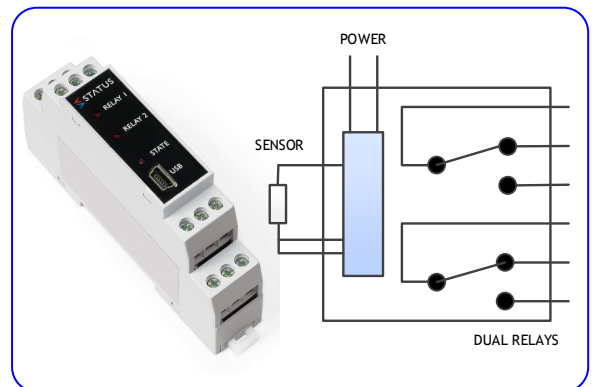


SMART RTD/RESISTANCE/SLIDE WIRE DUAL ALARM UNIT

SEM1633

- SUITABLE FOR RTD OR SLIDEWIRE SENSORS
- HIGH, LOW, DEVIATION AND INVERT RELAY ACTIONS
- RELAY RATING 250 V AC 1A ; 30 V DC 1A
- POWERED (10 to 32) V AC / (10 to 48) V DC SUPPLY
- FILTER, USER LINEARISATION FUNCTIONS
- USB PROGRAMMABLE



