Complete Automation Solution

General Catalog

• Controllers • Transmitters • Data Loggers • Thermostats • Indicators • Software • Sensors • Wireless

novus

We Measure, We Control, We Record

About NOVUS

Exceeding the expectations of our customers and employees has been a priority for NOVUS. This, coupled with social and environmental responsibility, demonstrates our deep and ongoing commitment to the community and to the environment.

With the economic opening of the 1990's in Brazil, and consequent influx of imports, NOVUS management responded and seized the opportunity to reinvent the company, seeking new challenges. The goal was to develop a strategy aimed at producing products that appealed to international markets, expanding its boundaries beyond the borders of Brazil, looking at the world as a potential customer. The same product that comes off of our assembly lines can find its way to a small town in Brazil or to an advanced center of any European or American city.

With modern high precision automatic SMT assembly equipment, NOVUS is technologically able to meet stringent requirements in line with the strictest environmental standards.

NOVUS is not here by chance. Our achievements are the result of hard work, investment and innovation.

We Measure, We Control, We Record.

Universal Indicator - N1540

N1540 process meter was designed with advanced technology for highest performance and reliability in the most demanding applications. Based on an advanced and robust hardware platform, the **N1540** can be fully programmed via its front keypad or via a USB interface. The unique USB interface makes the programming task a simple one step fool proof operation. It allows, for example, the set up of several instruments with the same programming parameters with extreme ease while saving precious time. The USB interface also provides an invaluable means for continuous monitoring of the measured process variable. With a very short 34 mm (1.34 inches) depth enclosure, the **N1540** can be easily installed in panels and enclosures where space is at a premium.
Dual alarm relays and a convenient 24 V auxiliary power supply are also available in this competitively priced process meter.

- Accepts thermocouples J, K, T, E, N, R, S, B, Pt100, 0-50 mV, 0-5 Vdc, 0-10 Vdc, 0-20 mA and 4-20 mA
- Temperature in °C or °F
- Adjustable indication offset
- Adjustable digital filter
- Programmable indicating range from -1999 to 9999
- Sampling rate: up to 50 measurements per second
- Two relay alarms: SPST 1.5 A / 240 Vac
- Alarm funtions: LO, HI, differential, differential LO, differential HI, sensor break
- Alarm initial blocking
- Alarm hysteresis
- Flash function (display flashes under alarm condition)
- Detachable wire connectors
- Bright 14 mm display
- Recorded maximum HI and minimum LO values can be retrieved via keypad
- Password for configuration protection

- Auxiliary 24 Vdc voltage source
- USB Interface for configuration and monitoring
- Factory configuration parameters retrieval
- IP65 UL 94 V-2 front; IP20 UL 94V-0 enclosure
- Silicone rubber keypad
- CE and UL certification
- Size: 96 x 48 x 34 mm
- Power: 100~240 Vac/dc ±10%

OPTIONS:
- RS485 Modbus RTU serial communication
- Power: 24 Vac/dc

USB

Nconfig Software Configuration
(See page 17)

Universal Indicator - N1040i

This low cost universal indicator can be installed and programmed by operators with little or no skill in instrumentation. It features up to two alarm relays and a 24 Vdc power supply for remote transmitters.

- Sensor inputs J, K, T, E, N, R, S, B, Pt100, 0-50 mV, 0-5 Vdc, 0-10 Vdc and 4-20 mA
- Programmable indicating range from -1999 to 9999
- Alarm functions: LO, HI, differential, LO differential, HI differential and sensor break
- Simplified configuration menu
- Access password for configuration protection
- Detachable wire connector
- IP65 UL 94 V-2 front panel; IP20 UL 94V-0 enclosure
- Silicone rubber keypad
- CE and UL certification

- Size: 48 x 48 x 80 mm
- Power: 100~240 Vac/dc ±10%
  - 48~240 Vdc ±10%
  - 24~240 Vdc ±10% (model N1040i-F)

OPTIONS:
- SPST 3 A / 250 Vac relay + 24Vdc power supply
- Process Variable retransmission: 0-20 / 4-20 mA
- RS485 Modbus RTU serial communication
- Two relay alarms: SPST 3 A/240 Vac
- Auxiliary 24 Vdc voltage source
- Power: 24 Vac/dc

Universal Indicator - N1500 & N1500LC

This high performance universal indicator features a 16-bit resolution converter, up to 4 relays, digital communication, power supply for remote transmitter or load cell excitation, one digital input and analog retransmission.

- Accepts thermocouples J, K, T, E, N, R, S, B, Pt100, 0-50 mV, 0-5 Vdc, 0-10 Vdc and 4-20 mA
- Programmable indicating range from -31000 to 31000 or 0 to 60000
- Sampling rate: up to 15 measurements per second
- Adjustable digital filter
- Alarms relays: 2 SPDT 3 A / 240 Vac
- Programmable alarm functions: HI, LO, differential and sensor break
- Internal power supply for remote transmitters: 24 Vdc
- **N1500LC** - dedicated for load cell application
- Functions: HOLD, MAX, MIN, TARE and ZERO through **F** (function) key or digital input

- Internal load cell excitation: 10 Vdc
- CE and UL certification
- Size: 96 x 48 x 92 mm
- Power: 100~240 Vac/dc ±10%

OPTIONS:
- Process Variable retransmission: 0-20 / 4-20 mA
- RS485 Modbus RTU serial communication
- Two relay alarms: SPST 1.5 A/240 Vac
- Power: 24 Vac/dc

Universal Indicator - N1500G

This high performance universal Indicator features a large 56 mm (2.2 inches) display for high visibility at long distances and offers the most relevant requirements of a modern DPM. Setup can be done via its keyboard or remotely via RS485. It offers a 4-20mA retransmission output and a digital input with special functions.

- Accepts thermocouples J, K, T, E, N, R, S, B, Pt100, 0-50 mV, 0-5 Vdc and 4-20 mA
- Programmable indicating range from -1999 to 9999
- Sampling rate: up to 5 measurements per second
- Alarm relays: 2 SPST 3 A / 240 Vac
- Programmable alarm functions: HI, LO, differential and sensor break
- Internal power supply for remote transmitters: 24 Vdc
- Process Variable retransmission: 4-20 mA

- RS485 Modbus RTU serial communication
- HOLD, PEAK, MAX and MIN functions
- Digital input: hold, zero tare or reset
- Zero and tare via digital input or keypad
- Internal load cell excitation: 10 Vdc
- CE certification
- Size: 310 x 110 x 37 mm
- Power: 100~240 Vac/dc ±10%

High 56 mm Display

Flow Meter- N1500FT

Tailor made for flow applications, this instrument measures and displays both the instant measured value and the totalized value. One model is capable of reading a 4-20 mA signal or a pulsed signal. Input type is fully software selected. Several display modes are available and instrument can be ordered with up to 4 relays plus digital communication. It boasts dual retransmission outputs: one 4-20 mA output, typically for instant flow, and the other is a pulse (NPN) output, typically for totalized flow. Both outputs are isolated.

- Inputs: 4-20 mA, NPN, PNP, dry contact or coil signal
- 4-20 mA input with integral function and square root option
- Capable of reading pulsed signals from 0.1 to 8000 Hz
- Resetable or continuous totalization (on the same model)
- Fully customized scale factors
- Configurable input filters
- With pulsed input being used, the 4-20 mA input can be used as an auxiliary input (example: pressure reading)
- Isolated 4-20 mA output (instant flow) and pulse output (NPN – totalized)
- The outputs can be manually changed for easier setup
- Dosage monitorign functions ensure product quality and consistancy
- Display functions for HOLD, MAX and MIN
- Dual 6-digit displays, allows for several display messaging configuration
- Customized linearization
- Fully keypad programmable with user friendly menu
- Configuration can be password protected
- Configurable alarms: HI, LO and sensor break
- Alarms: 2 SPDT 3 A/ 250 Vac relays

- Auxiliary 24 Vdc voltage source
- Operating temperature: 0 to 50 °C
- CE certification
- Size: 96 x 48 x 92 mm
- Power: 100~240 Vac/dc ±10%

  OPTIONS:
- RS485 Modbus RTU serial communication
- Dual SPST 3 A/ 250 Vac extra relays
- Power: 24 Vac/dc

Universal Controller - N1100

One single instrument provides all the main features needed for the vast majority of industrial processes. Both input and output are selected through the front keypad without hardware change.

- Accepts thermocouples J, K, T, E, N, R, S, B; Pt100, 0-50 mV, 0-5 Vdc and 4-20 mA
- Outputs: 2 relays SPST, pulse for SSR and linear 4-20 mA
- Up to 2 alarms with timers from 0 to 6500 s
- Input resolution: 12000 levels
- PV or SP retransmission in 0-20/ 4-20 mA
- Bumpless Auto/Manual function
- Remote setpoint input (4-20 mA)
- Programmable soft start (0 to 9999 s)
- Auto tuning PID
- Access password for configuration protection

- Ramp and soak: seven 7-segment profiles or one 49-segment profile
- IP65 UL 94 V-2 front panel; IP20 UL 94 V-0 enclosure
- CE and UL certification
- Size: 48 x 48 x 110 mm
- Power: 100~240 Vac/dc ±10%
  OPTIONS:
- RS485 Modbus RTU serial communication
- SPDT 3 A/ 250 Vac relay or 2 digital I/Os
- 24 Vac/dc power supply

USB

Universal Controller - N2000 & N2000S

These two instruments contain all of the features required for most hight performance industrial processes. The S model has two time proportionally driven relays to control servo-positioning valves and dampers.

- Accepts thermocouples J, K, T, N, R, S; Pt100, 0-50 mV, 0-5 Vdc and 4-20 mA
- Outputs: 2 SPDT and 2 SPST relays, pulse for SSR and linear 4-20 mA
- 4 software configurable alarms
- Up to 2 alarms with timers from 0 to 6500 s
- Input resolution: 12000 levels
- Built-in auxiliary 24 Vdc voltage source
- PV or SP retransmission in 4-20 mA
- Bumpless Auto/Manual function
- Remote setpoint input (4-20 mA)
- Programmable soft start (0 to 9999 s)

- Ramp and soak: seven 7-segment profiles or one 49-segment profile
- Auto tuning PID
- IP65 UL 94 V-2 front panel; IP20 UL 94 V-0 enclosure
- Silicone rubber keypad
- CE and UL certification
- Size: 48 x 96 x 92 mm
- Power: 100~240 Vac/dc ±10%
  OPTIONS:
- RS485 Modbus RTU serial communication
- Power: 24 Vac/dc

Universal Controller - N3000

This is a fully featured high performance controller designed to satisfy the most advanced industrial process applications. Input and outputs can be easily configured from the keypad.

