EVCO EVIF22TSX Advanced Controller Instruction Manual

Multi-functional modules
(clock and/or non-optoisolated TTL/RS-485 serial interface)

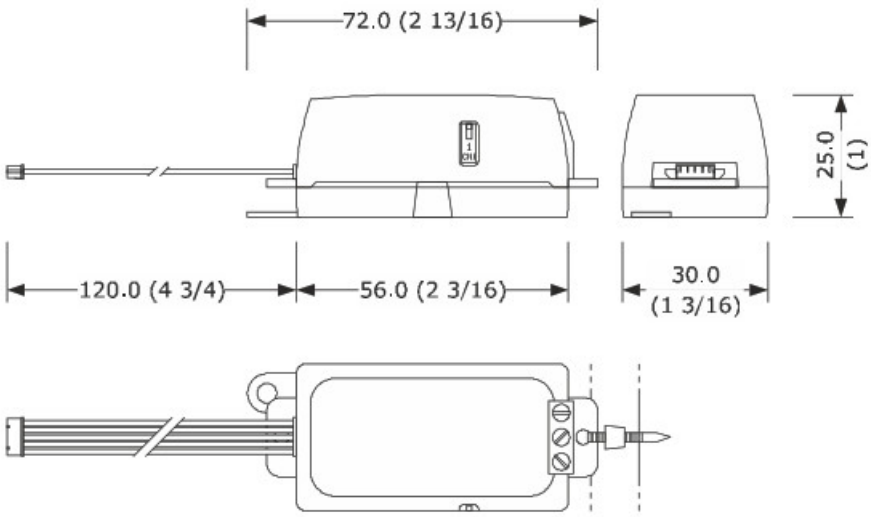
EVIF22TSX & EVIF23TSX

– clock (not available for EVIF22TSX)
– TTL MODBUS port (input)
– RS-485 MODBUS port (output).

Contents

MEASUREMENTS AND INSTALLATION

Measurements in mm (inches); to be fitted on a rigid support, with a cable tie (not provided



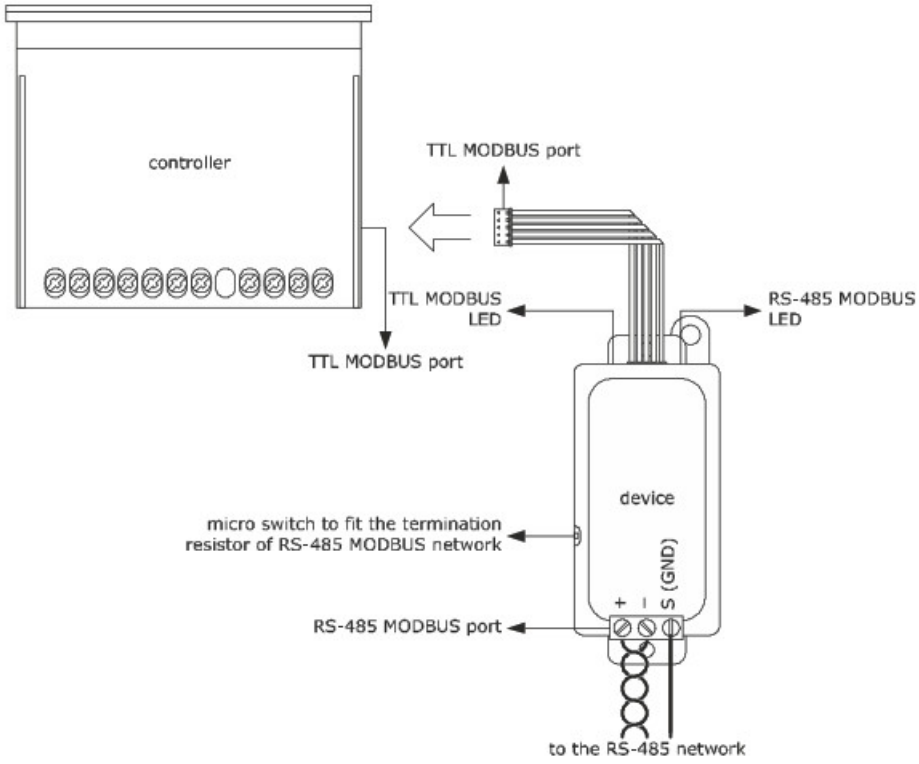
INSTALLATION PRECAUTIONS

– Ensure that the working conditions are within the limits stated in the TECHNICAL SPECIFICATIONS section
– Do not install the device close to heat sources, equipment with a strong magnetic field, in places subject to direct sunlight, rain, dampness, excessive dust, mechanical vibrations or shocks
– In compliance with safety regulations, the device must be installed properly to ensure adequate protection from contact with electrical parts. All protective parts must be fixed in such a way as to need the aid of a tool to remove them.

