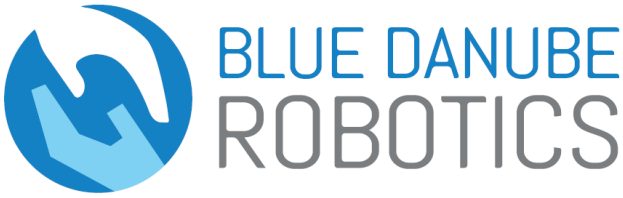
AIRSKIN®
A BLUE DANUBE ROBOTICS PRODUCT

AIRSKIN® Modules

Fact Sheet

20220806



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AIRSKIN® Modules

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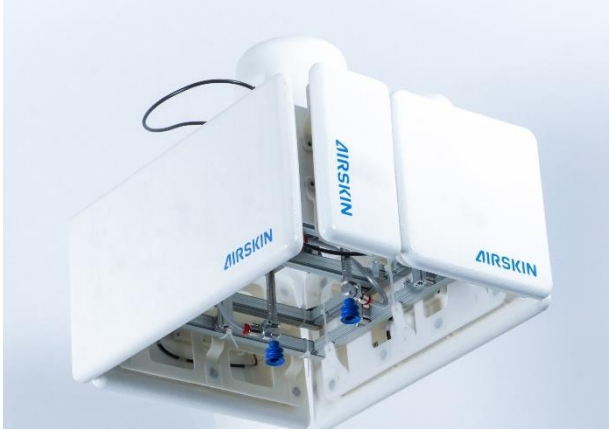
AIRSKIN® Module 200x100-H0 [BLASMOD200X100H0]

Product Description

AIRSKIN® Module 200x100-H0 is a pressure sensitive safety sensor. It consists of a soft AIRSKIN® pad with a size of 200 by 100 mm and a mounting structure with magnetic connectors. The total installed thickness is 34 mm and compressibility is a maximum of 16 mm.



Weight of Product: 160 g
Weight including Packaging: 250 g
Package size: 105x220x65 mm

Consists of

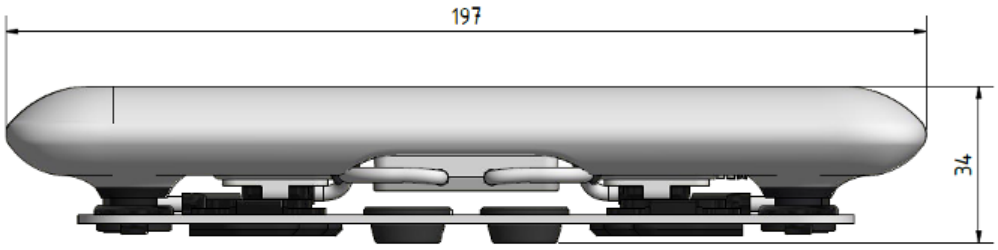
1 AIRSKIN® Pad 200x100
White industrial polyurethane, certified safety electronics, magnetic connectors

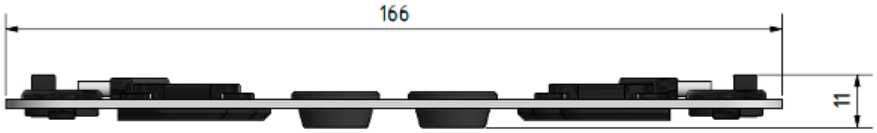
1 Mounting Structure H0
ABS structure with magnetic connectors for AIRSKIN® Pad and mounting points

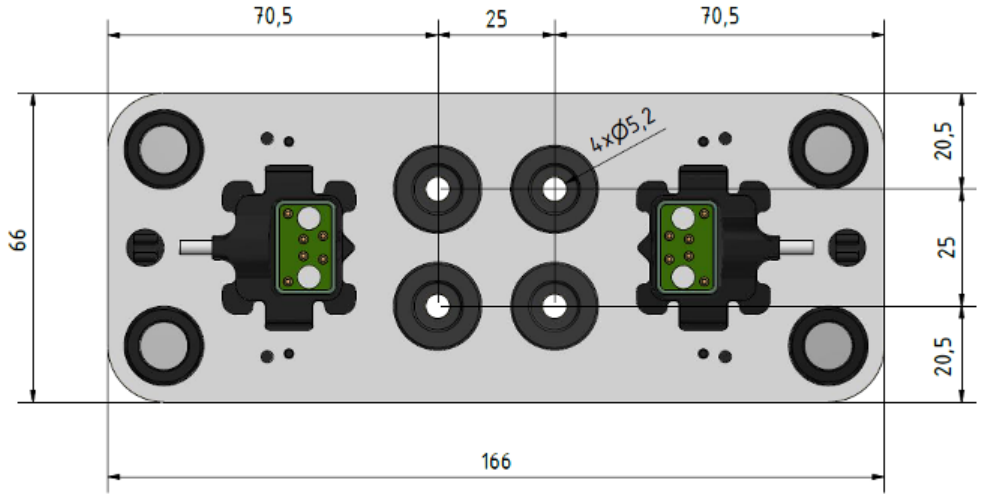
1 Cable, 400 mm
Cable with integrated magnetic connectors on both ends to connect to next AIRSKIN® Module

AIRSKIN® Module 200x100-H0 [BLASMOD200X100H0]

Product Detail







AIRSKIN® Module 200x100-H1 [BLASMOD200X100H1]

Product Description

AIRSKIN® Module 200x100-H1 is a pressure sensitive safety sensor. It consists of a soft AIRSKIN® pad with a size of 200 by 100 mm and a mounting structure with magnetic connectors. The total installed thickness is 52 mm and compressibility is a maximum of 30 mm.

Weight of Product: 180 g
Weight including Packaging: 270 g
Package size: 105x220x65 mm

Consists of

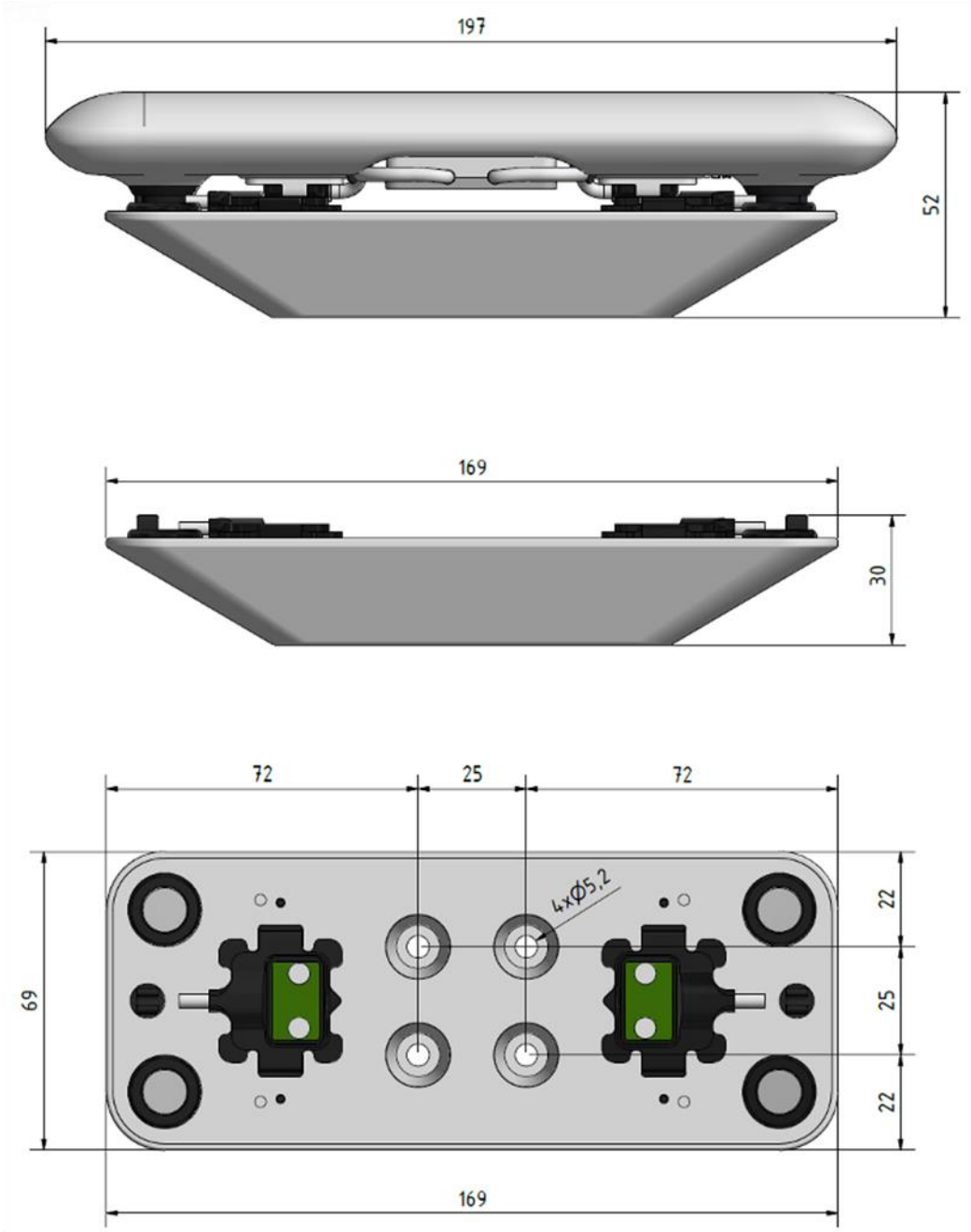
1 AIRSKIN® Pad 200x100
White industrial polyurethane, certified safety electronics, magnetic connectors

1 Mounting Structure H1
ABS structure with magnetic connectors for AIRSKIN® Pad and mounting points

1 Cable, 400 mm
Cable with integrated magnetic connectors on both ends to connect to next AIRSKIN® Module

AIRSKIN® Module 200x100-H1 [BLASMOD200X100H1]

Product Detail

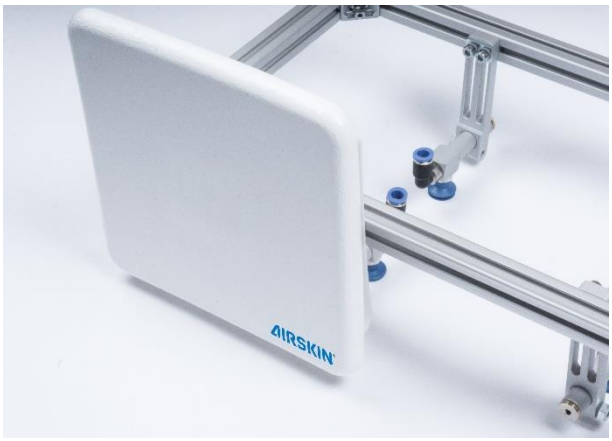


AIRSKIN® Module 200x200-H0 [BLASMOD200X200H0]

Product Description

AIRSKIN® Module 200x200-H0 is a pressure sensitive safety sensor. It consists of a soft AIRSKIN® pad with a size of 200 by 200 mm and a mounting structure with magnetic connectors. The total installed thickness is 34 mm and compressibility is a maximum of 16 mm.

