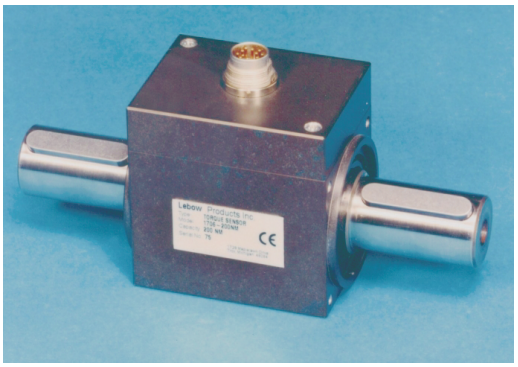
Lebow® Products Inc.

Model 1700 Series

TORQUE TRANDUCERS

These transducers are suitable for laboratory applications as well as industrial environments because of their compact size and multiple mounting options. The contactless transmission of supply voltage and measuring signal enables continuous operation with low maintenance.



Special features:

- Ÿ built-in instrumentation amplifier (±10 V output)
- Ÿ contactless
- Ÿ single supply voltage
- Ÿ compact size
- Ÿ wide application range

Options:

- Ÿ Speed Sensing (rpm)
- Ÿ Angle Encoder

Technical Specifications:	1700	1701	1702	1703	1706
Capacity Range:	**0.02;0.05 Nm**	**0.1;0.2;0.5;1;2 Nm**	**5;10;20 Nm**	**50;100;200;300 Nm**	**500;1000;1500 Nm**
Supply Voltage:	12 VDC ±10%	12 VDC ±10%	12 VDC ±10%	12 VDC ±10%	12 VDC ±10%
Current Consumption:	approx. 160 mA	approx. 160 mA	approx. 250 mA	< 200 mA	approx 250 mA
Rise Time:	2 ms	2 ms	2 ms	2 ms	1 ms (1Hz)
Limit Frequency - 3dB	200 Hz	200 Hz	200 Hz	200 Hz	---
Voltage Output:	0 to ±10V	0 to ±10V	0 to ±10V	0 to ±10V	0 to ±10V
Internal Resistance:	100Ω	100Ω	100Ω	100Ω	100Ω
Ripple:	< 100mVpp	< 100mVpp	< 100mVpp	< 100mVpp	< 100mVpp
Overall Accuracy:	<0.25%	<0.25%	<0.25%	<0.25%	<0.25%
Operating Temperature:	0 - 60°C	0 - 60°C	0 - 60°C	0 - 60°C	0 - 60°C
Compensated Temperature Range:	5 - 45°C	5 - 45°C	5 - 45°C	5 - 45°C	5 - 45°C
Temperature error					
Zero Point:	0.02%/K	0.02%/K	0.02%/K	0.02%/K	0.02%/K
Sensitivity:	0.01%/K	0.01%/K	0.01%/K	0.01%/K	0.01%/K
Mechanical Overload:	100%	100%	100%	100%	100%
Weight:	approx. 200g	approx. 200g	approx. 600g	approx. 1300g	approx 4500g
Max. Sensor Speed (rpm):	15,000	37,000	19,000	13,500	7,900

Options

Speed Sensing (rpm):	(n)	**Angle:**	(w)
speed max:	10000 rpm	speed max.:	3000 rpm
Output:	open collector	Pulses/rev.:	360
internal pull up:	100kΩ (5V level)	Resolution:	1°
external pull up:	24V max	**Phase Shift:**	Quadrature
I max:	20mA		
Pulses/rev.:	60		