ELECTRICAL CONNECTION

	N.B. – Use cables of an adequate section for the current running through them – To reduce any electromagnetic interference connect the power cables as far away as possi ble from the signal cables and, if necessary, connect to an RS-485 MODBUS network by usin g a twisted pair.

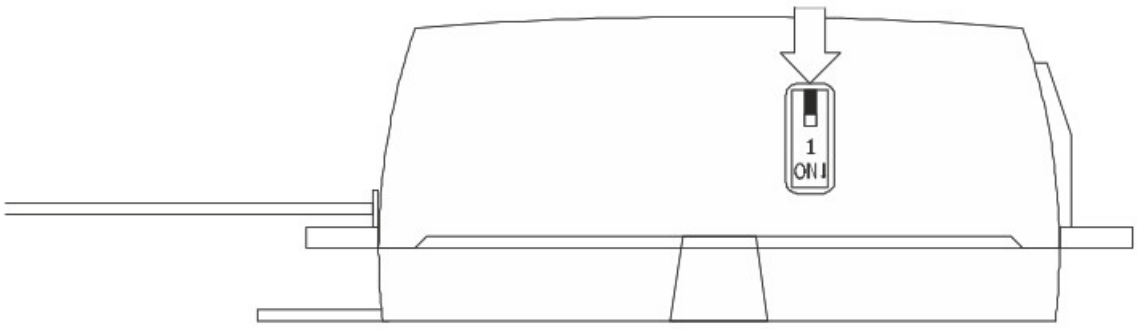
Example of electrical connection to a controller belonging to the EV3 series.



LED	ON	OFF	BLINKING
TTL MODBUS	–	no TTL MODBUS activity	TTL MODBUS activity
RS-485 MODBUS	– device power up – waiting RS-485MODBUS data	no RS-485 MODBUS activity	RS-485 MODBUS activity

Fitting the termination resistor of RS-485 MODBUS network

To fit the RS-485 MODBUS network termination resistor, place the micro-switch in position ON.



PRECAUTIONS FOR ELECTRICAL CONNECTION

– If using an electrical or pneumatic screwdriver, adjust the tightening torque
– If the device has been moved from a cold to a warm place, the humidity may have caused condensation to form inside. Wait about an hour before connecting it to the controller
– Disconnect the device from the controller before doing any type of maintenance
– For repairs and for further information, contact the EVCO sales network.

FIRST-TIME USE

1. Install following the instructions given in the section MEASUREMENTS AND INSTALLATION.
2. Disconnect the device from the mains; see the relative instruction sheet.
3. Connect the TTL MODBUS port of the device to the TTL MODBUS port of the controller as shown in the section ELECTRICAL CONNECTION.
4. Connect the RS-485 MODBUS port of the device to the RS-485 MODBUS network as shown in the section ELECTRICAL CONNECTION.
5. Power up the controller and an internal test of the device will be run.
   The test normally takes a few seconds, when it is finished the LED of the device will switch off.
6. If EVIF23TSX is used, the controller shows the label “rtc” flashing: set the date and time of the controller.
   Do not disconnect the device from the mains in the two minutes following the setting of the date and time.

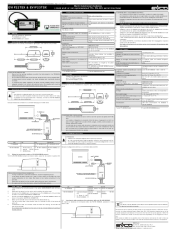
TECHNICAL SPECIFICATIONS

Container:	Black, self-extinguishing.
Category of heat and fire resistance:	D.
Measurements:	176.0 x 30.0 x 25.0 mm (6 15/16 x 1 3/16 x1 in).
Mounting methods for the control device:	on a rigid support, with a cable tie (in dotazione).
Degree of protection provided by the covering:	IP00.
Connection method:	
Pico-Blade connector	Fixed screw terminal block for wires up to 2.5 mm^2.
The maximum permitted length for connection cables:	RS-485 MODBUS port: 1,000 m (328 ft).
Operating temperature:	From 0 to 55 °C (from 32 to 131 °F).

Storage temperature:	From -25 to 70 °C (from -13 to 158 °F).
Operating humidity:	Relative humidity without condensate from 5 to 95%.
Compliance:	
RoHS 2011/65/CE	WEEE 2012/19/EU
REACH (EC) Regulation no. 1907/2006	EMC 2014/30/UE.
Power supply:	the device is powered by the TTL MODBUS port of the controller.
Software class and structure:	A.
Clock	secondary lithium battery (not available in EVIF22TSX).
Clock drift:	≤ 60s/month at 25°C (77 °F).
Clock battery autonomy in the absence of a power sup ply:	> 6 months at 25 °C (77 °F).
Clock battery charging time:	24h (the battery is charged by the power supply of the device).
Visualizzazioni:	TTL MODBUS and RS-485 MODBUS communication status LED.

Communications ports:	
1 TTL MODBUS slave port	1 RS-485 MODBUS slave port.

Documents / Resources

	EVCO EVIF22TSX Advanced Controller [pdf] Instruction Manual EVIF22TSX, EVIF23TSX, EVIF22TSX Advanced Controller, Advanced Controller, Controller