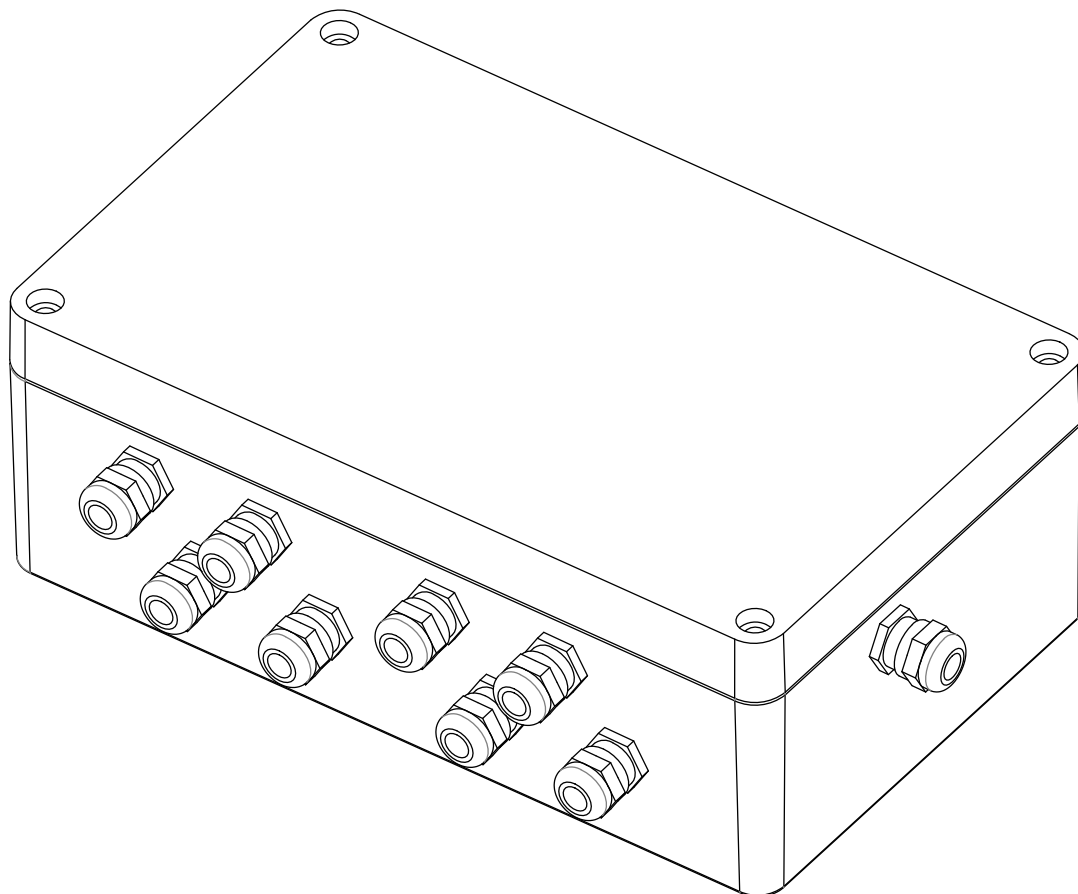


MUX02

TT probes multiplexer concentrator



technical documentation EN Rev. of 01/02/2024

TABLE OF CONTENTS

1-WARRANTY	page 3
2-PRODUCT	page 4
3-TECHNICAL SPECIFICATIONS	page 5
4-DIMENSIONS	page 6
5-ELECTRICAL CONNECTIONS	page 7
6-CONFIGURATIONS	page 12
7-TESTING/QUALITY CERTIFICATE	page 16

1-WARRANTY

SGM-LEKTRA S.r.l. undertakes to remedy any defect, defect or lack, which occurs within 12 months from the delivery date, provided that it is attributable to it and has been notified within the established terms.

SGM-LEKTRA S.r.l. can choose whether to repair or replace the defective Products.

Products replaced under warranty will benefit from an additional 12-month warranty.

Products repaired under warranty will enjoy the warranty until the original term.

