

Pendant Stations



More than safety.



EUCHNER

More than safety.



Emil Euchner, the promoter of the enterprise and inventor of the multiple limit switch, around 1928



Around the world – the Swabian specialists for monitoring various motions in the field of machine and industrial manufacturing.

EUCHNER's history began in 1940 with the establishment of an engineering office by Emil Euchner. Since that time, EUCHNER has been involved in the design and development of switching devices for controlling a wide variety of motions in the field of machine and industrial manufacturing. 1953 Emil Euchner founded EUCHNER + Co., a milestone in the company's history. In 1952, he developed the first multiple limit switch – to this day a symbol of the enterprising spirit of this family-owned company.

Automation – Safety – ManMachine

Today, our products range from electromechanical and electronic components to complex system solutions. With this wide range of products we can provide the necessary technologies for offering the right solution for special requirements - regardless of whether these relate to reliable and precise positioning or to components and systems for safety engineering in the automation sector. EUCHNER products are sold through a world-wide sales network of competent partners. With our closeness to the customer and the guarantee of reliable solutions throughout the globe, we enjoy the confidence of customers all over the world.

Quality, reliability, precision

Quality, reliability and precision are the hallmarks of our corporate philosophy. Terms and values to which we feel totally committed. At EUCHNER, quality means that all our employees take personal responsibility for the company as a whole and in particular, for their own area of responsibility. Individual endeavour and carrying out tasks flawlessly result in products which are totally in line with the customers' needs and the requirements of the market. After all: Our customers and their needs are the focus of all our efforts. Through efficient and effective use of resources, the promotion of personal initiative, and courage in finding unusual solutions to the benefit of our customers, we ensure a high level of customer satisfaction. We familiarize ourselves with their needs, requirements and products and we learn from the experiences of our customers' customers.

EUCHNER – More than safety.



Quality – made by EUCHNER

HBA Hand-Held Pendant Station

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General

EUCHNER hand-held pendant stations are characterized by their robust plastic housing with high degree of protection IP65, their multifunctional expandability and ergonomically logical operability. The hand-held pendant stations have been deployed for many years in the most diverse applications, especially in rough industrial environments.

In addition to the conventional properties, the new HBA series also offers new features, e.g. a flat and convenient design, small housing dimensions, lighter weight and an attractive design.

Thanks to its flexible configuration, the HBA series is also suitable for applications in diverse fields, e.g. robotics, controls for machine tools and assembly lines. A holder is also supplied for stationary mounting of the hand-held pendant station.

To enable you to use ergonomically designed housings even for prototypes or special versions, EUCHNER provides a kit for hand-held pendant stations. Consequently, you are able to assemble a hand-held pendant station in a user-friendly housing according to your requirements.

In order to use these ergonomically designed housings for diverse requirements, EUCHNER offers the option of customized solutions.



Brilliant in rough industrial environments - a unique design achievement

HBA hand-held pendant station awarded international design prize

Within the framework of the Baden-Württemberg International Design Prize 2001, two HBA hand-held pendant stations were awarded the title „Excellent“.

The success achieved in the competition on the theme „Focus Mobility“ can be attributed to the device's flat and convenient form, reduced weight and the ergonomical and handy design.

Both hand-held pendant stations are absolutely ideal for mobile deployment in rough industrial environments. Thanks to their robust plastic housing and multifunctional expandability, they can be employed in various fields, e.g. in robotics or as controls for machine tools and assembly lines.



Design Award
Design Center Stuttgart



Focus mobility 2001

Basic designs of integral devices



HBA - 079 828



HBA - 079 826



HBA - 079 825



HBA - 079 827



HBA - 072 910

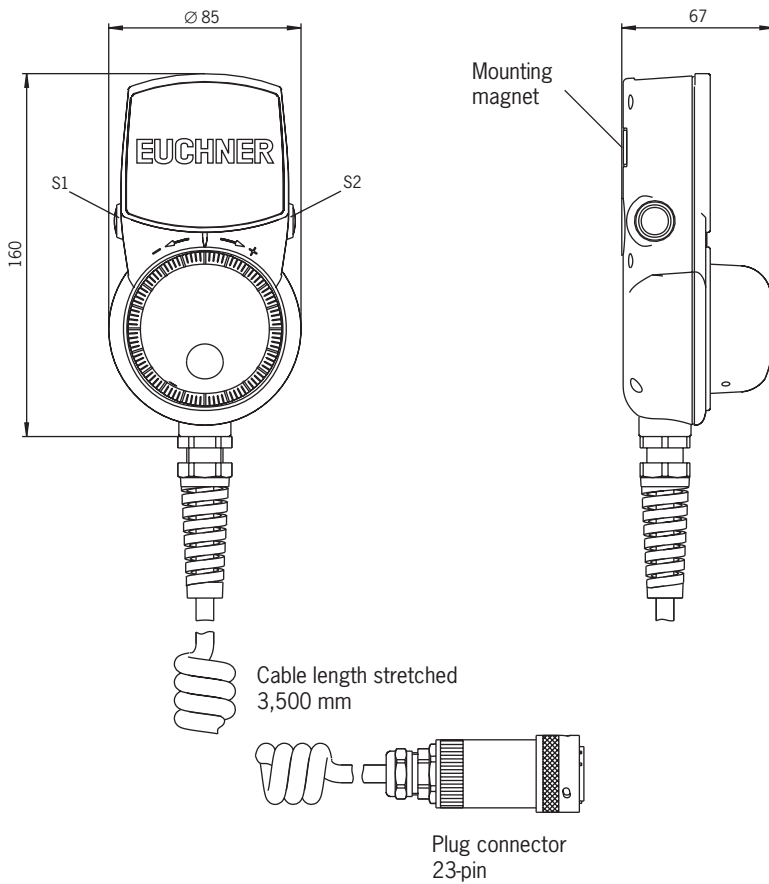


HBA holder

HBA - 079 828

- ▶ 2 x 100 pulse handwheel, wear-resistant magnetic latching
- ▶ Two enabling switches, 2 stage, one per NO contact

Dimension drawing



Notes

- ▶ HBA holder for hand-held pendant stations, see Accessories, page 34
- ▶ Accompanying 23-pin flange sockets, see Accessories, page 32

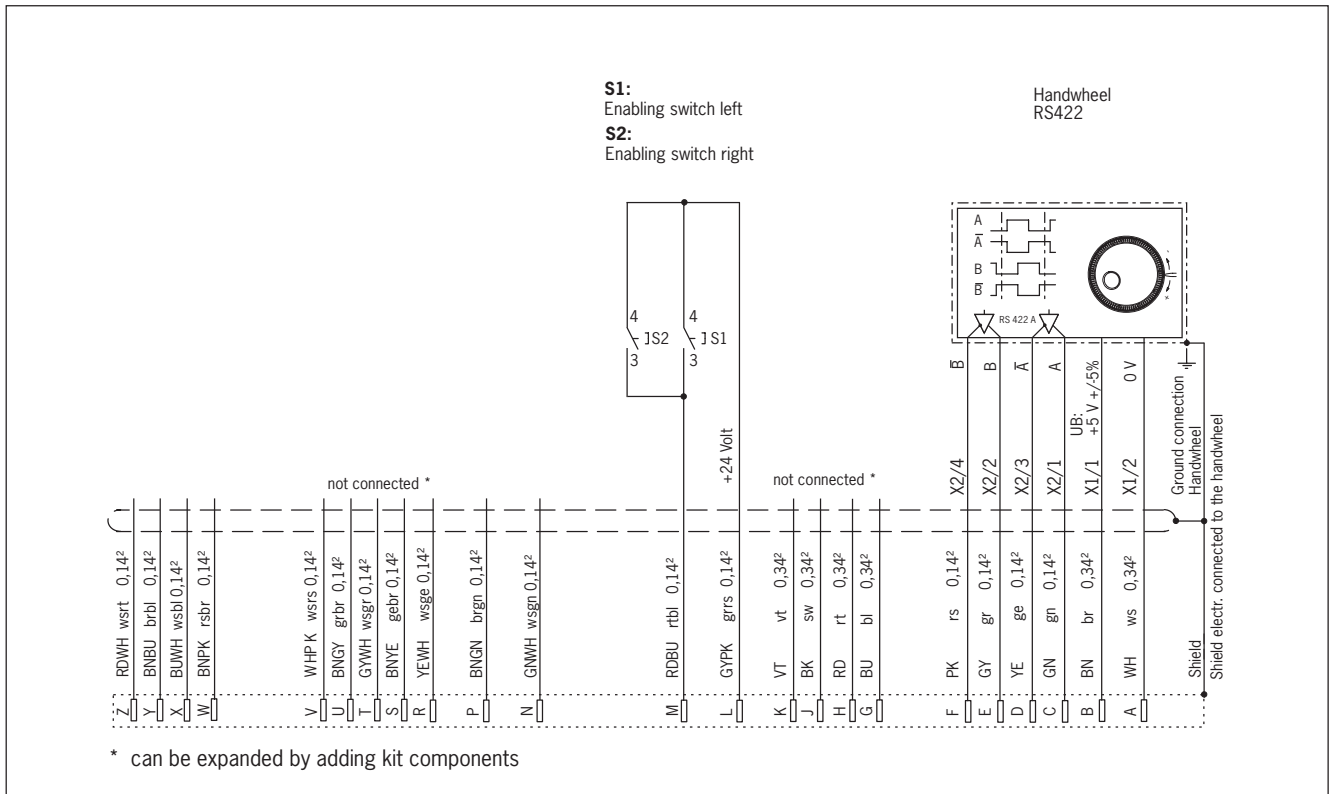
Order / type table

Designation	Cat. no.
HBA - 079 828 hand-held pendant station	079 828

Technical data

Parameters	Value	Unit
HBA housing		
Material	Plastic (Polycarbonate)	
Color	Grey RAL 7040	
Operating temperature	0 to +50	°C
Storage temperature	-20 to +50	°C
Degree of protection according to EN 60529/NEMA	IP 65 / 250-12	
Connection	Spiral cable, expandable to 3.5 m, 23-pin plug connector	
Weight	approx. 1.3	kg
Handwheel		
Pulse / Revolution	100	
Distribution voltage	5 ± 5%	V DC
Output specifications	RS422A	
Enabling switch		
Switching element	1 x No contact	
Resistive load	30 V AC / 0.4 A; 30 V DC / 0.1 A	

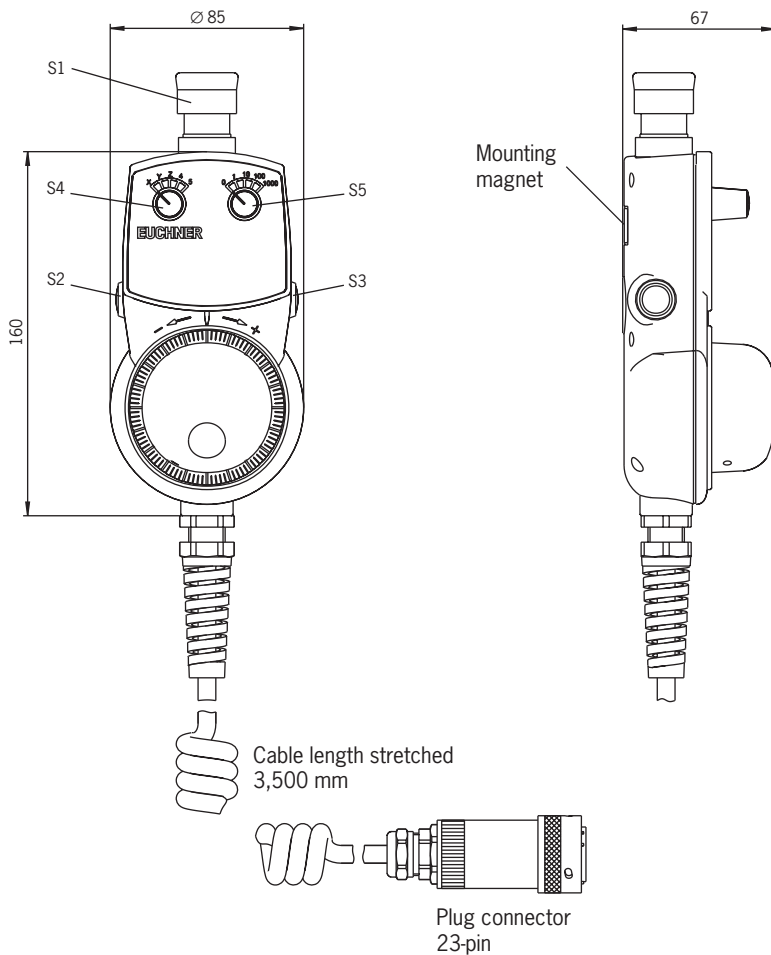
Circuit plan



HBA - 079 826

- ▶ 2 x 100 pulse handwheel, wear-resistant magnetic latching
- ▶ Overload-proof EMERGENCY-STOP according to EN 418, twin channel
- ▶ Two enabling switches, 2 stage, one per NO contact
- ▶ 2 selector switches, each 5-fold (X, Y, Z, 4, 5 and 0, 1, 10, 100, 1000)

