



HART
COMMUNICATION PROTOCOL

PROFI
BUS



ABOUT VIVACE



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

The company was born to grow, inspire with 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 multidisciplinary team of over 25-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, specification, implementation and certification 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 customer needs.

PRESSURE TRANSMITTER



VPT10

The VPT10 is a pressure transmitter with high performance capacitive sensor, designed for differential, absolute and gauge pressure measurements, as well as models for level applications: flanged, remote seal and sanitary options.

The VPT10 is available with HART® 7 and Profibus-PA communication protocols, being a robust and highly reliable solution for pressure, level and flow measurements, ensuring efficient and reliable process results with high availability.

Characteristics:

- Basic Accuracy: $\pm 0.075\%$
- High Accuracy: $\pm 0.05\%$
- Innovative: High Performance Microprocessor Capacitive Sensor, digital reading
- Built-in Temperature and Pressure Compensation
- 7 Pressure Ranges – Range 1: -765 to 765 mmH₂O up to Range 7: -1 to 210 Kg/cm²
- Response Time: Less than 50 ms
- HART® 7 / 4-20mA and PROFIBUS-PA
- Totalizing with Persistence
- 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 ETP-Probable Total Error
- High Rangeability and Stability
- Local Adjustment with Magnetic Tool

POSITION

Vivace's field device family focused on position monitoring of linear and rotative systems. Available on HART® 7 / 4 - 20 mA and Profibus PA communication protocols, these devices were developed with extremely low-consumption technology and high performance, offering robust, high-accurate and safe measurements, just like the final control elements demand.

VVP10 - VALVE POSITIONER



The VVP10 is a smart positioner and it is designed to work with linear or rotary valve actuators, providing precision and control with high availability and reliability. It allows easy installation and commissioning and it is suitable for various types of valves, regardless of type and size.

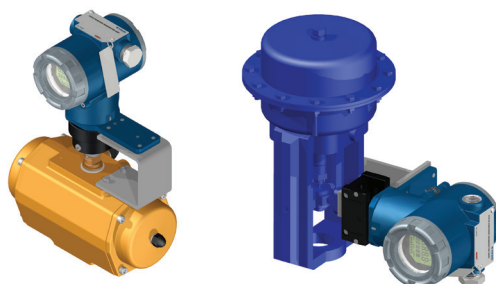
VVP10 positioners are available in HART® 7 / 4-20mA and PROFIBUS PA technologies. The HART® model has in its standard model the feedback signal(4-20mA) to indicate the current controlled position.

The VVP10 has a model with pressure sensor and digital inputs and outputs for advanced diagnostics that help to predict efficiently the need for maintenance.

Characteristics:

- 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)

VTP10



Position transmitter VTP10 was projected to monitor linear or rotative movement systems, such as valve actuators. Linear or rotary applications: manual and modulating control valves, sluice gates, tilting systems, conveyor belt alignment, level measurement etc.

TEMPERATURE



Vivace's temperature transmitter line provides reliable measurement with high accuracy and stability. They are robust and suitable for temperature measurement in the toughest processes of practically all industrial segments.

Using very low consumption, high performance microcontrollers and working with HART® 7 /4–20 mA and Profibus-PA technologies, transmitters are available in different models to provide easy assembly according to the application: head mounting, panel and field.

Due to their construction characteristics and unmatched performance, these transmitters increase plant availability, reducing ownership cost through advanced diagnostics and easy configuration tools.

Vivace's temperature transmitters help increase productivity and efficiency on industrial processes with safety, quality improvement and cost reduction.

VTT10-F



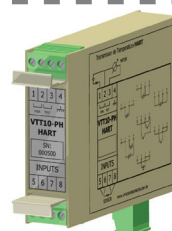
VTT10-F is a temperature transmitter for field mounting that has a multifunctional LCD display. It accepts T/C, RTD, Ohm and mV sensors.

VTT10-H



VTT10-H is a temperature transmitter for head mounting (DIN Form B-compliant) that accepts T/C, RTD, Ohm and mV sensors.

VTT10-P



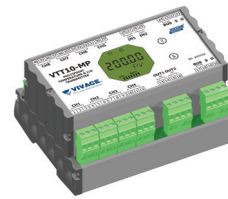
VTT10-P is a temperature transmitter for DIN rail mounting that accepts T/C, RTD, Ohm and mV sensors.

VTT01



VTT01 is a low-cost temperature transmitter for head mounting, USB-configured that accepts T/C, RTD, Ohm and mV sensors.

VTT10-MP



VTT10-MP is a Profibus-PA 8-point temperature transmitter, with two analog input channels and two 4-20 mA output channels, configured by user. It has a multifunctional LCD display, local adjust and can be configured with any DTM or EDDL tool.

