



- 1x5 Symbols, RGB Color
- Symbols are changeable with insert strips
- Symbol size 16x16mm
- Redundancy and feedback channel for monitoring Symbol activity and color
- Power Supply and Inputs 24-110VDC
- Lamptest Input
- Dimming input (0-10V, PWM)
- Galvanically isolated DIG Output
- 1x CAN
- 1x USB for configuration



1. Electrical Supply characteristics

Parameter	Min.	Typ.	Max.	Unit
Operating voltage	16.8	24 - 110	143	V
Power consumption		0.5	1	W
Inrush current			<300	mA

2. Electrical Input characteristics (Symbol1..5_C1, Symbol1..5_C2)

Parameter	Min.	Typ.	Max.	Unit
Operating voltage	16.8	24 - 110	143	V
Input current			3	mA

3. Electrical output characteristics DIG OUT

Parameter	Min.	Typ.	Max.	Unit
Operating voltage	16.8	24	32	V
Operating current			0.1	A
Galvanically isolated		yes		

4. Environmental conditions

Parameter	Min.	Typ.	Max.	Unit
Rated temperature		25		°C
Operating temperature	-25		+70	°C
Storage temperature	-40		+85	°C
Storage and operating humidity	10		90 ¹	%RH
Protection class front		IP65		
Protection class back		IP21		
Altitude during operation above sea level			2000	m
Reliability MTTF		60		Years

5. CAN

Parameter	Min.	Typ.	Max.	Unit
Speed (configurable)	125kb/s	250kb/s	1Mb/s	
Address (configurable)				
Protocoll (sdx, CANopen)				

created 2026-02-10/RB	checked	approved	filename asisPicto_1x5_Datasheet.docx	version 0.3	page 1/10
--------------------------	---------	----------	--	----------------	--------------

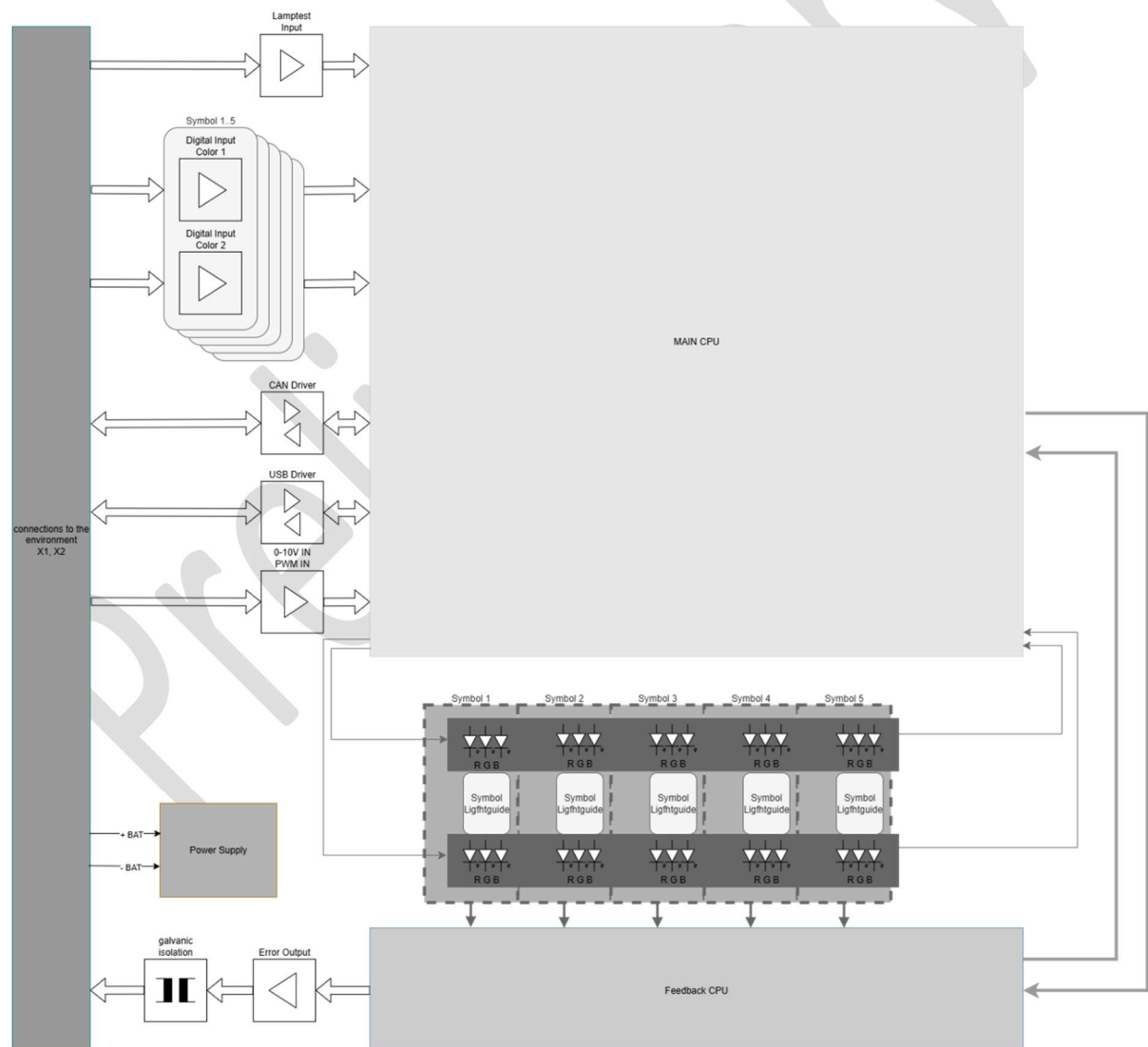
6. Dimensions / Weight / Material / Color / Protection

