

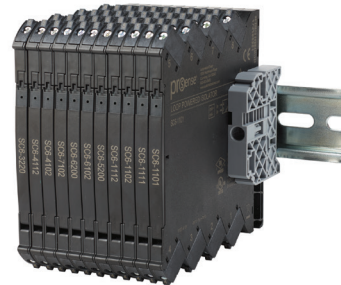
prosense® SC6 Series - Pulse Isolator and Frequency Converter - Signal Conditioners

SC6 Series - Pulse Isolator and Frequency Converter - Signal Conditioners

The ProSense SC6 Series of pulse isolator and frequency converter signal conditioners are housed in a narrow 6mm width package that allows for high density mounting on a 35mm DIN rail, saving panel space. The units are powered either via terminal inputs or in-rail power bus. DIP switch configuration provides flexibility to meet a variety of applications. All models are UL Listed.

Features

- Isolation and/or conversion of discrete/pulse input signals
- Narrow 6mm width allows for high density mounting on a DIN rail saving panel space
- In-rail power bus
- DIP switch selectable configuration for simple setup
- LED operation status on some models
- Excellent accuracy and fast response time
- Wide operating temperature range
- Suitable for high vibration environments
- UL Listed



SC6 Series Signal Conditioner Selection Guide - Frequency and Switch/Pulse Input Modules

Part Number		<u>SC6-2001</u>	<u>SC6-2002</u>	<u>SC6-2501</u>	<u>SC6-2502</u>
Price		\$149.00	\$149.00	\$252.00	\$240.00
Weight (lb)		0.25	0.27	0.26	0.26
Input	NAMUR	X	X	X	X
	NPN	X	X	X	X
	Contact	X	X	X	X
	Frequency	—	—	X	X
	Tachometer	—	—	X	X
	PNP	—	—	X	X
	TTL	—	—	X	X
	SO	—	—	X	X
Output	Relay	—	X	—	X
	NPN	X	—	—	—
	Current	—	—	X	—
	Voltage	—	—	X	—
Application	One Channel	—	—	X	X
	One Input to Two Output Signal Splitter	X	X	—	—
Isolation	Input / Output / Power Isolated	X	X	X	X

prosense® SC6 Series - Pulse Isolator / Switch Amplifier - Signal Conditioners

SC6 Series - Pulse Isolator / Switch Amplifier - Signal Conditioners

The ProSense SC6 Series of pulse isolator and switch amplifier signal conditioners are housed in a narrow 6mm width package that allows for high density mounting on a 35mm DIN rail, saving panel space. The units easily convert or isolate a pulse signal and multiply outputs. The SC6-2001 and 2002 each have a single input that is converted to either two NPN or two Relay outputs that can be used for controlling multiple devices and provides isolation from higher voltages providing a layer of protection for personnel operating switches and for sensitive devices out in the field.

Features

- Conversion of NAMUR sensor to more common input signals
- Discrete/pulse signal splitter
- Over-voltage protected
- Polarity protected
- Short-circuit protected
- DIP switch selectable configuration for simple setup
- LED operation status
- Complete isolation between input, all outputs, and power
- NAMUR, NPN open collector, or contact input
- NPN transistor or mechanical relay output models
- UL Listed



Part No. [SC6-2001](#)



ProSense SC6 - Pulse Isolator -Signal Conditioners				
Part No.	Description	Weight (lb)	Drawing Link	Price
SC6-2001	ProSense signal conditioner, isolated, Input: 1-channel, NAMUR sensor/ NPN/dry contact, Output: 2-channel, NPN, 24 VDC operating voltage, 35 mm DIN rail mount.	0.25	PDF	\$149.00
SC6-2002	ProSense signal conditioner, isolated, Input: 1-channel, NAMUR sensor/ NPN/dry contact, Output: 2-channel, relay, 24 VDC operating voltage, 35 mm DIN rail mount.	0.27	PDF	\$149.00

SC6 Series Common Technical Specifications		
Environmental Conditions		
Operating Temperature	-25°C to 70°C (-13°F to 158°F)	
Storage Temperature	-40°C to 85°C (-40°F to 185°F)	
Calibration Temperature	+20°C to 28°C (+68 to 82.4°F)	
Relative Humidity	< 95% RH (non-cond.)	
Protection Degree	IP20*	
Mechanical Specifications		
Dimensions (HxWxD)	113 x 6.1 x 115 mm (4.45 x 0.24 x 4.53 in)	
Weight Approx.	SC6-2001: 70g / SC6-2002: 80g	
DIN Rail Type	DIN EN 60715 - 35mm	
Wire Size	0.13...2.5 mm² / AWG 26...12 stranded wire	
Screw Terminal Torque	0.5 N·m	
Observed Authority Requirements	EMC	2014/30/EU
	LVD	2014/35/EU
	RoHS 2	2011/65/EU
Approvals	cULus, Standard for Safety	UL 61010-1, File E498965
	Safe Isolation	EN 61140
* Installation in pollution degree 2 & overvoltage category II. No corrosive gases		

