



TECHNICAL SPECIFICATIONS

■ VKP-033

Zero & Span Adjustable IP65 Pressure Transmitter

Description:

The Zero & Span Adjustable IP65 Pressure Transmitter was designed to meet industrial application requirements and to address fine signal adjustment challenges in the process with precision and efficiency. Its construction is entirely made of AISI 316L stainless steel, ensuring compatibility with the vast majority of industrial processes. The IP65 protection rating provides complete protection against dust and water jets from any direction. The microcontroller-based electronics, built with high-quality SMD components, incorporate exclusive temperature compensation technology, making it the ideal solution for a wide range of industrial applications.

Main Applications:

- Industrial process control
- Sanitation and wastewater treatment
- Refrigeration, ventilation, heating, and air conditioning (HVAC)
- Hydraulic systems
- Pneumatic systems

Operating Principle:

The piezoresistive-type pressure transmitter measures process pressure through a component known as a diaphragm, which is in direct contact with the process fluid. As the pressure varies, the diaphragm is deflected with proportional intensity. A miniature sensor located on the inner side of the diaphragm converts the pressure variation into a corresponding change in electrical resistance. An integrated electronic circuit then converts this information into a 4-20 mA current signal or a 0-10 VDC or 0-5 VDC voltage signal, compatible with virtually all automation devices, including PLCs, digital indicators, and other control systems.

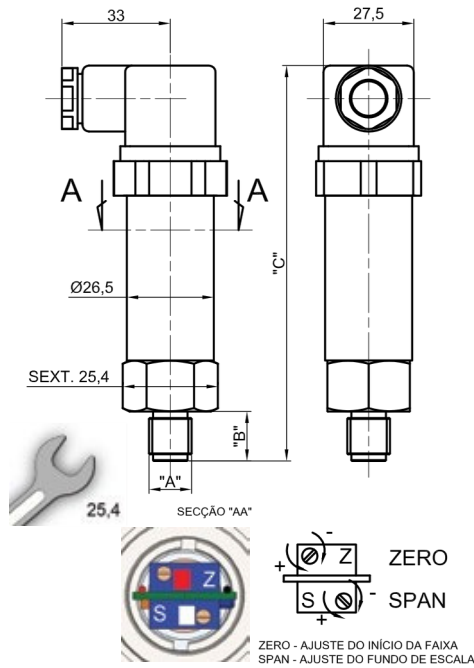
Key Features / Differentials:

- Zero & span signal adjustment
- High rangeability available
- Robust construction

PRODUCT DETAILS



DIMENSIONAIS DATA



TECHNICAL DATA

"A" THREAD

"B" THREAD
LENGTH (mm)

"C" OVERALL
LENGTH (mm)



1/4 " BSPM
1/4 " NPTM
1/2 " BSPM
1/2 " NPTM
3/4 " BSPM
3/4 " NPTM

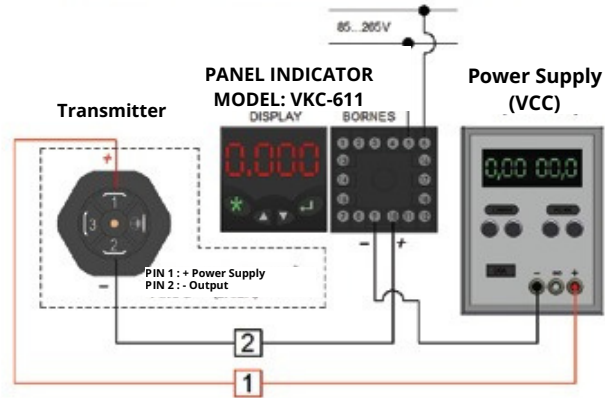
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15
20
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20
20

120
120
125
125
125
125

■ INSTALLATION DIAGRAM

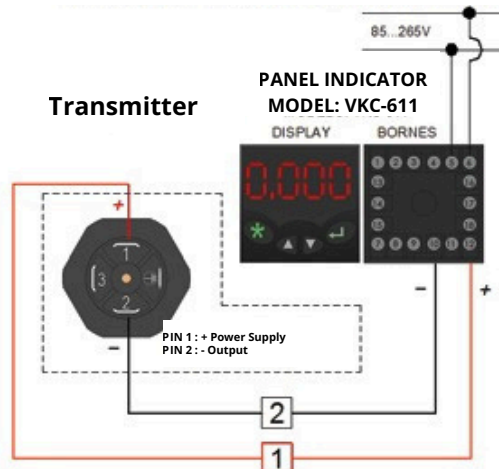
DIN CONNECTOR
 Using an external power source
 4...20mA (CURRENT) - 2-wire connection