- Accepts thermocouples J, K, T, N, R, S; Pt100, 0-50 mV, 0-5 Vdc and 4-20 mA
- Outputs: 2 SPDT relays, 2 SPST relays, pulse for SSR and linear 4-20 mA
- 4 software configurable alarms
- Up to 2 alarms with timers from 0 to 6500 s
- Input resolution: 12000 levels
- Auxiliary 24 Vdc voltage source
- PV or SP retransmission in 4-20 mA
- Bumpless Auto/Manual function
- Remote setpoint input (4-20 mA)
- Programmable soft start (0 to 9999 s)

- Ramp and soak: seven 7-segment profiles or one 49-segment profile
- Auto tuning PID
- IP65 UL 94 V-2 front panel; IP20 UL 94 V-0 enclosure
- Silicone rubber keypad
- CE and UL certification
- Size: 96 x 96 x 92 mm
- Power: 100~240 Vac/dc ±10%
  OPTIONS:
- RS485 Modbus RTU serial communication
- Power: 24 Vac/dc

Universal Controller - N1200

This self-adaptive PID process controller boasts an advanced tuning algorithm which continuously monitors process performance and automatically adjusts the PID settings to always abtain the best possible control response. The same model accepts most common analog signals and sensors featuring the necessary signal to connect the process actuators. The complete instrument configuration can be made using the keypad or the USB interface and the NConfig software.

- Accepts thermocouples J, K, T, E, N, R, S, B; Pt100, 0-50 mV, 0-5 Vdc, 0-10 Vdc, 0-20 mA and 4-20 mA
- Outputs: 2 relays SPST 1.5 A/ 250Vac, pulse for SSR and linear 4-20 mA
- 16 bit A/D converter, 55 samples per second
- PV or SP retransmission in 0-20/ 4-20 mA, 12 bits
- Bumpless Auto/Manual function
- Fail safe function
- Loop break detection function
- Remote setpoint input (0-20 mA, 4-20 mA, 0-5 Vdc, 0-10 Vdc)
- Programmable soft start (0 to 9999 s)
- Ramp and soak: twenty 9-segment profiles or one profile with up to 180 segments
- Access password for configuration protection
- USB 2.0 interface for configuration
- IP65 UL 94 V-2 front panel; IP20 UL 94 V-0 enclosure
- CE and UL certification
- Size: 48 x 48 x 110 mm
- Power: 100~240 Vac/dc ±10%

OPTIONS:
- RS485 Modbus RTU serial communication
- SPDT 3 A/ 250 Vac relay or 2 digital I/Os
- Loop break detection function
- 24 Vac/dc power supply

USB

Nconfig Software Configuration
(See page 17)

Temperature Controller - N1020

This controller features an advanced tuning algorithm which continuously monitors the temperature and automatically adjusts the PID settings resulting in the best possible control response. With front dimensions of only 48x24 mm (1/32 DIN) it is the right choice when panel space is at a premium.

- Accepts thermocouples J, K, T, E, N, R, S, B; Pt100 and 0-50 mV
- High efficiency LED Display
- Auto-adaptive PID algorithm
- Auto-tuning PID
- 2 outputs: 1 pulsed 5 Vdc/ 25 mA and 1 relay SPST 1.5 A/ 240 Vac
- Output functions: Control, Alarm1, Alarm2
- Configurable alarms with 8 functions
- Alarm initial blocking at power up
- Programmable timer
- "F" key with 3 special functions

- Soft-start function
- Ramp to soak function
- Access password for configuration protection
- Factory settings restoration feature
- Front panel: IP65, Polycarbonate UL94 V-2
- Enclosure: IP20, Polycarbonate UL94 V-2
- Silicone rubber keypad
- CE and UL certification
- Size: 48 x 24 x 105 mm
- Power: 100~240 Vac ±10% / 24 ~ 240 Vdc ±10%

Temperature Controller - N1040

Designed for low cost and space sensitive applications and yet achieving a high degree of accuracy. It features a short depth enclosure of only 80 mm (3.15 inches), an efficient universal power supply, auto tunig PID, dual control outputs and a detachable electrical wire connector block.

- Accepts thermocouples J, K, T and Pt100 RTD
- Control output: 5 Vdc/ 20 mA logic pulse or one SPST 1.5A/250 Vac relay
- Sampling rate: 10 readings per second
- Internal resolution: 15000 levels
- Configurable limits for setpoint
- Dual red and green 4-digit displays
- Access password for configuration protection
- °C or °F indication

- Front panel and enclosure: PC (UL94 V-2)
- Programmable alarm functions: LO, HI or differential
- IP65 front protection, IP30 housing protection
- Silicone rubber keypad
- CE and UL certification
- Size: 48 x 48 x 80 mm
- Power: 100~240 Vac/dc ±10%
     48~240 Vdc ±10%
     24~240 Vdc ±10% (model N1040-PR-F)

Temperature Controller - N480D

This user-friendly dual display PID temperature controller incorporates many functions such as single ramp & soak, logic pulse and relay outputs that provide quick and effective control action.

- Accepts thermocouples J, K, T, E, N, R, S and Pt100 RTD
- Red display for process variable and green display for setpoint
- Control output: SPST relay and voltage pulse
- Ramp & soak profile programming with successive repetition
- Auto tuning PID
- Detects any sensor failure
- Easy-to-set programming menu
- IP65 UL 94 V-2 front panel; IP20 UL 94 V-0 enclosure

- Silicone rubber keypad
- CE and UL certification
- Size: 48 x 48 x 110 mm
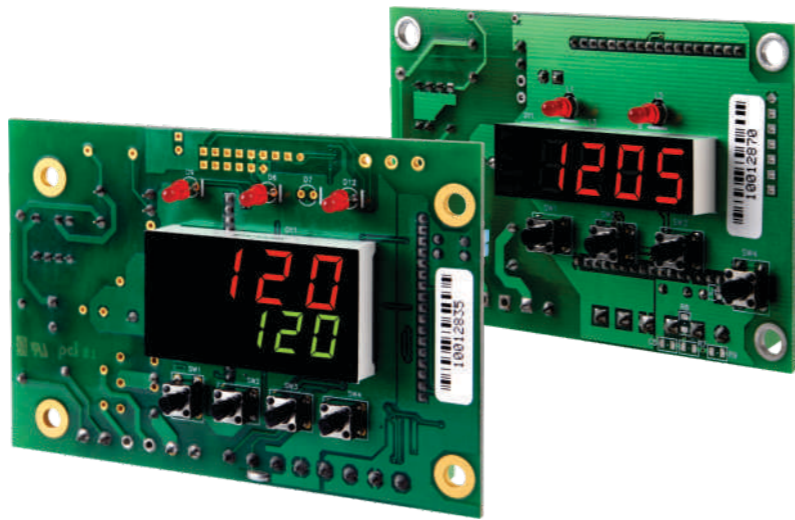- Power: 100~240 Vac/dc ±10%
  OPTIONS:
- 4-20 mA control output
- Dual SPST 3 A/ 240 Vac relay outputs
- Power: 24 Vac/dc

Universal Controller - N120 & N120S

This open frame process controller is a perfect solution for behind the panel mounting for machine manufacturers. Many custom dedicated functions and features are readily available.

- Accepts thermocouples J, K, T, E, N, R, S, B, Pt100, 0-50 mV, 0-5 Vdc, 0-10 Vdc, 0-20 mA e 4-20 mA
- Outputs: 2 SPST relays, logic pulse for SSR
- Auto-adaptive PID control
- Up to 4 alarms with timers from 0 to 9999 s
- 16-bit A/D converter, 55 samples per second
- Bumpless Auto/Manual function
- Ramp and Soak: twenty 9-segment profiles or 1 profile with up to 180 segments
- Data Logging function with RTC and Internal memory for 32 K loggings
- Programmable soft start (0 to 9999 s)
- Access password for configuration protection
- USB 2.0 port for configuration
- Digital input for multiple functions
- Timer function
- Size: 100 x 67 mm
- Power: 100~240 Vac/dc ±10%
- Configurable through the **NConfig** software

OPTIONS
- RS485 Modbus RTU serial communication
- SPDT relay for up to 10 A loads
- Single and dual display versions
- Power: 24 Vac/dc
- Customized versions available

USB

LogChart
(See page 17)

NConfig Software Configuration
(See page 17)

Temperature Controller - N320, N321, N322 & N323

The **N320** electronic thermometer is used to indicate temperature with a high degree of accuracy. The **N321**, **N322** and **N323** controllers can be configured via keypad for heating or refrigeration control. **N322** has 2 relays and **N323** has 3 relays. The alarm outputs can be configured for high, low or differential alarm.

- Configurable protection password
- Sensors: NTC thermistor (-50 to 120 °C), Pt100 (-50 to 300 °C), Pt1000 (-200 to 530 °C), T/C J (0 to 600 °C), T/C K (-50 to 1000 °C) or T/C T (-50 to 400 °C)
- Control relay: SPDT, 16 A/ 240 Vac
- Alarm relay 1: SPST, 3 A/ 240 Vac (**N322** and **N323**)
- Alarm relay 2: SPST, 3 A/ 240 Vac (**N323**)
- Accuracy: 0.6 °C (NTC), 0.7 °C (Pt100 and Pt1000), 3 °C (thermocouple)
- IP65 front face plate
- Display: 3½ LED digits, 13 mm height
- Resolution: 0.1 °C between -19.9 and 199.9 °C
- Sampling: 1.5 per second
- CE and UL certification
- Size: 75 x 33 x 75 mm
- Power: 100~240 Vac/dc ±10%
  OPTIONS:
- RS485 Modbus RTU serial communication
- Pulse output for SSR: 5 Vdc / 25 mA (**N322**)
- Power: 12~24 Vac/Vdc

Temperature Controller - N322T

N322T finds application in heating and cooling processes. It features a built-in timer function for forced defrost cycles, programmed liquid stirring and other timed or interval related actions. The time base can be adjusted for seconds, minutes or hours.