Weight of Product: 240 g
Weight including Packaging: 340 g
Package size: 210x220x65 mm



Consists of

1 AIRSKIN® Pad 200x200

White industrial polyurethane, certified safety electronics, magnetic connectors

1 Mounting Structure H0

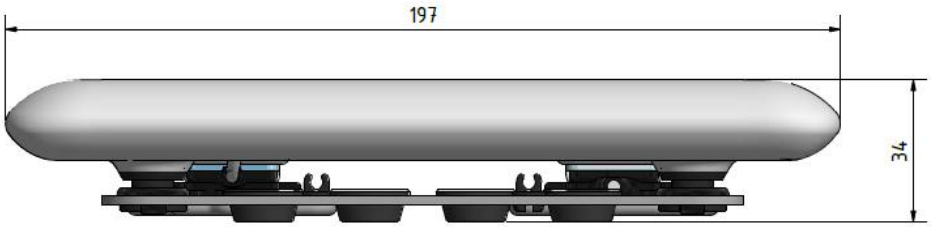
ABS structure with magnetic connectors for AIRSKIN® Pad and mounting points

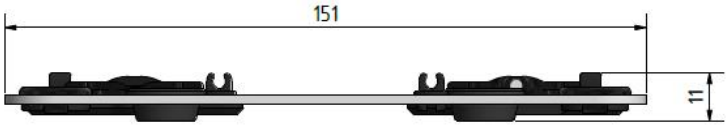
1 Cable, 400 mm

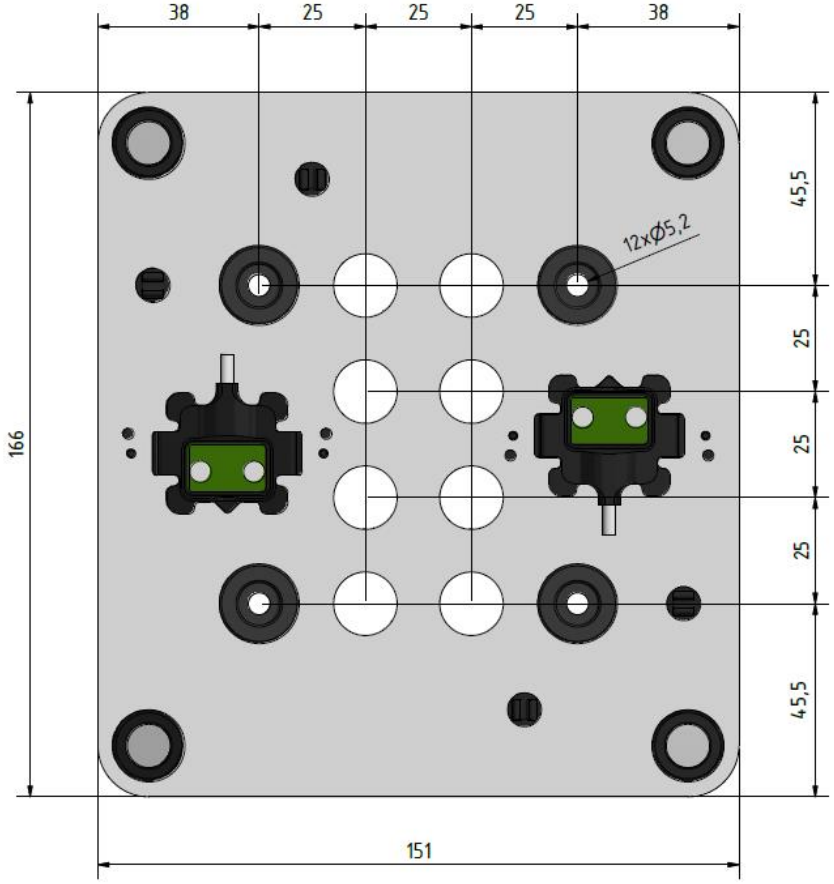
Cable with integrated magnetic connectors on both ends to connect to next AIRSKIN® Module

AIRSKIN® Module 200x200-H0 [BLASMOD200X200H0]

Product detail







AIRSKIN® Module 200x200-H1 [BLASMOD200X200H1]

Product Description

AIRSKIN® Module 200x200-H1 is a pressure sensitive safety sensor. It consists of a soft AIRSKIN® pad with a size of 200 by 200 mm and a mounting structure with magnetic connectors. The total installed thickness is 52 mm and compressibility is a maximum of 30 mm.

Weight of Product: 280 g
Weight including Packaging: 380 g
Package size: 210x220x65 mm

Consists of

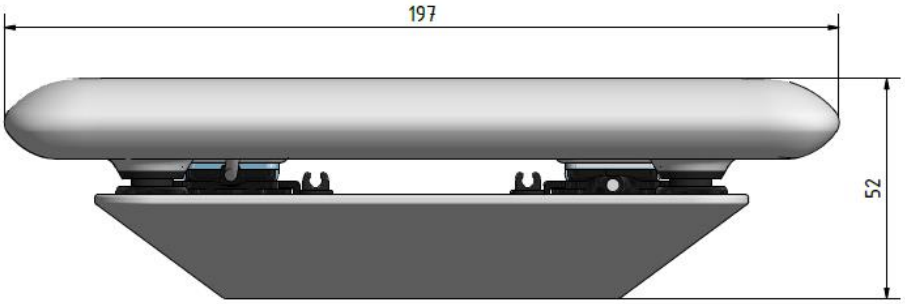
1 AIRSKIN® Pad 200x200
White industrial polyurethane, certified safety electronics, magnetic connectors

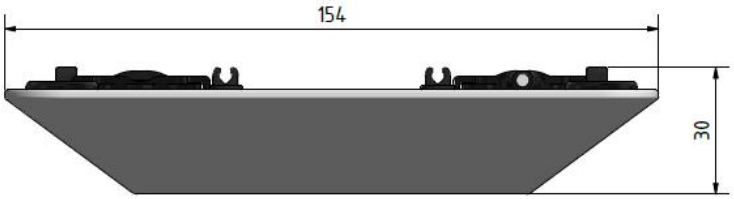
1 Mounting Structure H1
ABS structure with magnetic connectors for AIRSKIN® Pad and mounting points

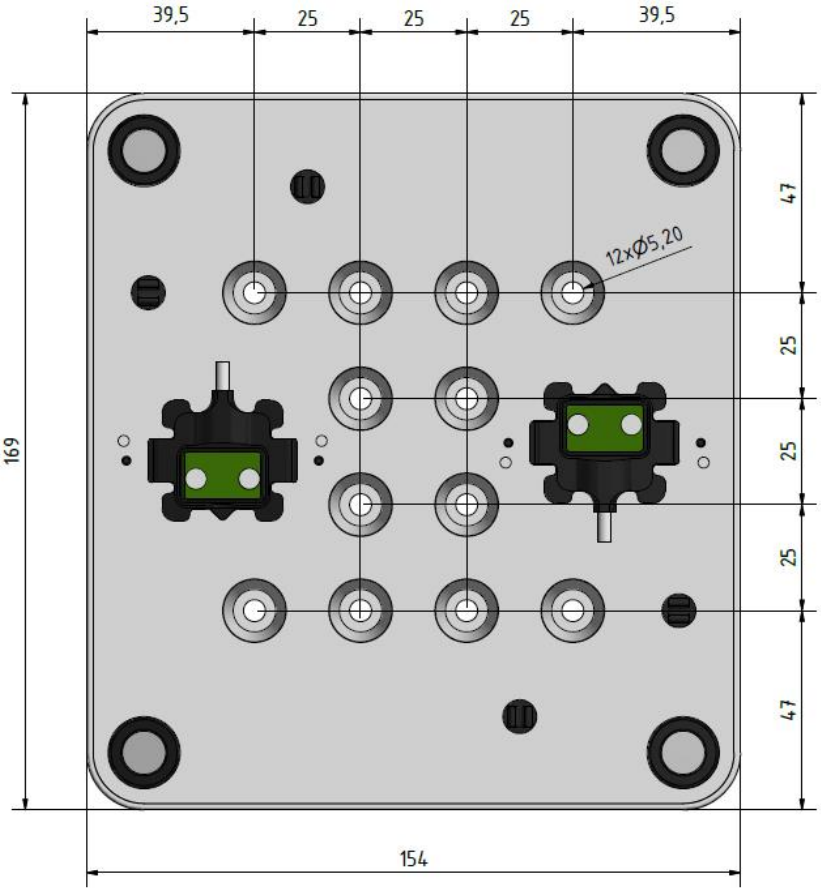
1 Cable, 400 mm
Cable with integrated magnetic connectors on both ends to connect to next AIRSKIN® Module

AIRSKIN® Module 200x200-H1 [BLASMOD200X200H1]

Product Detail







AIRSKIN® Module 300x200-H0 [BLASMOD300X200H0]

Product Description

AIRSKIN® Module 300x200-H0 is a pressure sensitive safety sensor. It consists of a soft AIRSKIN® pad with a size of 300 by 200 mm and a mounting structure with magnetic connectors. The total installed thickness is 34 mm and compressibility is a maximum of 16 mm.