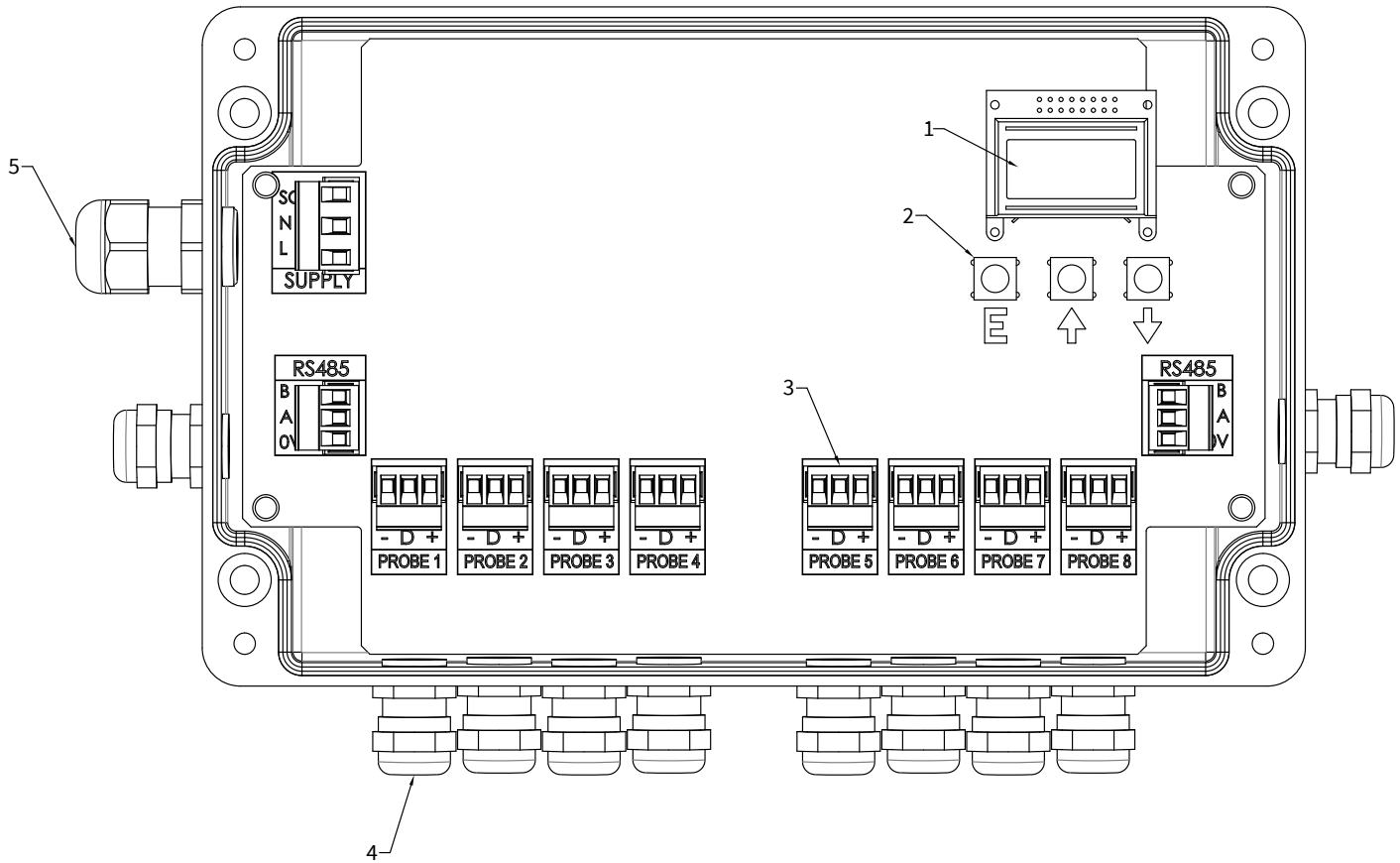
Parts of Products repaired out of warranty will have a 3 month warranty.

The Products are guaranteed to meet particular specifications, technical characteristics or conditions of use only if this is expressly agreed in the Purchase Agreement or in the documents referred to therein.

The guarantee of SGM-LEKTRA S.r.l. absorbs and replaces guarantees and responsibilities, both contractual and non-contractual, originating from the supply such as, for example, compensation for damages, reimbursement of expenses, etc., both in towards the Customer, and towards third parties.

The warranty is void in case of tampering or improper use of the Products.

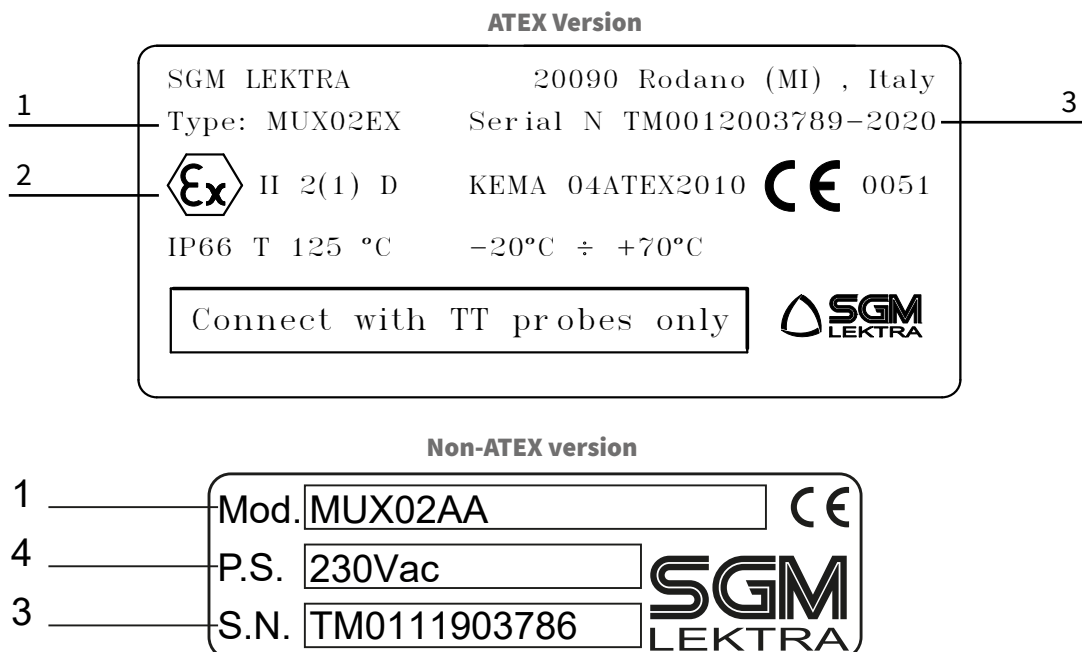
2- PRODUCT



1. Display 2. Programming keys 3. Removable terminals 4. Cable glands PG9 (N°10) 5. Cable gland PG11

2.1 - IDENTIFICATION

Each instrument has an adhesive identification plate on which the main instrument data are reported. The following image describes the information and data on the plate.



