ULCOS 900

Universal Converter

AC DC
Universal power supply

Sensor power supply

Presentation

ULCOS 900 is a universal converter: direct current, DC voltage, variable resistance probe, thermocouple, potentiometer, 2-wire resistor, special table for NTC / PTC, lined with a sensor power supply, and with 1 or 2 analog outputs and 2 relays.
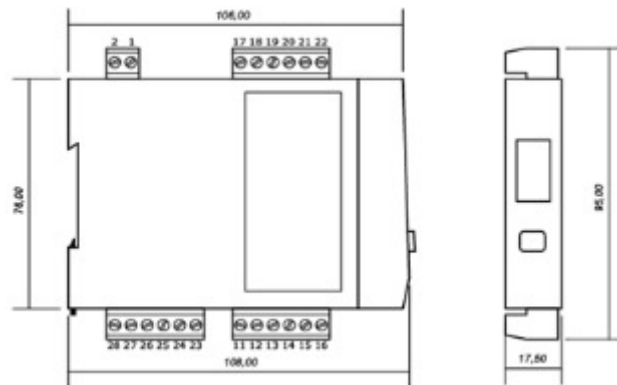
ULCOS 900 is guaranteed for 10 years

Range

Converter	Input	Outputs			Communication
		Number of Analog		Number of Relay	
	Universal	1	2	2	Indirect USB
ULCOS 920D0	✓			✓	✓
ULCOS 900D1	✓	✓			✓
ULCOS 920D2	✓		✓	✓	✓
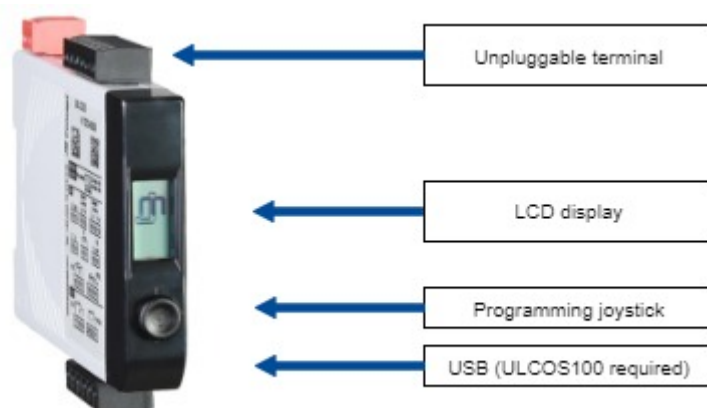
Dimensions

Dimensions : Width : 17,5 mm - Height : 76 mm - Depth : 106 mm

Case connecting on DIN rail

Factory settings

Input		Input type		Input gauge		
		Current		From 4 to 20mA		

Display	Function	Minimum	Maximum	Resolution	Com position	Offset
	Linear	0	1000	1	0000	0

Outputs		Display	Output type	
		0-1000	4-20mA	

Relays (2RT)	Alarm	Threshold	Storage	On alarm	Hysteresis
	High	5000	No	Indication is on Coil is energized	low/ zero amplitude

Other settings on demand

Inputs - Outputs

Input gauges

Current (continuous)	Standard scales : 0-20mA ; 4-20mA Adjustable scales : From 0 to 22mA
Voltage (continuous)	Standard scales : 0-100mV ; 0-10V Adjustable scales : From 0 to +110mV, from 0 to 11V
Resistance 2 wires	1KΩ, 5KΩ, 10KΩ, 50KΩ
Special table for NTC and PTC	1KΩ, 5KΩ, 10KΩ, 50KΩ Unit : °C or F Programmable with **IXLOG** software
Thermocouple	Standard scales : J, K, T, B, R, S, E, NiMo, N, W3/D, W5/C, P Adjustable scales : J, K, T, B, R, S, E, NiMo, N, W3/D, W5/C, P
PT 100 – PT 1000 2 or 3 wires	Standard scales : -210°C / 660°C Adjustable scales : -210°C / 800°C
Potentiometer	From 470Ω to 100KΩ Adjustable scales : From 0% to 110%
Sensor supply	Sensor 2 wires 19V - 26mA max

Output gauges

Current Output	Standard scales : 0-20mA ; 4-20mA Adjustable scales : From 0 to 22mA
Voltage Output	Standard scales : 0-10V Adjustable scales : From 0 to 11V
Output Relay	Relay 1RT - Max current : 500mA Max voltage : 250Vac/220Vdc - Max power : 60Vac/30W
Communication	USB cable (ULCOS 100) on front panel

Characteristics

Display	
Type	Non backlit LCD
Color	Green
Number of characters	4
Numbers of lines	4
Programming joystick	5 positions
Input characteristics	
Current input impedance	5,5Ω
10V voltage input impedance	>1MΩ
mV voltage and thermocouple input impedance	10MΩ
Voltage resistance 2 wires, RTD and potentiometer input impedance	Current : <1mA
Output characteristics	
Permissible impedance on the current output	<700Ω
Permissible impedance on the voltage output	>700Ω
Isolation	
Supply / Input-Output 1-Output 2-USB	4200Vrms, 50Hz, 1mn
Input / Output 1-Output 2	2500Vrms, 50Hz, 1mn
Input / USB	Without
Output 1-Output 2 / USB	2500Vrms, 50Hz, 1mn
Output 1 / Output 2	Without
Auxiliary source	
Voltage supply	22-240Vdc or 90-230Vac 50/60Hz