Weight of Product: 340 g
Weight including Packaging: 460 g
Package size: 315x220x65 mm

Consists of

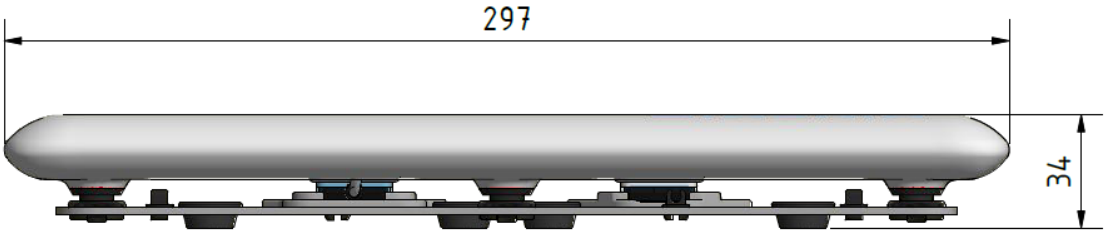
1 AIRSKIN® Pad 300x200
White industrial polyurethane, certified safety electronics, magnetic connectors

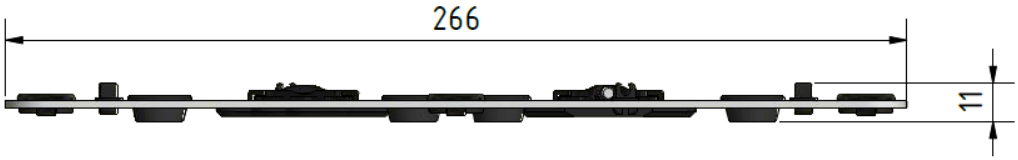
1 Mounting Structure H0
ABS structure with magnetic connectors for AIRSKIN® Pad and mounting points

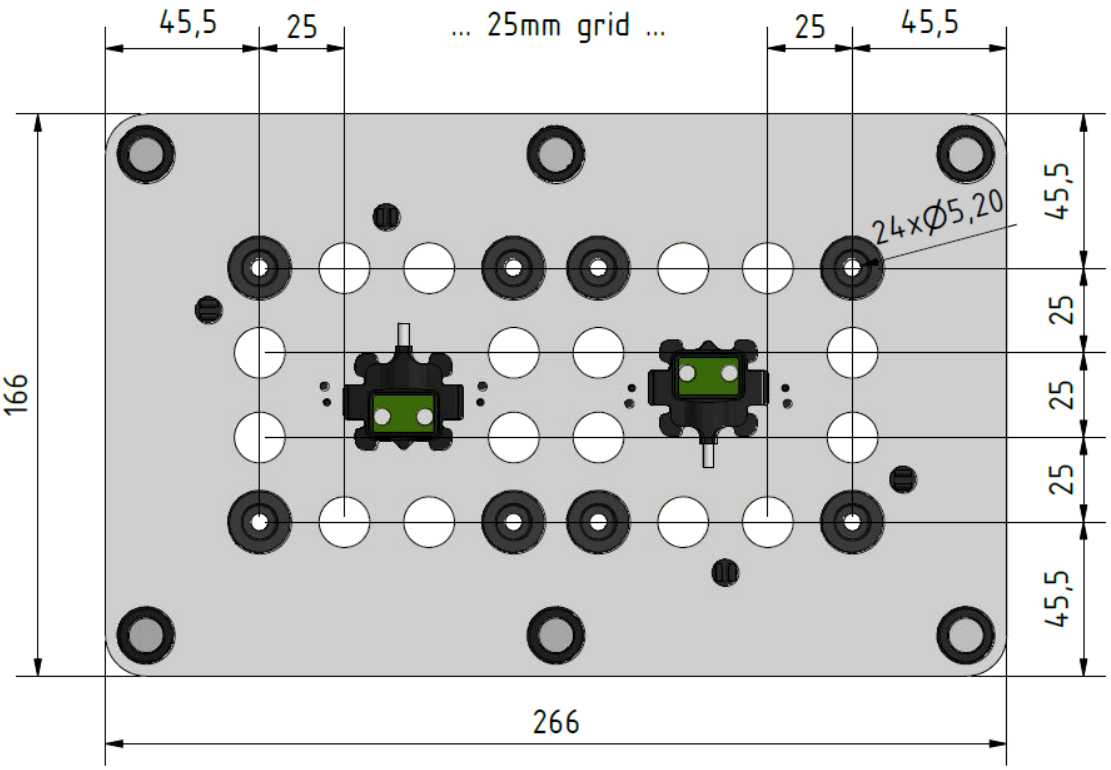
1 Cable, 400 mm
Cable with integrated magnetic connectors on both ends to connect to next AIRSKIN® Module

AIRSKIN® Module 300x200-H0 [BLASMOD300X200H0]

Product Detail







AIRSKIN® Module 300x200-H1 [BLASMOD300X200H1]

Product Description

AIRSKIN® Module 300x200-H1 is a pressure sensitive safety sensor. It consists of a soft AIRSKIN® pad with a size of 300 by 200 mm and a mounting structure with magnetic connectors. The total installed thickness is 52 mm and compressibility is a maximum of 30 mm.

Weight of Product: 430 g
Weight including Packaging: 550 g
Package size: 315x220x65 mm

Consists of

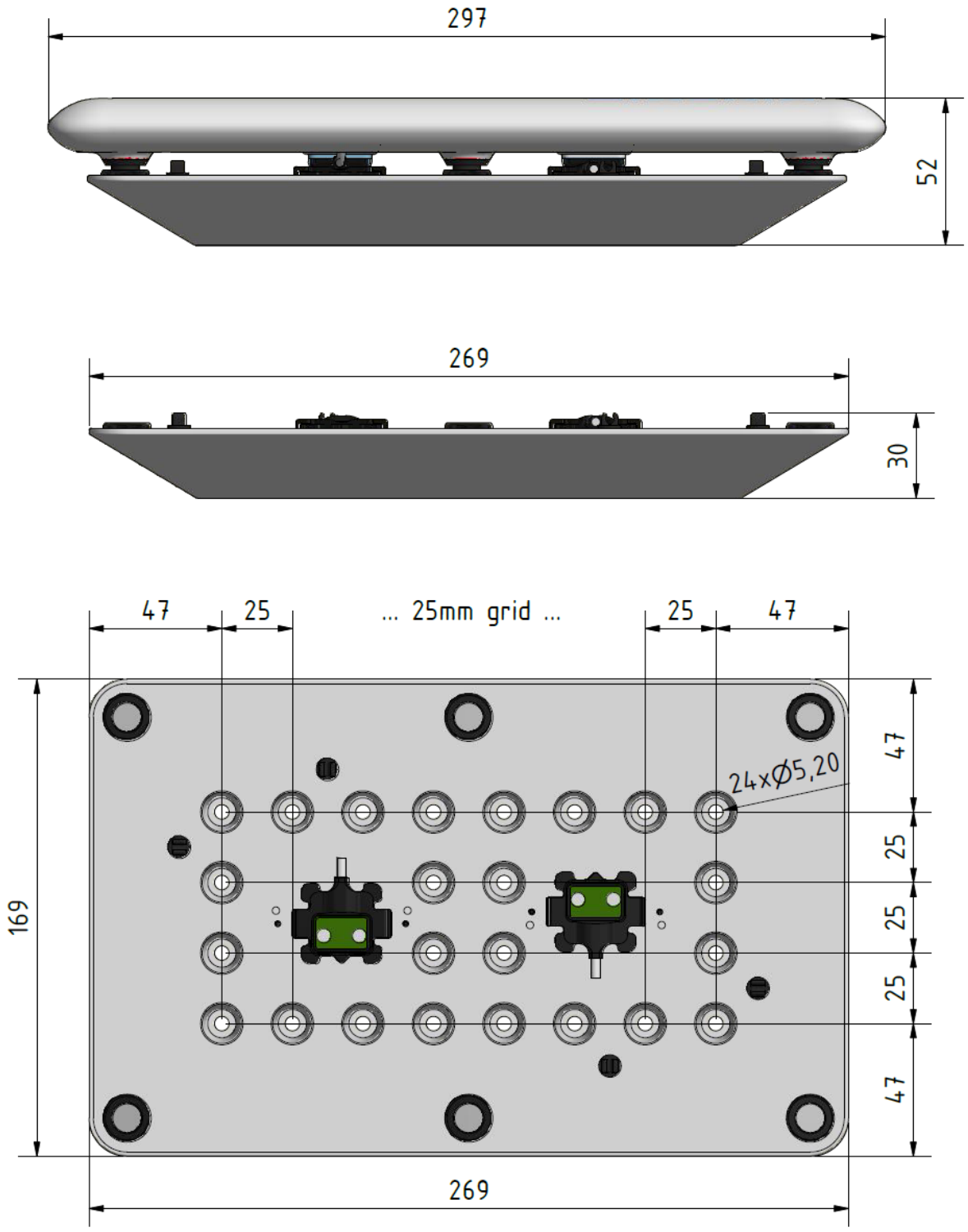
1 AIRSKIN® Pad 300x200
White industrial polyurethane, certified safety electronics, magnetic connectors

1 Mounting Structure H1
ABS structure with magnetic connectors for AIRSKIN® Pad and mounting points

1 Cable, 400 mm
Cable with integrated magnetic connectors on both ends to connect to next AIRSKIN® Module

AIRSKIN® Module 300x200-H1 [BLASMOD300X200H1]

Product detail



AIRSKIN® Module 400x200-H0 [BLASMOD400X200H0]

Product Description

AIRSKIN® Module 300x200-H0 is a pressure sensitive safety sensor. It consists of a soft AIRSKIN® pad with a size of 400 by 200 mm and a mounting structure with magnetic connectors. The total installed thickness is 34 mm and compressibility is a maximum of 16 mm.

