



Product Information

Torque Transducer

DRBK + DRBK-A

Torque ranges from 0,5 to 1000 Nm



Features DRBK

- Very short
- Broad input voltage range
- Current output and voltage output
- Measurement accuracy: $\leq 0.5\%$ of full scale
- Torque ranges from 0,5 to 1,000 Nm
- Contactless transfer of measurement signal
- Proven strain gage technology
- Integrated signal amplifier
- Optional speed measurement
- Single power supply
- Low-Cost Torque transducer

The Series DRBK torque transducers are suitable for lab and industrial applications because of their small size and multiple mounting options.

As supply voltage and output signal are transmitted without contact, the device can operate continuously with low wear and no maintenance. These transducers are also available with speed measurement for a host of applications.

Extra Features DRBK-A

- Simultaneous speed/torque indication
- 4-segment display with sign
- Peak mode (clockwise only)
- Indication area on LCD display 30 x 11 mm
- Speed indication updated 1x sample/second
- Torque updated 1,000 samples/second

Series DRBK-A torque transducers are custom made for applications where an extra analyzer should not be used or is not needed.

Production monitoring data can be clearly displayed at very little cost!

Technical Specifications DRBK + DRBK-A

Supply voltage:	11,5 to 30 V DC
Power consumption:	Approx. 200 mA
Rise time 10-90 %:	1 ms
Limit frequency -3 dB:	1 kHz
Voltage output:	0 to ± 5 V
Internal resistance:	100 Ω
Current output:	10 \pm 8 mA Burden max. 500 Ω
Ripple:	< 50 mV _{ss}
Nonlinearity:	< 0,3 %
Hysteresis:	< 0,3 %
Deviation at zero point:	$\leq \pm 100$ mV / ± 200 μ A
Max. measurement error	0,5 % (of full scale)
Operating temperature:	0 - 60 °C
Compensated temperature range:	5 - 45 °C
Temperature error	
Zero point:	0,05 % / K
Sensitivity:	0,02 % / K
Mechanical overload:	100 %
Internal protection:	IP 40 DIN 40050
Connection:	12 pin-Connector