Parameter				unit
Dimensions WxHxD	144	36	16.3 ²	mm
Height above frontplate			4.8	mm
Weight		0.2		kg
Housing	Black anodized aluminium, and stainless steel			
Frontglass	Black printed glass			
Sealing	2mm closed-cell epdm			
Protection class	Front IP65, back IP21			
IK class frontglass	IK07			

¹ Non-condensing

² Without ground bolt

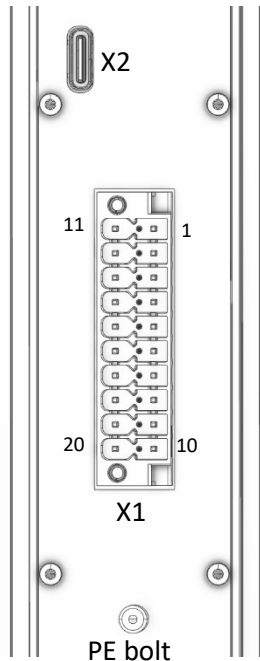
7. Block diagram



created 2026-02-10/RB	checked	approved	filename asisPicto_1x5_Datasheet.docx	version 0.3	page 2/10
--------------------------	---------	----------	--	----------------	--------------

8. Connector

8.1. Pin description



Connector	Pin	Signal	Description
X1	1	Symbol5_C2	+ Signal of Symbol5 Color 2
	2	Symbol4_C2	+ Signal of Symbol4 Color 2
	3	Symbol3_C2	+ Signal of Symbol3 Color 2
	4	Symbol2_C2	+ Signal of Symbol2 Color 2
	5	Symbol1_C2	+ Signal of Symbol1 Color 2
	6	GND	- Signal of 0-10VDC Input
	7	Dimming IN	+ Signal of 0-10V/PWM Input
	8	TR-	- of DIG output
	9	TR+	+ of DIG output
	10	+VinDC	+ BAT
	11	Symbol5_C1	+ Signal of Symbol5 Color 1
	12	Symbol4_C1	+ Signal of Symbol4 Color 1
	13	Symbol3_C1	+ Signal of Symbol3 Color 1
	14	Symbol2_C1	+ Signal of Symbol2 Color 1
	15	Symbol1_C1	+ Signal of Symbol1 Color 1
	16	Lamptest	Lamptest input
	17	CAN_L	CAN L Signal
	18	CAN_H	CAN H Signal
	19	Ground	Ground for shielding CAN
	20	-VinDC	- BAT
X2		USB	Configuration Interface
Grounding stud		Ground	Grounding stud

8.2. Signal description:

8.2.1. +VinDC, -VinDC

These two terminals provide the power supply for the asisPicto. The asisPicto can operate with a supply voltage of 24 VDC to 110 VDC $\pm$ 30%.

8.2.2. Symbol inputs Symbol1..5_C1/C2:

These are discrete inputs for the two colors per symbol. Each symbol can be assigned two colors in the configuration, color 1 and color 2 (C1, C2). The discrete inputs are used to control these colors. The inputs are designed for 24–110 VDC $\pm$ 30%.

