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11 121

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Pressure Transmitter

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### Description

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*The 11 121 is a 4 - 20mA loop powered pressure transmitter capable of measuring gauge pressure for a variety of applications including liquids, gases and vapors. The 11121s thin film pressure transducers features a high pressure range along with reliable performance and accuracy. It is ideal for gas and liquid pressure measurement such as water, oil and non aggressive chemical liquid.*

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### Features

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- Two-wire, 4-20 mA loop powered transmitter.
  - Measure Gauge Pressure for a variety of applications including liquids gases and vapors.
  - Ideal for high pressure application
  - Pressure ranges from 0-30 Bar up to 0-1200 Bar.
  - Accuracy of less then 0.5% of full scale.
  - Input power of 12-30V.
  - Compact design.
  - Easy installation.
  - No calibration required.
  - Configured to customer specifications prior to shipping.
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The purpose of this document is assist with the setup, installation, operation and maintenance of the 11 121 as well as providing technical specifications and basic data, for further information about this product can be found at [www.springres.com](http://www.springres.com)

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## 1 General Information

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The 11 121 is a 4 - 20mA loop powered pressure transmitter capable of measuring gauge pressure for a variety of applications including liquids, gases and vapors. The 11 121s compact size, simplistic installation and high available pressure range make it an ideal choice for most pressure applications with measurement ranges up to 1200 bar. The 11 121 can be mounted in any orientation and uses a 1/8" NPT, 1/4" NPT or G 1/4 process connection.

The purpose of this document is to provide an overview of the 11 121 and its various technical specifications. For more information on the 11 121 and all other Springfield Research products, please visit our web site at [www.springres.us](http://www.springres.us).

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## 2 Safety Information

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### Basic Safety Information

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The 11 121 is a continuous pressure transmitter for use in applications within the range of technical specifications as outlined in the Technical Specifications section of this document. The 11 121 is to be installed and operated by trained personnel with proper authorization.

All instructions in this manual should be performed by such personnel only. The 11 121 is a self contained unit and any internal work on the 11 121 must be performed by Springfield Research and its authorized partners only. Failure to adhere to the instructions in this manual could result in application specific hazards, and/or equipment damage, and will void the 11 121 warranty.

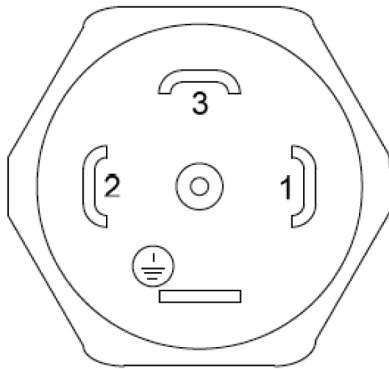
Please adhere to specific governmental and/or company regulations and guidelines before installing any equipment. When installing the 11 121 in Ex environments, be sure to follow the Ex standard guidelines as well as the Ex specific instructions contained throughout this document.

### Safety Approvals

The 11 121 meets CE conformity with the following standards:

- EMC (89/336/EWG)
- NSR (73/23/EWG)
- R & TTE guideline (1999/5/EC)
- Namur NE 21 recommendation

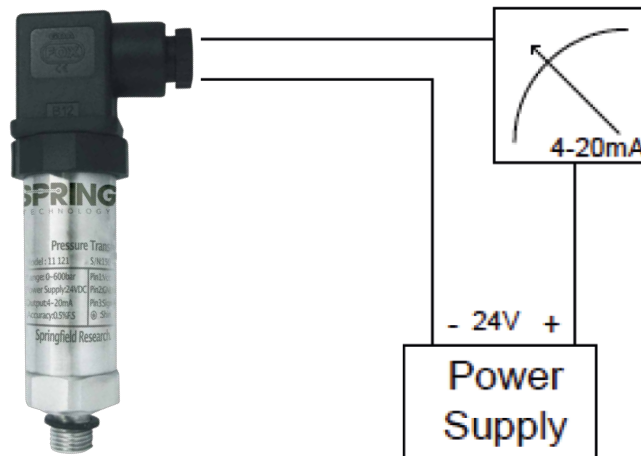
### 3 Connection Information



**Fig. 1.1** – Connections and description of the 11 121 Top View.

Connection	Description
	Signal +
1	Signal -
2	NC
3	Chassis Ground
GND	

**Fig. 1.2** - Shows the connection descriptions of the 11 121.



**Fig. 1.3** – Wiring Diagram for the 11 121.

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## 4 Technical Specifications

