



TELIS reinvents conversion and transmission of measures

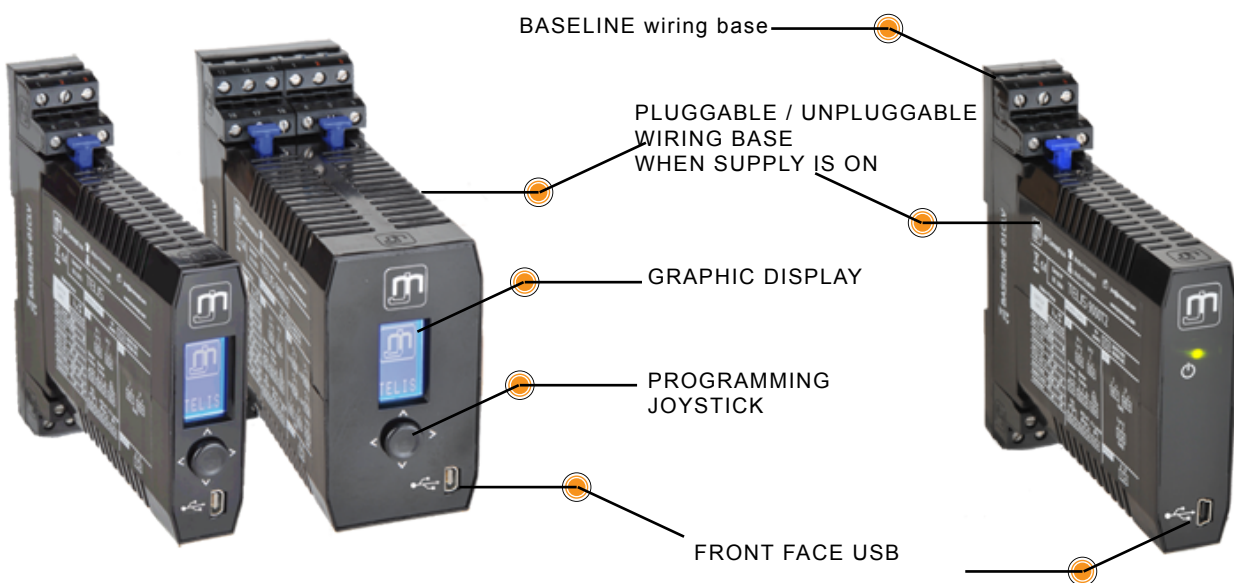
- Its graphic screen display, and its joystick make user-friendly and easily programmable device.
- Its USB front face plug enables a very simple programming with PC.
- Its cutting edge technology allows T E L I S 9000S to have exceptional characteristics.
- Its inputs/outputs configurations, adapted to the market, are efficient for any application.
- A double current input makes of T E L I S 9000 a double transmitter in one product.
- T E L I S is designed in JM concept case unpluggable from its DIN RAIL wiring base.

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REFERENCE WITH GRAPHIC DISPLAY	1 UNIVERSAL INPUT OR 2 INPUTS mA with calculation function	OUTPUTS						COMMUNICATION RS485 FRONT FACE USB	CASE WIDTH		REFERENCE WITHOUT GRAPHIC DISPLAY
		ANALOGUES		RELAYS					22,5 mm	45 mm	
		1	2	1	2	3	4				
TELIS 9000U0	✓							✓		TELIS 9000T0	
TELIS 9000U1	✓	✓						✓		TELIS 9000T1	
TELIS 9000U2	✓		✓					✓		TELIS 9000T2	
TELIS 9100U0	✓			✓				✓		TELIS 9100T0	
TELIS 9150U1	✓	✓		✓				✓		TELIS 9150T1	
TELIS 9250U0	✓				✓			✓		TELIS 9250T0	
TELIS 9200U0	✓				✓			✓	✓	TELIS 9200T0	
TELIS 9200U1	✓	✓			✓			✓	✓	TELIS 9200T1	
TELIS 9200U2	✓		✓		✓			✓	✓	TELIS 9200T2	
TELIS 9300U0	✓					✓		✓	✓	TELIS 9300T0	
TELIS 9300U1	✓	✓				✓		✓	✓	TELIS 9300T1	
TELIS 9400U0	✓						✓	✓	✓	TELIS 9400T0	
TELIS 9400U1	✓	✓					✓	✓	✓	TELIS 9400T1	
TELIS 9400U2	✓		✓				✓	✓	✓	TELIS 9400T2	

VIEW



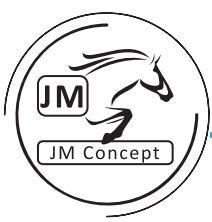


TELIS is a transmitter that offers exceptional performances.

