MultiCONT

MULTICHANNEL PROCESS CONTROLLER

NIVELCO

The **MultiCONT** unit is a universal interface between NIVELCO's HART®-capable intelligent level transmitters and other elements of the process control systems like the PCs, PLCs, displays, and actuators. Besides its role as an interface, the MultiCONT can power the 2-wire transmitters while handling complex control tasks. The large LCD or OLED dot-matrix display is comprehensive and informative. As a special feature, it can display the echo map when the MultiCONT works with an **EchoTREK, PiloTREK, MicroTREK,** or **EasyTREK** transmitter. The **MultiCONT** supports communication with 15 standard HART®-capable 2 and 4-wire NIVELCO transmitters or 4 Ex ia HART®-capable 2-wire NIVELCO transmitters. If the number of transmitters in a system exceeds the number of transmitters a MultiCONT can handle, other **MultiCONT** units can be added to the system via RS485. The transmitters can be programmed remotely, and their parameters and the measured data can also be downloaded using a **MultiCONT**. Outputs, such as the 4…20 mA, relays, and digital outputs, can be controlled using measured and calculated values.

The internal current outputs *(up to 2)* of the **MultiCONT** can transmit and even modify the information supplied by the transmitters. The built-in relays *(up to 5)* can be freely programmed and assigned to the transmitters.

FEATURES

- Provides a flexible solution to commissioning process control systems containing HART®-based intelligent *(level, temperature or pressure)* transmitters
- Galvanically isolated 4…20 mA outputs for transmitters
- Depending on the type of the transmitters, 1 to 15 *(standard)* or 1 to 4 *(Ex ia)* channels
- Highly informative large LCD or OLED display
- Ex ia variant
- Simple 6-button programming
- Trend logging in internal memory or SD memory card
- USB connector for downloading data from internal FLASH memory
- Universal interface module expansion via RS485
- "Echo-Map" for EchoTREK, PiloTREK, MicroTREK and EasyTREK ultrasonic transmitters
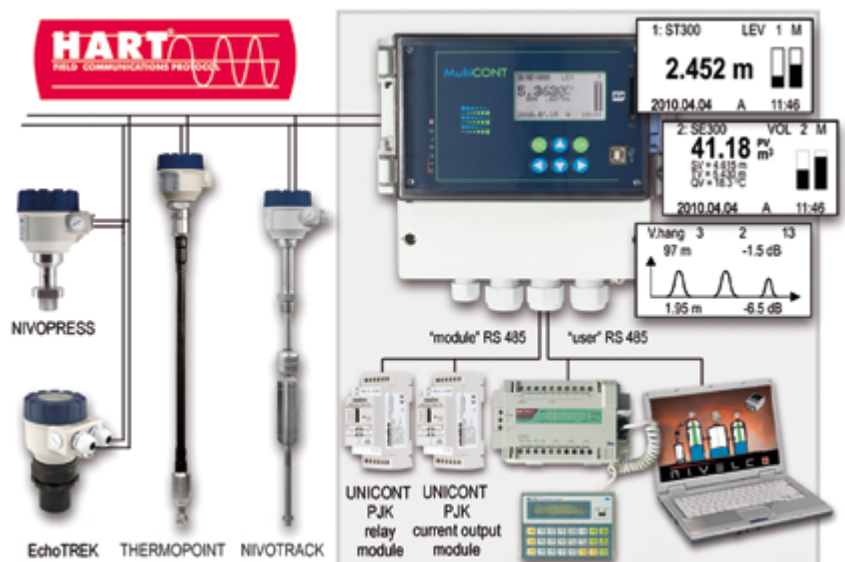- 5 years warranty

MultiCONT
PRN–200

APPLICATIONS

- Remote programming, displaying of transmitters data
- Power supply for 2-wire transmitters
- Process controller for HART®-capable transmitters
- Displaying measured data in numerical and bargraph mode
- Data transmission via RS485 *(via HART® or Modbus protocol)*
- Simple data-logging function
- Trend or flow-measurement logging

CERTIFICATES

- ATEX [Ex ia G]
- ATEX [Ex ia D]
- IEC Ex [Ex ia G]
- INMETRO [Ex ia G]
- UKCA Ex [Ex ia G]

