

# UNIVERSAL DIN RAIL TRIP AMPLIFIER

## SEM1630

- SIMPLE CONFIGURATION VIA USB PORT
- UNIVERSAL PT100, THERMOCOUPLE, mV, mA Input
- ISOLATED INPUT
- DUAL RELAY OUTPUTS 250 V AC 1A
- RELAY ISOLATED FROM EACH OTHER



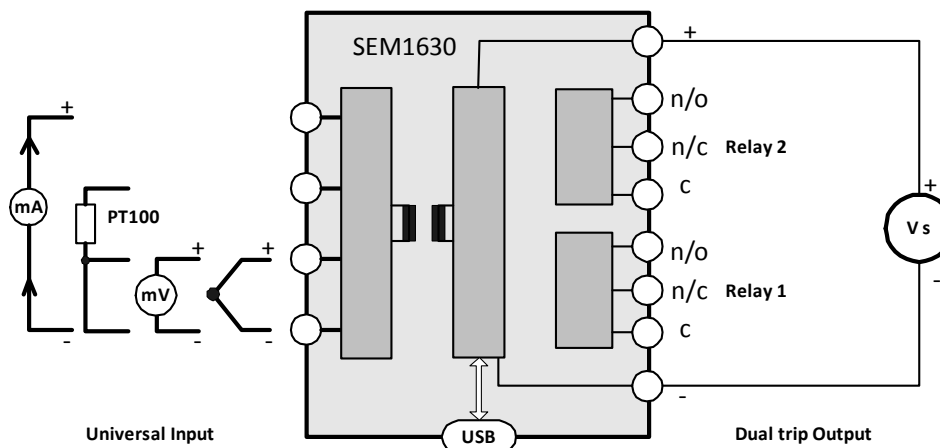
## INTRODUCTION

The SEM1630 is the new generation DIN rail mounted trip amplifier from Status Instruments. It has been designed to accept most common process and temperature sensor inputs and provide the user with a dual trip output. Isolation is provided on all three ports. All temperature ranges are linear to temperature.

Designed for ease of use, our latest USB interface is fitted for quick and easy configuration. Just connect a standard USB cable between the SEM1630 and your PC. Using our free configuration software, your PC will automatically upload the existing configuration data and guide you through any changes you wish to make. To further help save time, the SEM1630 does not need to be wired to a power supply during the configuration process, it is powered via the USB interface from your PC. The following parameters are configurable :-

INPUT TYPE	UNITS	RELAY 1 Level	RELAY 2 Setpoint	RELAY 1 Hysteresis	RELAY 2 Level	RELAY 2 Setpoint	RELAY 2 Hysteresis
PT100	°F, °C, mV & mA	High Low	Set in units	Set in units	High Low	Set in units	Set in units
T/C K, J, E, N, T, R, S							
mV							
mA							

The state led indicates out of range input during normal operation. Alarm LEDs are provided for each relay.



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**SPECIFICATION @ 20 °C**

## INPUTS

INPUT	RANGE	ACCURACY (Note 1)	STABILITY (Note 7)	O/C	CJ (Note3)	Sensor excitation (Note 4)	IMPEDANCE
<b>K</b>	(-200 to 1370) °C	0.1 % of FSR ±0.5 °C (type T 0.2 % FSR. ± 0.5 °C)	± 0.01 % of FSR / °C	Yes	Yes	-	1 MΩ (Note 5)
<b>J</b>	(-100 to 1200) °C						
<b>E</b>	(-100 to 1000) °C						
<b>N</b>	(-180 to 1300) °C						
<b>T</b>	(-100 to 400) °C						
<b>R</b>	(-10 to 1760) °C	± 0.5 °C ±0.1 % of FSR (Note 2)					
<b>S</b>	(-10 to 1760) °C	± 0.5 °C ±0.1 % of FSR (Note 2)					
<b>mV</b>	(-20 to 75) mV	± 0.04 mV			-		
<b>PT100</b>	(-200 to 850) °C	(± 0.1 °C) + (±0.05 % of Rdg)	± 0.005 % of FSR / °C		-	<450 uA	-
<b>mA</b>	(-10 to 25) mA (4 to 20) mA Capability	± 0.008 mA	± 0.01 % of FSR / °C	-	-	-	2.7 R (Note 6)

**Key** Rdg = Reading ; FSR = Full Scale Range ; O/C = programmable open circuit sensor detect; CJ = Cold junction error

## Notes

1. Accuracy for PT100 and T/C do not include sensor and cold junction errors.
2. Only over the range (800 to 1600) °C
3. Cold junction range (-20 to 70) °C, Accuracy ± 0.5 °C , Tracking ± 0.05 °C
4. PT100 input Maximum lead resistance 20 R, Lead effect 0.015 °C / Ω.
5. Impedance – not including 0.2 uA open circuit detect bias current effect.
6. Maximum current over load ± 100 mA.
7. Ambient (-10 to 50) °C

## OUTPUT

**Type** Dual Form C relay contacts  
**Supply** 24 V dc ± 5 % @ 40 mA Max  
**Response time** < 500 ms to reach 95 % of final value ; Start up time < 3 s  
**Contact rating** (250 V ac rms @ 1A ; 30 V dc @ 1 A) Resistive Load  
**Relay Type** Individual relays 1 & 2 may be set at high or low level, full range setpoint plus adjustable hysteresis  
**Ranges** Setpoint programmed on units, covering full range of input.  
**Hysteresis** Set in units.  
**Protection** Reverse connection and over-voltage protection. Max over voltage current 100 mA.

## GENERAL

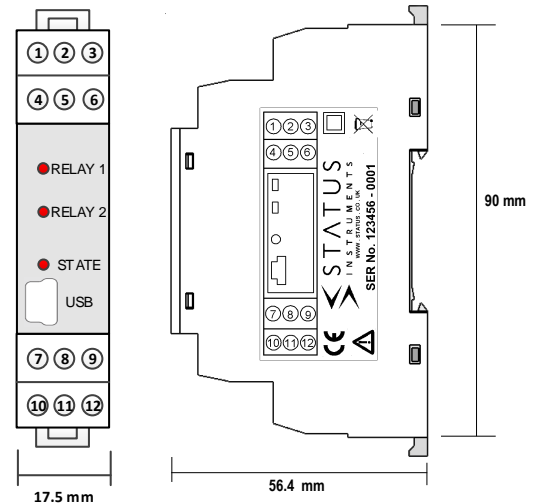
**Galvanic Isolation** 3750 V ac Input to relays , relay to relay.  
**Ambient** operating (-20 to 70) °C (10 to 95) % RH non condensing. Storage (-40 to 85) °C  
**Approvals** CE tested to BS EN 61326

## MECHANICAL

**Material** Polmide 6.6  
 Self extinguishing  
**Terminals** Screw terminal  
**Cable** 2.5 mm Max.  
**Colour** Grey



**REFER TO  
INSTRUCTION  
MANUAL  
BEFORE USE**



**ORDER CODE : SEM1630**

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 USB Link Software

ORDER CODES  
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D2446-01-09 CN5384 SEM1630 Data Sheet

