



9 LSLR
Ultra-Low Range Accelerometer +/-5V, 0-5V or 4-20mA Output

The LSLR is a very rugged, ultra-low, single-axis accelerometer designed for peak performance in extreme conditions. The fluid damped mechanism delivers superior noise rejection in high shock and vibration environments as well as excellent output stability. Units are available with a 6-pin connector, pin-terminals or flying leads. Available outputs include +/-5V, 0-5V and 4-20mA. Custom input ranges, filters and temperature sensor are also available on request.



FEATURES

- Extremely Rugged
- ±0.1g, ±0.25g, ±0.5g, ±1g & ±2g Ranges
- High Performance
- Temperature Sensor Available
- +/-5V, 0-5V or 4-20mA Output
- RoHS Compliant

APPLICATIONS

- Seismic Monitoring
- Geophysical Measurements
- Ultra-Low Acceleration Analysis
- Civil Engineering
- Flight Testing
- Robotics

Connector Version

PIN	FUNCTION	
	SINGLE OR 4-20mA OUTPUT	DUAL SUPPLY
A	+VDC	+VDC
B	PWR & SIG COM	PWR & SIG COM
C	N/C	-VDC
D	SIG OUT	SIG OUT
E	N/C	N/C
F	N/C	N/C

Pin Terminal Version

PIN	FUNCTION	
	SINGLE SUPPLY OR 4-20mA OUTPUT	DUAL SUPPLY
A	+VDC	+VDC
B	PWR & SIG COM	PWR & SIG COM
C	N/C	-VDC
D	SIG OUT	SIG OUT
E	N/C	N/C
F	N/C	N/C

Wired Version

WIRE COLOR	FUNCTION	
	SINGLE SUPPLY OR 4-20mA OUTPUT	DUAL SUPPLY
RED	+VDC	+VDC
WHITE	PWR & SIG COM	PWR & SIG COM
BLACK	N/C	N/C
GREEN	SIG OUT	SIG OUT



0-5V OUTPUT VERSION

PERFORMANCE

Input Range (g)	±0.1	±0.25	±0.5	±1	±2
Full Range Output (FRO¹) VDC 0.5%	0-5				
Non-linearity (% FRO²) maximum	0.02	0.02	0.02	0.02	0.05
Scale Factor (V/g) nominal	25.0	10.0	5.0	2.5	1.25
SF Temp Sensitivity (PPM/°C) max	300	100	60	60	60
Bandwidth (-3 dB), Hz nominal	2	15	20	30	30
Transverse Axis Misalign. (°max)	±0.25	±0.50	±0.5	±0.5	±0.5
Bias (g) range	±0.04	±0.01	±0.02	±0.02	±0.02
Bias Temp Sensitivity (µg/°C) max	50	50	50	50	50
Resolution & Threshold (µg)³	1				

¹Full Range is defined "from negative full input to positive full input g." ²Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment. ³Full Resolution is achieved with noise reduction techniques.

ELECTRICAL

Input Voltage Range, (VDC)	9 to 18
Input Current, mA, max	40
Output Impedance (Ohms) nominal	1
Noise (Vrms) max (3 Hz to 300 kHz)	0.002

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

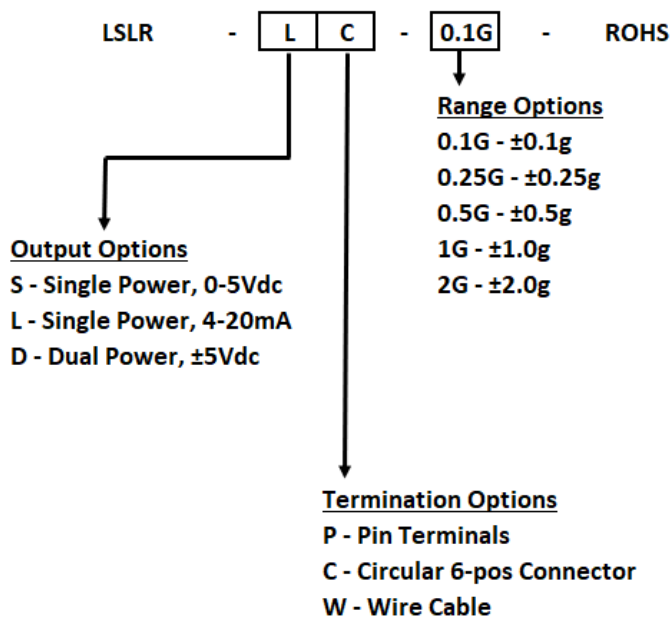
ENVIRONMENTAL

Operating Temp Range	-40°C to +80°C
Storage Temp Range	-60°C to +90°C
Shock	1500g, 0.5 msec, ½ sine
Seal	IP66