Dimension drawing



Notes

- ▶ HBA holder for hand-held pendant stations see Accessories, page 34
- ▶ Accompanying 23-pin flange sockets, see Accessories, page 32

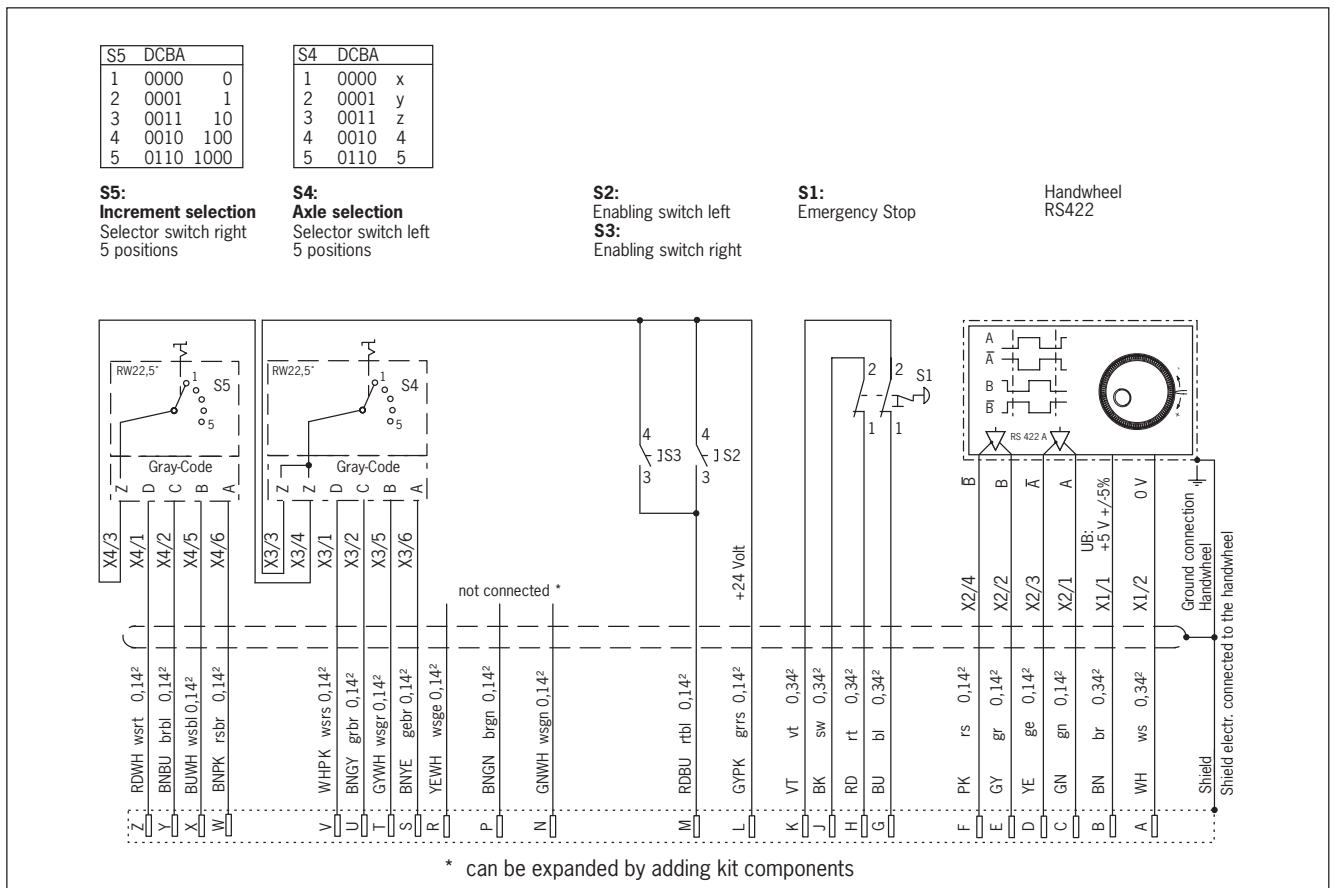
Order / type table

Designation	Cat. no.
HBA - 079 826 hand-held pendant station	079 826

Technical data

Parameters	Value	Unit
HBA housing		
Material	Plastic (Polycarbonate)	
Color	Grey RAL 7040	
Operating temperature	0 to +50	°C
Storage temperature	-20 to +50	°C
Degree of protection according to EN 60529/NEMA	IP 65 / 250-12	
Connection	Spiral cable, expandable to 3.5 m, 23-pin plug connector	
Weight	approx. 1.3	kg
Handwheel		
Pulse / Revolution	100	
Distribution voltage	5 ± 5%	V DC
Output specifications	RS422A	
EMERGENCY-STOP		
Norm	EN 418	
Switching element	2 x NC contact	
Utilization category according to IEC 60947-5-1	DC-13, U _e 24 V, I _e 3 A	
Enabling switch		
Switching element	1 x No contact	
Resistive load	30 V AC / 0.4 A; 30 V DC / 0.1 A	
Selector switch		
Output code	see circuit plan	
Maximum switching voltage	30	V DC
Maximum switching current	200	mA
Maximum switching capacity	1	W

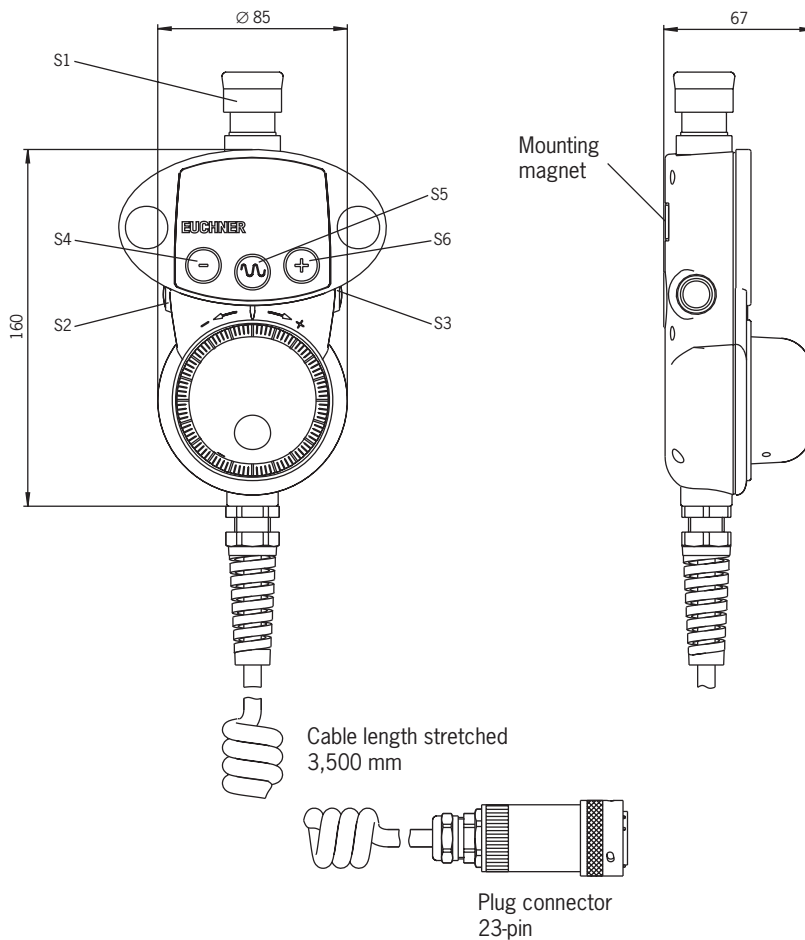
Circuit plan



HBA - 079 825

- ▶ 2 x 100 pulse handwheel, wear-resistant magnetic latching
- ▶ Overload-proof EMERGENCY-STOP according to EN 418, twin channel
- ▶ Two enabling switches, 2 stage, one per NO contact
- ▶ 3 membrane pushbuttons, one per NO contact

Dimension drawing



Notes

- ▶ HBA holder for hand-held pendant stations see Accessories, page 34
- ▶ Accompanying 23-pin flange sockets, see Accessories, page 32

