

SELF-POWERED LOOP ISOLATOR

ELITv93 / ELITv940

Advantages

- The **ELITv** solves common point problems which may appear on measure loops and also reduces the rejection of the disturbances induced on the cables.
- The **ELITv** isolates the sensors or transmitters from the process receivers (PLCs, recorders, etc.).
- The version with Hart transparency **ELITv -H** allows the user to communicate with the protocol HART through the isolator.
- The lightning protector version **ELITv -PF** limitates the residual voltage on the ELITv output following a lightning shock on the input.
The **ELITv -PF** allows more than 10 consecutive shocks of 5000A or more than 300 consecutive shocks of 500A without destruction or modification of The metrological features of the product.

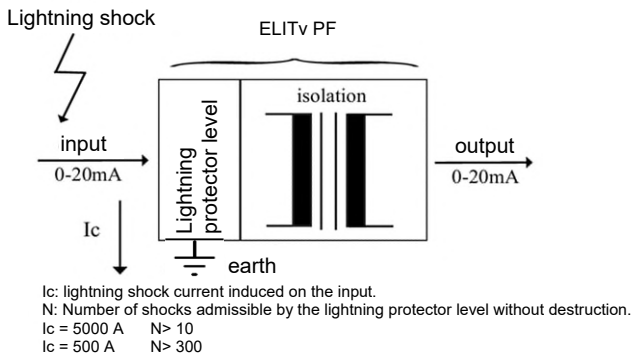


Functions

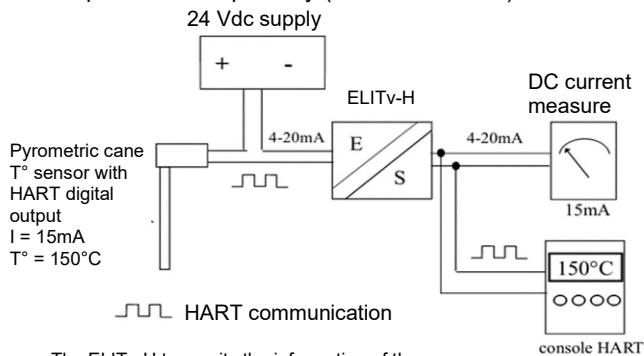
- 1 or 2 isolated measure channels:
ELITv93: 1 channel
ELITv940: 2 channels
- Isolation between input / output.
- Transfer ratio 1/1.
- High transmission accuracy.
- High load impedance.
- Powered by the input signal.
- Reduced dimensions.
- Conform with the lightning protection standard IEC 61643-21 (version ELITv-PF)

Applications

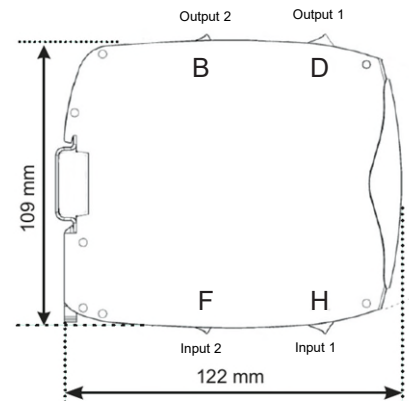
- Isolation of current loops
- Isolation of measure transmitters from the PLC cards.
- Isolation of 4-20 mA signals from thermocouples, where the isolation may become defective when the temperature is high.
- Protection of the elements connected on the isolator output in case of lightning shock on the current loop (version **ELITv-PF**):



- HART protocol transparency (version **ELITv-H**):



Dimensions



Protection: housing / terminals: IP 20
Removable terminal blocks for screwed connectings (2.5 mm², flexible or rigid)
Weight: 240g (with packaging)
Self-extinguishing case of black UL 94VO PA66.
Mounting in cabinet: latching on symmetrical DIN rail.