PHYSICAL

Weight (grams) max	250
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HOW TO ORDER





■ 5V OUTPUT VERSION

PERFORMANCE

Input Range (g)	±0.1	±0.25	±0.5	±1	±2
Full Range Output (FRO ¹) VDC 0.5%	±5				
Non-linearity (% FRO ²) maximum	0.02	0.02	0.02	0.02	0.05
Scale Factor (V/g) nominal	50.0	20.0	10.0	5.0	2.5
SF Temp Sensitivity (PPM/°C) max	300	100	60	60	60
Bandwidth (-3 dB), Hz nominal	2	15	20	30	30
Transverse Axis Misalign. (°max)	±0.25	±0.5	±0.5	±0.5	±0.5
Bias (g) range	±0.04	±0.01	±0.02	±0.02	±0.02
Bias Temp Sensitivity (µg/°C) max	50	50	50	50	50
Resolution & Threshold (µg) ³	1				

¹Full Range is defined "from negative full input to positive full input g." ²Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment. ³Full Resolution is achieved with noise reduction techniques.

ELECTRICAL

Input Voltage Range, (VDC)	±12 to ±18
Input Current, mA, max	30
Output Impedance (Ohms) nominal	1
Noise (Vrms) max (3 Hz to 300 kHz)	0.002

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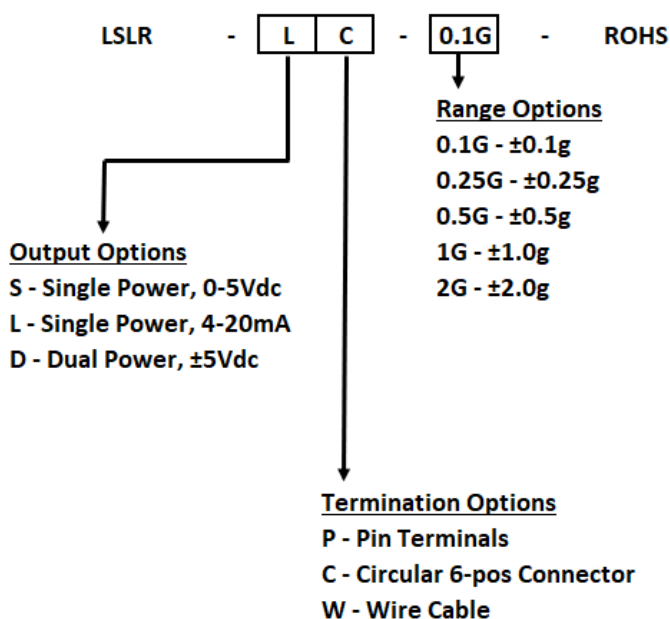
ENVIRONMENTAL

Operating Temp Range	-40°C to +80°C
Storage Temp Range	-60°C to +90°C
Shock	1500g, 0.5 msec, ½ sine
Seal	IP66

PHYSICAL

Weight (grams) max	250
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■ HOW TO ORDER





■ 4-20MA OUTPUT VERSION:

PERFORMANCE

Input Range (g)	±0.1	±0.25	±0.5	±1	±2
Full Range Output (FRO¹) mA 0.5%	4-20				
Non-linearity (% FRO²) maximum	0.03	0.03	0.03	0.03	0.05
Scale Factor (mA/g) nominal	80.0	32.0	16.6	8.0	4.0
SF Temp Sensitivity (PPM/°C) max	300	100	60	60	60
Bandwidth (-3 dB), Hz nominal	2	15	20	30	30
Transverse Axis Misalign. (°max)	±0.25	±0.5	±0.5	±0.5	±0.5
Bias (g) range	±0.04	±0.01	±0.02	±0.02	±0.02
Bias Temp Sensitivity (µg/°C) max	50	50	50	50	50
Resolution & Threshold (µg)³	1				

¹Full Range is defined "from negative full input to positive full input g." ²Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment. ³Full Resolution is achieved with noise reduction techniques.