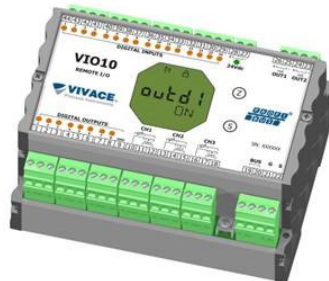
PROFIBUS PA REMOTE I/O



The VIO10 remote has Profibus PA communication and is designed for field installation or panel with DIN rail.

It has great versatility with temperature inputs, 4-20mA inputs and outputs, digital inputs and outputs on a single hardware.

VIO10



Characteristics:

- 16 discrete inputs
- 8 discrete outputs (open collector)
- 3 user selectable analog inputs for each channel:
 - 3-wire temperature measurement or
 - 4-20 mA / 0-05Vdc input (easy integration of conventional equipment into the Profibus-PA network)
- 2 4-20mA Analog Outputs (easy integration of conventional equipment into the Profibus-PA network)
- LCD 5 digits, multifunctional and with bargraph
- Local adjustment
- LEDs for inputs and outputs
- Configuration via EDDL or DTM
- 12 mA of quiescent consumption
- Power supply via bus Profibus PA, no polarity
- A single address on the network
- Reduction of costs

INTERFACES



Vivace Process Instruments has a wide range of hardware and software interfaces for HART and Profibus-PA protocols, making commissioning, 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-AH



The VCI10-AH is a HART® communication interface for use with Android® devices.

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.

SOFTWARES



Vivace Process Instruments has a wide range of software and applications for HART® and Profibus-PA protocols that make the steps of commissioning, startup, operation and maintenance easier. Tools for Windows®, Android® and PalmOS platform are available, supporting EDDL and FDT/DTM standards.

Applications based on EDDL ensure easy integration of field devices and let to explore the ease of navigation. They also offer the mobility of wireless for Android® and Windows® via Bluetooth®.

HAPP



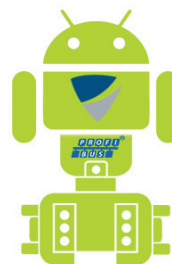
HAPP - Vivace HART® Palm App is a versatile application for PalmOS platform that enables connection to HART® networks.

VMT-HART®



VMT-HART® is a versatile application for Android® and Bluetooth® that allows connection to HART® networks using Vivace HART® Interfaces.

VMT-PROFIBUS



VMT-PROFIBUS is a versatile application for Android® and Bluetooth® devices that allows connection to Profibus-PA networks using Vivace Profibus Interfaces.

ACCESSORIES



Vivace Process Instruments has a wide range of 4-20mA, HART® and Profibus accessories, making automation projects easier.

VAP10



VAP10 is an analog converter that allows up to 3 input channels for 4-20 mA (or 0-20mA) or 0-5V signals can be converted to Profibus-PA.

VFC10



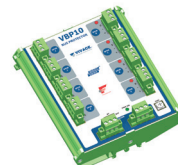
VFC10 is a power conditioner with active impedance control circuit for Profibus-PA and Foundation Fieldbus™.

VHC10-F



VHC10-F was projected to create an additional 4-20mA channel on the field to devices that do not own this feature. It also works as a HART® indicator.

VBP10



VBP10 guarantees short-circuit protection on spurs for Profibus and Foundation Fieldbus™ networks, avoiding short-circuit propagation among spurs or trunk.

VHC10-P



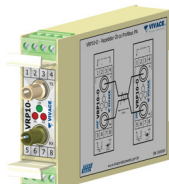
VHC10-P was projected to create an additional 4-20 mA channel on panel to devices that do not own this feature or need an extra monitoring channel.

VR10-I



VR10-I is a 4-20 mA remote indicator with two channels, powered by current loop, with very low current consumption.

VRP10-O



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

VP010



VP010 is a Profibus-PA converter that generates up to three 4-20 mA output channels or discrete open collector signals.

VR10-P



VR10-P is a Profibus-PA remote indicator of up to 10 parameter indications of other devices in the PA network and it works as a sniffer without cyclic data exchange with the Profibus master.

APPLICATIONS

As part of our every-day activities, we seek to increase the competition capability of our customers. Besides our knowledge and passion for our work, we focus on global vision of processes in several segments, offering state-of-art technology and complete solutions for your business.



SERVICES

Vivace, in addition to its complete line of products for industrial automation, has a multidisciplinary technical team and can assist its clients in several areas. Protect your investments through a partnership with our teams to help you at each stage of life cycle of your plant, assessing high-level implementations of instrumentation and control. Vivace is proud to have a team with more than 25 years of experience and highly skilled and can help you with success in:

- Repairs for field equipment
- Field service
- Commissioning, startup and assisted operation
- Maintenance plans
- Consulting in automation projects
- Certifications of 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 courses for industrial automation professionals, through specialists in communication protocols, measurement of analog process variables, networks certification and offers training in:

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

According to the clients' needs, special and in-company courses are held.





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