Model 1701

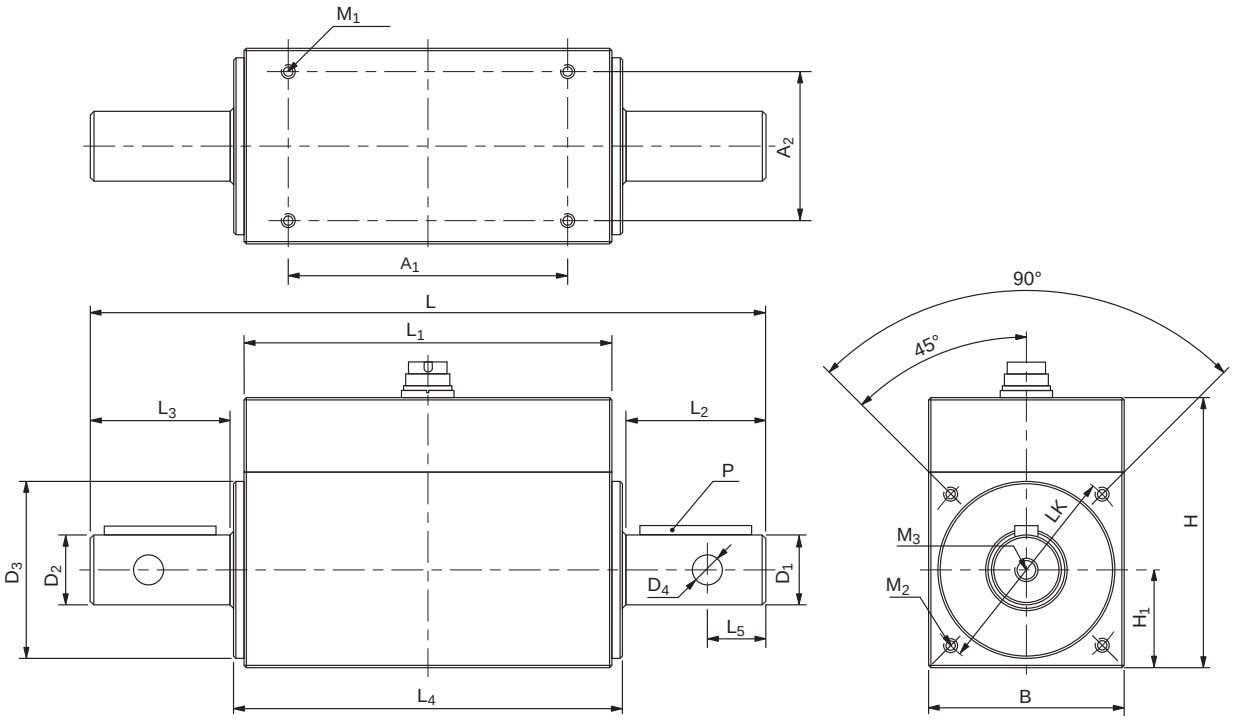
Range	spring constant C [Nm/rad]	Moment of Inertia I [kgm2]	allowable axial load [N]	allowable load [N]
0...0.1Nm	20	$1x10^{-6}$	2	2
0...0.2Nm	20	$1x10^{-6}$	3	3
0...0.5Nm	20	$1x10^{-6}$	3	3
0... 1Nm	43	$1x10^{-6}$	4	4
0... 2Nm	103	$1x10^{-6}$	5	5
0... 5Nm	355	$1x10^{-6}$	5	5

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Lebow® Products Inc.

Model 1700 Series

TORQUE TRANDUCERS



Model	1700	1701	1702	1703	1706
Capacity (Nm)	*0.02 / 0.05*	*0.1 / 0.2 / 0.5 / 1 / 2*	*5 / 10 / 20*	*50 / 100 / 200 / 300*	*500 / 1000 / 1500*
Dimensions					
L (mm)	70	89 / 95	145	170	270
B (mm)	32	28	42	56	88
H (mm)	46	48,5	58	73	104
H1 (mm)	14	14	21	28	44
D1 g6 (mm)	Ø3	Ø5 / Ø6	Ø15	Ø26	Ø45
D2 g6 (mm)	Ø3	Ø8 / Ø8	Ø15	Ø26	Ø45
D3 -0,1 (mm)	Ø15	Ø27	Ø38	Ø54	Ø80
D4 H7 (mm)	---	Ø2 / Ø2.5	---	---	---
LK ±0,1 (mm)	*	Ø32	Ø46	Ø65	Ø98
L1 (mm)	51	62	79	72	84
L2 (mm)	7.5	10 / 14	30	45	85
L3 (mm)	7.5	11 / 14	30	45	85
L4 (mm)	55	66	83	78	90
L5 -0,1 (mm)	---	4 / 5	---	---	---
A1 (mm)	38	40	60	42	46
A2 (mm)	24	22	32	40	70
M1	M2.5 x 5 DEEP	M3 x 5 DEEP	M3 x 6 DEEP	M4 x 8 DEEP	M6 x 12 DEEP
M2	M2.5 x 5 DEEP	M3 x 6 DEEP	M3 x 6 DEEP	M4 x 8 DEEP	M6 x 12 DEEP
M3	---	---	---	M8 x 15 DEEP	M10 x 20 DEEP
P (DIN6885)	---	---	2 x A5x5x25	2 x A8x7x40	4 x A14x9x80

Dimensions are in mm

* *Consult factory.*

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