

# SCHMID-M

## PASSIVE LOOP POWER SUPPLY ISOLATION TRANSMITTER $I_{in}$ & $I_{out}$ ST1100L-F

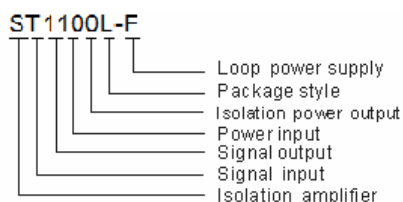
### DESCRIPTION

ST1100L-F Isolation transmitter is a kind of two-wire loop powered isolation module. Isolation power is transmitted from the 4 ~ 20 mA current loop to power the former two-wire transmitter and receive the 4~20mA current signal from the two-wire transmitter. Adopting unique electromagnetism isolation design and high efficiency loop electric-arc-energy technology independent power supply is not required for the module, realizing 4~20 mA standard signal isolation with high accuracy it match to kinds of equipment module input attachment (PLC/DCS act); Over-current Protection is designed to protect this isolation module and the latter circuit; Besides, the module have extremely low temperature drift(no more than 35PPM/°C under -25°C~+71°C). The isolation voltage between the input and output can be up to 3KVDC.

### FEATURES

- loop power supply Over-current Protection
- High accuracy(0.1% F.S.)
- High linearity (0.1% F.S.)
- Isolation voltage(3KVDC/60s)
- Extremely low temperature drift(35PPM/°C)
- High reliability(MTBF>500,000 hours)

### MODEL SELECTION



### SCHMID-MULTITECH GMBH

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### PRODUCT PROGRAM

Part Number	loop power supply voltage	Maximum voltage*	Input	Output	Channels	Package
ST1100L-F	10~30V	40V	4~20mA	4~20mA	1	SIP12

\*Note: Exceed the maximum voltage can damage the Products

### ELECTRICAL CHARACTERISTICS

Input Parameter	Input Signal	4~20mA
	Overload	≤30mA (Over-current Protection)
	Voltage Drop-out	Type: 5V (@input = 20mA)
Output Parameter	Output Signal	4~20mA
	Load Capacity	$R_L \leq (U_s - 5) / 0.02$ $U_s$ : loop power supply voltage

### TRANSMISSION CHARACTERISTICS

Zero Offset	0.1%F.S.
Gain Error	0.1%F.S.
Temperature Drift	0.0035%F.S./°C(-25°C ~ +71°C)

### ISOLATION CHARACTERISTICS

Galvanic Isolation	Two-port isolation (Between input and output)
Isolation Voltage	3KVDC/60s(leakage current<1mA,humidity<70%)
Insulation Resistance	100MΩ,500VDC(Between input and output)

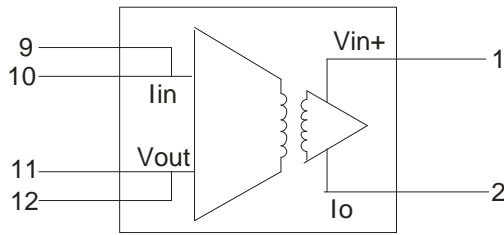
### OTHER CHARACTERISTICS

Ambient temperature	Operation temperature:-25°C ~ +71°C
	Transport and Storage temperature:-50°C ~ +105°C
Package	SIP12
Weight	About 8g
Application Environment	No dust, fierce vibration, impulsion and corrosive gas

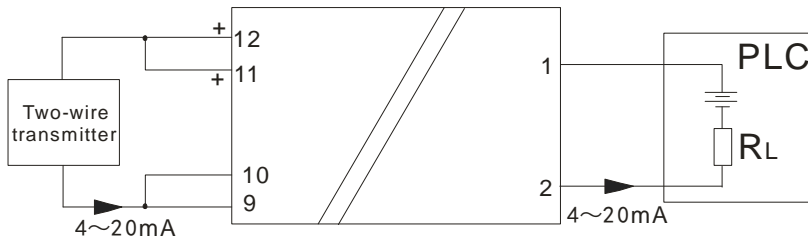
Note:

1. All specifications measured at TA=25°C, humidity <75%, nominal input voltage and rated output load unless otherwise specified.
2. Only typical models listed, specifications of custom product may be different. Please contact our service people directly for certain conditions.