01



DIN CONNECTOR
 Using an internal power source
 4...20mA (CURRENT) - 2-wire connection

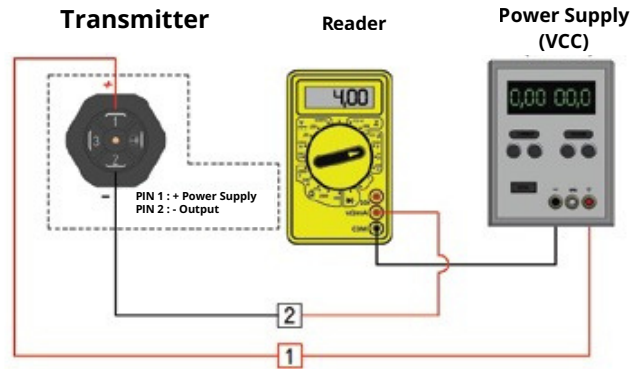
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■ INSTALLATION DIAGRAM

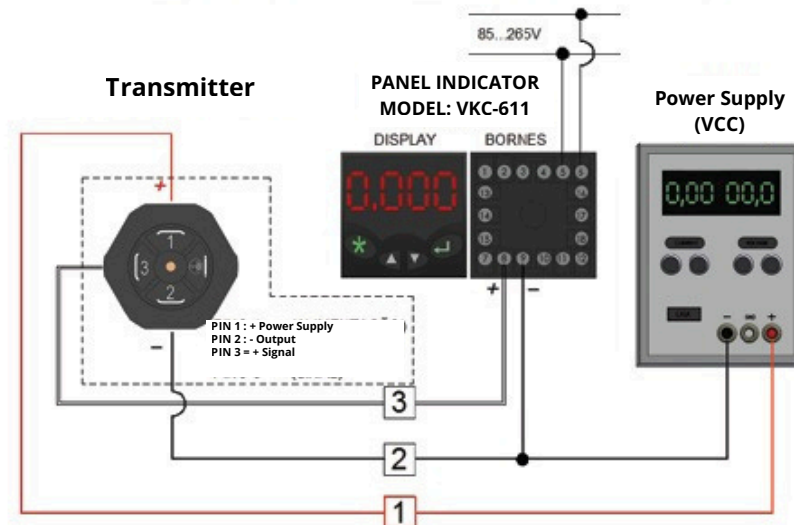
DIN CONNECTOR
 Using an external power source
 4...20mA (CURRENT) – 2-wire connection

03



DIN CONNECTOR
 Using an internal power source
 0...10VCC (CURRENT) and 0...5VCC – 3-wire connection