Weight of Product: 430g
Weight including Packaging: 570g
Package size: 420x220x65mm

Consists of

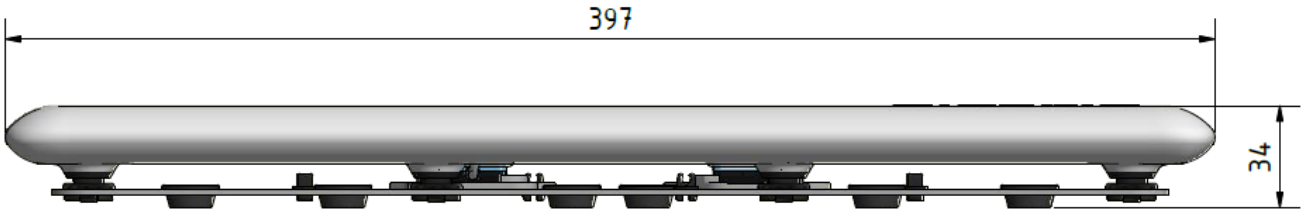
1 AIRSKIN® Pad 400x200
White industrial polyurethane, certified safety electronics, magnetic connectors

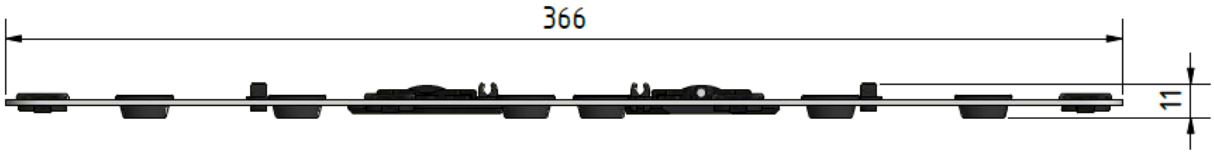
1 Mounting Structure H0
ABS structure with magnetic connectors for AIRSKIN® Pad and mounting points

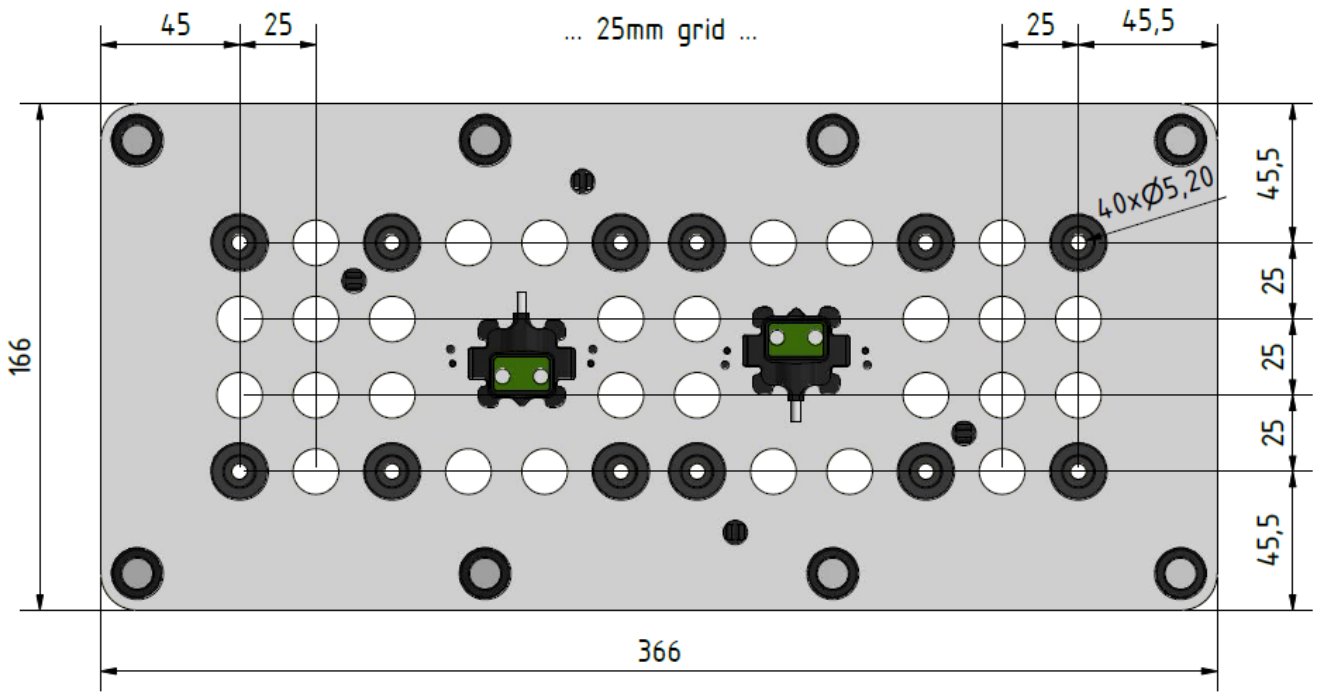
1 Cable, 400 mm
Cable with integrated magnetic connectors on both ends to connect to next AIRSKIN® Module

AIRSKIN® Module 400x200-H0 [BLASMOD400X200H0]

Product Detail







AIRSKIN® Module 400x200-H1 [BLASMOD400X200H1]

Product Description

AIRSKIN® Module 400x200-H1 is a pressure sensitive safety sensor. It consists of a soft AIRSKIN® pad with a size of 400 by 200 mm and a mounting structure with magnetic connectors. The total installed thickness is 52 mm and compressibility is a maximum of 30 mm.

Weight of Product: 560 g
Weight including Packaging: 700 g
Package size: 420x220x65 mm

Consists of

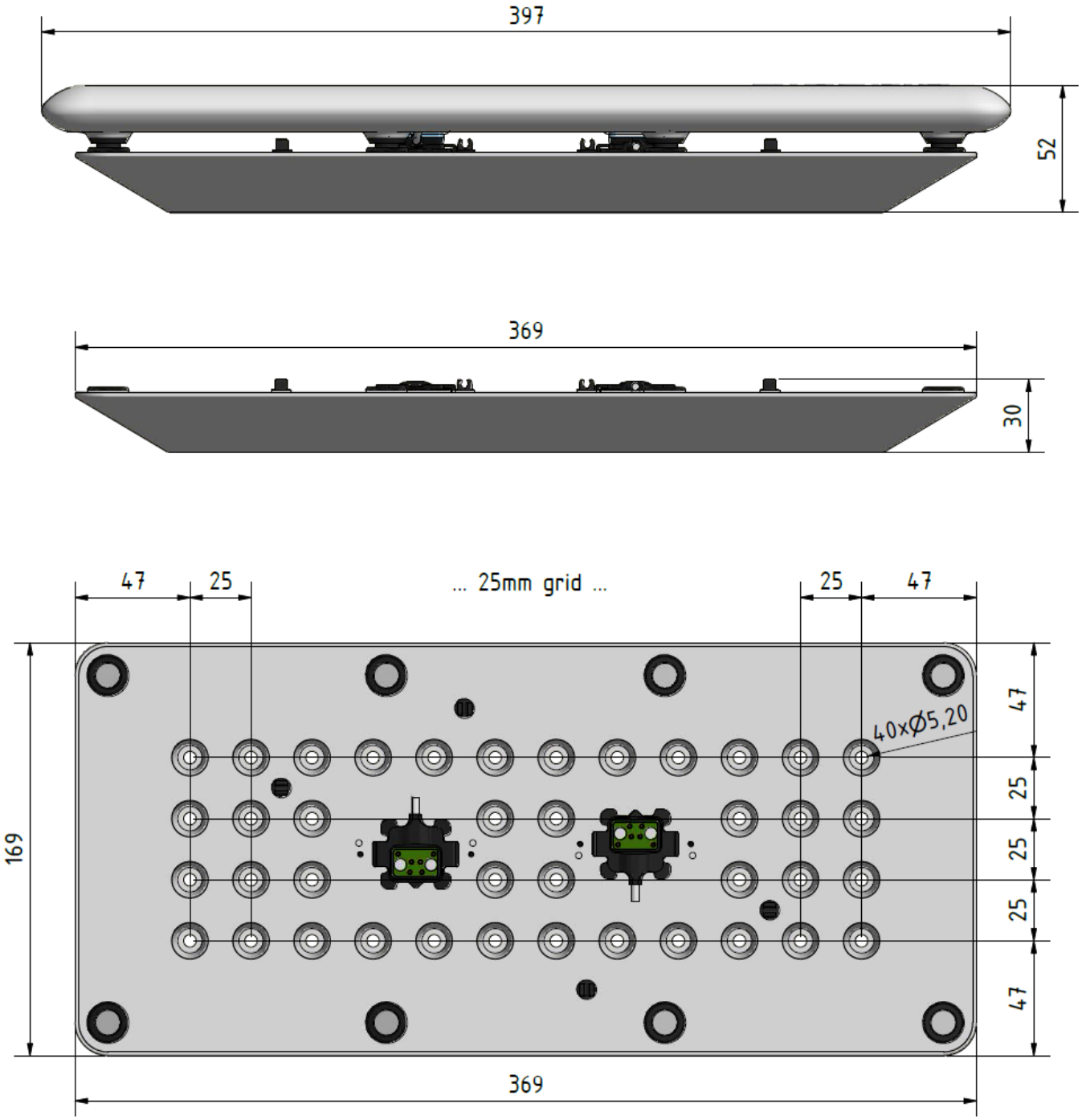
1 AIRSKIN® Pad 00x200
White industrial polyurethane, certified safety electronics, magnetic connectors

1 Mounting Structure H1
ABS structure with magnetic connectors for AIRSKIN® Pad and mounting points

1 Cable, 400 mm
Cable with integrated magnetic connectors on both ends to connect to next AIRSKIN® Module

AIRSKIN® Module 400x200-H1 [BLASMOD400X200H1]

Product Detail



AIRSKIN® Module 200x160x100E-H0 [BLASMOD200X160X100EH0]

Product Description

AIRSKIN® Module 200x160x100-H0 is a pressure sensitive safety sensor. It consists of a soft AIRSKIN® pad with a size of 200 by 160 by 100 mm and a mounting structure with magnetic connectors. The total installed thickness is 34 mm and compressibility is a maximum of 16 mm.