- Configurable protection password
- Sensor offset calibration
- Program retention during power failure
- Sensors: NTC thermistor, Pt100, Pt1000 or Thermocouples type J, K, or T
- Control relay: SPDT, 16 A/250 Vac
- Timer relay: SPST, 3 A
- IP65 front protection
- Display: 3½ LED digits, 13 mm height
- Resolution: 0.1 °C from -19.9 to 19.9 °C
- Accuracy: 0.6 °C (NTC), 0.7 °C (Pt100 and Pt1000), 3 °C (T/Couple)
- Working temperature: 0 to +40 °C
- CE and UL certification
- Size: 75 x 33 x 75 mm
- Power: 100~240 Vac/dc ±10%
  OPTIONS:
- RS485 Modbus RTU serial communication
- Pulse output for SSR: 5 Vdc / 25 mA
- Built-in alarm buzzer
- Voltage monitor for compressor protection: 150~250 Vac (models with NTC sensor)
- Power: 12~24 Vac/Vdc

Temperature Controller - N321S & N322S

N321S and **N322S** were designed for solar water heating applications. Water circulation sytem is controlled based on the difference of temperature between the solar collector and the storage tank. With two NTC-type temperature sensors and a control output for activating the water circulation pump. **N322S** has also a relay output for booster control.

- **N321S** has one SPDT relay output, 1 HP (16 A resistive) / 250 Vac for pump control. **N322S** has also a 3 A/250 Vac SPST relay as a secondary output (booster)
- Temperature measurement: NTC: -50 to 120 °C
- Display: 3½ LED digits, 13 mm height
- Sensor offset calibration
- Adjustable hysteresis
- Program retention during power failure
- Configurable protection password
- Accuracy: 0.6 °C (NTC)
- Resolution: 0.1 °C from -19.9 to 120.0 °C
- IP65 front protection
- CE and UL certification
- Size: 75 x 33 x 75 mm
- Power: 100~240 Vac/dc ±10%
  OPTIONS:
- RS485 Modbus RTU serial communication
- Power: 12~24 Vac/dc

Humidity Controller - N322RHT & N323RHT

N322RHT and **N323RHT** are temperature and relative humidity digital controllers. **N322RHT** has two relay outputs that can be configured as control or alarm. **N323RHT** has three outputs that can be independently configured as control, alarm or timer.

- Selectable variable indication
- IP65 front protection
- Output 1: one SPDT, 16 A/ 250 Vac relay
- Output 2: one SPST 3 A/ 250 Vac relay
- Output 3: one SPST 3 A/ 250 Vac relay (on **N323RHT**)
- Humidity:
  - Measuring range: 0 to 100% relative humidity (RH)
  - RH accuracy: 3% @ 25 °C
  - RH measuring resolution: 1% of full scale
- Temperature:
  - Measuring range: -20 to 80 °C
  - Accuracy: 0.5 °C @ 25 °C
  - Measuring resolution: 0.1 °C from 19.9 to 80.0 °C
- CE and UL certification
- Size: 75 x 33 x 75 mm
- Power: 100~240 Vac/dc ±10%
  OPTIONS:
- RS485 Modbus RTU serial communication
- Voltage pulse output for SSR: 5 Vdc / 25 mA (**N322RHT**)

Refrigeration Controller - N321R

N321R performs automatic defrost cycles by stopping the compressor at programmable intervals and duration or via a manual defrost key. It features a programmable power-on delay function and compressor protection against voltage fluctuation.

- Access password for configuration protection
- Sensor offset calibration
- Adjustable hysteresis
- Program retention during power failure
- Sensors: NTC thermistor, Pt100, Pt1000
- Control relay: SPDT, 16 A/250 Vac
- IP65 front protection
- Display: 3½ LED digits, 13 mm height
- Resolution: 0.1 °C from -19.9 to 199.9 °C
- Accuracy: 0.6 °C (NTC), 0.7 °C (Pt100 and Pt1000)
- CE and UL certification
- Size: 75 x 33 x 75 mm
- Power: 100~240 Vac/dc ±10%
  OPTIONS:
- RS485 Modbus RTU serial communication
- Compressor protection against voltage fluctuation programmable from 150~250 Vac (models with NTC)
- Power: 12~24 Vac/ Vdc

Refrigeration Controller - N323R & N323TR

N323R has 3 relays: one for compressor, one for defrost and the other for fan control. It operates with dual temperature sensors, one for chamber temperature and the other for evaporator temperature for defrost control. **N323TR** adds a built-in real time clock for time programmed defrost cycles at specific days of week and times. It holds 3 relays: one for compressor, one for defrost and one for fan control.

- Access password for configuration protection
- Sensor offset calibration
- Adjustable hysteresis
- Program retention during power failure
- Sensors: NTC thermistor (2 sensors)
- Control relay: SPDT, 16 A/250 Vac
- Alarm relay: SPST, 3 A/ 240 Vac
- Resolution: 0.1 °C from -19.9 to 199.9 °C
- Accuracy: 0.6 °C
- IP65 front protection
- Silicone rubber keypad
- Display: 3½ digits LED, 13 mm height
- Sampling: 1.5 readings per second
- CE and UL certification
- Size: 75 x 33 x 75 mm
- Power: 100~240 Vac/dc ±10%
  OPTIONS:
- RS485 Modbus RTU serial communication
- Power: 12~24 Vac/ Vdc

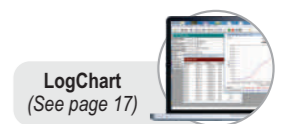## DAQ, Recording & Supervision - LogBox-AA & LogBox-DA

These self-contained data loggers accept several analog and digital industrial sensors and accurately record the measurements in non-volatile memory. Setup and data retrieval is done in a PC via the **IR-Link3** infrared wand with the use of **LogChart** software which plots and prints graphs, lists loggins and exports data to spreadsheets. Special mathematical functions can also be programmed.

LogBox-AA:
- 2 analog inputs for thermocouples J, K, T, N, R, S, B, Pt100, 0-50 mV, 0-10 Vdc, 0-20 mA and 4-20 mA
- Resolution: 14 bits

LogBox-DA:
- 1 analog input for 0-50 mV, 0-10 Vdc, 0-20 mA or 4-20 mA
- 1 digital input for voltage pulse or dry contact
- Counts pulses within a time interval
- Memory: 32768 recordings
- Recording rate: from 1s to 18 days
- Power: internal 3.6 V lithium battery

- Battery life: 2 years typical
- Operating temperature: -40 to 70 °C
- IP65 or IP67 housing
- Size: 70 x 60 x 35 mm
- Free **LogChart** configurator

USB Compatible

LogChart
(See page 17)

DAQ, Recording & Supervision - LogBox-RHT

LogBox-RHT-LCD is a self-contained data logger with built-in humidity and temperature sensors. It ca be easily programmed and configured with the **IR-Link3** infrared interface connected to a USB port. The measured values are shown on the LCD display which also state maximum and minimum values occurred while logging.

- Built-in industrial grade humidity and temperature sensors
- Memory: 32664 recordings
- Recording interval: from 1s to 18 days
- Power: internal 3.6 V lithium battery
- Battery life: 1 year typical
- Operating temperature: -40 to 70 °C
- IP65 or IP67 housing
- Size: 70 x 60 x 35 mm
- Free **LogChart** configurator

USB Compatible

LogChart
(See page 17)

DAQ, Recording & Supervision - TagTemp

TagTemp is a compact waterproof temperature data logger housed in an IP67 enclosure. Configuration is easy connecting straight to a PC USB port. **LogChart** software allows logger configuration, recorded data retrieval, plotting, historical analysis and exporting data to spreadsheets. Its high resolution 14 bit ADC and 32k logging memory capacity make it the ideal product for accurate temperature monitoring for long periods or fast sampling.

- Temperature measurement accuracy: ±0.5 °C
- Reading resolution: 14 bits
- Memory capacity: 32,000 recordings
- Recording interval: from 5 second to 18 hours
- Configuration and data analysis software for Windows®
- USB communication: internal micro B connector
- Operating temperature: -20 °C to +60 °C

- Replaceable lithium battery (type 2032), with average life time of 1 year
- IP67 housing
- Size: 51 x 38 x 12 mm

LogChart
(See page 17)

Acquisition and Data Recording - FieldLogger

FieldLogger is a versatile, powerful, and yet cost effective data logger capable of analog and digital variables recording with email plus automated data and alarm transfer. It features USB memory stick support, 24 bit resolution, extensive communications capabilities and optional LCD display which can be remotely mounted. Stand alone or easily integrated into existing systems **FieldLogger** can act as a Modbus RTU master and read registers from slaves. Capable of performing mathematical operations in the input channels, it is a high-speed reading and logging device with plenty of available memory, along with high connectivity and ease of configuration and operation.

- 8 analog channels: thermocouples J, K, T, E, N, R, S, B; 4-20 and 0-20 mA, Pt100 and Pt1000, 0-20 mV, 0-50 mV, 0-60 mV, 0-5 V and 0-10 V with no hardware changes or strap selection
- Ethernet interface 10/100 with: DHCP, DNS, SMTP, HTTP, FTP (client and server), SNMP (with traps) and Modbus TCP
- Custom web pages
- A/D converter: 24 bits, up to 1000 samples/s
- Accuracy: 0.20% of the span for t/c, 0.15% of the span for other input types
- 8 digital channels individually configured as input or output
- 2 relay output
- Accumulation and variation functions available for Analog and Digital channels
- RS485 interface (Modbus master or slave)
- Can act as a Modbus TCP – Modbus RTU gateway
- Able to read up to 64 registers from Modbus slaves (remote channels)
- Up to 128 channels for mathematical and logical operations
- Data download available via USB flash drive, RS485, USB (cable), FTP (client and server) and Modbus TCP
- Configuration available via USB interface (cable), RS485 and Modbus TCP
- Up to 32 alarms with plenty of actions: outputs switching, e-mails sending, SNMP traps sending and logging control
- Internal memory for up to 512k loggings or optional SD card expansion
- Intuitive configuration, download and export software tool included
- 24 Vdc output capable of powering up to eight 4-20 mA transmitters (standard)
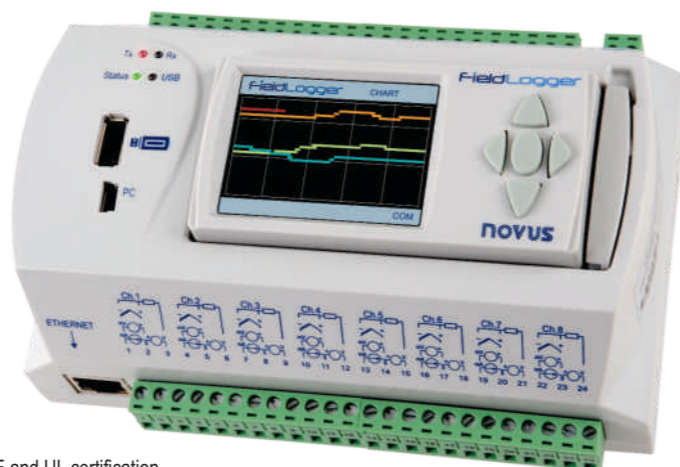
- CE and UL certification
- Dimensions: 164 x 117 x 70 mm
- Power: 100~240 Vac/dc ±10%

OPTIONS:
- Exclusive 320 x 240 pixel color HMI that allows local or remote mounting
- Extension kit for HMI remote mounting
- 24 Vac/dc powered model
- **FieldLogger** is also available without on-board memory and HMI expansion, remote channels and Ethernet interface at reduced price. Consult sales for details.