ELECTRICAL

Input Voltage Range, (VDC)	+20 to +30
Input Current, mA, max	75
Noise (mA rms) max (3 Hz to 300 kHz)	0.01

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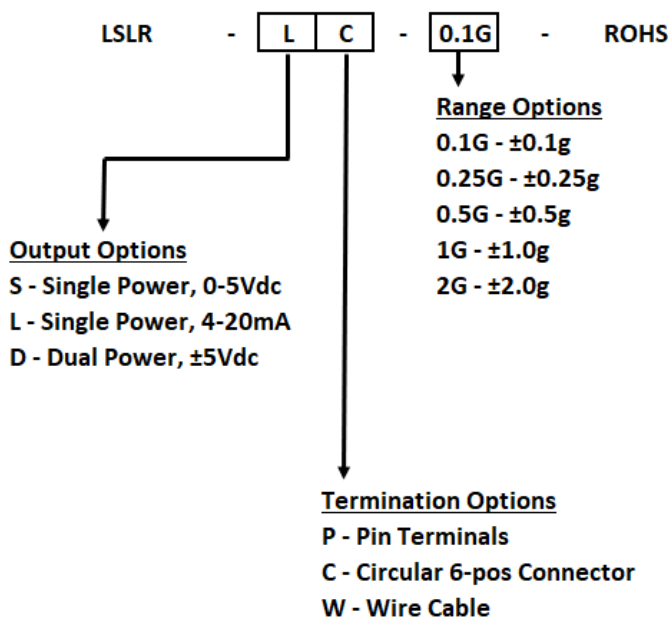
ENVIRONMENTAL

Operating Temp Range	-40°C to +80°C
Storage Temp Range	-60°C to +90°C
Shock	1500g, 0.5 msec, ½ sine
Seal	IP66

PHYSICAL

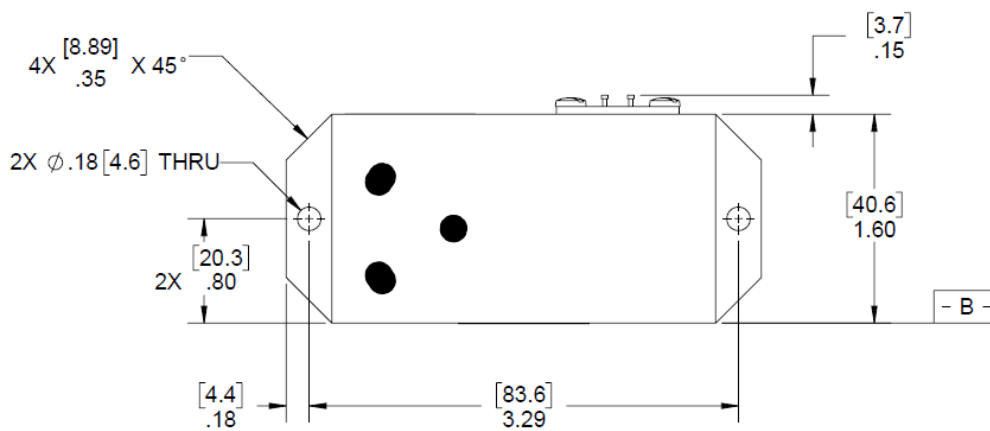
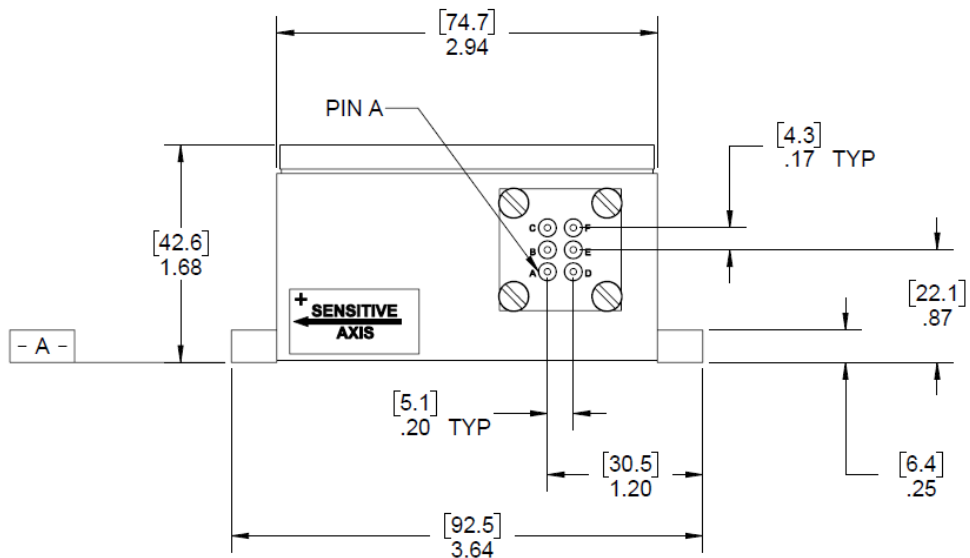
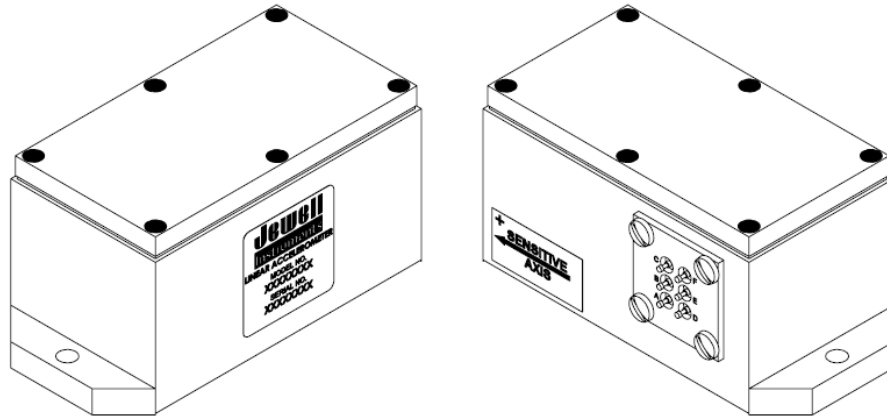
Weight (grams) max	250
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■ HOW TO ORDER





