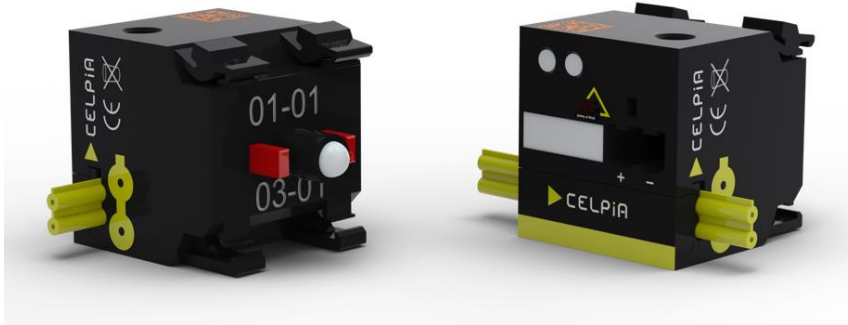AS-Interface Safety Cabinet module for emergency stop switch.
Connect with standard cable of your choice. It can be parameterized to different indicator colors and light effects.

Cabinet Module Characteristics

- Replaces contact block and fit your emergency stop button and other safety related illuminated or not illuminated pushbuttons, see *www.celpia.com* for a complete list of supported devices
- Easy tool-free installation and connection using a AS-Interface standard "cabinet cable"
- Compact module size
- One module for all supported brands
- Monitoring and troubleshooting available for actuators and indicators
- By using AS-Interface technology, diagnosis and fault monitoring is possible at operator control point
- Up to 32 slaves can be connected to one single AS-Interface cable
- Indicator with 6 colors: Red, Green, Yellow, Amber, Blue and White
- The indicator can be configured in 2 different modes
  - Continuously High intensity ON or OFF
  - Pulsating between OFF and High intensity

Preamble

This document will provide detailed information of how to install and configure the AS-Interface Cabinet module CMSAFE.

General safety instructions

The following precautions must be observed to ensure safe operation.

1. Do not use the product in environments subject to flammable or explosive gases.
2. The product must only be used indoor or inside a cabinet or box with proper protection class.
3. Do not attempt to disassemble, repair, or modify the product.
4. Do not use a voltage that exceeds the rated operating voltage range.
5. Dispose of the product according to applicable regulations (laws).

Intended Use

The product is designed and intended for specific purpose as described. The product may only be used with equipment and under operating conditions described in relevant documentation. Users must be qualified to handle the devices and be aware of the hazards potentially associated with the process. The user is solely responsible for applications, which go beyond the intended use described here and for each individual product or equipment or device, which are not described in instructions sets.

Misuse of the product

Read this document carefully and always follow all instructions. Celpia AB assumes no responsibility for any damage caused by not following the instructions in this, and product-related documents. Any use beyond the intended use is considered to be misuse.

Exclusion of liability

The information contained herein is accurate at the time of publication, subject to editorial errors. Compatibility with future versions of this product is not guaranteed.

Certification

In order to ensure that all Celpia's AS-Interface products meet the applicable requirements for reliable function and failure immunity, they have been tested by an independent authorized laboratory and have the AS-Interface Certification Logo printed on it.

The products have been tested by an authorized laboratory and meet the applicable EMC requirements.

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Page 2 of 9
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F116501-03-010-MAN001
2021-11-16 Rev 03

Technical data

Type of voltage supply for power supply	Using AS-Interface, Standard and Power24
Operating voltage	16.5 – 31.6V DC
Max total current (18 – 31.6V DC)	30mA
Electrical connection of the AS-Interface line	Plug-in terminal as piercing terminal for AS-Interface cabinet cable 2x0.86 VZN FRNC / 802183 and Mail connector for 2 way plug, Phoenix MSTB2,5 (refer to the accessories)
AS Interface Connection Polarity reversal protection	Built-in
Addressing	1-31 programmable via Power Barrel Connector, Outer diameter 3.40mm, inner diameter1.30mm or AS-Interface connector
Slave profile	S-7.B.0 Extended ID Code 1 is set to F by default but can be changed by user
AS-Interface version	3.1
Display of AS-Interface status	Green and Red LED
Inputs / Actuator switches	2
Outputs / LED indicator colors	Red, Green, Yellow, Amber, Blue, White
Dimensions	Width 29mm, Height 31mm, Depth 30mm
Operating altitude	max 2000m
Ambient temperature during operation	0℃ … +60℃
Ambient temperature during storage	-40℃ … +60℃
Protection class	IP 20
Certificates/approvals	Approvals pending: CE marking EN 62026-2:2013/A1:2019 RoHS 2011/65/EU WEEE 2012/19/EU UL
Delivery note	The modules are delivered without the plug Phoenix MSTB2,5
Ordering information	CMSAFE

Mounting instructions

The Cabinet module is mounted on the back of an emergency stop switch in the same way the contact block and LED module is mounted. Simply snap the module on the back of the desired devise. See *www.celpia.com* and manufacturer of switch for further instructions.