Weight of Product: 300 g
Weight including Packaging: 420 g
Package size: 210x220x130 mm

Consists of

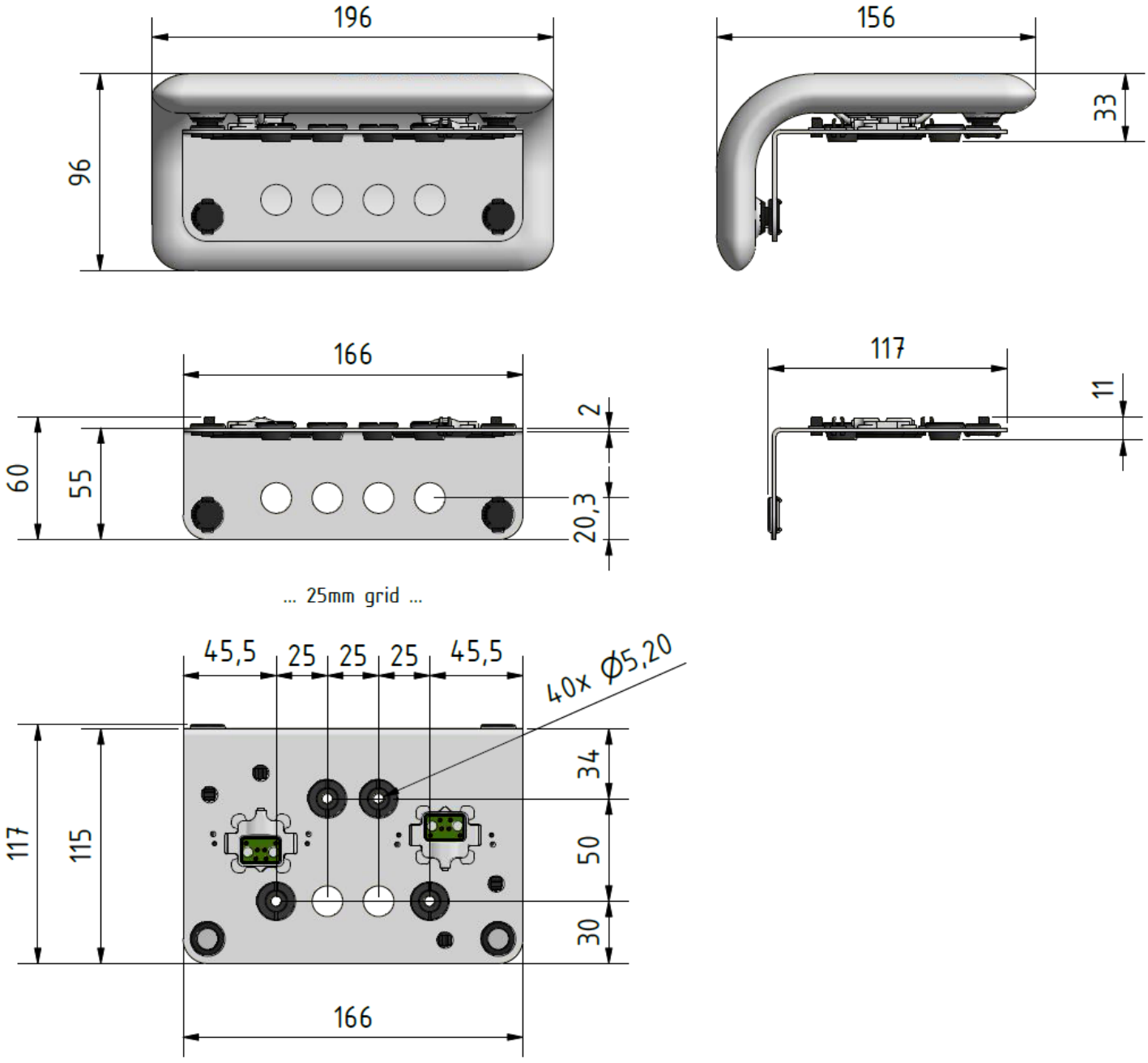
1 AIRSKIN® Pad 200x160x100
White industrial polyurethane, certified safety electronics, magnetic connectors

1 Mounting Structure H0
ABS structure with magnetic connectors for AIRSKIN® Pad and mounting points

1 Cable, 400 mm
Cable with integrated magnetic connectors on both ends to connect to next AIRSKIN® Module

AIRSKIN® Module 200x160x100E-H0 [BLASMOD200X160X100EH0]

Product Detail



AIRSKIN® Module 200x200x100E-H0 [BLASMOD200X200X100EH0]

Product Description

AIRSKIN® Module 200x200x100-H0 is a pressure sensitive safety sensor. It consists of a soft AIRSKIN® pad with a size of 200 by 200 by 100 mm and a mounting structure with magnetic connectors. The total installed thickness is 34 mm and compressibility is a maximum of 16 mm.

Weight of Product: 350 g
Weight including Packaging: 480 g
Package size: 210x220x130 mm

Consists of

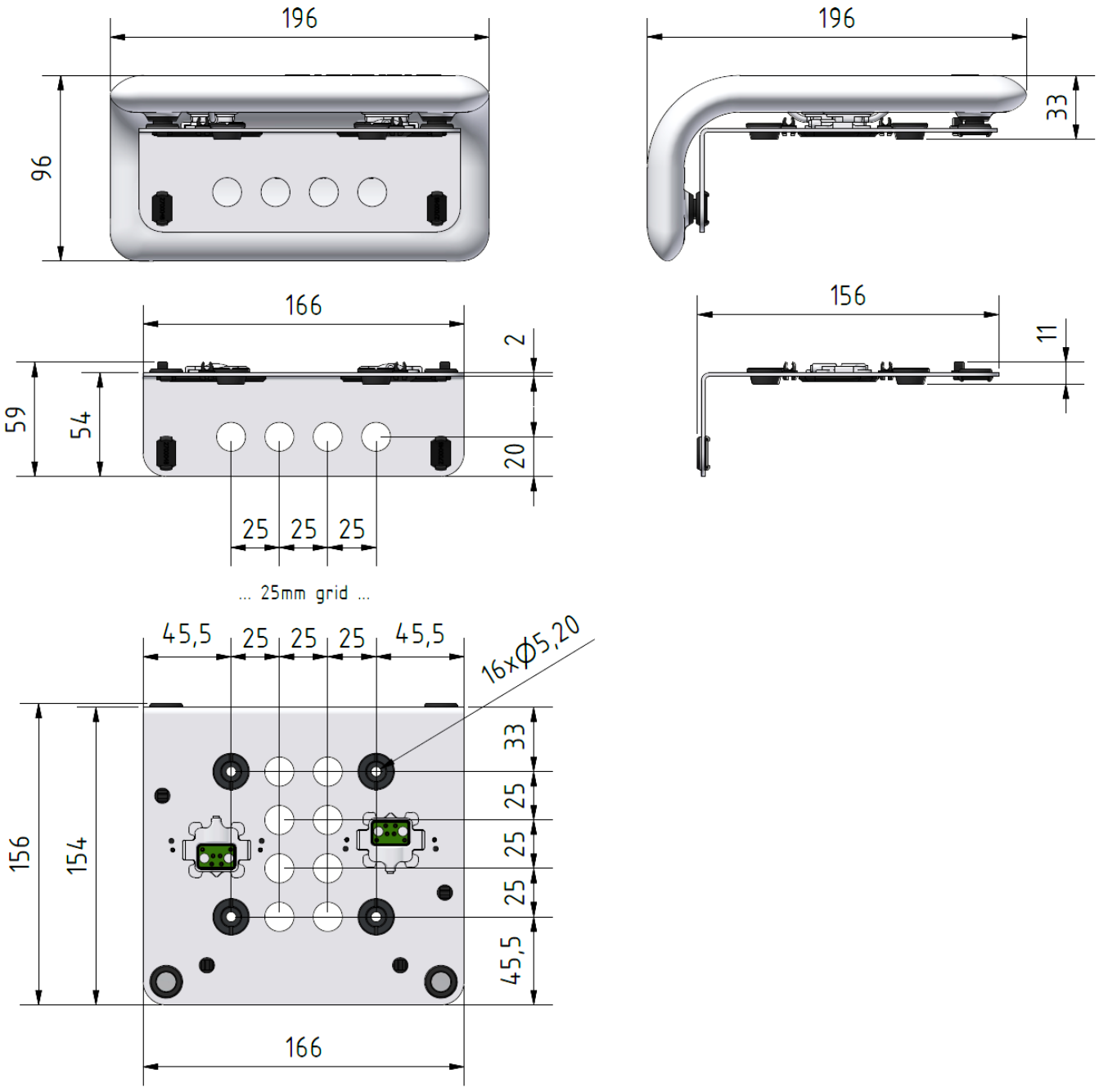
1 AIRSKIN® Pad 200x200x100
White industrial polyurethane, certified safety electronics, magnetic connectors

1 Mounting Structure H0
ABS structure with magnetic connectors for AIRSKIN® Pad and mounting points

1 Cable, 400 mm
Cable with integrated magnetic connectors on both ends to connect to next AIRSKIN® Module

AIRSKIN® Module 200x200x100E-H0 [BLASMOD200X200X100EH0]

Product Detail



AIRSKIN® Module 200x260x100E-H0 [BLASMOD200X260X100EH0]

Product Description

AIRSKIN® Module 200x260x100-H0 is a pressure sensitive safety sensor. It consists of a soft AIRSKIN® pad with a size of 200 by 260 by 100 mm and a mounting structure with magnetic connectors. The total installed thickness is 34 mm and compressibility is a maximum of 16 mm.

Weight of Product: 400 g
Weight including Packaging: 540 g
Package size: 315x220x130 mm