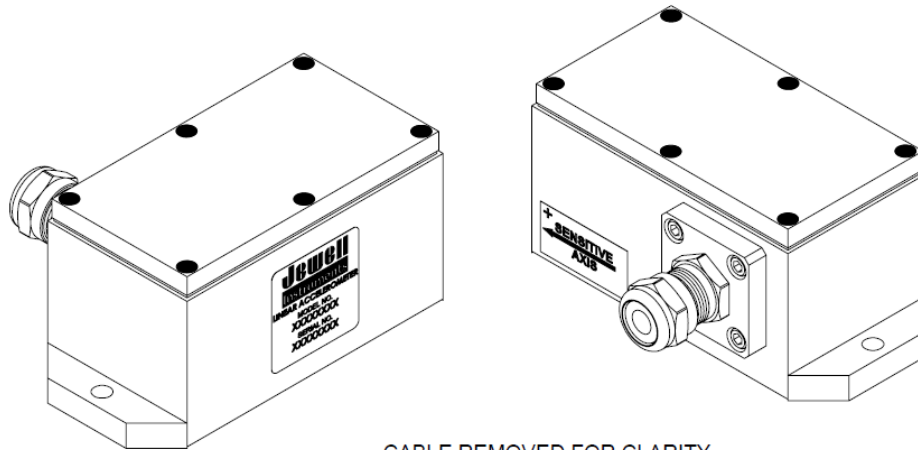
OUTLINE DRAWING: PIN TERMINAL VERSION



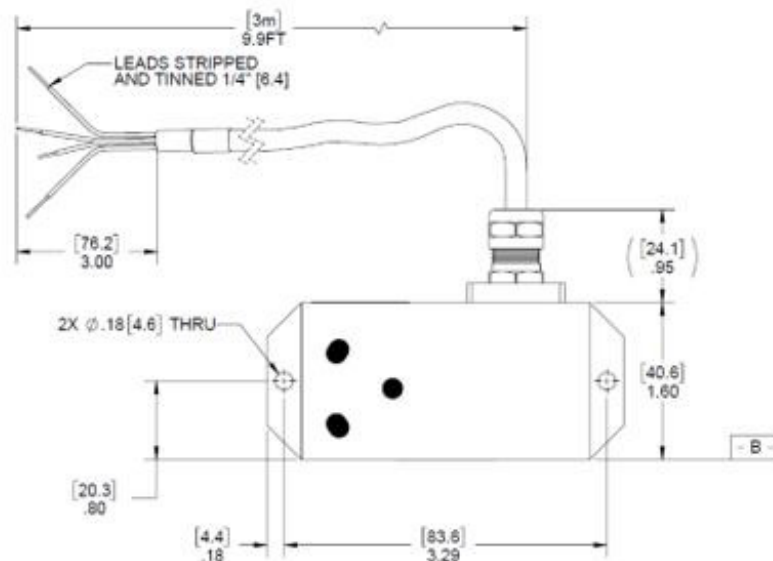
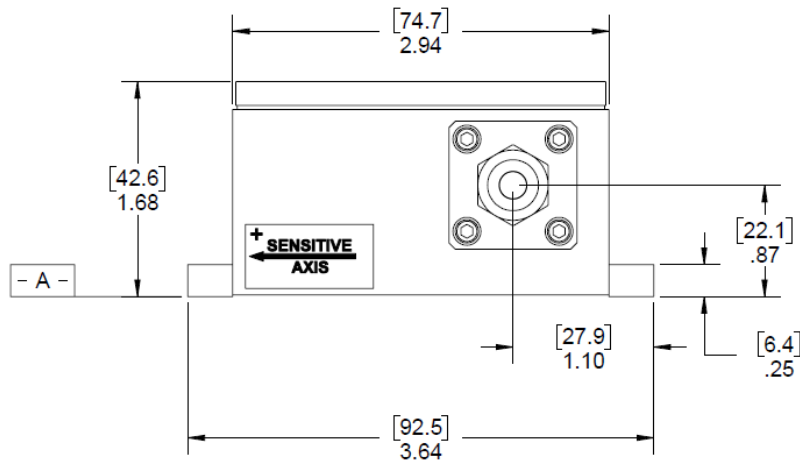
- NOTES:
1. DATUM **- A -** AND **- B -** ARE DEFINED AS REFERENCE SURFACES.



OUTLINE DRAWING: WIRED VERSION



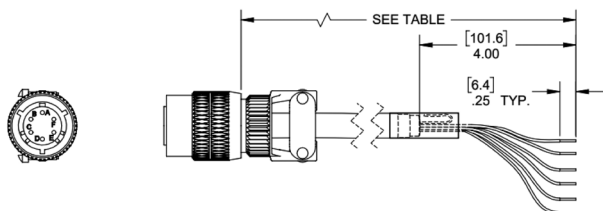