EMC Immunity from interference (DIN EN 61326-1 / EN 61000-6) *1

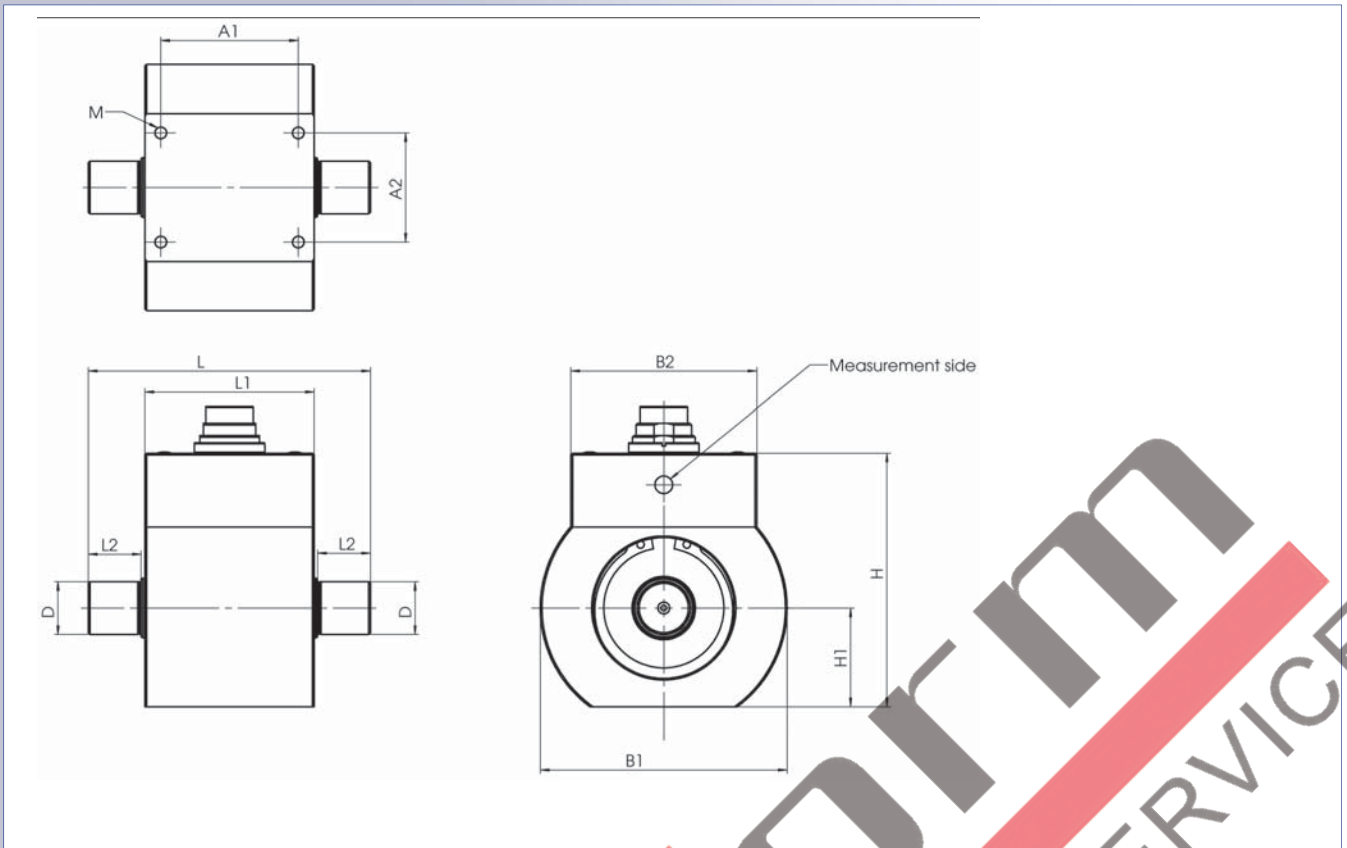
Enclosure	Severity	Criterion
HF line interference 150 kHz - 80 MHz (AM)	3 V	A
(ESD) Electrostatic discharge	Air 8 kV Contact 4 kV	A A
Enclosure Electromagnetic Field		
80 MHz - 1000 MHz (AM)	10 V/m	A
80 MHz - 2700 MHz (AM)	10 V/m	A
Leads - Connection Cable Burst (fast transients)	2 kV	A
Surge voltage (Surge)	1 kV	B
Interference Emission (EN 61326-1 / EN 55011)		
Disturbance Voltage (Electromagnetic Disturbances)	-	Class B (150 kHz - 30 MHz)
Radiated Emission (Electromagnetic Disruption axis)	-	Class B (30 MHz - 1000 MHz)

Speed Option (n)	
max. rev.:	up to 10 000 min ⁻¹ *2
Output:	Open-Collector
Internal pull up:	4,7 k Ω (5 V level))
External pull up:	24 V max / 20 mA
Pulses/rev.:	60

*1 Severity / Criterion: industrial environment;
Cable length \leq 30m.
Application not outside buildings.

*2 by proper external connections til speed max.

Mechanical Dimensions DRBK



Sizes DRBK

Type	DRBK- ...	DRBK- ...	DRBK- ...	DRBK- ...
Torque Ranges: (Nm)	0,5 1 2	5 10 20	50 100 200	500 1000
Dimensions:				
L (mm)	66	80	90	120
Ø B1 (mm)	45	70	75	105
B2 (mm)	45	53	53	76
H (mm)	56	72	77,5	97,5
H1 ± 0,05 (mm)	18	28	30	40
Ø D g6 (mm)	6	15	24	40
L1 (mm)	42	48	52	65
L2 (mm)	10	15	18	26
A1 (mm)	33	39	42	50
A2 (mm)	20	31	35	55
M	M3 x 5 tief	M4 x 6 tief	M4 x 6 tief	M5 x 10 tief
	General tolerances DIN 2768 - m			
Weight approx.: (g)	230	550	850	2450
Speed max.: (1/min)	20000	18000	16000	9000