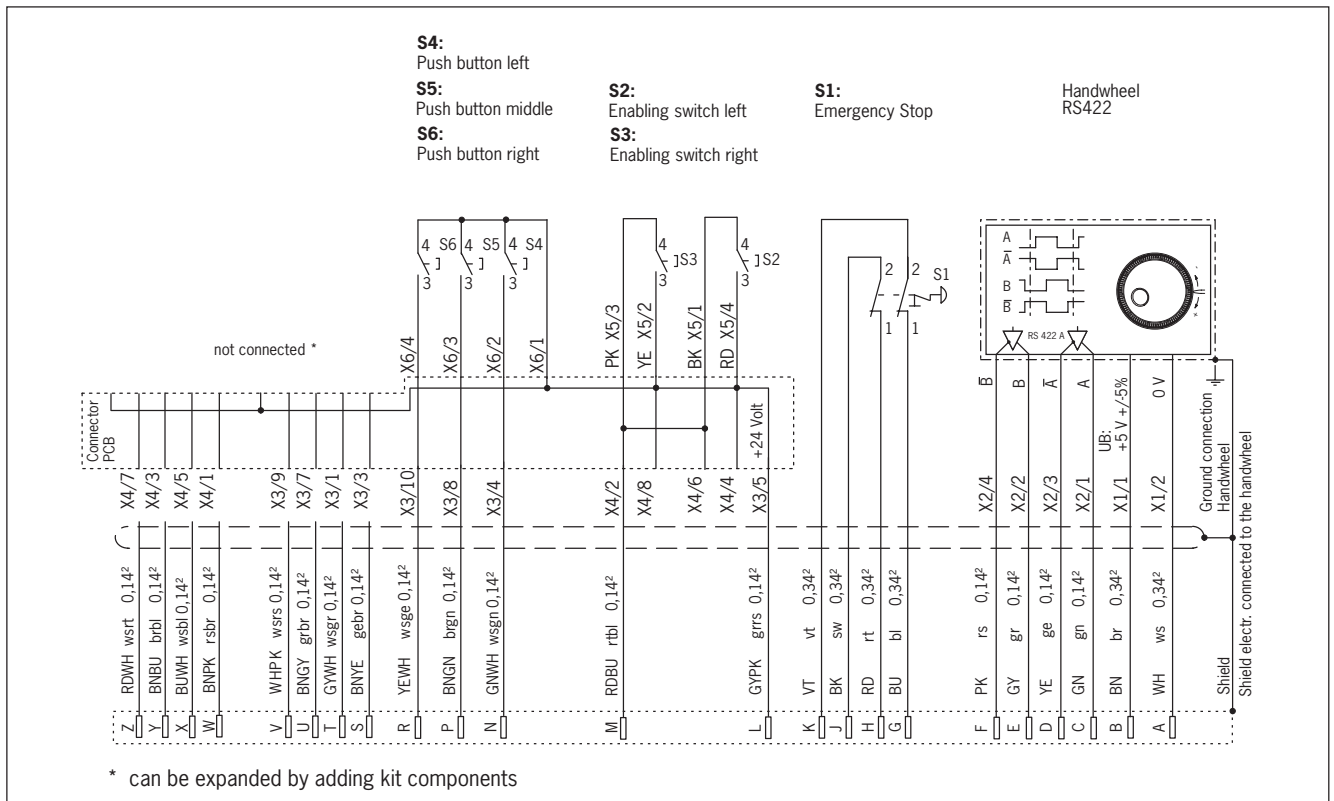
Order / type table

Designation	Cat. no.
HBA - 079 825 hand-held pendant station	079 825

Technical data

Parameters	Value	Unit
HBA housing		
Material	Plastic (Polycarbonate)	
Color	Grey RAL 7040	
Operating temperature	0 to +50	°C
Storage temperature	-20 to +50	°C
Degree of protection according to EN 60529/NEMA	IP 65 / 250-12	
Connection	Spiral cable, expandable to 3.5 m, 23-pin plug connector	
Weight	approx. 1.3	kg
Handwheel		
Pulse / Revolution	100	
Distribution voltage	5 ± 5%	V DC
Output specifications	RS422A	
EMERGENCY-STOP		
Norm	EN 418	
Switching element	2 x NC contact	
Utilization category according to IEC 60947-5-1	DC-13, U _e 24 V, I _e 3 A	
Enabling switch		
Switching element	1 x No contact	
Resistive load	30 V AC / 0.4 A; 30 V DC / 0.1 A	
Pushbutton		
Switching elements	3 membrane pushbuttons, one per NO contact	
Maximum switching voltage	30	V DC
Maximum switching current	100	mA
Maximum switching capacity	1	W

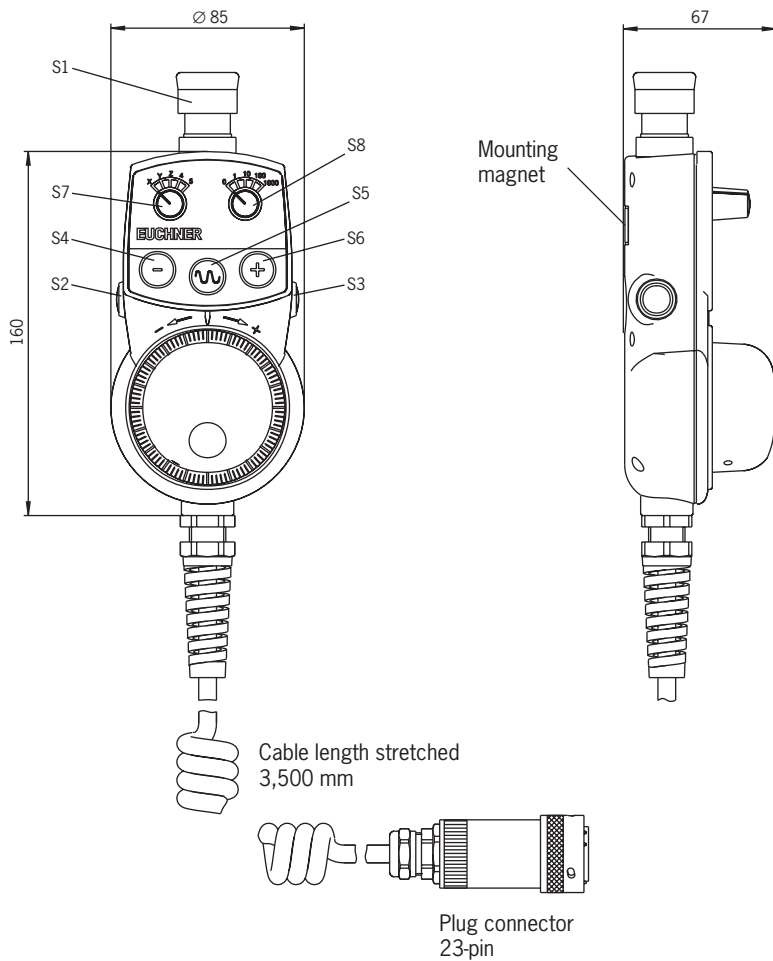
Circuit plan



HBA - 079 827

- ▶ 2 x 100 pulse handwheel, wear-resistant magnetic latching
- ▶ Overload-proof EMERGENCY-STOP according to EN 418, twin channel
- ▶ Two enabling switches, 2 stage, one per NO contact
- ▶ 2 selector switches, each 5-fold (X, Y, Z, 4, 5 and 0, 1, 10, 100, 1000)
- ▶ 3 membrane pushbuttons, one per NO contact

Dimension drawing



Notes

- ▶ HBA holder for hand-held pendant stations see Accessories, page 34
- ▶ Accompanying 23-pin flange sockets, see Accessories, page 32

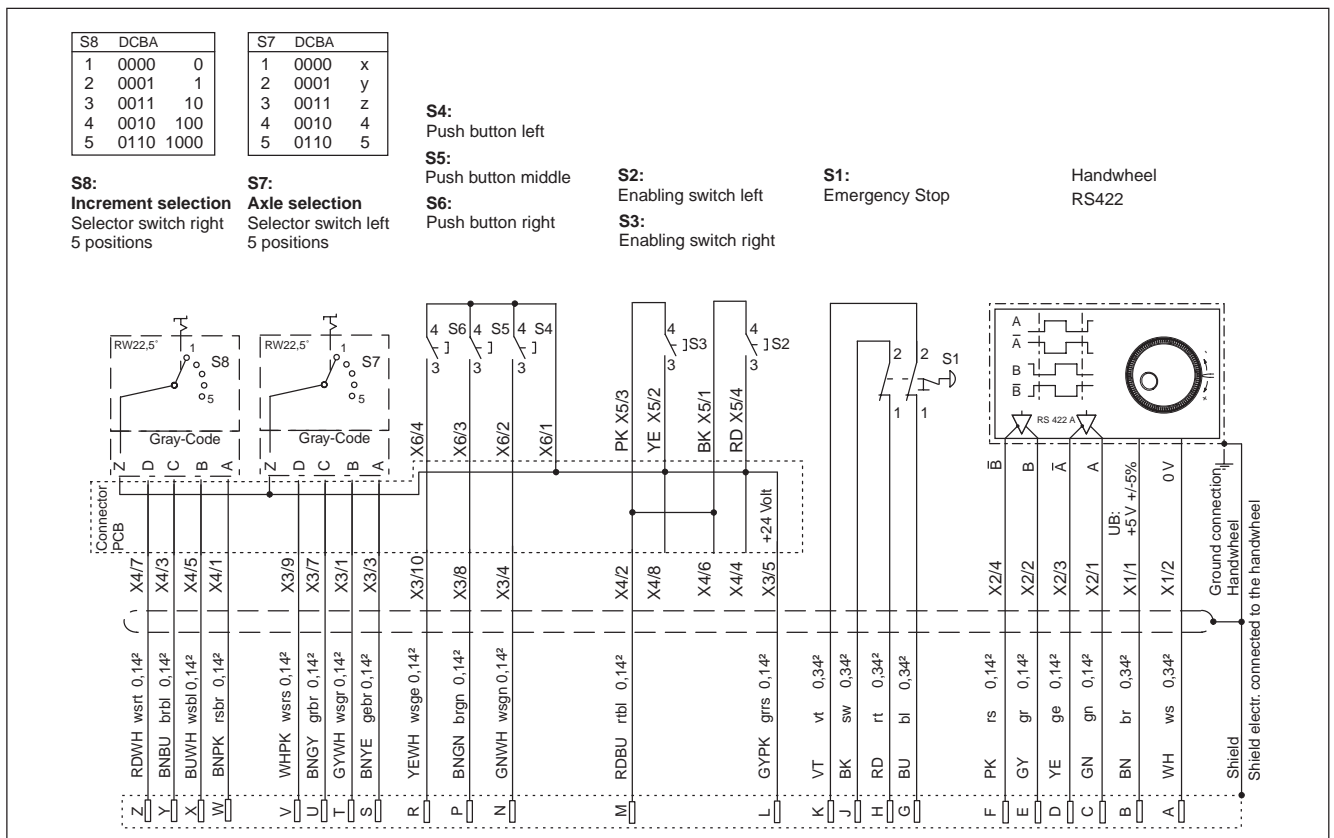
Order / type table

Designation	Cat. no.
HBA - 079 827 hand-held pendant station	079 827

Technical data

Parameters	Value	Unit
HBA housing		
Material	Plastic (Polycarbonate)	
Color	Grey RAL 7040	
Operating temperature	0 to +50	°C
Storage temperature	-20 to +50	°C
Degree of protection according to EN 60529/NEMA	IP 65 / 250-12	
Connection	Spiral cable, expandable to 3.5 m, 23-pin plug connector	
Weight	approx. 1.3	kg
Handwheel		
Pulse / Revolution	100	
Distribution voltage	5 ± 5%	V DC
Output specifications	RS422A	
EMERGENCY-STOP		
Norm	EN 418	
Switching element	2 x NC contact	
Utilization category according to IEC 60947-5-1	DC-13, U _e 24 V, I _e 3 A	
Enabling switch		
Switching element	1 x No contact	
Resistive load	30 V AC / 0.4 A; 30 V DC / 0.1 A	
Selector switch		
Output code	see circuit plan	
Maximum switching voltage	30	V DC
Maximum switching current	200	mA
Maximum switching capacity	1	W
Pushbutton		
Switching elements	3 membrane pushbuttons, one per NO contact	
Maximum switching voltage	30	V DC
Maximum switching current	100	mA
Maximum switching capacity	1	W

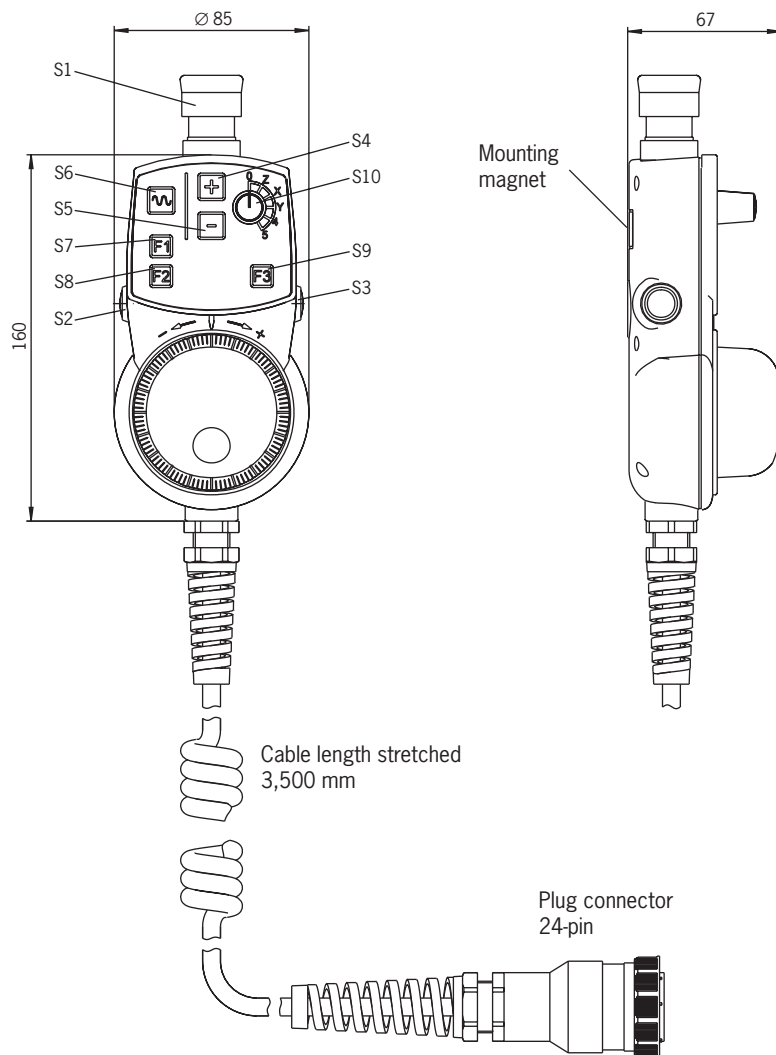
Circuit plan



HBA - 072 910

- ▶ 2 x 100 pulse handwheel, wear-resistant magnetic latching
- ▶ Overload-proof EMERGENCY-STOP according to EN 418, twin channel
- ▶ Two enabling switches, 2 stage, one per NO contact
- ▶ 1 selector switch, 6-fold (0, Z, X, Y, 4, 5)
- ▶ 6 membrane pushbuttons, one per NO contact

