

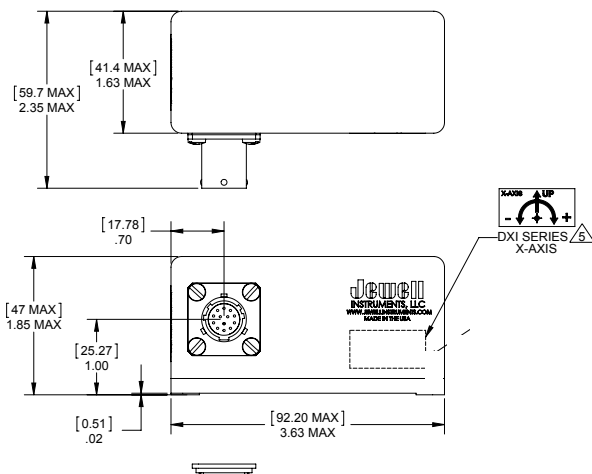
## DXA-100/200-R

### Single or Dual Axis Rail Digital Accelerometer

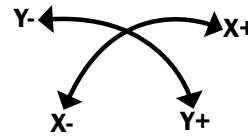
The Jewell DXA-100/200-R Series single or dual digital accelerometer takes Jewell's highly accurate analog closed loop sensor technology to the next level.

#### FEATURES:

- Digital output
- Resolution 8  $\mu$ g
- Mechanical Shock 1500g 1msec half sine
- Industry Standard EIA-RS485 and EIA-RS422 output
- For use in high shock and vibration environments
- High Precision and Performance
- Low Noise
- Meets CENELEC/AREMA Standards



Dimensions: in [mm]



\*Standard DXA-100 includes X-axis only

## RAILSTAR

The Jewell Instruments RailStar line offers high performance sensors and control products for the rail transportation industry. Many of the products in this line meet CENELEC and AREMA Standards.

**CENELEC AREMA**



#### APPLICATIONS:

- Linear Acceleration/Deceleration Measuring
- Automatic Train Position Control
- Rail Maintenance of Way

# PERFORMANCE SPECIFICATIONS DXA-100/200

## PERFORMANCE

<b>INPUT RANGE (g)</b>	<b>±0.25</b>	<b>±0.50</b>	<b>±0.87</b>	<b>±1.00</b>	<b>±2.00</b>
<b>NON LINEARITY (%FRO max)<sup>1</sup></b>	0.02	0.02	0.03	0.05	0.03
<b>SCALE FACTOR TOLERANCE (% max)</b>	0.5				
<b>SCALE FACTOR TEMP. SENSITIVITY (PPM/°C, max)</b>	100				
<b>BIAS (mg)</b>	±1.00				
<b>BIAS THERMAL SENSITIVITY (mg)</b>	29				
<b>0° OUTPUT TEMPERATURE SENSITIVITY (°/°C, max)</b>	0.005				
<b>BANDWIDTH (-3dB, Hz, nominal)<sup>2</sup></b>	30				
<b>TRANSVERSE AXIS MISALIGNMENT (° max)</b>	0.5				

## ELECTRICAL

<b>NUMBER OF AXES</b>	1 or 2	
<b>SUPPLY VOLTAGE RANGE (VDC)</b>	10 to 30	
<b>INPUT CURRENT (mA, max)</b>	Transmitting Not Transmitting	DXA-100 32 mA & DXA-200 50 mA DXA-100 22 mA & DXA-200 40 mA

## ENVIRONMENTAL

<b>OPERATING TEMP. RANGE</b>	-40° to +85° C
<b>STORAGE TEMP. RANGE</b>	-40° to +85° C
<b>VIBRATION</b>	20 grms
<b>SHOCK</b>	1500g, 1 msec, ½ sine

## DIGITAL OUTPUT

<b>INTERFACE</b>	EIA-RS485 (default) EIA-RS422
<b>PROTOCOL</b>	Proprietary (custom)
<b>BAUD RATE<sup>3</sup></b>	19200, <b>38400</b> , 57600, 115200, 230400

