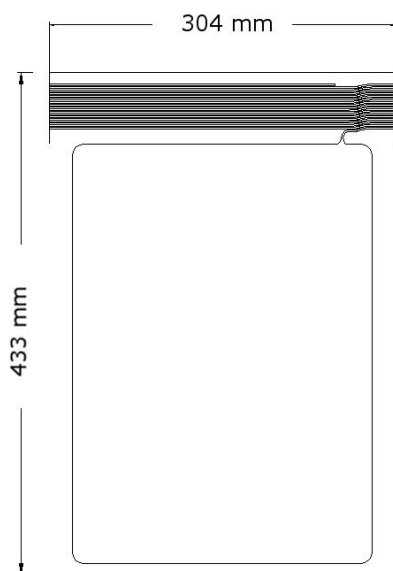**MariCare™**
Member of MariElectronics Group

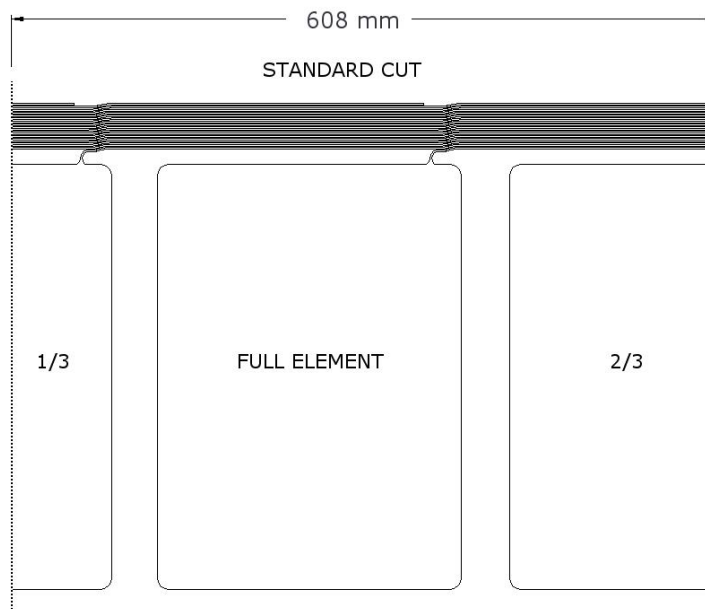# ELSI SENSOR LAMINATE v10.7

TECHNICAL DATA SHEET

The ELSI™ Smart Floor is an intelligent sensor system, which is able to detect and track human and other objects in an indoor environment. The