

GENERAL DESCRIPTION

The newest generation **EasyTREK SP-500** series level transmitters are based on NIVELCO's 35 years of experience with ultrasonic level measurement. The IP68 rated units have their transducer and processing electronics incorporated in one single housing. The new **EasyTREK** transmitters utilize HART® 7 communication so they can be used in multidrop systems connected to **MultiCONT** process controller/display, or to a PC with the help of the **UNICOMM** HART®-USB modem or similar. The transmitters can be remotely programmed also with Handheld Field Communicator, and can be connected wirelessly to a PC with the SAT-504 Bluetooth® HART® modem. The members of the new **EasyTREK SP-500** series can be recognised from the more compact size, the increased maximum measuring range and the decreased minimum measuring range.

MAIN FEATURES

- 2-wire integrated transmitter
- Non-contact level measurement
- Can be powered from 12 V battery
- Max. 18 m measuring range
- Narrow (5°) beam angle
- Temperature compensated
- HART® 7
- Handheld compatibility
- IP68 protection

APPLICATIONS

- For liquid level measurement, open channel flow metering
- Wide application area from wastewater to aggressive chemicals
- Level measurement in basins, wells, sumps, lift-stations
- Suitable for level measurement of hydrocarbons, acids, water based media

TECHNICAL DATA

Type	EasyTREK SP-500
System	2-wire
Power supply	11 – 36 V DC
Accuracy ⁽¹⁾	± (0.1% of measured distance + 0.025% of range) or ± (0.05% of range), whichever is greater
Resolution	Depending on the measured distance: < 2 m: 1 mm, 2 – 5 m: 2 mm, 5 – 10 m: 5 mm, >10 m: 10 mm
Output	Analogue
	Relay
	Digital communication
Ambient temperature	-30 °C ... +80 °C
Process temperature	PP, PVDF transducers -30 °C ... +90 °C
Pressure (absolute)	0.05 – 0.3 MPa (0.5 – 3 bar)
Housing	PP or PVDF same as the transducer material
Electrical connection	4 x 0.5 mm ² (relay version: 7 x 0.5 mm ²) shielded Ø6 mm cable; standard cable length: 5 m (can be ordered up to 30 m)
Electrical protection	Class III
Ingress protection	IP68

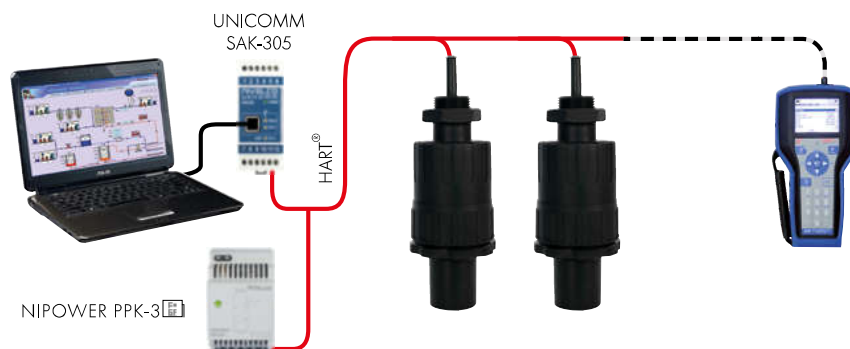


SPECIAL DATA OF THE TRANSDUCERS

Transducer type	SP 55A	SP 59	SP 58	SP 57	SP 56	SP 54
Beam angle	5°	6°	5°	7°	5°	5°
Transducer material	PP, PVDF					
EasyTREK SP 2-wire						
Upper process connection	1" BSP					
Lower process connection	1" BSP / NPT	1 1/2" BSP / NPT	2" BSP / NPT		-	
Maximum measuring range ⁽¹⁾	3 m	5 m	8 m	10 m	12 m	18 m
Minimum measuring range ⁽¹⁾	0,15 m	0,18 m	0,2 m	0,25 m	0,25 m	0,35 m

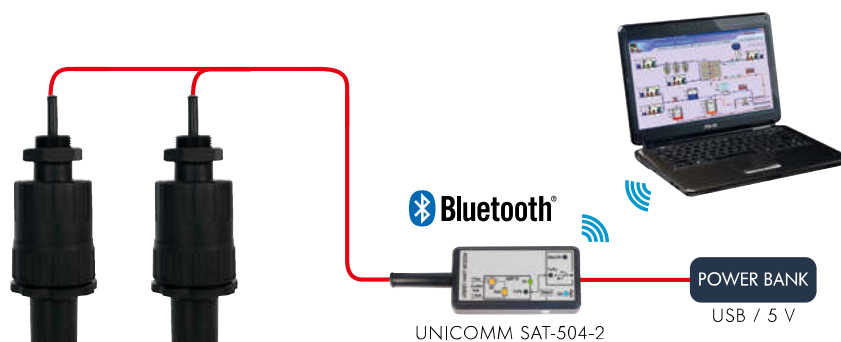
⁽¹⁾ Under optimum conditions and stabilized transducer temperature.

