Exceeding Automation Limits

PRODUCT CATALOG

VIVACE™
Process Instruments

HART COMMUNICATION PROTOCOL
PROFIBUS®
FIELDCOMM GROUP™ MEMBER
Ex
CE

LIFETIME WARRANTY

ABOUT VIVACE

Vivace Process Instruments is a company that provides products and services for industrial automation and control.

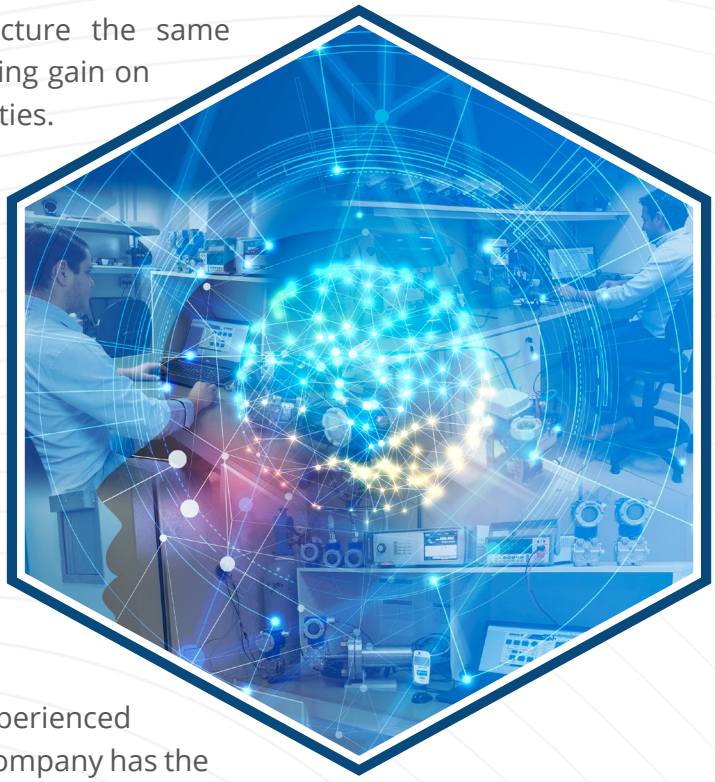
The company was born to strive, inspire courage to change, leave the obvious and overcome challenges. More than this, start a new phase on the development and supply of industrial automation products and services in Brazil. Everything to keep our major value: your trust.

Vivace is composed by a multidisciplinar team of over 30-years experienced professionals working on automation and instrumentation market, having large experience on project techniques, maintenance and installation, in addition to knowledge of all process segments such as sugar & ethanol, mining, oil & gas, paper & cellulose, food & beverage and others.

The team of developers has large experience on the development of industrial automation and instrumentation technology, successfully supporting national and international companies on the conception, specifi cation, implementation and certifi cation of industrial automation development projects. It also offers software and hardware projects on HART®/4-20mA, WirelessHART, Foundation Fieldbus, and Profibus technologies, in addition to integrating those communication protocols on customer products, working together on the choice of the best option and technology to attend the customer needs.

INSTALLATIONS

Vivace Process Instruments uses in its structure the same technology it produces for its customers, reaching gain on quality and productivity in the operational activities.



All company sectors are located in the same building, including the research and development, engineering, specialized laboratories, support/technical assistance and test/application development areas.

A structure composed by modern devices is responsible for the manufacturing process control, assembly procedures and maintenance. All stages developed in its installations are aligned with the company highest quality standards.

With an appropriated environment and large experienced on engineering projects human resources, the company has the capability to provide products and services to several segments on automation and control area.

QUALITY

Vivace Process Instruments establishes, documents, executes and keeps a Quality Management System according to NBR ISO 9001:2015, seeking for:

- Demonstrate its capacity to develop technology, trade products and execute qualified services that fulfill the customers needs, legal requirements and;
- Amplify customer satisfaction through effective application of the system and continuous improvement.

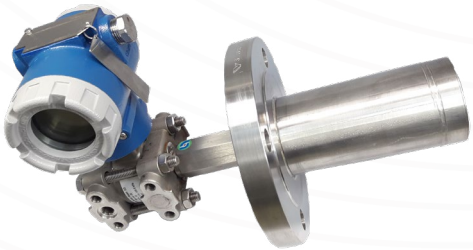
The company policy establishes as strategical goal to reach and keep a leadership reputation with product and service quality, always focusing on reaching and overcoming customer expectations.

Seeking quality in every existent process is the priority misison for us, always focusing on continuous improvement for all the tasks that aggregate value to product or service, enphasizing collaborators participation and teamwork.