Dimension drawing



Notes

- ▶ HBA holder for hand-held pendant stations see Accessories, page 34
- ▶ Accompanying connection kit containing 24-pin connection box and short-circuit plug see Accessories, page 34

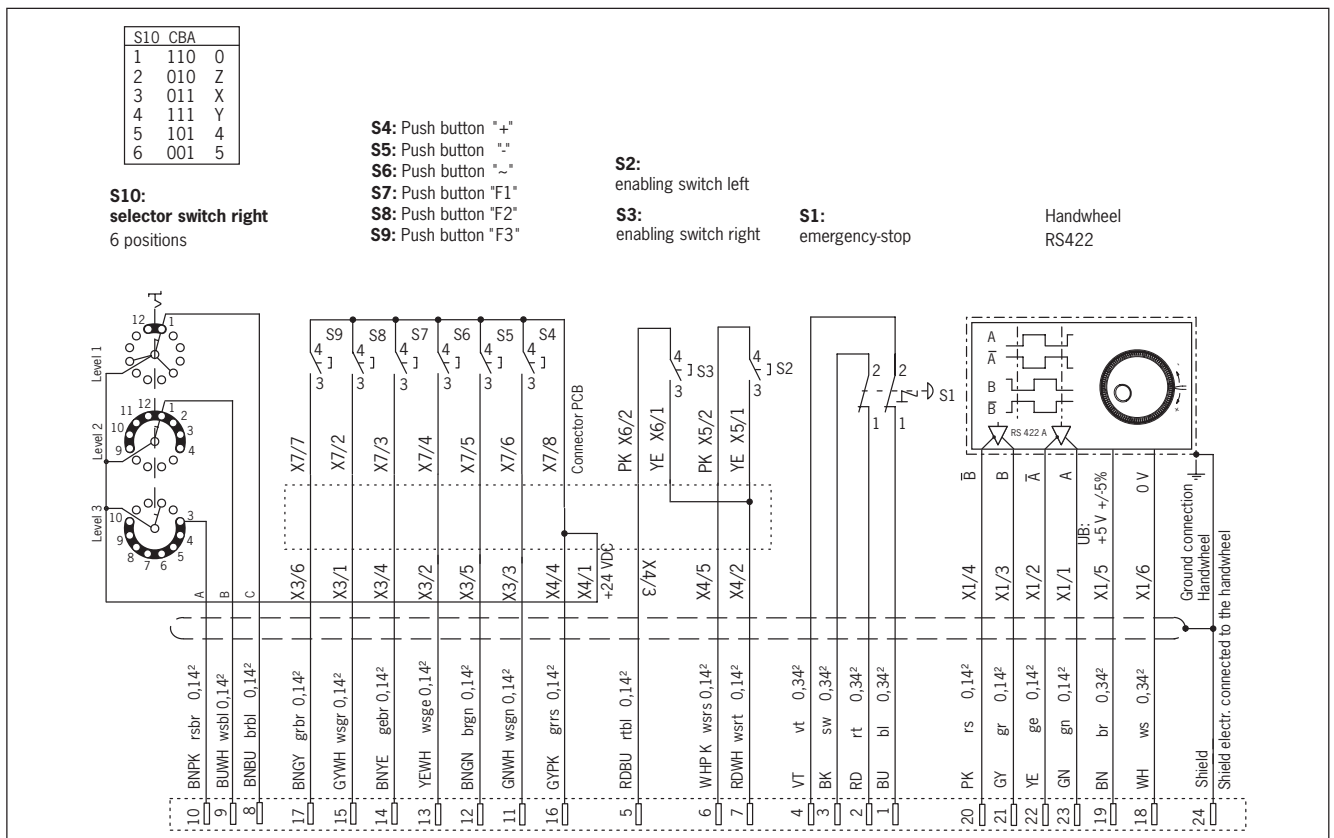
Order / type table

Designation	Cat. no.
HBA - 072 910 hand-held pendant station	072 910

Technical data

Parameters	Value	Unit
HBA housing		
Material	Plastic (Polycarbonate)	
Color	Grey RAL 7040	
Operating temperature	0 to +50	°C
Storage temperature	-20 to +50	°C
Degree of protection according to EN 60529/NEMA	IP 65 / 250-12	
Connection	Spiral cable, expandable to 3.5 m, 23-pin plug connector	
Weight	approx. 1.3	kg
Handwheel		
Pulse / Revolution	100	
Distribution voltage	5 ± 5%	V DC
Output specifications	RS422A	
EMERGENCY-STOP		
Norm	EN 418	
Switching element	2 x NC contact	
Utilization category according to IEC 60947-5-1	DC-13, U _e 24 V, I _e 3 A	
Enabling switch		
Switching element	1 x No contact	
Resistive load	30 V AC / 0.4 A; 30 V DC / 0.1 A	
Selector switch		
Output code	see circuit plan	
Maximum switching voltage	30	V DC
Maximum switching current	200	mA
Maximum switching capacity	1	W
Pushbutton		
Switching elements	6, one per NO contact	
Maximum switching voltage	30	V DC
Maximum switching current	100	mA
Maximum switching capacity	1	W

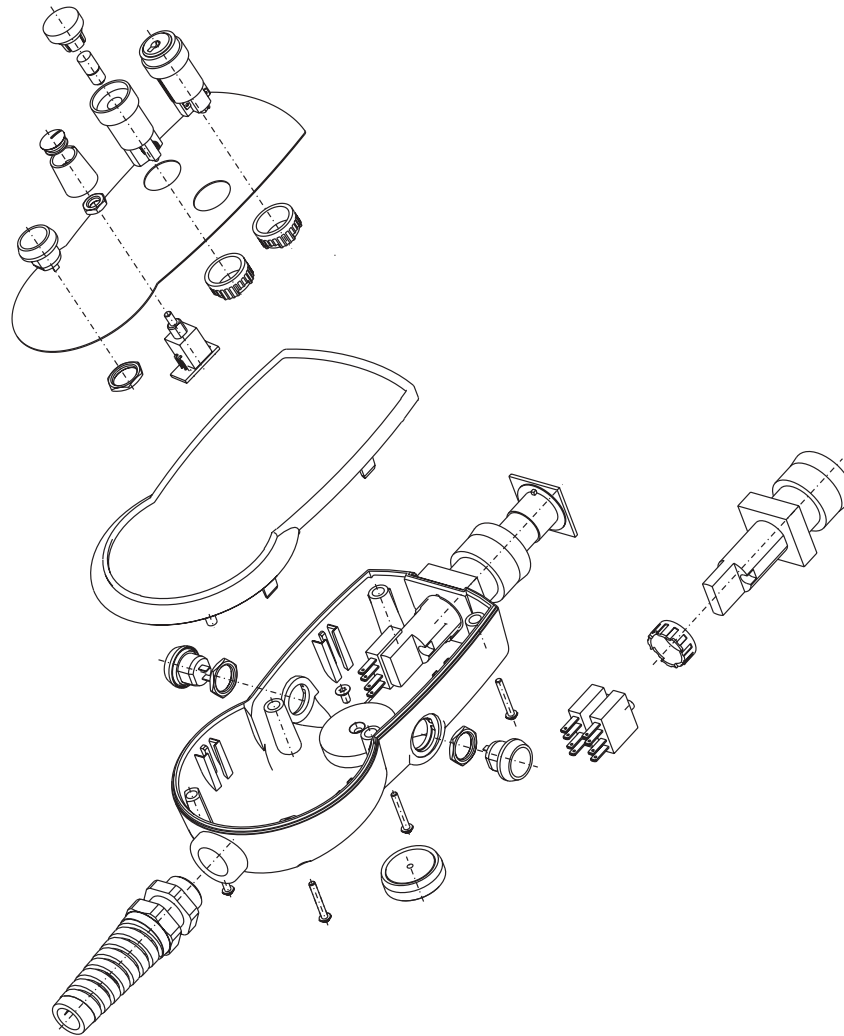
Circuit plan



Hand-held pendant station kit

▶ HBA kit without handwheel

The three designs without handwheel comprise the cable glands and mounting magnets. In addition to the basic HBA housing, two other similar designs with an emergency assembly option and enabling switches are available.



The kit is designed to match individual customer specifications. Thanks to its modular configuration, you can construct prototypes and special versions in line with your requirements.

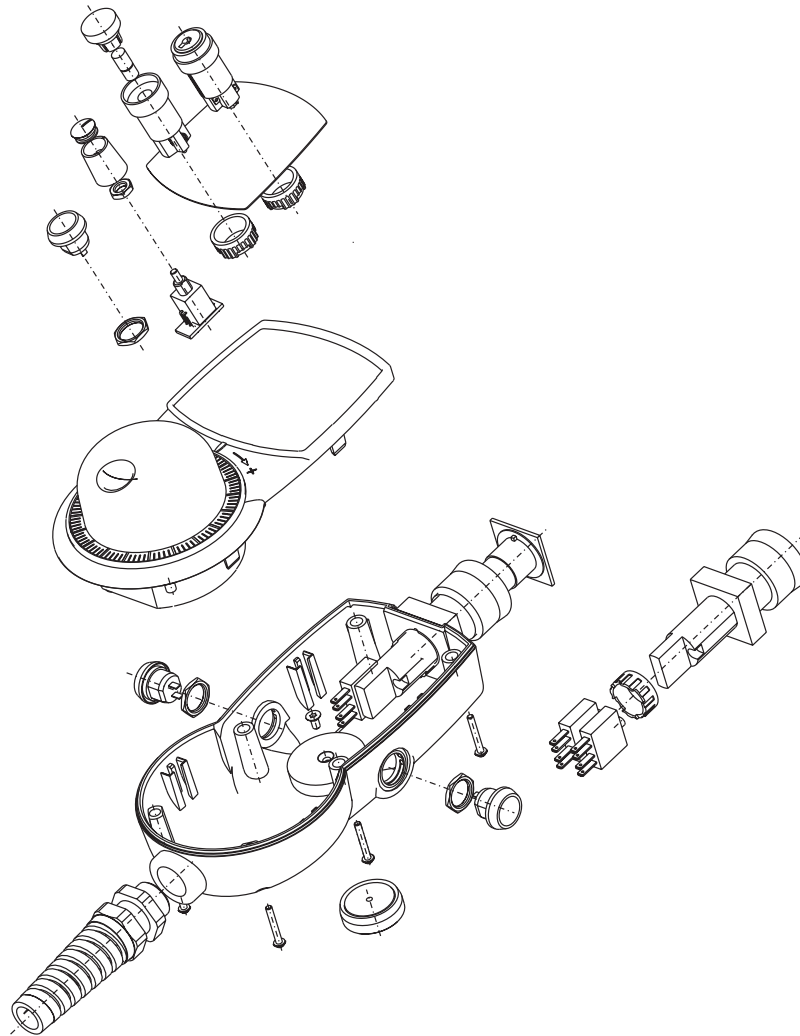
Front plates to match the housings are supplied in aluminum, silver and black anodized.

