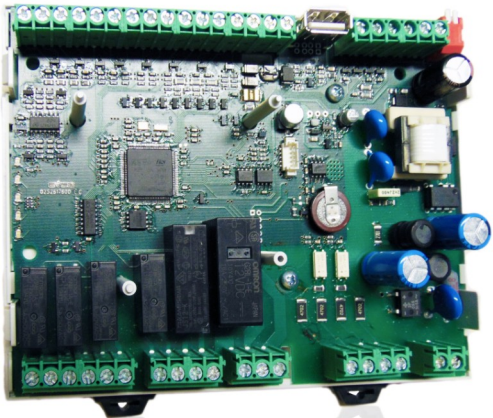


c-pro 3 OEM

Programmable controllers (up to 21 I/O)

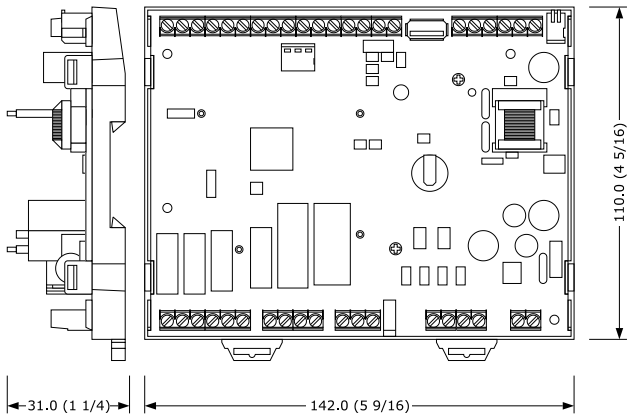


 **PLEASE READ CAREFULLY**
and save this document
CONSIDER THE ENVIRONMENT

- EN ENGLISH**
- 115... 230 VAC power supply
 - models with clock
 - 7 analogue inputs (can be configured also for dry contact digital input)
 - 2 dry contact digital inputs
 - 2 high voltage digital inputs
 - 4 analogue outputs
 - 6 electro-mechanical relay digital outputs
 - INTRABUS port (RS-485 MODBUS master/slave by connecting the serial interface EVIF221SX)
 - models with RS-485 MODBUS master/slave port (can be configured with the UNI-PRO 3 development environment)
 - CAN and USB ports
 - 1 MB program memory (only models EPB9OI and EPB9OIE).

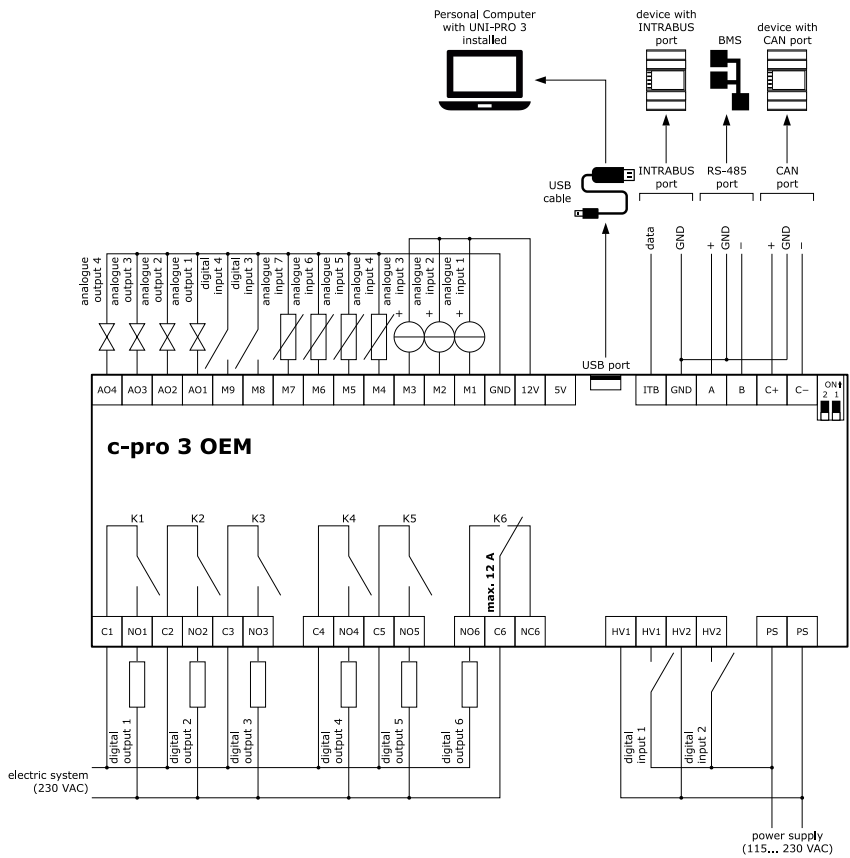
1 MEASUREMENTS AND INSTALLATION

Measurements in mm (inches). To be fitted on a DIN rail, in a control panel.