system is based on thin sensor laminates, which are installed under the conventional top flooring material. The sensors act similar to touchpad, as soon as person moves across the sensor elements ELSI® system analyse it and indicates continuous movement or a location where person has stopped or fallen. Each laminate is connected to multiplexer units (MUX) which forward measured data to ELSI system via measurement control units (MCU).
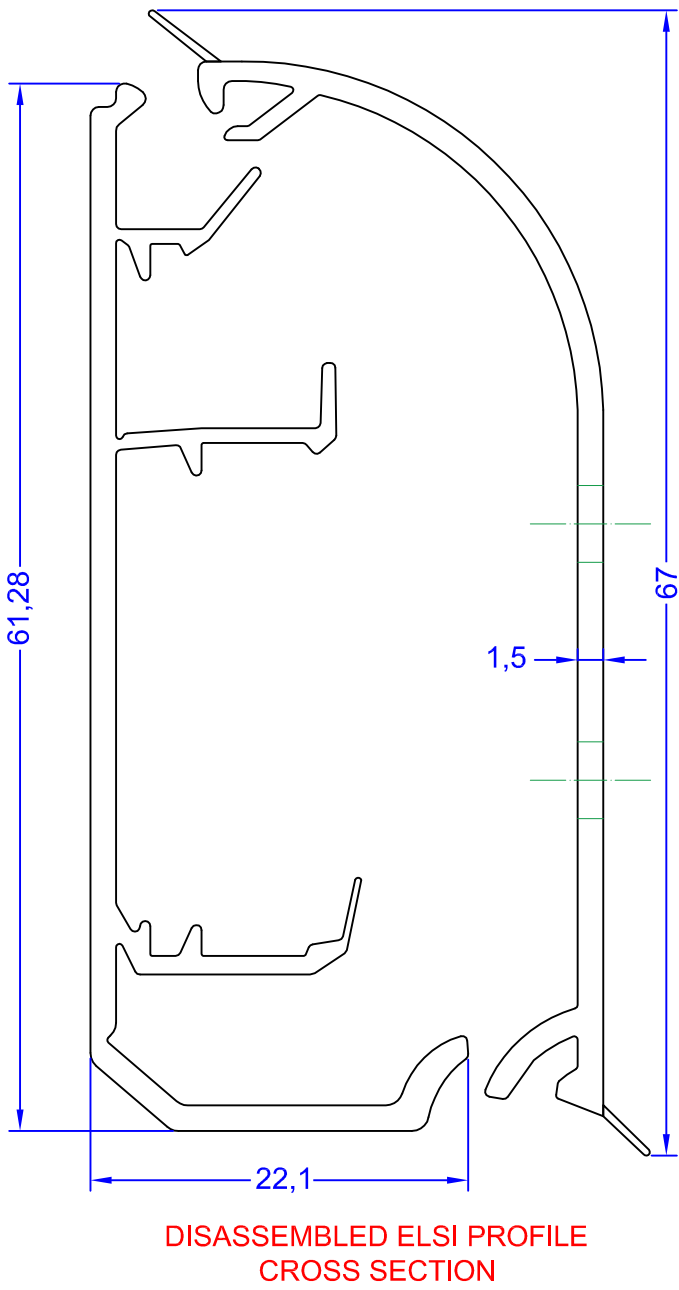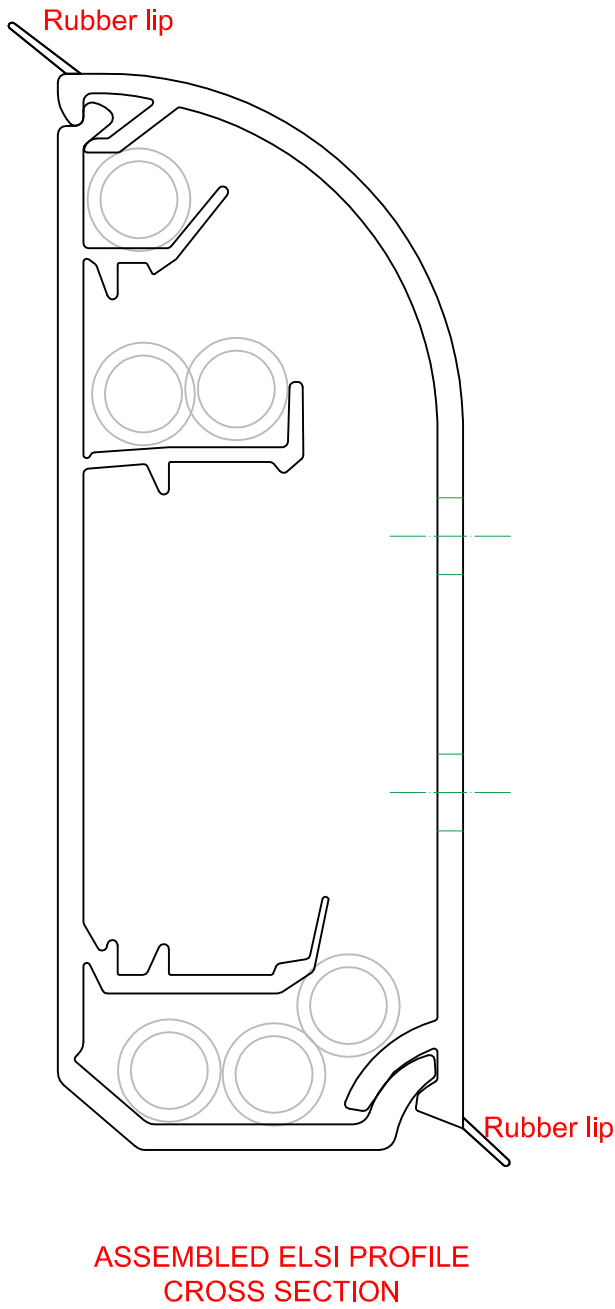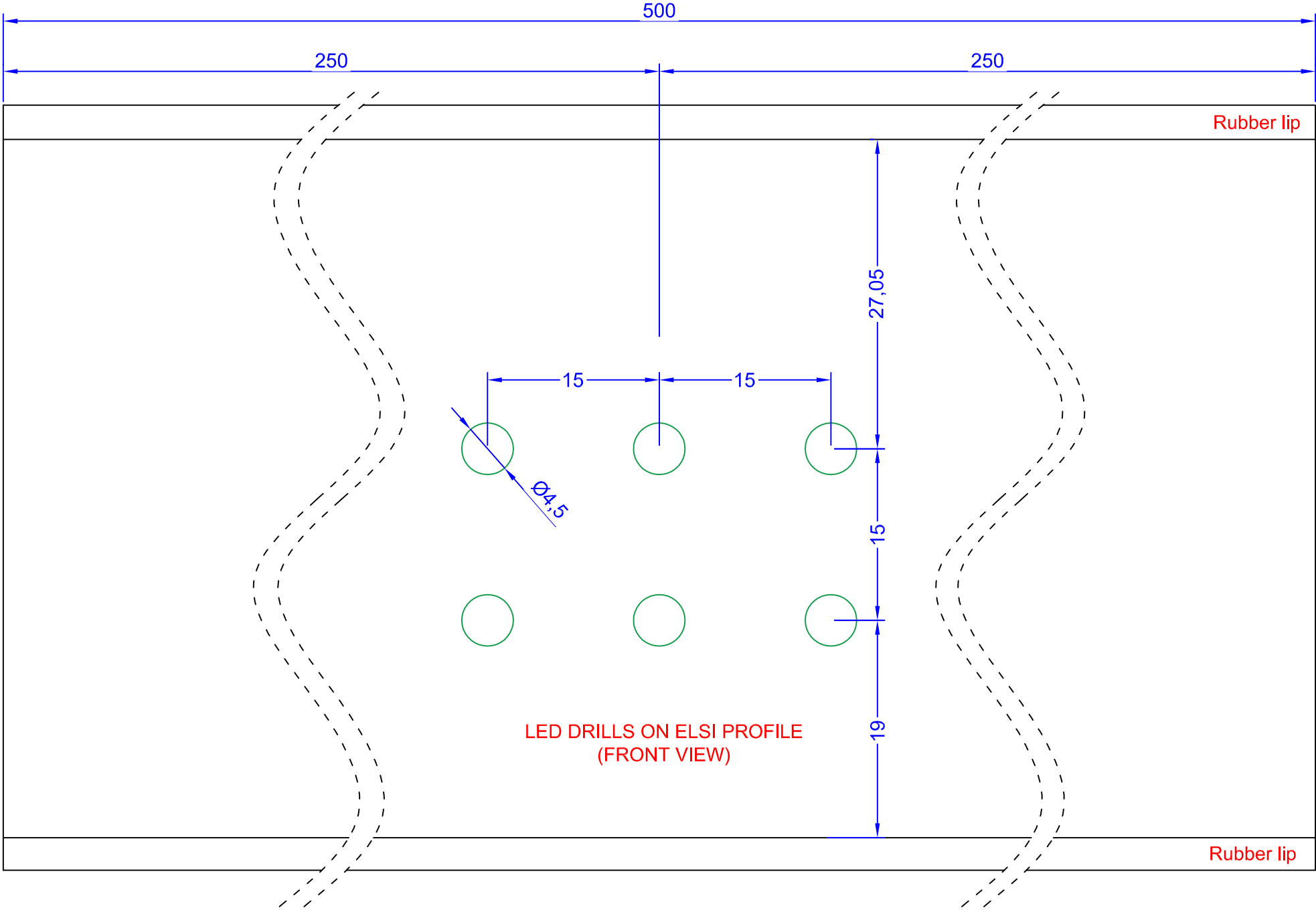
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SINGLE ELEMENT