1. Model
2. Atex Marking
3. Serial number
4. Power Supply

3-TECHNICAL SPECIFICATIONS

Case

wall assembly

Dimensions

260x160x91mm; template for fixing 240x110mm

Casing protection

IP66

Casing material

Aluminium

Keyboard

3 keys

Display

alphanumeric digit 2 x 8

Consumption

15W max.

LED

green "power on" / red "RX/TX"

Connections

8 removable 3-pole terminals for connection of TT multipoint temperature probes;

2 removable 3-pole terminals for RS485 connection;

1 removable 3-pole terminal for power supply connection

Power supply

230V 50Hz; -15% +10%

Measurement inputs

n.8 in 1-WIRE-BUS

Data memory

EEPROM

Microprocessor

digital technology

Conversion resolution

0.5°C

Max system expansion

no.63 MUX02Ex units

Max no. TT probes for MUX unit

8 probes

Operating temperature

-20°C ÷ +70°C

Measurement range

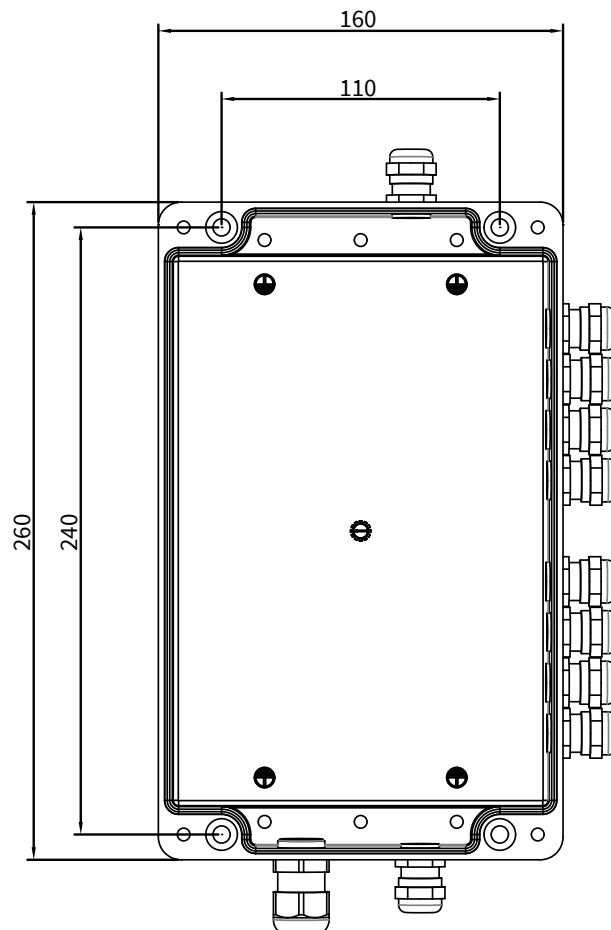
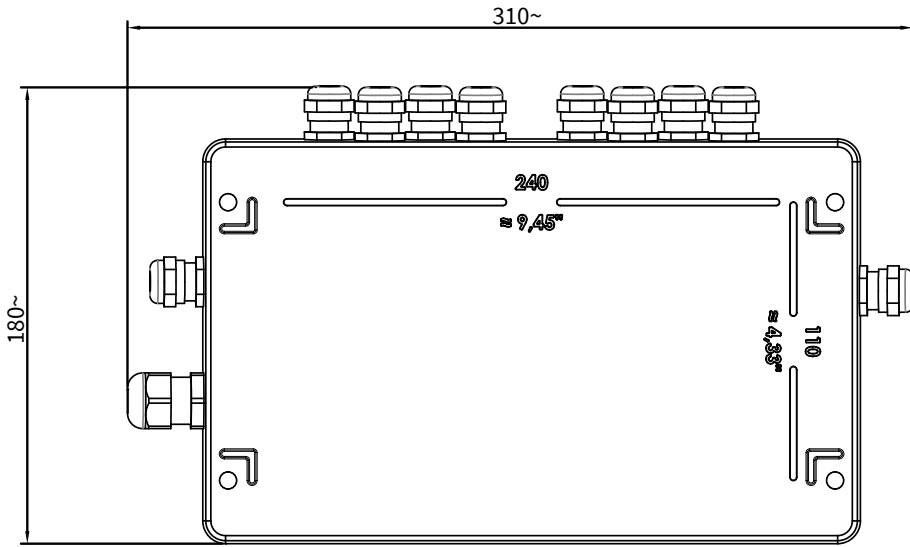
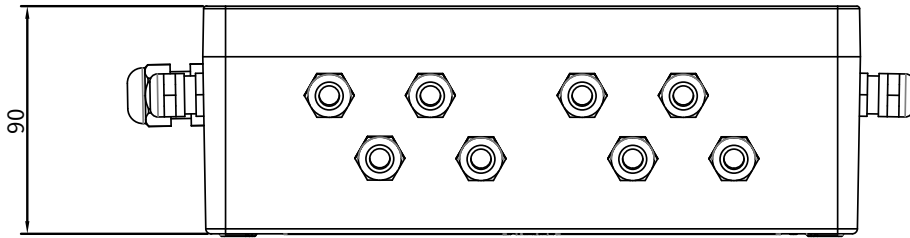
-30°C ÷ +125°C

