

FUTEK MODEL CSG110

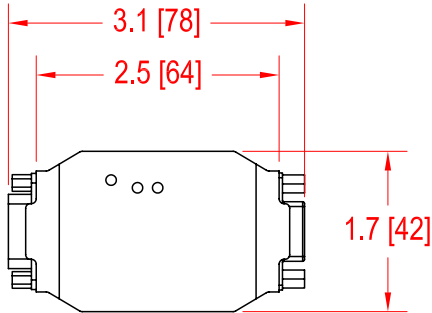
ITEM # SEE CHART

GENERAL PURPOSE DIN RAIL AMPLIFIER MODULE

DC POWERED, UNIVERSAL STRAIN GAGE SIGNAL CONDITIONER

Drawing Number: FI1045-J

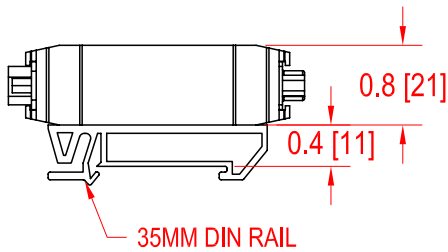
INCH [mm] | R.O.= Rated Output



FEMALE DB 9 SENSOR SIDE

PIN #	WIRING CODE
1	+EXCITATION*
2	+SIGNAL
3	-SIGNAL
4	-EXCITATION*
5	GROUND
6	GROUND
7	GROUND
8	GROUND
9	GROUND

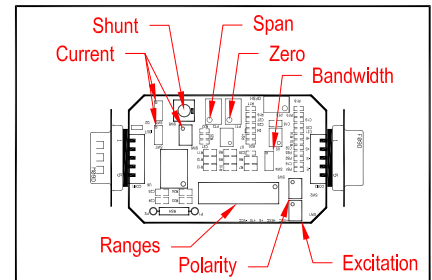
*FOR 6 WIRE SENSOR CONNECT +SENSE TO +EXCITATION AND -SENSE TO -EXCITATION OR GROUND



MALE DB 9 - POWER SIDE

PIN #	WIRING CODE	CABLE COLOR CODE
9	POWER SUPPLY	RED
8	SIGNAL OUT (VOLTAGE)	GREEN
7	GROUND	ORANGE
6	GROUND	BLACK
5	GROUND	N/A
4	GROUND	N/A
3	GROUND	N/A
2	GROUND	BLUE
1	SIGNAL OUT (CURRENT)**	WHITE

**ONLY AVAILABLE WITH CURRENT OUTPUT OPTION



Do Not Connect Device To Power Supply When Power Supply Is Already On!

Features

- Bipolar Output, Differential Input
- ± 5 or ± 10 VDC Outputs
- 0-20 mA, 4-20 mA, 0-16 mA, 5-25 mA DIP Switch Selectable Outputs
- Bridge Excitation 5 or 10 VDC
- Ranges: 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 10.0 mV/V (DIP Switch)
- Interchangeable Socket Mounted 60.4K Ω Shunt Cal
- Externally Accessible Shunt Cal Activation Button
- Internal Span and Offset Adjust Resistor Locations
- Sensor Polarity Reversal DIP Switch
- Weight: 1.6 oz [45 g]

Environment

Parameter	Min	Typ	Max	Unit
Operating Temperature	32		158	°F
	0		70	°C
Storage Temperature	-40		185	°F
	-40		85	°C
Relative Humidity: 95% at 100 °F [39 °C]				
IP Rating IP31				

Notes

- Adjusting Zero Will Not Affect Calibration.
- Adjusting Span Will Affect Calibration.
- Power Supply Must Source 150mA Minimum.
- Carefully Remove Cover To Access DIP Switches.

Electrical Specifications

Parameter	Min	Typ	Max	Unit
Power Supply	14 ⁽¹⁾		26	VDC
Current Dissipation ⁽²⁾		30		mA
Output Impedance (voltage)	1000			Ohms
Output Impedance (current)			500	Ohms
Sensor Impedance	100			Ohms
Bandwidth	1000		25000	Hz
Common Mode Rejection Ratio	120			dB
Noise		15		mV p-p
Output Span Range	-10		10	% of RO
Output Zero Range	-10		10	% of RO
Gain Drift With Temperature	-25	x	25	PPM of FSR
Gain Non-Linearity	-0.001	x	0.001	% of FSR
Zero Drift With Temperature	-25	x	25	PPM of FSR

Versions

Item #	Bandwidth	Output
FSH01449	1 kHz	+/-5 VDC, +/-10 VDC, 0-20 mA, 4-20 mA, 0-16 mA, 5-25 mA
FSH03546	1 kHz	+/-5 VDC, +/-10 VDC
QSH00602	10 kHz ⁽³⁾	+/-5 VDC, +/-10 VDC, 0-20 mA, 4-20 mA, 0-16 mA, 5-25 mA
QSH01498	25 kHz ⁽⁴⁾	+/-5 VDC, +/-10 VDC, 0-20 mA, 4-20 mA, 0-16 mA, 5-25 mA

Accessories And Options

Description	Item Number
26 AWG, 6 Conductor 5 ft Long Cable w/ Yellow Molded DB9 Female (Included)	FSH03219
DB9 Male With Housing (Included)	FSH01075
28 AWG, 4 Conductor 5 ft Long Cable w/ DB9 Male	FSH01129
DB9 Male with Screw Terminal Blocks (Sensor Side)	FSH02236
DB9 Female with Screw Terminal Blocks (Output Side)	FSH02237

(1) For FSH03546: Min. Power Supply is 12.5 VDC
 (2) No Load Applied (Input or Output)

(3) Only For Sensitivity Of 1 mV/V or Greater
 (4) Only For Sensitivity Of 1.5 mV/V or Greater



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