04



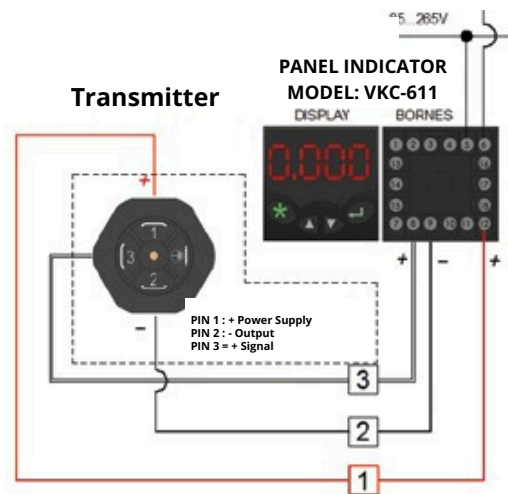
■ INSTALLATION DIAGRAM

DIN CONNECTOR

Using an internal power source

0...10VCC (CURRENT) and 0...5VCC- 3-wire connection

05

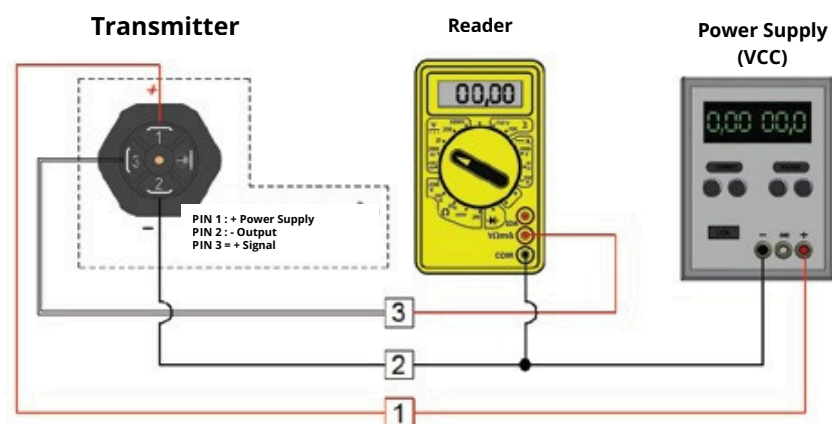


DIN CONNECTOR

Using an external power supply with a multimeter

0...10VCC (CURRENT) and 0...5VCC- 3-wire connection

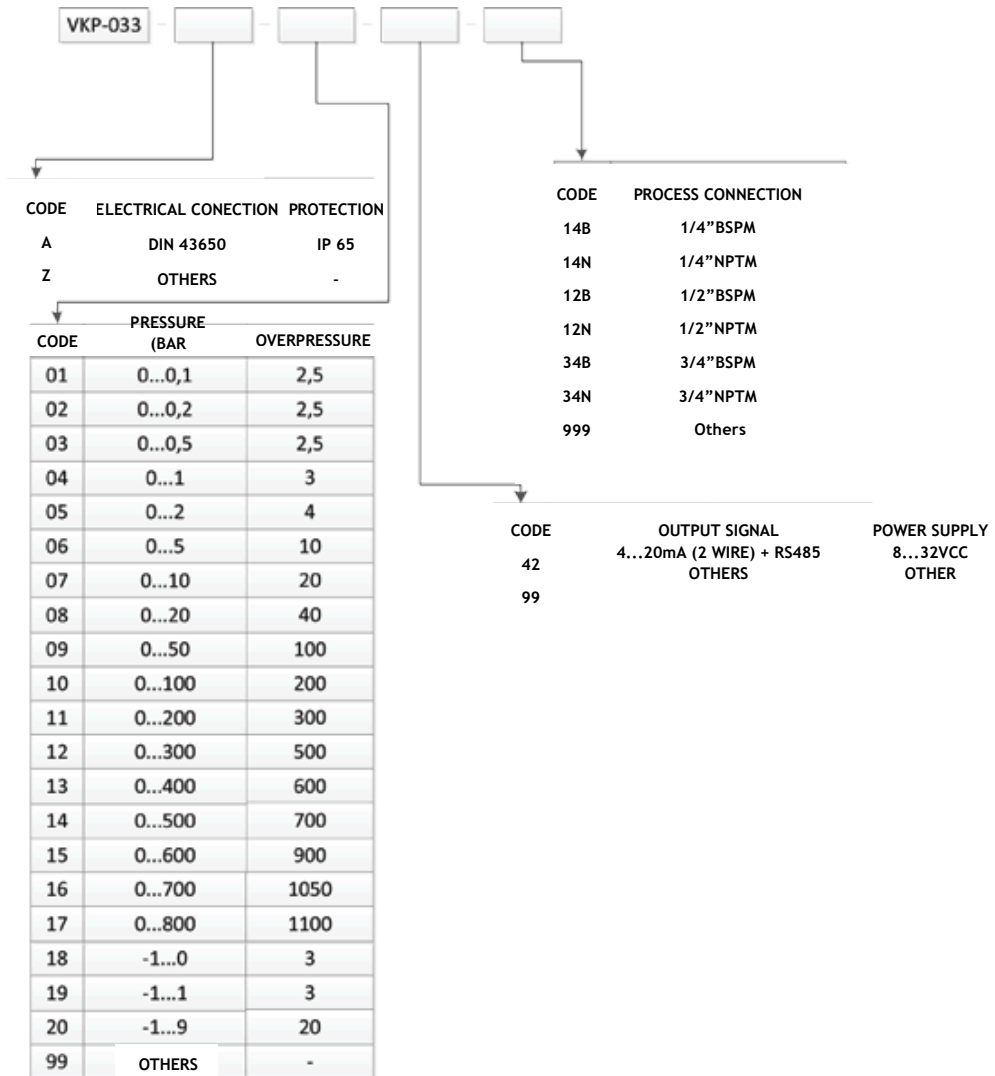
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■ TECHNICAL DATA