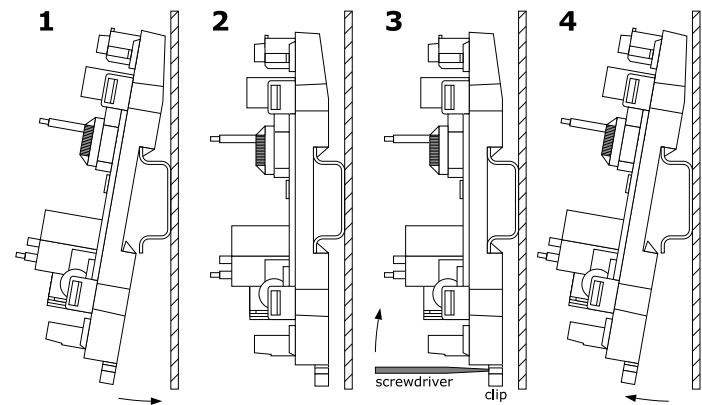


2.2 Electrical connection

Example of electrical connection.



To install the device operate as shown in pictures 1 and 2; to uninstall it operate as shown in pictures 3 and 4. To install the device again press down the clip before.



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, damp, 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.

2 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 possible from the signal cables and, if necessary, connect to a RS-485 MODBUS network and/or a CAN network by using a twisted pair.

2.1 Connectors

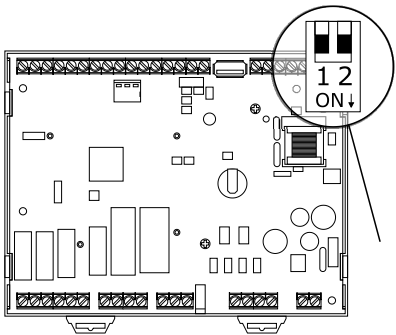
Description of connectors.

N.	DESCRIPTION
C1	K1 digital output common contact
NO1	K1 digital output normally open contact (5 A res. @ 250 VAC)
C2	K2 digital output common contact
NO2	K2 digital output normally open contact (5 A res. @ 250 VAC)
C3	K3 digital output common contact
NO3	K3 digital output normally open contact (5 A res. @ 250 VAC)

N.	DESCRIPTION
C4	K4 digital output common contact
NO4	K4 digital output normally open contact (5 A res. @ 250 VAC)
C5	K5 digital output common contact
NO5	K5 digital output normally open contact (8 A res. @ 250 VAC)

2.3 Fitting the termination resistor of RS-485 MODBUS network, CAN network and polarisation of RS-485 MODBUS network

To fit the RS-485 MODBUS network termination resistor, place micro-switch 1 in position ON. To fit the CAN network termination resistor, place micro-switch 2 in position ON.



The RS-485 MODBUS network can be polarised using the UNI-PRO 3 development environment.

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 switching on the power
- Make sure that the supply voltage, electrical frequency and power are within the set limits. See the section *TECHNICAL SPECIFICATIONS*
- Disconnect the power supply before doing any type of maintenance
- Do not use the device as safety device
- For repairs and for further information, contact the EVCO sales network.

N.	DESCRIPTION
NO6	K6 digital output normally open contact (16 A res. @ 250 VAC)
C6	K6 digital output common contact
NC6	K6 digital output normally closed contact

N.	DESCRIPTION
HV1	high voltage digital input; DI1
HV1	high voltage digital input; DI1
HV2	high voltage digital input; DI2
HV2	high voltage digital input; DI2

