DIMENSIONAL DATA

OVERALL DIMENSIONS AND PANEL CUTOUT

The dimensions are expressed in millimetres and inches (third-scale drawing).

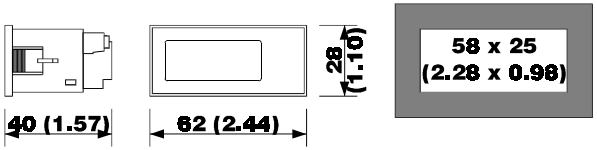

Fig. 3
ds2ae.wmf

INSTALLATION

WITH THE FIXING SYSTEM SUGGESTED BY THE BUILDER

Panel mounting, with elastic fins (third-scale drawing).

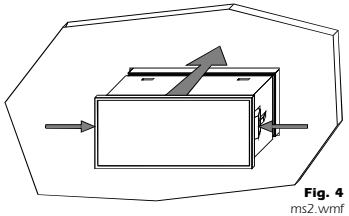

Fig. 4
ms2.wmf

ELECTRICAL CONNECTION

CONNECTIONS TO DERIVE

Instance of typical application.

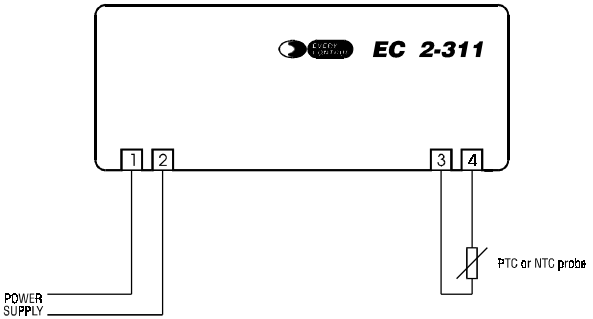

Fig. 5
c2-311e.wmf

BUILDER DATA

EVERY CONTROL S.r.l.
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EC 2-311

Small size digital thermometer supplied from main voltage

Fig. 1
f2-311.wmf

Operating instructions
Version 1.00 of April the fifteenth 2002
File ec2311e_v1.00.pdf
PT

IMPORTANT:

The use of this new instrument is easy; but for safety reasons, it is important read these instructions carefully before the installation or before the use and follow all additional informations.

It is very important keep these instructions with the instrument for future consultations.

GENERAL INFORMATIONS

WHAT IS THE USE

EC 2-311 is a small size digital thermometer; the instrument can be supplied from main voltage (230 Vac) with a very low power consumption (0.35 VA).

In factory the instrument gets preset to accept at the measure input PTC with 990 Ohm @ +25 °C, +77 °F or NTC with 10 KOhm @ +25 °C, +77 °F and B=3435 or NTC with 100 KOhm @ +25 °C, +77 °F and B=3977 probes; adjustments of the displayed value can be done through the suitable trimmer.

EC 2-311 is available in the 62 x 28 mm (2.44 x 1.10 in.) case and it is studied for panel mounting with elastic fins.

GETTING STARTED

INSTALLATION

EC 2-311 was studied for panel mounting, panel cutout 58 x 25 mm (2.28 x 0.98 in.), with elastic fins (the overall dimensions and the panel cutout are related in Fig. 3, the fixing system suggested by the builder is related in Fig. 4).

ADDITIONAL INFORMATIONS

- *the panel thickness must be included from 1 to 3 mm (0.04 to 0.11 in.)*
- *verify if the using conditions (ambient temperature, humidity, etc.) are within the limits indicated by the builder (see the chapter TECHNICAL DATA)*
- *install the instrument in a location with a suitable ventilation, to avoid the internal overheating of the instrument*
- *do not install the instrument near surfaces that can to obstruct the air-grating (carpets, covers, etc.), heating sources (radiators, hot air ducts, etc.), locations subject to direct sunlight, rain, humidity, excessive dust, mechanical vibrations or bumps, devices with strong magnetos (microwave ovens, big speakers, etc.)*
- *according with the safety norms, the protection against possible contacts with electrical parts and parts protected with functional insulation only must be ensured through a correct installation procedure of the instrument; all parts that ensure the protection must be fixed so that they can not be removed if not with a tool.*

ELECTRICAL CONNECTION

EC 2-311 is provided with two screw terminal blocks for cables up to 2.5 mm² (0.38 in.², for the connection to the power supply and measure input), located on the instrument back panel (the connections to derive are related in Fig. 5 and they are checkable on the polyester label stuck on the instrument case).