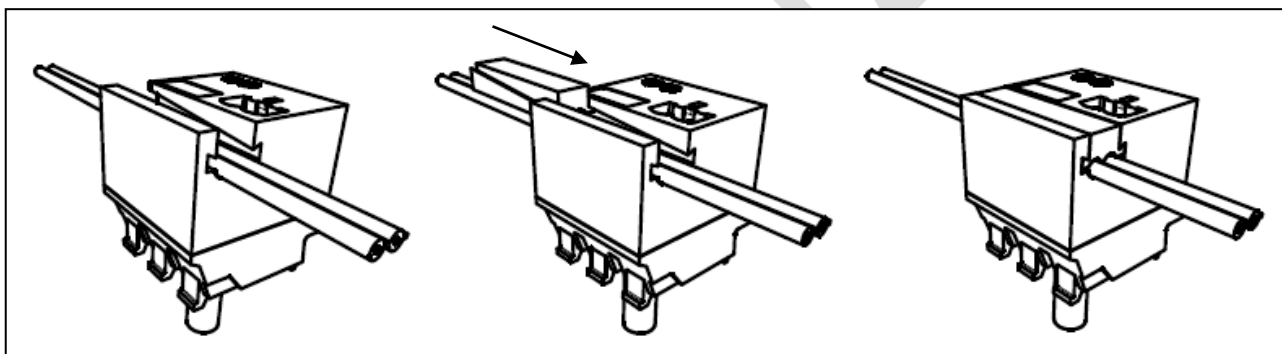Continuous monitoring and safety shutdown in case of separation of Cabinet module from actuator. This will activate the fault signal to the monitor.

Connection of Cabinet module

The Cabinet Module can be connected in three different ways. First and preferably by using a standard AS-Interface cabinet cable, secondary with color coded hook-up cables or third by connecting both.

AS-Interface cabinet cable

If a standard AS-Interface cabinet cable is used, no tools are needed. Remove the wedge and place the cable in the groove that is designed so that the cable fits when properly polarized. Reinstall the wedge and push it in manually, the piercing pins will penetrate the cable insulation.

Hook-up wires

If hook-up wires are used, a 2-way plug is needed (see chapter accessories).
- Single conductor size:
  - 0,75 – 2,5 mm² (AWG 18 – 12)
- Color coding:
  - Brown ASI+
  - Blue ASI-

AS-Interface cabinet cable and hook-up wires

It is also possible to connect a Cabinet module with both hook-up wire and AS-Interface Cabinet cable and then link to a desired number of Cabinet modules with the Cabinet cable.

Note! If the AS-Interface link will continue to other devices, make sure not to reduce the cable area.

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Page 4 of 9

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F116501-03-010-MAN001
2021-11-16 Rev 03

Semantics of I/O data bits and parameter settings

Output from master to cabinet module safety slave.

Bit D2-D0: Value	LED color
0 (x000 $_{Bin}$)	OFF
1 (x001 $_{Bin}$)	Red
2 (x010 $_{Bin}$)	Green
3 (x011 $_{Bin}$)	Blue
4 (x100 $_{Bin}$)	Yellow
5 (x101 $_{Bin}$)	Amber
6 (x110 $_{Bin}$)	White
7 (x111 $_{Bin}$)	OFF

Data bits to select LED color
X = set light effect

Bit D3: Value	Light effect
0 (0xxx $_{Bin}$)	Fixed ON
1 (1xxx $_{Bin}$)	Pulsating fading indication, 2 Hz

