

FEATURES & BENEFITS

- Low capacity – 0.2 to 20 Nm (1.77 to 177 lbf-in)
- Proprietary Interface temperature compensated strain gages
- Small size – 41 x 33 mm (1.6 in OD x 1.25 in)
- Excellent linearity & repeatability
- Low deflection – high torsional stiffness

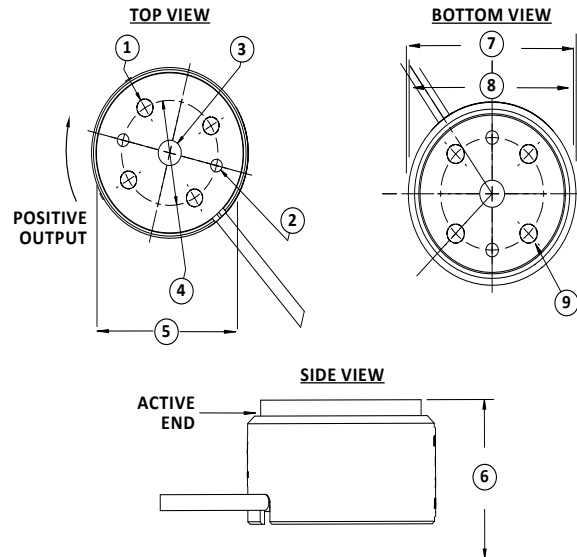
SPECIFICATIONS

ACCURACY – (MAX ERROR)		
Nonlinearity – %FS		± 0.10
Hysteresis – %FS		± 0.10
Non-repeatability – %RO		± 0.05
Creep, in 20 min – %		± 0.10
TEMPERATURE		
Effect on Zero – %RO / 100F°		±0.20
Effect on Output – % / 100F°		±0.10
Compensated Range	°C	-10 to +45
	°F	+15 to +115
Operating Range	°C	-55 to +90
	°F	-65 to +200
ELECTRICAL		
Rated Output – mV/V		2.00 ± 0.30
Zero Balance – %RO		±1.0
Input Resistance – Ohms		700 +100/-7
Output Resistance – Ohms		700 ±7
Insulation Resistance – Megohm		> 5000
Excitation – VDC NOM		10
Excitation – VDC MAX		20
MECHANICAL		
Overload:		
Safe Torsion – %CAP		±150
Ultimate Torsion – %CAP		±400
Safe Side Load	N	13, 110, 160, 280, 400
	lbf	3, 25, 36, 63, 90
Safe Overhung Moment – %CAP		100
Safe Mounting Torque	Nm	0.3, 3, 5, 6, 9
	in-lbf	2.7, 27, 44, 55, 80
Deflection at Capacity – Radian		0.007, 0.003, 0.003, 0.003, 0.003
Cable Length	m	1.5
	ft	5
Material		Aluminum

STANDARD CONFIGURATION



MODEL MRT (Shown)



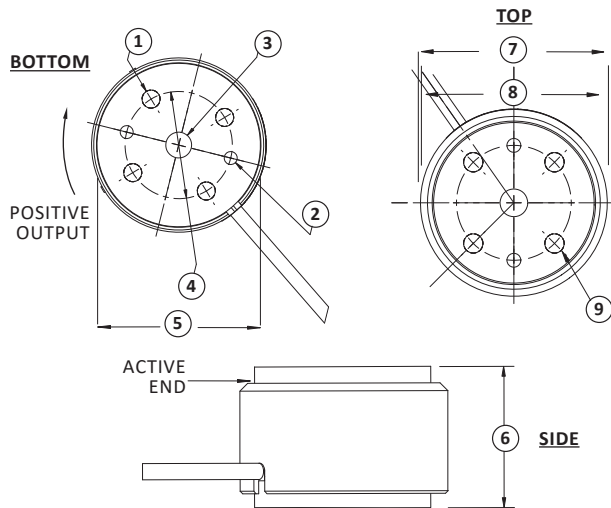
DIMENSIONS

See Drawing	CAPACITY	
	Metric (Nm)	US (lbf-in)
	0.2, 2, 5, 10, 20	1.77, 17.7, 44, 89, 177
	mm	in
(1)	M5 x 0.8 - 6H x ↓ 5.1	M5x0.8 - 6H x ↓ 0.20
(2)	∅3.02 ^{±0.03}	∅0.119 ^{±0.001}
(3)	∅6.02	∅0.237 thru
(4)	∅24.99	∅0.984
(5)	∅34.95	∅1.375
(6)	31.8	1.25
(7)	40.6	1.60
(8)	38.1	1.50
(9)	M5x0.8 - 6H x ↓ 5.1	M5x0.8 - 6H x ↓ 0.20

M RTP MINIATURE PROTECTED TORQUE TRANSDUCER (U.S. & METRIC)