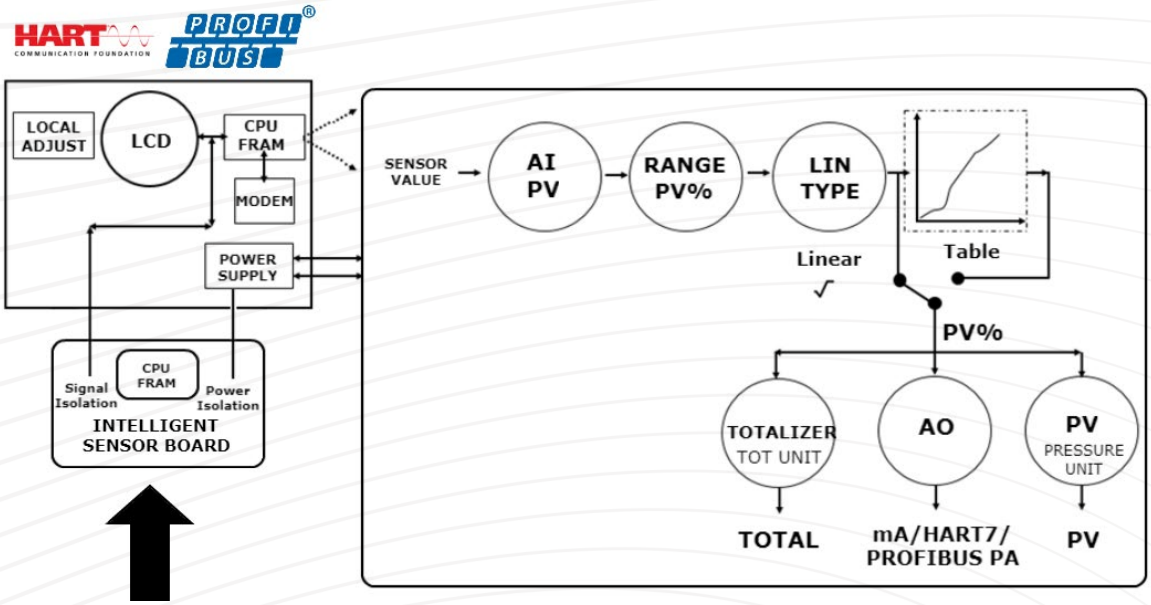
VPT10

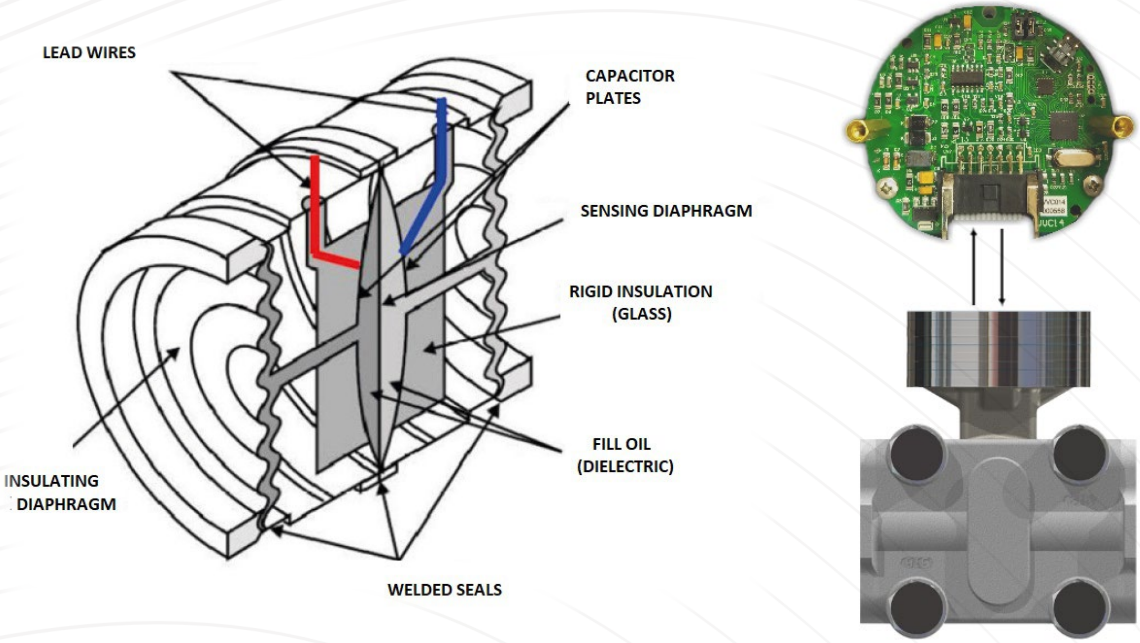
TRANSMITTER FOR PRESSURE, LEVEL AND FLOW APPLICATIONS

- Basic Accuracy: ± 0.075%
- High Accuracy: ± 0.05%
- Innovative: High Performance Microprocessed Capacitive Sensor, digital Reading
- Built-in Temperature and Pressure Compensation
- Range 1: -765 to 765 mmH2O up to Range 7: -1 to 210 Kgf/cm2
- HART® 7 / 4-20mA and PROFIBUS-PA
- Totalizing with Persistence
- Response Time: < 50 ms
- Square Root Extraction and User Table
- 5 Digit LCD, Rotatable, Multifunctional and Easy to Use
- Advanced Diagnostics
- Supports DD, EDDL and FDT / DTM
- No Power Polarity
- Built-in Transient Protector
- Low PTE-Probable Total Error
- High Rangeability and Stability
- Local Adjustment with Magnetic Tool

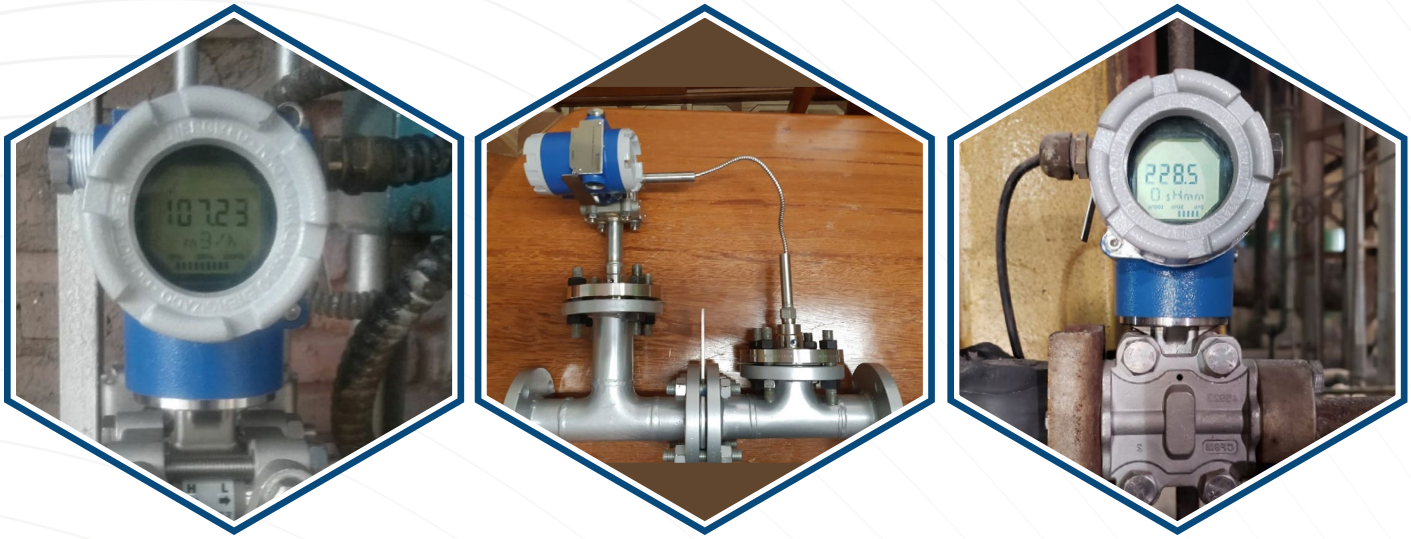


Exceeding Automation Limits





APPLICATIONS



VPT11

TRANSMITTER FOR PRESSURE AND LEVEL

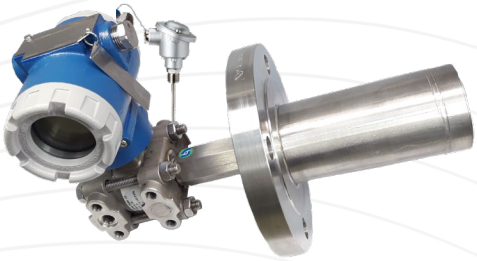
- Basic Accuracy: ± 0.075%
- High Accuracy Model: ± 0.05%
- Innovative: High Performance Microprocessed Piezoresistive Silicon Sensor, digital Reading
- Built-in Temperature and Pressure Compensation
- 6 Manometric Pressure Ranges - from 0 to 40 MPa
- 3 Absolute Pressure Ranges - from 0 to 3.0 MPa
- Response Time: < 100 ms
- HART® 7 / 4-20mA and PROFIBUS-PA
- 5 Digit LCD, Rotatable, Multifunctional and Easy to Use
- Advanced Diagnostics
- Supports DD, EDDL and FDT / DTM
- No Power Polarity
- Built-in Transient Protector
- Low PTE-Probable Total Error
- High Rangeability and Stability
- Local Adjustment with Magnetic Tool