304 mm

433 mm

FULL ELEMENT

608 mm

STANDARD CUT

| 1/3 | FULL ELEMENT | 2/3 |

TECHNICAL DETAILS	
Elsi sensor laminate v10.7	
SPECIFICATIONS	**DESCRIPTION**
Dimensions per single element, H x L	433 x (304 +/- 0,5) mm
Laminate cut, standard cut for full element, H x L	433 x (608 +/- 20) mm
Maximum amount of full elements	16
Maximum length of full elements	4864 mm with 16 elements
Thickness	160 µm, +/- 20 µm
Material	Copper and PET plastic
Fixing method	Glue
Relative Humidity	≤50%
Capacitance (between laminate and floor base material)	≤ 2.5µF
Installation temperature	18ºC – 32 ºC
Moisture in floor base	≤65%

500

250 | **250**

Rubber lip

27,05

15 | **15**

Ø4,5

15

LED DRILLS ON ELSI PROFILE
(FRONT VIEW)

19

Rubber lip

Rubber lip

61,28

67

1,5

Rubber lip

22,1

ASSEMBLED ELSI PROFILE
CROSS SECTION

DISASSEMBLED ELSI PROFILE
CROSS SECTION

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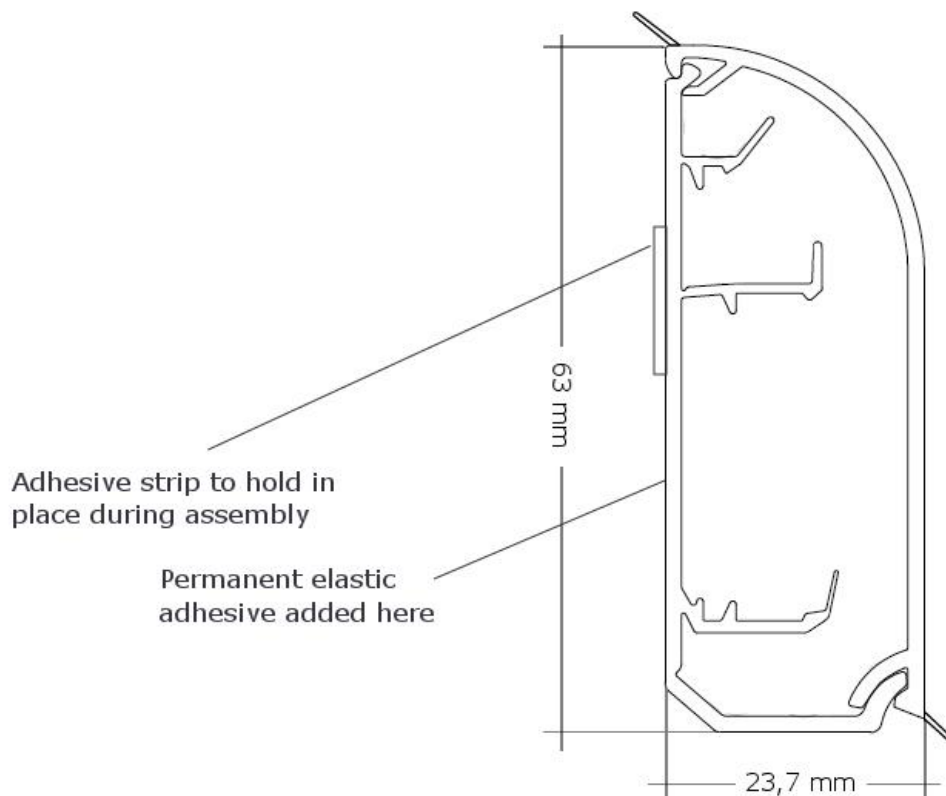Member of MariElectronics Group

ELSI SKIRTING BOARD

TECHNICAL DATA SHEET

The Elsi® Skirting Board has been designed especially for the installation of the Elsi® system. The skirting board consists of two pieces of plastic profile that snap together easily. Skirting Board cover part has integrated TPE gaskets that create a dust and splash-proof seal between the skirting board and the wall. Electronic components and cables are concealed and protected inside the skirting board.

FEATURES
- Splash and dust proof design
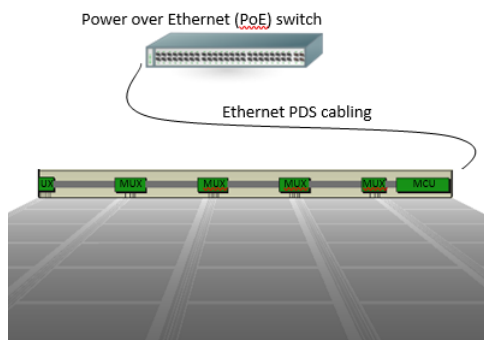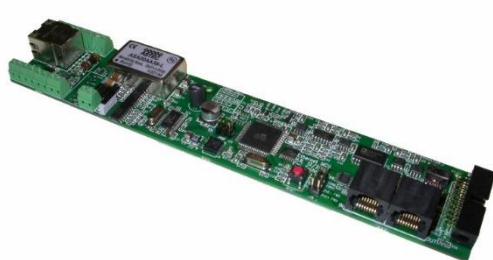- Double sided adhesive tape for easy installation