Certification

ATEX II 2(1) D IP66 T125°C

4-DIMENSIONS

4.1 - MECHANICAL DIMENSIONS



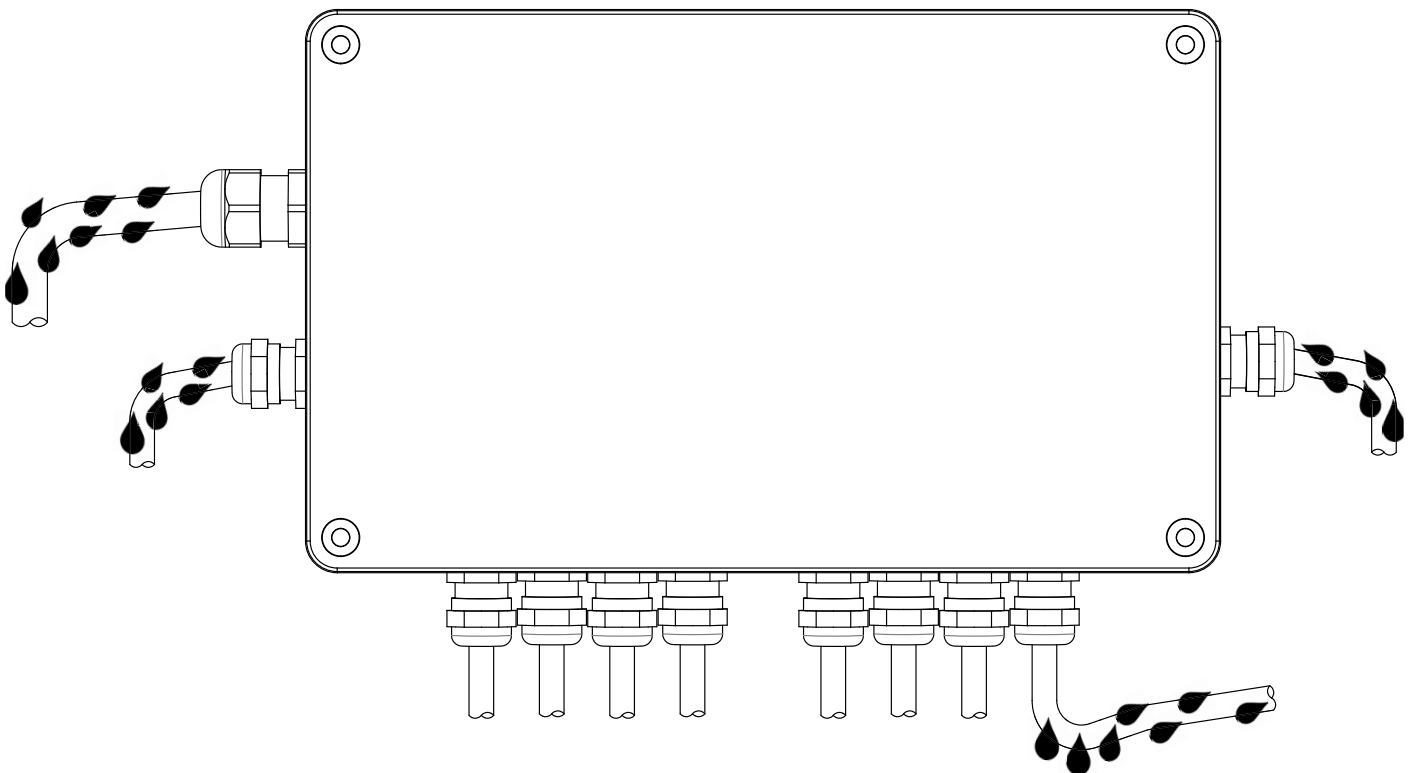
5-ELECTRICAL CONNECTIONS

5.1 - PRECAUTIONS FOR INSTALLATION

- The installation must only be performed by qualified personnel and in compliance with the current regulations.
- Make sure that the working temperature is between -20 and +70°C.
- Install the MUX02 in an environment that is compatible with the physical characteristics and construction materials of the casing.
- The equipment must be used observing the safety warnings.
- Incorrect use of the device could cause serious damage to persons, the product and the equipment connected to it.
- Do not open the casing in the presence of potentially explosive powders.
- Make sure that the length of the connection cable between the MUX02 and the TT probe does not exceed 50 meters.