Exceeding Automation Limits

VMV10

MULTIVARIABLE TRANSMITTER: TEMPERATURE AND PRESSURE

- A single address on the PROFIBUS network
- It simplifi es and reduces installation costs
- Consumption of 12mA, Power without polarity from 9 to 32 Vdc
- Microprocessed Capacitive Pressure Transmitter
  - » 100% Digital Reading - Differential, Absolute, Manometric, Level and Inline models
  - » 7 pressure ranges: from 765 mmH2O to 210 Kgf/cm2
  - » Standard Accuracy: ± 0.075%, High Performance: ± 0.05%
  - » Rangeability 200: 1
  - » Totalizing with persistence
  - » Table, Root Extraction
- Temperature Transmitter
  - » Measurement: 2, 3 and 4 wires
  - » Single, double, differential and backup measurements
  - » Basic accuracy: ± 0.01% of calibrated span
  - » A/D Converter: 24 bit
  - » Sensors: RTD, TC, Ohm and mV and mA (as signal isolator)
  - » Ambient temperature compensation
  - » Galvanic isolation: 1.5 kVac
  - » Local Adjustment and 5-digit LCD with bargraph
  - » EDDL and FDT / DTM



VMV11

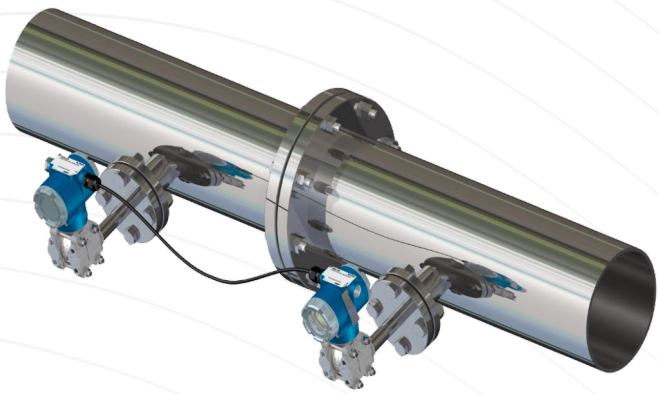
VMV11 PRESSURE AND TEMPERATURE TRANSMITTER

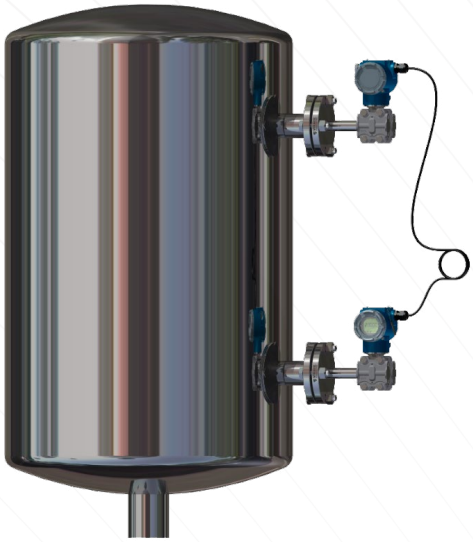
- A single address on the PROFIBUS network
- It simplifies and reduces installation costs
- Consumption of 12mA, Power supply without polarity from 9 to 32 Vdc
- Microprocessed Piezoresistive Silicon Pressure Transmitter
  - » 100% Digital Reading
  - » Absolute, Manometric and Levele
  - » 6 Gage Pressure Ranges: from 0 to 40 MPa
  - » 3 Absolute Pressure Ranges: from 0 to 3.0 MPa
  - » Standard Accuracy: ± 0.075%, High Performance: ± 0.05%
  - » 100: 1 rangeability
  - » User table
- Temperature transmitter
  - » Measurement 2, 3 and 4 wires
  - » Single, double, differential and backup measurement
  - » Basic accuracy: ± 0.01% of calibrated span
  - » A/D converter: 24 bits
  - » RTD, TC, Ohm and mV and mA sensors (as isolator)
  - » Ambient temperature compensation
  - » Galvanic isolation: 1.5 kVac
- Local adjustment and 5-digit LCD with bargraph
- EDDL and FDT / DTM

VDL10

DIFFERENTIAL PRESSURE, LEVEL, DENSITY AND FLOW TRANSMITTER WITH ELECTRONIC SEAL

- Differential pressure transmitter with electronic seal for measuring differential pressure, level (with or without density compensation), density, concentration and flow
- It enables pressure measurement for each sensor individually
- It eliminates capillaries with filling fluids, which are temperature error sources
- Fully digital, online measurement
- Recalibration on the process, simply and without interruption of the process
- HART® 7 / 4-20mA and PROFIBUS-PA communication protocols
- Simple and easy installation
- Several options of connections to the process
- Local adjustment via magnetic key
- 5 digit LCD, rotating, multifunctional and easy to use
- Supports DD, EDDL and FDT / DTM.

