

# IS400P

smar  
First in Fieldbus

DEC / 03  
IS400P

INSTALLATION MANUAL

## Power Distributor and Isolator





**Specifications and information are subject to change without notice.  
Up-to-date address information is available on our website.**

**web: [www.smar.com/contactus.asp](http://www.smar.com/contactus.asp)**

# IS400P- POWER DISTRIBUTOR AND ISOLATOR

## Introduction

The signal Isolator Distributor Module model IS400P is an auxiliary device projected to isolate galvanically a transmitted signal (current or voltage) of a receiver device, typically a register or controller. Besides, the power supply of the module is isolated from the input and output.

The signal Isolator Distributor Module - IS400P - solves the problem of the distortion in the signal transfer due to potentials of different ground.

It can also be used in the power supply of two-wire transmitters.

The figure 1 shows the terminals of the IS400P.

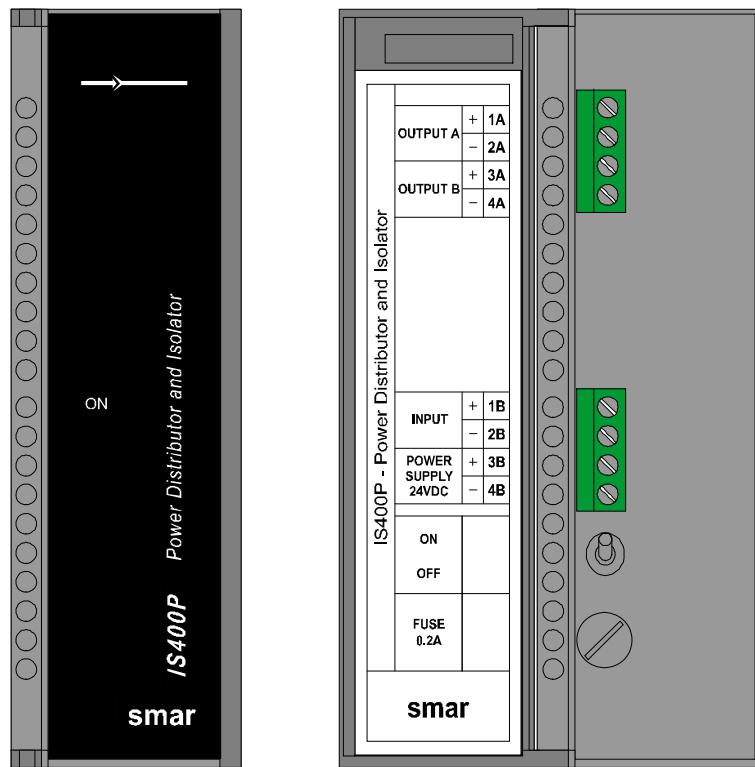


Fig 1 – Frontal View IS400P

### ORDERING CODE

IS400P	POWER DISTRIBUTOR AND ISOLATOR	
	<b>CODE</b>	<b>INPUT</b>
	0	4-20 mA
	1	1-5 Vdc
	2	4-20 mA (integral power supply for two-wire transmitter)
	<b>CODE</b>	<b>OUTPUT</b>
	0	4-20 mA/ 4-20 mA
	1	1-5 Vdc/ 4-20 mA
	2	1-5 Vdc/ 1-5 Vdc
<b>IS400P</b>	<b>1</b>	<b>2</b>

## General Characteristics

The Power Distributor and Isolator, model IS400P, can be used in two ways:

- Power supply for two-wire transmitters, providing isolation between input and outputs.
- Isolate 4-20 mA or 1-5 Vdc signal between the input and outputs.

## How to Configure the Inputs and Outputs of the Circuit Board

### Inputs

#### For inputs of 4-20 mA

- Insert jumpers W2, W4 and W11.

#### For inputs of 1-5 Vdc

- Insert jumpers W2, W4 and W10.

#### For two-wire transmitters

- Insert jumpers W1, W3 and W11.