5.2 - RECOMMENDATIONS FOR EXTERNAL INSTALLATION

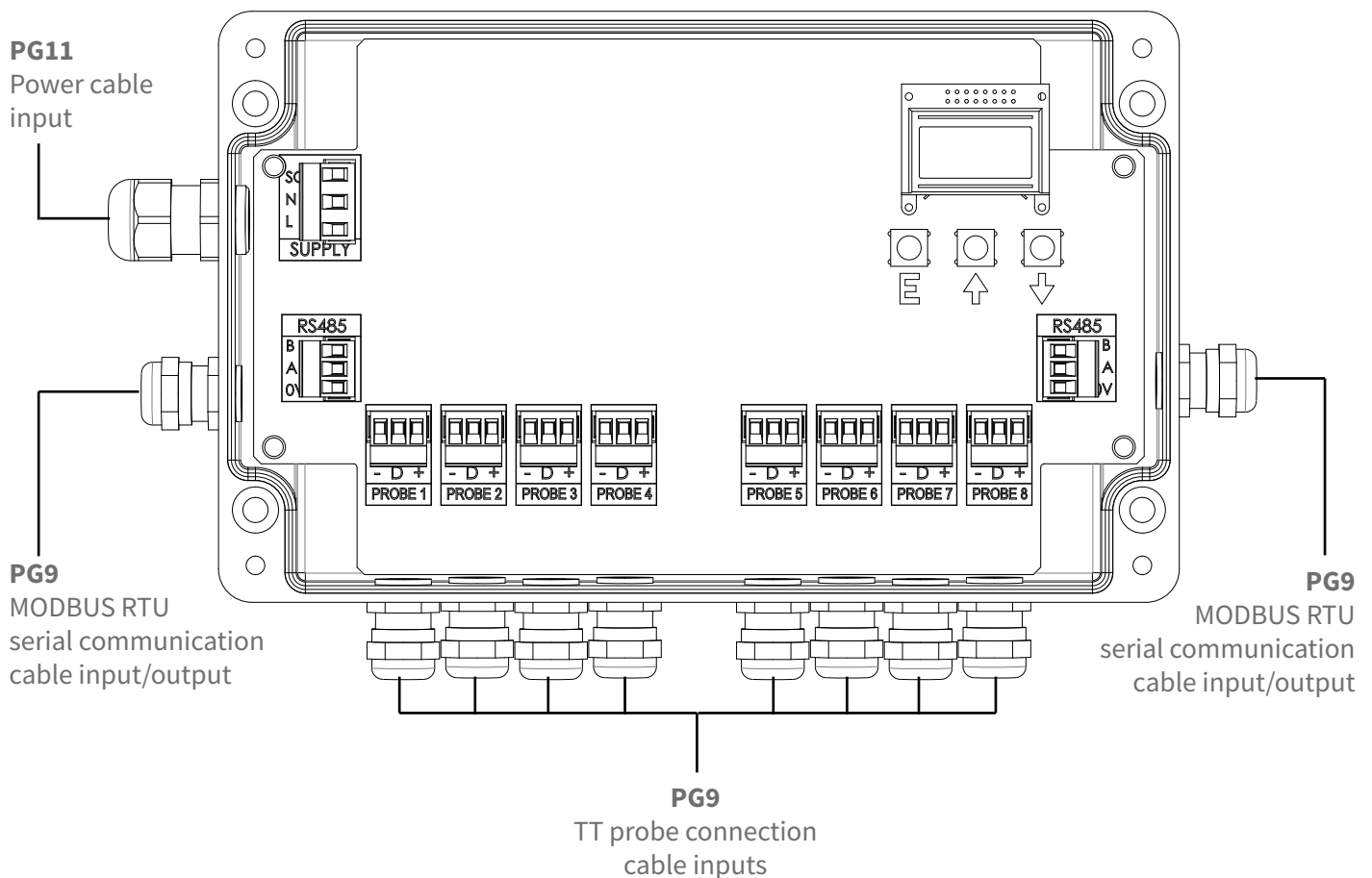
- To connect the power supply, use a cable with an external diameter of 5÷10mm and fully tighten the cable glands.
- Close the cover correctly by tightening the relative screws firmly.
- For the connections between the MUX02 and the TT probes, use the F/UTP AWG624/1 shielded cable CAT. 5E.
- Position the cables exiting the cable glands in such a way as to form a downward curve; by doing so, condensation and/or rainwater will tend to drip from the bottom of the curve (as shown in the figure below).