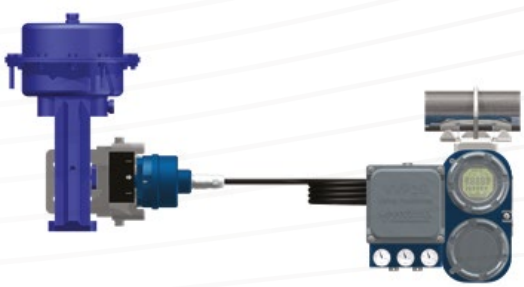


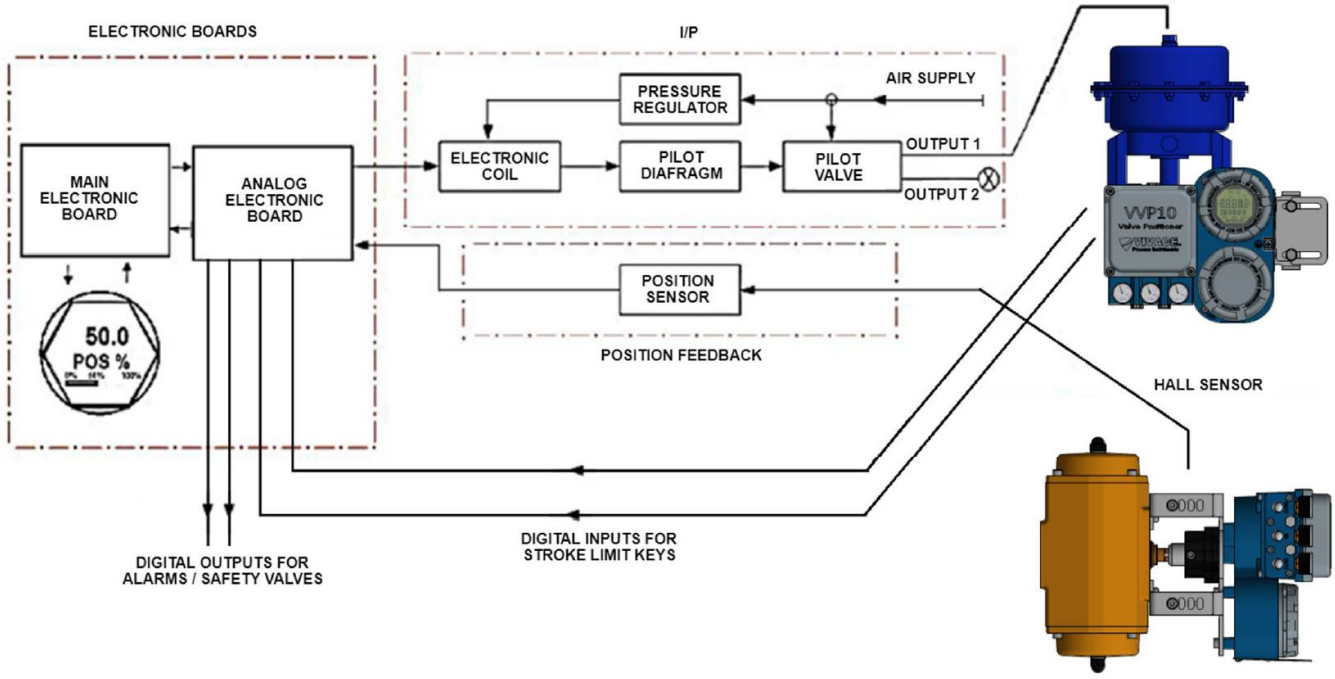


VVP10

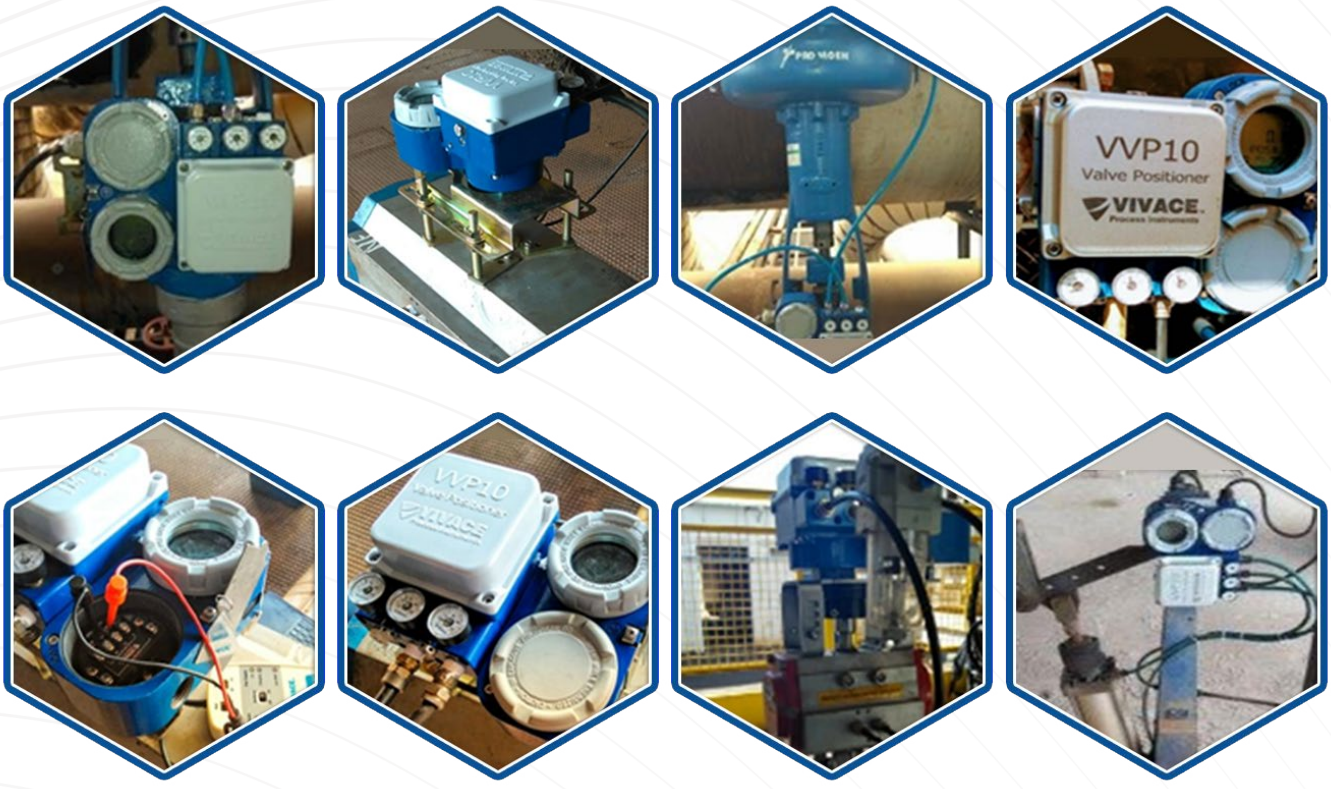
VALVE POSITIONER

- HART® 7 / 4-20mA and PROFIBUS-PA
- Compact, high-performance, multifunctional
- Designed to operate under severe conditions and high robustness with instrumentation air quality
- Electronic coil technology
- Non-contact position sensor (Hall sensor)
- Suitable for most brands of valves / actuators
- Single and double actions
- Remote position sensor available for high vibration and high temperature applications
- Auto-Setup, Auto-Tuning, Partial Stroke Test, Position Histogram and Advanced
- Diagnostics
- Usual or user-defined characterization curves (table)
- Pressure sensors
- Air supply pressure from 20 to 140 psi
- Actuator stroke
  - » Linear 3 to 100 mm and rotary 30 to 120 °
- 5-digit rotary, alphanumeric and bar graph LCD
- Local Adjustment
- Supports DD, EDDL and FDT / DTM
- 02 Digital inputs (limit switch) and 02 Digital outputs (for solenoid safety valve actuation)
- Standard model HART® 7 4-20mA: with feedback position signal (4-20mA)