## SCHEMATIC DIAGRAM



## TYPICAL APPLICATION



## APPLICATION NOTE

1. Please read instruction book carefully before using the product. If you have any question, please contact with our technical support.
2. Please don't install in the dangerous zone.
3. Don't divide the product privately in case the equipments ineffective or go wrong.

## AFTER SERVICE

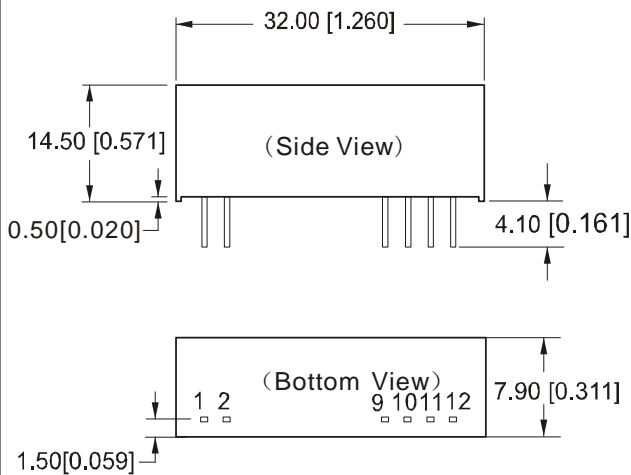
1. Products are carefully inspected and controlled before going out from our factory. If they operated abnormally or there were anything wrong in the inner parts, please contact with our agents near you or technical support in our company as soon as possible.
2. 3 years warranty since the delivery date. During the period of quality guarantee, our company will repair or change free of charge if product has any quality problem in the process of normal using.

## APPLICATION CIRCUITS

See A GUIDE TO INSTRUMENTATION ISOLATION AMPLIFIERS for more detail.

## PACKAGING SIZE AND TERMINAL DESCRIPTION

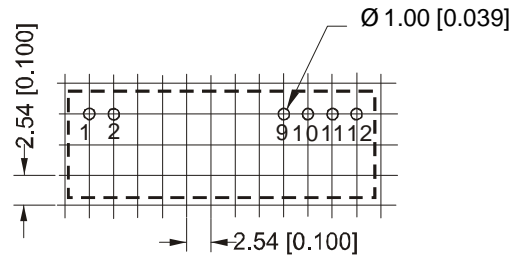
### MECHANICAL DIMENSIONS



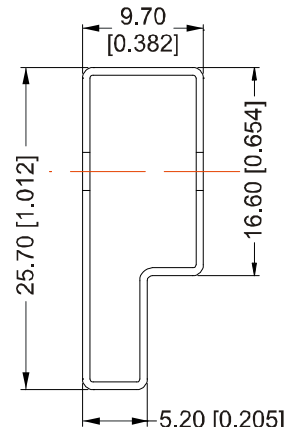
FOOTPRINT DETAILS	
Pin	Function
1(Vin+)	Power input
2(Io)	current output
9,10(lin)	current input
11,12(Vout)	Power output

Note:  
 Unit: mm[inch]  
 Pin tolerances:  $\pm 0.10\text{mm}$  [ $\pm 0.004\text{inch}$ ]  
 General tolerances:  $\pm 0.5\text{mm}$  [ $\pm 0.020\text{inch}$ ]

### RECOMMENDED FOOTPRINT(TOP VIEW)



### TUBE OUTLINE DIMENSIONS



Note:  
 Unit: mm[inch]  
 General tolerances: 0.50mm [ 0.020inch]  
 L=530mm[20.866inch] Devices per tube quantity: 15pcs  
 L=220mm[8.661inch] Devices per tube quantity: 6pcs  
 Short tube inner package dimensions: L\*W\*H=255\*170\*80mm  
 Short tube outer package dimensions: L\*W\*H=375\*280\*270mm  
 Long tube inner package dimensions: L\*W\*H=580\*200\*100mm  
 Long tube outer package dimensions(with two inner package boxes): L\*W\*H=600\*215\*220mm  
 Long tube outer package dimensions(with three inner package boxes):L\*W\*H=600\*215\*325mm