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Adhesive strip to hold in
place during assembly

Permanent elastic
adhesive added here

63 mm

23,7 mm

TECHNICAL DETAILS	
Elsi skirting board	
SPECIFICATIONS	**DESCRIPTION**
Dimensions, H x W	(63 +/- 1,2) x (23,7 +/- 0,7) mm
Profile length	2300 mm +/- 2 mm
Materials	Plastic ABS (cover & base), TPE (rubber gaskets)
Color	Visible top cover = white, Hidden back cover = natural

MCU
TECHNICAL DATA SHEET

Wiring diagram

The ELSI™ MCU (Measurement Control Unit) is installed inside the skirting boards in each monitored room. Set-up may change due to room size and shape. The measurement units are chained together with flat cable connections, and main controller unit is connected to the server with Ethernet cable (min. CAT 5). Measurement electronics are powered by designated PoE (Power over Ethernet) switch.
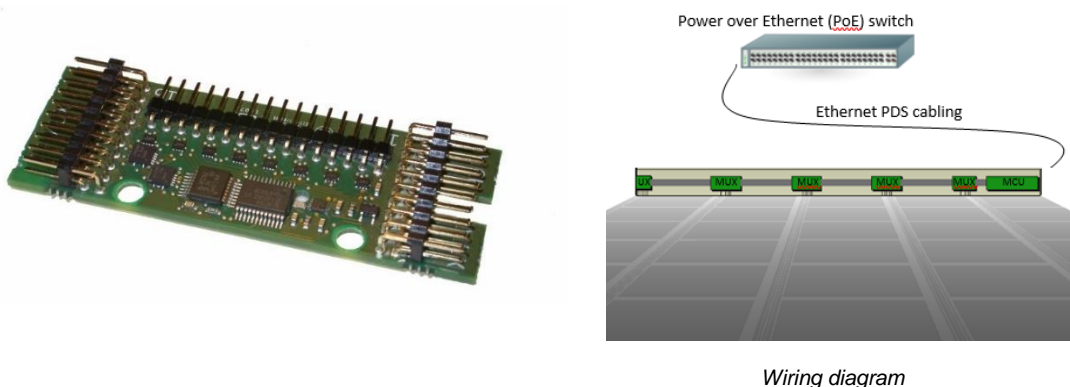
FEATURES

- Remote measuring, monitoring and controlling capabilities.
- Firmware can be updated remotely
- Average power consumption < 2W
- Controls one multiplexer line (max16 MUX-units in a line)
- Maximum room size for one MCU is 25m^2

TECHNICAL DETAILS	
MCU v7.3	
SPECIFICATIONS	**DESCRIPTION**
Physical Dimensions (L x W x H) mm	42 x 178 x 18
Data connection	Ethernet (10BASE-T) + PoE
MUX connection	Digital Control +5V + 20 (2x10) way header (2,54 mm pitch)
Auxiliary I/O connections	screw terminals (1,5 mm^2)
Operating voltage	48V, screw terminals (1,5 mm^2)
Operating power consumption	< 2W
Compatibility with following requirements	EN 55022:2006 +A1:2700; EN 55024:1998 +A1:2001 +A2:2002; EN 301 489-7 (v1.3.1)

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MUX
TECHNICAL DATA SHEET

Wiring diagram

The ELSI™ MUX v7.2 is a multiplexer unit connected to a line which an ELSI MCU controls. All the units are installed inside the skirting boards and are hidden after the installation is complete. MCU points out an element to measure and MUX-unit chooses the right element. To facilitate system diagnostics, MUX v7.2 features LED activity indicators.

FEATURES

• Average power consumption < 50mW
• Controls one (1) ELSI™ Sensor Laminate, max. length of the laminate with 16 elements is 4,86m
• LED activity indicator

TECHNICAL DETAILS	
MUX v7.2	
SPECIFICATIONS	**DESCRIPTION**
Dimensions	26 mm x 75 mm
Data line	Digital control +5V
Connections	20 way (2x10) header (pitch 2,54 mm) for the MCU or another MUX-units. 16 way R/A header (pitch 2,54 mm) for ELSI™ sensor laminate
Operating voltage	+5V
Power consumption	<50mW