- 24 bits analogue digital input conversion.
- 16 bits analogue digital output conversion.
- Triple or quadruple isolation 3750Vac 1mn 50Hz
- Cold soldering compensation with 16 bits digital sensor.
- Mapping of the modbus addresses allowing to chose your own adress of variable.
- USB front face plug enabling a direct programming with PC.
- TELIS 9000 is programmable on PC with IXLOGforTELIS, freely downloadable.
- TELIS can be used with 1 input, 2 inputs or 2 calculation inputs.

FUNCTIONS 1/2

DISPLAY	LCD graphic screen display.
INPUTS DISPLAY	Among other possibilities, LCD graphic screen enables to display, inputs in real value or programmed value
OUTPUTS DISPLAY	Among other possibilities, LCD graphic screen enables to display, outputs programmed value or in percent, it displays also alarms status.
PROGRAMMATION	Programmation with a 5 position JOYSTICK 5 in front face and by USB with the free software IXLOG.
INPUT SCALE FACTOR	Enables to provide a magnifying effect on input 1 in manual or in automatic calibration
OUTPUT SCALE FACTOR	Enables to provide a magnifying effect on outputs and display.
INPUT 1 CHANNEL	Channel 1 : Universal – Sensor supply.
INPUTS 2 CHANNELS	Channel 1 & 2 : 0/20mA ; 4/20mA – NO sensor supply Independent programming of each channel.
INPUT 2 CHANNELS WITH CALCULATION FUNCTION	Calculation rule (+, -, x, :) Input 3 = a x Input 1 + b x Input 2.
SIMULATION	Simulation function allows action concerning analogue, relays, digital, outputs (RS485 Modbus RTU & USB) and display separately from input and without disconnecting input or ouptuts. On TELIS simulation function can be set going separatly on each input.



OUTPUTS ASSIGN	Analogue outputs can be separately assigned on each input
RELAYS ASSIGN	Relays can be separately assigned on each input.
OUTPUTS LIMITATION	Possibility to limit outputs values – High Limitation and Low limitation.
MEMORISATION	Opens the possibility of memorisation the last measured value in case of error.
SENSOR SAFETY	Shows sensor break display, on digital output on analog output (by entering drop out value), and on relays outputs, independent for each output.
100 POINTS LINEARIZATION	100 points linearization (free choice for each point) allows to create an output function by input signal segmentation
PTC - NTC RESISTIVE LINEARIZATION	Allows to create the curve PTC or NTC by segmentation of input signal (only with software IXLOG for TELIS)
SQUARE ROOT	Output(s) is/are the square root of the input
OFFSET	OFFSET setting for all inputs type.
TARE	Tare function.
MINI / MAXI MEMORY	Maxi and mini measurement value memorizing
CJC	Cold Junction Compensation with digital sensor 16 bits.
THRESHOLD	Simple mode or band-mode with positive or negative safety. Threshold, hysteresis and temporization adjustment (separately from the rise or the fall). Direct access to the thresholds. Alarm memorizing and alarm deleting
ALARMS RESET	Separately on each alarm.
ALARMS MEMORIZATION	Separately on each alarm.
OTHER FUNCTIONS	Cut Off ; Resolution ; Comma ; Filtering ; Contrast setting ; programmation mode ; Display light off ; Joystick lock.
COMMUNICATION	All transmitters have a bidirectional digital output RS485, then it's possible to recover the measurements and to send them in digital, but it's also possible to configurate and to drive the transmitter. This digital output is double over with USB plug on front face.
DIGITAL BUS	Digital bus access through USB plug (when TELIS are plugged on multichannel wiring bases)
USB	USB front face plug enable to connect with PC for a very simple product configuration
MAPPING	Modbus adress mapping, enables to choose your own parameter adress.



