![Jewell Instruments logo]

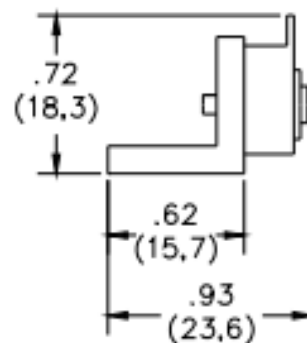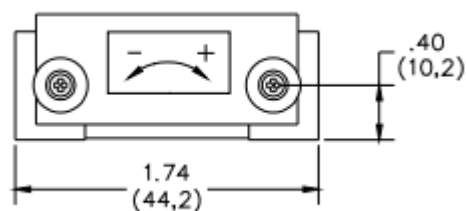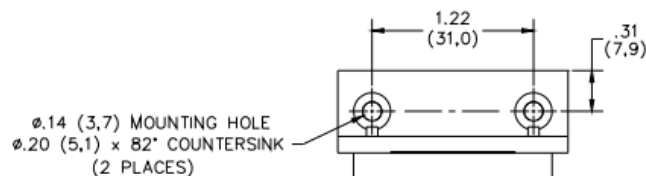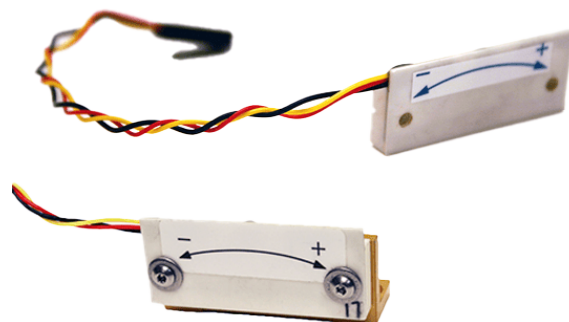**Jewell**
Instruments

MAKING SENSE OUT OF MOTION

84053/59577
Mid-range Ceramic Tilt Sensor

The Model 84053 Mid-range Ceramic Tilt Sensor is a compact and robust electrolytic tilt sensor with up to 1.75 µradian resolution. Units come complete with Aluminum mounting bracket for easy installation. Order without mounting bracket as the model 59577 (performance is the same). Total range is ±6°, linear range is ±3°. All 84053 and 59577 Ceramic Tilt Sensors include calibration over ±3° when ordered with Jewell electronics (or specify special/custom calibrated ranges on order). Use the 84053 and 59577 sensor for precision OEM applications where small size and peak performance are key.

1.22 (31,0)   .31 (7,9)

ø.14 (3,7) MOUNTING HOLE
ø.20 (5,1) x 82° COUNTERSINK
(2 PLACES)

BLACK (E)
YELLOW (−)
RED (+)

.40 (10,2)
1.74 (44,2)

8 in.
3=YELLOW (−)
2=BLACK (E)
1=RED (+)

.244
.140
1.220
1.500
ø.096 THRU (2 PLCS)

.72 (18,3)
.62 (15,7)
.93 (23,6)
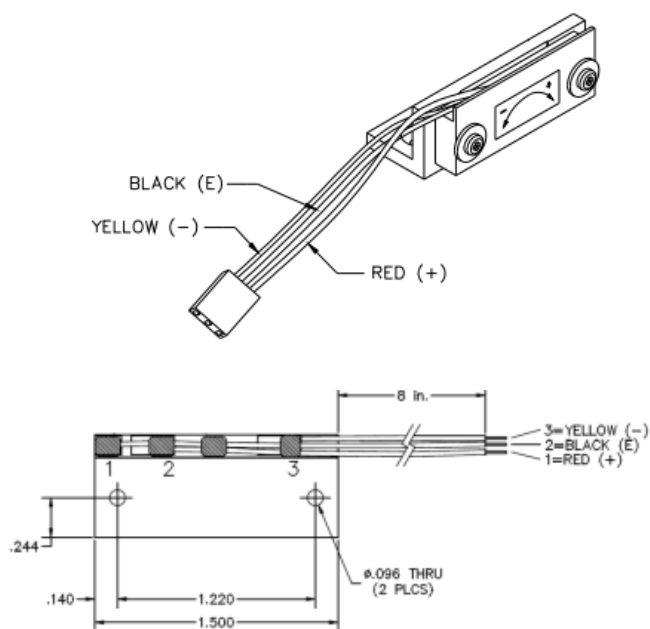
Dimensions: in [mm]

PERFORMANCE SPECIFICATIONS

PERFORMANCE

VERSION	Model 84053 and 59577 Mid-range Ceramic Sensors
TOTAL RANGE (°)[1]	±6°
LINEAR RANGE (°)	±3°
RESOLUTION	<0.0001° (<1.75 µradian)
NONREPEATABILITY	0.0002° (3.5 µradian static)
NONLINEARITY (%FRO)[2] max	2% half span (8% full span)
NATURAL FREQUENCY	3 Hz
TIME CONSTANT	0.15 sec
Kz TEMP COEFFICIENT	±3.5 µradians/°C (typical)
Ks TEMP COEFFICIENT[3]	0.04%/°C (typical)

ELECTRICAL & ENVIRONMENTAL

OPERATING TEMPERATURE RANGE	-50°C to +125°C
STORAGE TEMPERATURE RANGE	-75°C to +150°C
WEIGHT	84053=24g ; 59577=9.5g
MATERIALS	Ceramic sensor, gold anodized Al, Teflon lead wire
SENSOR EXCITATION	Use with any Jewell Instruments signal conditioner

NOTES:
1. Specify calibrated range on order
2. Nonlinearity is specified as variation around the best straight line from null to full-range output
3. Ks = % change in scale factor per °C typical

Specifications are subject to change without notice due to continued product development

ORDERING CODE

MODEL NO.	DESCRIPTION
84053	Mid-Range Ceramic Tilt Sensor Assembly, ±6° total range (±3° linear), with Mounting Bracket
59577	Mid-Range Ceramic Tilt Sensor (bare), ±6° total range (±3° linear), no Mounting Bracket

Jewell Instruments

ISO**9001** CERTIFIED