Customer-specific functionality can be created by using the components supplied in the kit (pushbutton, selector switch, key-operated rotary switch, etc).

For connection to the parent application, cables with different numbers of wires, plug connectors and the relevant flange sockets are available.

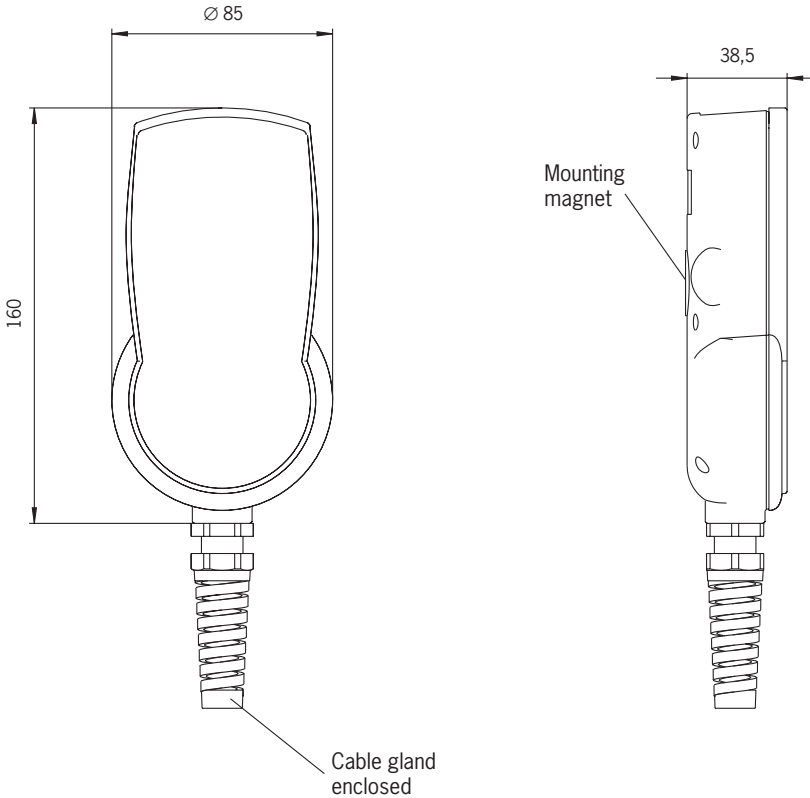
► HBA kit with handwheel

The four designs with handwheels are distinguished by the output stages of the handwheels and are adapted to diverse controls.



HBA housing without handwheel, design 1

Dimension drawing



Notes

- ▶ Enclosed is a cable gland suitable for a cable of diameter 5 - 10 mm
- ▶ Plastic-coated mounting magnet on the rear of housing
- ▶ 6 fixing domes for printed board assembly in top shell
- ▶ Matching front plate, see page 25

Technical data

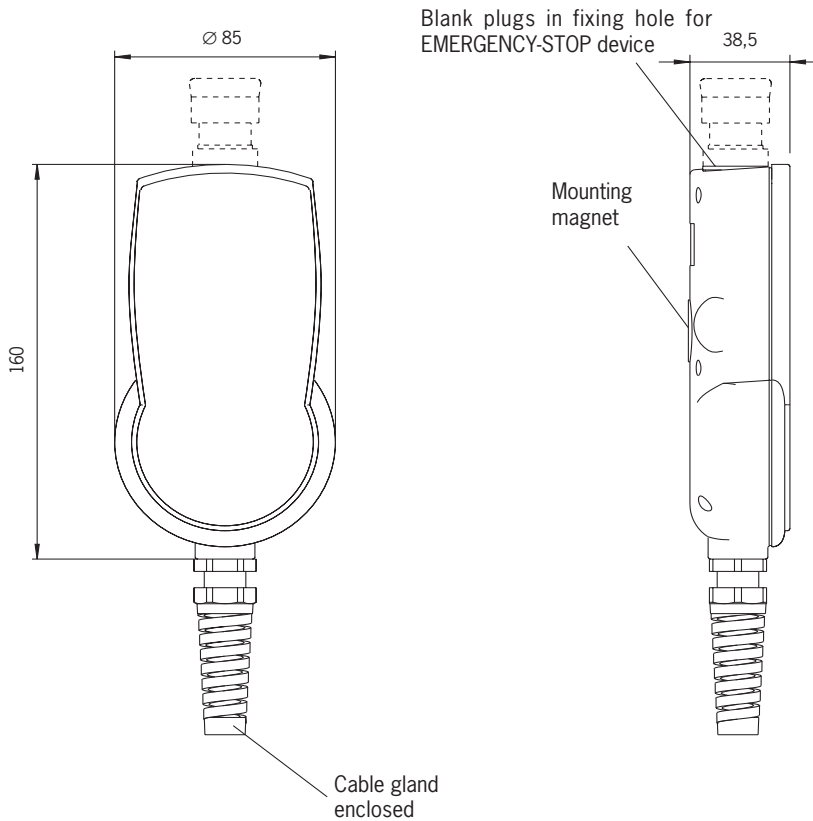
Parameters	Value	Unit
HBA housing		
Material	Plastic (Polycarbonate)	
Color	Grey RAL 7040	
Ambient temperature	0 to +50	°C
Degree of protection according to EN 60529	to IP 65	
Weight	0.3	kg

Order / type table

Design	Type designation	Cat. no.
1	HBA housing without handwheel, with mounting magnet and cable gland	084 445

HBA housing without handwheel, design 2

Dimension drawing



Notes

- ▶ Fixing hole for EMERGENCY-STOP device (sealed with blank plugs)
- ▶ Enclosed is a cable gland suitable for a cable of diameter 5 - 10 mm
- ▶ Plastic-coated mounting magnet on the rear of housing
- ▶ 6 fixing domes for printed board assembly in top shell
- ▶ Matching front plate, see page 25

Technical data

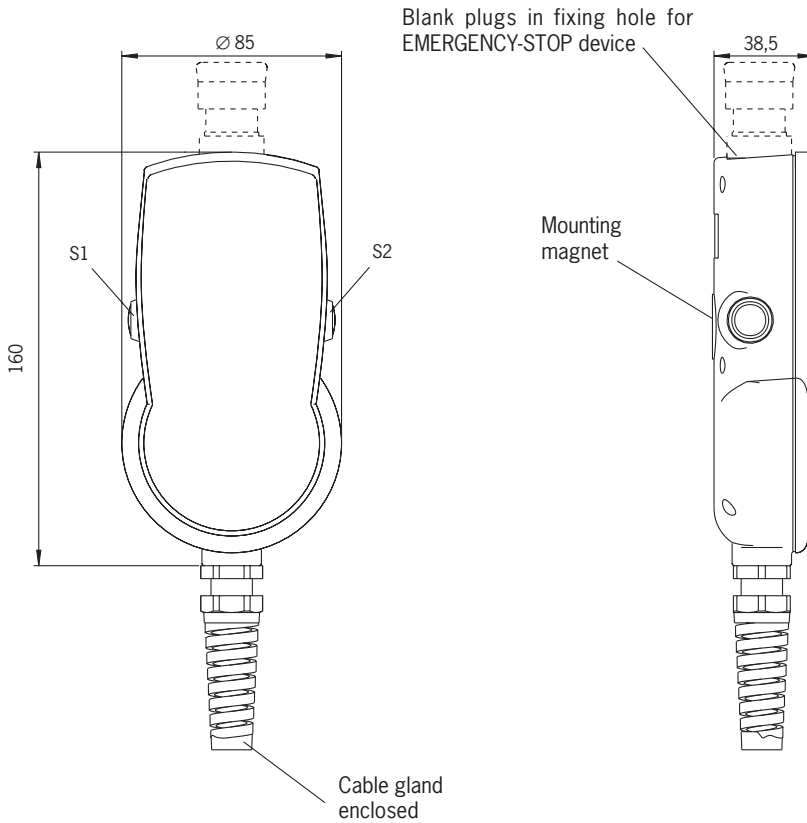
Parameters	Value	Unit
HBA housing		
Material	Plastic (Polycarbonate)	
Color	Grey RAL 7040	
Ambient temperature	0 to +50	°C
Degree of protection according to EN 60529	to IP 65	
Weight	0.3	kg

Order / type table

Design	Type designation	Cat. no.
2	HBA housing without handwheel, with mounting magnet Fixing hole for EMERGENCY-STOP device and cable gland	084 450

HBA housing without handwheel, design 3

Dimension drawing



Notes

- ▶ Fixing hole for EMERGENCY-STOP device (sealed with blank plugs)
- ▶ 2 enabling switches, one per NO contact
- ▶ Enclosed is a cable gland suitable for a cable of diameter 5 - 10 mm
- ▶ Plastic-coated mounting magnet on the rear of housing
- ▶ 6 fixing domes for printed board assembly in top shell
- ▶ Matching front plate, see page 25

Technical data

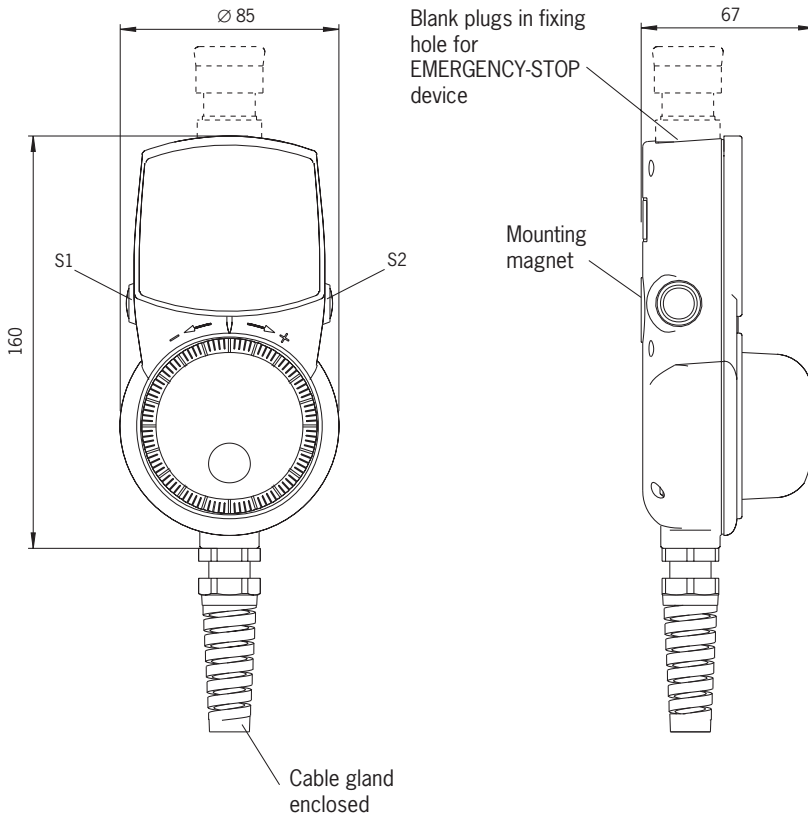
Parameters	Value	Unit
HBA housing		
Material	Plastic (Polycarbonate)	
Color	Grey RAL 7040	
Operating temperature	0 to +50	°C
Storage temperature	-20 to +50	°C
Degree of protection according to EN 60529	to IP 65	
Weight	0.3	kg
Enabling switch		
Switching element	1 x NO contact	
Resistive load	30 V AC / 0.4 A; 30 V DC / 0.1 A	

Order / type table

Design	Type designation	Cat. no.
3	HBA housing without handwheel, with mounting magnet, fixing hole for EMERGENCY-STOP device, 2 enabling switches, each with one NO contact and cable gland	086 155