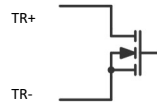
8.2.3. Dimming IN

This input allows the symbols to be dimmed in a range from 0–100%. A project-specific dimming curve can be defined in the configuration. The input accepts either a 0–10 VDC or a 24 VDC PWM signal. GND is internally connected to -VinDC.

created 2026-02-10/RB	checked	approved	filename asisPicto_1x5_Datasheet.docx	version 0.3	page 3/10
--------------------------	---------	----------	--	----------------	--------------

8.2.4. TR+, TR-

TR+ is the positive and TR- the negative terminal of the MOSFET DIG output. The output can be operated either in high-side or low-side mode. It is rated for 24VDC / 0.1 A. The error output can be configured in the software. By default, it is NC (normally closed); when an error occurs (e.g., the symbol does not light up or lights up in the wrong color), the output is switched off. This output is controlled by an independent microcontroller.



8.2.5. Lamptest

When this input is activated, all symbols light up either in both colors (if two colors per symbol have been configured) or alternately, depending on the configuration settings.

8.2.6. CAN_H, CAN_L

As an alternative to the discrete inputs, the asisPicto can also be controlled via sdxCAN and CANopen. This enables extended functionality. The CAN address is configured in the settings.

8.2.7. PE

This pin is connected to the housing, which in turn is connected to ground via the grounding stud. It can be used for shielding the CAN bus.

8.2.8. USB

The USB port serves as the configuration interface used to configure the asisPicto.

8.2.9. Grounding stud

Equipped with 2 hexagonal nuts, 2 washers and 1 spring washer

9. Symbol colors

Each symbol can be illuminated with up to two colors during operation. These colors can be defined in the asisPicto Configurator.

The following colors are available:

- Red
- Green
- Blue
- Yellow
- Amber
- White
- Customer defined (defined with RGB values in the configurator)

10. Configuration

The asisPicto can be configured using the asisPicto Configurator. For detailed information, please refer to the Configurator Manual.

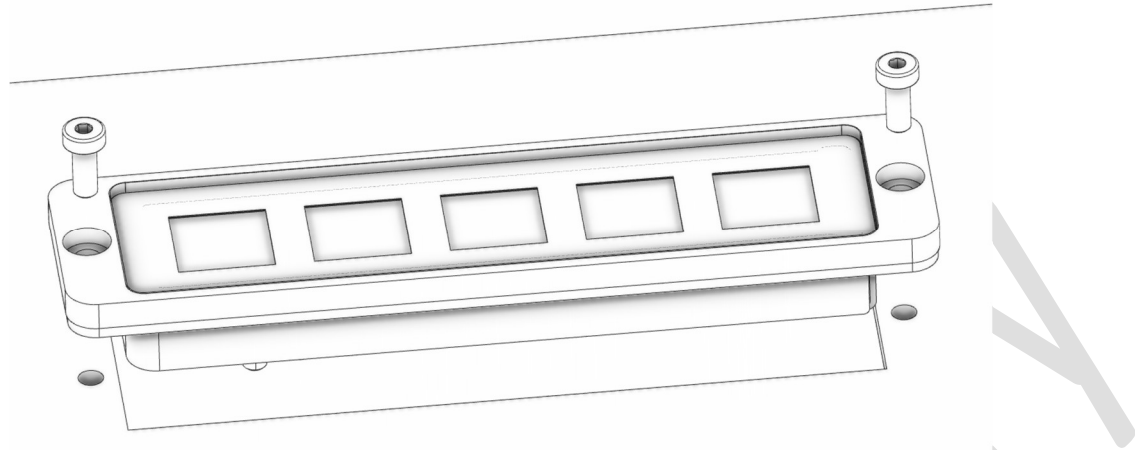
created	checked	approved	filename	version	page
2026-02-10/RB			asisPicto_1x5_Datasheet.docx	0.3	4/10

11. Installation options

The asisPicto is offered in three mounting configurations: screw type, stud type, and latch type.