Consists of

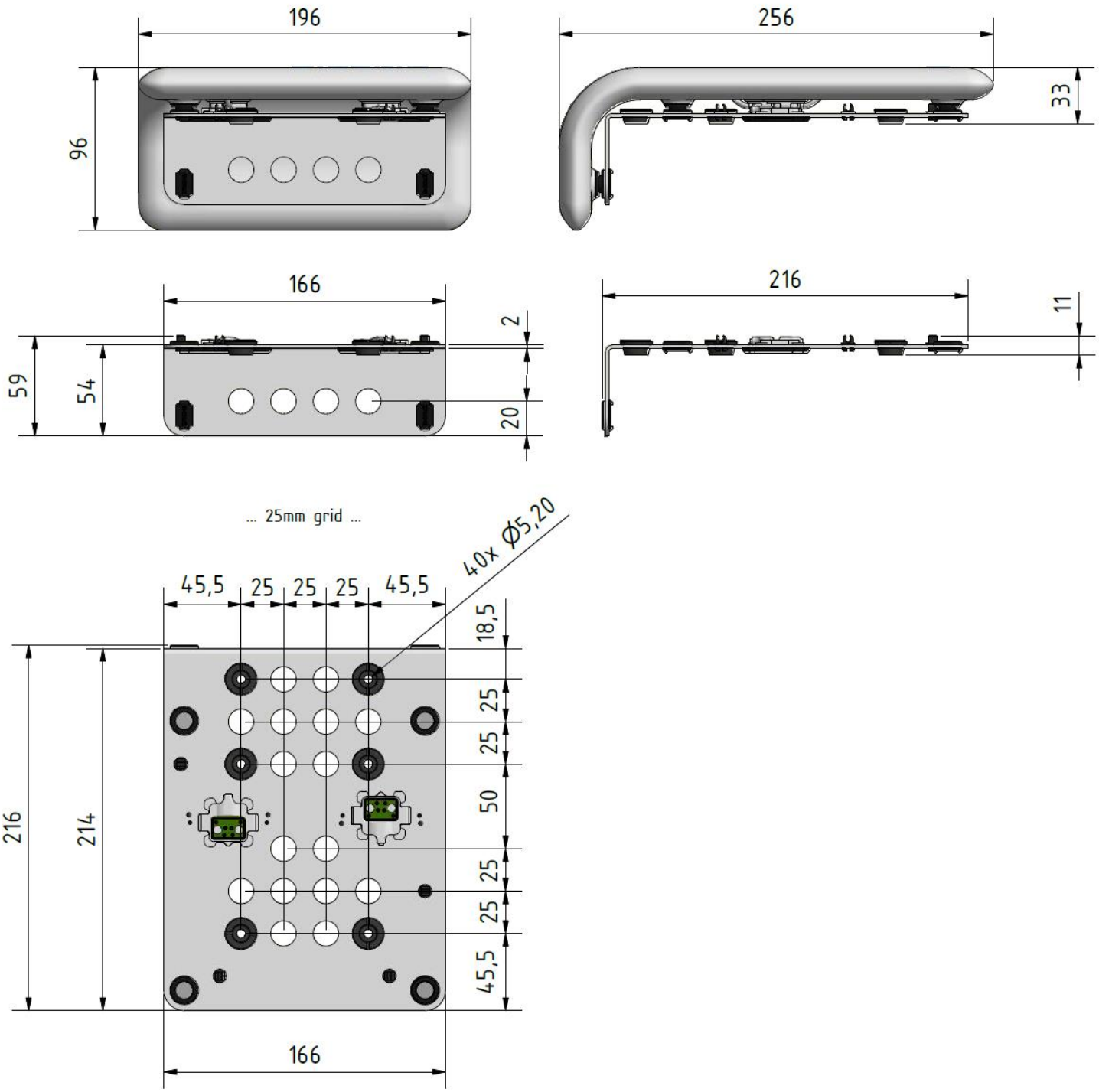
1 AIRSKIN® Pad 200x260x100
White industrial polyurethane, certified safety electronics, magnetic connectors

1 Mounting Structure H0
ABS structure with magnetic connectors for AIRSKIN® Pad and mounting points

1 Cable, 400 mm
Cable with integrated magnetic connectors on both ends to connect to next AIRSKIN® Module

AIRSKIN® Module 200x260x100E-H0 [BLASMOD200X260X100EH0]

Product Detail



AIRSKIN® Module 400x200x100E-H0 [BLASMOD400X200X100EH0]

Product Description

AIRSKIN® Module 400x200x100-H0 is a pressure sensitive safety sensor. It consists of a soft AIRSKIN® pad with a size of 400 by 200 by 100 mm and a mounting structure with magnetic connectors. The total installed thickness is 34 mm and compressibility is a maximum of 16 mm.

Weight of Product: 645 g
Weight including Packaging: 805 g
Package size: 420x220x130 mm

Consists of

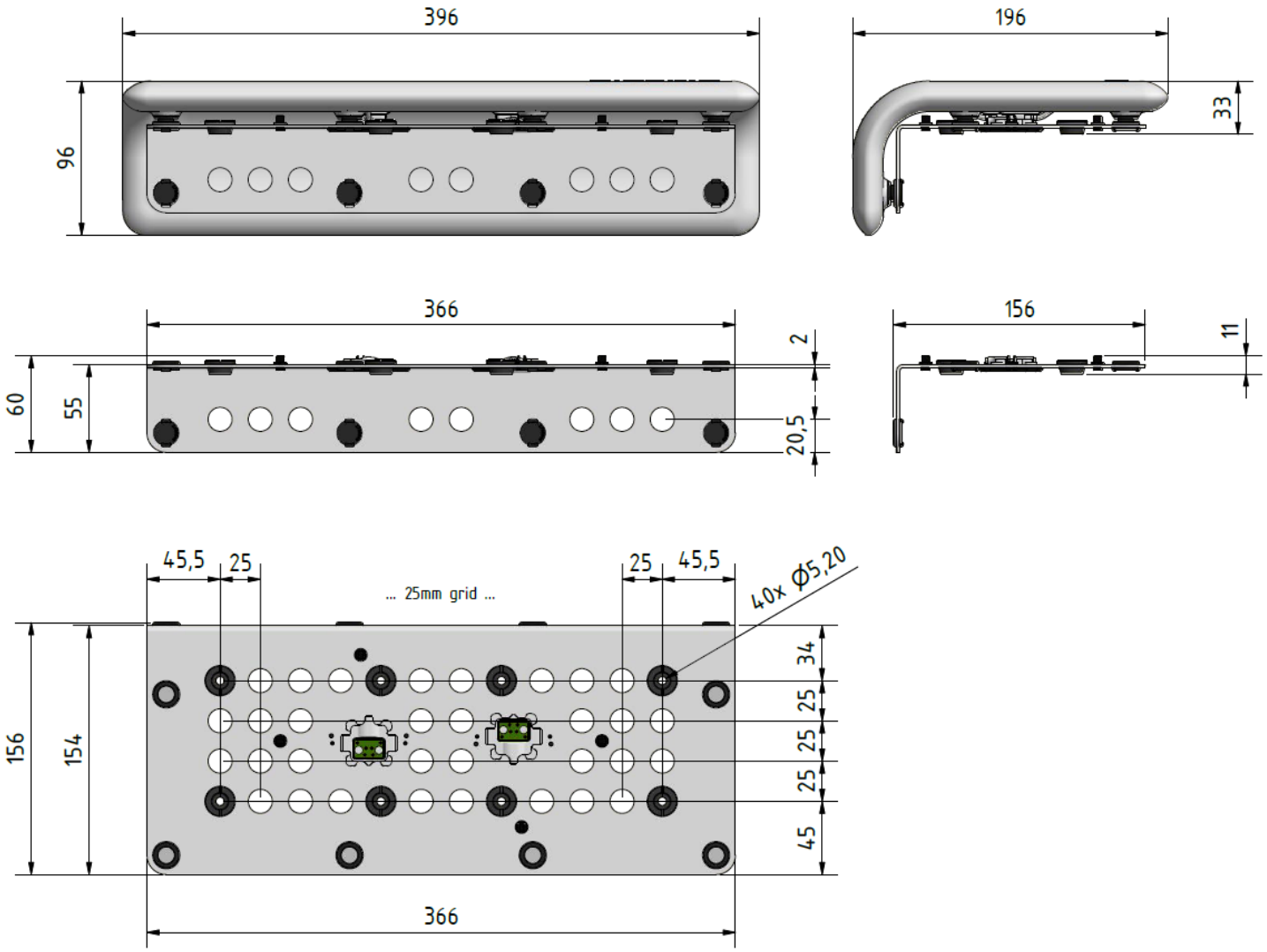
1 AIRSKIN® Pad 400x200x100
White industrial polyurethane, certified safety electronics, magnetic connectors

1 Mounting Structure H0
ABS structure with magnetic connectors for AIRSKIN® Pad and mounting points

1 Cable, 400 mm
Cable with integrated magnetic connectors on both ends to connect to next AIRSKIN® Module

AIRSKIN® Module 400x200x100E-H0 [BLASMOD400X200X100EH0]

Product Detail



AIRSKIN® Module 90x300x90E-H0 [BLASMOD90X300X90EH0]

Product Description

AIRSKIN® Module 90x300x90-H0 is a pressure sensitive safety sensor. It consists of a soft AIRSKIN® pad with a size of 90 by 300 by 90 mm and a mounting structure with magnetic connectors. The total installed thickness is 34 mm and compressibility is a maximum of 16 mm.

Weight of Product: 300 g
Weight including Packaging: 420 g
Package size: 420x220x130 mm

Consists of

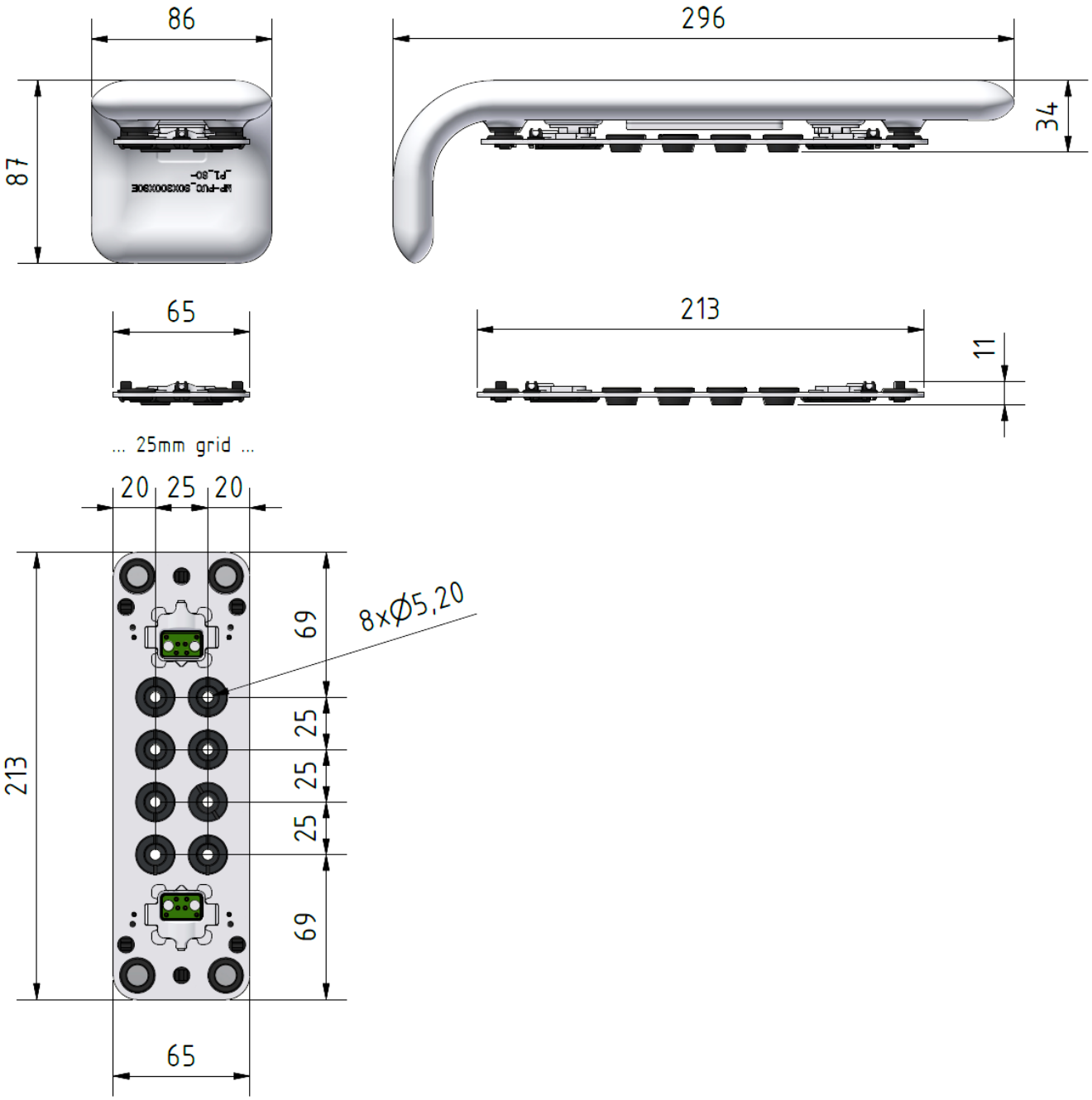
1 AIRSKIN® Pad 90x300x90
White industrial polyurethane, certified safety electronics, magnetic connectors