HBA housing without handwheel, design 1

Dimension drawing

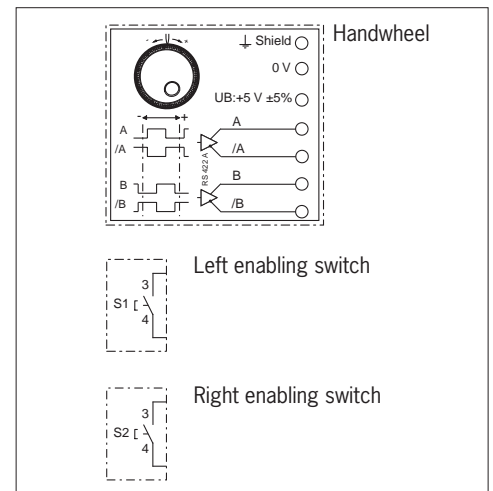


Notes

- ▶ Integrated HKA handwheel with 100 pulses per revolution
- ▶ Fixing hole for EMERGENCY-STOP device (sealed with blank plugs)
- ▶ 2 enabling switches, one per NO contact
- ▶ Enclosed is a cable gland suitable for a cable of diameter 5 - 10 mm
- ▶ Plastic-coated mounting magnet on the rear of housing
- ▶ 6 fixing domes for printed board assembly in top shell
- ▶ Matching front plate, see page 26

Circuit plan

for Siemens controls with RS422 handwheel interface



Technical data

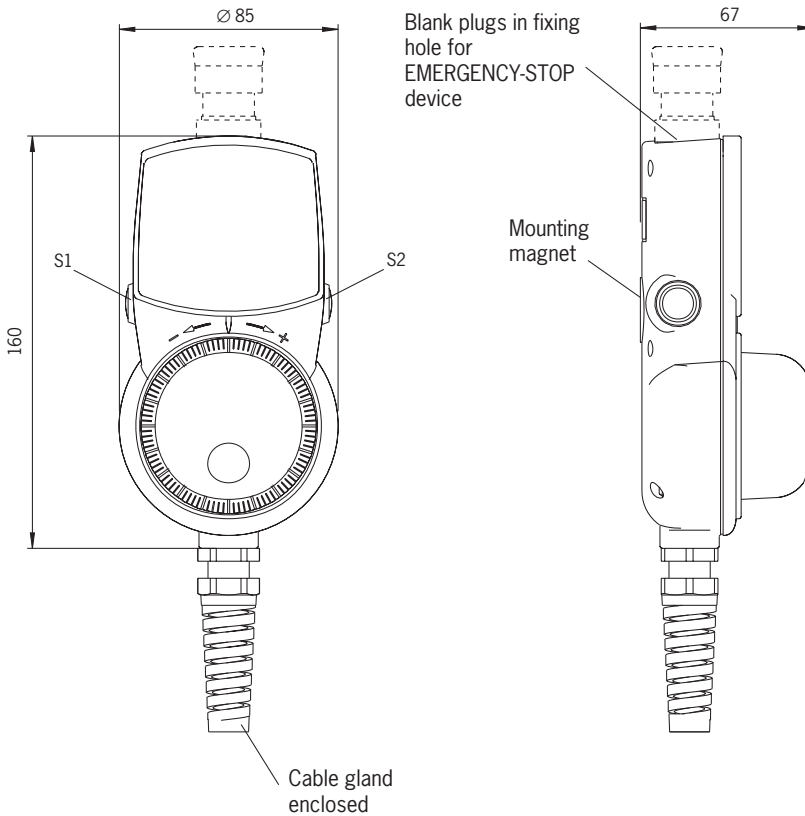
Parameters	Value	Unit
HBA housing		
Material	Plastic (Polycarbonate)	
Color	Grey RAL 7040	
Operating temperature	0 to +50	°C
Storage temperature	-20 to +50	°C
Degree of protection according to EN 60529	to IP 65	
Weight	0.3	kg
Handwheel		
Pulse / Revolution	100	
Distribution voltage	5 ± 5%	V DC
Output specifications	RS422A	
Enabling switch		
Switching element	1 x NO contact	
Resistive load	30 V AC / 0.4 A; 30 V DC / 0.1 A	

Order / type table

Design	Type designation	Cat. no.
1	HBA housing with handwheel, with mounting magnet, fixing hole for EMERGENCY-STOP device, 2 enabling switches, each with one NO contact and cable gland	083 449

HBA housing without handwheel, design 2

Dimension drawing

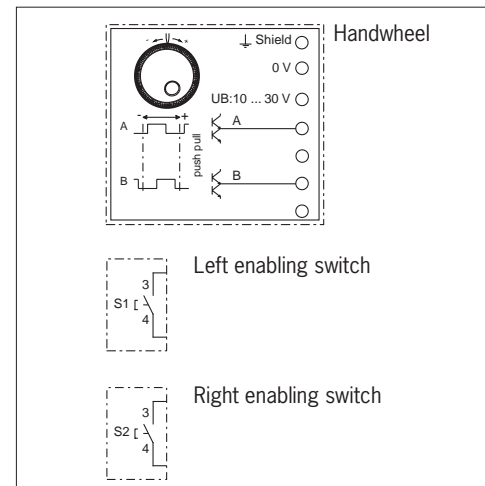


Notes

- ▶ Integrated HKA handwheel with 25 pulses and 100 detents per revolution
- ▶ Fixing hole for EMERGENCY-STOP device (sealed with blank plugs)
- ▶ 2 enabling switches, one per NO contact
- ▶ Enclosed is a cable gland suitable for a cable of diameter 5 - 10 mm
- ▶ Plastic-coated mounting magnet on the rear of housing
- ▶ 6 fixing domes for printed board assembly in top shell
- ▶ Matching front plate, see page 26

Circuit plan

for Mitsubishi controls with 25 pulse/revolution handwheel, 100 positions/revolution and 5 V push-pull handwheel interface.



Technical data

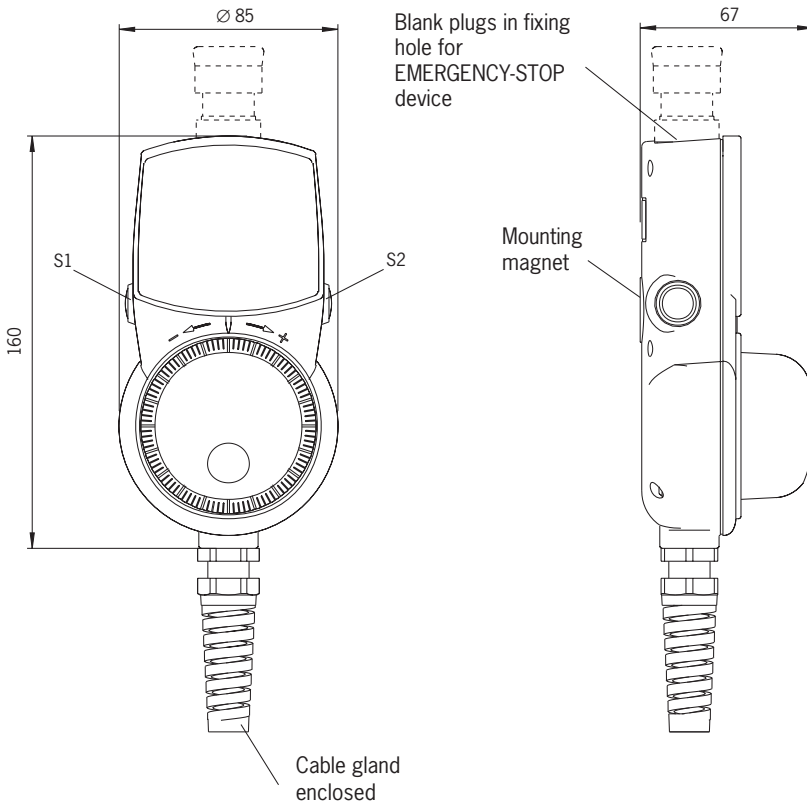
Parameters	Value	Unit
HBA housing		
Material	Plastic (Polycarbonate)	
Color	Grey RAL 7040	
Operating temperature	0 to +50	°C
Storage temperature	-20 to +50	°C
Degree of protection according to EN 60529	to IP 65	
Weight	0.3	kg
Handwheel		
Pulse / Revolution	25	
Distribution voltage	10 ... 30	V DC
Output circuit	5 V push-pull	
Output voltage / output current	HIGH, min. 3.9 V at 5 mA / 3.6 V at 20 mA LOW, max. 0.5 V at 20 mA	
Enabling switch		
Switching element	1 x NO contact	
Resistive load	30 V AC / 0.4 A; 30 V DC / 0.1 A	

Order / type table

Design	Type designation	Cat. no.
2	HBA housing with handwheel, mounting magnet, fixing hole for EMERGENCY-STOP device, 2 enabling switches, each with one NO contact and cable gland	083 499

HBA housing without handwheel, design 3

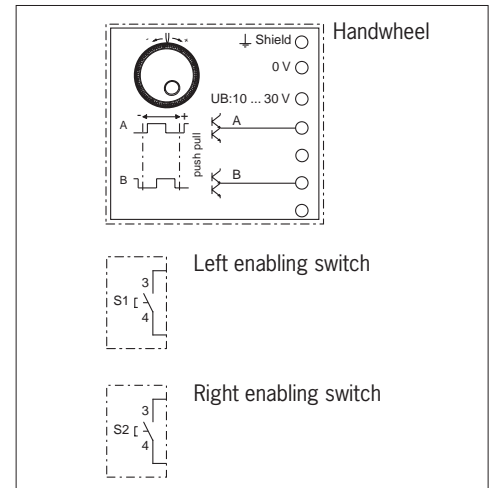
Dimension drawing



Notes

- ▶ Integrated HKA handwheel with 100 pulses per revolution
- ▶ Fixing hole for EMERGENCY-STOP device (sealed with blank plugs)
- ▶ 2 enabling switches, one per NO contact
- ▶ Enclosed is a cable gland suitable for a cable of diameter 5 - 10 mm
- ▶ Plastic-coated mounting magnet on the rear of housing
- ▶ 6 fixing domes for printed board assembly in top shell
- ▶ Matching front plate, see page 26

Circuit plan



Technical data

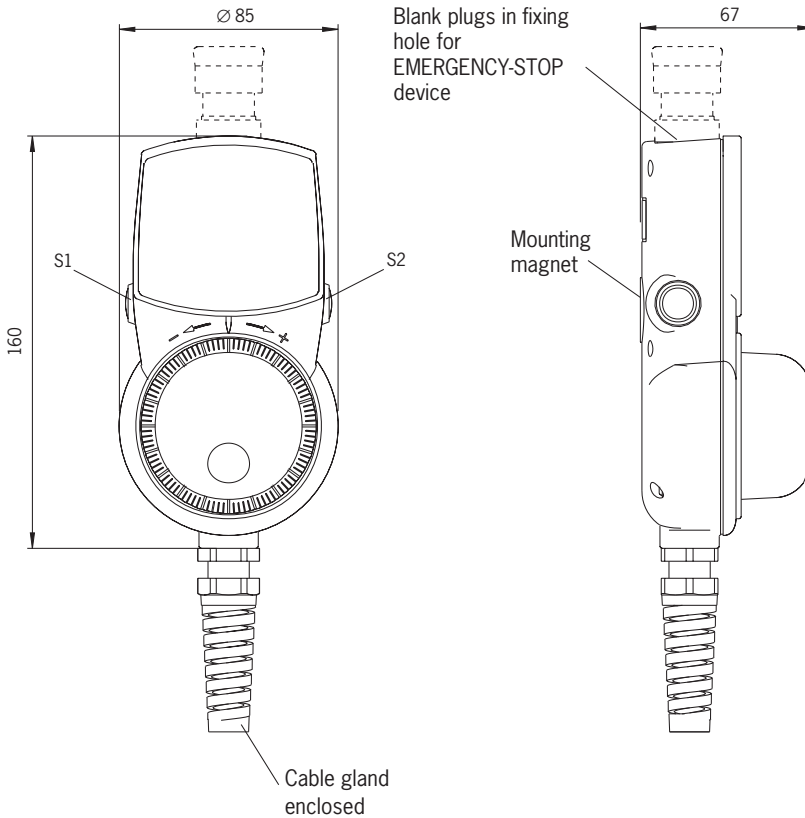
Parameters	Value	Unit
HBA housing		
Material	Plastic (Polycarbonate)	
Color	Grey RAL 7040	
Operating temperature	0 to +50	°C
Storage temperature	-20 to +50	°C
Degree of protection according to EN 60529	to IP 65	
Weight	0.3	kg
Handwheel		
Pulse / Revolution	100	
Distribution voltage	10 ... 30	V DC
Output circuit	24 V push-pull	
Output voltage / output current	HIGH, min. $U_B - 3\text{ V}$ at 20 mA LOW, max. 3 V at 20 mA	
Enabling switch		
Switching element	1 x NO contact	
Resistive load	30 V AC / 0.4 A; 30 V DC / 0.1 A	