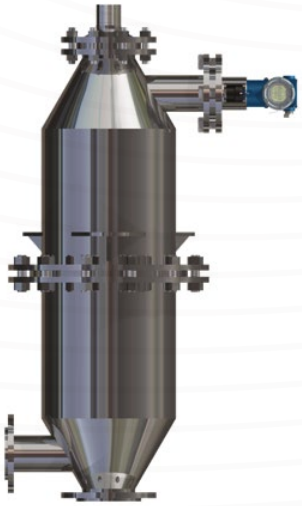
APPLICATIONS

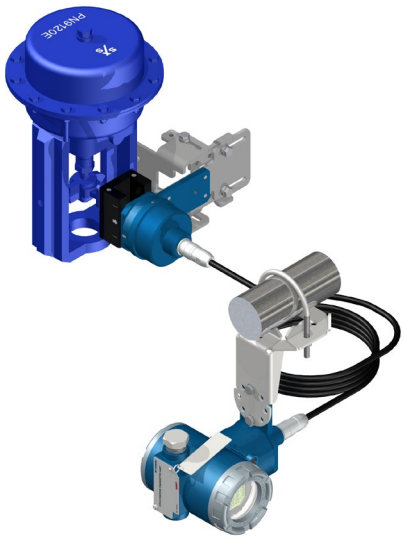


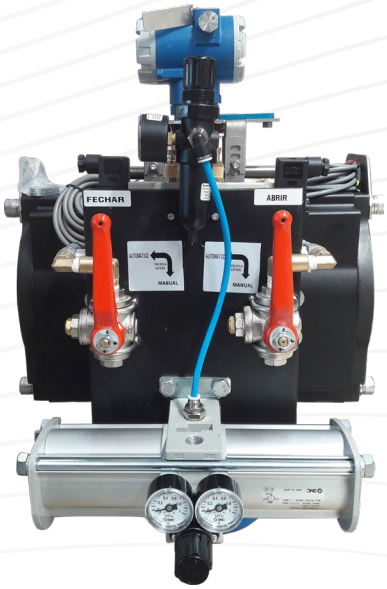
VTP10

POSITION TRANSMITTER

- HART® 7 or Profibus-PA Communication Protocols
- For linear and rotary applications: control, manual, modulator or sluice valves, tilting systems, alignment of conveyor belts, level measurement etc.
- No Polarity Power Supply
- Work Range Configuration
- Operation Limits Alarms
- No Mechanical Contact Magnetic Sensor
- Remote Sensor (optional)
- 5-digit, rotative, multifunctional, bargraph LCD
- Predictive Maintenance Diagnostics
- Position Histogram
- Measuring Unit Configuration
- Operation Temperature -40 to 85 °C
- Supports EDDL and FDT/DTM Programmers and Tools
- Local Adjust





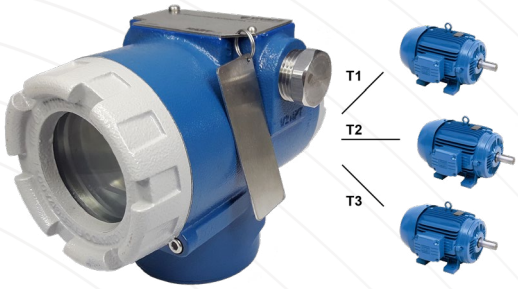


VTT10

TEMPERATURE TRANSMITTER

- High accuracy and long-term stability
- Several types of measurement and sensors (TC, RTD, mV and Ω)
- Callendar–Van Dusen
- Ambient temperature compensation
- Self-diagnosis
- Five digits, rotary, multifunctional with bargraph LCD
- Intuitive, configurable with fast editing function local adjustment
- HART® 7 /4-20 mA and Profibus-PA communication protocols
- NAMUR NE43 (HART® 7 /4-20 mA model)

VTT10-F: FIELD MOUNTING

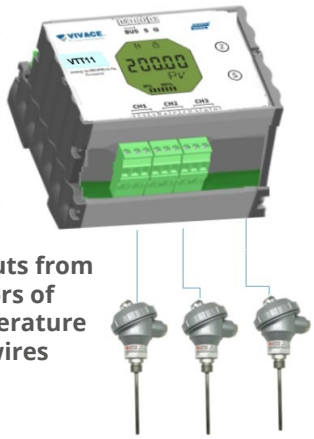


VTT10-F is a temperature transmitter for field mounting with a multifunctional LCD display. It accepts TC, RTD, Ohm and mV sensors, generating a 4 – 20 mA current signal (HART® 7 model) or a digital signal (Profibus-PA model), according to the measurement type and user configuration. The Profibus-PA line has 2 or 3 channel models (VTT11-FP3), and the 3-channel is ideal for temperature measurements in motors.

VTT11-PP: TRANSMISOR DE TEMPERATURA PROFIBUS PA

VTT11-PP

VTT11-PP is a PROFIBUS-PA Temperature Transmitter with 3 inputs of 3-wire temperature sensors, 12 mA of quiescent consumption, a single address on the network, mount in panel, DIN rail.



3 inputs from sensors of temperature to 3 wires

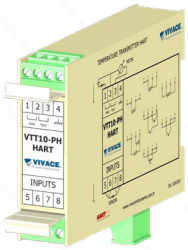
VTT10

TEMPERATURE TRANSMITTER

VTT10-H: HEAD MOUNTING

VTT10-H is a temperature transmitter for head mounting - DIN Form B-compliant that generates 4 – 20 mA current signal (HART® 7 model) or a digital signal (Profibus-PA model), according to the measurement and user configuration.

VTT10-P: PANEL MOUNTING



VTT10-P is a temperature transmitter for DIN rail mounting, that accepts TC, RTD, Ohm and mV sensors, generating 4-20 mA current signal (HART® 7 model) or a digital signal (Profibus-PA model), according to the measurement type and user configuration. The HART®/4-20 mA model has two open-collector outputs for alarms or on/off signals.

VTT01

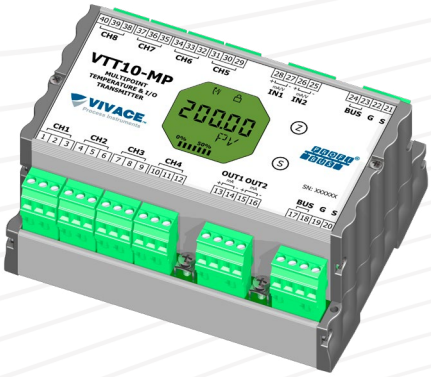
LOW COST TEMPERATURE TRANSMITTER

VTT01 is a low-temperature 4-20 mA temperature transmitter cost, designed for installation in DIN B form head (VTT01-H) and also for panel mounting (VTT01-P).

It allows sensor type and measurement range settings through the 'VTT01 Tool' software using the VUI10 interface.

VTT10-MP

MULTIPOINT TRANSMITTER

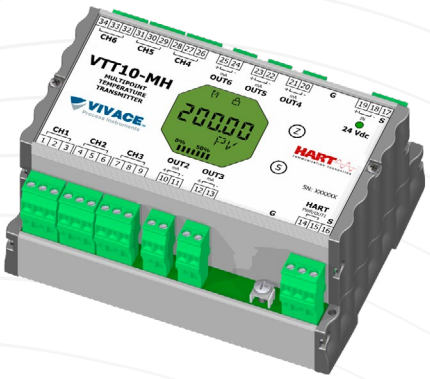


- A single node in the Profibus-PA network with consumption of 12mA
- Reduced installation and design cost through the availability of eight independent temperature channels and analog input and output signal converters
- Easily enables the integration of output devices (eg valve positioners) and HART / 4-20 mA input (transmitters) in Profibus-PA networks
- Easy configuration of inputs and outputs
- Local adjustment
- Self-diagnosis
- 5 digit rotary, multifunctional and bargraph LCD
- Local adjustment intuitive, configurable and with fast editing function

