ProSense® Digital Process Meter

Quick Start Guide

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Description:

This Quick Start Guide provides basic information for configuring the ProSense digital process meters. For more specific information and additional instructions please visit www.AutomationDirect.com and download the free instructions manuals for the LPD5 series.

CE

The numerical displays for series LPD5-A-AC and LPD5-A-DC, are industrial displays with analog input for the control processes. All the models are manufactured in 5 digits, with one display side.

The large digit display size of 100mm, with a legible distance from 50m, is one of the main characteristics.

All the equipment is provided completely calibrated, with the data stored in non-volatile memory, eliminating the use of trimming potentiometers.

Technical Specifications

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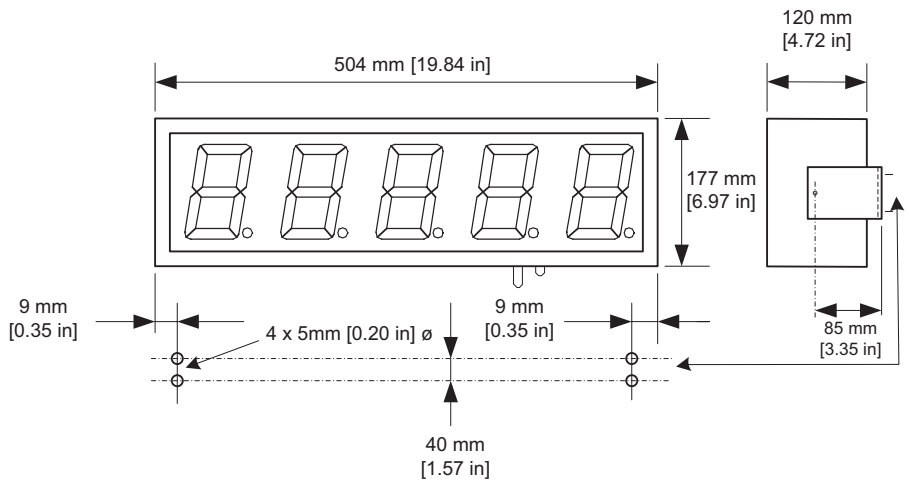
Supply Voltage	100 to 240 VAC 50 to 60Hz or 19 to 36VDC	
Consumption	17W	
Display	7 segments, 100mm high + decimal point	
LED	Red LED sunlight readable. Viewing distance: max 50 meters	
Parameter Memory	Eeprom	
Environmental Conditions	***Operation temperature***	-20 to 60ºC (-4 to 140ºF)
	Storage temperature	-30 to 70ºC (-22 to 158ºF)
	Humidity	5-95% RH non condensing
	Sealing	IP65
Input Signal	***Configuration***	Differential asymmetrical
Voltage Input	***Range***	± 10VDC
	Resolution	0.5 mV
	Input impedance	1 MΩ
Current Input	***Range***	± 20 mA DC
	Resolution	5µA
	Input impedance	12.1 Ω
Output Excitation	24VDC @ 100mA	
Accuracy to 22° ±5°C	***Maximum error***	± (0.1% of reading + 3 digits)
	Temperature coefficient	100ppm/°C
	Warm up time	5 minutes
Conversion Method	***Technique***	Sigma-Delta
	Resolution	16 bits
	Rate	25 samples/s
Display	***Over-range 5 digits***	-OuE / OuE
	Parameter error. IP1 > IP2	E0
	Non input signal or polarity inverted	E2
	Over-range input signal	E3

Dimensions



Installation

The installation is not a particularly delicate one, but some important considerations must be taken into account.

The display must not be anchored to places subject to vibrations, nor should it be installed in places which generally surpass the limits specified in the display characteristics, both in terms of temperature and humidity.

The degree of protection of displays is IP65 meaning that they are dust-tight and protected from low pressure water jets from any direction.

In the electrical installation, proximity to lines of high intensity circulation and high voltage lines must be avoided, as well as proximity to High Frequency generators and U/F converters for motors.

