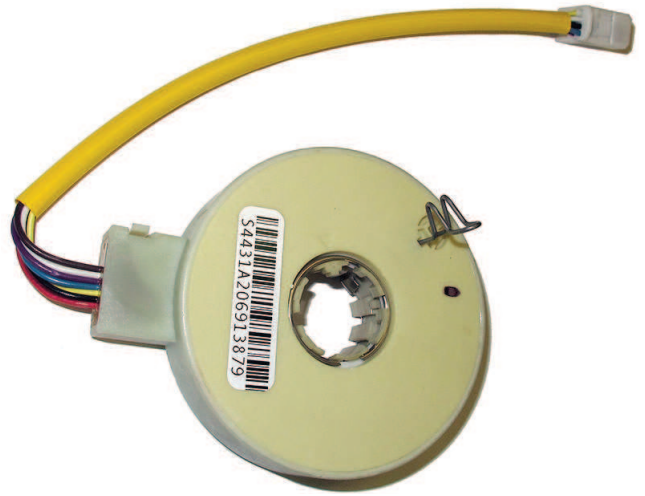


SX-4431

LH3 Steering Sensor with Torque and Multi-turn Position Output

The LH3 torque and position sensor is ideally suited for demanding Electric Power Steering systems.



ELECTRICAL¹

| | |
|--|--|
| Torque Signal Linearity | ±3% |
| Torque Hysteresis | 0.5% maximum |
| Torque Signal Microgradient | ±30% of theoretical slope over 0.4° interval |
| Torque Sensed Angle | ±8 |
| Position Signal Linearity (P1, P2) | ±1.5% |
| Position Signal Microgradient (P1, P2) | ±30% of theoretical slope over 2° interval |
| Multi-turn Position Accuracy (P3) | ±3% |
| Multi-turn Position Sensed Angle | ±720° |
| Total Resistance | 420 Ω ±30% |

MECHANICAL

| | |
|--|------------------|
| Torque Mechanical Travel | ±11.4° |
| Position Mechanical Travel | Continuous |
| Turning Torque (rotor to rotor) | 0.03 NM maximum |
| Turning Torque (position rotor to housing) | 0.06 NM maximum |
| Weight | 95 grams maximum |