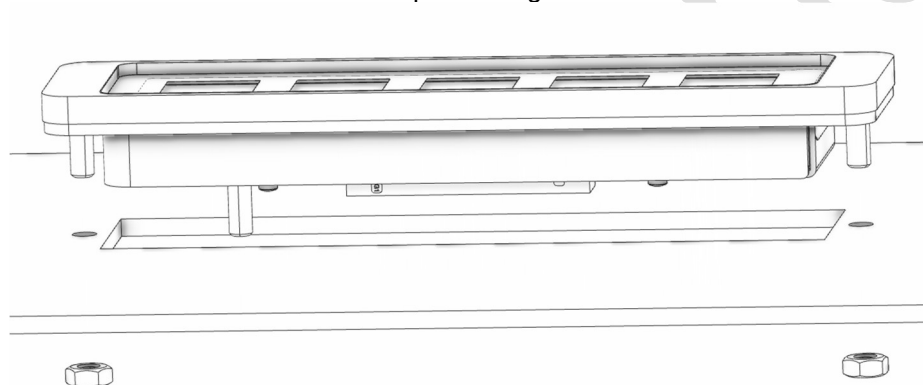
11.1. Screw Type

Front-mounted to the vehicle front plate using two M4 cylinder head screws.



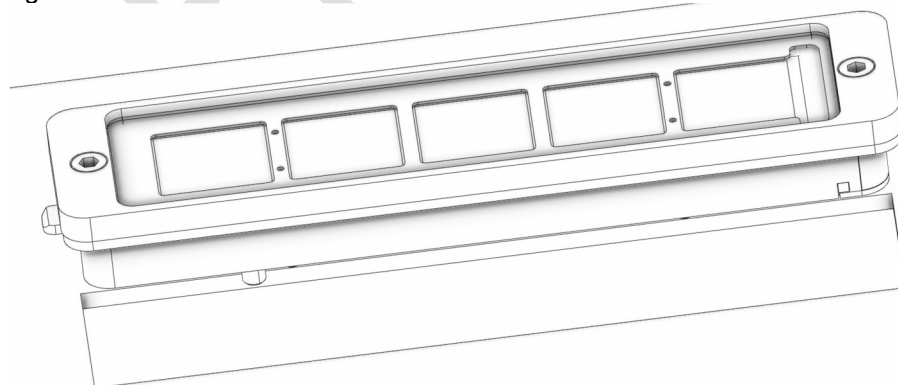
11.2. Stud Type

Rear-mounted to the vehicle front plate using two M4 nuts.



11.3. Latch Type

Front-mounted using the integrated latch mechanism. The left latch shows the mounted state, the right one the unmounted state.



created 2026-02-10/RB	checked	approved	filename asisPicto_1x5_Datasheet.docx	version 0.3	page 5/10
--------------------------	---------	----------	--	----------------	--------------

12. Insert strip

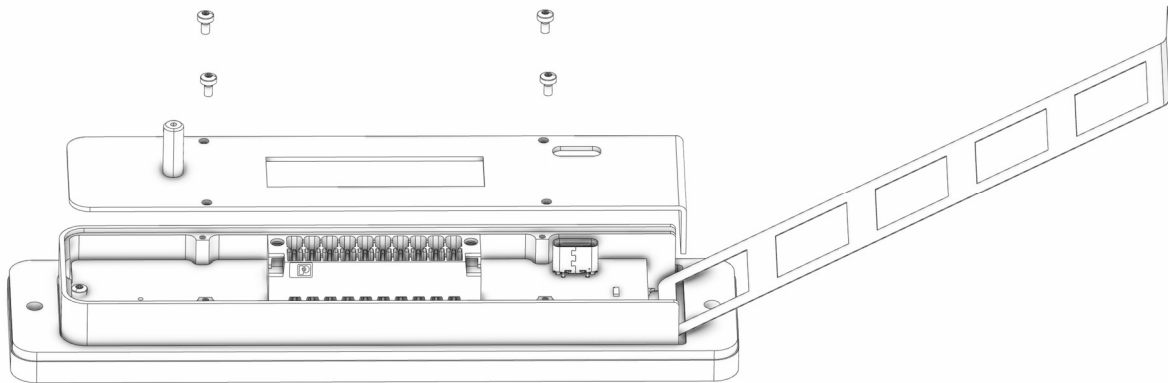
The symbols on the asisPicto are implemented using an insert strip. This design makes the asisPicto highly flexible, as different insert strips can be used for various projects while keeping the same device. The insert strips can be replaced at any time if symbol changes are required. The insert strips are project-specific and must be ordered separately. We integrate the symbols required by the customer into the insert strips. The symbols should preferably be provided to us in a vector format. The symbols can have a maximum size of 16×16mm.

