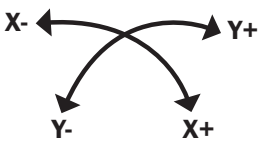
Jewell Instruments

MAKING SENSE OUT OF MOTION

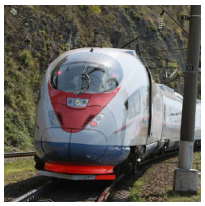
LCF-2530

Dual-Axis Analog Accelerometer



RAILSTAR

Part of our RailStar Series of products, the LCF-2530 is ideal for Rail Maintenance or Way applications. The Jewell LCF-2530 Series is a dual-axis version of the rugged, high accuracy LCF series. The design of the LCF-2530 was optimized to provide the high suspension, servo technology in a small and convenient package for applications requiring a compact dual-axis solution.



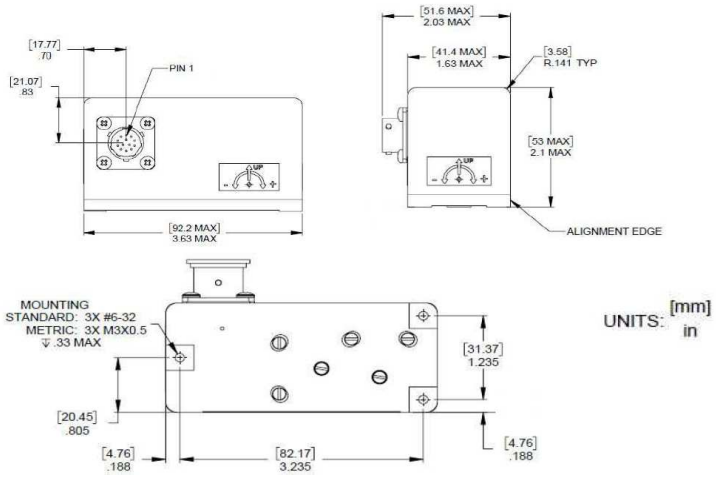
FEATURES:

- ±0.5g to ±05.0g Full Range
- Filtering 5-100 Hz Bandwidth Available
- Exceptional Bias & Scale Factor Repeatability
- High Level ± 5 Vdc Output
- 1,000g Shock Capability
- Built-in Temperature Sensor Available
- Fluid-Damped
- High Accuracy Dual-Axis in Small Package
- Superior Bias Stability
- Low EMI

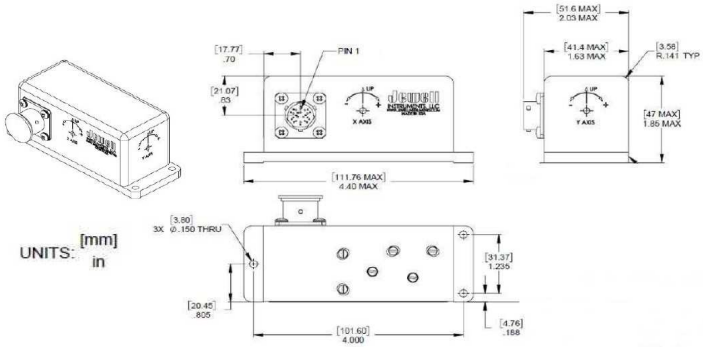
APPLICATIONS:

- Railcar Accel/Decel Control
- Train Performance Testing
- Active Damping
- Railcar Harshness (NVH)
- Manual Rail Measurement