N.	DESCRIPTION
PS	device power supply (115... 230 VAC)
PS	device power supply (115... 230 VAC)

N.	DESCRIPTION
AO4	analogue output 4 (for 0-10 V or PWM)
AO3	analogue output 3 (for 0-10 V or PWM)
AO2	analogue output 2 (for 0-10 V or PWM)
AO1	analogue output 1 (for 0-10 V or PWM)
M9	digital input (dry contact and for pulse trains up to 2 KHz); DI4
M8	digital input (dry contact and for pulse trains up to 2 KHz); DI3
M7	analogue input (for PTC, NTC or Pt 1000 probes); AI7 can be configured also for dry contact digital input; DI12
M6	analogue input (for PTC, NTC or Pt 1000 probes); AI6 can be configured also for dry contact digital input; DI11
M5	analogue input (for PTC, NTC or Pt 1000 probes); AI5 can be configured also for dry contact digital input; DI10
M4	analogue input (for PTC, NTC or Pt 1000 probes); AI4 can be configured also for dry contact digital input; DI9
M3	analogue input (for NTC probes, 0-5 V, 0-10 V, 0-20 mA or 4-20 mA transd.); AI3 can be configured also for dry contact digital input; DI8
M2	analogue input (for NTC probes, 0-5 V, 0-10 V, 0-20 mA or 4-20 mA transd.); AI2 can be configured also for dry contact digital input; DI7
M1	analogue input (for NTC probes, 0-5 V, 0-10 V, 0-20 mA or 4-20 mA transd.); AI1 can be configured also for dry contact digital input; DI6
GND	reference (GND)
12V	auxiliary power supply (12 VDC)
5V	ratiometric transducer power supply 0-5 V (5 VDC)

N.	DESCRIPTION
ITB	INTRABUS port data
GND	reference (GND)
A	if present, signal + RS-485 MODBUS master/slave port
B	if present, signal - RS-485 MODBUS master/slave port
C+	signal + CAN port
C-	signal - CAN port

3 TECHNICAL SPECIFICATIONS

Purpose of the control device:	Function controller.
Construction of the control device:	Built-in electronic device.
Container:	Grey, self-extinguishing.
Category of heat and fire resistance:	D.
Measurements:	142.0 x 110.0 x 31.0 mm (5 9/16 x 4 5/16 x 1 1/4 in).
Mounting methods for the control device:	To be fitted on a DIN rail, in a control panel.
Degree of protection provided by the covering:	IP00.
Connection method:	screw terminal blocks for wires up to 2.5 mm ²
Maximum permitted length for connection cables:	Type A female USB connector.
Power supply: 10 m (32.8 ft)	Analogue inputs: 10 m (32.8 ft)
Auxiliary power supply and 0-5 V ratiometric transducer power supply: 10 m (32.8 ft)	Digital inputs: 10 m (32.8 ft)
0-10 V analogue outputs: 10 m (32.8 ft)	PWM analogue outputs: 1 m (3.28 ft)
Digital outputs: 100 m (328 ft)	INTRABUS port: 10 m (32.8 ft)
RS-485 MODBUS port: 1,000 m (3,280 ft)	USB port: 1 m (3.28 ft).
CAN port:	1,000 m (3,280 ft), baud rate: 20,000 baud 500 m (1,640 ft), baud rate: 50,000 baud 250 m (820 ft), baud rate: 125,000 baud 50 m (164 ft), baud rate: 500,000 baud.
Operating temperature:	From -20 to 60 °C (from -4 to 140 °F).
Storage temperature:	From -20 to 70 °C (from -4 to 158 °F).
Operating humidity:	Relative humidity without condensate from 5 to 95%.
Pollution status of the control device:	2.
Compliance:	
RoHS 2011/65/EC	WEEE 2012/19/EU
REACH (EC) Regulation N. 1907/2006	
EMC 2014/30/EU	LVD 2014/35/UE.
Power supply:	115... 230 VAC (+10% -15%), 50/60 Hz (±3 Hz), max. 10 VA.
Earthing methods for the control device:	None.

Rated impulse-withstand voltage:	4 KV.
Over-voltage category:	III.
Software class and structure:	A.
Clock:	According to the model (with secondary lithium battery).
Clock drift:	≤ 60s/month at 25°C (77 °F).
Clock battery autonomy in the absence of a power supply:	> 6 months at 25 °C (77 °F).
Clock battery charging time:	24h (the battery is charged by the power supply of the device).
Analogue inputs:	4 for PTC, NTC or Pt 1000 probes (can be configured also for dry contact digital input) 3 for NTC probes, 0-5 V, 0-10 V, 0-20 mA or 4-20 mA transducers (can be configured also for dry contact digital input).
PTC probes:	Sensor type: KTY 81-121 (990 Ω @ 25 °C, 77 °F) Measurement field: from -50 to 150 °C (from -58 to 302 °F) Resolution: 0.1 °C (1 °F).
NTC probes:	Sensor type: B3435 (10 K Ω @ 25 °C, 77 °F) Measurement field: from -50 to 120 °C (from -58 to 248 °F) Resolution: 0.1 °C (1 °F).
Pt 1000 probes:	Sensor type: 1 K Ω @ 0 °C, 32 °F Measurement field: from -100 to 400 °C (from -148 to 752 °F) Resolution: 0.1 °C (1 °F).
0-5 V transducers:	Input resistance: ≥ 10 KΩ Resolution: 0.01 V.

