

L10X

Field Datalogger

24-bit A/D	4-Ch DIFF
Max. 64-Ch	PoE 100Base-T
RTC	52,000 Logs
SCANLIST Visual Sequencer	
LOADCELL	RTD Pt100/1000
VOLT 10V	RESISTANCE
CURR 20mA	ISO. DI/DO
TC-E/K/J	240V RELAY
VIB. WIRE	SW. 12V



Industrial Grade Sturdiness

1500Vrms Isolation PoE and Dual Backup DC Inputs
Measuring Channels are 240VAC Fault-tolerant

Field Proven Performance

Applications in 161KV Transmission Tower and 750VDC MRT Sites
Supports Vibrating-wire Sensors for Harsh Environments

Self-contained and Low-power

Self Measuring, Logging, and Cloud Uploading
Remote Programmable Sequences, Conditional Tests and Triggers
Consumes Less Than 6W w/ Switchable 12VDC Sensor Supply

Expandable Connectivity

Up to 64 Channels Via External Low-leakage Multiplexers
PoE-powered IP Networking



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Specifications

Valid for Operating Temperature in -10 to +60 °C
May be Subject to Change without Prior Notices

Voltage	Using H, L, G Terminals
Num. of Ch	4, shared
Resolution	24-bit
Impedance	> 1G ohm
Range	±10V w/ 20% Over-range
Topology	DC-coupled, Differential
Tempco	78ppm/°C, max
Drift	30ppm/√1000Hrs, typ
Accuracy	Better than 0.1%

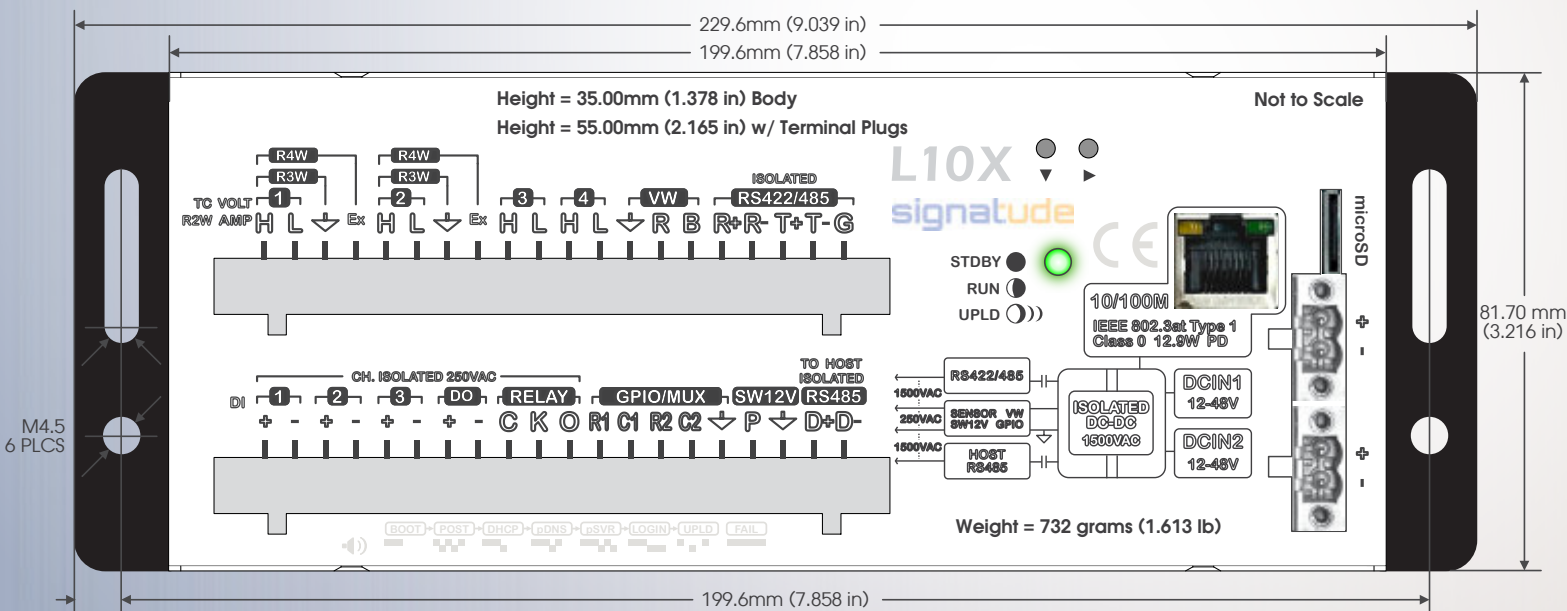
Thermocouple	Using H, L Terminals
Num. of Ch	4, shared
Topology	Internally Ground Biased
Type	E, K, J,
Tempco	48ppm/°C, max
Drift	30ppm/√1000Hrs, typ
Accuracy	Better than 0.3°C

