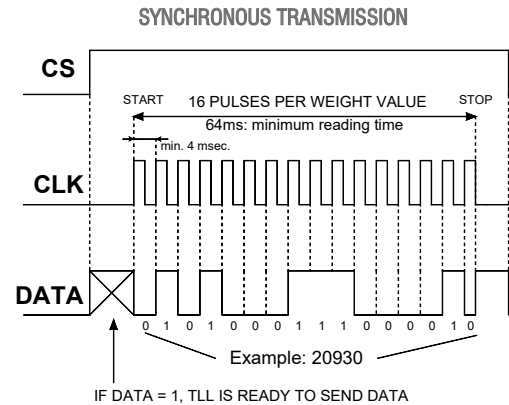
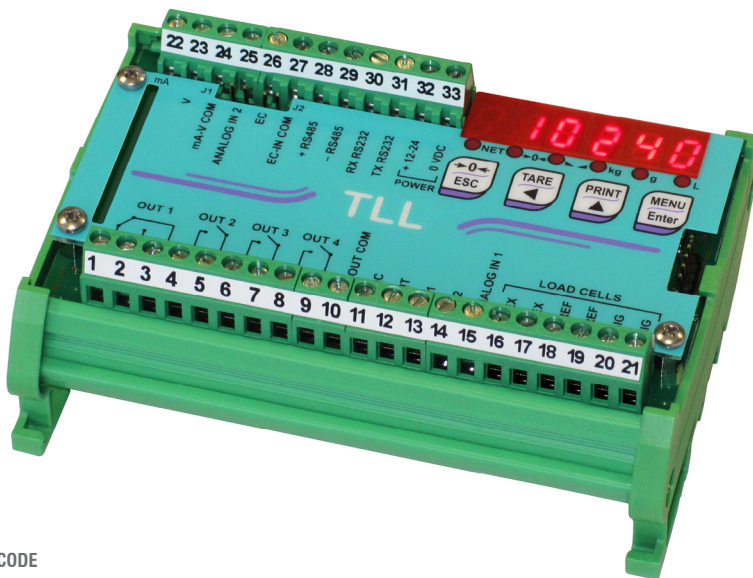




**MODBUS RTU**



CODE

TLL

TLLANA (analog output)

### DESCRIPTION

- Weight transmitter suitable for back panel mounting on Omega/DIN rail or junction box (on request).
- Dimensions: 123x92x50 mm.
- 6-digit semi-alphanumeric red LED display (8 mm height).
- 6 signalling LED.
- 4-key keyboard.

### INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- Current or voltage 16 bit optoisolated analog output (TLLANA).
- 4 relay outputs controlled by the setpoint values or via protocols (2 outputs if synchronous serial transmission is present).
- 2 optoisolated PNP digital inputs: status reading via serial communication protocols (1 input if synchronous serial transmission is present).
- 1 load cell dedicated input.

### CERTIFICATIONS

**UL** UL Recognized component - Complies with United States and Canada regulations


**EAC** Complies with the Eurasian Customs Union regulations

**UK CA** Equivalent of the CE marking for the United Kingdom

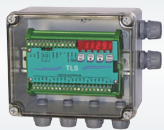


### MAIN FUNCTIONS

- Connections to:
  - PLC via synchronous serial communication;
  - PLC via analog output (TLLANA);
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display via RS485/RS232;
  - up to 8 load cells in parallel by junction box.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 5 points).
- Tare weight zero setting.
- Automatic zero setting at power-on.
- Gross weight zero tracking.
- Semi-automatic tare (net/gross weight) and preset tare.
- Semi-automatic zero.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Hysteresis and setpoint value setting.

### TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W	
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 mA	
Linearity • Analog output linearity	<0.01% full scale • <0.01% full scale	
Thermal drift • Analog output thermal drift	<0.0005% full scale/°C • <0.003% full scale/°C	
A/D Converter	24 bit (16000000 points) - 80 Hz	
Divisions (with measurement range ±10 mV and sensitivity 2 mV/V)	±999999 • 0,01 μV/d	
Measurement range	±19.5 mV	
Usable load cells sensitivity	±3 mV/V	
Conversions per second	80	
Display range	±999999	
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100	
Digital filter • Readings per second	10 levels • 5÷80	
Relay outputs	4/2 - max 115 VAC/150mA	
Optoisolated digital inputs	2/1 - 5÷24 VDC PNP	
Serial ports	synchronous transmission, RS485, RS232	
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)	
Optoisolated analog output	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)	
Humidity (condensate free)	85%	
Storage temperature	-30 °C +80 °C	
Working temperature	-20 °C +60 °C	
	Relay outputs	4 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20 °C +60 °C
	Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

### OPTIONS ON REQUEST

	DESCRIPTION
	IP67 polycarbonate box; dimensions: 170x140x95 mm (four fixing holes Ø4 mm; centre distance: 152x122 mm)
	<b>CASTL</b> - transparent lid - transparent lid; 4+2 M16x1.5 cable glands - plugs - transparent lid; 4+2 PVC end-fittings for sheath
	<b>CASTLTAST</b> - external keyboard - external keyboard; 4+2 M16x1.5 cable glands - plugs - external keyboard; 4+2 PVC end-fittings for sheath
	<b>CASTLTASTATEX</b> - ATEX II 3GD (zone 2-22) version - external keyboard; 4+2 M16x1.5 cable glands - plugs

The Company reserves the right to make changes to the technical data, drawings and images without notice.