CABLE REMOVED FOR CLARITY



NOTES:
1. DATUM **- A -** AND **- B -** ARE DEFINED AS REFERENCE SURFACES.

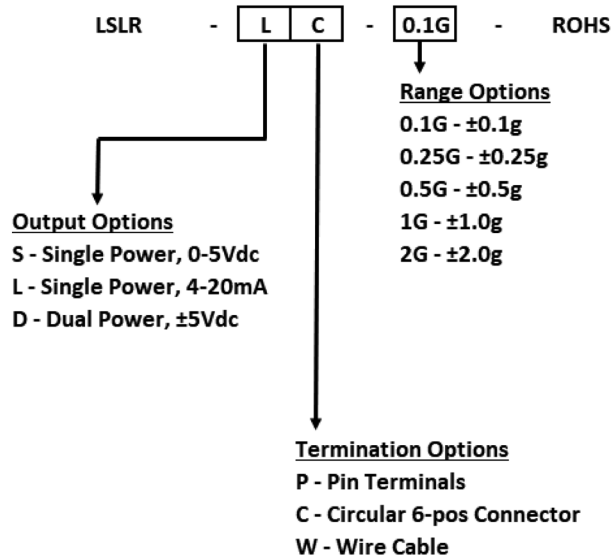


ACC ESSORIES:



PART #	MODEL #	LENGTH ft (m)
879605-001	DSI-CBL-006-1	6 (1.83)
879605-002	DSI-CBL-010-1	10 (3.05)
879605-007	DSI-CBL-02M-1	6.56 (2)
879605-008	DSI-CBL-03M-1	9.84 (3)