EasyTREK TRANSMITTERS IN SYSTEM WITH A PC



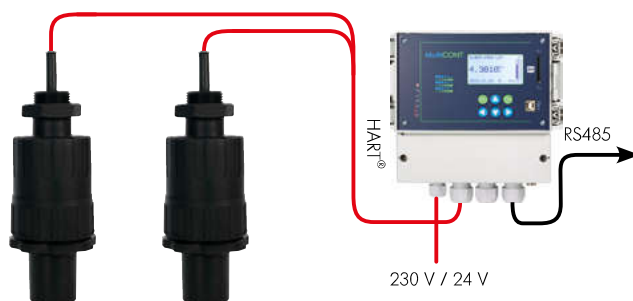
The instruments with HART® output can be connected to a PC using a **UNICOMM SAK-305** HART®-USB modem. All measured values of the **EasyTREK** level transmitters can be visualized and/or the instruments can be remotely programmed via digital HART® communication. Applicable software for PC: **EView2** configuration software or **NIVISION** process visualization software.

EasyTREK IN SYSTEM WITH A PC CONNECTED VIA BLUETOOTH®



The instruments with HART® output can be connected to a PC via Bluetooth® wireless connection using a **UNICOMM HART®-USB-Bluetooth®** modem (**SAT-504**). We can provide power supply for the system with a USB power bank connected to the **UNICOMM** modem.

EasyTREK LEVEL TRANSMITTERS IN HART® MULTIDROP LOOP



The **MultiCONT** multichannel process controller processes and displays measurement data supplied by **NIVELCO's** HART® equipped transmitters connected to a Multidrop loop. The transmitters (also mixed models) can be connected and remote programming can be also performed through the **MultiCONT**. Re-transmission of the data is possible via RS485 communication line to a PC or PLC when needed. The visualisation of the data can be done by **NIVISION** process visualization software.

With the help of **MultiCONT** different useful functions can be achieved such as configuring and optimizing the measurement, or displaying the special echo map of the process environment.

EasyTREK SP-5A/59/58/57/56/54

5 years

2-wire integrated compact ultrasonic level transmitters for liquids with PP, PVDF or PTFE transducer; Ingress protection: IP68

Range / Frequency / Process connection

SP ■ - 5 ■ ■ - ■

A	0.15-3 m (120 kHz, 1" mounting)
9	0.18-5 m (80 kHz, 1" or 1 1/2" mounting)
8	0.2-8 m (80 kHz, 1" or 2" mounting)
7	0.25-10 m (60 kHz, 1" or 2" mounting)
6	0.25-12 m (60 kHz, 1" mounting)
4	0.35-18 m (40 kHz, 1" mounting)

Transducer material

SP ■ - 5 ■ ■ - ■

A	PP
B	PVDF
T	* PTFE (only for SP-5A)

Mounting

SP ■ - 5 ■ ■ - ■

0	BSP thread
N	1", 1 1/2", 2" NPT and 1" BSP (only for SP-5A/59/58/57)

Output / Approval

SP ■ - 5 ■ ■ - ■

4	4-20 mA + HART
8 *	4-20 mA + HART / Ex ia
H	4-20 mA + HART + Relay

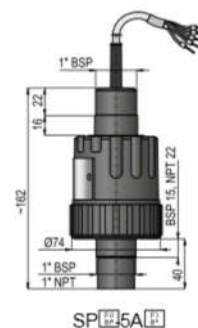
* Under development

Cable

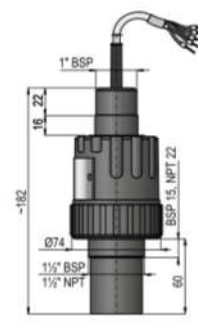
Maximum length 30 m each started 1 m over the standard 5 m

Accessories to order (see relevant page for details)

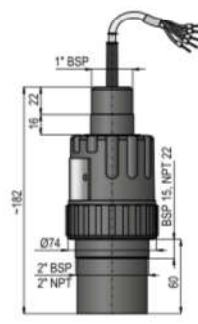
S F A - 3 ■ ■ - 0	Flanges
S A T - 3 0 4 - 0	HART-USB modem
S A T - 5 0 4 - ■	HART-USB/Bluetooth modem
S A K - 3 0 5 - 2	HART-USB/RS485 modem
S A K - 3 0 5 - 6	HART-USB/RS485 modem/ Ex ia
S A A - 1 0 ■ - ■	Mounting brackets
S A A - 1 0 1 - 0	Fast connecting gland for pipe mounting devices with 1" process connection, PP
S A A - 1 0 6 - 0	Damping gland for mounting SP devices to thin metal roofs, PP



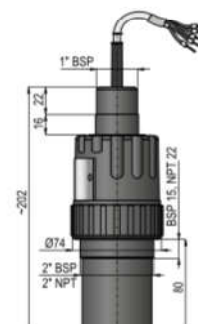
SP-5A



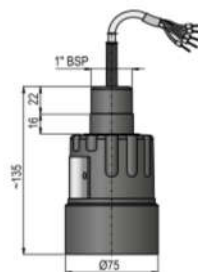
SP-59



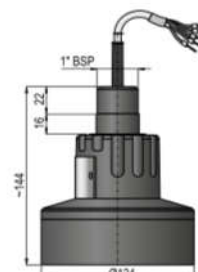
SP-58



SP-57



SP-56



SP-54

NIV24

SPA-590-4

SPA-580-4

SPA-560-4

SPA-540-4

SAA-107-0

SAA-108-0