Order / type table

Design	Type designation	Cat. no.
3	HBA housing with handwheel, mounting magnet, fixing hole for EMERGENCY-STOP device, 2 enabling switches, each with one NO contact and cable gland	083 495

HBA housing without handwheel, design 4

Dimension drawing

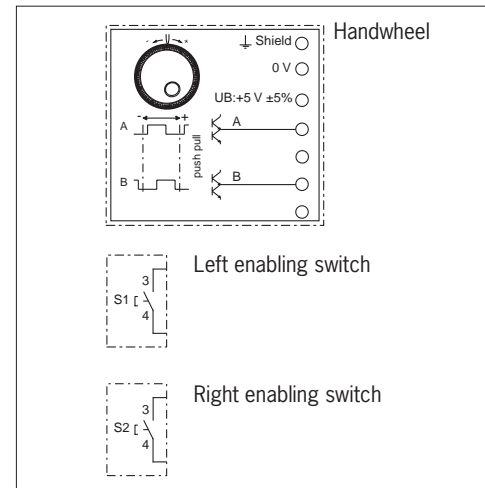


Notes

- ▶ Integrated HKA handwheel with 100 pulses per revolution
- ▶ Fixing hole for EMERGENCY-STOP device (sealed with blank plugs)
- ▶ 2 enabling switches, one per NO contact
- ▶ Enclosed is a cable gland suitable for a cable of diameter 5 - 10 mm
- ▶ Plastic-coated mounting magnet on the rear of housing
- ▶ 6 fixing domes for printed board assembly in top shell
- ▶ Matching front plate, see page 26

Circuit plan

for Fanuc controls with push-pull handwheel interface



Technical data

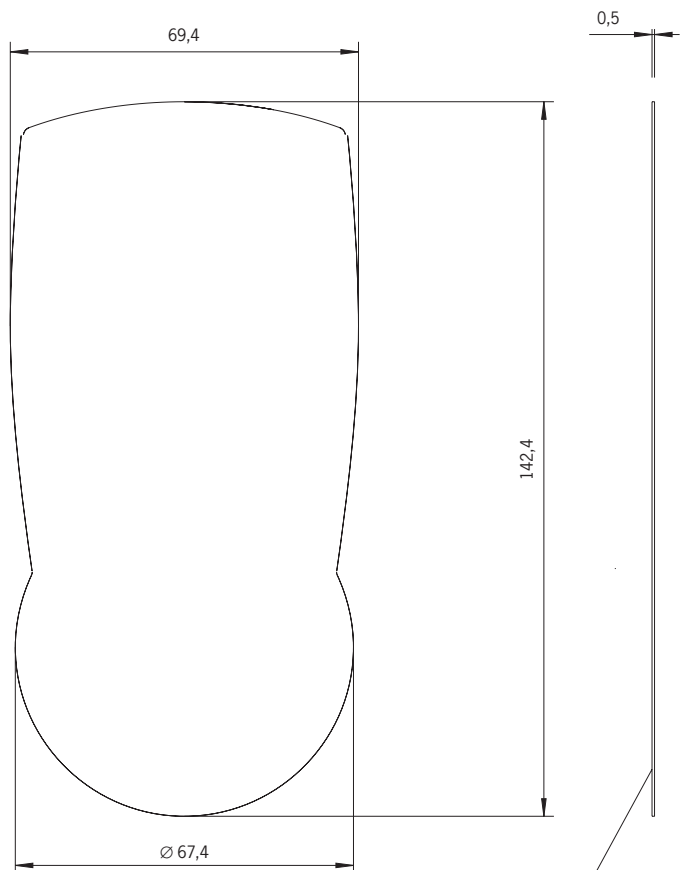
Parameters	Value	Unit
HBA housing		
Material	Plastic (Polycarbonate)	
Color	Grey RAL 7040	
Operating temperature	0 to +50	°C
Storage temperature	-20 to +50	°C
Degree of protection according to EN 60529	to IP 65	
Weight	0.3	kg
Handwheel		
Pulse / Revolution	100	
Distribution voltage	5 ± 5%	V DC
Output circuit	5 V push-pull	
Output voltage / output current	HIGH, min. 4.0 V at 0 mA / 3.3 V at 6 mA / 3.0 V at 20 mA LOW, max. 0.5 V at 20 mA	
Enabling switch		
Switching element	1 x NO contact	
Resistive load	30 V AC / 0.4 A; 30 V DC / 0.1 A	

Order / type table

Design	Type designation	Cat. no.
4	HBA housing with handwheel, mounting magnet, fixing hole for EMERGENCY-STOP device, 2 enabling switches, each with one NO contact and cable gland	086 762

Front plate for HBA housing without handwheel

Dimension drawing



Rear is coated so as to be self-adhesive

Notes

- ▶ Matching the HBA housing without handwheel (see pages 18 to 20)
- ▶ An illustrative file for customized front plates is available (e.g. in Internet at www.euchner.de).

Technical data

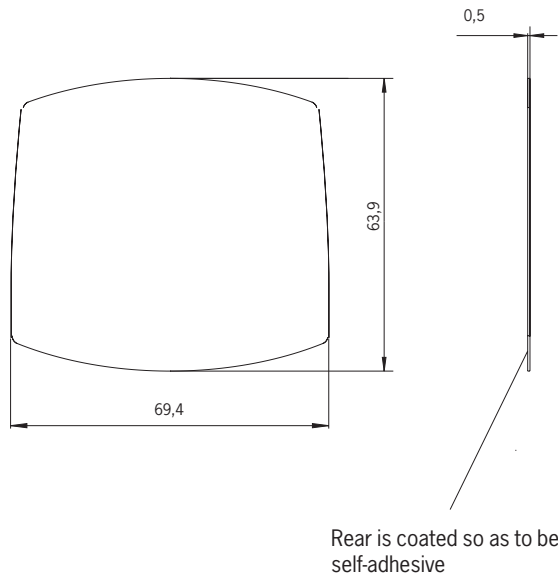
Material	
Front plate	Electrically anodized aluminum, black or silver Rear is coated so as to be self-adhesive

Order / type table

Type designation	Cat. no.
Front plate for HBA housing without handwheel, bright anodized	084 395
Front plate for HBA housing without handwheel, black anodized	084 396

Front plate for HBA housing with handwheel

Dimension drawing



Notes

- ▶ Matching the HBA housing without handwheel (see pages 21 to 24)
- ▶ An illustrative file for customized front plates are available (e.g. in Internet under www.euchner.de).

Technical data

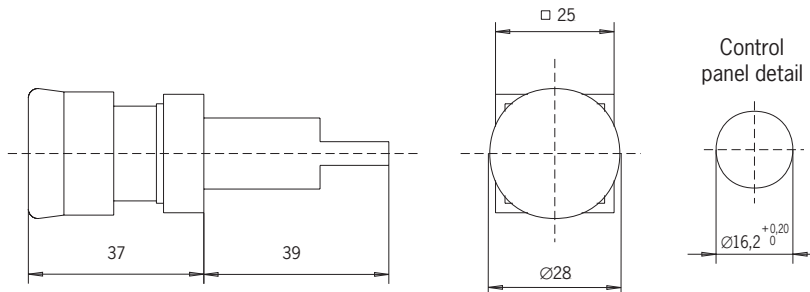
Material	
Front plate	Electrically anodized aluminum, black or silver Rear is coated so as to be self-adhesive

Order / type table

Type designation	Cat. no.
Front plate for HBA housing with handwheel, bright anodized	083 635
Front plate for HBA housing with handwheel, black anodized	083 636

EMERGENCY-STOP device with pull release according to EN 418

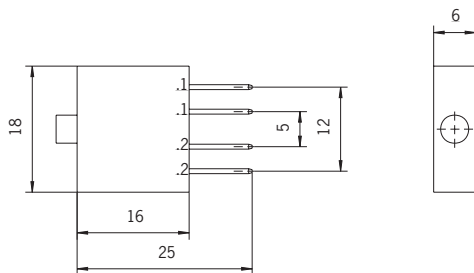
Actuator element



Notes

- ▶ The EMERGENCY-STOP device engages when actuated by pressing, unlocks when pulled, and is overload-proof
- ▶ Is used only for HBA housing without handwheel design 2/3 and all HBA housings with handwheel

Switching element



Notes

- ▶ 2 switching elements can be deployed per actuator element

Technical data

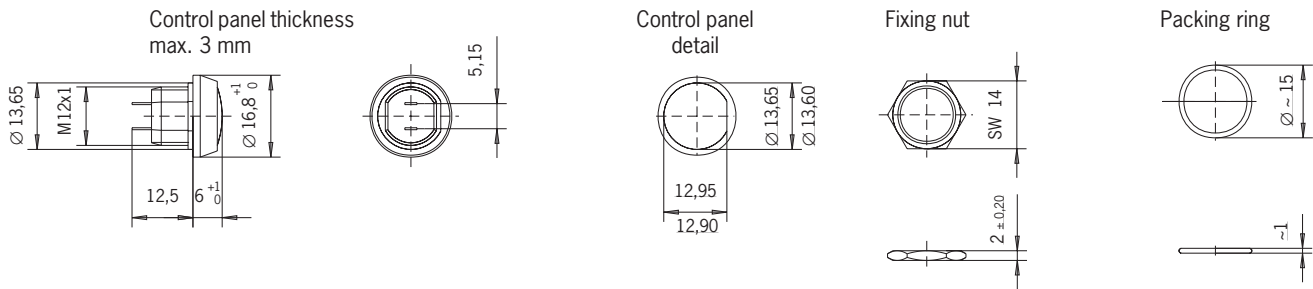
Parameters	Value	Unit
Actuator element		
Color of actuating buttons	red	
Color of bottom shell	yellow	
Maximum number of switching elements	2	
Degree of protection	IP 65	
Switching element		
Contact element	1 x positive opening	
Utilization category according to IEC 947-5-1	DC-13 U _e 24 V I _e 3 A	

Order / type table

Type designation	Cat. no.
EMERGENCY-STOP actuator element, pull release	083 637
EMERGENCY-STOP switching element, 1 positive opening	083 638
Blank plugs in fixing hole for EMERGENCY-STOP device	083 653