FieldLogger remote HMI mounting kit
(See more at www.fieldlogger.net)

Isolated Converter - USB-i485

The **USB-i485** module is a cost-effective way to convert RS485 or RS422 industrial buses to a USB interface. When connected to a PC USB port the **USB-i485** module is automatically detected and installed as a native COM port compatible with any existing serial communications application. Multiple modules can be installed using USB hubs thus allowing a hassle-free configuration of a multi serial system. 1500 V isolation protects the PC from spikes or possible misconnections.

- USB (V1.1 and V2.0) Plug and Play interface
- Virtual COM port driver for Windows® Mac & Linux
- Jumper selected RS485 / RS422
- Automatic flow control for RS485
- Transmission rate: 300 bps to 250 kbps
- Dual RS485 bus: Connection of up to 64 unit load RS485 devices

- Powered from the USB port
- Isolation: 1500 Vdc from USB interface and the RS485/RS422 interface
- RS485/422 bus protection: ±60 Vdc, 15 kV ESD
- Dimensions: 70 x 60 x 18 mm

Acquisition and Data Recording - myPCLab

myPCLab is a very compact DAQ tool which connects to a PC via a USB port and monitors two universal input analog variables along with one digital input. From hobbyists to scientists, from simple technical tasks to complex engineering activities, **myPCLab** can be an invaluable tool for on-line monitoring and data logging in schools, laboratory research, machine data recording and industrial processes.
It comes with an intuitive and easy-to-use Windows® software which plots and records data, shows gauges, bargraphs and digital readouts.

- Dual analog inputs for thermocouples J, K, T, E, N, R, S, B, Pt100, 0-50 mV, 4-20 mA, 0-10 V
- A/D resolution: 11 to 15 bits
- Sampling rate: selectable from 8 to 128/second, depending on selected resolution
- Accuracy: 0.25% FS ±1°C for thermocouples or 0.2% FS for other signals

- Digital input: voltage level or dry contact
- USB V1.1. & V2.0 Virtual Serial Port driver, Modbus RTU protocol
- Windows® software provides communication to multiple **myPCLab** devices
- Dimensions: 70 x 60 x 18 mm

Data Acquisition and Recording - SuperView Mobile

SuperView Mobile is a SCADA (Supervisory Control and Data Acquisition) system designed for users who want to do monitoring, control and supervision of devices and equipment in industrial plants using Smartphones and Tablets with **ANDROID™**. This mobile system provides a user-friendly interface for advanced users and beginners. A configuration wizard guides the user to develop entire application from scratch.
Remote communication is performed using Modbus protocol on TCP and communication interfaces present in mobile devices such as Wi-Fi, 3G, 4G, GPRS, etc. The graphical interface consists of list type screens, trend chart and map (GPS) that allows the visualization of data for both reading and writing. Alarms configured are integrated to ANDROID notification system, where the user is immediately notified and can acknowledge them for traceability purposes. This and other important application events are logged and can be viewed with Audit Trail tool.
There are currently two versions available in the Android Market (Google Play). **SuperView Mobile Lite** is free and has the same features as the commercial version but is limited to the configuration of five variables (Tags). The commercial version of **SuperView Mobile** does not have the configuration limitations.

- Screen types: List, Trend Chart and Map (GPS)
- Connections with any Modbus TCP device
- Classed Tags (integer, float, bit, Boolean)
- Alarms integrated to ANDROID notification system
- Alarms acknowledgement for traceability purposes
- Mathematical formulae with functions library
- Import and Export applications
- Security to authenticate users
- Audit Trail (Event Log)

- Statistics and status of real time application
- Project information for version control
- Interactive configuration wizard
- Automatic updates within ANDROID Market (Google Play)
- Encrypted application file

Data Acquisition and Recording - SuperView

Scalable, functional and user-friendly, **SuperView** is a SCADA (Supervisory Control and Data Acquisition) platform that allows supervision of local and geographically distributed applications. Its simplicity of configuration gives the users ability to build an effective graphical representation of the process. Acting as a control for supervision, the users have a set of tools that allows to describe logic to read and write to Modbus devices. It comprises functions such as historic, event logs, alarm monitoring and e-mail sending. A client/server module provides TCP/IP distributed supervision.

- Geographically distributed supervision and control
- User-friendly interface to configure recipes
- Management of formulae and mathematical statements
- Encrypted historical files, protected against data tampering

- User profile configuration for each user, limiting their policies
- Individual alarm supervision with visual, sound and email notification
- Electronic signature when acknowledge alarm events
- Complies with technical requirements of FDA 21 CFR Part 11
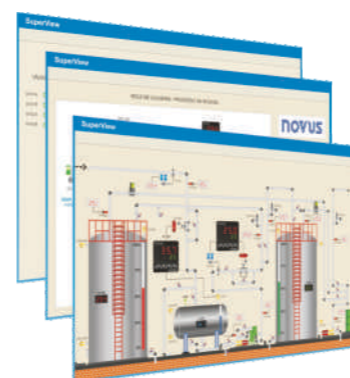
Data Acquisition and Recording - FieldChart

FieldChart is a data acquisition and monitoring software tool dedicated to and easy to use with **NOVUS** devices such as **FieldLogger**, **FieldLogger I/O** and all **NOVUS** controllers and indicators with digital communication capability.
The main module collects data from **FieldLogger** and **FieldLogger I/O** memories to a PC, displays the data in both digital and online trend charts and generates historical views. It can zoom in and out, it shows values as a list, it can join and and overlay graphs, print and export data to txt and spreadsheets.
When online, it communicates using Modbus RTU and Modbus TCP protocols to monitor up to 64 channels from **NOVUS** devices like **FieldLogger, FieldLogger I/O** and controllers or DPMs. High and low alarms can be associated to each channel of the trend chart and their values will be shown on the screen whenever and alarm becomes active.
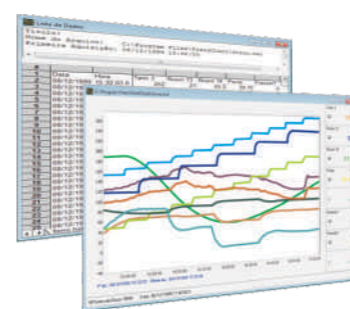
Data Acquisition and Recording - WebServer

Ws10 is a data acquisition and transmission device capable of integrating instruments and sensors to the Internet and Intranet. It has an Ethernet interface, TCP/IP protocol, 2 serial ports, 2 relay outputs and 4 analog or digital inputs. As a master Modbus RTU, it can read and write to external devices. As a server or gateway Modbus TCP, it can easily be integrated to SCADA systems.
The **WS10** can provide HTML pages, send email, monitor alarm conditions and communicate by conventional modem or cellular (mobile).

- Communication interfaces: 1 RS232, 1 RS485 Ethernet 10BaseT. Optional: Internal V32 Modem
- Protocols TCP/IP, PPP, HTTP, FTP, SMTP, DHCP, DNS, Modbus (TCP and RTU)
- Inputs: 4 digital or analog (0-5 V, 0-20 mA)
- Resolution: 10 bits (4-20 mA) or 800 levels

- 2 relay outputs SPST 3 A/250 V
- Flash Memory for HTML and data recording
- Case in ABS, for 35mm DIN rail
- Consumption: 4 VA
- Dimension: 105 x 90 x 60 mm
- Power: 100~240 Vac/dc ±10%

Gateway - AirGate-GPRS

new

Applied in M2M (machine-to-machine) communication, **AirGate-GPRS** enables a Modbus RTU network to be monitored by more than one master. A remote master communicates using Modbus TCP through the Internet, reaching **AirGate-GPRS** through its GPRS connection to the cloud. A second master can be locally connected to a SCADA system using the USB port. One of its RS485 ports can be configured as a slave and connected to a third master, such as an HMI, or similar to start a new Modbus network segment with additional slaves. The other RS485 port will always connect to the main RS485 network segment, containing only slaves. Routing and multiplexing Modbus packets through its four communication interfaces adds innovative funcionalities with minimum performance loss.

- Connects to a cloud based gateway through its GSM/GPRS interface, enabling remote access to Modbus slaves connected to local interfaces
- Fully compatilbe with NOVUS M2M Gateway for monitoring and storage
- USB port allows PC connection as a virtual COM port
- Isolated USB interface: 2 kV
- Two configurable RS485 interfaces (baud rate, parity and stop bits)

- One RS485 is always a Modbus master and the other can be set as master or slave
- RS485 baud rate from 1200 to 115200 bps
- Worldwide GSM compatibility: quadri band
- Authentication to the remote gateway to increase security
- Sends SMS as alarm or event notification
- Free configuration software
- Two inputs, configurable as analog (4-20 mA or 0-10 V) or digital

- Includes an antenna with magnetic base and 3m cable
- ABS enclosure for DIN rail mounting
- Enclosure protection index: IP40
- Certification: CE, ANATEL
- Power supply: 10 to 35 Vdc

OPTIONAL:
- Cable less antenna

Gateway - AirGate-Modbus

AirGate-Modbus is a wireless multifunction gateway. It allows the transparent and easy insertion of wireless branches into existing wired RS485 networks. The **AirGate-Modbus** has four operation modes: Modbus master, multiplexer, USB-RS485 converter and wireless RS485 extension. Supports multiple network topologies: star, point to point and tree, enabling efficient slave distribution in mixed wired and wireless network segments.