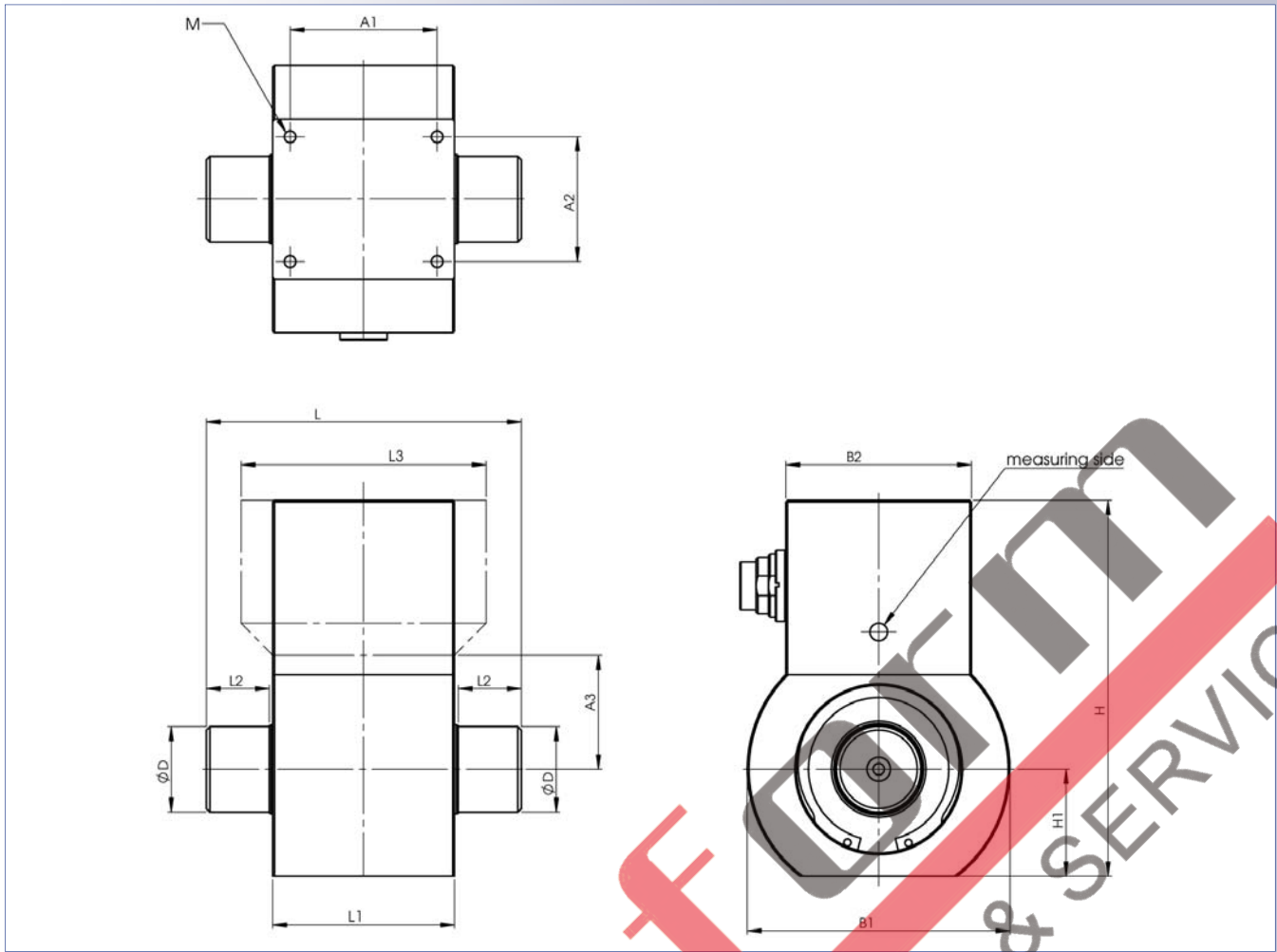
Features

- Supply is protected against overvoltage max 60 V DC (permanent)
- The outputs are short-circuit proof
- Contact for „Tranducer ready“ 100 mA 30 V DC

Ordering example

DRBK-10-n
 Torque Transducer DRBK
 Measuring Range 10 Nm
 Option Speed Measurement

Mechanical Dimensions DRBK-A



Sizes DRBK-A

Sizes	0	I	II	III
Torque Ranges: (Nm)	0,5 1 2	5 10 20	50 100 200	500 1000
Dimensions:				
L (mm)	66	80	90	120
Ø B1 (mm)	45	70	75	105
B2 (mm)	54	53	53	76
H (mm)	90	100	106	122
H1 ± 0,05 (mm)	18	28	30	40
Ø D g6 (mm)	6	15	24	40
L1 (mm)	42	48	52	65
L2 (mm)	10	15	18	26
L3 (mm)	51	-	-	-
A1 (mm)	33	39	42	50
A2 (mm)	20	31	35	55
A3 (mm)	22	-	-	-
M	M3 x 5 tief	M4 x 6 tief	M4 x 6 tief	M5 x 10 tief
	General tolerances DIN 2768 - m			
Weight ca.: (g)	310	610	910	2530
Speed max.: (1/min)	20000	18000	16000	9000

Subject to technical changes