

Model RD3 Square & Hex Drive Rotary Torque Sensors

Why the Interface model RD3 Square or Hex Drive Rotary Torque Sensors are the best in class:

- Non-contact signal transfer
- ± 5 VDC output
- 11 to 26 VDC supply
- High dynamics
- Suitable for pulse tool operation
- Maintenance free
- Standardized Mechanical Connections:
 - Square drive (1/4", 3/8", 1/2", 3/4", 1")
 - Hex (1/4") DIN 3126
- Rotation angle—2X 360 pulse/rev. (Models RD3QA/RD3HA only)
- Capacities from 12 to 1,000 Nm (106 to 8,850 lb-in)



RD3QA Square Drive Shown



RD3HA Hex Drive Shown

SPECIFICATIONS

ACCURACY – (MAX ERROR)

Combined Error—% FS ± 0.2

TEMPERATURE

Effect on Zero—%FS/°C ± 0.015

Effect on Output—% r° ± 0.015

Rated Range—°C +5 to +50

Operating Range—°C -25 to +80

Storage Range—°C -25 to +80

ELECTRICAL

Torque Output—VDC ± 5

Bandwidth, Hz 1000

Speed/Angle Option 2x 360 pulses 90°, TTL

Control Signal—% Range 100 ± 0.2

Supply Voltage—VDC 11 to 26

Power Input—W 1

Electrical Connection Binder 12-pin

MECHANICAL

Safe Overload—% CAP ± 150

Max Speed - rpm

RD3QA, RD3HA (includes angle measurement)

All Ranges 7,000

RD3Q (no angle measurement)

0.5 to 18 Nm 12,000

20 to 160 Nm 9,000

250 to 1,000 Nm 7,000

Housing Aluminum

Model RD3QA Square Drive

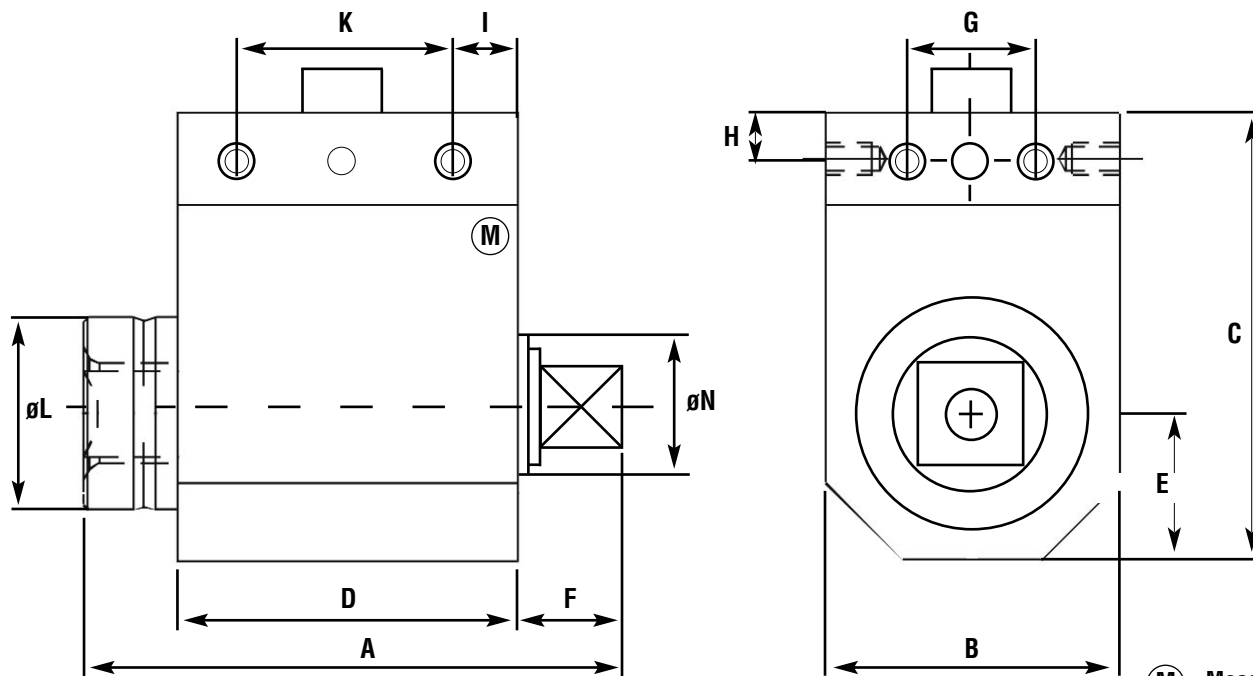
DIMENSIONS

Capacity (Nm)	MODEL RD3QA Square Drive (Includes Angle Measurement)*									
	12, 18		50, 63		100, 150, 160		250, 300, 500		1000	
Equivalent (lb-in)	106, 160		443, 560		885, 1328, 1416		2213, 2655, 4425		8850	
Square	1/4"		3/8"		1/2"		3/4"		1"	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
A	2.95	75	3.98	101	4.17	106	5.31	135	6.97	177
B	1.10	28	1.50	38	1.50	38	2.28	58	2.87	73
C	2.05	52	2.28	58	2.28	58	2.99	76	3.54	90
D	2.28	58	2.32	59	2.32	59	2.52	64	2.87	73
E	0.55	14	0.75	19	0.75	19	1.14	29	1.44	36.5
F	0.33	8.5	0.85	21.5	1.02	26	1.57	40	2.26	57.5
G	0.31	8	0.55	14	0.55	14	1.18	30	1.77	45
H	0.20	5	0.24	6	0.24	6	0.20	5	0.20	5
I	0.43	11	0.47	12	0.47	12	0.55	14	0.55	14
K	-	-	1.38	35	1.38	35	1.42	36	1.77	45
Lϕ	0.51	13	0.98	25	0.98	25	1.57	40	1.97	50
Nϕ	-	-	0.67	17	0.67	17	1.18	30	1.57	40