12.1. Insert strip installation

The installation of the insert strip is identical for all three mounting versions (screw, stud, and latch). However, there are minor differences in the procedure depending on the version.

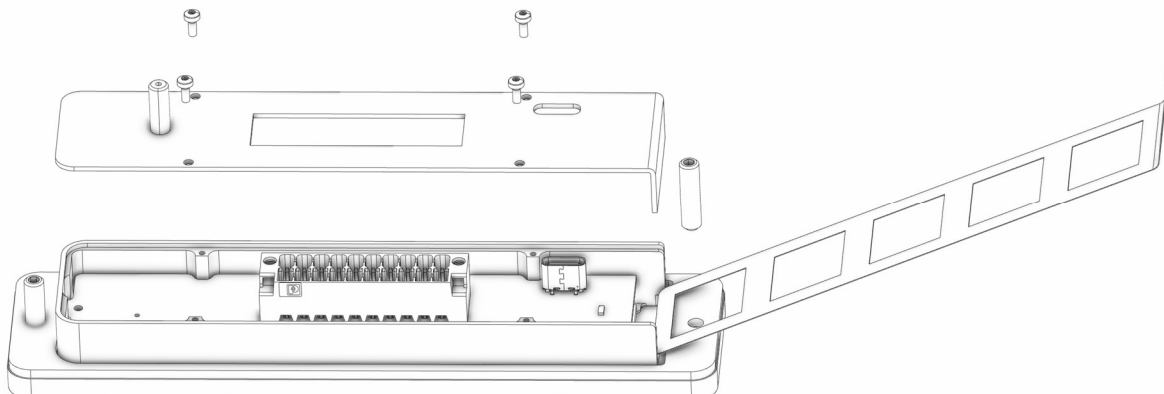
12.1.1. Screw version insert strip installation

For the screw version, only the back cover needs to be removed. The existing insert strip can then be pulled out and replaced with the new one (inserted with the rounded corners first). If insertion becomes difficult, slightly pull back and push forward again until the strip reaches its stop.



12.1.2. Stud version insert strip installation

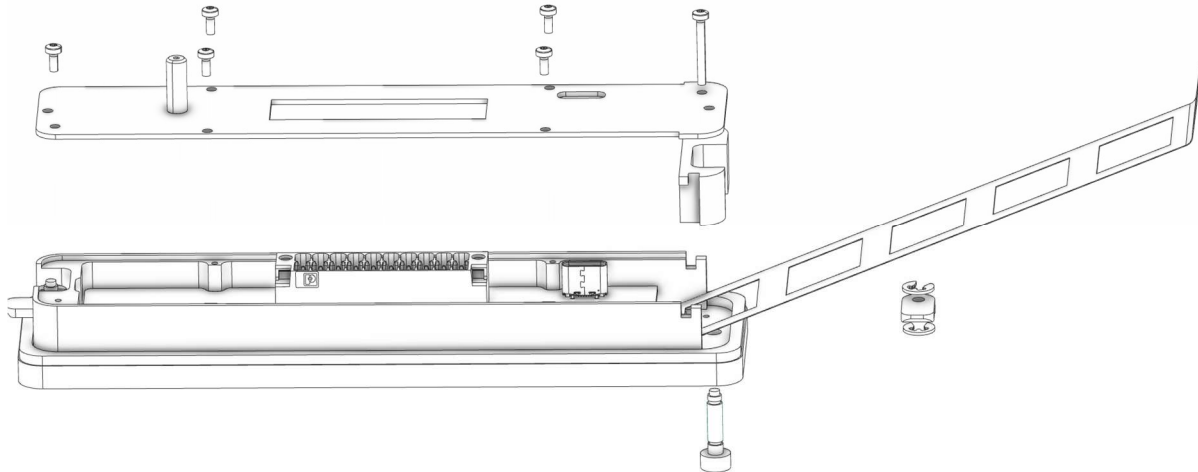
For the stud version, the back cover must be removed, and **one of the two studs** should be unscrewed to allow easier insertion of the insert strip. After inserting the new strip, the stud can be screwed back in place.



created 2026-02-10/RB	checked	approved	filename asisPicto_1x5_Datasheet.docx	version 0.3	page 6/10
--------------------------	---------	----------	--	----------------	--------------