A TYPICAL NETWORK CONTROLLED BY A MultiCONT

SIGNAL PROCESSING UNITS

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TECHNICAL DATA

MultiCONT P□□–2□□–□	
Power supply / power consumption / max. supply voltage	85…255 V AC 50…60 Hz / 12 VA / 255 V_{eff} ; 11.4…28 V AC 50…60 Hz / 12 VA / 28 V_{eff} ; 11.4…40 V DC / 11 W / 40 V DC
Supply voltage for transmitters	30 V DC / 60 mA (Ex variant: 25 V DC / 22 mA)
Graphic display	128 × 64 dot-matrix (LCD / OLED)[1]
Relay	Max. 5, SPDT 250 V AC, AC1, 5 A
Analog output	Max. 2, galvanically isolated 4…20 mA, max. load: 500 Ω, with overvoltage protection
Number of powered transmitters	Max. 15× standard, or max. 4× Ex
RS485 interface — "user"	Galvanically isolated, HART® and Modbus protocol
RS485 interface — "module"	Galvanically isolated, HART® protocol
Logger unit	Capacity: flash = 65 000 entries; SD card = depending on card size (max. 32 GB)
Housing material	Polycarbonate (PC)
Mounting	Wall-mountable
Ambient temperature	−20…+50 °C
Ingress protection	IP65
Electrical protection	Class I / III
Weight	900 g

Ex information	
Ex marking — ATEX	⟨Ex⟩ II (1) G [Ex ia Ga] IIB, ⟨Ex⟩ II (1) D [Ex ia Da] IIIC
Ex marking — IEC Ex [1]	[Ex ia Ga] IIB
Intrinsic safety data	U_o = 30 V; I_o = 140 mA; P_o = 1 W; L_o = 4 mH; C_o = 200 nF; U_m = 253 V
Supply voltage for transmitters	25 V DC / 22 mA
Ambient temperature	−20…+50 °C

[1] In the case of OLED, the lifetime of the display depends on the way the user applies the screen saver function and hence it is not covered by the warranty.

SPECIAL FEATURES

Trend logging (optional)

MultiCONT versions with an on-board logger can store the measured values and three additional parameters of the transmitters to the system into the internal flash memory or an SD memory card. There are two logging modes, time-controlled and event-controlled. Monitoring the average, minimum, and maximum value or highest flow values can be used only with NIVELCO transmitters in flow-metering mode. The content of the internal memory is retrievable through USB, within the capacity of 65 000 entries. The unit can handle SD cards up to 32 GB capacity.

NIVISION (optional) Process Visualization Software

RS485-capable versions of the **MultiCONT** can communicate with NIVELCO's **NIVISION** process visualization software to graphically indicate parameters of process control systems on a PC. The process, the measured values, or any calculated values can be visualized in tables with **NIVISION**. **NIVISION** performs data logging, trend monitoring, database handling, and various other tasks in addition to basic visualization. The software is sold as a custom-tailored product.
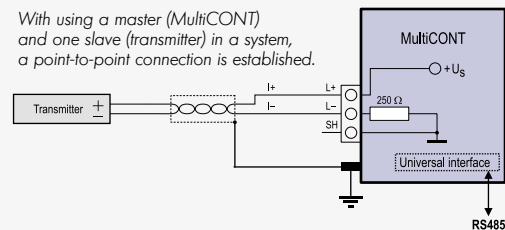
OUTPUT TYPES

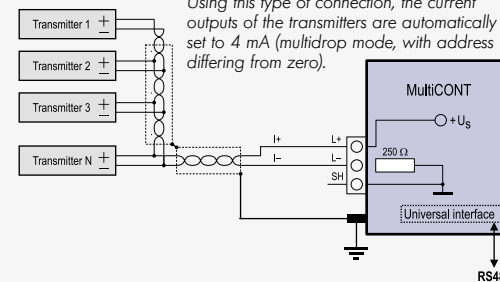| Outputs	Display only (without relay)	Number of relays				
		1	2	3	4	5
Only display (w. o. RS485 or current output)	■	■	■	■	■	■
RS485 Interface	■	■	■	■	■	■
1× 4…20 mA output	■	■	■	■	■	
2× 4…20 mA output	■	■	■	■	■	
RS485 + 1× 4…20 mA analog output	■	■	■	■	■	
RS485 + 2× 4…20 mA analog outputs	■	■	■	■	■	

COMMUNICATION BETWEEN MultiCONT & TRANSMITTERS

Point-To-Point connection

With using a master (MultiCONT) and one slave (transmitter) in a system, a point-to-point connection is established.

Multi-point connection (Multidrop). Multiple slaves connected in parallel

Using this type of connection, the current outputs of the transmitters are automatically set to 4 mA (multidrop mode, with address differing from zero).

SYSTEM SET-UP

There is a Master-Slave relation between **MultiCONT** and the connected transmitters. Through the **MultiCONT** the transmitters can be programmed or their parameters checked and modified. Reading the process values of the transmitters is easy to do by the **MultiCONT**. In case of using **MultiCONT** with multiple transmitters, the units should be addressed with numbers *(Short address)* differing from zero. Using two transmitters with the same Short address is not possible. **MultiCONT** can handle a number of max. 15 transmitters with HART® communication. When using 2-wire transmitters, the current output of the transmitters will be limited to 4 mA, because of the capacity of the **MultiCONT's** power supply, which is rated at 60 mA with standard transmitters.

