



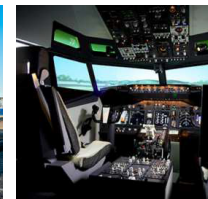
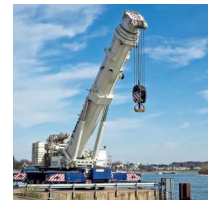
JDHA-100/200/300 Ruby MEMS Accelerometer

The NEW digital Ruby MEMS accelerometers set new standards for high-performance inertial sensors. With an improved price-performance ratio, the new Ruby inertial sensors offer outstanding resolution, excellent frequency response, and high bandwidth—all in an IP67-rated housing.

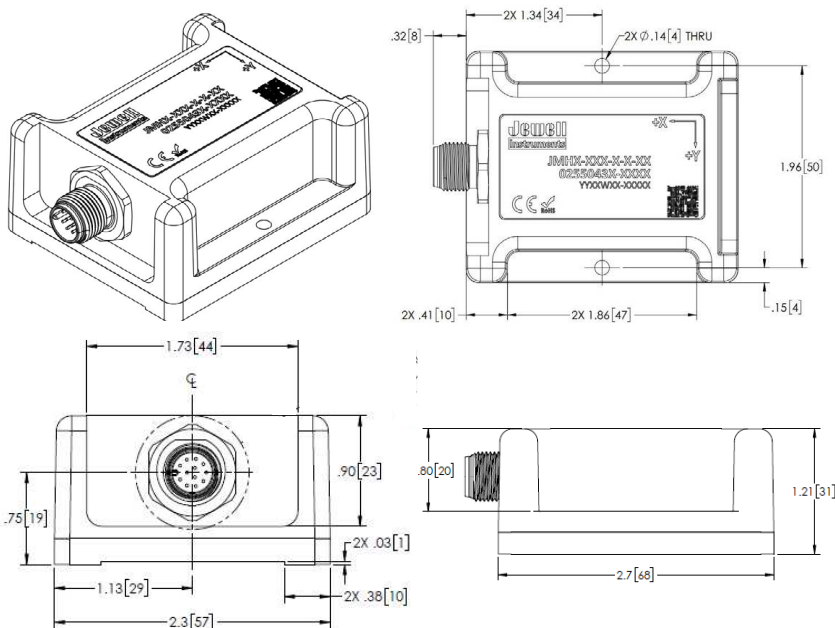


FEATURES

- Ranges: $\pm 0.5g$ to $\pm 1.0g$
- Temperature Compensated
- Digital Interface Options: ASCII (RS-485/RS-232) and Modbus (RS-485)
- High-Precision with $30\mu g$ digital resolution
- Operating Temp Range: -40° to $+85^\circ C$
- Seal: IP67
- M12 and DB9 termination options
- CE and RoHS compliant



DIMENSIONS: in [mm]



APPLICATIONS

- Aerospace
- Military
- Robotics
- Academic Research
- Wind Turbine Controls
- Track Monitoring and Testing
- Wind Power Monitoring
- Vibration monitoring
- Automated Control Systems
- Vehicle Testing and more....



JDHA SPECIFICATIONS / STATIC/DYNAMIC

INPUT RANGE (g)	±0.5	±1.0
DIGITAL RESOLUTION (μg, max) ¹	30	
REPEATABILITY (mg)	70	
NONLINEARITY (% FRO) max	0.04	0.01
BIAS TEMPERATURE SENSITIVITY (mg/°C max)	0.005	
TRANSVERSE AXIS MISALIGNMENT (°, max)	0.25	
BANDWIDTH (HZ NOM) (-3 dB)	(Sample Rate) / 4	
ACCURACY - TEMPERATURE SENSOR (°C, max)	±2	
WARM UP TIME (seconds typ)	0.5	