ADDITIONAL INFORMATIONS

- *if the instrument is brought from a cold to a warm location, the humidity may condense inside the instrument; wait about an hour before supply the instrument*
- *verify if the operating power supply voltage, electrical frequency and power of the instrument correspond to the local power supply (see the chapter TECHNICAL DATA)*
- *do not supply more instruments with the same transformer*
- *if the instrument is installed on a vehicle, its power supply must be derived directly from the battery of the vehicle*
- *give the instrument a protection able to limit the current absorbed in case of failure*
- *the instrument remains connected to the local power supply as long as the terminals 1 and 2 are derived to the local power supply, even if the instrument is apparently turned off*
- *give the probe a protection able to insulate it against possible contacts with metal parts or use insulated probes*
- *do not try to repair the instrument; for the repairs apply to highly qualified staff*
- *if you have any questions or problems concerning the instrument please consult Every Control (see the chapter BUILDER DATA).*

USE

PRELIMINARY INFORMATIONS

After derived the connections related in Fig. 5, during the normal functioning the instrument displays the temperature read by the probe; adjustments of the displayed value can be done through the suitable trimmer.

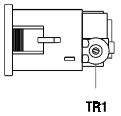

Fig. 2
adj2311.wmf

If an alarm should be active the instrument displays the alarm code flashing as long as the cause that has given it does not disappear (see the chapter ALARMS).

ALARMS

ALARMS

If the instrument displays the indication "**E0**" flashing (**probe failure alarm**) it means that: the kind of connected probe is not proper (verify the kind of connected probe), the probe is faulty (verify the probe integrity), there is a mistake in the instrument-probe connection (verify the instrument-probe connection integrity), the temperature read by the probe is outside the limits permitted by the probe in use (verify that the temperature near the probe be inside the limits permitted by the probe); inactive.

TECHNICAL DATA

TECHNICAL DATA

Case:	plastic black (PPO), self-extinguishing, open case.
Size:	62 x 28 x 40 mm (2.44 x 1.10 x 1.57 in.).
Installation:	panel mounting, panel cutout 58 x 25 mm (2.28 x 0.98 in.), with elastic fins.
Type of protection:	IP 54.
Connections:	screw terminal blocks with pitch 7.5 mm (0.29 in., power supply) and with pitch 5 mm (0.19 in., measure input) for cables up to 2.5 mm² (0.38 in.²).
Ambient temperature:	from 0 to +60 °C (+32 to +140 °F, 10 ... 90 % of not condensing relative humidity).
Power supply:	230 Vac or 115 Vac, 50/60 Hz, 0.35 VA.
Insulation class:	II.
Measure inputs:	1 configurable, hardware depending, for PTC with 990 Ohm @ +25 °C, +77 °F or NTC with 10 KOhm @ +25 °C, +77 °F and B=3435 or NTC with 100 KOhm @ +25 °C, +77 °F and B=3977 probes.
Working range:	from -50 to +150 °C (-58 to +302 °F) for PTC with 990 Ohm @ +25 °C, +77 °F probe, from -40 to +110 °C (-40 to +230 °F) for NTC with 10 KOhm @ +25 °C, +77 °F and B=3435 probe, from +50 to +300 °C for NTC with 100 KOhm @ +25 °C, +77 °F and B=3977 probe.
Resolution:	1 °C (1 °F).
Display:	3-digit display 12.5 mm (0.49 in.) high red LED display with automatic minus sign.

ADDITIONAL INFORMATIONS

- *the effective probes working range principally depends from the kind of sensor and from the material that forms the bulb and the cable.*

HOW TO ORDER

CODING SYSTEM

Instrument name:	EC 2-311.
Desired measure input:	P (for PTC with 990 Ohm @ +25 °C, +77 °F probes), N (for NTC with 10 KOhm @ +25 °C, +77 °F and B=3435 probes),

H (for NTC with 100 KOhm @ +25 °C, +77 °F and B=3977 probes).

Desired power supply: 220 (230 Vac),
110 (115 Vac).