Dimensions: 22.6 x 109 x 122 mm

Operating T°: -20° to 60°C

Storage T°: -20 to 70°C

Isolation: 2.5 kV, 50 Hz 1 mn (2 kV for the ELITv-H)

Installation: Pollution degree 2 / Voltage surge II

♦ **CE** marking

♦ Compliance with standards:

Directive LV 2014/35/UEEN 61010-1

Directive EMC 2014/30/UEEN 61326-1

Directive ROHS 2011/65/UE



Technical features at 23°C

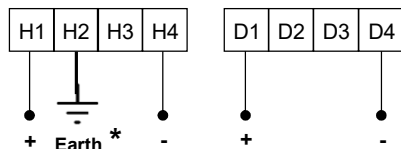
		ELITv93 / ELITv940	ELITv93-H / ELITv940-H	ELITv93-PF / ELITv940-PF
INPUT	Current	0.4..20..50 mA	0.4..20..50 mA	0.4..20..50 mA
	Internal line drop at 20 mA	≤ 1.6 V	≤ 1.8 V	≤ 2.2 V
OUTPUT	Load loss	$1 \times L_r + 1.6$ V	$1 \times L_r + 1.8$ V	$1 \times L_r + 2.2$ V
	Max. voltage drop (output loop open)	$U_e = 16$ VDC	$U_e = 16$ VDC	$U_e = 16$ VDC
ALIM	Impedance in Ω at 20 mA	$L_r + 80$ Ω	$L_r + 90$ Ω	$L_r + 110$ Ω
GENERAL	Current	0.4..20..50 mA	0.4..20..50 mA	0.4..20..50 mA
	Max. load (L_r in Ω) admissible at 20 mA	700 Ω	700 Ω	700 Ω
LIGHTNING PROTECTOR	Supply	Self powered by the input loop	Self powered by the input loop	Self powered by the input loop
GENERAL	Nominal response time (0 to 90%) :			
	For load $R_c = 20$ Ω $R_c = 100$ Ω L_r influence $100 \leq R_c \leq 700$ Ω	0.3 ms 1 ms 0.7 ms / 100 Ω	0.3 ms 1 ms 0.7 ms / 100 Ω	0.3 ms 1 ms 0.7 ms / 100 Ω
GENERAL	Accuracy at nominal conditions:			
	Class Temperature influence Load resistance influence	0.15% at $L_r = 100$ Ω $\pm 0.001\%$ / °C $\pm 0.05\%$ / 100 Ω if $L_r \leq 500$ Ω $\pm 0.1\%$ / 50 Ω if $L_r \geq 500$ Ω	0.15% at $L_r = 100$ Ω $\pm 0.001\%$ / °C $\pm 0.05\%$ / 100 Ω if $L_r \leq 500$ Ω $\pm 0.1\%$ / 50 Ω if $L_r \geq 500$ Ω	0.15% at $L_r = 100$ Ω $\pm 0.001\%$ / °C $\pm 0.05\%$ / 100 Ω if $L_r \leq 500$ Ω $\pm 0.1\%$ / 50 Ω if $L_r \geq 500$ Ω
GENERAL	Others:			
	Conversion ratio Isolation input / output and between channels Condense free dampness	1 / 1 2.5 kV 50Hz 1 mn 85%	1 / 1 2 kV 50Hz 1 mn 85%	1 / 1 2.5 kV 50Hz 1 mn 85%
LIGHTNING PROTECTOR	Test standard:			IEC 61 643-21 : 2001
	IEC test class: Discharge current (8/20 μ s) nominal Maximum Maximum service voltage: Nominal current at 55°C: Limitation of the output voltage for 1 kV/ μ s: In differential mode: In common mode:			C1 C2 C3 D1 $I_n = 5$ kA $I_{max} = 10$ kA $U_c = 20$ V DC $I_n = 50$ mA $U_p = 21$ V $U_p = 650$ V

Connectings

ELITv93 / ELITv93-H / ELITv93-PF

Input

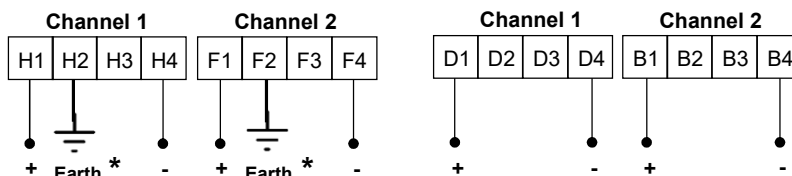
Output



ELITv940 / ELITv940-H / ELITv940-PF

Inputs

Outputs



* Only for the lightning protector version:

IMPORTANT: For the versions ELITv93-PF and ELITv940-PF, the earth must be connected to the terminals H2 and F2 of the product to guarantee the efficiency of the lightning protector function.



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