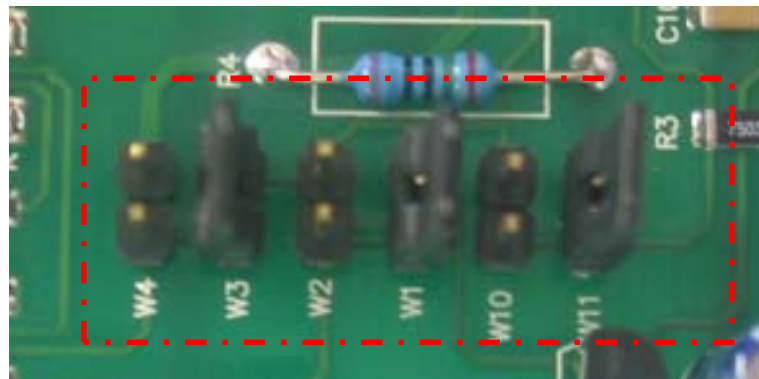


Fig 2 – Jumpers W1, W2, W3, W4, W10 and W11

### Outputs

#### For output A 4-20 mA/output B 4-20mA

- Insert jumper W5, and put the jumpers W8 in ON and W9 in OFF.

#### For output A 1-5 Vdc /output B 4-20 mA

- Insert jumper W6, and put the jumpers W8 and W9 in ON.

#### For output A 1-5 Vdc/output B 1-5 Vdc

- Insert jumpers W6, W7, and put the jumpers W8 in OFF and W9 in ON.

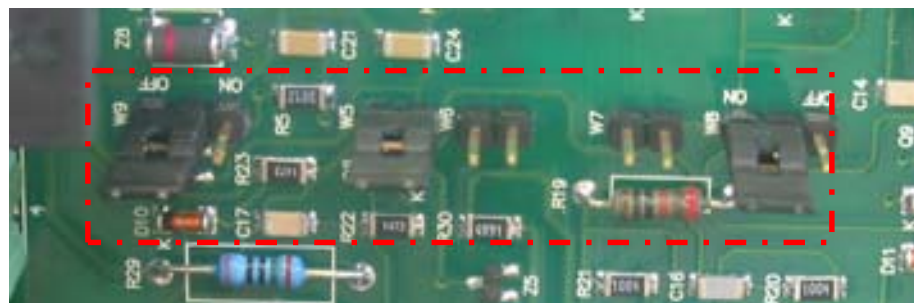


Fig 3 – Jumpers W5, W6, W7, W8 and W9

## Technical Specifications

### General

- Power supply: 24 Vdc  $\pm$ 10%
- Accuracy: 0.15% of span
- Maximum current consumption: 120 mA
- Insulation resistance from power supply to input and outputs: 1000 M $\Omega$  (minimum) at 500 Vdc.
- Dielectric strength: Between every terminal: 500 Vac for 1 minute (among all points).
- Operation temperature range: 0 a 60 °C.

### Input

- 4-20 mA using the integral power supply for two-wire transmitters.
- 4-20 mA
- 1-5 Vdc

#### NOTE

Inputs for 0 to 20 mA and 0 to 5 Vdc can also be used, with the outputs being respectively 0 to 20 mA and/or 0 to 5 Vdc.

- Integral Power Supply (when used).
- Maximum External Load: 300  $\Omega$  (when used with LD290, LD300, LD301, TT300 and TT301 Transmitters Series).
- Short Circuit Current: approximately 40 mA.