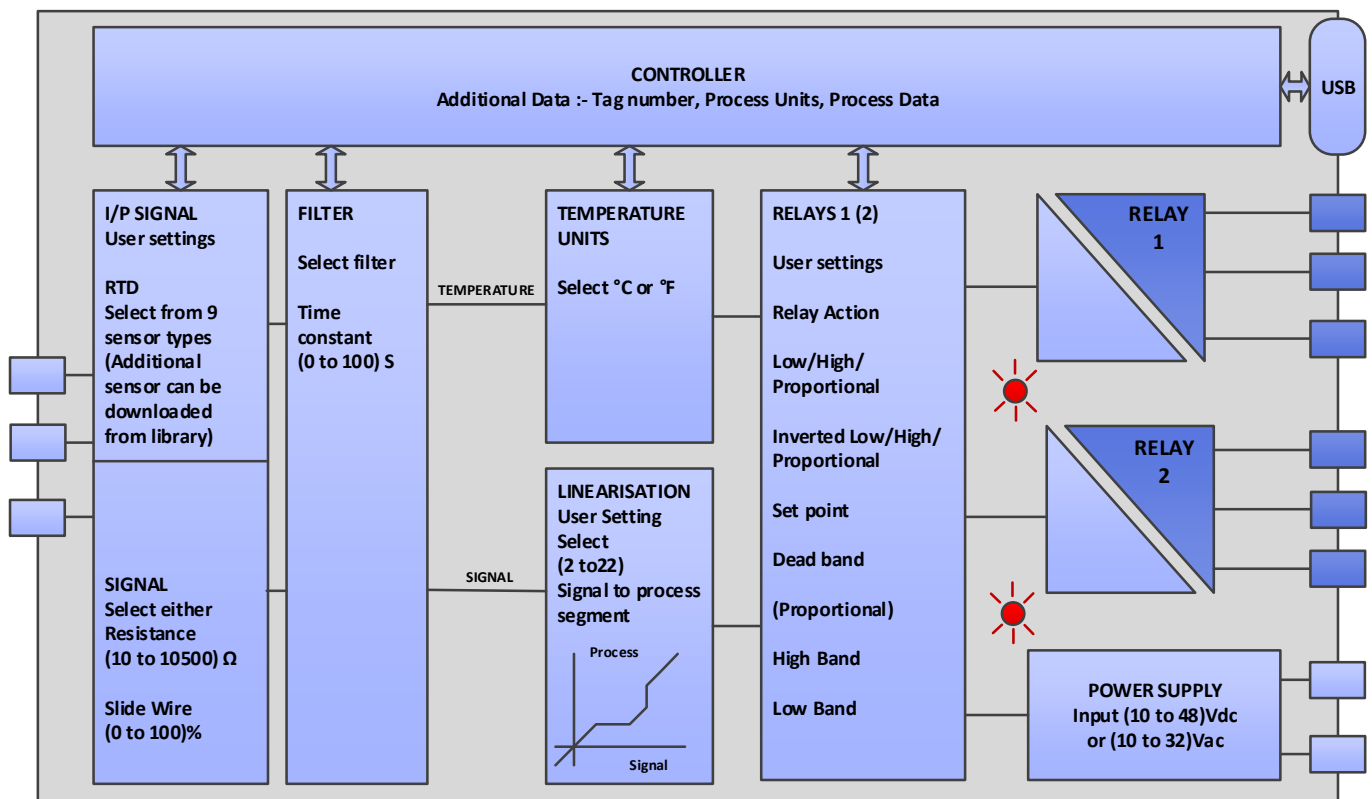
INTRODUCTION

The SEM1633 provides an accurate alarm / switching function when used with RTD or Slidewire sensors. The flexible design allows for the use of any resistive sensor within the range of (10 to 10500) Ohms. This means that in the standard product Pt100, 500, 1000, Ni or Cu sensors as well as slide wire sensors up to 100 K, can be accommodated. Other sensor characteristics or your own 22 point linearisation characteristic (for slidewire or linear resistance) can be downloaded into the product enabling you to adapt it exactly to your application.

Relay outputs are independently configured for action, set point and dead band. Six actions are provided, normal High/Low/Deviation and inverted High/Low/Deviation.

For ease of use, a high efficiency switch mode power supply is fitted as standard and does not require any adjustment between ac or dc applications. Operating voltages are (10 to 48) V dc and (10 to 32) V ac

Our USB interface is fitted for quick and easy configuration. Just connect a standard USB cable between the SEM1633 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 SEM1633 does not need to be wired to a power supply during the configuration process, it is powered via the USB interface from your PC.



SMART RTD/RESISTANCE/SLIDE WIRE DUAL ALARM UNIT

SPECIFICATION @20 °C

INPUT

Type	RTD, Resistance, Slide Wire
Maximum Range	(0 to 10000) Ω , (0 to 100) % slide Wire (1 to 100) K Ω Pot
Standard RTD	PT100, PT500, PT1000, Cu100, Cu1000, Ni100, Ni120, Ni1000, Cu53, library
Update	300 mS
Accuracy	See below "SENSORS RTD & SIGNAL RESISTANCE/SLIDE WIRE"
Warm up time	1 minute.

RELAY 1

Type	Form C relay contacts
Response time	< 500 mS to reach 95 % of final value; Start up time < 3 s
Contact rating	250 V ac rms @ 1 A; 30 V dc @ 1 A resistive load
Relay Actions	High-Low-Deviation; Inverted High-Low-Deviation.
Indication	Relay 1 on - Red LED
Protection	Protect with 2.0A (T) fuse fitted externally.
Isolation	3750 V ac relay 1 to input; relay 1 to relay 2

RELAY 2

Type	Form C relay contacts
Response time	< 500 mS to reach 95 % of final value; Start up time < 3 s
Contact rating	250 V ac rms @ 1 A; 30 V dc @ 1 A resistive load
Relay Actions	High-Low-Deviation; Inverted High-Low-Deviation.
Indication	Relay 2 on - Red LED
Protection	Protect with 2.0 A (T) fuse fitted externally.
Galvanic Isolation	3750 V ac relay 1 to input; relay 1 to relay 2

SUPPLY

Range	(10 to 48) VDC, (10 to 32) VAC Protected by internal 500 mA resettable fuse.
Power	< 1 W Full Power

USER INTERFACE

Type	USB 2.0
Baud rate	19,200 baud
Equipment	PC running windows XP or later, USB cable.