Data bit 3 settings to control indicator light effect.
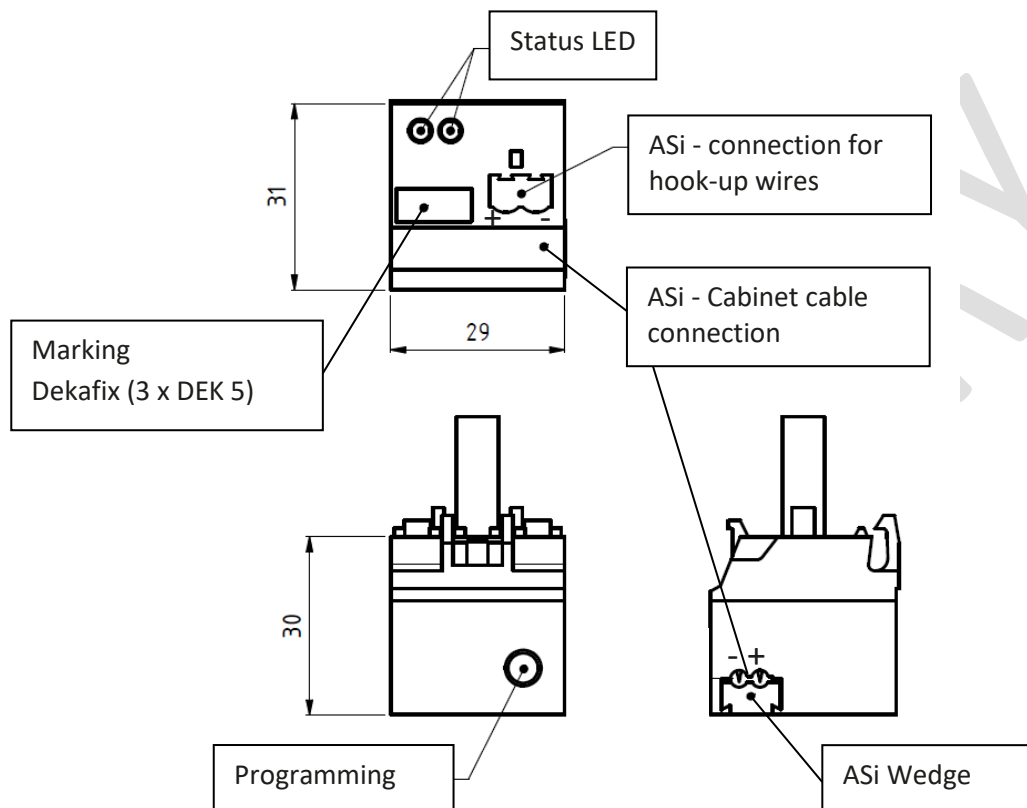*XXX = set LED color*

Input when master read cabinet module safety slave.

Data bits				Switch status		Meaning
D3	**D2**	**D1**	**D0**	**SW 2**	**SW 1**	
0	0	0	0	X	X	Off-state
0	0	1	1	X		Error
1	1	0	0		X	Error
1	1	1	1			On-state

X = Switch Activated

Instead of the regular input data provided at the data ports, a 4-bit data word from a specific $8 * 4$ bit code table is transmitted to the master. Each Cabinet safety module is programmed with its own code sequence which is unique.

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Page 5 of 9

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F116501-03-010-MAN001
2021-11-16 Rev 03

Dimensions

Status LED

ASi - connection for hook-up wires

Marking
Dekafix (3 x DEK 5)

31

29

ASi - Cabinet cable connection

30

Programming

ASi Wedge

Accessories

Component	Order number
ASi Wedge	9001-00-01
2 way plug, Phoenix MSTB2,5	9002-00-01
Cabinet cable 2x0.86 VZN FRNC / 802183	9003-00-01
Dekafix markers	9004-00-XX

More information about accessories can be found in document *Celpia Product Range*.

Supported devices

See *www.celpia.com* to for details.

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Page 7 of 9
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F116501-03-010-MAN001
2021-11-16 Rev 03

Dismantling and disposal

EU Waste Electrical and Electronic Equipment (WEEE) Directive

In August of 2005, the European Union (EU) implemented the EU WEEE Directive 2002/96/EC and later the WEEE Recast Directive 2012/19/EU requiring Producers of electronic and electrical equipment (EEE) to manage and finance the collection, reuse, recycling and to appropriately treat WEEE that the Producer places on the EU market after August 13, 2005. The goal of this directive is to minimize the volume of electrical and electronic waste disposal and to encourage re-use and recycling at the end of life.

Celpia AB has met its national obligations to the EU WEEE Directive by registering in those countries to which Celpia AB is an importer. Celpia AB has also elected to join WEEE Compliance Schemes in some countries to help manage customer returns at end-of-life.

Figure 1 WEEE symbol - crossed out wheeled bin

If you have purchased Celpia-branded electrical or electronic products in the EU and are intending to discard these products at the end of their useful life, please do not dispose of them with your other household or municipal waste. Celpia AB has labeled its branded electronic products with the WEEE Symbol (figure 1) to alert our customers that products bearing this label should not be disposed of in a landfill or with municipal or household waste in the EU. Instead, please be aware that Celpia AB is making a return and collection system available to you, free of transportation and recycling costs, for discarding these products.

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Page 8 of 9

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F116501-03-010-MAN001
2021-11-16 Rev 03

Revision history

Revision	Description
00	First release
02	Added order numbers to chapter Accessories.
03	Changed picture, added approvals pending