FEATURES & BENEFITS

- Capacity 0.2 Nm (1.77 lbf-in)
- 7x overload protection
- Proprietary Interface temperature compensated strain gages
- Small size - 41 x 33 mm (1.6 in OD x 1.25 in)
- Excellent linearity & repeatability
- Low deflection - high torsional stiffness



Note:
Do not bridge overload stop and active end

DIMENSIONS

See Drawing	CAPACITY	
	Metric (Nm)	U.S. (lbf-in)
	mm	in
(1)	M5x0.8 - 6H x \downarrow 5.1	M5x0.8 - 6H x \downarrow 0.20
(2)	\varnothing 3.02 \pm 0.03	\varnothing 0.119 \pm 0.001
(3)	\varnothing 6.02 thru	\varnothing 0.237 thru
(4)	\varnothing 24.99	\varnothing 0.984
(5)	34.95	1.375
(6)	31.8	1.25
(7)	40.6	1.60
(8)	38.1	1.50
(9)	M5x0.8 - 6H x \downarrow 5.1	M5x0.8 - 6H x \downarrow 0.20

OPTIONS

- Extra cable length

STANDARD CONFIGURATION



MODEL MRTP (Shown)

SPECIFICATIONS

ACCURACY – (MAX ERROR)		
Nonlinearity – %FS		\pm 0.10
Hysteresis – %FS		\pm 0.10
Nonrepeatability – %RO		\pm 0.05
Creep, in 20 min – %		\pm 0.10
TEMPERATURE		
Compensated Range	$^{\circ}$ C	-10 to +45
	$^{\circ}$ F	+15 to +115
Operating Range	$^{\circ}$ C	-55 to +90
	$^{\circ}$ F	-65 to +200
Effect on Zero – %RO / deg	$^{\circ}$ F	\pm 0.20
Effect on Output – % / deg	$^{\circ}$ F	\pm 0.10
ELECTRICAL		
Rated Output – mV/V (Nominal)		2.00 \pm 0.30
Zero Balance – %RO		\pm 1.0
Input Resistance – Ohms		700 + 100/-7
Output Resistance – Ohms		700 \pm 7
Insulation Resistance – Megohm		> 5000
Excitation, VDC NOM		10
Excitation, VDC MAX		20
MECHANICAL		
Overload:		
Safe Torsion – %CAP		\pm 700
Safe Side Load	N	13
	lbf	3
Safe Overhung Moment – %CAP		100
Safe Mounting Torque	Nm	0.3
	lbf-in	2.7
Deflection at Capacity – Radian		0.007
Cable Length – Integral Cable	m	1.5
	ft	5

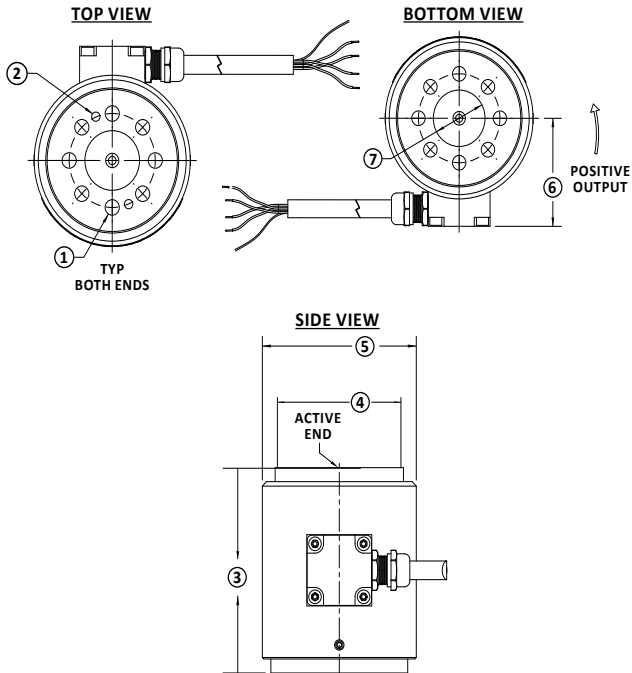
ACCESSORIES

- Instrumentation

International System of Units (SI) dimensions and capacities are provided for conversion only. Standard products have U.S. capacities and dimensions. SI capacities available upon special request and at an additional cost.