LSLR ORDERING INFORMATION



Range	Output	Connection	Model #	Part #
±0.1g	0-5V (S)	Connector (C)	LSLR-SC-0.1G-ROHS	02550417-101-ROHS
		Pin Terminal (P)	LSLR-SP-0.1G-ROHS	02550415-101-ROHS
		Wire (W)	LSLR-SW-0.1G-ROHS	02550416-101-ROHS
	±5V (D)	Connector (C)	LSLR-DC-0.1G-ROHS	02550417-201-ROHS
		Pin Terminal (P)	LSLR-DP-0.1G-ROHS	02550415-201-ROHS
		Wire (W)	LSLR-DW-0.1G-ROHS	02550416-201-ROHS
	4-20mA (L)	Connector (C)	LSLR-LC-0.1G-ROHS	02550417-301-ROHS
		Pin Terminal (P)	LSLR-LP-0.1G-ROHS	02550415-301-ROHS
		Wire (W)	LSLR-LW-0.1G-ROHS	02550416-301-ROHS
±0.25g	0-5V (S)	Connector (C)	LSLR-SC-0.25G-ROHS	02550417-102-ROHS
		Pin Terminal (P)	LSLR-SP-0.25G-ROHS	02550415-102-ROHS
		Wire (W)	LSLR-SW-0.25G-ROHS	02550416-102-ROHS
	±5V (D)	Connector (C)	LSLR-DC-0.25G-ROHS	02550417-202-ROHS
		Pin Terminal (P)	LSLR-DP-0.25G-ROHS	02550415-202-ROHS
		Wire (W)	LSLR-DW-0.25G-ROHS	02550416-202-ROHS
	4-20mA (L)	Connector (C)	LSLR-LC-0.25G-ROHS	02550417-302-ROHS
		Pin Terminal (P)	LSLR-LP-0.25G-ROHS	02550415-302-ROHS
		Wire (W)	LSLR-LW-0.25G-ROHS	02550416-302-ROHS
±0.5g	0-5V (S)	Connector (C)	LSLR-SC-0.5G-ROHS	02550417-103-ROHS
		Pin Terminal (P)	LSLR-SP-0.5G-ROHS	02550415-103-ROHS
		Wire (W)	LSLR-SW-0.5G-ROHS	02550416-103-ROHS
	±5V (D)	Connector (C)	LSLR-DC-0.5G-ROHS	02550417-203-ROHS
		Pin Terminal (P)	LSLR-DP-0.5G-ROHS	02550415-203-ROHS
		Wire (W)	LSLR-DW-0.5G-ROHS	02550416-203-ROHS
	4-20mA (L)	Connector (C)	LSLR-LC-0.5G-ROHS	02550417-303-ROHS
		Pin Terminal (P)	LSLR-LP-0.5G-ROHS	02550415-303-ROHS
		Wire (W)	LSLR-LW-0.5G-ROHS	02550416-303-ROHS

Range	Output	Connection	Model #	Part #
±1g	0-5V (S)	Connector (C)	LSLR-SC-1G-ROHS	02550417-104-ROHS
		Pin Terminal (P)	LSLR-SP-1G-ROHS	02550415-104-ROHS
		Wire (W)	LSLR-SW-1G-ROHS	02550416-104-ROHS
	±5V (D)	Connector (C)	LSLR-DC-1G-ROHS	02550417-204-ROHS
		Pin Terminal (P)	LSLR-DP-1G-ROHS	02550415-204-ROHS
		Wire (W)	LSLR-DW-1G-ROHS	02550416-204-ROHS
4-20mA (L)	Connector (C)	LSLR-LC-1G-ROHS	02550417-304-ROHS	
	Pin Terminal (P)	LSLR-LP-1G-ROHS	02550415-304-ROHS	
	Wire (W)	LSLR-LW-1G-ROHS	02550416-304-ROHS	
±2g	0-5V (S)	Connector (C)	LSLR-SC-2G-ROHS	02550417-105-ROHS
		Pin Terminal (P)	LSLR-SP-2G-ROHS	02550415-105-ROHS
		Wire (W)	LSLR-SW-2G-ROHS	02550416-105-ROHS
	±5V (D)	Connector (C)	LSLR-DC-2G-ROHS	02550417-205-ROHS
		Pin Terminal (P)	LSLR-DP-2G-ROHS	02550415-205-ROHS
		Wire (W)	LSLR-DW-2G-ROHS	02550416-205-ROHS
	4-20mA (L)	Connector (C)	LSLR-LC-2G-ROHS	02550417-305-ROHS
		Pin Terminal (P)	LSLR-LP-2G-ROHS	02550415-305-ROHS
		Wire (W)	LSLR-LW-2G-ROHS	02550416-305-ROHS