Sensor Type	Piezoresistive		
Measuring Range	-1...0BAR 0...1BAR until 0...250BAR		
Accuracy	+/-0,25%F.E. (Including Hysteresis and Repeatability)		
Stability	Measuring range > 2BAR = 0,1...0,2% FE Measuring range > 2BAR = 2...4mBAR		
Overpressure	According to the table		
Diaphragm Material	Stainless Steel AISI-316L		
Sensor Fill Fluid	Standard Silicone (Other options available)		
Fluid Temperature	-40°...100°C		
Ambient Temperature	-10°C ... 80°C		
Enclosure Material	Stainless Steel AISI-316L		
Protection Rating	IP65		
Electrical Connection Type	DIN43650		
Communication Cable	Made of PVC (OPTIONAL)		
Connection Material	Stainless Steel AISI-316L		
Process Connection	1/4"BSP, 1/4"NPT, 1/2"BSP, 1/2"NPT, 3/4"BSP, 3/4"NPT and Others		
Material in Contact with the Process	Stainless Steel AISI-316L + O-Ring in FPM (Fluorocarbon). Other material combinations available.		
Output Signal	4...20mA	0...10VCC	0...5VCC
Output Signal Limit	3,2...22,3mA	-1,2...11,2V	-0,6...5,6V
Power Supply	8...32VDC	12...32VDC	8...32VDC
Load Resistance	<(U-8) / 0,025	>5kΩ	>5kΩ
Frequency Limit	2kHz	2kHz	2kHz
Power Consumption	Max. 24mA	Max. 5mA	Max. 5mA
Response Time	(0-99%) < 5ms		
Electromagnetic Compatibility	EN 61000-6-2: 2005 EN61000-6-3: 2005 EN61326-2-3: 2006		

■ HOW TO SPECIFY



Specification example: VKP-033-A-07-42-12N
 Description: PRESSURE TRANSMITTER, VKP-033 SERIES, DIN 43650 type electrical connector, IP65 protection rating, pressure range 0...10 bar, 4...20 mA output signal, 2-wire, 1/2" NPT male process connection.

■ WARRANTY

Due to constant technological advancement, Velki products may be modified without prior notice. Velki is always ready to clarify any doubts. Do not hesitate to contact us.

Warranty:

Every Velki product is manufactured according to the highest quality standards. All Velki products come with a 1-year warranty from the date of the invoice, provided that:

1. The product is used correctly, within the limits of its technical specifications, and in accordance with the instructions.
2. It has not suffered mechanical or electronic damage caused by accidents or misuse.
3. Its seals have not been tampered with.

Shipping costs for repairs and transportation risks (to and from) are the responsibility of the owner. Free technical support will only be provided by the factory, located at Rua Theolinda Xavier da Silveira, 255 Jd. Oliveira - Itu, SP, CEP 13312-035. Products with broken seals, that have been disassembled, modified, or subjected to mechanical or electrical overload, exceeding catalog values, or damaged due to improper mechanical or electronic installation will lose the right to warranty.

Technical Support:

Sending instruments for repairs (under warranty or not) or for periodic or eventual calibration must be previously communicated to Velki Technical Support, which will define the shipping conditions and provide instructions. Shipping costs for repairs and transportation risks (to and from) are the responsibility of the customer.

Important:

All information in this manual specifically refers to the instrument indicated. It aims to help the customer use the product properly. These instructions do not cover all possibilities: specific questions can and should be directed to Velki's Technical Support, who will be happy to assist.

Attention:

In case of any malfunction, avoid attempting to repair the instrument yourself; immediately contact Velki's Technical Support for the appropriate procedures.



In-House Manufacturing
with Specialized Team



Shipping within 4 hours



Custom Products
tailored to your needs



Guaranteed Smart Purchase
with Velki Consultancy