FEATURES & BENEFITS

- Capacities from 5 to 50 Nm (44 to 443 lbf-in)
- Proprietary Interface temperature compensated strain gages
- Small size - 70 x 60 mm (2.75 x 2.25 in)
- Excellent linearity & repeatability
- Low deflection - high torsional stiffness



DIMENSIONS

See Drawing	CAPACITY	
	Metric (Nm)	US (lbf-in)
	5, 10, 20, 50	44.3, 88.5, 177, 443
	mm	in
(1)	M5x0.8 - 6H x \downarrow 8.1 8 PL EQ SP on 31.50 B.C.	M5x0.8 - 6H x \downarrow 0.32 8 PL EQ SP on 1.240 B.C.
(2)	\varnothing 3.18 ^{+0.013/-0.000} 2 PL EQ SP on \varnothing 34.93 B.C.	\varnothing 0.125 ^{+0.0005/-0.0000} 2 PL EQ SP on \varnothing 1.375 B.C.
(3)	69.85	2.75
(4)	47.625	1.875
(5)	57.15	2.25
(6)	38.1	1.50
(7)	\varnothing 20.000 ^{+0.020/-0.000}	\varnothing 0.7874 ^{+0.0008/-0.0000}

STANDARD CONFIGURATION



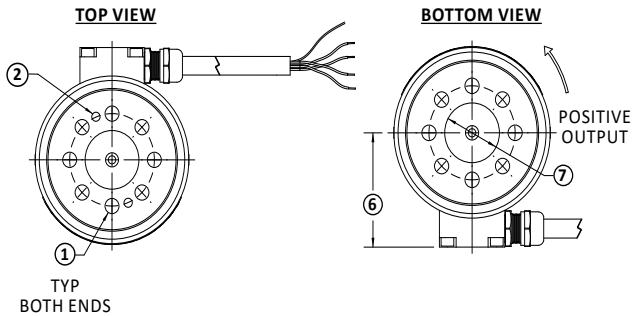
MODEL MRT2 MINIATURE REACTION (Shown)

SPECIFICATIONS

ACCURACY – (MAX ERROR)					
Nonlinearity – %FS	± 0.10				
Hysteresis – %FS	± 0.10				
Non-repeatability – %RO	± 0.05				
TEMPERATURE					
Effect on Zero – % / 100F°	±0.20				
Effect on Output – %RO / 100F°	±0.10				
Compensated Range	°C	-9 to +46			
	°F	+15 to +115			
Operating Range	°C	-54 to +93			
	°F	-65 to +200			
ELECTRICAL					
Output – mV/V	2.00 ^{+0.30}				
Excitation – VDC MAX	20				
Bridge Resistance – Ohms	700 ± 7				
Electrical Connection – Integral Cable	m	1.5			
	ft	5			
MECHANICAL					
Safe torsion – %RO	150	150	150	150	
Deflection at Capacity – rad	0.003	0.003	0.003	0.002	
Overhung Moment – %CAP MAX	100	100	100	100	
Shear – MAX	N	225	333	400	900
	lbf	50.6	74.9	89.9	202
Material	Aluminum				

FEATURES & BENEFITS

- Capacities from 0.2 to 2 Nm(1.77 to 17.7 lbf-in)
- 3x overload protection
- Proprietary Interface temperature compensated strain gages
- Small size - 70 x 60 mm (2.75 x 2.25 in)
- Excellent linearity & repeatability
- Low deflection - high torsional stiffness



DIMENSIONS

See Drawing	CAPACITY	
	Metric (Nm)	US (lbf-in)
	0.2, 2	1.77, 17.7
	mm	in
(1)	ØM5x0.8 - 6H x \downarrow 8.1 8 PL EQ SP on 31.50 B.C.	ØM5x0.8 - 6H x \downarrow 0.32 8 PL EQ SP on 1.240 B.C.
(2)	Ø3.18 ^{+0.013/-0.000} 2 PL EQ SP on 34.93 B.C.	Ø0.125 ^{+0.0005/-0.0000} 2 PL EQ SP on 1.375 B.C.
(3)	6.985	0.275
(4)	47.625	1.875
(5)	57.15	2.25
(6)	38.1	1.50
(7)	Ø20.000 ^{+0.020/-0.000}	Ø0.7874 ^{+0.0008/-0.0000}

STANDARD CONFIGURATION



MODEL MRT2P (Shown)

SPECIFICATIONS

ACCURACY – (MAX ERROR)			
Nonlinearity – %FS	± 0.10		
Hysteresis – %FS	± 0.10		
Non-repeatability – %RO	± 0.05		
TEMPERATURE			
Compensated Range	°C	-9 to +46	
	°F	+15 to +115	
Operating Range	°C	-54 to +93	
	°F	-65 to +200	
Effect on Zero – % / 100F°	±0.20		
Effect on Output – %RO / 100F°	±0.10		
ELECTRICAL			
Output – mV/V	2.00 ± 0.30		
Excitation – VDC MAX	20		
Bridge Resistance – Ohms	700 ± 7		
Electrical Connection – Integral Cable	m	1.5	
	ft	5	
MECHANICAL			
Safe torsion – %RO	300	300	
Deflection at Capacity – rad	0.01	0.007	
Overhung Moment – %CAP MAX	100	100	
Shear MAX	N	13	110
	lbf-in	2.9	25
Material	Aluminum		

*Patent Pending