INPUTS CHARACTERISTICS

CURRENT (DC)	Standards scales 0-1mA ; 0-10mA ; 0-20mA ; 4-20mA; +/-1mA ; +/-10mA ; +/-20mA Adjustable scales From -22mA to 22mA
VOLTAGE (DC)	Standards scales : 0-100mV ; 0-1V ; 0-5V ; 1-5V ; 0-10V ; 2-10V ; 0-50V ; 0-100V ; 0-200V; +/-100mV ; +/-1V ; +/-5V ; +/-10V +/-50V ; +/-100V ; +/-200V 0-500V; 0-1000V; +/-500V; +/-1000V Adjustable scales From -110mV to 110mV ; From -2V to 11V ; From -200V to 220V
RTD	PT10; CU50; CU53; CU100 PT100 ; PT1000 2 or 3 wires ; Ni100 ; Ni1000 2 or 3 wires
THERMOCOUPLE	J, K, R, S, T, E, B, N, W3/C, W5/D, NiMo,P
POTENTIOMETER	From 0 - 100Ω to 0 - 100KΩ - Other values on demand
RESISTOR 2 WIRES	0-200Ω ; 0-1kΩ ; 0-0kΩ - 0-50kΩ - Other values on demand (NTC / PTC)
SENSOR SUPPLY	Sensor 2 or 3 wires – Sensor supply : 24V - 29mA max

OUTPUTS CHARACTERISTICS

OUTPUT 1&2 CURRENT	0/10mA 0/20mA 4/20mA - From 0 to 20mA
OUTPUT 1 VOLTAGE	0/10V +/-10V - From -10 to 10V 0/5V, 1/5V, 2/10V
OUTPUT 2 VOLTAGE	0/10V - From 0 to 10V 0/5V, 1/5V, 2/10V
SORTIE NUMÉRIQUE	USB on front face RS 485 Modbus RTU isolated from input and output 1
RELAY OUTPUT	1 C/O or 1N/O (according to reference)



OTHER CHARACTERISTICS

INPUT IMPEDANCE

Current input	5,6Ω
Voltage input <10V	> 10 MΩ
Voltage input +/-10V ou >10V	6 MΩ
Input PT100 ; PT1000 ; Ni100	Current : < 1mA
Input Ni 1000	Current : < 1mA
2 wires resistor R=200Ω;R=1kΩ;	Current : < 1mA
2 wires resistor R=10kΩ	Current : < 1mA

OUTPUT IMPEDANCE

Current output 1 & 2	< 900Ω
Voltage output 1 & 2	> 4 kΩ

SENSOR SUPPLY U < 24V - I < 29mA

RELAYS Relays 1C/O ou 1 N/O : 2A/250Vac

GENERAL CHARACTERISTICS

Precision class	0.1
Analogue input/digital conversion	24 bits
Digital output/analogue conversion	16 bits
Response time input Process, Thermoc., 2 wires resistance	< 80ms
Response time RTD potentiometer	< 160ms

ISOLATION

Supply / Input	5000Vdc - 3750Vac, 50Hz, 1mn - 5000V RMS
Supply / Input 1 / Input 2	5000Vdc - 3750Vac, 50Hz, 1mn- 5000V RMS
Input / Output 1 / Output 2	5000Vdc - 3750Vac, 50Hz, 1mn- 5000V RMS
Digital output / Output 1	50Hz, 1mn- 2500V RMS
Communication bus / Output 2	Without

POWER SUPPLY

Universal supply	20Vdc / 240Vdc & 80Vac / 2 56Vac
Option	20Vac / 60Vac

MAXIMAL CONSUMPTION < 4VA

TEMPERATURE

Operating temperature	-10°C / +60°C
Storage temperature	-25°C / +80°C

PROTECTION INDEX Black polyamide self-extinguishable V0

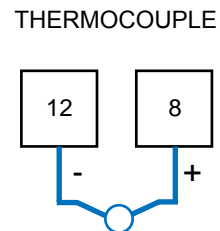
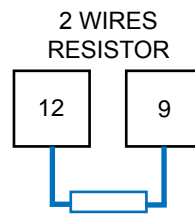
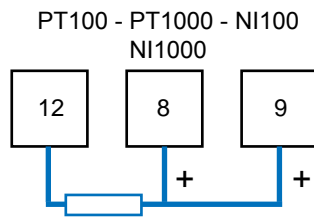
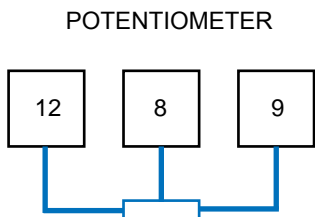
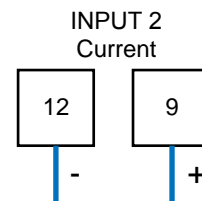
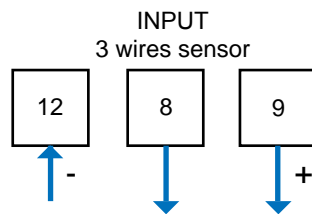
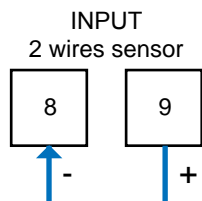
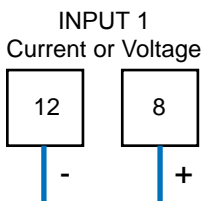


