

UNICONT PDF & PLK

LOOP DISPLAYS

5 YEARS WARRANTY

OCIVELCO

SYSTEM COMPONENTS



The **UNICONT** series 2-wire passive loop-indicators are universally scalable process value indicators of NIVELCO, operating without the need for power supply. The process indicators find their use where the process value has no control function (such as switching ON/OFF, pressure control, etc.). The 3-wire HART® converter type **UNICONT** devices offer the optimal solution where local displaying is needed besides the remote data processing and the field transmitters having 4...20 mA output are needed to be integrated into HART® multi-drop system. The devices are applicable not only for NIVELCO transmitters but for all transmitters which use standard 4...20 mA output. The **UNICONT PDF** devices are digital, 2-wire passive / 3-wire active, field process indicators suitable for temperature, pressure, level, etc. indication with 6-digit **SAP-202** LCD display. Explosion-proof versions are available for hazardous environments. The HART® capable **UNICONT PDF** 3-wire process indicators require an additional power supply. Besides displaying the loop current or the process values, these units convert input current to HART® signals and enable devices with analog outputs to be integrated into HART® multidrop systems. A robust enclosure makes applications under harsh conditions also possible. The **UNICONT PDF-600** series with flameproof (Ex d) stainless steel housing meets the special requirements of certain industry segments, such as food and beverage, maritime, oil & gas.

FEATURES

- 4...20 mA input
- 2-wire loop display
- 3-wire 4...20 mA + HART® transmitter
- Wall-mountable
- Scalable display
- IP67
- Ex variant

APPLICATIONS

- General display
- For 4...20 mA transmitters
- 4...20 mA-HART® converter
- Displaying level, volume, temperature, pressure, etc.

CERTIFICATES

- ATEX (Ex ia G), (Ex d G), (Ex d ia G)
- INMETRO (Ex ia G), (Ex d G), (Ex d ia G)



PDF-401-6 Ex

TECHNICAL DATA

	Standard version	Ex variant	Standard with HART® output	Ex variant with HART® output
Powering	2-wire		3-wire	
Measured value (input signal)	4...20 mA current loop			
Measuring Range	3.6...22 mA		0...22 mA	
Output	–		4...20 mA and/or HART® for 4...20 mA current limit values: 3.9...20.5 mA terminal resistor for HART®: R _{lmin} = 250 Ω	
Supply voltage	–		10...36 V DC Ex variant: 10...30 V	
Display	SAP-202 display, range of displayed value: –9999...+29,999			
Accuracy	±0.1% if displayed value is >10,000; ±0.2% if displayed value is <10,000			
Temperature error	±0.05% / 10 °K			
Voltage drop	<1.6 V		<1 V	
Overvoltage capability	140 mA			
Damping time	Selectable: 3 s, 5 s, 10 s or 20 s			
Ambient temperature	Standard: –40...+70 °C (–40...+158 °F), with display: –25...+70 °C (–13...+158 °F); Ex variant: see "Ex Information" table			
Electrical connection	Standard: M20×1.5 cable gland, cable diameter: Ø6...Ø12 mm (Ø0.25...Ø0.5"); Ex variant: see "Ex Information" table			
Electrical protection	Class III			
Ingress protection	IP67			
Housing	Painted aluminum or plastic PBT	Painted aluminum or stainless steel	Painted aluminum or plastic PBT	Painted aluminum or stainless steel
Weight	With aluminum housing: ~0.9 kg (~2 lb)			
	With plastic housing: ~550 g (~1.25 lb)	With SS housing: ~2.5 kg (~5.5 lb)	With plastic housing: ~550 g (~1.25 lb)	With SS housing: ~2.5 kg (~5.5 lb)

Ex INFORMATION

	PDF-401 / 501 / 601-6 Ex	P□F-401 / 501 / 601-8 Ex	PDF-401-C Ex PDF-601-C Ex	P□F-401-D Ex P□F-601-D Ex	P□F-401-A Ex P□F-601-A Ex	P□F-401-B Ex P□F-601-B Ex
Protection type	Intrinsic safety		Intrinsic safety with flameproof enclosure		Flameproof enclosure	
Ex marking	Ⓔ II 1 G Ex ia IIC T6 Ga	Ⓔ II 1 G Ex ia IIB T6 Ga	Ⓔ II 1 G Ex d+ia IIB T6 Ga		Ⓔ II 2 G Ex d IIB T6 Gb	
Intrinsic safety data	U _i = 30 V; I _i = 100 mA; P _i = 0.7 W; C _i ≈ 0 nF; L _i < 200 µH	U _i = 30 V; I _i = 140 mA; P _i = 1.1 W; C _i < 20 nF; L _i < 200 µH	U _i = 30 V; I _i = 140 mA; P _i = 1.1 W; L _i < 200 µH C _i ≈ 0 nF		Supply voltage: 10...30 V	
Electrical connection	Plastic M20×1.5 cable glands, cable: Ø6...Ø12 mm (Ø0.25...Ø0.5")		M20×1.5 Ex d cable glands for Ø8...Ø12 (Ø0.35...Ø0.5") mm cable			
	Shielded twisted cable with 0.25...1.5 mm ² (AWG20...16) wire cross section					
Ambient temperature	-25...+70 °C (-13...+158 °F)	-40...+70 °C (-40...+158 °F), with display: -25...+70 °C (-13...+158 °F)	-25...+70 °C (-13...+158 °F)	-40...+70 °C (-40...+158 °F), with display: -25...+70 °C (-13...+158 °F)	-25...+70 °C (-13...+158 °F)	-40...+70 °C (-40...+158 °F), with display: -25...+70 °C (-13...+158 °F)