PROFIBUS®

VTT10-MH

MULTIPOINT TRANSMITTER

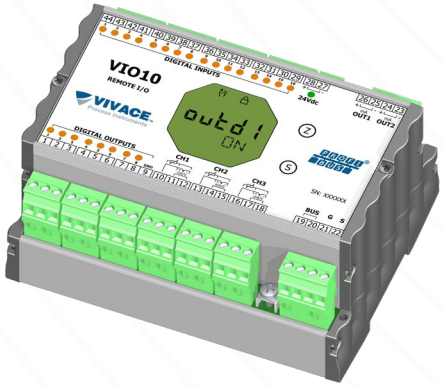


- Only one HART address
- Cost reduction on project and installation due to six independent temperature channel and six 4-20 mA analog outputs
- Several types of measures and sensors (T/C, RTD, mV and Ω)
- 6 Sensor Inputs
- 6 Analog Output Currents (4-20 mA)
- Self-diagnosis
- 5-digit, rotative, multifunctional with bargraph LCD
- Fast edition, configurable and intuitive local adjust

HART COMMUNICATION PROTOCOL

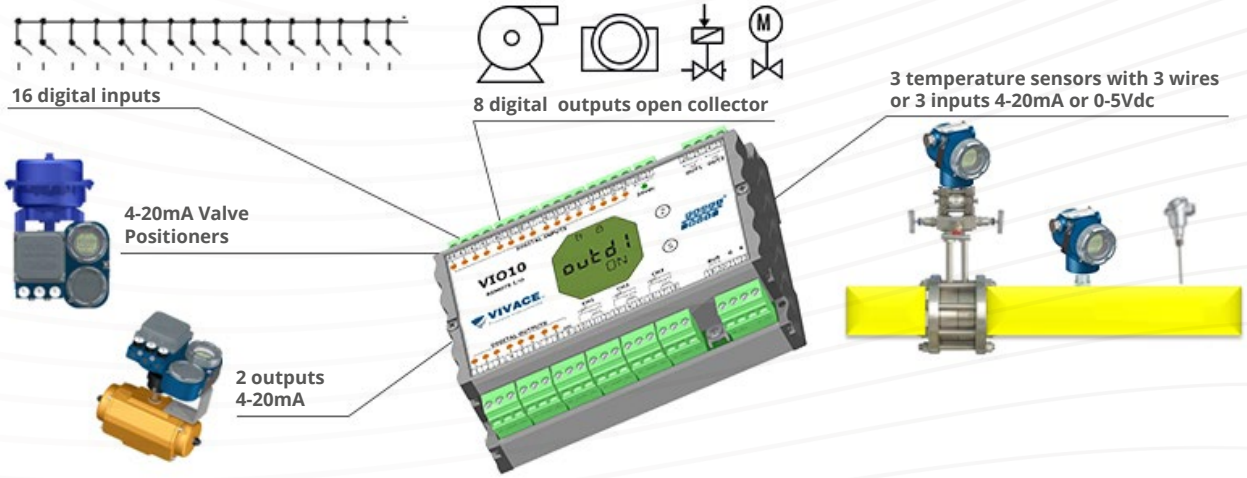
VIO10

PROFIBUS-PA REMOTE I/O



- A single node in the Profibus-PA network with consumption of 12mA
- Reduced installation and design cost through the availability of 16 digital inputs, 8 digital outputs, 3 temperature channels and analog input and output signal converters
- Easily enables the integration of output devices (e.g. valve positioners) and HART® / 4-20 mA input (transmitters) in Profibus-PA networks
- Easy configuration of inputs and outputs
- Several measurement and sensor types (TC, RTD, mV and Ohm)
- Self-diagnosis
- 5 Digit LCD, Rotatable, Multifunctional and Easy to Use
- Local adjustment intuitive, configurable and with fast editing function

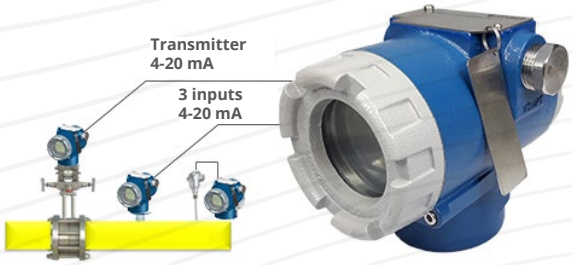
PROFIBUS®



CONVERTERS

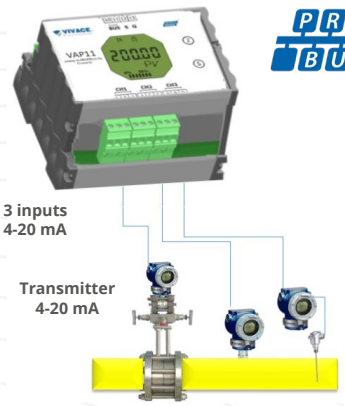
ANALOG TO PROFIBUS-PA CONVERTER

VAP10



VAP11

For panel mounting, DIN rail



Selectable inputs for each channel, independently, by the user:

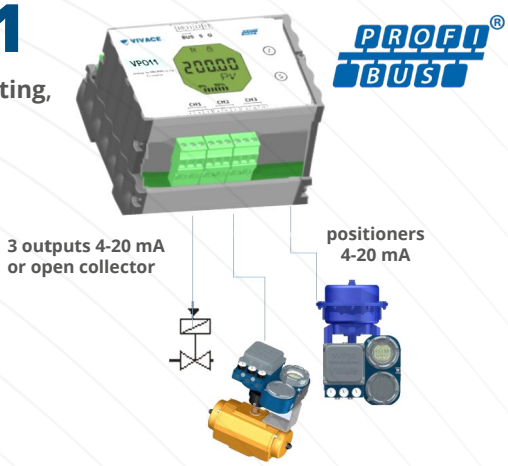
- 0-20 mA
- 4-20 mA
- 0-5 Volts
- 12 mA of quiescent consumption
- A single address on the network
- Cost Reduction

PROFIBUS-PA TO OUTPUT CONVERTER

VPO10

VPO11

For panel mounting, DIN rail



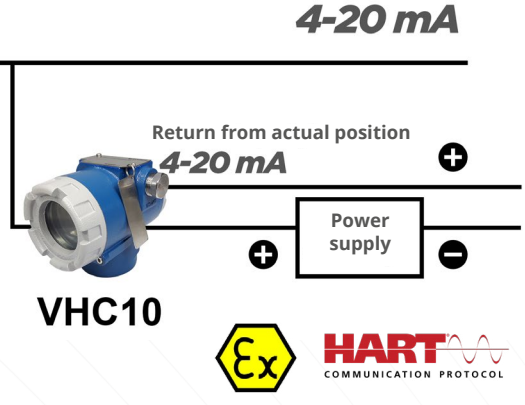
Outputs selectable for each channel, independently, by the user:

- 4-20 mA
- Open Collector
- (400mA max 24 Vdc)
- 12 mA of quiescent consumption
- A unique address on the network
- Cost reduction

HART® TO 4-20 MA CONVERTER

VHC10

VHC10 was designed to create an additional 4-20 mA current channel, assisting analog monitoring in field devices that does not have this characteristic (valve positioners, for example) or that require this monitoring in more than one variable.



