V
Input resistance	352 Ω ± 2 Ω
Output resistance	352 Ω ± 2 Ω
Insulation resistance (50 V)	> 5000 MΩ
Reference excitation voltage	10 VDC
Nominal range of excitation voltage	3 to 12 VDC
Nominal sensitivity	1 mV/V
Load limits	
Safe load limit	200 % F.S.
Breaking load	> 500 % F.S.
Static lateral force limit	150 % F.S.
Permissible dynamic loading	75 % F.S.

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

Dimensions

Load measuring wedge sockets 9QGSP5000B

All specified dimensions are in mm (in.)

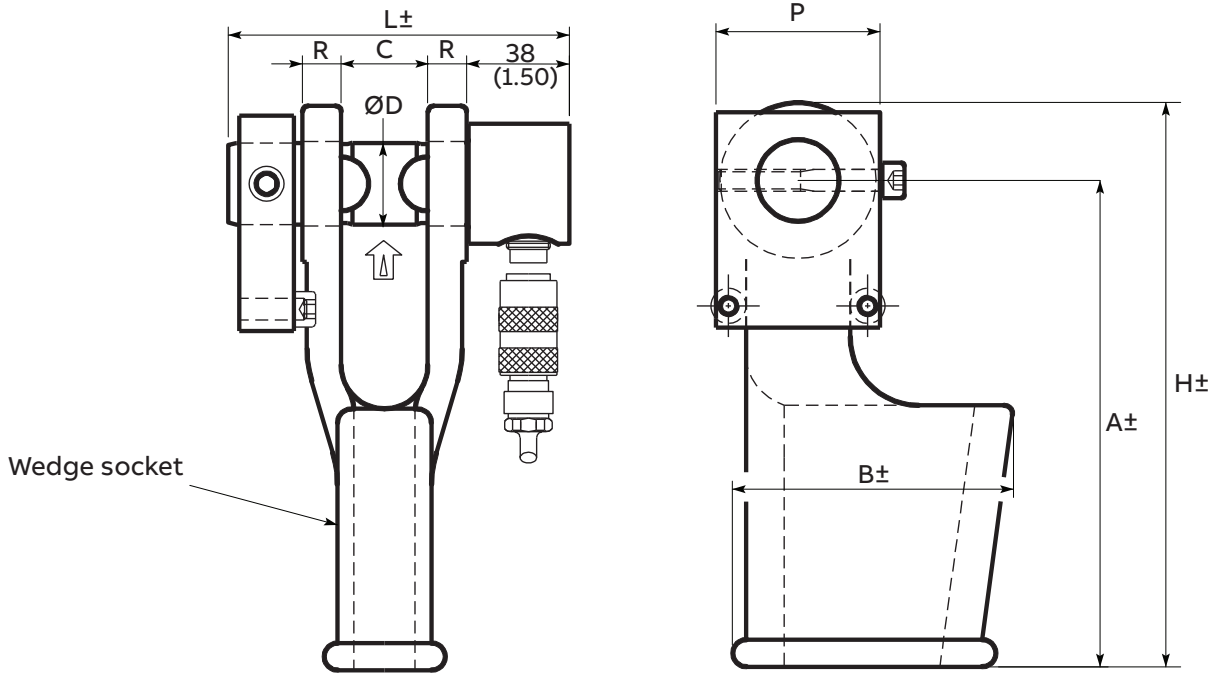


Figure 1: Dimensions wedge sockets 9QGSP5000B

Ref. Item	Capacities (t)	Size ($\varnothing$ of cable)		$A \pm$	$B \pm$	C	$\varnothing D$ h9	$H \pm$	$L \pm$	R
		(mm)	(in.)							
5000B - $\frac{3}{8}$ in.	0.3 to 2	9 to 10	$\frac{3}{8}$	145 (5.71)	65 (2.55)	20.6 (0.81)	20 (0.79)	167 (6.57)	108 (4.25)	11.2 (0.44)
5000B - $\frac{1}{2}$ in.	0.5 to 3	11 to 13	$\frac{1}{2}$	146 (5.75)	87.5 (3.44)	25.5 (1.00)	25 (0.98)	173 (6.81)	118 (4.64)	12.7 (0.5)
5000B - $\frac{5}{8}$ in.	0.75 to 5	14 to 16	$\frac{5}{8}$	178 (7.01)	103 (4.05)	31.8 (1.25)	30 (1.18)	207 (8.15)	125 (4.92)	14.2 (0.56)
5000B - $\frac{3}{4}$ in.	1 to 6	18 to 19	$\frac{3}{4}$	215 (8.46)	122 (4.80)	38.1 (1.50)	35 (1.37)	248 (9.76)	139 (5.47)	16.8 (0.66)