OPTIONS	PRODUCT CODE
Case varnish 22,5mm ou 45mm	TELIS 9XXXXX-T
Auxiliary power supply 20Vac / 60Vac	TELIS 9XX9XX

INPUT CONFIGURATION SWITCH

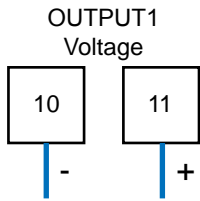
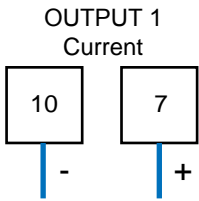
INPUT SWITCH		1	2	3	4	5	6
	Input 1 - Current	●	●				
	Input 2 - Current	●					●
	Voltage input < 10V - Thermocouple		●				
	Voltage input >10 V	●		●			
	RTD		●			●	
	Sensor supply	●	●		●		
	2 wires resistor	●				●	
	Potentiometer		●			●	

INPUT WIRING

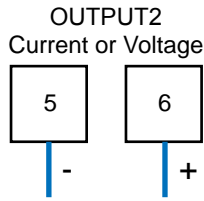
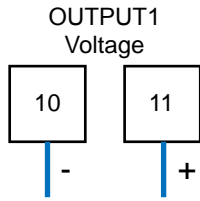
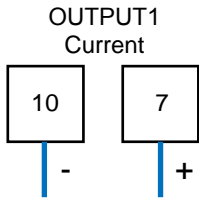




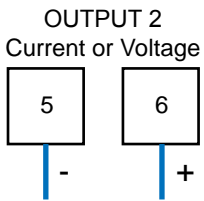
ANALOG OUTPUTS WIRING



TELIS 9000U1 - TELIS 9000T1
 TELIS 9200U1 - TELIS 9200T1
 TELIS 9300U1 - TELIS 9300T1
 TELIS 9400U1 - TELIS 9400T1

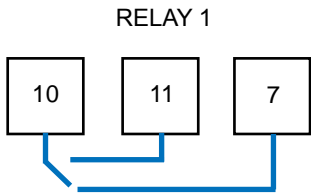


TELIS 9000U2 - TELIS 9000T2
 TELIS 9200U2 - TELIS 9200T2
 TELIS 9400U2 - TELIS 9400T2

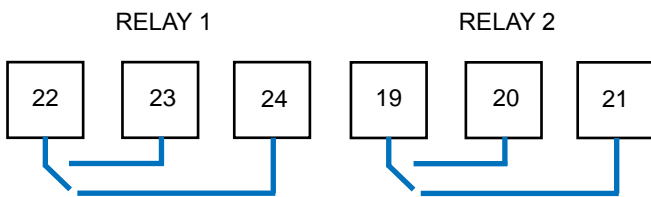


TELIS 9150U1 - TELIS 9150T1

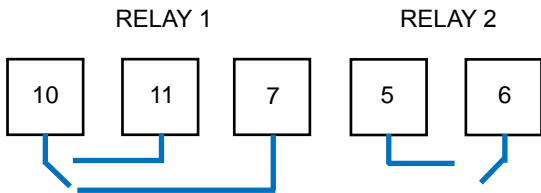
OUTPUT RELAYS WIRING



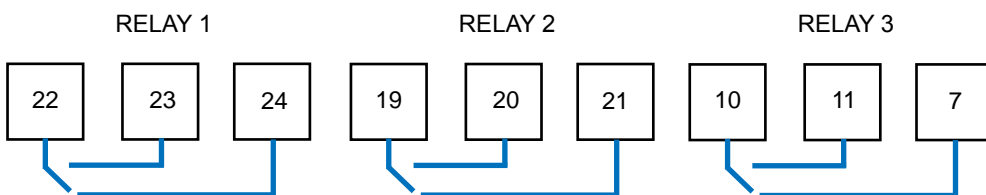
TELIS 9100U0 - TELIS 9100T0
 TELIS 9150U1 - TELIS 9150T1