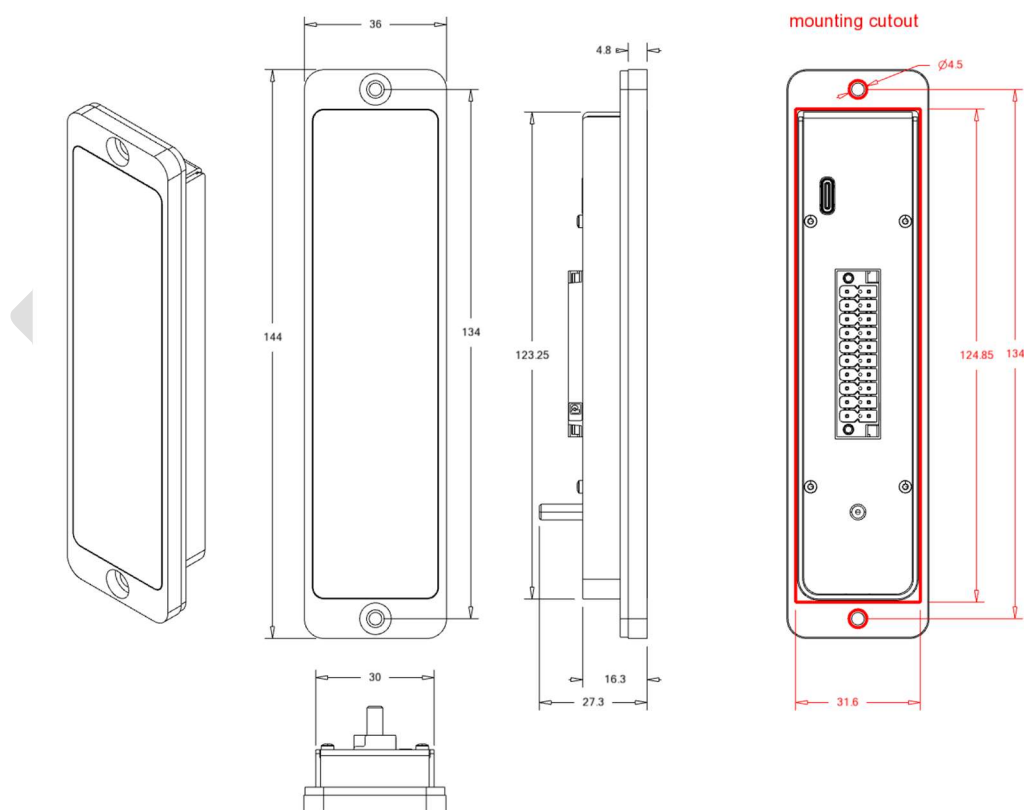
12.1.3. Latch version insert strip installation

For the latch version, after removing the back cover, the side panel must be taken out. Then, the two retaining rings of the locking screw have to be removed, allowing the locking screw to be unscrewed. The insert strip can now be replaced. Reassembly is carried out in the reverse order.