Its function is to monitor any variables of other HART® device (regardless of its version: HART® 5, HART® 6 or HART® 7), configured by the user and to externalize them through the current channel.

CONVERTER

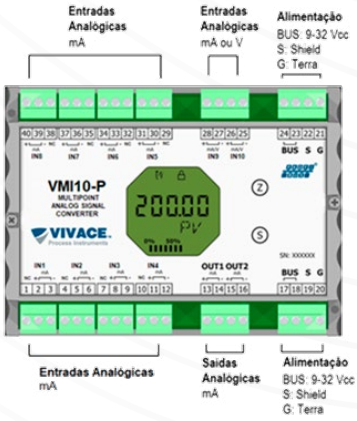
MULTIPOINT ANALOG FOR PROFIBUS PA

VMI10-P

VMI10-P is a multipoint analog signal converter for Profibus PA designed for installation in the field or panel with DIN rail.

- Inputs and Outputs
  - 8 Input Channels for 4-20mA signals
  - 02 Analog Input Channels
  - 02 4-20mA Output Channels
- Analog Inputs
  - Current (4 - 20 mA)
  - Voltage (0 - 5 Vdc)
- Function Blocks
  - 10 Analog Input Blocks (AI)
  - 02 Analog Output Blocks (AO)
- Configuration via EDDL or DTM
- 12 mA of quiescent consumption
- Power supply without polarity and via Profibus PA bus
- A unique address on the network
- Cost reduction

VMI10-P has great flexibility of integrating input and output signals on Profibus PA networks.



REMOTE INDICATOR

VRI10

- Powered by the current loop with low consumption (VRI10-I)
- 1 or 2 channels (VRI10-I) or 10 indications (VRI10-P)
- Copy function from one channel to another (VRI10-I)
- Configuration via local settings
- Open loop self-diagnostics (VRI10-I)
- Non-volatile totalization (VRI10-I)
- Extraction of the square root (VRI10-I)
- No cyclic communication (VRI10-P)
- Units of pressure, temperature, flow, level, density and user unit
- 5-digit, easy-to-use, multi-function rotary LCD with bar graph

COMMUNICATION INTERFACE

VCI10

Vivace Process Instruments has a wide range of hardware and software interfaces for HART® and Profibus-PA protocols, making comissioning, startup, operation and maintenance steps easier. The interfaces are available for Windows® and Android® platforms, also working with EDDL and FDT/DTM-based tools with USB, Android® and Bluetooth® connectivity.

VCI10-BH

VCI10-BH is a HART® communication interface for use with Bluetooth® devices.

VCI10-BP

The VCI10-BP is a Profibus-PA communication interface for use with Bluetooth® devices.

VCI10-UH

VCI10-UH is a HART® communication interface for devices with USB type-A standard connection.

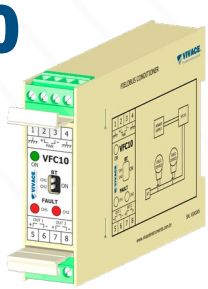
VCI10-UP

The VCI10-UP is a Profibus-PA communication interface for devices with USB type-A standard connection.

ACCESSORIES

POWER SUPPLY IMPEDANCE

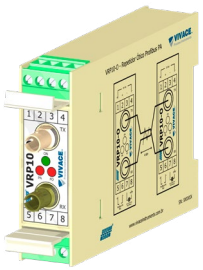
VFC10



VCF10 is a power conditioner with active impedance control circuit for Profius PA and Foundation fieldbus ™ protocols according to IEC 61158-2.

OPTICAL PROFIBUS-PA REPEATER

VRP10-O



The VRP10-O allows that PROFIBUS-PA (H1, 31.25 kbits/s) electrical interfaces are converted into optical interfaces and vice-versa.

NOISE ATTENUATOR

VNA10

VNA10 is an electronic EMI filter that increases the availability of communication signals and ensures a significant reduction of noise in common mode on digital networks.

Common mode current flows in both conductors of the Profibus-PA, Foundation fieldbus and HART® signals, in the same direction and returns to ground via parasitic capacitance. In this case, currents generate magnetic fields with equal magnitude and polarity that do not cancel each other out.

The common mode current is capable of generating an electromagnetic field. The signals of Radio frequencies are common sources of common-mode noise. It is the major problems in cables due to the common impedance between the signal and its return path.

Common mode current, flowing in the same direction through VNA10, creates magnet fields It phases that add up. The VNA10 will create a high impedance for the common mode signal, attenuating it.

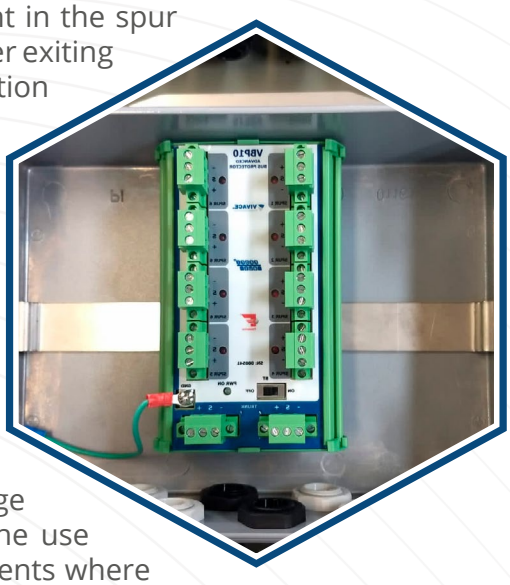
ACCESSORIES

PROFIBUS-PA AND FOUNDATION ™ FIELDBUS BUS PROTECTOR

VBP10

VBP10 is a bus protector for Profibus-PA and FOUNDATION ™ fieldbus networks, according to IEC 61158-2 standard, which guarantees that a short circuit generated in its spurs is not propagate to other spurs or to the main trunk. In the short circuit condition, between the signals + and - or + and shield of the spur, it opens the spur, avoiding the short circuit.

For each spur there is an indication LED, activated in the short-circuit condition. From time to time, the VBP10 checks whether there is current in the spur and, if so, it is activated the LED, turnning on the spur again. After exiting the short-circuit condition, the spur starts again and the protection circuit is deactivated, turnning off the LED.



VBP10 uses the “FoldBack” technique, where it automatically turns off the spur in any situation that consumes more than 48 mA, until the situation returns to normal. For this, it consumes less than 2 mA per spur, which is a advantage in comparison to other market protectors that maintain a permanent fault current, overloading the segment in case of multiple short circuits in the spurs.