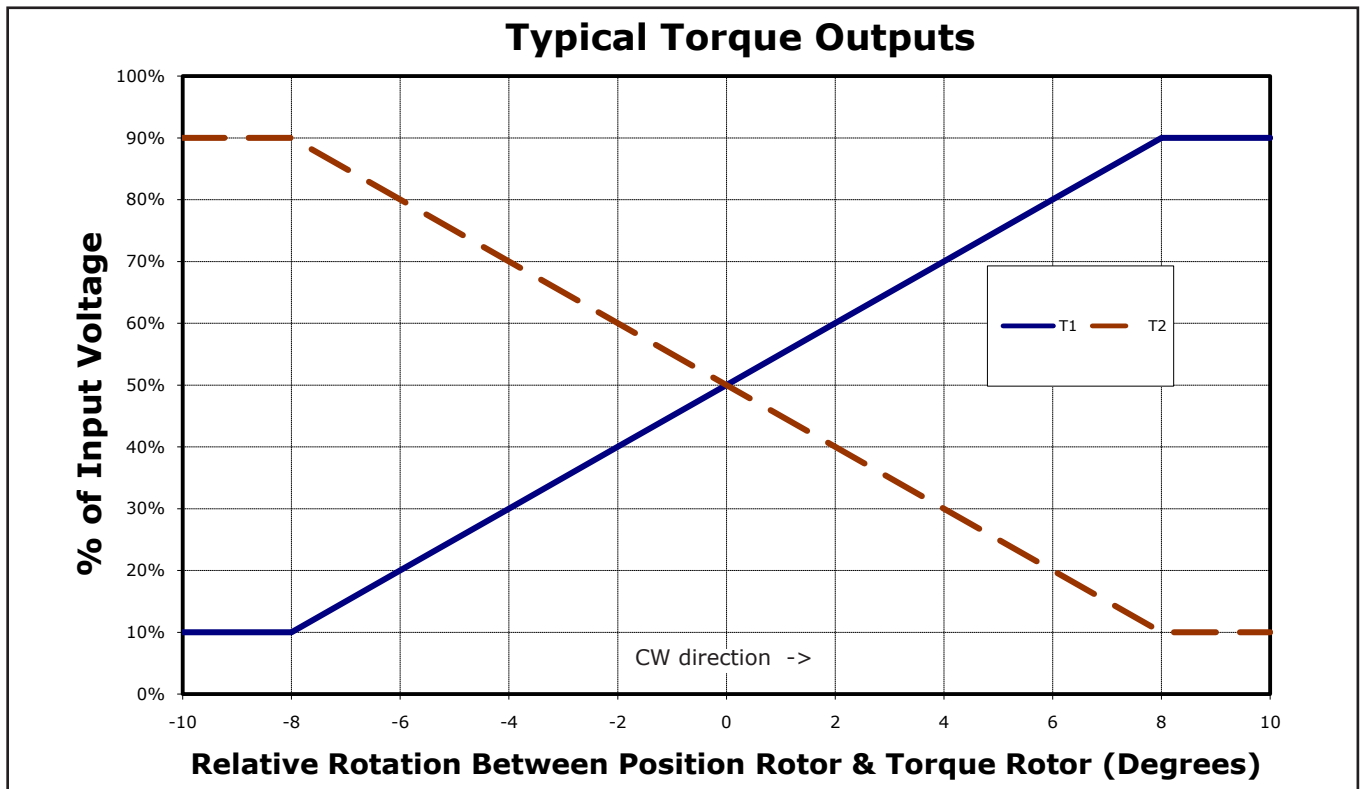
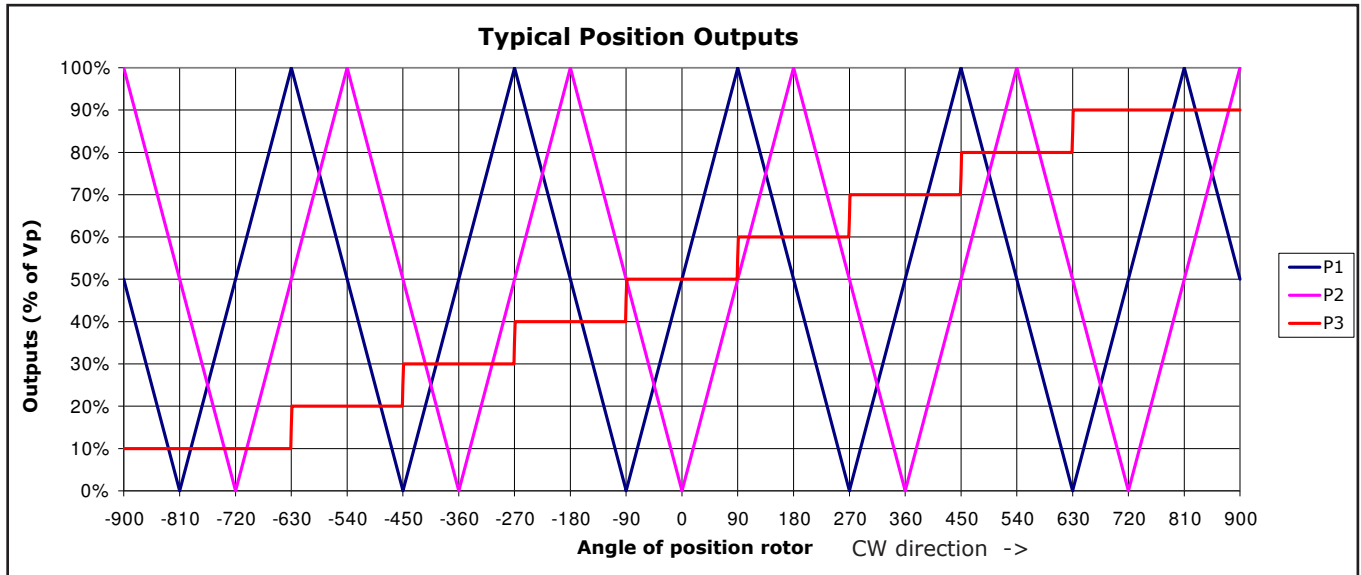
ENVIRONMENTAL