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### Functional Specifications

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#### Output Signal

Two-wire, 4-20 mA

#### Power Supply

12-30V +- 10%

#### Measurement Range

From 0-30 Bar up to 0-1200 Bar

See figure 1.4 for all options

#### Max Allowed Overpressure

2.0 times full scale

#### Pressure Form

Gauge Pressure

#### Hazardous Location

Available both in Explosion proof and

Non Explosion Proof

#### Mechanical Dimensions

See Fig. 1.3

#### Temperature Limits

*Compensated Temperature:*

-10 to 60oC (14 to 140oF)

*Working Temperature:*

-40 to 80oC (-40 to 176oF)

#### Humidity Limits

10 to 100% RH

#### Turn-on Time

Approximately 10mS

#### Update Time

10mS

#### Mounting

See ordering code.

### Performance Specifications

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#### Accuracy

0.5% of Full Scale (including linearity, repeatability and hysteresis)

#### Long Term Stability

+/- 0.2% Full Scale per year

#### Vibration Effect

Meets SAMA PMC 31.1

#### Electro-Magnetic Interference Effect

Designed to comply with IEC 801

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## Physical Specifications

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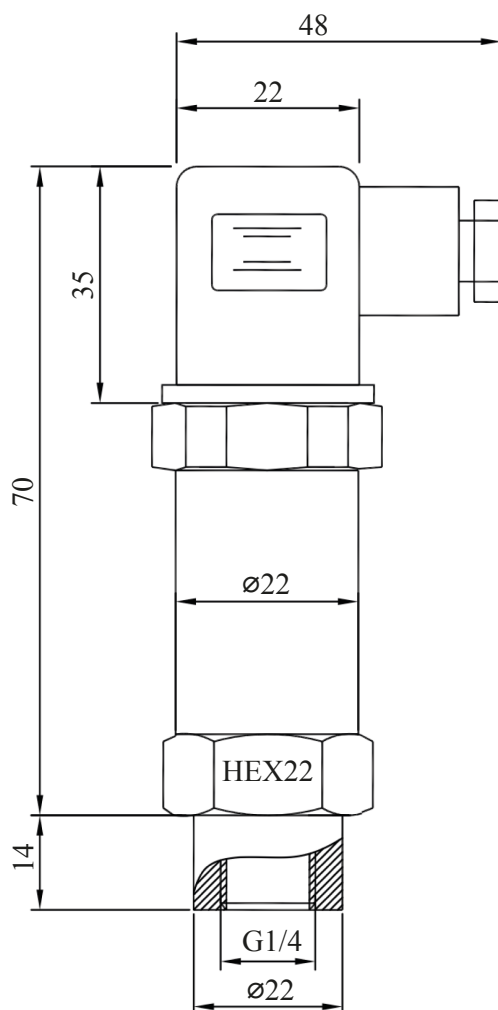
### Electrical Connection

3 Pin connector accommodates conductors up  
to 2.5mm<sup>2</sup> (12 AWG)

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## 5 Mechanical Dimensions

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**Note:**

All Units are mm

**Fig. 1.4** – Mechanical Dimensions

## 6 Ordering Information

Output Signal	PRESSURE TRANSMITTER	
	CODE	MEASUREMENT RANGE
:	01	0~30 Bar
:	02	0~100 Bar
:	03	0~300 Bar
:	04	0~600 Bar
:	05	0~1000 Bar
:	06	Others on request.
:	:	<b>CODE    Process Connection</b>
:	01	1/8" NPT
:	02	1/4" NPT
:	03	G 1/4"
:	04	7/16" - 20 UNF
:	05	Others On Request
:	:	:
<b>11 121</b>	1	1

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