ELECTRICAL/PROTOCOL

NUMBER OF AXES	1, 2, 3
INPUT VOLTAGE RANGE (VDC)	5 min, 9 to 36 typ, 38 max, reverse wiring protected
POWER - RS485 TERMINATION ENABLED (mW, max)	800.0
POWER - RS485 TERMINATION DISABLED (mW, max)	600.0
PROTOCOL	ASCII (RS-485); ASCII (RS-232); MODBUS-RTU
BAUD (bps) ²	2400, 4800, 9600, 19200 , 38400, 57600, 115200, 230400, 460800, 500000 (max)
COMMUNICATION SETTINGS ²	8 bits, 1 stop bit, even odd
DATA SAMPLE RATE ² (Hz)	3.9 , 7.8, 15.6, 31.2, 62.5, 125
NODE ID ²	0+last 2 digits of serial number
FILTERING	User selectable
BUS TERMINATION- INTERNAL ² (120Ω)	On / off

ENVIRONMENTAL

OPERATING TEMP. RANGE	-40 ° to +85 °C
STORAGE TEMP. RANGE	-55 ° to +105 °C
VIBRATION	20 grms 5Hz to 2KHz
SHOCK	180 g, 0.011 sec, 1/2 sine

ENCLOSURE

WEIGHT (g)	140
PROTECTION CLASS (per IEC 529)	IP67
CONNECTOR	DB9, M12

NOTES:

- Observed using noise reduction methods.
- User selectable; default underlined
- NIST Certification Range up to ±45°, Calibrated Temperature Range of -30 °C to +60 °C.

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



ORDERING INFORMATION / HOW TO ORDER

Model Numbers are comprised of the series, the axes, the input range, interface, and termination options

EXAMPLE 1: JDHA Series, Single Axis, DB9 termination, ASCII RS-485, $\pm 0.5g$ Input

SERIES	-	AXIS	-	TERMINATION	-	INTERFACE	-	INPUT RANGE
JDHA	-	100	-	1	-	F	-	0.5

EXAMPLE 2: JDHA Series, Dual Axis, M12 Male termination, ASCII RS-232 Interface, $\pm 1.0g$

SERIES	-	AXIS	-	TERMINATION	-	INTERFACE	-	INPUT RANGE
JDHA	-	200	-	4	-	T	-	1.0

INTERFACE OPTIONS

F	RS485	ASCII (RS-485)
T	RS232	ASCII (RS-232)
M	MB485	MBRTU (RS-485)

TERMINATION OPTIONS

1	DB9	DB9
4	M12	12-pin M12, Male

ACCESSORIES / CABLE

CONNECTOR	MODEL #	LENGTH (m)
M12 (RS-232)	F848886-03M	3
M12 (RS-232)	F848886-05M	5
M12 (RS-232)	F848886-10M	10
M12 (RS-232)	F848886-15M	15
M12 (RS-485)	F848887-03M	3
M12 (RS-485)	F848887-05M	5
M12 (RS-485)	F848887-10M	10
M12 (RS-485)	F848887-15M	15
DB9 (RS-232)	95076-03	3
DB9 (RS-232)	95076-05	5
DB9 (RS-232)	95076-10	10
DB9 (RS-232)	95076-15	15
DB9 (RS-485)	95066-03	3
DB9 (RS-485)	95066-05	5
DB9 (RS-485)	95066-10	10
DB9 (RS-485)	95066-15	15

DB9 PIN OUT

	RS-485	RS-232
1	DATA-	N/C
2	DATA+	RxD
3	N/C	TxD
4	N/C	N/C
5	GND	GND
6	N/C	N/C
7	N/C	N/C
8	PWR-	PWR-
9	PWR+	PWR+

M12 SENSOR PIN OUT

	RS-485	RS-232
1	D-	N/C
2	D+	RxD
3	N/C	TxD
4	N/C	N/C
5	GND	GND
6	N/C	N/C
7	N/C	N/C
8	PWR RTN	PWR RTN
9	V+	V+
10	N/C	N/C
11	N/C	N/C
12	N/C	N/C

MOUNTING BRACKET

TYPE	MODEL #	MATERIAL
Vertical	F849539-02	6061 Aluminum