In addition, VBP10 acts fastly, limiting the inrush current (when a Profibus-PA or Fieldbus foudantion device is energized, a large current flows and exceeds the steady current state value. The use of segment protectors with low quality terminals in environments where there is vibration, for example, can cause the disconnection and connection of fiel devices repeatedly (due to the bad contact on the terminals of these protectors or derivations). Depending on the quality of the protection of this bus, the insrush current may exceed the current supplied to the segment and “shut down” the bus or drastically affect the communication.

VBP10 has an LED, which indicates that the module is powered and an integrated bus terminator (BT). The input has a surge protector, ensuring greater safety to VBP10 and spurs. In normal operation, that is, without short circuit, each protector consumes less than 10 mA. Each spur has 50 mA of maximum current.

BUS TERMINATOR

VBT10

VBT10 is a bus terminator for PROFIBUS-PA and FOUNDATION digital networks fieldbus. Developed according to IEC 61158-2, it consists of a series RC circuit, where high precision and low variations in temperature are used to ensure the perfect impedance match and minimize signal reflections.

VBT10 has a reduced and robust design, providing easy installation inside junction and protection boxes, as well as in the terminal blocks of field devices.

ACCESSORIES

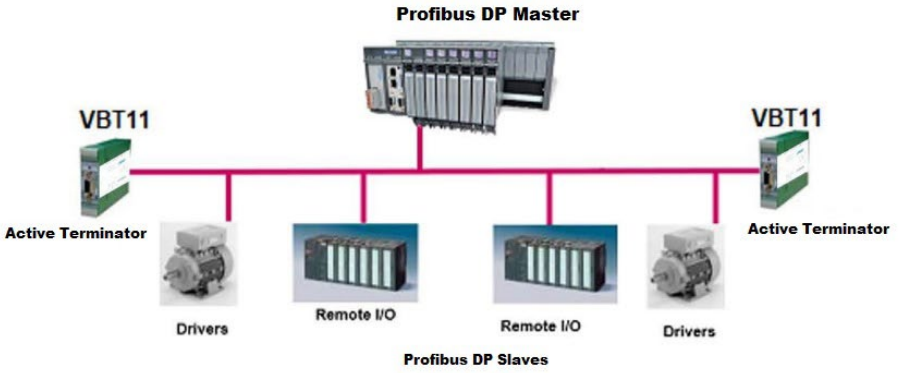
VBT11: PROFIBUS DP ACTIVE BUS TERMINATOR

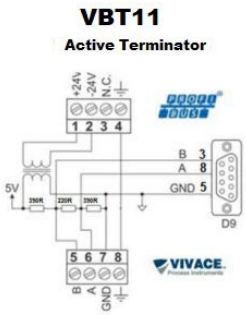
VBT11

VBT11 is an active bus terminator for PROFIBUS DP digital networks. Developed according to the EN50170 standard, it is composed of a resistive divider composed of 3 resistors (390R, 220R, 390R), where high precision components and low temperature variations are used to guarantee the perfect impedance matching and minimize signal reflections . Reflections will effect the original signal, causing severe distortion and bit errors.

The terminator eliminates communication errors due to signal distortions. The greater the length of the network, the greater the distortion of the signals can be. It is also worth remembering that by not using the network terminator, the cabling will work as an antenna, facilitating signal distortion and increasing susceptibility to noise.

VBT11 is an active terminator that is installed independently of the PROFIBUS DP network nodes, which facilitates access to any node in maintenance operations, without putting the network in a situation of intermittence due to lack of termination. In this way, any network slave can be disconnected, removed or replaced without compromising communication.



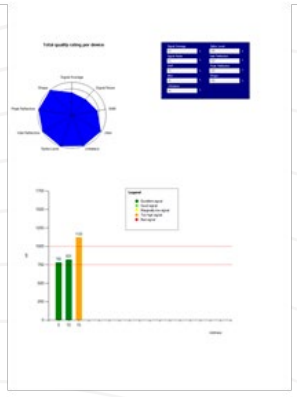


- Active Terminator for Profibus DP networks
- Increases the availability of your network Profibus DP
- Provides impedance matching
- Prevents signal reflections
- No configuration required
- Makes easier maintenance during operation
- According to EN50170
- Small and robust design
- Simple and easy installation
- Mounting on panels and DIN rail

PROFIWISER®

PROFIBUS-PA NETWORK ANALYZER

PROFIWISER®: A powerful tool for PROFIBUS-PA networks: artificial intelligence, diagnostics, troubleshooting, maintenance and configurator via FDT/DTM.



PROFIBUS-PA Network Analyzer:

- Automatic capture, analysis and statistics of frames
- Oscilloscope with automatic H1 / PA signal capture and analysis with advanced IEC61158-2 physical layer diagnostics
- Measurement of trunk, spurs and shield current without opening cabling
- Livelist
- Integration with GSD files
- Signal quality indicators
- Bar graphs
- Spider graphic
- Automatic tips on possible causes and solutions to identified problems.
- Advanced Statistics
- Automatic generation of reports, comparison of analyzes in different dates of data collection, facilitating the certification of networks
- VPW10 Interface: Isolated

PROFIBUS-PA Communication Interface:

- USB connection
- VPW10 Interface: Isolated
- Provides Power to the Profibus-PA device without DP/PA coupler on bench
- LEDs indicative for communication
- Local and network operation
- Easy Installation
- Compatible with FDT / DTM tools

THE BEST COST-BENEFIT RELATIONSHIP IN THE MARKET.

PROFIWISER®

SERVICES

Vivace, in addition to its complete line of products for industrial automation, has a multidisciplinary technical team and can help customers in several areas. Protect your investments through a partnership with our team to help you every step of your plant life cycle, evaluations of high-level opportunities for instrumentation and control implementations. Vivace is proud to have a team with over 30-years of experience and highly qualified and we can help you successfully in:

- Repairs of field devices
- Technical assistance in the field
- Commissioning, startup and assisted operation
- Maintenance plans
- Consulting in automation projects
- Certifications for digital networks
- Field device specifications
- Trainings
- Electronic and Mechanical Development

Vivace has a team of professionals with extensive experience in project area and is able to assist in choosing the best alternatives and products. Vivace has its services based on technical analysis, detailed knowledge and expertise. Combining knowledge and instrumentation segment experience and control with the best practices, our teams will help with actions that will have positive and continuous commercial impacts, ensuring consistent and measurable results continuously. In addition, Vivace has a wide range of products to improve the operating performance of your instrumentation.

TRAINING

Vivace Process Instruments offers several training and classes for industrial automation professionals. This trainings cover the company line of products and focus on the introduction of the industrial automation and instrumentation concepts, allowing customers to completely understand our products. Besides, Vivace has team specialists with large knowledge on communication protocols, analog process variables measurements, network certification, ofering several trainings such as:

- 4-20mA/HART®
- WirelessHART
- Profibus-DP and Profibus-PA
- Foundation fieldbus
- Pressure, temperature, level, flow, density, position measurements
- Valve Positioners
- Profibus network certification
- etc.

Special and in-company courses are held according to the clients' needs.

Fieldbus Foundation WirelessHART PROFIBUS® HART COMMUNICATION PROTOCOL

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