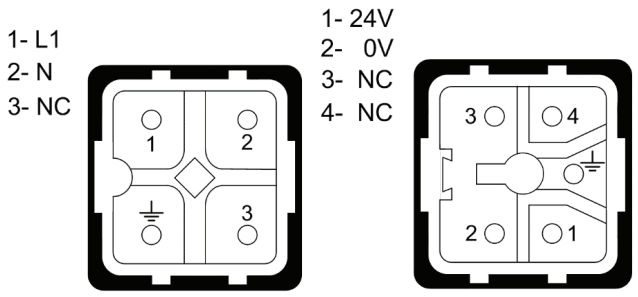
Power Supply

The power supply must be 100 to 240 VAC, 50 to 60 Hz or 19 to 36 VDC.

The power supply conductor section will be in line with consumption and the ground conductor will be a minimum section of 1.5m².

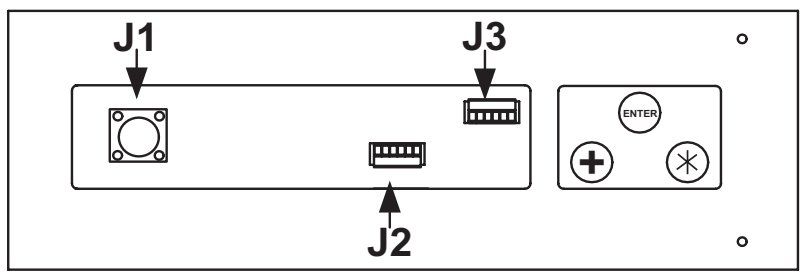
The power supply connector for 100 to 240 VAC has 4 contacts and is situated in the lower part of the unit. Connect the power wires following the schema below.

The power supply connector for 19 to 36 VDC has 5 contacts and is situated in the lower part of the unit. Connect the power wires following the schema below.



LPD5-A-AC LPD5-A-DC

Button and Connector Position



The signal connectors are situated in the lower part of the unit.

Connector J2: Analog inputs.

Connector J3: Relay output.

The J1 power lead connector is placed in the lower part of the unit.

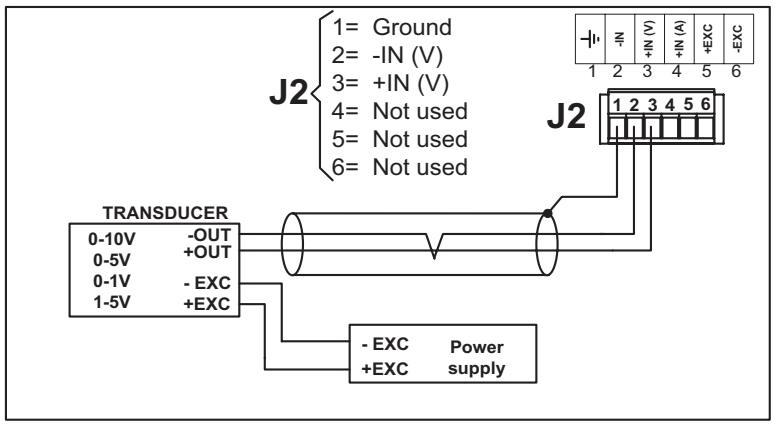
The buttons for configuration of the equipment are located in the lower part. They are identified with the symbols +, * and the text “ENTER”.