1 Mounting Structure H0
ABS structure with magnetic connectors for AIRSKIN® Pad and mounting points

1 Cable, 400 mm
Cable with integrated magnetic connectors on both ends to connect to next AIRSKIN® Module

AIRSKIN® Module 90x300x90E-H0 [BLASMOD90X300X90EH0]

Product Detail



AIRSKIN® Module 90x400x90E-H0 [BLASMOD90X400X90EH0]

Product Description

AIRSKIN® Module 90x400x90-H0 is a pressure sensitive safety sensor. It consists of a soft AIRSKIN® pad with a size of 90 by 400 by 90 mm and a mounting structure with magnetic connectors. The total installed thickness is 34 mm and compressibility is a maximum of 16 mm.

Weight of Product: 380 g
Weight including Packaging: 500 g
Package size: 420x220x130 mm

Consists of

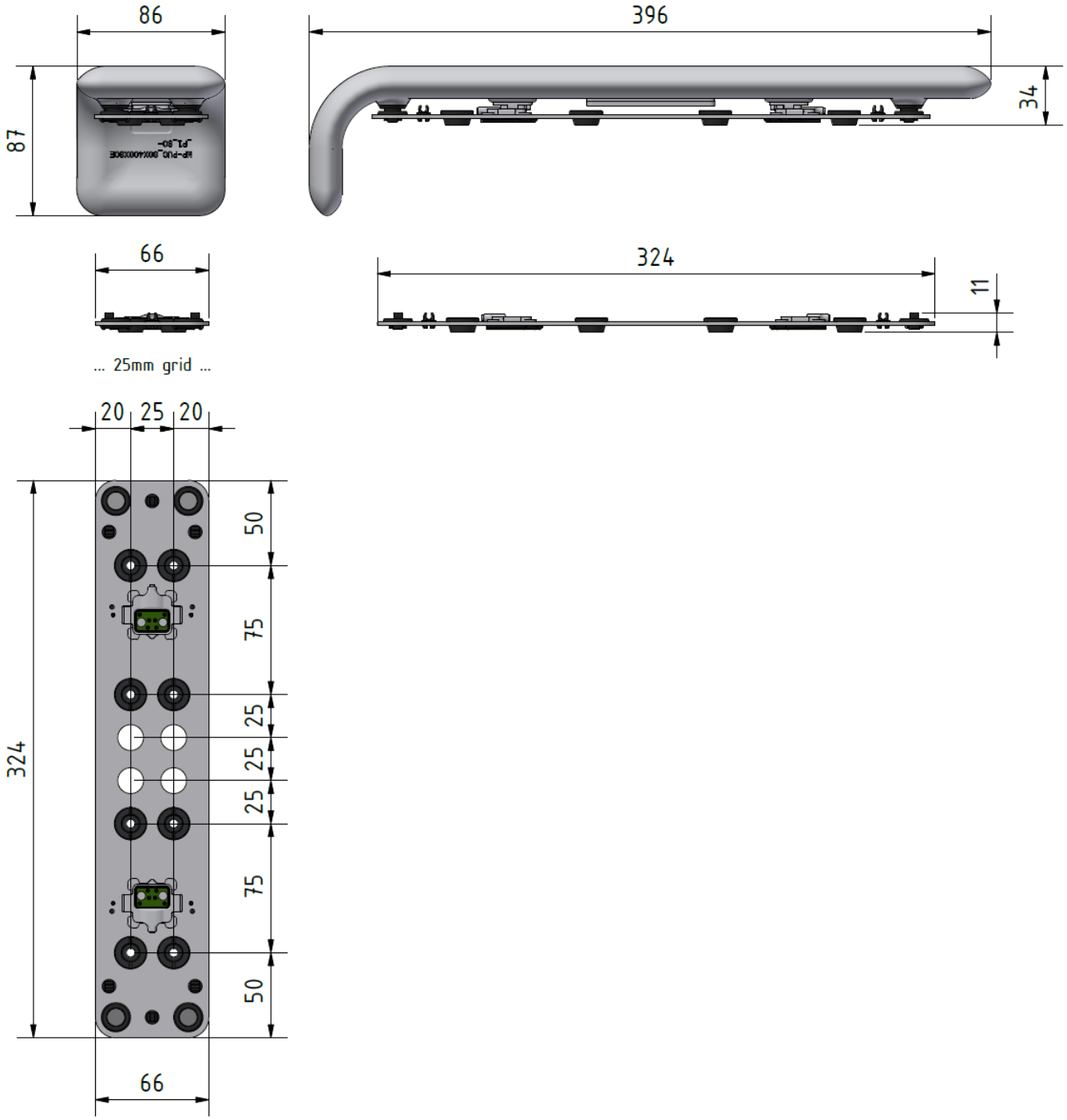
1 AIRSKIN® Pad 90x400x90
White industrial polyurethane, certified safety electronics, magnetic connectors

1 Mounting Structure H0
ABS structure with magnetic connectors for AIRSKIN® Pad and mounting points

1 Cable, 400 mm
Cable with integrated magnetic connectors on both ends to connect to next AIRSKIN® Module

AIRSKIN® Module 90x400x90E-H0 [BLASMOD90X400X90EH0]

Product Detail



AIRSKIN® Modules

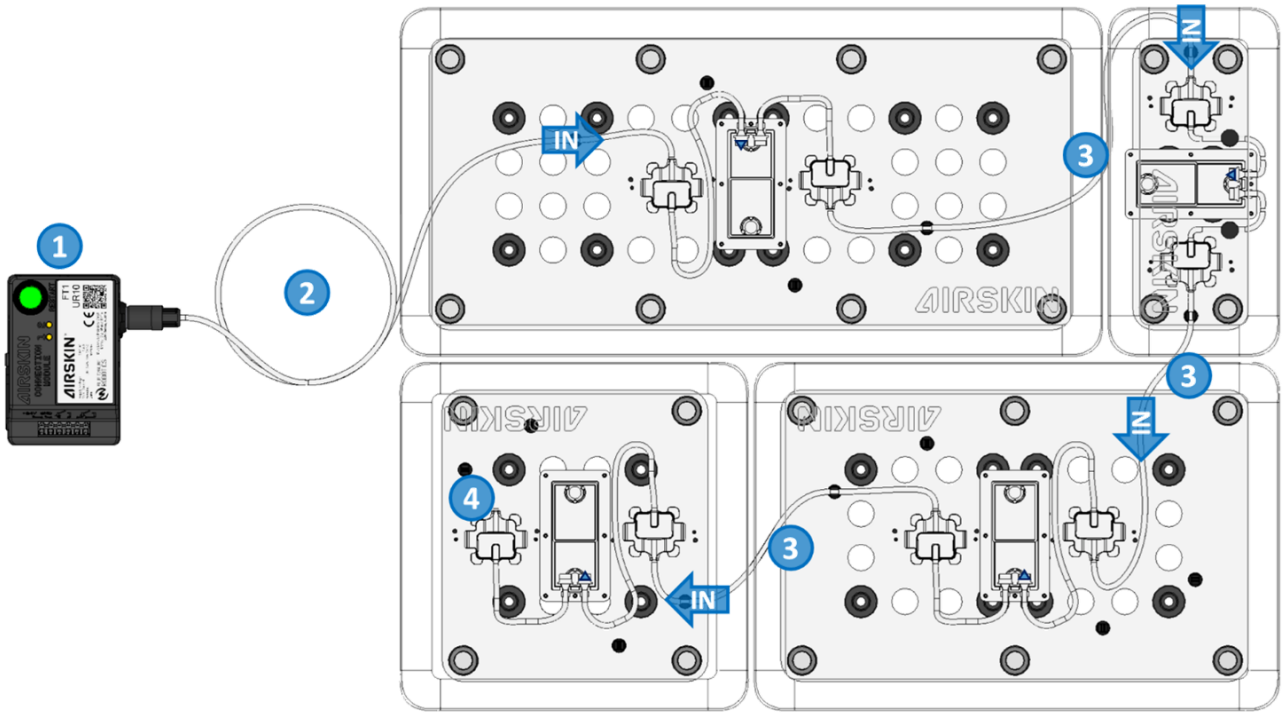
Installation and Cabling

Operation of AIRSKIN® Modules requires:

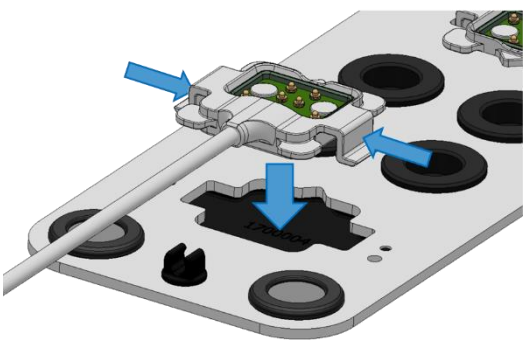
AIRSKIN® connection box 1 with connection cable 2