## ENCLOSURE

<b>HOUSING MATERIAL</b>	Anodized & Alodine Aluminum
<b>WEIGHT</b>	DXA-100 8oz [226.80 g] DXA-200 10oz [283.50 g]
<b>PROTECTION CLASS (per IEC 529)</b>	IP67
<b>NEMA ENCLOSURE RATING</b>	6
<b>SEAL</b>	MILD-STD-202 Method 112
<b>CONNECTOR TYPE</b>	MS27476Y10D35P
<b>RECOMMENDED MATING CONN.</b>	MS27473T10B35S

## PIN OUTS

<b>1</b>	N/C	<b>8</b>	N/C
<b>2</b>	N/C	<b>9</b>	N/C
<b>3</b>	CASE GROUND	<b>10</b>	N/C
<b>4</b>	+ SERIAL PORT	<b>11</b>	POWER RETURN
<b>5</b>	- SERIAL PORT	<b>12</b>	+ POWER
<b>6</b>	N/C	<b>13</b>	N/C
<b>7</b>	N/C		

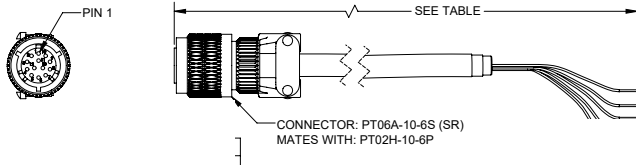
### NOTES:

1. Non-linearity is specified as deviation of output referenced to a best fit straight line, independent of misalignment.
2. In default condition without averaging enabled.
3. Default Baud Rate is 38400

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

# ACCESSORIES

## CONNECTOR CABLE



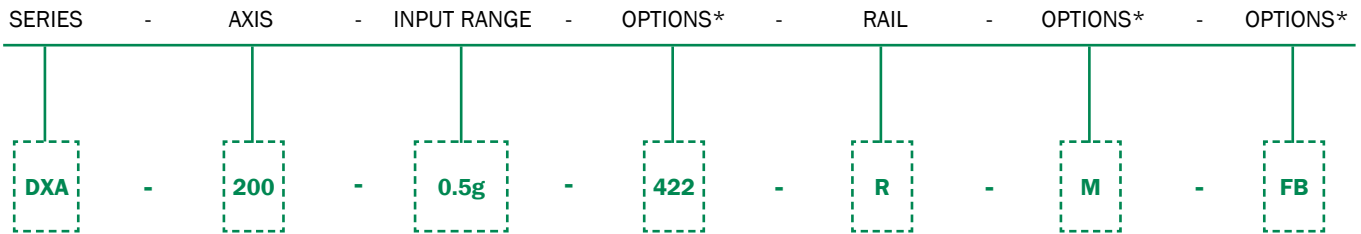
PART #	MODEL #	LENGTH m (ft)
F847774-001	13-Pin Circular Connector	-
879839-02	DXX-CBL-03M-2 (3M)	3 (9.84)
879839-01	DXX-CBL-05M-2 (5M)	5 (16.4)
Contact manufacturer for custom lengths		

# ORDERING INFORMATION

## HOW TO ORDER

Model Numbers are comprised of the series, the axis, the input range, and options.

**EXAMPLE:** DXA Series, dual axis,  $\pm 0.5g$  Input, RS422 Output, CENELEC/AREMA certified (R), with metric mounting threads (M), and a flange base (FB).



Standard Version

\*Leave options blank if not needed

	AXES	MODEL #	PART #
$\pm 0.25$	1	DXA-100-0.25g-R	02550341-001
	2	DXA-200-0.25g/0.25g-R	02550342-001
$\pm 0.50$	1	DXA-100-0.5g-R	02550341-002
	2	DXA-200-0.5g/0.5g-R	02550342-002
$\pm 0.87$	1	DXA-100-0.87g-R	02550341-003
	2	DXA-200-0.87g/0.87g-R	02550342-003
$\pm 1.00$	1	DXA-100-1g-R	02550341-004
	2	DXA-200-1g/1g-R	02550342-004
$\pm 2.00$	1	DXA-100-2g-R	02550341-005
	2	DXA-200-2g/2g-R	02550342-005

\*NOTE: Numbers provided are for the standard RS485 digital interface with no additional options. For more information on configuration options, please reach out to Jewell Instruments.



CENELEC EN 55022:2010  
CENELEC EN 50155:2007  
CENELEC EN 61000-4-8:2010

AREMA PART 11.5.1

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