5.2.1 - Technical specifications for TT and RS485 probes connection cable

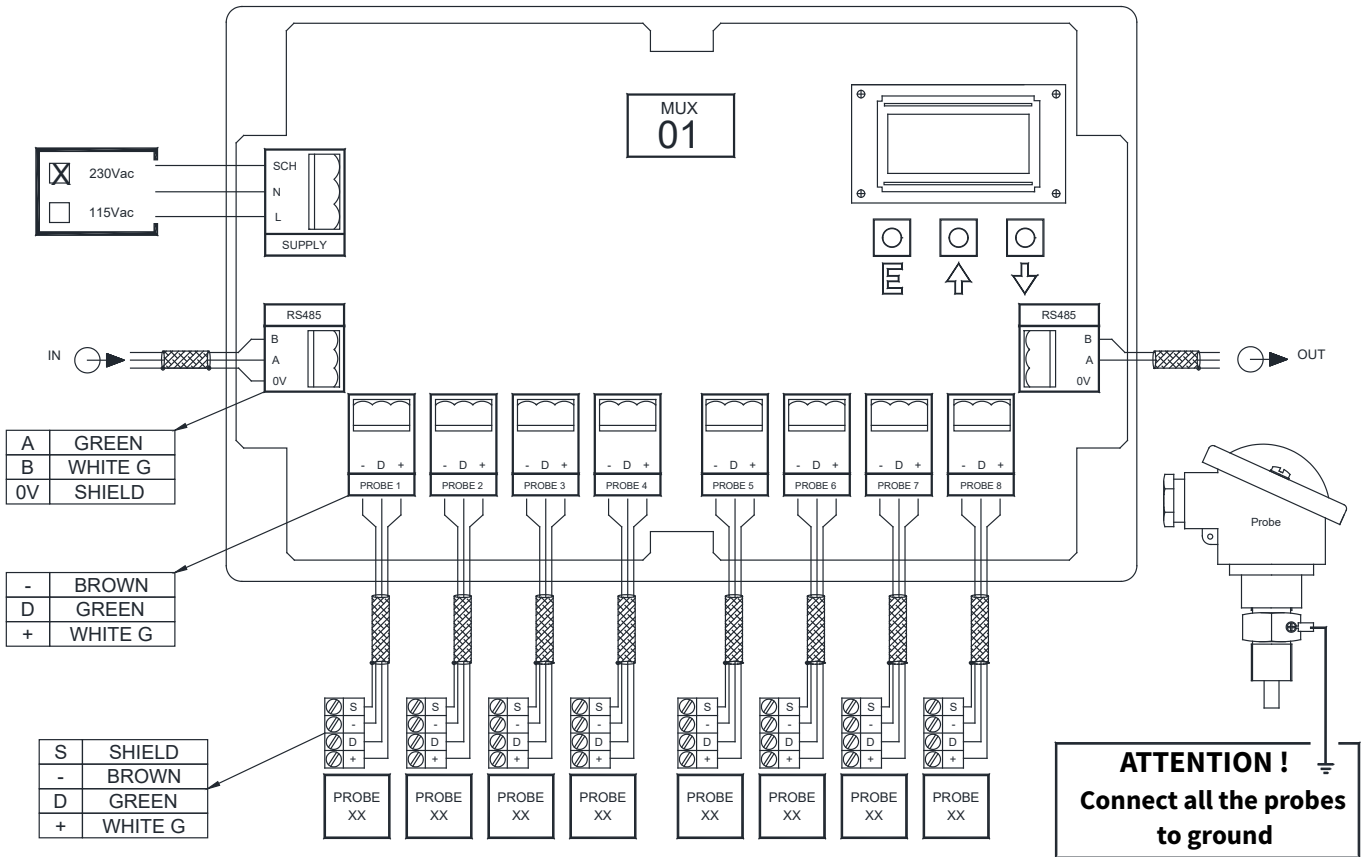
F/UTP AWG624/1 cable CAT. 5E	
Conductors	Rigid copper wire Ø 0.50mm
Isolation	Polyethylene Ø 1.00mm + -0.1
Colours	2 white-green-brown
Conductors stranded in pairs	Green - white G / brown white B
Stranding	Pairs stranded together
Screen	Polyester tape + tinned copper continuity wire + Mylar tape
Sheath	PVC RZ BLUE RAL 5015 Ø 5.90mm+/-0.50
Marking	SGM-LEKTRA-525B025A-F UTP 2PR AWG 6 24/1 CAT 5E+metric marking
Operating temperature	-25°C+80°C (fixed installation)
Voltage test	1.5KV V.c.a.
Work voltage	300/300V
Curvature radius	8 times the diameter
Reference standards	CEI 20-35 - IEC 332.1 – CEI 20-37 ROHS 2011/65/EU(ROHS 2)
Capacity	<60nF/km

5.3 - CABLE INPUTS / OUTPUTS



5.4 - CONNECTIONS

- Remove the closing cover and the caps from the cable glands.
- Insert the connection cables between the TT probes and the MUX, passing them through the cable glands.
- Connect the cables to the relative terminals according to the following paragraphs.
- Fully tighten the cable glands and close the cover to ensure the IP66 degree of protection.



All the probe connections must be created with F/UTP AWG624/1 shielded cable CAT. 5E or equivalent. The shield must only be in the probe “S” terminal.

