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Strain Monitor Systems SMG034

Sensor Application Note #2

Overview

This Sensor Application Note provides additional information to wire and configure the potentiometer based (using an ETI Systems LCP8T series potentiometer) Strain Monitor Systems SMG034 sensor. This sensor includes 2 potentiometers, one to measure current displacement of the shaft, the other to measure maximum displacement. Remote sense leads are provided to account for voltage drop across the ground and power leads due to the attached cable. (Other versions of the SMG sensors are wired and read in the same manner as described below.)

More information on these sensors may be found in the SMG034 Instruction Manual.

Wiring – Remote Sense (recommended)

Description	Color	Pin	Non-MultiSensor	MultiSensor
Excitation+	Red	2	1H	1H
Output A (active)	White	4	1L	1L
Remote Sense+	Blue	3	2H	2H
Common	Black	1	2L	2L
Shield	Bare		S	S
Jumper with Excitation+ (1H)			3H	3H
Output B (peak)	Green	5	3L	3L
Jumper with Remote Sense+ (2H)			4H	4H
Jumper with Common (2L)			4L	4L
			S	S

Wiring – Non-Remote Sense

Description	Color	Pin	Non-MultiSensor	MultiSensor
Excitation+	Red	2	1H	1H
Output A (active)	White	4	1L	1L
Output B (peak)	Green	5	2H	2H
Common	Black	1	2L	2L
Shield	Bare		S	S

Configuration

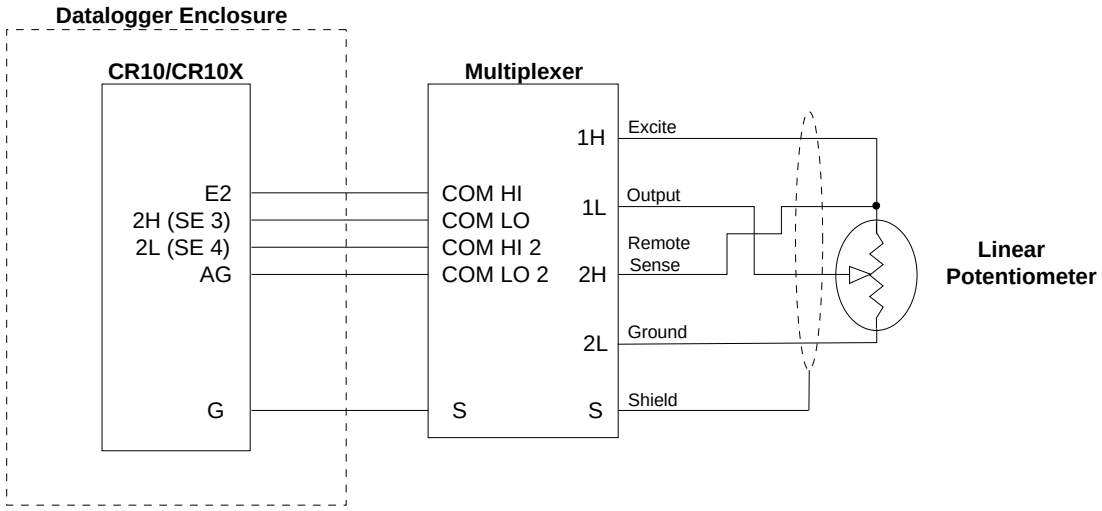
Type	Make	Model	Instruction File	Description	Output Units
Linear Pot	SMS	SMG03n_RS	Smg03n_rs.ins	Strain Monitor Systems Linear Pot with Remote Sense	Ratio (0-1)
	SMS	SMG03n	Smg03n.ins	Strain Monitor Systems Linear Pot	Ratio (0-1)

This sensor configuration is included in shipments of MultiLogger beginning with v2.0.10. Contact Canary Systems if you require assistance configuring them with older versions of the software.

For non-remote sense configurations use the Type **SMG03n** as the Upper Channel to read the Output B (peak) displacement. Output is ratio, 0-1.

See the supplied calibration sheets to convert the ratio output to displacement.

Non-MultiSensor Multiplexer Wiring – Remote Sense (recommended)



Non-MultiSensor Multiplexer Wiring – Non-Remote Sense