General characteristics	
Precision class	0,1
Input analog/digital conversion	16 bits
Output analog/digital conversion	16 bits
Response time	Process input, thermocouple, 2 wires resistor : <150ms RTD input, potentiometer : 300ms
Thermal drift	<25ppm
Residual ripple on current output	<20µA
Residual ripple on voltage output	<10mV
Maximum of consumption	<7VA
Operating temperature	-10°C … +60°C
Storage temperature	-25°C … +80°C
Protection factor	IP20 Black self-extinguishing polyamide housing V0

Options listing

Option	Device code
Tropicalization	ULCOS 9XXXX-T

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Functions

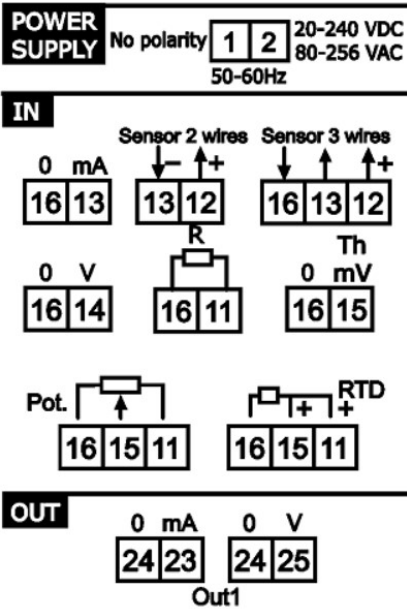| Display functions	
LCD display	Graphic display by LCD screen
5 positions joystick	Allows you to configure the parameters displayed on the front panel screen
Programming lock	Locking of the programming on the front panel or by the IXLOG software Unlock by long press on the joystick
Programming	Programming by Joystick on the front panel or by USB via the special cable **ULCOS 100** and the **IXLOG** software
Display Adjustment	Automatic shift of the display resolution according to the displayed value
Memory Mini / Maxi	Storage of the maximum and minimum value of the measurement on each input channel
Customizing the display	Resolution, Comma, Contrast adjustment
Input	
Inputs display	The display allows to visualize the input in physical value and in programmed value
Adjustable input scale	Allows to zoom on the input either in manual or automatic mode
Offset	Manual adjustment of the input offset
Taring	Taring function at process input (by validation)
Cut Off	Threshold below which the input is considered as null

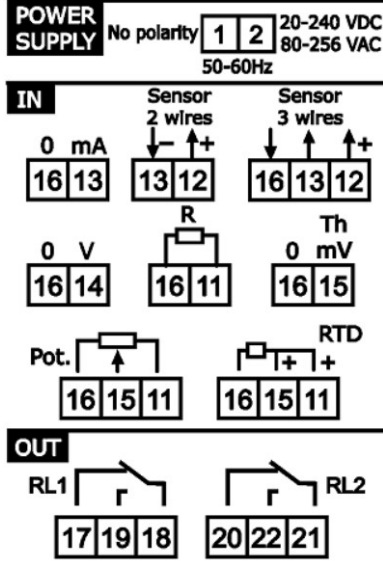| Smart functions	
Sensor signal loss	Translates the sensor signal loss on : • the display, • each of the analog outputs, • the digital output, • the status of the relays
Filtering	Integration of the measurement over the defined time
Square root	The output(s) are function of the square root of the input
Pilot function/simulation	The pilot function makes it possible to act on the display value influencing the output(s), independently of the input The Pilot function is activated either by the digital link (RS485 or USB) or by the joystickon the front panel
Segmentation in 99 points	Linearization in 99 points (free choice for each point), allows to create an output function by segmentation of the signal of each input channel
Segmentation PTC-NTC resistive	Allows to create the PTC or NTC curve by segmentation of the input signal (programmable only by the **IXLOG** software)
CSF	Cold junction compensation by 16 bit digital sensor
Outputs	
Visualization of the outputs	The display allows to visualize the outputs, in physical value and percentage; as well as the status of the relays
Output assignment	Assignment of outputs to inputs or to the control function, independently for each channel
Adjustable output scale	Allows you to zoom in on the outputs
Output limitation	Possibility to limit the value of the outputs - High limit and Low limit
Relay assignment	Assignment of relays to inputs or to the control function, independently for each channel
Thresholds	Single or band mode, with positive or negative safety Adjustment of thresholds, hysteresis and time delay (independent on rise or fall) Direct access to the thresholds
Acknowledgement of alarms	Independently for each alarm
Storage of alarms and/or relay status	Independently for each alarm
Links and communication	
Indirect USB on the front panel	USB on the front panel allowing to connect to the USB socket of a PC via a special **ULCOS 100** cable for programming with the **IXLOG** software

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Wiring

ULCOS 900D1

ULCOS 920D0

ULCOS 920D2