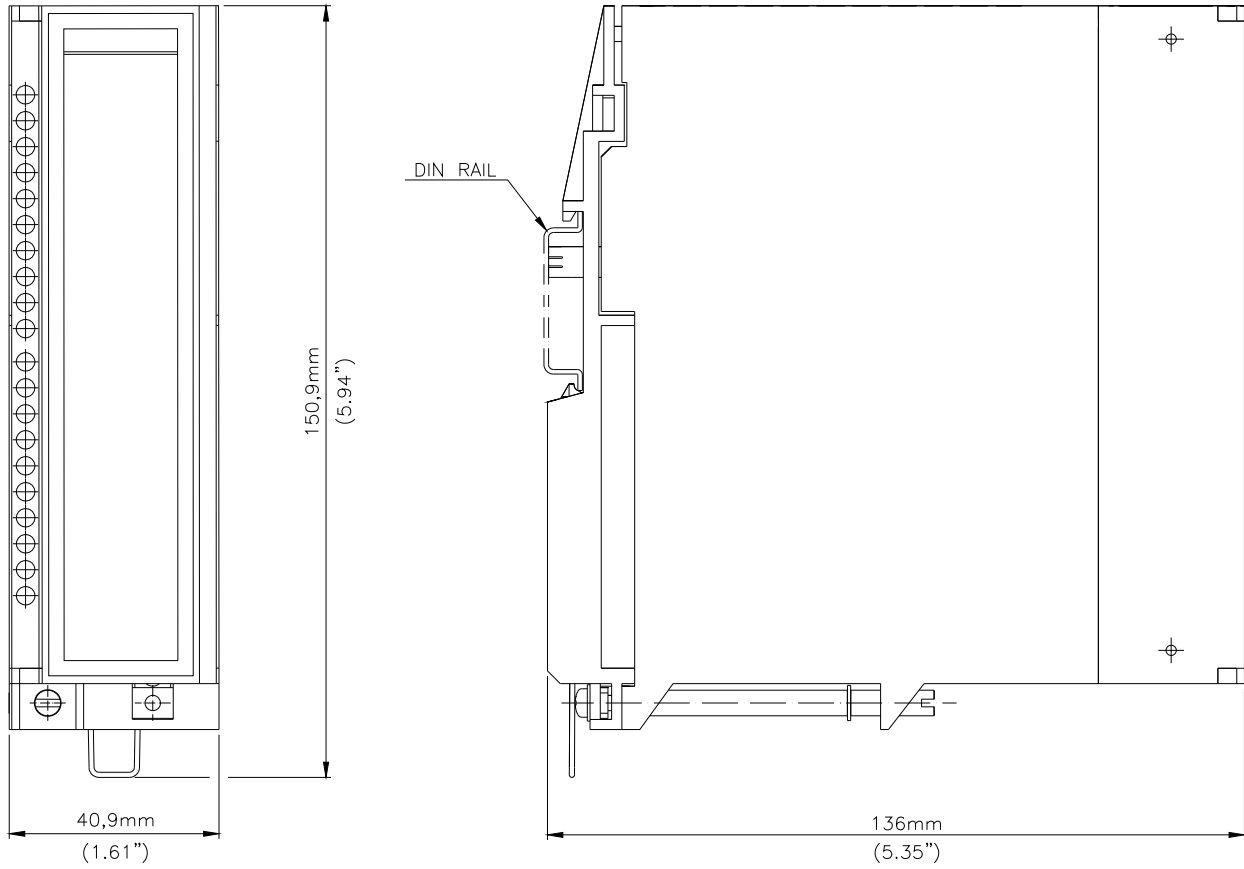
### Outputs A/B

- 4-20 mA/4-20 mA
- 1-5 Vdc/4-20 mA
- 1-5 Vdc/1-5 Vdc
- The output negative terminals are interconnected.
- Maximum load (current output): 750  $\Omega$  with power supply of 24 Vdc.
- Minimum load (voltage output): 5 k $\Omega$ .

#### NOTE

In case of the outputs A or B is not used, it should be jumped, or the other, the positive is to be connected to the negative.

## Dimensions



**Fig 4 – Dimensions**

# Appendix A

<b>smar</b>	<b>FSR – Service Request Form</b>	
	<b>IS400P – Power Distributor and Isolator</b>	Proposal N°: _____
<b>COMPANY INFORMATION</b>		
Company: _____		
Unit: _____		
Invoice: _____		
<b>COMMERCIAL CONTACT</b>		
Full Name: _____		
Phone: _____		Fax: _____
E-mail: _____		
<b>TECHNICAL CONTACT</b>		
Full Name: _____		
Phone: _____		Extension: _____
E-mail: _____		
<b>EQUIPMENT DATA</b>		
Model: _____		
Serial Number: _____		
<b>PROCESS DATA</b>		
Process Type (Ex. boiler control): _____		
Operation Time: _____		
Failure Date: _____		
<b>FAILURE DESCRIPTION</b>		
(Please, describe the failure. Can the error be reproduced? Is it repetitive?)		
_____		
_____		
_____		
_____		
<b>OBSERVATIONS</b>		
_____		
_____		
_____		
_____		
<b>USER INFORMATION</b>		
Company: _____		
Contact: _____		
Section: _____		
Title: _____		Signature: _____
Phone: _____		Extension: _____
E-mail: _____		Date: ____/____/____
For warranty or non-warranty repair, please contact your representative. Further information about address and contacts can be found on <a href="http://www.smar.com/contactus.asp">www.smar.com/contactus.asp</a>		