- Frequency Band: ISM 2.4 GHz
- Wireless protocol: IEEE 802.15.4
- Up to 15 channels with automatic adaptive selection
- Programmable transmition power up to 100 mW (20 dbm)
- Typical wireless range: 100 m indoor, 1000 m in open field
- Wireless communication speed: 250 Kbps
- Encryption: AES-CBC-128
- USB device interface with Mini-B receptacle, virtual COM port driver

- Auto-adaptative wireless repeater
- Wired communication interface: two RS485, Modbus RTU protocol
- Wired interface speed: 1200 to 115200 bps
- Enclosure protection: IP20
- Enclosure: ABS+PC for DIN rail mount
- Certification: CE and ANATEL
- Power Supply: 10 to 35 Vdc, up to 70 mA at 24 Vdc

OPTIONAL:
- Magnetic base antenna with 2.5m cable

Gateway - DigiGate Profibus

DigiGate Profibus is the ideal device for interconnecting a Profibus DP network to Modbus RTU devices. Acting as a gateway, it behaves as a master station in the Modbus network and as a Slave in the Profibus network. **DigiGate** reads the data from the Modbus slave devices and relays them to the Profibus master. Likewise, **DigiGate** writes into the Modbus slaves outputs according to the Profibus master requests thus providing complete control of the Modbus network over the Profibus network.

- Profibus: operates from 9600 bps to 12 Mbps
- Modbus: operates from 1200 bps to 115200 bps
- Built-in terminating and polarizing resistors (jumper enabled)
- Electrical insulation between device and Profibus interface: 1000 Vac
- Frontal LEDs for status and communication indication

- Operating environment: 0 to 50°C, 5 to 90%RH (non-condensing)
- Assembly: 35 mm DIN rail
- Includes Windows® software for device configuration and diagnostic
- Power Supply: 10 to 35 Vdc

Data Acquisition - DigiRail

The **DigiRail I/O** modules provide a simple, convenient, flexible and inexpensive way for integrating digital and analog signals into PLCs and SCADA systems via RS485 interface with Modbus RTU protocol.

- Communication: RS485, Modbus RTU. Baud rate from 1200 to 115200 bps
- Windows® based configuration software
- Dimensions: 72 x 77 x 19 mm
- Power supply: 10 to 35 Vdc
  DigiRail-2R: dual 8A/250 Vac SPDT relays with timer function
  DigiRail-4C: 4 isolated digital counters, input 1 accepts 100 KHz, inputs 2 to 4 accept 1 KHz
  DigiRail-2A: dual universal channels, accept t/c types J, K, T, E, N, R, S, B, Pt100 RTD, 0-20 mV, 0-50 mV, 0-5 V, 0-10 V; 0-20 mA, 4-20 mA

- Sensor break detection for t/c and RTD
- A/D resolution: 17 bits
- User defined linearization option for the analog inputs
- Accuracy: 0.25% of span ±1 °C for t/c; 0.15% for Pt100 RTD, mV, V and mA
- Analog inputs isolation from device: 1000 Vac for 1 minute

All-In-One Controllers - XL Family*

new

The **XL Family** is composed of a very robust and reliable programmable controller that integrates analog and digital inputs and outputs, operator interface, communication with more than 30 protocols and also the capability of expand data memory for data logging applications are additional features of this small and powerful product. In addition to the advanced ladder programming language, the software supports all the IEC 61131 standard programming languages. It is also possible to perform the network configuration and the specially I/O setup using the same software environment. In addition a great way to accelerate the learning process, you do not have to manage many software licenses.

The **XLe** model incorporates a graphic display of 2.2 inches and alpha numeric programmable keys. The models **XL4** and **XL6** incorporate a colorful display of 3.5 and 5.7 inches touch-screen interface plus programmable function keys. All models offer digital, analog and special I/O, serial communication and CAN bus. The models **XL4** and **XL6** also offer USB and Ethernet interfaces.

- Advanced Ladder or IEC 61131 standard programming languages
- Program memory: Up to 1Mb
- Scan time: up to 0,013 us/k logic
- Interface: graphic display
- Function keys and alphanumeric entry
- Data logger function with MicroSD card or USB flash memory
- Up to 5000 I/O points thru network expandable modules
- Two serial communication ports, CAN bus and Ethernet port resulting in more than 30 communication protocols

May not be available in all countries or regions.

PLC*

This line of **PLCs** (Programable Logic Controllers) was conceived to address a wide range of applications through modularity, versatility, robustness and connectivity.

- Protocol ModBus RTU or ASCII
- Removable connectors
- Free Windows® based programming tool capable of on-line and off-line simulations
  Brick CPUs (monoblock) - ES2 / Ex2
- Power supply 110 / 220 Vac
- Digital (24 Vdc) and analog inputs
- Relay outputs (2 A) or transistor (0.5 A)
- 3 communication ports (RS232 and Rs485)
- Models with 16, 20, 40 and 60 I/Os
- 16 k program steps

SLIM CPUs (modulate)-SA/SA2/SX/SX2/SV
- Power supply 24 Vdc
- CPUs with 10, 12, 20 and 28 I/Os. Up to 512 I/Os
- 2 communication ports (RS232 and Rs485)
- Digital and analog expansion modules
- Dedicated modules (thermocouples, Pt100 and weight measurement)
- Communication modules: Ethernet, Profibus-DP, DeviceNet, CANopen and Remote Modbus
- 8 or 16 k program steps

May not be available in all countries or regions.

HMI*

These **HMIs** are able to meet a large variety of applications having a modern look and the best cost-benefit of the market.

- Over 80 communication protocols for the main PLC models of the market (Siemens, Rockwell, GE, Schneider, among others)
- Sizes from 3.5 to 10.4 inches
- Free Windows® based programming tool capable of on-line and off-line simulations
- IP65 front panel protection
  TP series - Text and keypad
- LCD with 4 to 8 lines
- Parameterization and navigation keys RS232 and RS485
  AS Series - 3.5 inches
- Touch-screen color graphic display

- 4 customizable keys, 1 system key
- Independent RS232 and RS485 ports
- USB Client (programming) and Host (pen-drive, bar code reader, etc.)
  B Series – 5.6, 7.0 and 10.1 inches
- Touch-screen color graphic display
- Independent RS232 and RS485 ports
- USB Client (programming) and Host (pen-drive, bar code reader, etc.)
- Ethernet

May not be available in all countries or regions.

AC Frequency Inverters*

new

The new **NOVUS AC Drives** have an advanced microprocessor technology which is capable of efficiently controlling the speed of an AC motor while also improving the power factor which can improve process controls, increase energy savings, and reduce wear on the machinery.

- Compact size plus side-by-side installation capability
- Start-up assistant
- EMC filter
- High performance and functionality
- Integrated PLC based on IEC 61131 programming standards
- Operator interface with program back-up feature

- Global certifications
- PID Control and RS485 communication incorporated
- Safe-STOP input according to EN 60204-1
- DC bus inductor for AC Drivers from 16Amps and up
- Available in all standard voltage ranges
- From 0.5 HP to 250HP

May not be available in all countries or regions.

Pressure Transmitter - NP300

The **NP300** line of industrial pressure transmitters boasts a unique state-of-the-art digital technology that features programmable range and digital field calibration capabilities. They are offered in five basic pressure ranges and final application range can be user configured by means of a convenient USB interface and the easy-to-use **TxConfig** configuration software. The same configuration interface and software are used for calibration. These features bring flexibility, allowing the field calibration, and inventory reduction through the rangeability.

- Models availabe:
  - 0.1 MPa (1 bar): gauge pressure
  - 0.3 MPa (3 bar): gauge pressure
  - 1 MPa (10 bar): gauge pressure
  - 3 MPa (30 bar): gauge pressure
  - 10 MPa (100 bar): absolute pressure
- Rangeability: 3:1
- Working temperature: -10 to 70 °C
- Media contact material: 316L stainless steel
- Enclosure material: 304 stainless steel
- Accuracy: 0.5% of full scale, including hysteris linearity and repeatability
- Process connection: 1/4" - 18 NPT
- Electrical connection: mini DIN 43650
- Over pressure: 1.5 times rated pressure

- Burst pressure:
  - 0.1 MPa (1 bar): 10 times rated pressure
  - 0.3 MPa (3 bar): 8 times rated pressure
  - 1 MPa (10 bar): 5 times rated pressure
  - 3 MPa (30 bar): 4 times rated pressure
  - 3 MPa (30 bar): 4 times rated pressure
  - 10 MPa (100 bar): 2 times rated pressure
- Dynamic response: < 30 ms
- Output: two-wire 4-20 mA
- CE certification
- Weight: 136 g
- Dimensions: Ø 23 x 132 mm
- Power: 11-33 Vdc
- Kit with USB TxConfig USB-NP interface and software for transmitter configuration is sold separately

TxConfig USB-NP

Pressure Transmitter - NP430D

The **NP430D** series of pressure transmitters have been developed for general industrial applications including hydraulics, pneumatics, water and sewage utility companies, machine manufacturers and especially for safety and monitoring in refrigeration equipment.

- Measuring ranges: 0 to 120 bar (several combinations)
- Output signal: two-wire 4-20 mA
- Excitation voltage (Vexc): 12to 28 Vdc
- Maximum load (RL): RLmax = (Vdc - 12 V) / 20 mA
- Accuracy: < 1 % of full scale (FS)
- Over pressure: 1.5 times full scale
- Burst pressure: 3 times full scale
- Protection level: IP65

- Weight: 90 g
- Working temperature: -40 to 75 °C
- Process fluid temperature: -40 to 100 °C
- Dynamic response: < 10 ms (0~99 %)
- Process connection: external thread ¼ - 18 NPT
- Electrical connection: DIN 175301-803
- Wetted parts: 304 SS, ceramic diaphragm (Al2O3 - 96%)
- Seal: Nitrilic Buna Rubber-N (NBR)

Pressure Transmitter - 510 & 511

The **510** and **511** series of pressure transmitters were designed for high volume and low cost OEM industrial and commercial applications for liquids and gases. The **510** has a unique stainless steel diaphragm for all media compatibility suited for aggressive refrigeration gases, cryogenic equipment and compressor systems.
The **511** features a high stability ceramic sensor which withstands a broad temperature range being suited for industrial compressors and steam measurements.