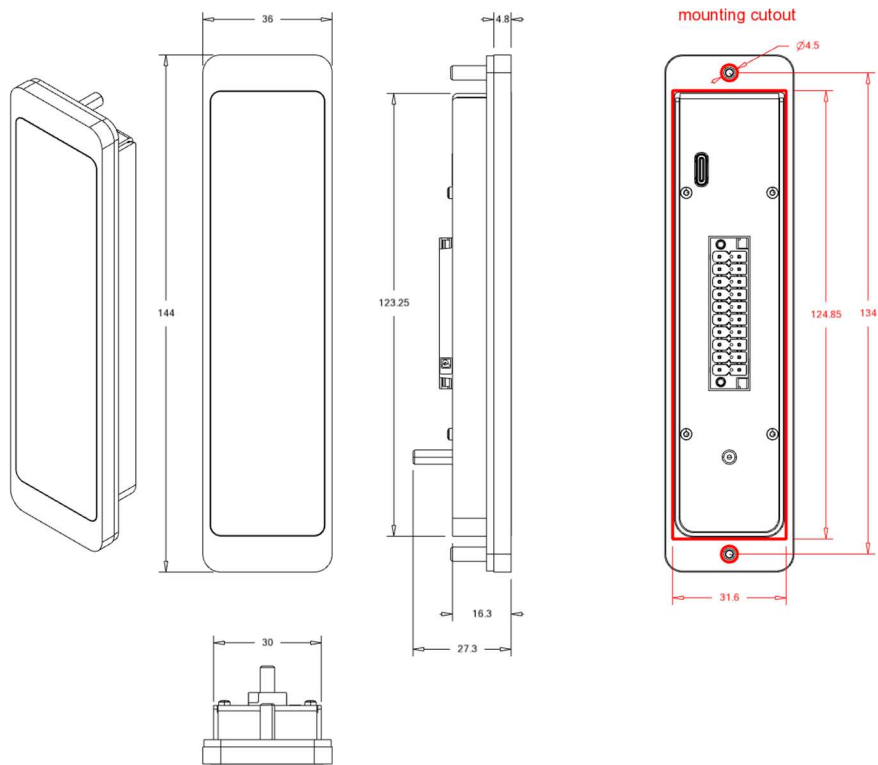
13. Drawings / Cut out dimension

13.1. Screw version

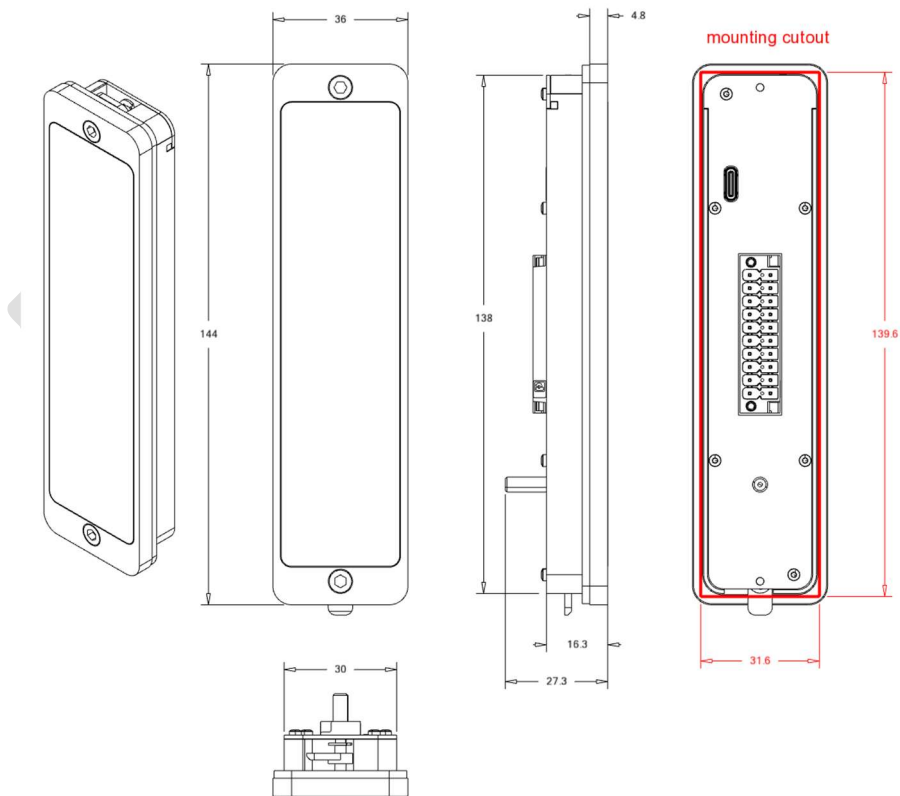


created 2026-02-10/RB	checked	approved	filename asisPicto_1x5_Datasheet.docx	version 0.3	page 7/10
--------------------------	---------	----------	--	----------------	--------------

13.2. Stud version



13.3. Latch version

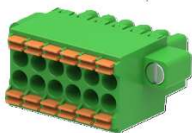


created 2026-02-10/RB	checked	approved	filename asisPicto_1x5_Datasheet.docx	version 0.3	page 8/10
Synics AG Querstrasse 8, CH-8105 Regensdorf			www.synics.ch		rail@synics.ch +41 44 840 40 60

14. Connector

For the cable connector, there are two versions available: one with screw locking and one with latch locking. The connectors are suitable for solid and stranded wires from 0.2 to 1.5 mm². The terminals use push-in spring connections. The connectors must be ordered separately.