TELIS 9200U0 - TELIS 9200T0
 TELIS 9200U1 - TELIS 9200T1
 TELIS 9200U2 - TELIS 9200T2

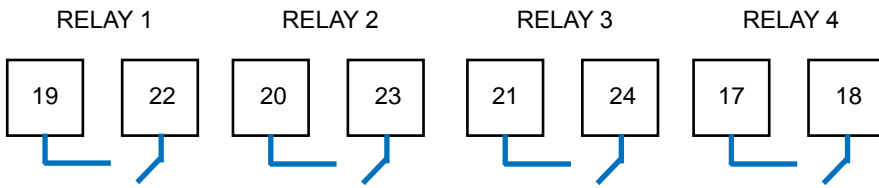


TELIS 9250U0 - TELIS 9250T0



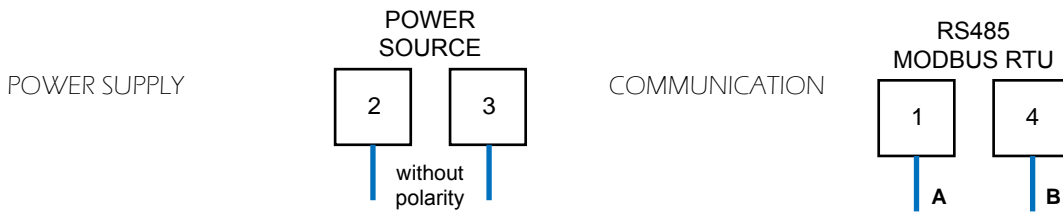
TELIS 9300U0 - TELIS 9300T0
 TELIS 9300U1 - TELIS 9300T1

OUTPUT RELAYS WIRING

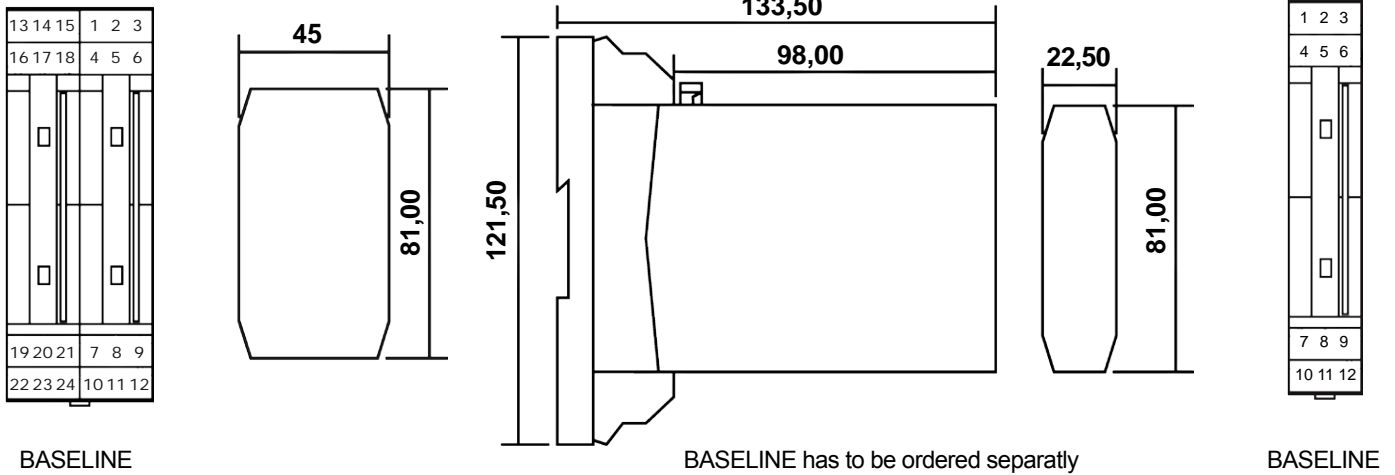


TELIS 9400U0 - TELIS 9400T0
 TELIS 9400U1 - TELIS 9400T1
 TELIS 9400U2 - TELIS 9400T2

OTHERS WIRING



DIMENSIONS



BASELINE

BASELINE has to be ordered separatly

BASELINE

DEFAULT ADJUSTMENT

Input: 4/20mA
 Display : 0-100

Output 1: 4/20mA
 Output 2: 4/20mA

Relay (1RT ou 1T)
 Alarme High

Communication speed : 9600bauds
 Slave adress : n°1

Other adjustment on demand