- Range: -1 to 600 bar (several combinations)
- Working temperature: -40 to 85 °C
- Wetted parts: 1.4305 (AISI 303) stainless steel or ceramic
- Process connection: 1/4" - 18 NPT
- Burst pressure: 6 / 2.5 x measuring range, limited to 900 bar.
- Unique PPS system avoids fluid leakage
- Quick-on electrical connector with IP67 protection

- Accuracy: < ±0.5 / 0.3% of meauring span, including hysteresis, linearity e repeatability
- Output: two-wire 4-20 mA
- Power: 8-33 Vdc
- Size: Ø 23 x 82 mm
- Weight: 98 g

Pressure Transmitter - 692

The **692** series of differential pressure transmitters measure differential pressures with high accuracy from 0 to 0.1 bar up to 0 to 25 bar and yet withstanding high one-side static overpressures.

- Ranges: from 0 to +0.1 bar up to 0 to a 2.5 bar
- Working temperature: -15 to 80 °C
- Media contact material: ceramic and 1.4305 SS (AISI 303)
- Accuracy: 0.5% of full scale, including hysteresis, linearity and repeatabilty
- Process connection: 6 mm pressure tube tip
- System pressure: 25 bar for 6 bar range, 50 bar for 25 bar range

- Burst pressure: 1.5 x system pressure
- Connector DIN 43650-A IP65
- Output: two-wire 4-20 mA
- Power: 11-33 Vdc
- Electromagnetic compatibility according to CE 89/336
- Weight: 430 g
- Size: Ø 45 x 89 mm

Pressure Transmitter - 699

The **699** series of differential pressure transmitters are ideal for high accuracy monitoring and control of low air flow in air-conditioning systems, in clean room applications, fine pressure laboratories and in critical filters protection with non-corrosive gases. They are similar to the **694** series adding the advantage of being dip switch configurable. An optional LCD display is available for PV visualization.

- Ranges: -1 to 1 mbar; 0 to 0.3 - 50 mbar
- Available with or without LCD display
- Working temperature: 0 to 70 °C
- Silicone LSR bi-component diaphragm
- Burst pressure: 2 x range at room temperature or 1.5 range at 70 °C
- Accuracy: ±1%
- Process connection: dual 6.2 mm Ø tubes
- Electrical connection: 6.3 mm fast-on lugs and Pg11 gland

- Output: 0-20 mA or two-wire 4-20 mA / 0-10 Vdc (adjustablel via dip switch
- Response time: less than 20 ms
- Power: 11-33 Vdc
- Electromagnectic compatibility according to CE 89/336
- Plastic housing according to Ul94
- Weight: 90 g
- Size: 92 x 75 x 49 mm

Pressostat - 604

The **604** series differential pressure switches are used as DP flow switches in ventilation ducts for the control of filters and fans and in primary and secondary control systems for air dampers. They are also ideally suited to protect heating coils from overheating and for monitoring industrial air cooling circuits. Precise setpoint adjustment is done through individual scale and by turning the knob.

- Ranges: 0.2 to 3 mbar; 0.5 to 5 mbar; 1 to 10 mbar; 0 to 50 mbar and 10 to 50 mbar
- Electrical contact: 5A/250 Vac SPDT 4A/30 Vdc relay
- Life span: 1,000,000 commuting cycles
- Working temperature: -30 to 85 °C
- Silicone LSR bi-component diaphragm
- Minimum switching pressure: 0.2 mbar
- Repeatability: ±0.025 mbar (0.2-3 mbar), ±0.05 (0.5-20 mbar); ±0.15 (10-50 mbar)

- Over-pressure protection: 75 mbar
- Hysteresis: 0.1 mbar
- Process connection: dual 6.2mm Ø tubes
- Electrical connection: 6.3 mm spade lugs and PG11 gland
- Fiber-reinforced PC
- Protection: IP54
- Weight: 144 g
- Size: 103 x 88 x 55 mm

Pressure Transmitter - 691

The **691** series of pressure transmitters were designed for high performance industrial applications in relative pressure up to 600 bar or absolute applications up to 16 bar.

- Maximum range: -1 to 600 bar (relative pressure); 0 to 16 bar (absolute pressure)
- Working temperature: -15 to 80 °C
- Media contact material: ceramic and 1.4305 SS (AISI 303)
- Accuracy: 0.3% of full scale, including hysteresis, linearity and repeatability
- Process thread: 1/4" - 18 NPT. Others under request
- Protection: 2 x measuring range

- Burst pressure: 3 x measuring range limited to 900 bar
- Dynamic response: <5 ms
- Connector: DIN 43650-A IP65
- Output: two-wire 4-20 mA
- Power: 11-33 Vdc
- Electromagnetic compatibility according to directive CE 89/336
- Weight: 245 g
- Size: Ø 36 x 64 mm

SSR and Solid State Module

These electronic devices are used for switching resistive or inductive loads with many advantages over conventional electromechanical relays. They provide years of reliable high speed switching operation without electrical noise, sparks or mechanical wear coupled with driving power make the SSRs the perfect choice where high control accuracy is essential. The **Solid State Module with SSR** consists of an equipment with heatsink, fan, overheating protection and wiring terminals.
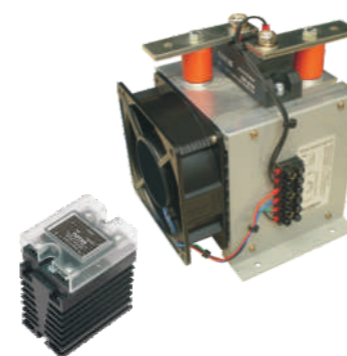
- Currents: 10, 25, 40, 60, 80, 100, 150, 200 and 300 A
- Maximum voltage: 480 Vac
- LED for status indication
- Internal snubber for dv/dt protection
- Zero crossing switching
- Trigger voltage: 4 to 32 Vdc
- High switching speed
- Optical isolation between input and output
- High EMI and RFI noise imunity
- Requires minimum power for switching

- Heat sink without voltage
- Does not generate EMI or RFI
- Switch 1, 2 or 3 phases *
- Overheating protection*
- Connections compatible with the load*
- Built in heat sink and cooling fan*

* For Solid State Module only

Power Controller

These devices control and limit the electrical power delivered to electrical loads. By using state of the art technology one can achieve significant reduction in energy consumption while attaining best process performance, with high efficiency, precision, endurance and economy. They execute the important function of protecting the controlled load and the thermal system due to the built-in ultra-fast protection fuses on all versions. Available in two versions, PCW and PCWE, the latter features electrical power limitation to the load.

- Load voltage: 180~440 Vac; 50/60 Hz
- Switching signal: 0-20 mA, 4-20 mA, 0-5 V, 1-5 V, 0-10 V and 2-10 V10 k potentiometer
- Control type: pulse width modulation and phase angle
- Controller power supply: 220 Vac; 50/60 Hz

- Relay alarm SPST; 3 A / 250 Vac
- Electrical isolation between input and output: 2500 V
- Operating temperature: -10 to 60 °C
- Plastic enclosure: ABS+PC / UL-94V0
- Fuses included

Temperature and RH Wireless Transmitter - RHT-Air

The **RHT-Air** is a wireless transmitter that when coupled with the **AirGate-Modbus** provides an excellent solution for wireless monitoring of temperature, humidity and dew point.
Through the IEEE 802.15.4 wireless interface, multiple **RHT-Air** wireless transmitters can talk to one or more **AirGate-Modbus** gateways providing USB and RS485 communication paths to the main application.
The **RHT-Air** uses high accuracy sensors for measurement of the temperature, relative humidity and dew point. It also provides a LCD display for local viewing of the measurements while allowing reconfiguration of the transmitter parameters without having to run the configuration software on PC.
The **RHT-Air** internal battery provides stand-alone operation. Optional external source is available. **RHT-Air** is offered in wall mount (WM) and duct mount (DM) versions.

- Operating limits:
  - Sensor and probe: -20 to 80 °C, 0 to100 % RH
  - Electronic circuit: 0 to+65 °C, 0 to 95 % RH
- Power supply
  - Internal battery: Lithium ½ AA, 3.6V
  - Battery autonomy: typically 12 months
  - External supply (optional): 10 to 35 Vdc, 70 mA max
- Wireless Protocol: IEEE 802.15.4
- Configurator software **DigiConfig** for Windows®

- Accuracy: ±3 % RH from 20 to 80 % RH (at 25 °C) and ±1 °C for temperature
- ABS housing with IP65 protection, for wall mounting (WM model). Nylon probe
- Probe extension (DM model): Stainless steel 150 or 250 mm of length
- Dimensions: 70 x 60 x 35 mm
- Anatel certification

Temperature and RH Transmitter - RHT-WM / DM / XS /P10

The **RHT-WM** and **RHT-DM** temperature, relative humidity and dew point transmitters integrate a high accurate and robust sensor for delivering precise and stable measurements. The **RHT-WM** model was designed for wall mounting, while the **RHT-DM** with its long probe is aimed at ducts or through the wall applications. There are versions for remote sensor (XS) and for pressurized ducts (P10). The microprocessed based construction allows easy configuration by a PC .

- Configurable measurement range
- Operating limits:
  - Sensor e probe: -20 to 80 °C, 0 to 100% RH
  - Electronic circuit: 0 to+65 °C, 0 to 95 % RH
- Two 4-20 mA loop powered outputs or two 0-10 Vdc outputs
- Accuracy: ±3 % RH from 20 to 80 % RH (at 25 °C) and +-1 °C for temperature
- Response time: 8 s for RH, 30 s for temperature

- Power supply: 12 to 30 Vdc (4-20 mA) or 18 to 30 Vdc (0-10 V)
- ABS housing, IP65 protection, Nylon probe (WM mod.).
- Probe sheath (DM model): Stainless steel 150 or 250 mm of length
- Dimensions: 70 x 60 x 35 mm
- Sensor cable length: 3 m (XS and P10 versions)
- Maximum working pressure: 10 bar (P10 version)
OPTION:
- Windows® software and USB configuration interface

Temperature and RH Transmitter with RS485 - RHT-485-LCD

This transmitter provides the temperature, relative humidity and dew point data through a RS485 serial communication interface with Modbus RTU protocol. The high contrast LCD local display provides in the field monitoring capability and allows for local change of parameters without the need of connecting it to the PC configuration software.