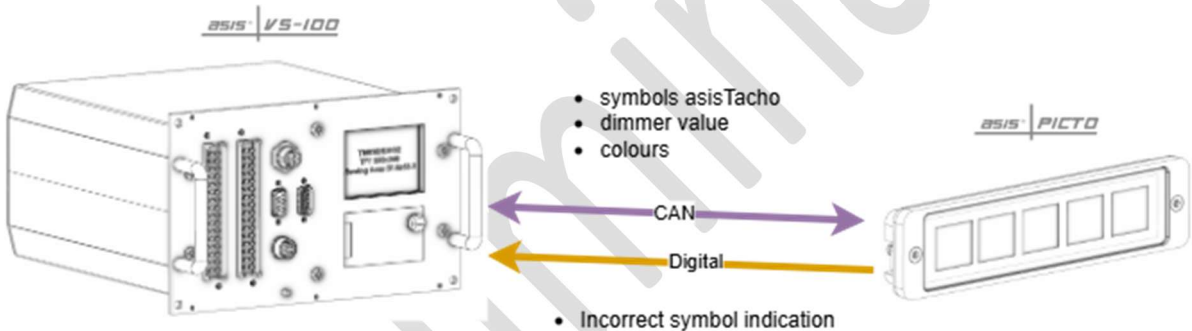
14.1. Screw locking



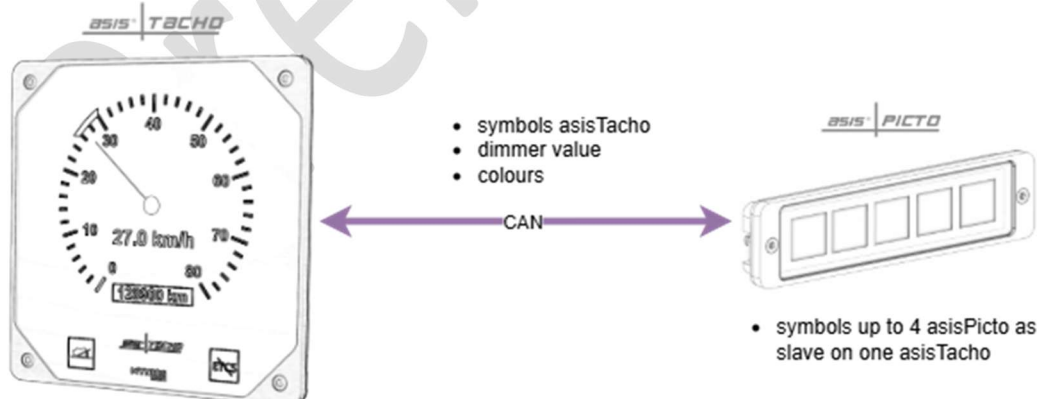
14.2. Latch locking version



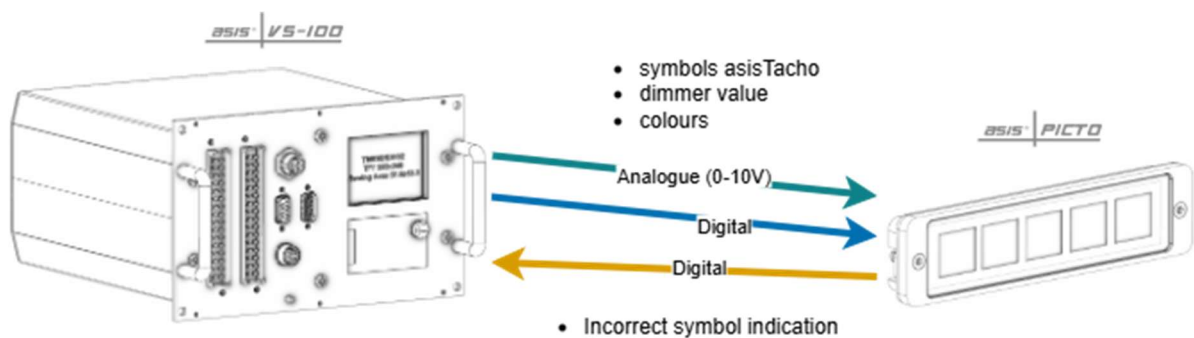
15. Application examples



Application CAN and digital



Application as a slave device of aisTacho via CAN



Application Analogue and digital

16. Standards and Approvals

EN 50155:2022-06
EN 45545-2:2020-10

17. Ordering information

3662	asisPicto1x5 screw version
3663	asisPicto1x5 stud version
3664	asisPicto1x5 latch version
project-specific	Insert strip (customized)
3639	20-pin female cable connector with screw locking
3640	20-pin female cable connector with latch locking