Wiring

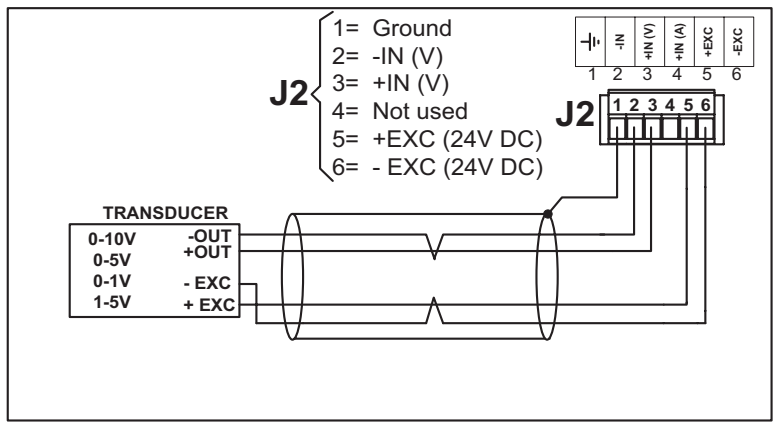
In all the mountings, the connection of the inputs must be done using braided and insulated cable. The screen must only be connected to terminal 1 of the input connector.

Terminals 5 and 6 of J2 are output power. Terminals 5 and 6 of J2 must NEVER be connected to a power supply.

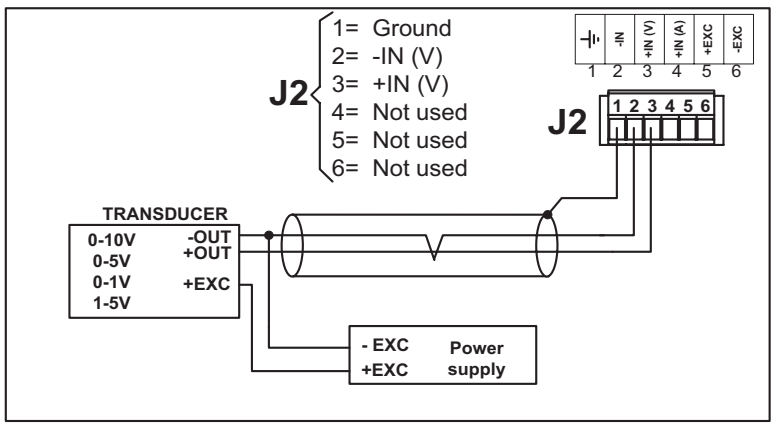
Voltage input. 4-Wire Connection. External excitation



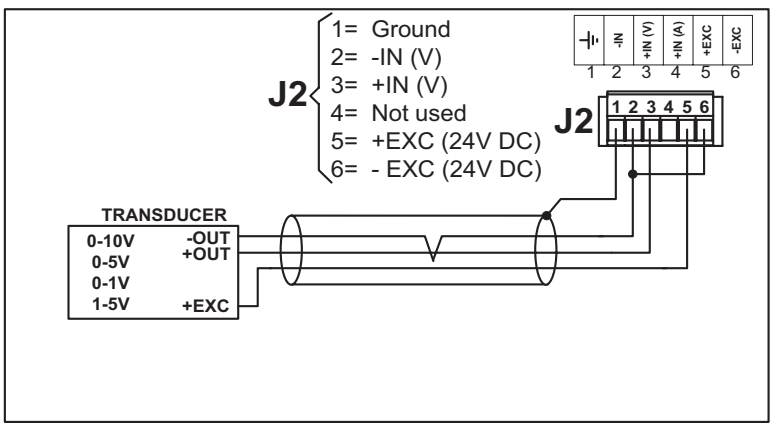
Voltage input. 4-Wire Connection. Internal excitation



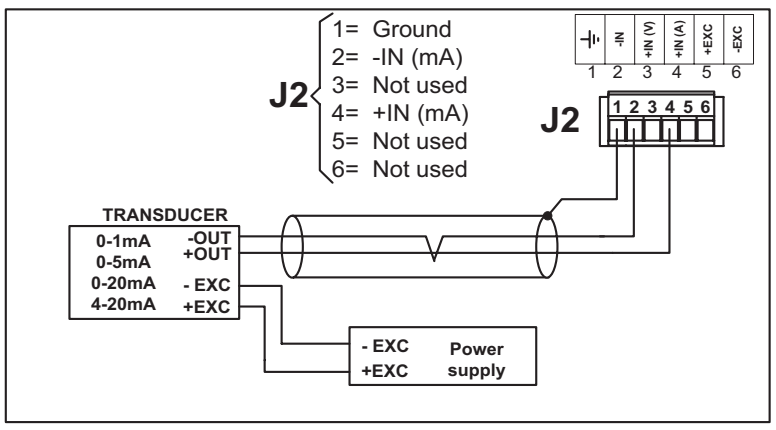
Voltage input. 3-wire connection. External excitation