- Operating limits:
  - Sensor and probe: -20 to 80 °C, 0 to 100% RH
  - Electronic module: 0 to+65 °C, 0 to 95 % RH
- Power supply: 10 to 35 Vdc, 10 mA max
- Accuracy: ±3 % RH from 20 to 80 % RH (at 25 °C) and ±1 °C for temperature
- Response time: 8 s for RH
  30 s for temperature

- RS485 (Modbus RTU protocol) serial communication
- **DigiConfig** configurator software for Windows® (free of charge)
- ABS housing, IP65 protection, Nylon probe (WM model).
- Probe extension (DM model): Stainless steel 150 or 250 mm of length
- Dimensions: 70 x 60 x 35 mm

Temperature Transmitter - TEMP-WM & TEMP-DM

The **TEMP-WM** and **TEMP-DM** transmitter series incorporate high accuracy and great stability for temperature measurement. The microprocessor based circuit enables full configuration of the temperature range through the USB communication interface along with the TxConfig software for Windows®. Model **TEMP-WM** is designed for wall mounting and **TEMP-DM** has a sheathed probe for duct and through-the-wall mounting.

- Programmable measuring range
- Operating limits:
  - Electronic Module: -20 to +65 °C, 0 ~ 95% RH
  - Sensor and probe: (**TEMP-DM**): -40 ~ +100 °
- CLoop powered 4-20 mA output
- Optional 0-10 Vdc output
- Accuracy: 0.5 °C @ 25 °C
- Response time: up to 30 seconds in slow motion air
- Power: 12 to 30 Vdc (4-20 mA) or 18 to 30 Vdc (0-10 V)

- ABS enclosure with IP65 protection for wall mounting. Polyamide sensor protecting cap
- Probe sheath (**TEMP-DM**): Stainless steel, 150 or 250 mm length
- Dimensions: 70 x 60 x 35 mm
OPTIONS:
- **Txconfig** interface and software for Windows®
- Dimensions: 70 x 60 x 35 mm

Temperature Transmitter - TxMiniBlock

The **TxMiniBlock** is a small size programmable RTD temperature transmitter for head mounting. Its microprocessed based technology features full PC sensor range configuration and calibration.

- Two-wire loop powered 4-20 mA output
- Power supply: 12 to 35 Vdc
- Input: Pt100 RTD
- Programmable working range
- Accuracy (T_{amb} 25°C): 0.2% of span
- Operating temperature: -40 to 50 °C
- TxConfig for Windows® configurator software
- USB configuration interface (accessory)
- Manual zero (offset) adjustment on the front panel
- Linearized output

- Output resolution: 4 µA
- 3-wire Pt100 connection
- Programmable burnout upscale or downscale sensor failure protection
- Dimensions: (D x H): 34 x 18 mm (fits small heads)

TxConfig configuration tool
(see page 18)

Temperature Transmitter - TxBlock

The **TxBlock** is a fully programmable head mount temperature transmitter for Pt100 and thermocouple sensors. Configuration of input sensor, working range and calibration are achieved by means of **TxConfig USB** configuration tool.

- Programmable input: Pt100 RTD, 0-50mV, and thermocouple types J, K, T, E, N, R, S
- Programmable working range
- Two-wire loop powered 4-20 mA output
- Power supply: 12 to 35 Vdc
- Accuracy (T_{amb} 25°C): ±0.2% max of full scale for Pt100 and 0.3% max. of full scale for thermocouples
- Operating temperature: -40 to 85 °C
- TxConfig configurator software for Windows®
- USB configuration interface (accessory)
- Manual zero (offset) adjustment on the front panel

- Linearized output
- Output resolution: 4 µA
- Internal cold junction compensation for T/C
- 2 or 3-wire Pt100 connection
- Programmable burnout upscale or downscale sensor failure protection
- Dimensions (D x H): 44 x 25 mm

TxConfig configuration tool
(see page 18)

Temperature Transmitter - TxIsoPack USB

The **TxIsoPack** USB represents the state of art technology in loop-powered isolated temperature transmitters. By using advanced signal processing technology, the **TxIsoPack** is configured directly from PC USB port.

- Two-wire loop powered 4-20 mA output
- Power: 12 to 35 Vdc
- Programmable input for thermocouple types J, K, T, E, N, R, S, B, RTD Pt100 and linear 0-50 mV
- Programmable working range
- Accuracy: ±0.25% of span for t/c ; ±0.15% for Pt100 and mV
- Linearized output
- Operating temperature: -20 to 75 °C
- Configurator for Windows®
- Native USB interface with mini-B connector
- Output resolution: 4 µA

- Internal cold junction compensation for thermocouples
- 2, 3 or 4-wire Pt100 connection
- Programmable burnout upscale or downscale sensor failure protection
- Electrical isolation: 1000 Vac/1 min
- Dimensions (D x H): 44 x 24 mm

Temperature Transmitter - TxRail & TxIsoRail

The **TxRail** and **TxIsoRail** (isolated) are fully programmable DIN rail mounting temperature transmitters for Pt100 and thermocouple sensors. The flexibility of in-the-field configuration translates into a one-model-fits-all signal conditioning and isolator module.

- 2-wire loop powered 4-20 mA or 0-10 Vdc output
- Power supply: 10 to 35 Vdc
- 18 to 35 Vdc when 0-10 Vdc output
- Programmable input: Pt100, t/c types J, K, T, E, N, R, S, B, linear 0- 50 mV, 0-10 V, 0-20 mA and 4-20 mA
- Programmable working range; linearized output
- Cold junction compensation for thermocouples
- 2 or 3-wire Pt100
- Accuracy: 0.2% max. of full span for Pt100 0.3% max. of full span for thermocouples
- **TxIsoRail** electrical isolation: 1000 Vac/1 min

- Configurator for Windows® with USB adaptor (optional)
- Manual zero (offset) adjustment on the front panel
- Programmable burnout upscale or downscale sensor failure protection
- Working temperature: -40 to +85°C (-40 to 185°F)
- Dimensions: 72 x 77 x 19 mm

TxConfig configuration tool
(see page 18)

Temperature Transmitter - TxIsoPack-HART & TxIsoRail-HART

The **TxIsoPack-HART** (head mount) and **TxIsoRail-HART** (DIN rail mount) transmitters convert termocouples, RTDs and voltage signals into an isolated 4-20 mA signal along with a superimposed HART protocol digital communication.

- Programmable input:
  - thermocouple types B, E, J, K, R, S, T, N
  - Pt100, Pt500, Pt1000
  - Cu50, Cu100
  - Ni100, Ni500, Ni1000 (5000 ppm / K)
  - Ni100, Ni500, Ni1000 (6180 ppm / K)
  - 0 to 400 Ω, 0 to 2000 Ω, 0 to10 KΩ
  - -10 to 75 mV, -100 to 100 mV, -100 to 500 mV, -100 to 2000 mV
- Programmable working range
- 2-wire loop powered 4-20 mA output

- Cold junction compensation for thermocouples
- Configurator TxConfig-HART for PC (sold separately)
- Power supply: 10 to 35 Vdc
- Accuracy: 0.2% max. of full span for Pt100 and 0-50 mV / 0.3% max. of full span for thermocouples
- Working temperature: -40 to +85 °C (-40 to 185°F)
- Maximum load: (Vdc - 10,5V) / 0.022

HART Configurator
(see page 18)

Signal Isolator - TxIsoLoop

The loop isolators **TxIsoLoop-1** (1 channel) and **TxIsoLoop-2** (2 channels) provide signal protection by electrically isolating 0(4)-20 mA signals. They avoid measurement errors due to different voltage potentials or undesirable ground loops typically encountered in instrument installations. The 0(4)-20 mA input is measured and an identical isolated signal is reproduced at the output. Power is drawn from the input current loop thus not requiring any other power supply for its operation.

- Electrical isolation: 3000 Vac / 10 seconds, 240 Vac continuously
- Input signal: 0-20 mA and 4-20 mA
- Output signal: 0-20 mA and 4-20 mA
- Voltage drop input/output: < 3 Vdc
- Response time: 2 ms
- Minimum operating current: > 0,1 mA
- Maximum input current: < 40 mA

- Maximum load : 1450 Ω
- Total accuracy: 0,2 % @ 0 to 60 °C
  0,3 % @ -20 a 75 °C
- Input protection against reversed polarity
- DIN mounting enclosure, IP40 protection
- Operating conditions: -20 to 75 °C, 20 to 90 % relative humidity

Eletronic Counter - NC400-6

This programmable 6-digit counter is also a batch counter and totalizer, performs quadrature counting and accepts remote reset. Its 2 outputs with built-in timers can be activated at any of the 3 counter presets: unit, batch or totalizer. It features a programmable function key, full scale adjustment and several other advanced configuration options.

- Input types: (2 for counting, 1 for reset) type NPN/PNP, dry contact or voltage pulse
- Max. count frequency: 55 Hz, 4 kHz or 20 kHz
- Counter scale factor: 0.00001 to 9.99999
- Counting: UP or DOWN
- F key functions: hold, reset, outputs reset
- Outputs: 2 SPST 3 A relays, 250 Vac or 1 SPST relay and 1 logical pulse 5 V/25 mA
- Output timer: 10 ms to 9999 s
- Internal battery for counting retention
- Sensor supply output: 12 Vdc/50 mA

- IP65 UL94 V-2 front panel; IP20 UL94 V-0 enclosure; silicone rubber keypad
- CE and UL certification
- Dimensions: 48 x 48 x 110 mm
- Power: 100~240 Vac/dc
- **OPTIONS:**
- RS485, Modbus RTU protocol
- 24 Vdc power supply

Programmable Timer - NT240

With a 4-digit display, this timer offers a relay output to be switched at pre-programmed intervals according to eleven distinct timing functions. The LED display shows the running time and the digital inputs execute start, hold and reset functions.