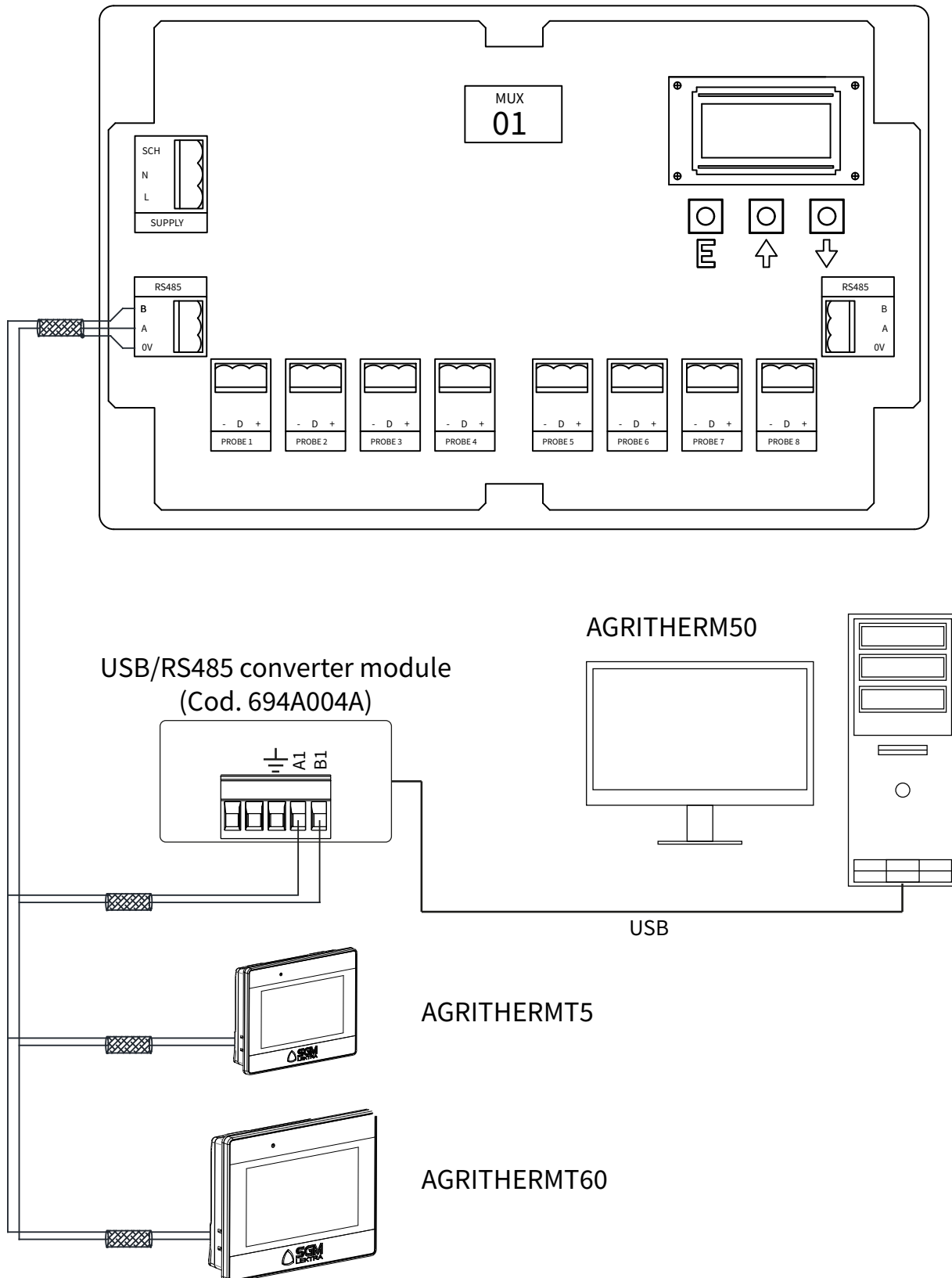
N.B.: The cable of each probe must not exceed 50m and must be positioned away from the power and supply cables, using the appropriate connectors.

ATTENTION! Inversion of the connections causes serious damage to the probes.

5.4.1 - AGRITHERM50 (PC), AGRITERMT5 and AGRITHERMT60 connection via RS485

For the electrical connection between the MUX02 and the RS485/USB conversion module, use the F/UTP AWG624/1 cable CAT. 5E (our cod. 525B025A), or equivalent, suitable for serial data transmission.

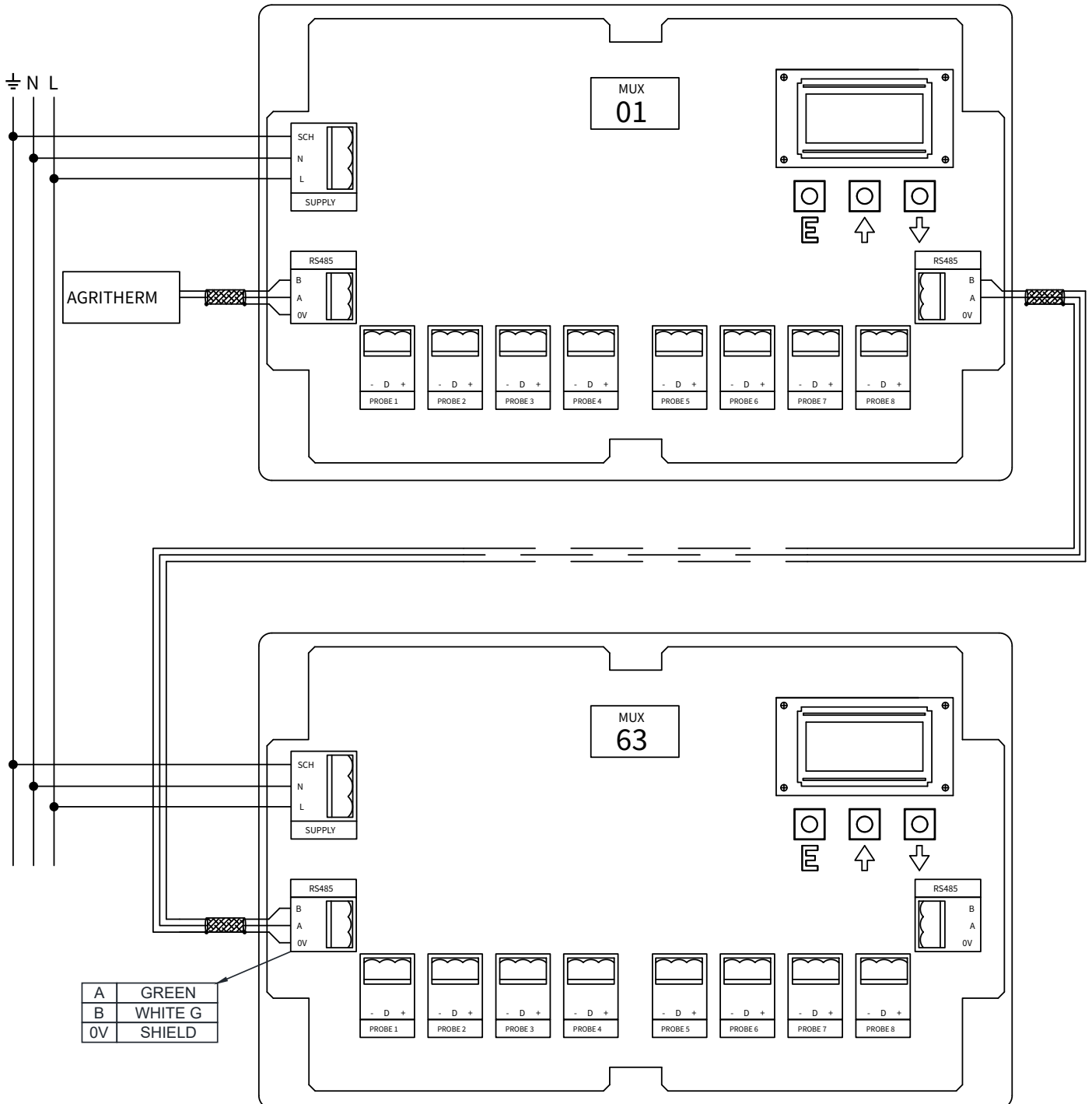
Upon completion of the work tighten all the cable glands well to guarantee the IP66 degree of protection.