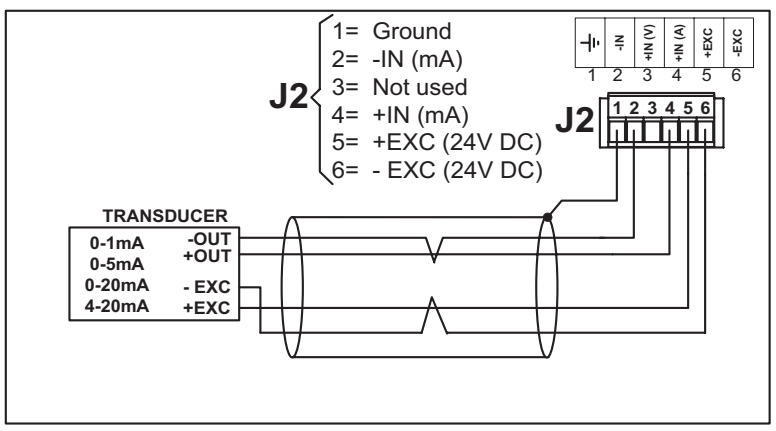
Voltage input. 3-wire connection. Internal excitation



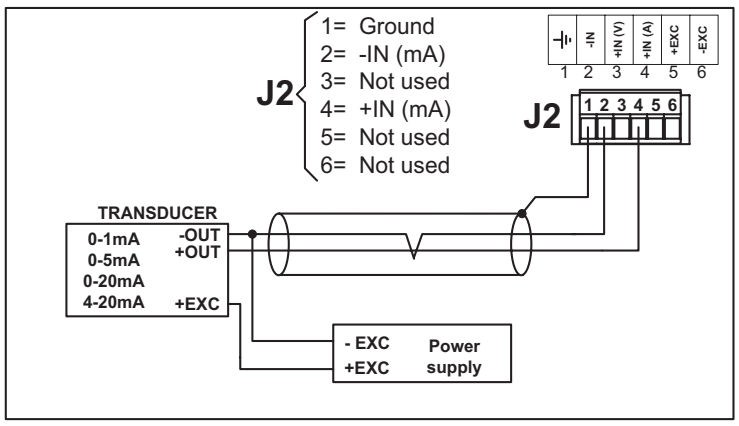
Current input. 4-wire connection. External excitation



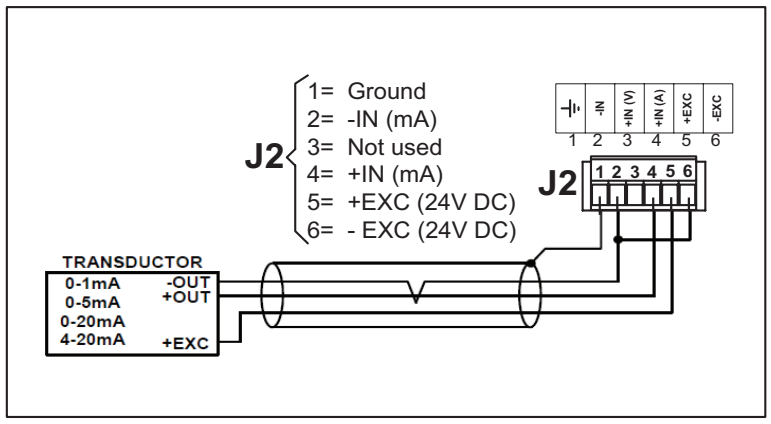
Current input. 4-wire connection. Internal excitation