- Input types: NPN/PNP, dry contact and voltage pulse.
- Output type: 3 A/250 Vac relay or 5 Vdc/25 mA voltage pulse
- Display: high efficiency 10 mm LED
- Time range from 0.01 seconds to 9999 hours
- Up and down counting
- Eleven pre-defined timer modes plus one user defined
- Auxiliary supply output for sensor: 12 Vdc/50 mA
- Time Base Accuracy: 0.05%
- Digital input for start, hold and reset
- Frontal key to execute one pre-programmed special function

- IP65 UL94 V-2 front panel; IP20 UL94 V-0 enclosure; silicone rubber keypad
- Dimensions: 48 x 48 x 110 mm
- Power: 100~240 Vac/dc
- **OPTION:**
- 24 Vdc power supply

Timer - TM-619 & TM-6331

The microprocessor based weekly timers **TM-619** and **TM-6331** are intended for the switching of electrical loads at preprogrammed time intervals with good accuracy. They allow up to 8 ON/OFF program events to take place during a week. They find broad application in heating and refrigerating systems, boilers, ovens, dryers, defrosting equipment, swimming pools, hatcheries, illumination, etc. When not in use (no power applied), its internal battery maintains the programs for several weeks.

- Easy to program
- 8 ON/OFF simultaneous programs
- 14 distinct weekly switching configurations: every day the same, every day different, from Monday to Friday, from Sat. to Sun:, 3 alternate days
- Power Supply: 12 Vdc, 24 Vdc, 127 Vac or 220 Vac, 50/60 Hz
- Minimum switching interval: 1 minute
- Relay output: SPDT 16 A/250 Vac (resistive), 8 A/250 Vac (inductive load)

- Working temperature: 0 to 60°C
- Indication of activated output
- Screw panel mounting
- **OPTIONS:**
- DIN rail mounting adaptor

Calibrators - DC80T - DC80R - DC80L

DC80T - Thermocouple calibrator/indicator
- 8 thermocouple types: J, K, T, E, R, S, B and N
- Electrical voltage from -10 to + 75 mV
- Accuracy: ± 0.3 °C / 0.025 % for mV
- Resolution: 0.1 °C / 0.01 mV
- Accessories included: two connectors, one bead t/c connector, operating manual and carrying pouch.

DC80R - RTD Calibrator/Indication
- 7 different types of RTDs
- Resistance from 0 to 3200 Ω
- Accuracy: ± 0.2 °C / 0.1 Ω
- Resolution: 0.1 °C / 0.1 Ω
- Accessories included: one pair of test leads, one pair of alligator clips and carrying pouch

DC80L - Voltage & Current Calibrator/Indicator
- Voltage: from 0 to 100 mV and 0 to 15 V
- Current: from 0 to 24 mA
- Accuracy: ± 0.02 % + 0.03m mV for voltage ± 0.015 % + 0.003m mA for current
- 24 Vdc power supply for loop excitation
- Accessories included: one pair of flying probes, one pair of alligator clips and carrying pouch.
- Optional external power adaptor

GENERAL CHARACTERISTICS:
- Power: 6 batteries 1.5 V, AAA size (included)
- Dimensions: 205 x 98 x 46 mm

LogChart

LogChart is an easy to use data management tool with features to configure, download and analyze data obtained from **NOVUS LogBox** and **TagTemp** data loggers. With this software it is possible to configure all datalogger parameters, download data from a time interval, display and print data in a trend graph, save and export the downloaded along with other functions. **LogChart** also features advanced solutions for data analysis. Among them is the union of the data downloaded from different devices. The instant values can be displayed in the graph using the mouse. The sample time and the corresponding values acquired are viewed with a simply mouse click. Through the zoom feature, you can perform a more detailed analysis of the data presented in charts. Besides the chart data is also presented in a table together with general configuration information. In addition to download data is also possible to view measurements online, in graph form, through the on-line monitoring.

NConfig Software Configuration

The **NConfig** is the software used to configure all compatible **NOVUS** controllers and indicators via standard USB port. The **NConfig** lets you simply and quickly set all instrument parameters. By presenting a detailed description of each parameter, this tool allows the user to put the instrument into operation without consulting the printed user's manual, making this process fast and friendly. Users can also copy instrument settings to other devices of the same model by using the batch setup function. The **NConfig** is a free software that can be downloaded from our website and can be used **NOVUS** with all controllers and indicators that include USB configuration interface feature.

Relay Interface - NIO

The **NIO** series of DIN rail relays are interfaces used extensively in switching applications in industrial automation. They are built with high quality components that deliver superior performance and comply with highly demanding automation standards.

- Width at only 6.2 mm
- 35 mm DIN rail mounting
- Switching time: 5 ms
- Electrical insulation input/output: 1000 Vdc
- Enclosure protection: IP20
- Wiring gauge: 0.2 ~ 1.5 mm²
- Terminal blocks for connections with screws
- Input:
  - Switching rated voltage (UN): 12/24/220 Vac/dc
  - Consumption: 0.2/0.3/0.9 VA (W)
  - Holding voltage: 0.8 ... 1.1 UN
  - Must drop-out voltage: 0.6 UN

- Output:
  - Output type: SPDT relay
  - Rated current: 6 A (resistive)
  - Maximum instantaneous current: 10 A
  - Working voltage: 250 Vac/dc
  - Maximum working voltage: 400 Vac/dc
  - **OPTIONS:**
- Identification and interconnecting accessories

Temperature Sensors
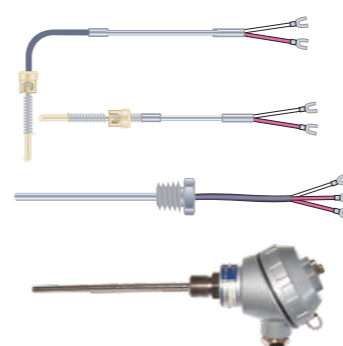
- Bare thermocouples
- Ceramic tube thermocouples
- Stainless steel sheathed mineral insulated thermocouples
- Thermocouple probes for plastic processing machinery
- Stainless steel sheathed RTDs
- Mineral insulation RTDs
- Pt100 RTDs for electric motors and generator stator slots
- Penetration and flexible probes
- Air and gases temperature probes
- Fast response surface temperature probes

- Pt100 manufactured with thin film technology on a flat ceramic substrate or wire wound on cylindrical ceramic or with glass body, they provide an excellent means for high accuracy temperature measurements.
- Thin film: -50 °C to 600 °C, class A and B Sizes: 1.6 x 3.2 mm and 2 x 5 mm
- Wire wound: -200 °C to 650 °C, class A & B Sizes: 0.7 x 5 mm to 2.8 x 30 mm

Power Supplies- DRP & PMC

The **DRP** e **PMC** power supplies are available in two models. With bold design and compact size they use materials resistant to shock and vibration, according to IEC 60068-2.

- Models:
  - DRP (35 mm DIN rail mounting): 60 W, 120 W and 240 W
  - PMC (back panel screw mounting): 35 W, 50 W e 100 W
- Input voltage:
  - DRP: 85-264 Vac / 120-375 Vdc
  - PMC: 85-264 Vac
- Output voltage: 24 Vdc ±2%
- Line frequency: 47-63 Hz
- Efficiency (typical): > 84%
- Indication of power ON
- Terminal blocks for connections (screw type)

- Enclosures:
  - DRP: Plastic (60 W) and Aluminum (120 W and 240 W)
  - PMC: Aluminum (35W, 50W and 100W)
- Installation:
  - DRP: 35 mm DIN rail mounting
  - PMC: back panel directly mounting (base or lateral sides)
- Working temperature:
  - DRP: -20°C to +75°C (>50 °C)
  - PMC: -10°C to +70°C
- RH @ 25 °C: < 95% (non condensing)

Configurator - TxConfig USB

The **TxConfig USB** is the interface for configuring the NOVUS transmitter products, providing at the same time the needed power for the transmitters with 0-10 Vdc or 4-20 mA outputs. It is used with the configuration software **TxConfig**.

- Easy installation
- USB communication with the PC and serial with the transmitter
- No external power required for exciting the transmitters during the configuration process.

- Easy wiring to the transmitters
- Dedicated version for pressure transmitters available version
- Compatible with USB 1.1 and 2.0
- Operational system: Windows®

Universal HART Configurator - TxConfig - HART

The **TxConfig-HART** is an universal configuration interface for transmitters with HART protocol. It is used together with the **TxConfig** configuration software.

- Easy installation
- USB communication with the PC and serial with the transmitter
- Pins to HART device: polarity insensitive test clips
- Compatible with USB 1.1 and 2.0
- Rx / Tx LED indicators
- Power: no need for external power

- Operating temperature: 0 to 50 ºC
- Storage temperature: -40 to 80 ºC
- Humidity: 0 to 95 % (non condensing)
- Isolation: 1500 Vdc galvanic isolation between transmitter and PC
- Operational systems: Windows®
- Dimensions: 70 x 45 x 18 mm

NOVUS WEB

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In addition to a complete line of industrial automation products NOVUS provides specialized CALIBRATION and SYSTEMS INTEGRATION services.

metrology laboratory

The **NOVUS Metrology Laboratory** is equipped with the most modern and technologically advanced resources dedicated to the calibration of measuring instruments. With experienced and highly trained personnel we offer a comprehensive range of calibration services both internally and externally.

The **Temperature and Relative Humidity Laboratory** provides calibration services for thermo-hygrometers, thermocouple and RTD sensors, digital thermometers, digital panel meters, temperature controllers, simulators and calibrators and temperature recorders. The **Electrical Parameters Laboratory** calibrates electrical equipment that measure and generate AC/DC voltage, AC/DC current and resistance measurements. The **Pressure Laboratory** calibrates instruments that require error verification to determine the measurement reliability. All our labs are accredited by RBC/CGCRE.

In addition to calibration within the laboratory, we also calibrate instruments at customer's site with the same quality and reliability. Our lab is also able to perform traceable calibration.

Contact the NOVUS Metrology Laboratory via e-mail **labmetrology@novusautomation.com** or telephone **+55 (51) 3323-3628**.

systems integration

Industrial automation technologies can be applied to all market segments for better understanding the processes resulting in quality and productivity gains. **NOVUS** not only provides a complete range of automation technology products but also offers a dedicated and experienced team of **Application Engineers** able to implement world-class automation solutions in industries such as food and beverage, dairy, pharmaceutical, building automation, water and sewage treatment, sugar and alcohol and many other sectors demanding measurement, control and data acquisition.

Contact our Systems Integration Team via e-mail **projects@novusautomation.com** or telephone **+55 (11) 3097-8466**.

www.novusautomation.com

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