| | |
|-----------------------------|---|
| Operating Temperature Range | -40°C to +85°C |
| Shock | 14 ms half-sine at 300 m/s ² |
| Vibration | 10 to 55 Hz with 1 mm P-P constant displacement, 120 hours each of 3 planes |
| Torque Rotational Life | 1 million cycles |
| Position Rotational Life | 1 million cycles |
| Storage Temperature Range | -40°C to +105°C |

¹ Specifications subject to change without notice. Complete specifications and test methods per BI Technologies specification HEP 32054

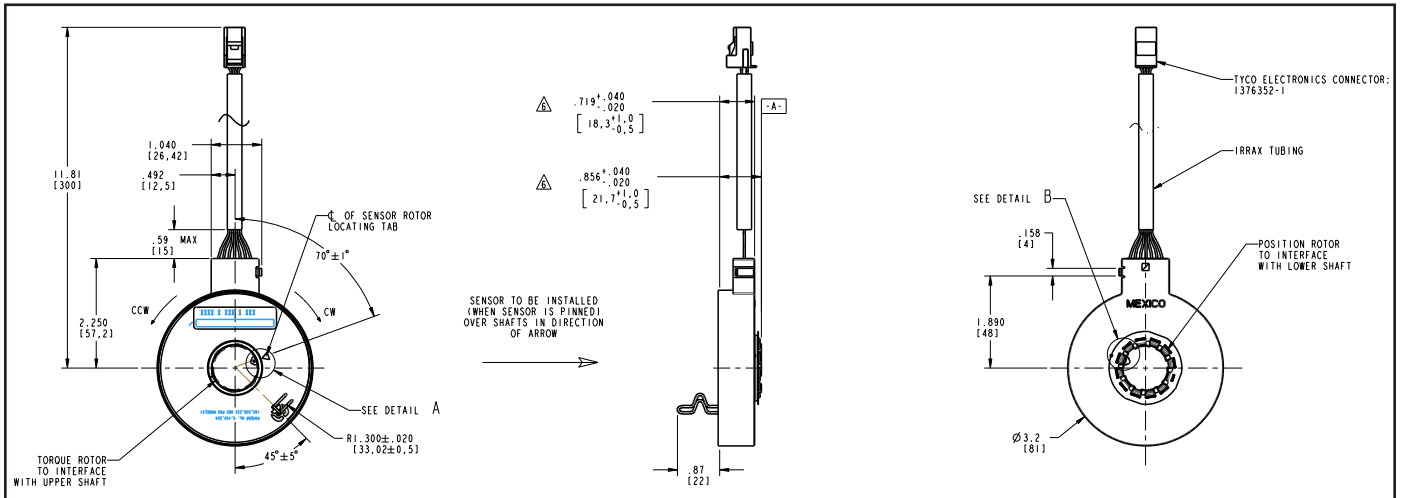
SX-4431

OUTPUT CHARTS



SX-4431

OUTLINE DRAWING



Tolerances ±0.25 mm unless otherwise specified. See drawing # 122-4431-80 for details.

PINOUTS

VIEW FROM
WHERE WIRES ENTER
CONNECTOR

TYCO
CONNECTOR: 1376352-1

| | | | |
|---|---|---|---|
| 4 | 3 | 2 | 1 |
| 8 | 7 | 6 | 5 |

| PIN No. | SIGNAL | WIRE COLOR |
|---------|----------|------------|
| 1 | P3 | YELLOW |
| 2 | P1 | BROWN |
| 3 | Vcc | RED |
| 4 | T2 | PURPLE |
| 5 | NOT USED | - - - |
| 6 | P2 | WHITE |
| 7 | GND | BLACK |
| 8 | T1 | BLUE |

SX-4431

RECOMMENDED INTERFACE