5.4.2 - Connection of multiple MUXs in a single RS485 network

For the electrical connection between the MUX02s of the RS485 network, use the F/UTP AWG624/1 cable CAT. 5E (our cod. 525B025A), or equivalent, suitable for data transmission via RS485

Upon completion of the work tighten all the cable glands well to guarantee the IP66 degree of protection.



6-CONFIGURATION

6.1 - CHECK PROBES

To configure the connected TT multipoint probes, proceed as follows:
Press the “DOWN ARROW” key.



UID 1

The message “CHECK PROBES” will appear on the display.
Press the “ENTER” key.



CHECK
PROBES

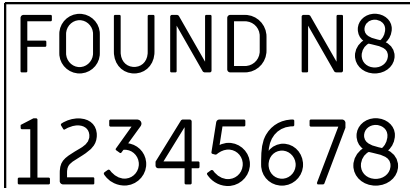
The message “WAIT” will be shown on the display until the operation is completed.



WAIT

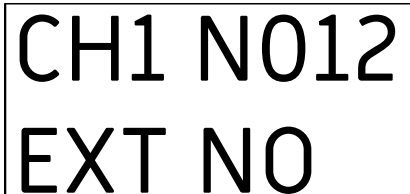
At the end of the operation, the report of the detected TT probes will be :

displayed: “FOUND N_”; indicates how many probes are connected “12345678”;
indicates in which position the detected TT multipoint probes are connected.
If “E” is displayed, instead of the position number, it is to indicate the presence of one
or more digital sensors in error in the TT probes connected in that position
(for example: “1E3_____” for the TT probe connected in the second door,
the presence of one or more digital sensors in anomaly is reported).



FOUND N8
12345678

Press and quickly release the “ENTER” key to view the individual channels.



CH1 N012
EXT NO

By pressing the “DOWN ARROW” or “UP ARROW” keys the required channel is selected.



CH3 N012
EXT NO

By keeping the “ENTER” key pressed for at least 2 seconds when it is released
the MUX will display the message “RESET” for approximately 2 seconds,
then it will return to RUN mode.



RESET

6.2 - VISUAL PROBE

To view the temperatures of the individual measuring points of the connected TT multi-point sensors, proceed as follows:
Press the "UP ARROW" key.

UID 1

The message "VISUAL PROBE N_" will appear on the display.

VISUAL
PROBE N1

Press the "DOWN ARROW" or "UP ARROW" keys to select the TT multipoint sensor whose individual measurement points are to be viewed.

VISUAL
PROBE N2

Press and quickly release the "ENTER" key to view the temperatures detected by the individual digital sensors of the selected TT multi-point sensor.

SENS 001
T=027.00

Press the "DOWN ARROW" or "UP ARROW" keys to select the single digital sensor whose temperature is to be displayed.

SENS 002
T=027.00

Press and quickly release the "ENTER" key to view the temperatures detected by the subsequent TT multi-point sensor.

VISUAL
PROBE N2

Keeping the "ENTER" key pressed for at least 2 seconds when releasing the MUX will return to RUN mode.

6.3 - CHANGE UID

To change the UID address of the muxes, proceed as follows:
Press the "ENTER" key and release it immediately.



UID 1

The message "CHANGE UID" will appear on the display.



CHANGE
UID 0001

Press the "DOWN ARROW" or "UP ARROW" keys to select the UID No.



CHANGE
UID 0005

Press and quickly release the "ENTER" key to confirm the change.



UID 5

8-TESTING/QUALITY CERTIFICATE



In accordance with production and testing procedures, I certify that the instrument:

(Multiplex Concentrator)

is conform to the technical requirements on Technical Data and it is made in conformity to the procedure

Quality control manager: Date of manufacture and testing: