RISHABH

Data Sheet

RISH CON SI-101

DC Signal Isolator

RoHS CE

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Application

The purpose of the RISH CON SI-101 is to electrically isolate input, output and power supply. The isolator fulfills all requirements and regulation concerning electromagnetic compatibility EMC and safely acc to IEC 61010 . It was developed and is manufactured and tested in strict accordance with quality assurance standard ISO 9001.
The device has single channels and provides single independent isolating amplifiers in an extremely small space.

Function

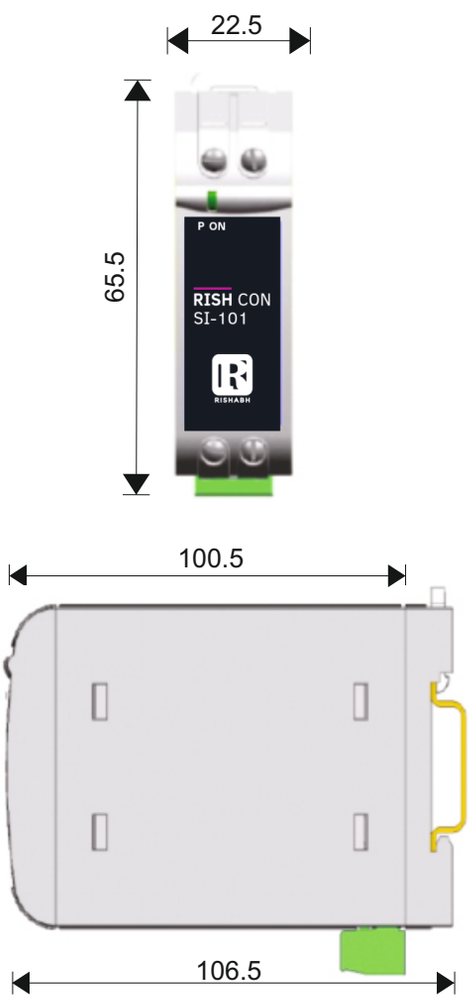
Simple dc isolator serves to electrically isolate input dc signal in the range 0 – 20 mA or 4-20 mA or 0-10V or 2-10V is then converted to signal 0-20 mA or 4-20 mA or 0-10V or 2-10V finds its application for isolate input and output.

Product Features

Electric Isolation

- Electrically isolated analog output prevents interference voltage and current. Solves grounding problem in meshed signal networks.
- High electric isolation between input and output 3.2 kV, and power supply versus all other circuits 5.2 kV.

Dimensions Details



Note : All Dimensions are in mm

Technical Specifications

Measuring inputs

DC current standard ranges	1) 0...20mA 2) 4...20mA 3) 1...5mA
DC voltage standard ranges	1) 0...10V 2) 2...10V 3) 1...5V 4) 0...300V

Measuring outputs

DC current standard ranges	1) 0...20mA 2) 4...20mA
Burden voltage	12V
External Resistance	Rext max. [kΩ] = 12V/ I_{AN} [mA] I_{AN} = Output circuit full scale value
DC voltage standard ranges	1) 0...10V 2) 2...10V
Burden	Rext min. [kΩ] = U_{AN} [V]/ 5 mA U_{AN} =Output circuit full scale value
Current limiter at Rext = 0	< 30mA for voltage output
Voltage limiter at Rext = ∞	< 17V for current output
Residual ripple in Output current	< 0.4% p.p.
Response time	< 50 ms
Common mode voltage	100V
Pollution degree	2

Power supply

Rated operating voltage	60 ... 230 ... 300 V AC/DC 24...48...60 V AC/DC
Rated operating frequency	45...50 or 60... 400 Hz
Power input	< 1.6 W resp. < 3.4 VA

Electrical Connections:

Connection	Terminal details	
Measuring input	+ -	1 2
Measuring output	+ -	3 4
Auxiliary Supply	~ , + ~ , -	5 6

Technical Specifications:

Accuracy data (Acc to IEC 60688)

Accuracy class	0.2 %

Reference conditions

Ambient temperature	23°C ± 2°C
Output burden	Current: 0.5 * Rext max. Voltage: 2 * Rext min.
Nominal value of Aux Supply voltage	230V 50Hz or 60 Hz AC/DC, 48V 50Hz or 60 Hz AC/DC