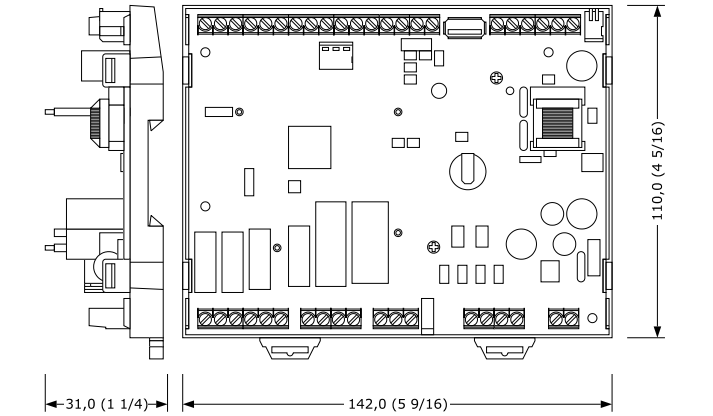
0-10 V transducers:	Input resistance: ≥ 10 KΩ Resolution: 0.01 V.
4-20 mA transducers:	Input resistance: ≤ 200 Ω Resolution: 0.01 mA.
Auxiliary power supply:	12 VDC +10% -15%, 160 mA max.
Ratiometric transducer power supply:	5 VDC, +10% -15%, 10 mA max.
Digital inputs:	2 dry contact and for pulse trains up to 2 KHz 2 high voltage.
Dry contact:	Contact type: 3/3 VDC, 1 mA Power supply: None.
High voltage contac:	Power supply: 115... 230 VAC.
Analogue outputs:	4 for 0-10 V or PWM signal
0-10 V signal:	Minimum applicable impedance: 1 K Ω Resolution: 0.01 V.
PWM signal:	Power supply: 0... 10 VDC (+16% -25%), 10 mA max. Frequency: 10 Hz... 2 KHz Duty: 0... 100%.
Digital outputs:	4 with SPST electro-mechanical relay, 5 A res. @ 250 VAC 1 with SPST electro-mechanical relay, 8 A res. @ 250 VAC 1 with SPDT electro-mechanical relay, 16 A res. @ 250 VAC
The device guarantees reinforced insulation between each digital output connector and the rest of the components of the device.	
Type 1 or Type 2 Actions:	Type 1.

Additional features of Type 1 or Type 2 actions:	C.
Displays:	None.
Communications ports:	
1 INTRABUS port	According to the model, 1 RS-485 MODBUS port
1 CAN port	1 USB port.

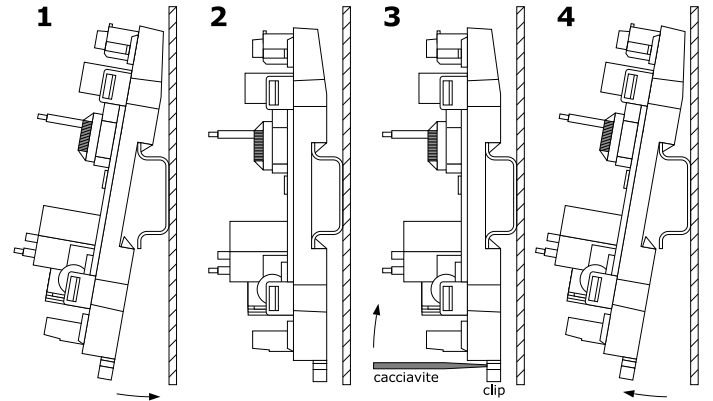
- IITALIANO
- alimentazione 115... 230 VAC
 - modelli con orologio
 - 7 ingressi analogici (configurabili anche per ingresso digitale a contatto pulito)
 - 2 ingressi digitali a contatto pulito
 - 2 ingressi digitali in alta tensione
 - 4 uscite analogiche
 - 6 uscite digitali a relè elettromeccanico
 - porta INTRABUS (RS-485 MODBUS master/slave collegando l'interfaccia seriale EVIF22ISX)
 - modelli con porta RS-485 MODBUS master/slave (configurabile con l'ambiente di sviluppo UNI-PRO 3)
 - porte CAN e USB
 - 1 MB memoria programma (solo I modelli EPB90I ed EPB90IE).

1DIMENSIONI E INSTALLAZIONE

Dimensioni in mm (in); installazione su guida DIN, in un quadro di controllo.



Per installare il dispositivo operare nel modo indicato nei disegni 1 e 2; per disinstallarlo operare nel modo indicato nei disegni 3 e 4. Per installare nuovamente il dispositivo premere prima a fondo la clip.



2.2Collegamento elettrico

Esempio di collegamento.