5000B - $\frac{7}{8}$ in.	1.5 to 8	20 to 22	$\frac{7}{8}$	240 (9.45)	139 (5.47)	44.5 (1.75)	41 (1.61)	283 (11.14)	143 (5.63)	19.1 (0.75)
5000B - 1 in.	4 to 12.5	24 to 26	1	276 (10.87)	155 (6.10)	50.8 (2.00)	50 (1.96)	324 (12.76)	160 (6.29)	22.3 (0.88)
5000B - 1 $\frac{1}{8}$ in.	5 to 16	28	1 $\frac{1}{8}$	313 (12.32)	171 (6.73)	57.2 (2.25)	57 (2.24)	365 (14.37)	172 (6.77)	25.4 (1.00)
5000B - 1 $\frac{1}{4}$ in.	8 to 20	30 to 32	1 $\frac{1}{4}$	351 (13.82)	187 (7.36)	63.5 (2.50)	64 (2.52)	406 (15.98)	185 (7.28)	28.7 (1.13)
5000B - 1 $\frac{3}{8}$ in.	8 to 20	34 to 36	1 $\frac{3}{8}$	400 (15.75)	–	69 (2.71)	64 (2.52)	474 (18.66)	190 (7.48)	28 (1.10)
5000B - 1 $\frac{1}{2}$ in.	10 to 20	35 to 39	1 $\frac{1}{2}$	450 (17.72)	–	76 (2.99)	70 (2.75)	530 (20.87)	200 (7.87)	30 (1.18)

Table 2: Other capacities and dimensions available on request

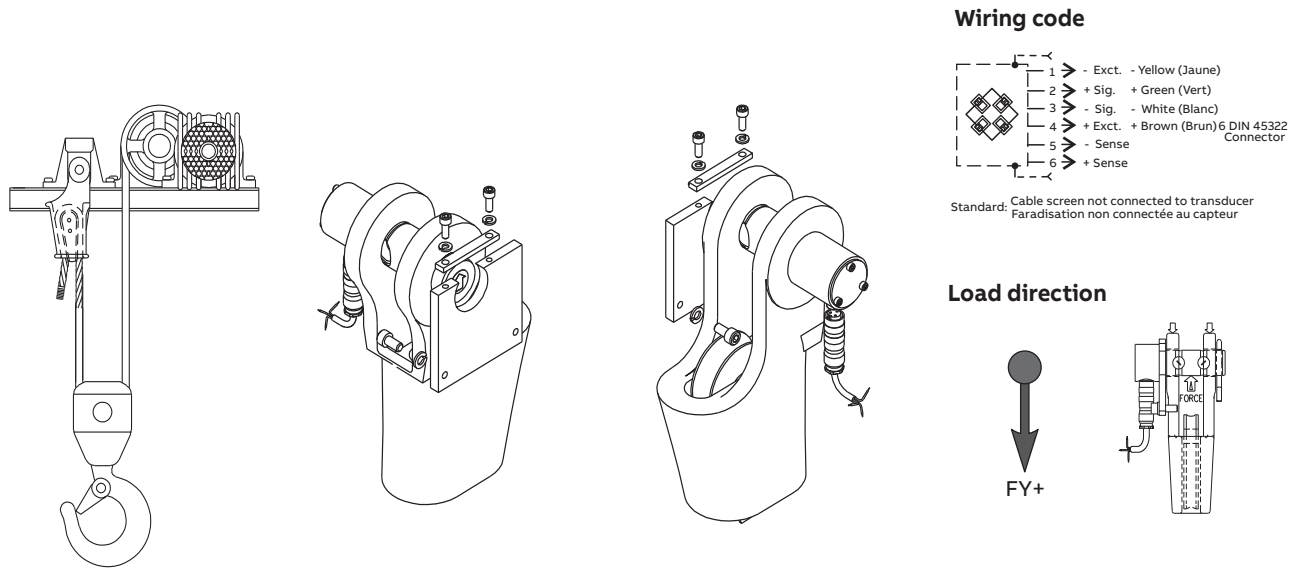


Figure 2: Other views



Notes

ABB Automation GmbH
Measurement & Analytics

Force Measurement
Oberhausener Str. 33
40472 Ratingen
Germany
Tel: +49 2102 12-2520
Fax: +49 2102 12-1414
Mail: ForceMeasurement@de.abb.com

abb.com/measurement

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