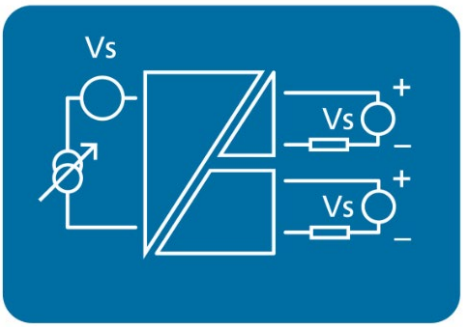
SEM1200 LOOP ISOLATOR/SPLITTER

- **1 x (4 to 20) mA INPUT AND 2 x (4 to 20) mA OUTPUTS**
- **ISOLATE and SPLIT LOOP SIGNALS**
- **GALVANIC ISOLATION 500 VDC, 1 KV FLASH TESTED**
- **HIGH ACCURACY, BETTER THAN 0.1% OF RANGE**
- **12.5 mm WIDE**



INTRODUCTION

The SEM1200 isolator is designed to take one primary (4 to 20) mA control loop and provide two isolated secondary loops. Power is required externally on each loop.
This isolator requires no user-adjustment during commissioning, apart from an initial test, to ensure it operates correctly over its full working range. Minor adjustments can be made to the calibration of the device by means of the two front-panel accessible calibration potentiometers.
Incorrect connection in the loop will not damage the device as long as the specified maximum currents /voltages are not exceeded.

FEATURE HIGHLIGHTS

SIGNAL SPLITTER
The SEM1200 outputs two galvanically isolated (4 to 20) mA loop outputs, derived from a single input loop. Basic and reliable in operation, the device can be used for applications where the same (4 to 20) mA loop signal is needed to be connected to multiple instruments that require isolation from each other to avoid ground loops.

HIGH ACCURACY
Only ± 10 uA error between the input and output signals ensures confidence in the SEM1200 product's performance.

GALVANIC ISOLATION
With 500 Vdc isolation between input and output circuits the SEM1200 is an ideal solution for removing ground loops between (4 to 20) mA loop equipment.

JOINS POWERED INPUT AND OUTPUT (4 to 20) mA LOOPS
The SEM1200 requires powered loop supplies on both input and output connections, enabling it to safely join two active supplies where there is a conflict with more than one piece of equipment powering a control loop.

BOOST A (4 to 20) mA LOOP
The SEM1200 can be used to extend the range of a weak (4 to 20) mA control loop by allowing an additional loop power supply to be added, isolated from the primary loop supply.

LOOP TRIM FUNCTION
The SEM1200 can be used to add a (4 and 20) mA fine trim function to a sensor with no trim options.

SEM1200 LOOP ISOLATOR/SPLITTER

ELECTRICAL INPUT (per channel) **mA**		**SPECIFICATIONS @20°C**
Type	**Range/value**	**Accuracy/stability/notes**
Current loop 2 wire externally powered	(4 to 20) mA > 2 mA minimum < 30 mA maximum	Included in output error
Protection		Reverse protected
Loop voltage	35 Vdc maximum	SELV
Loop volt drop	5.0 Vdc maximum	SELV
Thermal drift		Included in output error

ELECTRICAL OUTPUT (per channel) **mA**		**SPECIFICATIONS @20°C**
Type/function	**Range/value**	**Accuracy/stability/notes**
Current loop 2 wire externally powered	(4 to 20) mA > 2 mA minimum < 30 mA maximum	± 10 uA Combined input output error
Protection		Reverse protected
Loop voltage	(5 to 32) Vdc	SELV
Loop volt drop	2.7 Vdc	Load = 900 ohm @ Vs = 24 Vdc Load = 1200 ohm @ Vs = 30 Vdc
Thermal drift Combined input output error		Less than ± 2 uA /°C
Output loads must be > 250 Ohms when SEM1200 is used in ambient temperature > 50 °C		

USER INTERFACE (per channel) **Adjustment**		
Function	**Description**	**Notes**
Zero	Trim pot via front of unit	Calibrate @ 4 mA
Span	Trim pot via front of unit	Calibrate @ 20 mA
Suitable input source and meter required for adjustment		