* Installation in pollution degree 2 & overvoltage category II, No corrosive gases



SC6 Series - Pulse Isolator / Switch Amplifier - Signal Conditioners

SC6 Pulse Isolator Technical Specifications		
Part No.	SC6-2001	SC6-2002
DIP switch configurable	Yes	
Supply voltage	16.8 - 31.2 VDC (terminals or bus rail)	
Max. required power	≤ 1.2 W	
Max. power dissipation	0.65 W	0.95 W
Isolation voltage, test	2.5 kVAC	
Isolation voltage, working	300VAC (reinforced)	
Sensor auxiliary supply limitation	8.2 VDC, max. 8.2 mA @ 0VDC	
Input Specifications		
NAMUR Input	NAMUR according to	EN 60947-5-6
	Max. input frequency	5kHz
	Trig level LOW	<1.2 mA
	Trig level HIGH	>2.1 mA
	Input impedance	1kΩ 220pF 1kΩ 1.2 nF
	Sensor supply	8.2 VDC, max. 8.2 mA @ 0VDC
	Line Fault Detection – open loop / short circuit	Trig-level / hysteresis: 0.1 mA / 0.2 mA, 7mA / 0.5 mA
NPN Input	Max. input frequency	5kHz
	Trig level LOW	<1.2 mA
	Trig level HIGH	>2.1 mA
	Input impedance	1kΩ 220pF 1kΩ 1.2 nF
	Max. input voltage	24VDC
	Line Fault Detection – open loop / short circuit	Trig-level / hysteresis: 0.1 mA / 0.2 mA, 7mA / 0.5 mA
Contact Input	Max. input frequency	5kHz
	Trig level LOW	<1.2 mA
	Trig level HIGH	>2.1 mA
	Input impedance	1 kΩ 220pF 1kΩ 1.2 nF
	Max. input voltage	24VDC
	Line Fault Detection – open loop / short circuit	Trig-level / hysteresis: 0.1 mA / 0.2 mA, 7mA / 0.5 mA
Output Specifications		
Relay Output	Max. voltage	250VAC / 200VDC
	Max. current	2A AC
	Max. AC power	100VA
	Max. DC current, resistive load @U _{relay} ≤ 30VDC	2A DC
	Max. DC current resistive load @ 30 VDC < U _{relay} < 200VDC	380 x (U _{relay} -15) ² x 1.012 ^{U_{relay}-15} A DC
	Max. switching frequency	20Hz
	Response time	< 20 ms
NPN Output	Max. voltage	30VDC
	Max. switching frequency	5kHz
	Min. pulse length	> 0.1 ms
	Max. voltage drop	2.5 VDC @ 80mA
	Response time	< 0.1 ms

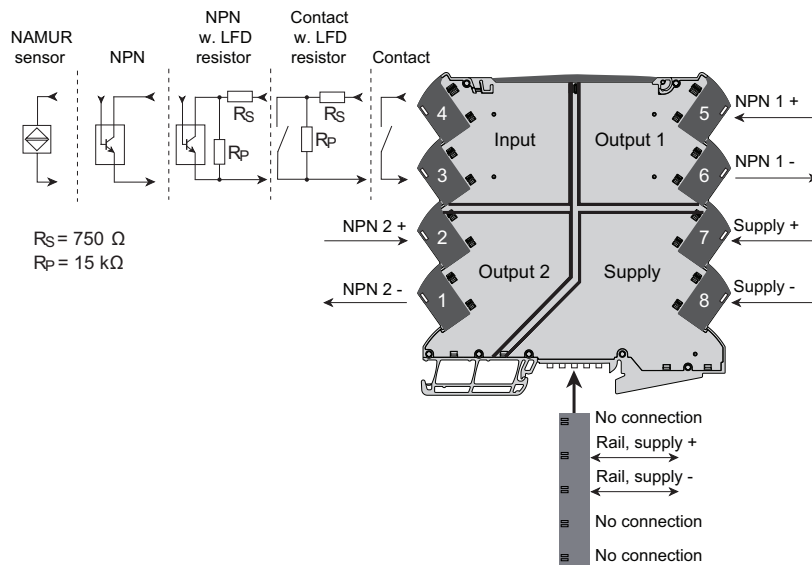
See product manual for additional specifications and installation information.



