

# LOOP POWERED TRIP AMPLIFIERS

## SEM1401 AND SEM1402

- 10 YEAR WARRANTY
- LOOP POWERED
- SMALL SIZE/HIGH PACKING DENSITY
- MAINS RATED RELAYS
- SINGLE OR DUAL TRIP
- TRIP STATE LED INDICATION
- ACTIVE HIGH OR LOW



## INTRODUCTION

The SEM1401 and SEM1402 are loop powered trip amplifiers designed to accept a (4 to 20) mA signal from a transmitter and to provide a single trip output (SEM1401) or two individual trip outputs (SEM1402) sharing the same common. Utilizing the loop power means that no separate supply is required to power the trip alarms with resulting cost reductions and simplified wiring.

Their small size and the mains line relay contacts make them the ideal choice for many trip alarm applications.

## SPECIFICATIONS @ 20 °C

<b>INPUT</b>	
Type	Two wire (4 to 20) mA, (50 mA maximum)
Protection	Reverse connection protected
Loop Drop	5 V maximum
<b>OUTPUT</b>	
Alarm	HIGH or LOW Active (switch selected)
Contact(s)	SEM1401 single relay with N.O. and N.C. contacts. SEM1402 two single pole relays with N.O. contacts sharing a common connection
Rating	Resistive load 2 A @ 250 VAC/125 VDC 150 W (inductive load) maximum
Indication	Alarm LED(s) on module front face
Set point	(0 to 100) % multi-turn trim potentiometer(s) access on module front face
Repeatability	± 0.2 %
Hysteresis	SEM1401 Adjustable (0.1 to 5) % single turn trim pot on module front face. SEM1402 Fixed 0.5 %
Delay	0.5 s fixed delay
Failure Mode	On loss of signal: HIGH Alarm...No alarm condition, LOW Alarm...Alarm condition (i.e. Alarm operates as if signal has fallen to -25 % or 0 mA)

### GENERAL SPECIFICATION

Breakdown Isolation	3000 VAC rms between contacts and input 1000 VAC rms between contacts
Ambient Operating	(0 to 50) °C (10 to 95) % RH non-condensing
Connections	Captive clamp screws
Cable Size	4 mm <sup>2</sup> solid/2.5 mm <sup>2</sup> stranded
Case Material	Grey polyamide
Flammability	To UL94-VO VDE 0304 Part 3 level IIIA

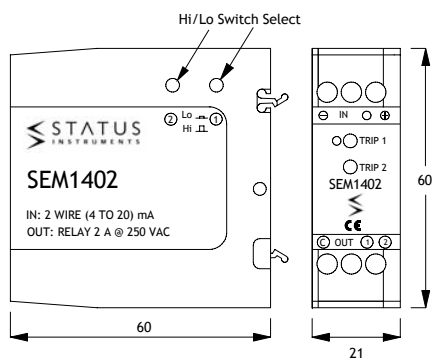
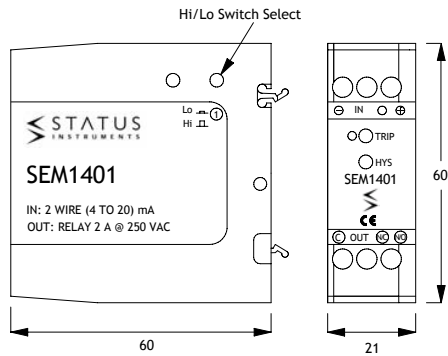
### APPROVALS

EMC	BS EN61326
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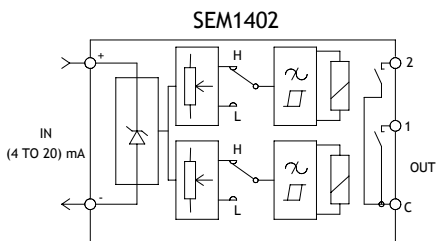
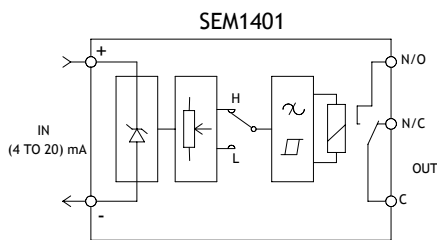
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## MECHANICAL DETAILS

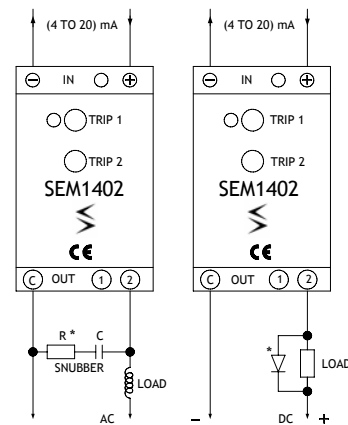
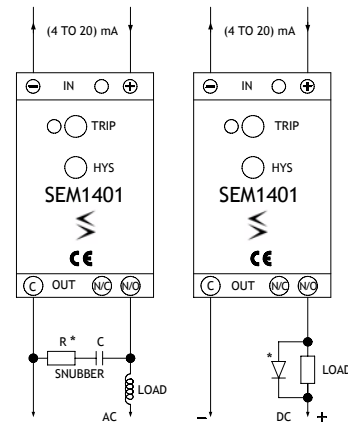
(All dimensions in mm)



## BLOCK DIAGRAMS



## ELECTRICAL DETAILS



\*NOTE: Snubber circuits recommended for inductive loads.

## ORDER CODE

SEM1401 Single trip change-over contacts

SEM1402 Dual trip N.O contacts

## ALSO AVAILABLE:

### DIN RAIL PRODUCTS

SEM1000 SERIES Process Signal Isolators  
 SEM1100 Mains Powered Process Isolator/Convertor  
 SEM1300 24 VDC 250 mA Power Supply (90 to 250) VAC input  
 SEM1500 Pt100 & T/C Signal Conditioners

CHECK WITH SALES OFFICE FOR FULL DETAILS