GENERAL	
Function	**Description**
Galvanic isolation	500 Vdc (flash tested @ 1 kV)
Isolation method	Opto-coupler
Response time	Typically, less than 10 ms to reach 70 % of final value

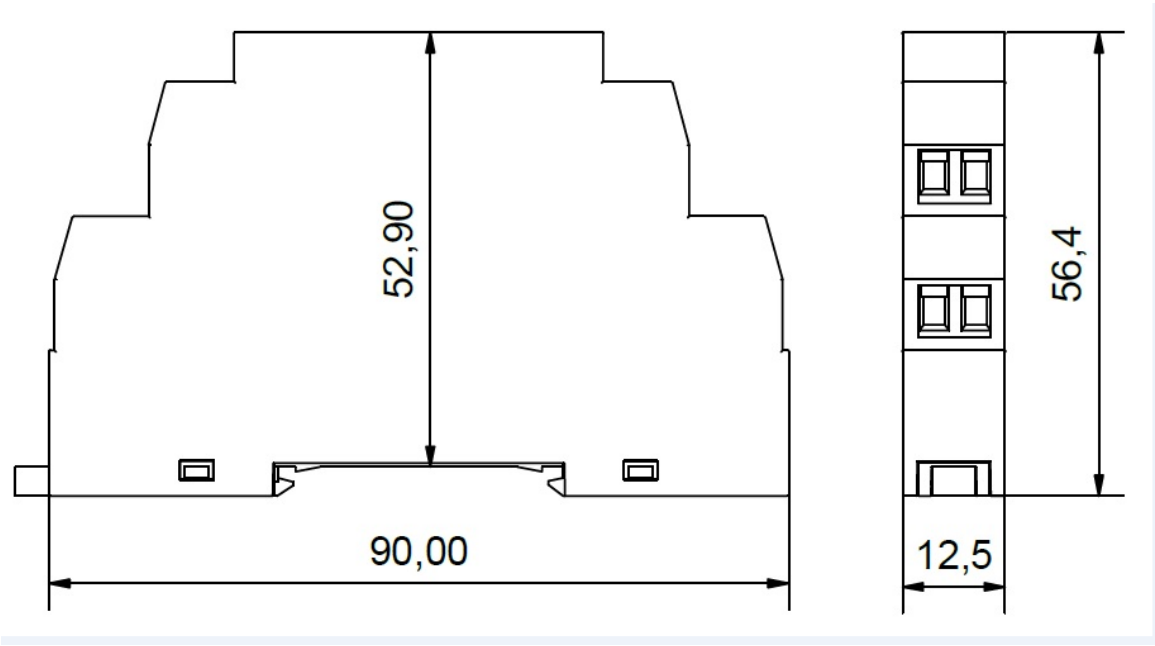
MECHANICAL	
Function	**Description**
Connection	Captive clamp screws
Cable size	Maximum recommended 2.5 mm^2 stranded
Case material	Grey Polyoxymethylene, ABS back clip
Flammability	UL94-HB
Mounting	DIN EN 50022-35
Dimensions (H x D x W)	(90 x 56.4 x 12.5) mm

ENVIRONMENTAL	
Function	**Description**
Ambient temperature	Operating / storage (0 to 70) °C
Ambient humidity	Operating / storage (10 to 95) %RH non-condensing
Protection requirement	Device must be installed in an enclosure offering >IP65 Protection

SEM1200 LOOP ISOLATOR/SPLITER

APPROVALS	
EMC	BS EN 61326: Note - Sensor input wires less than 30 m to comply
Class	BS EN 61010-1 Pollution degree II class I
Ingress protection	BS EN 60529
RoHS	Directive 2011/65/EU, incorporating Amendment Directive EU2015/863

Mechanical. Dimensions in mm



ORDER CODE	SEM1200

ACCESSORIES	
Loop powered display	Refer to sales@status.co.uk
Loop power supply	Refer to sales@status.co.uk

ADDITIONAL INFORMATION	
For SEM1200 Application Notes	Refer to www.status.co.uk
For SEM1200 User Guide	Refer to www.status.co.uk
For full range of loop isolators	Refer to sales@status.co.uk

To maintain full accuracy, annual calibration is required: contact support@status.co.uk for details
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