Influence factors

Temperature	± 0.15% per 10 °C
Burden influence	< ± 0.1 % for current output < ± 0.1 % for voltage output
Magnetic field	< ±0.2 % (400 A/T)

Regulations

Electromagnetic Compatibility	Acc. to IEC 61326 - 1
Protection	For Housing : IP40, Terminals : IP20
Electrical standards	Acc. to IEC 61010 -1 / EN 61010 -1
Pollution degree	2
Over voltage category	III for power supply. II for measuring input and measuring output.
Double Insulation	• Power supply versus all other circuit. • Measuring input versus measuring output
Test Voltage	•Power supply versus: All 5.2 kV, DC 1 min Measuring inputs versus: Measuring output 3.2 kV, DC 1min

Ambient Temperature	Climate case 3Z acc. to VDI / VDE 3540
Climatic rating	0 ºC to 45 ºC (Usage Group II)
Nominal Range of use	-40 ºC to 70 ºC
Storage temperature	< 75% standard Climatic rating
Annual mean relative humidity	

Installation Data	Lexan 940 (polycarbonate) Flammability Class
Mechanical Housing	V-0 acc. to UL 94 self extinguishing, non dripping, free of halogen Rail mounting / wall mounting
Mounting position	Approx. 0.15kg
Weight	

Connection Terminal	Conventional Screw type terminal with indirect wire pressure
Connection Element	4.0mm^2 single wire or 2 x 2.5mm Fine wire.
Permissible cross section of the connection lead	2 G acc. to EN 60068-2-6
Permissible Vibrations Shocks	3 x 50 g 2 shocks each in 6 directions Acc. to EN 60068-2-27

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Ordering Information

Ordering Information	SI01-	XX	XX	XX	XX	000000
Product Type	RISH CON SI-101 : DC Signal Isolator					
Input Current range	0-0.1mA	22				
	0-0.2mA	23				
	0-0.4mA	2Y				
	0-0.5mA	25				
	0-1mA	26				
	0.2-1mA	52				
	0-2mA	27				
	0-5mA	29				
	1-5mA	53				
	0-10mA	30				
	2-10mA	54				
	0-20mA	32				
	4-20mA	55				
	0-40mA*	37				
	0-60mA*	2P				
	0-80mA*	38				
	0-100mA*	35				
Input Voltage range	0-50mV	16				
	0-56.25mV*	17				
	0-62mV*	19				
	0-60mV	2E				
	0-75mV	2H				
	0-100mV	2K				
	0-200mV	2M				
	0-500mV*	2Q				
	0-800mV*	2Z				
	0-300mV	6G				
	0-150mV	6J				
	0-1V	5A				
	0.2-1V	3A				
	0-1.2V	6H				
	0-2V	5B				
	0-3V	2N				
	0-4V	5C				
	0-5V	5F				
	1-5V	3B				
	0-6V	6K				
	0-10V	5H				
	2-10V	3C				
	0-15V	5G				
	0-20V	5L				
	4-20V	3D				
	0-24V	5J				
	0-25V	6E				
	0-30V*	5K				
	0-36V*	2L				
	0-40V	5X				
	0-48V	5Y				
	0-50V	5I				
	0-60V	5Z				
	0-70V*	2V				
	0-75V*	2D				
	0-90V*	2S				
	0-100V	14				
	0-110V	5N				
	0-120V*	2R				
	0-121V*	2T				

Ordering Information	SI01-	XX	XX	XX	000000
Input Voltage range	0-125V*	2W			
	0-130V*	13			
	0-150V	6A			
	0-160V	6D			
	0-200V*	2J			
	0-220V*	2U			
	0-230V	6F			
	0-250V*	2F			
	0-260V	6L			
	0-280V*	15			
	0-300V	6B			
	0-310V*	2G			
	0-320V*	6C			
	0-350V	20			
	0-400V	18			
	0-500V	6I			
Output Range	0-5mA		33		
	0-20mA		32		
	4-20mA		55		
	0-5V		34		
	0-10V		5H		
	2-10V		3C		
Auxiliary Supply	24-60V AC/DC			F	
	40-300V AC/DC			H	

* Non standard input/output range
# For Non standard Current input: 0-100mA & Voltage input:0-500V range is possible.

Ordering Code Example : SI01-5H55H00000000
Rish CON SI101 (DC Signal Isolator)- Input 0-10V DC, Output 4-20mA, Aux 40-300V AC/DC

Specifications may change without prior notice

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