*Consult factory for RD3Q dimensions

MAX EXTRANEIOUS FORCE						
Capacity (Nm)	12, 18	50, 63	100	150, 160	250, 300, 500	1000
Equivalent (lb-in)	106, 160	443, 560	885	1328, 1416	2213, 2655, 4425	8850
Axial (N)	150	500	700	1000	2000	4000
Radial (N)	30	60	100	100	150	250

Axial and radial force values apply for unsecured housing.



(M) = Measuring side
Mounting thread M4, depth 6 mm

Model RD3HA Hex Drive 1/4"
DIN 3126 Form E/F, Includes Angle Measurement

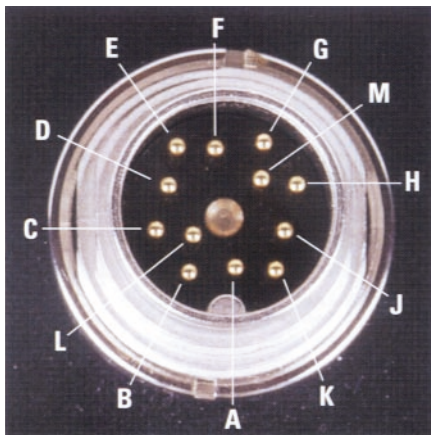
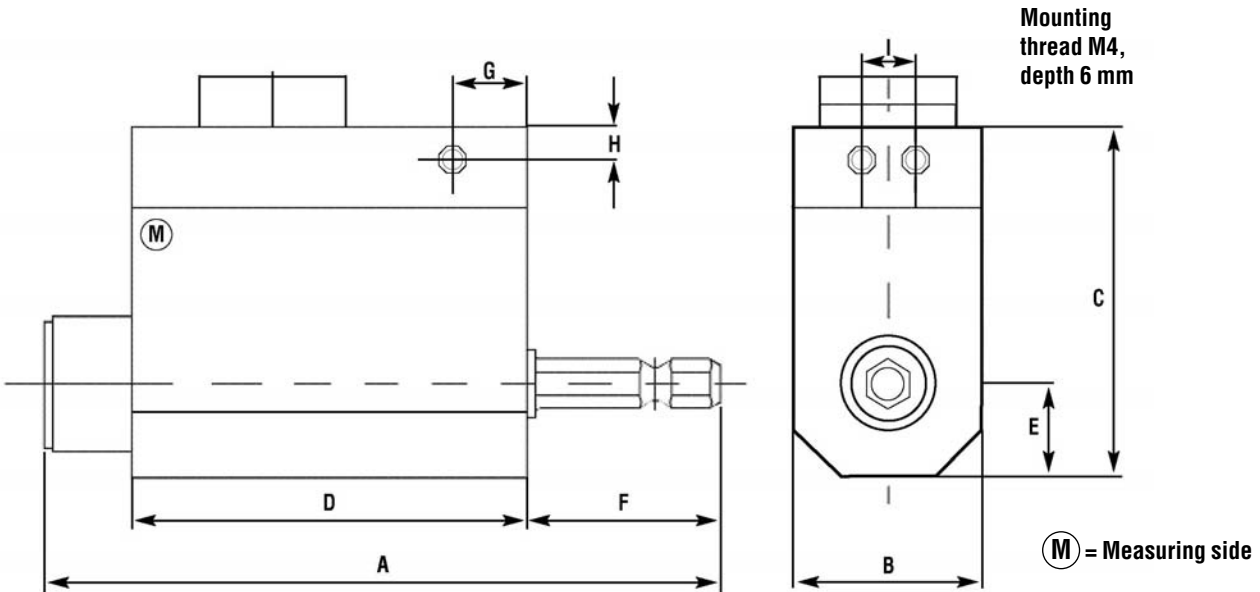
DIMENSIONS

Capacity (Nm)	MODEL RD3H	
	0.5, 1, 2, 6, 12, 18	
Equivalent (lb-in)	4.43, 8.85, 17.7, 53.1, 106, 160	
	inch	mm
A	3.98	101
B	1.10	28
C	2.05	52
D	2.28	58
E	0.55	14
F	1.10	28
G	0.43	11
H	0.20	5
I	0.31	8



MAX EXTRANEEOUS FORCE					
Capacity (Nm)	0.5	1	2	6, 12	18
Equivalent (lb-in)	4.43	8.85	17.7	53, 106	160
Axial (N)	20	50	50	150	200
Radial (N)	5	10	20	40	40

Axial and radial force values apply for unsecured housing.



BINDER 12-PIN		
Pin	Function	Description
A	Control GND	Control Signal Ground
B	Angle 1, Speed	360 pulse/rev.
C	+Output	Output ±5 VDC
D	Output GND	Output Ground
E	GND-Supply, Angle, Speed	Supply Ground, Angle Ground, Speed Ground
F	+Supply	+11 VDC to +26 VCD, 1 Watt
G	Angle 2	90° Running after Angle 1
H	Angle Supply	+5 VDC
K	Control	Control Signal (>3.5 VDC activates +5 Calibration Signal)
M	Shield	Transducer Housing