Up to 15 AIRSKIN® Modules in series with cables 3

Terminator 4



Mounting of magnetic connectors:



AIRSKIN® Modules

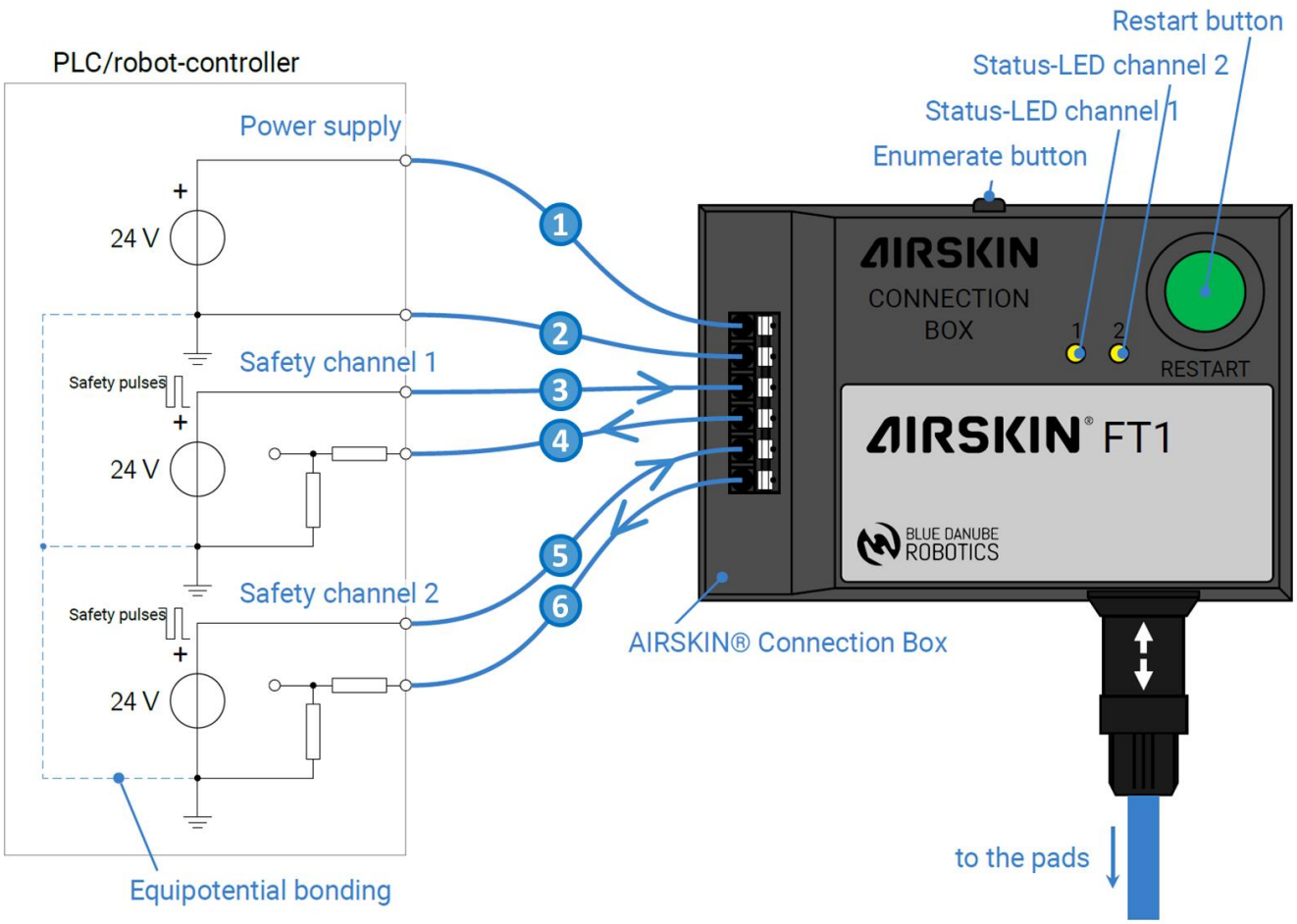
Installation and Cabling

Note

- Please read the AIRSKIN® manual
- Electrical connection to robot controller via AIRSKIN® Connection Box
- Input voltage 1 + 24V DC
- Current consumption ≤ 0.8A
- Not potential-free! When using an external power supply, grounds of power supply and 2 robot controller must be connected!

Safety Channels

- Inputs 3 und 5 + 24 V DC (test pulses allowed)
- Outputs 4 und 6 + 24 V DC (no collision - safety channels closed) or 0 V DC (collision or error - safety channels open)



AIRSKIN® Modules

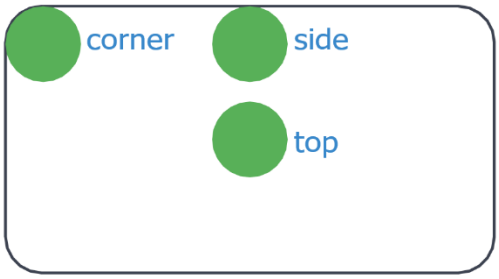
Actuation Characteristics

Equipment

Robotiq FT 300 Force Torque Sensor on a lightweight robot arm

Contact area: Cylinder with diameter 30 mm

Top view

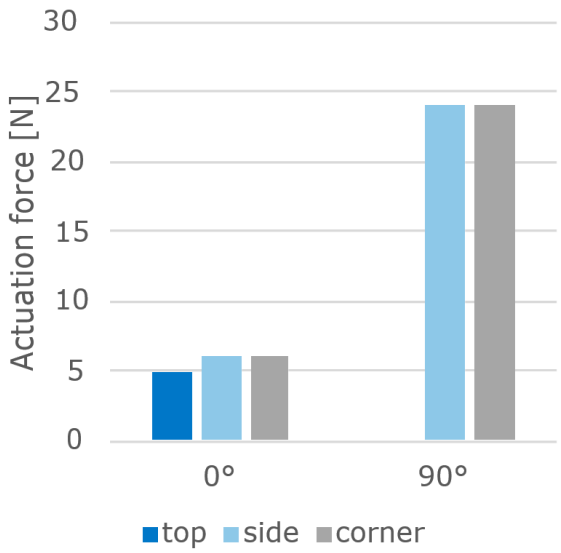


Measurement

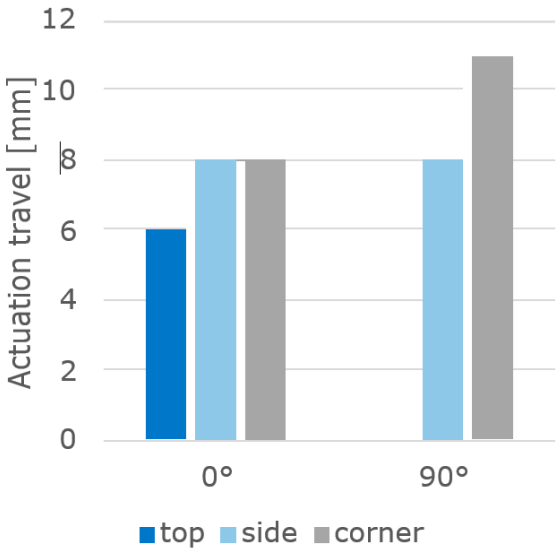
The tip of the cylinder is moving towards the pad with 20 mm/s. When the AIRSKIN® module pad is activated, the resulting force is measured by the FT 300 sensor. The distance travelled by the tip after touching the AIRSKIN® surface is taken via the robot controller. Values are averaged over 5 measurements.

Side view

AIRSKIN® Modules H0
Actuation: Force



AIRSKIN® Modules H0
Actuation: Travel



EG-Konformitätserklärung

Original-Konformitätserklärung

Hersteller	Blue Danube Robotics GmbH Donau-City-Straße 11, 15. OG, 1220 Wien, Österreich
Bevollmächtigte Person, für die Zusammenstellung der technischen Unterlagen:	Tobias Ferner Donau-City-Straße 11, 15. OG, 1220 Wien, Österreich
Produkt:	AIRSKIN®, „First Touch“, Taktiler Sicherheitssensor
Benannte Stelle für die Baumusterprüfung nach Anhang IX:	TÜV Austria GmbH Deutschstraße 10, 1230 Wien, Österreich 17-00411

Hiermit erklären wir, dass das oben beschriebene Produkt allen einschlägigen Bestimmungen der Maschinenrichtlinie 2006/42/EG entspricht.

Weitere angewandte Richtlinien und harmonisierten Normen:

- EMV-Richtlinie 2014/30/EU
- RoHS-Richtlinie 2011/65/EG
- EN 61000-6-7 Elektromagnetische Verträglichkeit – Fachgrundnormen – Störfestigkeitsanforderungen an Geräte und Einrichtungen, die zur Durchführung von Funktionen in sicherheitsbezogenen Systemen (funktionale Sicherheit) an industriellen Standorten vorgesehen sind
- EN 55011 Industrielle, wissenschaftliche und medizinische Geräte – Funkstörungen – Grenzwerte und Messverfahren – Änderung 1 – Messung von gestrahlten Störaussendungen

Sonstige angewandten Normen oder Spezifikationen:

- EN 60664-5 Isolationskoordination für elektrische Betriebsmittel in Niederspannungsanlagen
- EN 60068-2-1 Umgebungseinflüsse - Prüfung A: Kälte
- EN 60068-2-2 Umgebungseinflüsse - Prüfung B: Trockene Wärme
- EN 60068-2-6 Umgebungseinflüsse - Prüfung Fc: Schwingen (sinusförmig)
- EN 60068-2-14 Umgebungseinflüsse - Prüfung N: Temperaturwechsel
- EN 60068-2-27 Umgebungseinflüsse - Prüfung Ea und Leitfaden: Schocken
- EN 60068-2-30 Umgebungseinflüsse - Prüfung Db: Feuchte Wärme, zyklisch (12 + 12 Stunden)

Wien, 11. Juni 2018

Tobias Ferner
CTO

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CEO

AIRSKIN®
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For more information
CAD Data, KUKA Sim files and Datasheets can be downloaded from:
https://www.airskin.io/downloadkit