SIGNAL PROCESSING UNITS

ПIVELCO

MultiCONT P–200   5 years

Wall-mountable universal multichannel process controller unit to remote program and read all NIVELCO transmitters featuring HART® communication, expandable with relay and current output modules

Type
P □■ – 2 ■■ – ■

E	Standard, non expandable
R	Expandable (with universal interface module)

Version / Display
P ■□ – 2 ■■ – ■

W	IP65 Enclosure / LCD
A	IP20 Enclosure / Datalogger / LCD
C	IP65 Enclosure, transparent cover / LCD
D	IP65 Enclosure, transparent cover + Datalogger / LCD
L	IP65 Enclosure / OLED
K	IP65 Enclosure, transparent cover / OLED
N	IP65 Enclosure, transparent cover + Datalogger / OLED

Input
P ■■ – 2 □■ – ■

1	Single channel for one unit
2	2 channels for up to 2 units
4	4 channels for up to 4 units
8	8 channels for up to 8 units
M	15 channels for up to 15 units

Output
P ■■ – 2 ■□ – ■

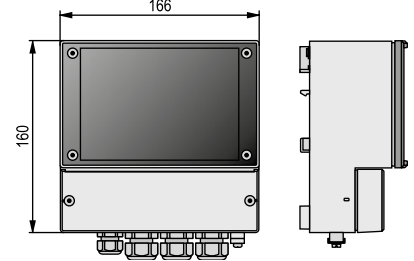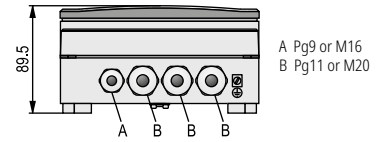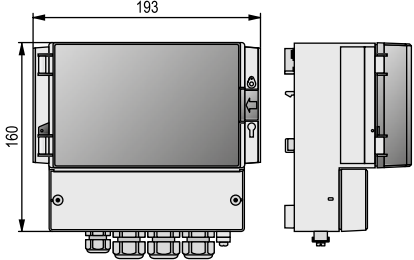|	
0	Display
1	Display and 1× relay
2	Display and 2× relays
3	Display and 3× relays
4	Display and 4× relays
D	Display and 5× relays
F	Display, 1× 4...20 mA current output
5	Display, 1× 4...20 mA current output and 1× relay
6	Display, 1× 4...20 mA current output and 2× relays
7	Display, 1× 4...20 mA current output and 3× relays
8	Display, 1× 4...20 mA current output and 4× relays
Q	Display, 1× 4...20 mA current output and 5× relays
G	Display and 2× 4...20 mA current output
H	Display, 2× 4...20 mA current output and 1× relay
J	Display, 2× 4...20 mA current output and 2× relays
K	Display, 2× 4...20 mA current output and 3× relays
9	Display, 2× 4...20 mA current output and 4× relays
A	Display + RS485 interface
L	Display + RS485 interface and 1× relay
M	Display + RS485 interface and 2× relays
N	Display + RS485 interface and 3× relays
P	Display + RS485 interface and 4× relays
E	Display + RS485 interface and 5× relays
B	Display + RS485 interface and 1× 4...20 mA current output
R	Display + RS485 interface, 1× 4...20 mA current output and 1× relay
C	Display + RS485 interface, 1× 4...20 mA current output and 2× relays
S	Display + RS485 interface, 1× 4...20 mA current output and 3× relays
T	Display + RS485 interface, 1× 4...20 mA current output and 4× relays
Z	Display + RS485 interface, 1× 4...20 mA current output and 5× relays
U	Display + RS485 interface, 2× 4...20 mA current output
V	Display + RS485 interface, 2× 4...20 mA current output and 1× relay
W	Display + RS485 interface, 2× 4...20 mA current output and 2× relays
X	Display + RS485 interface, 2× 4...20 mA current output and 3× relays
Y	Display + RS485 interface, 2× 4...20 mA current output and 4× relays

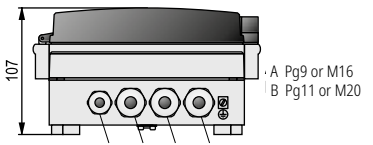### Power supply / Certificates
P ■■ – 2 ■■ – □

1	85...255 V AC
2	11.4...28 V AC and 11.4...40 V DC
5	85...255 V AC / [Ex ia G/D] (max. 4 channels)
6	11.4...28 V AC and 11.4...40 V DC / [Ex ia G/D] (max. 4 channels)

Check relevant page for the prices of UNICONT PJK

Need of IEC Ex is to be requested in the text part of the order

A Pg9 or M16
B Pg11 or M20

89.5
166
160

PEW-2□□

A Pg9 or M16
B Pg11 or M20

107
193
160

PEC-2□□

SIGNAL PROCESSING UNITS