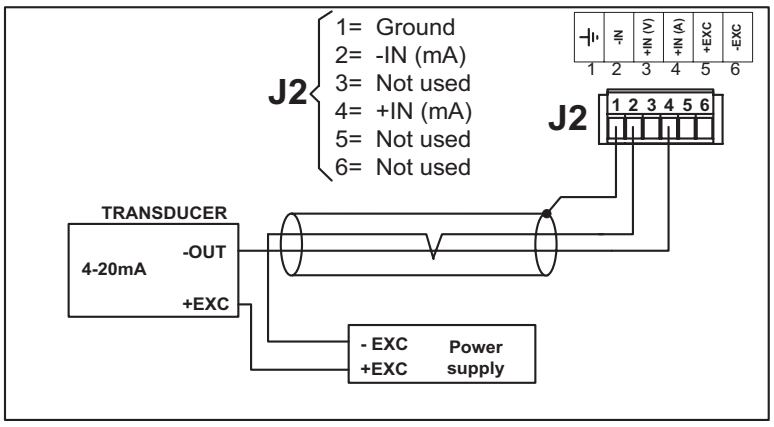
Current input. 3-wire connection. External excitation



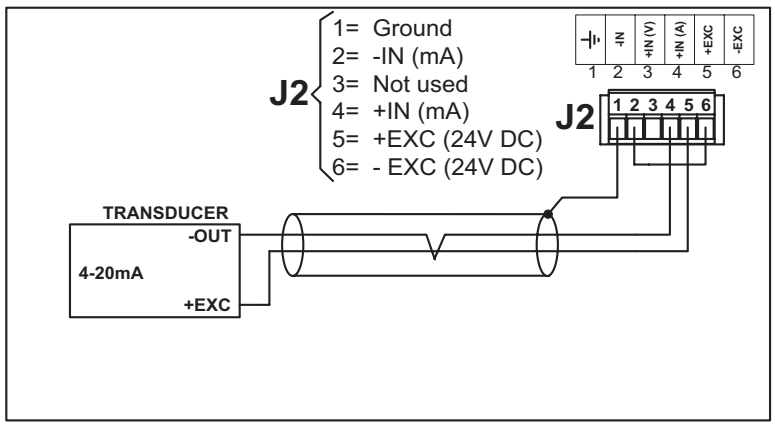
Current input. 3-wire connection. Internal excitation



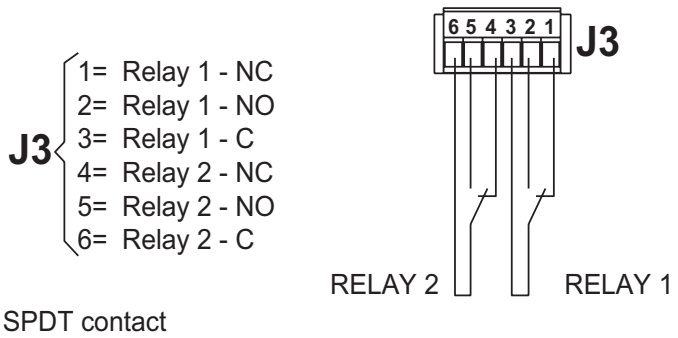
Current input. 2-wire connection. External excitation



Current input. 2-wire connection. Internal excitation



Wiring the relay output



SPDT contact
Maximum current: Resistive load, 5A
Inductive load, 5A
Maximum voltage: 60V AC/DC
Note: To guarantee electrical safety according to EN 61010-1 a protective external fuse must be installed.
Recommended fuse: 5A

Operation

For information regarding programming, configuration and error codes, please refer to the user manual for the ProSense Series LPD5-A.

Additional Help and Support

- For additional technical support and questions, call our Technical Support team @ 1-800-633-0405 or 770-844-4200
- For additional product information, please download the complete product manual which can be found at: www.AutomationDirect.com