USER INTERFACE FUNCTIONS

Scaling	User signal to process value scaling, for simplified setup.
Filter	Adjustable time constant (0 to 100) Seconds.
User Linearisation (Profile)	2 to 22 segments Ω (slide wire) to process.
Process Units	4 Characters (signal input only)
Temperature units	$^{\circ}$ C or $^{\circ}$ F (RTD inputs only)
Tag Number	20 Characters
Relay Action	Individual actions for relay 1 and 2
Set point	Individual set points for relay 1 and 2
Dead Band	Individual dead band settings for relay 1 and 2
High/low Band	Individual High/Low Band settings for relay 1 and 2

ENVIRONMENT

Operating Ambient	(-30 to 70) $^{\circ}$ C ; (10 to 90) %RH (non condensing)
Storage Ambient	(-30 to 70) $^{\circ}$ C ; (10 to 90) %RH (non condensing)
Configuration Ambient	(10 to 30) $^{\circ}$ C
Installation Enclosure	DIN Rail enclosure offering Protection $\geq$ IP65.

APPROVALS

CE	BS EN 61326 BS EN 61010-1 Installation category II pollution degree. The product is classed as "PERMANENTLY CONNECTED EQUIPMENT".
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MECHANICAL

Style	DIN 43880 (1 Module)
Colour	Grey
Material	Polymide 6.6 self extinguishing
Terminals	2.5 mm Maximum
Weight	< 70 grams

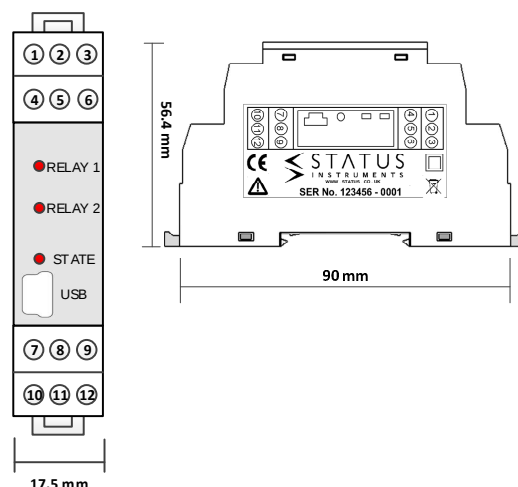
SENSORS RTD

Platinum IEC	Accuracy = 0.2° C + (0.05% of reading)
Platinum IPTS-68	Pt100 (-200 to 850), Pt500 (-200 to 750), Pt1000 (-200 to 600)
Ni100 DIN 0.00618	Pt100 (0.00391) + Pt100 (0.00392) (-200 to 630)
Ni120 0.00672	(-60 to 180)
Ni 1000	(-80 to 260)
Ni1000 Tk5000	(-60 to 180)
Ni 507.5	(-50 to 150)
Ni 604	(-80 to 360)
Cu 53	(-200 to 200)
Cu100 0.00427	(-50 to 180)
Silicon	(-80 to 260)
	(-80 to 260)
	KTY81-110 -120-121-122-150-210-220-221-222-250 (-55 to 175)
	KTY82-110 -120-121-122-150-210-220-221-222-250 (-55 to 175)
	KTY81-151, KTY82-151, KTY83-210-220-250-121-122 (-55 to 175)
	KTY84-130-150 (-40 to 300)

SIGNAL RESISTANCE/SLIDE WIRE

Slide wire	Pot type (1 to 100) K Ω , Signal (0 to 100) %, accuracy 0.05%
Resistance	Full range 10 to 10500 Ω , Accuracy (10 to 500) $\Omega \pm 0.055\Omega$ (500 to 2500) $\Omega \pm 0.5 \Omega$, (2500 to 10500) $\Omega \pm 10.0 \Omega$.

Order code: SEM1633



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D2539-01-04 CN5278 SEM1633 Data Sheet