PDF-400 Ex
with flameproof
aluminum housing



PDF-500
with plastic housing



PDF-600 Ex
with flameproof stainless steel housing





Symbols on the display module:

- **M** – metric (Eu) engineering system
- **US** – imperial engineering system
- **°F, °C, m, cm, in, ft, l, m³, gal, ft³**
- **PROG** – programming mode

Displayed values:

- **DIST** – distance
- **LEV** – level
- **VOL** – volume
- **%** – percentage
- **mA** and **°C** – current and temperature
- **▼ ▲** – arrow (shows the selected symbol)

UNICONT PLK – Plug-in Loop Displays

The UNICONT PLK-501 plug-in displays with 4-digit LED indicator can be connected to the 2-wire transmitters with its DIN 43650 / ISO 4400 connector (such as the *NIPRESS* pressure gauge / transmitter, *AnaCONT LCK* conductivity transmitter). The displayed numerical values can be freely scaled to the current input by the user, setting the maximum and the minimum value.

FEATURES

- 4...20 mA input
- 4-digit LED display
- Swiveling display
- Operation without external power
- PNP switch output
- IP65

APPLICATIONS

- Mountable between standard ISO 4400 connectors
- For 2-wire transmitters with 4...20 mA output



UNICONT PLK-501

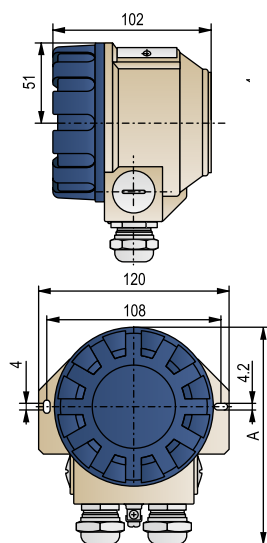
TECHNICAL DATA

PLK-501-2, PLK-501-3	
Input	4...20 mA
Output	PNP open collector switch, max. rating: 125 mA
Display	4-digit LED with 7 mm (0.28") height
Ambient temperature	-25...+70 °C (-13...+158 °F)
Setting range	-1999...+9999
Damping time	0.3...30 s
Electrical protection	Class III
Ingress protection	IP65
Electrical connection	ISO 4400 connector
Housing	Plastic
Weight	~100 g (~0.22 lb)

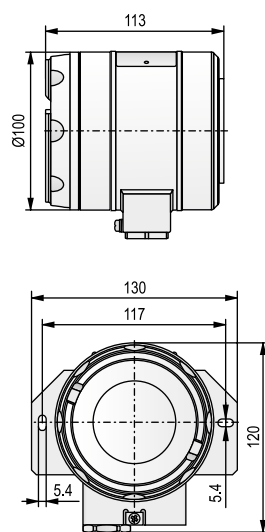


AnaCONT
LCK-211 + PLK-501

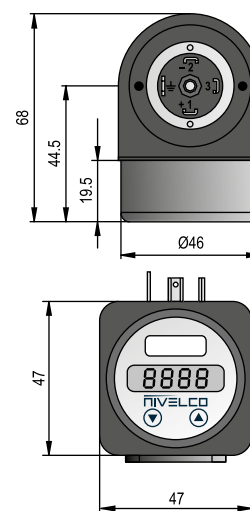
DIMENSIONS



PTF-401 / 501



PTF-601



PLK-501

ORDER CODES (NOT ALL COMBINATIONS AVAILABLE)

UNICONT PDF/PTF wall-mountable loop displays

UNICONT P ■ F - ■ 0 1 - ■

Version	Code
Without local LCD display	T
With local LCD display	D

Housing	Code
Painted aluminum	4
Plastic, PBT, fiberglass-reinforced	5
Stainless steel	6

Output / Certificates	Code
Without output	2
/ Ex ia G	6
/ Ex d G	A
/ Ex d ia G	C
4...20 mA + HART®	4
/ Ex ia G	8
/ Ex d G	B
/ Ex d ia G	D

ACCESSORIES

Description	Code
Plug-in display module	SAP-202-0
HART®-USB modem	SAT-304-0
HART®-USB/Bluetooth® modem	SAT-504-■
HART®-USB/RS485 modem	SAK-305-2
HART®-USB/RS485 modem / Ex ia G	SAK-305-6

UNICONT PLK plug-in loop displays

UNICONT P L K - 5 0 1 - ■

Type	Code
Plug-in display	2
Plug-in display with PNP output	3