Standard Base



Flanged Base



Performance Specifications

PERFORMANCE

INPUT RANGE (°)	±0.25	±0.5	±1.0	±2.0	±5.0
FULL RANGE OUTPUT (VDC)[1]	±5.00				
NONLINEARITY (% FRO)[2] max	0.02	0.02	0.02	0.05	0.10
SCALE FACTOR (V/g) nominal	20.0	10.0	5.0	2.5	1.0
SCALE FACTOR TEMP SENSITIVITY (PPM/°C max)	100	80	80	100	100
BANDWIDTH (-3dB) Hz, nominal	30				
OUTPUT AXIS MISALIGNMENT, ° max	±0.50	±1.00	±1.00	±1.00	±1.00
PENDULOUS AXIS MISALIGNMENT, ° max	±0.50	±1.00	±1.00	±1.00	±1.00
BIAS, g RANGE	±0.001	±0.002	±0.004	±0.005	±0.005
BIAS TEMP. SENSITIVITY (Volts/°C) max	0.001	0.0005	0.0003	0.0003	0.0003
RESOLUTION & THRESHOLD (μradians) max	1				

NOTES:
1. Full range is defined as "from negative full input angle to positive full input angle."
2. Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment.

*Specifications subject to change without notice on account of continued product development

ELECTRICAL

NUMBER OF AXES	2
INPUT VOLTAGE RANGE (VDC)	±12 to ±18
INPUT CURRENT (mA, max)	50
OUTPUT IMPEDANCE (Ohms) nominal	100
NOISE (Vrms, max)	0.002

ENVIRONMENTAL

OPERATING TEMP. RANGE	-40° to +80°C
STORAGE TEMP. RANGE	-60° to +90°C
VIBRATION	20 grms
SHOCK	1000g, 1 msec, ½ sine

ENCLOSURE

WEIGHT	8 oz
SEAL	IP65

PIN OUTS

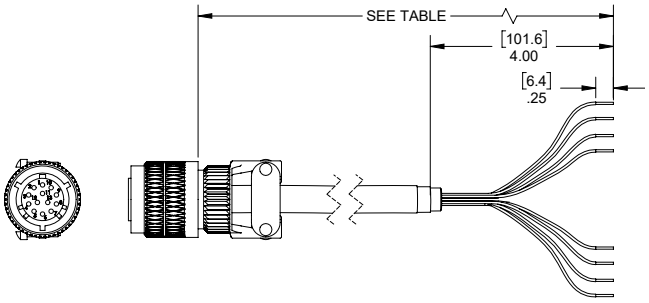
1	+12 to +18 VDC
2	-12 to -18 VDC
3	POWER COMMON
4	X-AXIS OUTPUT SIGNAL
5	X-AXIS OUTPUT RETURN
6	Y-AXIS OUTPUT SIGNAL
7	Y-AXIS OUTPUT RETURN
8-13	N/C

OPTIONS

- Flange Base (unthreaded)
- RoHS Compliance
- 0-5V Output

MATING CONNECTOR AND CABLE ASSEMBLIES

CONNECTOR CABLE



PART #	MODEL #	LENGTH m (ft)
847774-002	13-Pin Mating Connector	-
879605-009	DSI-CBL-02M-2	2 (6.56)
879605-010	DSI-CBL-03M-2	3 (9.84)
879605-0XX	DSI-CBL-05M-2	5 (16.4)
Contact manufacturer for custom lengths		

LCF-2530 SERIES ORDERING INFORMATION

SERIES - INPUT RANGE - BASE & THREADING

LCF-2530

- **1/1** = ±1° X&Y axis
- **3/3** = ±3° X&Y axis
- **14.5/14.5** = ±14.5° X&Y axis
- **30/30** = ±30° X&Y axis
- **60/60** = ±60° X&Y axis
- **90/90** = ±90° X&Y axis

[blank] = standard base with imperial threading
M = metric base with M6 threading
FB = flanged base with 3 unthreaded mounting holes

	MODEL #	PART #
±0.25	LCF-2530-0.25g/0.25g-ROHS	468853-001-ROHS
±0.5	LCF-2530-0.5g/0.5g-ROHS	468853-002-ROHS
±1	LCF-2530-1.0g/1.0g-ROHS	468853-003-ROHS
±2	LCF-2530-2.0g/2.0g-ROHS	468853-004-ROHS
±5	LCF-2530-5.0g/5.0g-ROHS	468853-005-ROHS

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