Current	Using H, L, G Terminals
Num. of Ch	4, shared
Resolution	24-bit
Range	0-20mA w/ 20% Over-range
Shunt Resistance	730-ohm, max
Compliance	24V, max
Tempco	95ppm/°C, max
Drift	250ppm/√1000Hrs, typ
Accuracy	Better than 0.1%

Loadcell	Using R, B, H, L Terminals
Num. of Ch	1, shared
Topology	Full Bridge 4-wire or 6-wire
Excitation	10V, Auto-zero
Tempco	48ppm/°C, max
Drift	30ppm/√1000Hrs, typ
Accuracy	Better than 5,000 counts

RTD	3-Wire Using H, L, G Terminals 4-Wire Using H, L, G, Ex Terminals
Num. of Ch	2, shared
Range	18 to 390 ohm @ 400uA Iexc 723 to 2840 ohm @ 100uA Iexc
Tempco	70ppm/°C for 3-wire mode, max 48ppm/°C for 4-wire mode, max
Drift	150ppm/√1000Hrs, typ
Accuracy	Better than 0.25°C for P1100
Cabling	150m w/ Shielded Twisted-pair

Resistance	3-Wire Using H, L, G Terminals
Num. of Ch	2, shared
Range	300 to 100k ohm @ 100uA Iexc
Tempco	70ppm/°C, max
Drift	150ppm/√1000Hrs, typ
Accuracy	Better than 0.5%



Vib. Wire	Using R, B, G Terminals
Num. of Ch	1, shared
Topology	H-Bridge Drive, 10V
Range	400 to 4000 Hz
Post Processing	Histogram Adaptive Filtering
Accuracy	Better than 0.02%
Cabling	300m w/ Shielded Twisted-pair
Isolated DI	Using +, - Terminals
Num. of Ch	3
Topology	Photocoupler Type
Transition Volt	$V_{IH} > 12V, V_{IL} < 8.2V$
Isolated DO	Using +, - Terminals
Num. of Ch	1
Topology	PhotoMOS Type
Capacity	60VDC, 1.5ohm, 0.5A max.

SW. 12VDC	Using P, G Terminals
Num. of Ch	1
Output	Switching Regulated 11.8V
Capacity	400mA or 4.8W max.
Relay	Using nC, Kommon, nO Terminals
Type	1 Form C
Topology	Electro-mechanical, Latching
Capacity	240VAC, 30W or 62.5VA
Contact	75mOhm, 1A switching max.
MUX Ext.	Using R1/2, C1/2, G Terminals
Num. of Ports	2
Protocol	5/12V Level, Serially Addressed
Capacity	Up to 32-Ch per MUX Ext. Port
Protection	For H, L, G, R, B, C, K, O, +, - Ex, R1, C1, R2, C2, P Terminals
Fault Input	240VAC between adjacent channels

System	256 sequencer entries max. Command Categories: Sense, WaitFor, Delay, Output, Conditional, Alarm
SCANLIST	32 Arithmetic holding places
FORMULA	Multiple, up to 4kB total
Sensor LUTs	52,000 Measurement Logs
Storage	Comm I/F #1 Isolated RS485 to Host only
Comm I/F #1	802.3at PoE, 100Base-T WebSCADA Auto-upload ThingSpeak® API Compliance
Comm I/F #2	±13min/Year CR1220 backup up to 2-year
RTC	12-48VDC, dual backup
DC Input	6W active, 13W max.
Power	
Environmental	
EMC	CE, FCC, BSMI
ESD	6kV Contact, 8KV air, Class B
Surge	2kV Level 2



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