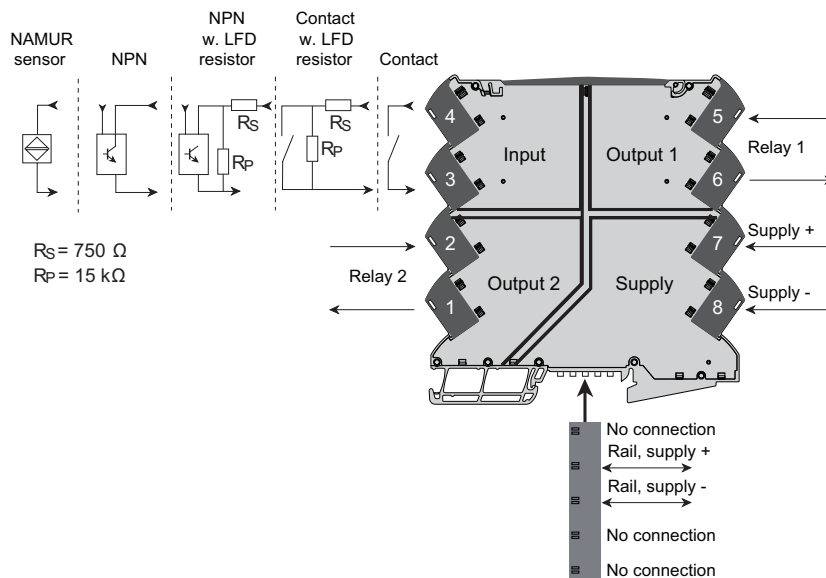
SC6 Series - Pulse Isolator / Switch Amplifier - Signal Conditioners

Wiring

Part No. SC6-2001



Part No. SC6-2002



Note: For contact and NPN input appropriate-sized resistors for R_S and R_P must be installed when Line Fault Detection is enabled.
 Typical values $R_S = 750 \, \Omega$ and $R_P = 15 \, k\Omega$.

prosense® SC6 Series Signal Conditioners

ProSense Power Connector Unit

The SC6-PCU1 power connector unit allows easy connection of a 24 VDC / 2.5 A source to the in-rail-bus to provide power to multiple SC6 signal conditioners mounted on the rail.

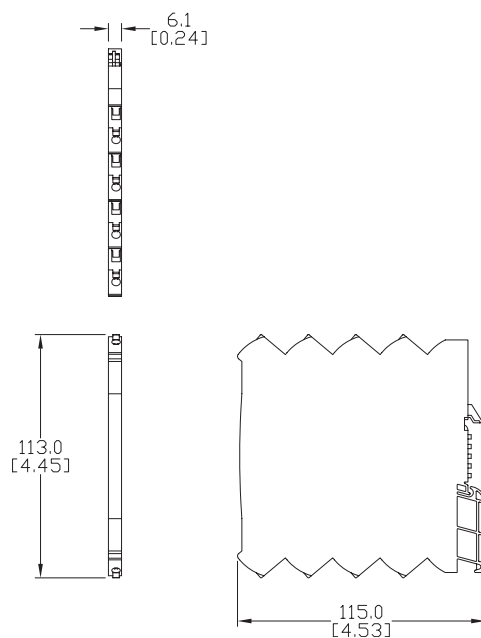


Power Connection Module			
Part No.	Description	Weight (lb)	Price
SC6-PCU1	ProSense power connection unit, for use with SC6 series signal conditioners.	0.19	\$120.00

Technical Specifications	
Part No.	SC6-PCU1
Supply voltage	16.8-31.2 VDC
Internal power dissipation	0.25 W max.
Required external fuse	2.5 A

Dimensions

mm [inches]



See our website www.AutomationDirect.com for complete Engineering drawings.

prosense® SC6 Series Signal Conditioners Accessory

In-Rail-Bus



SC6 Series Signal Conditioners Accessory					
Part No.	Description	"A"	"B"	Weight (lb)	Price
0068060	In-rail-bus, 250mm length. For use with SC6 series signal conditioners and DN-R35S1 series DIN rail.	239mm	252mm	0.2	\$51.00

Note: Order DIN rail and signal conditioners separately

In-Rail-Bus-Set / 250mm		
Part No.	0068060	Materials
Each Set Includes	BUS-PCB 250mm	Polyamide with copper traces
	Carrier profile 250mm	
	Carrier rail cover 250mm	Polyamide
	Safety cap right	Polycarbonate
	Safety cap left	Polycarbonate

Dimensions mm [inches]