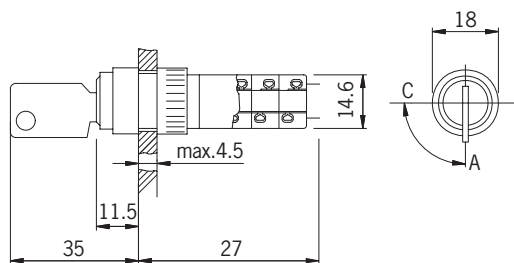
Pushbutton

Dimension drawing

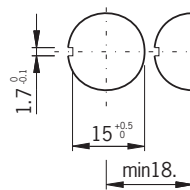


Key-operated rotary switch

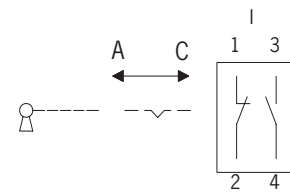
Dimension drawing



Control panel detail



Connection circuit diagram



Technical data

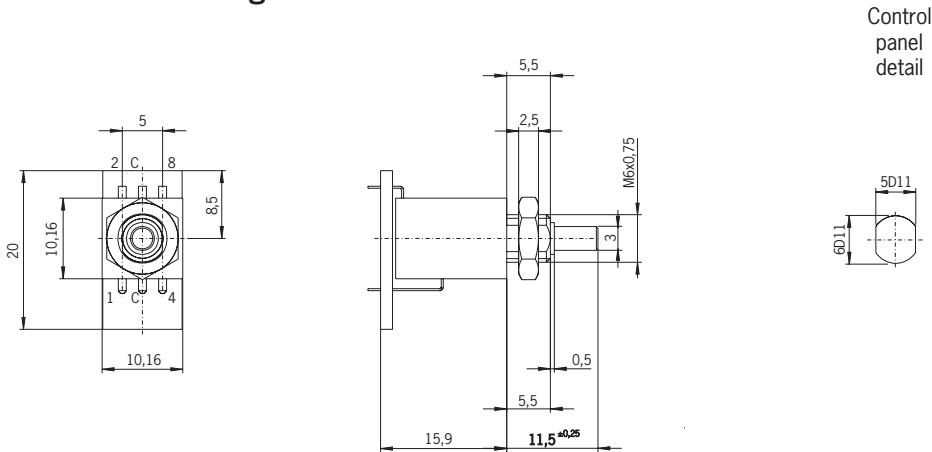
Parameters	Value	Unit
Pushbutton		
Ambient temperature	-25 to +70	°C
Frontal protective type (integrated in front plate)	to IP 67	
Switching principle	Snap switch element	
Switching element	1 x NO contact	
Maximum switching current	0.1	A
Switching voltage	30	V DC
Contact resistance (in new status)	≤ 50	mΩ
Connection type	Soldered connection	
Key-operated rotary switch		
Ambient temperature	-25 to +55	°C
Frontal protective type (integrated in front plate)	IP 65	
Switching principle	Snap switch element	
Switching element	1 x NO contact, 1 x NC contact	
Maximum switching current	5	A
Maximum switching voltage	30	V AC/DC
Contact resistance (in new status)	≤ 50	mΩ
Connection type	Soldered connection	

Order / type table

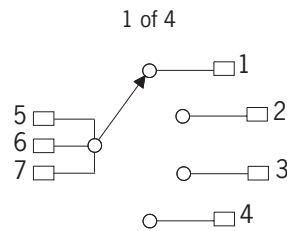
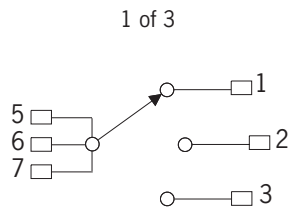
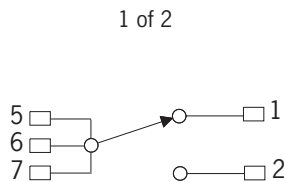
Type designation	Cat. no.
Pushbutton, black key	083 640
Pushbutton, red key	086 753
Pushbutton, green key	086 754
Pushbutton, blue key	086 757
Pushbutton, white key	086 755
Key-operated rotary switch	083 639

Selector switch 1 of X

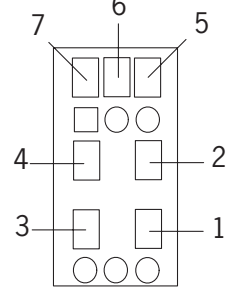
Dimension drawing



Output circuit board



View of soldered side



Technical data

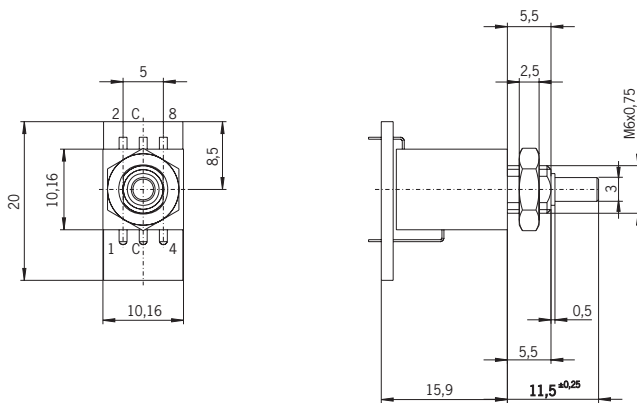
Parameters	Value	Unit
Frontal protective type (integrated in front plate)	to IP 68	
Single-hole bush mounting	M6 x 0.75	
Detent positions	2, 3 or 4, depending on type	
Output code	1 of 2, 1 of 3 or 1 of 4, depending on type	
Maximum switching capacity	5	VA
Maximum switching current	0.2	A
Maximum switching voltage	30	V~
Contact resistance (in new status)	≤ 50	mΩ
Connection type	Soldered connection on printed board	-
Maximum soldering time (soldering copper 16 W)	≤ 5 (at t ≤ 260 °C)	s

Order / type table

Type designation	Cat. no.
Selector switch, 2 detent positions, 1 of 2, batch-type	083 668
Selector switch, 3 detent positions, 1 of 3, batch-type	083 669
Selector switch, 4 detent positions, 1 of 4, batch-type	083 670

Grey code selector switch

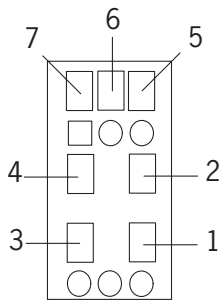
Dimension drawing



Control panel detail



View of soldered side



Connections 1 - 4: Switch outputs
Connections 5 - 7: Power supply

Output circuit board

Detent position	Output			
	4	3	2	1
1	0	0	0	0
2	0	0	0	1
3	0	0	1	1
4	0	0	1	0
5	0	1	1	0
6	0	1	1	1
7	0	1	0	1
8	0	1	0	0
9	1	1	0	0
10	1	1	0	1
11	1	1	1	1
12	1	1	1	0
13	1	0	1	0
14	1	0	1	1
15	1	0	0	1
16	1	0	0	0

Between the detent positions, all outputs are connected to the operating current.

Technical data

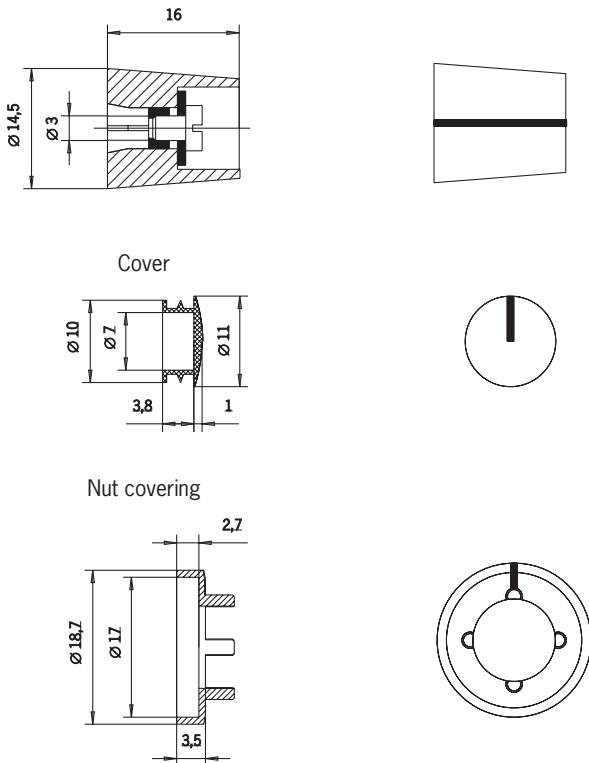
Parameters	Value	Unit
Frontal protective type (integrated in front plate)	to IP 68	
Single-hole bush mounting	M6 x 0.75	
Detent positions	5, 6, 7, 8, 12 or 16, depending on type	
Output code	Grey code	
Maximum switching capacity	5	VA
Maximum switching current	0.2	A
Maximum switching voltage	30	V~
Contact resistance (in new status)	≤ 50	mΩ
Connection type	Soldered connection on printed board	-
Maximum soldering time (soldering copper 16 W)	≤ 5 (at t ≤ 260 °C)	s

Order / type table

Type designation	Cat. no.
Selector switch, 5 detent positions, grey code, short-circuited	083 671
Selector switch, 6 detent positions, grey code, short-circuited	083 672
Selector switch, 7 detent positions, grey code, short-circuited	083 673
Selector switch, 8 detent positions, grey code, short-circuited	083 674
Selector switch, 12 detent positions, grey code, short-circuited	083 675
Selector switch, 16 detent positions, grey code, short-circuited	083 676

Rotary knob

Dimension drawing



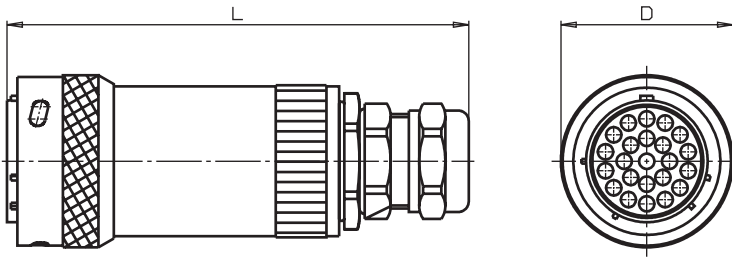
Scope of delivery

- ▶ Rotary knob with cover and nut covering

Order / type table

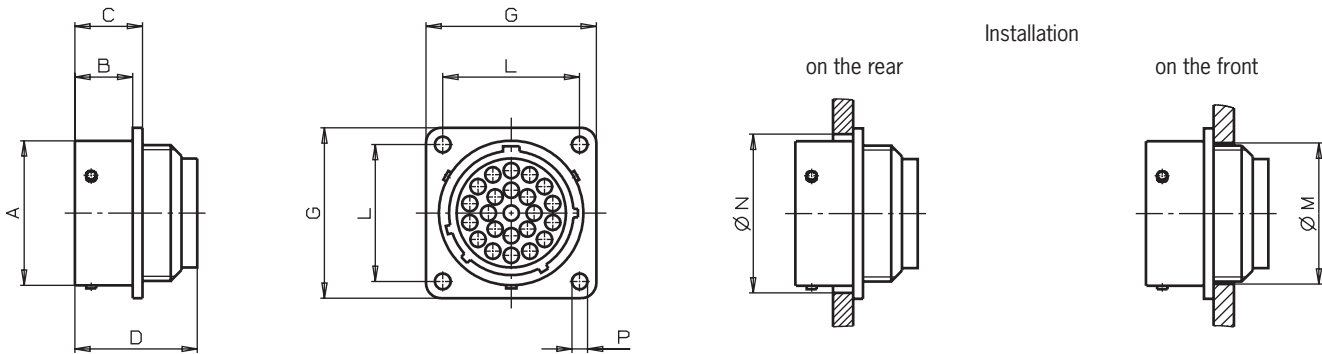
Type designation	Cat. no.
Rotary knob, matt grey with a marking, collet mounting for axis 3 mm	083 643
Rotary knob, matt black with a marking, collet mounting for axis 3 mm	083 645

Plug connector



Number of pins	D	Cable-Ø
35	40.2	8.0 - 12.0
28	37.2	8.0 - 12.0
23	33.9	6.0 - 10.0
12	27.5	5.5 - 9.5

Flange sockets



Number of pins	A	B _{max.}	C _{max.}	D _{max.}	G _{max.}	L	M	N	P
35	34.9	14.6	17.3	25.7	39.9	31.8	34.1	37.7	3.1
28	31.7	14.6	17.3	25.7	36.8	29.4	30.9	34.5	3.1
23	28.5	11.4	13.3	24.1	33.6	27	27.8	31.3	3.1
12	22.2	11.4	13.3	24.1	28.8	22.9	21.4	25	3.1

Technical data

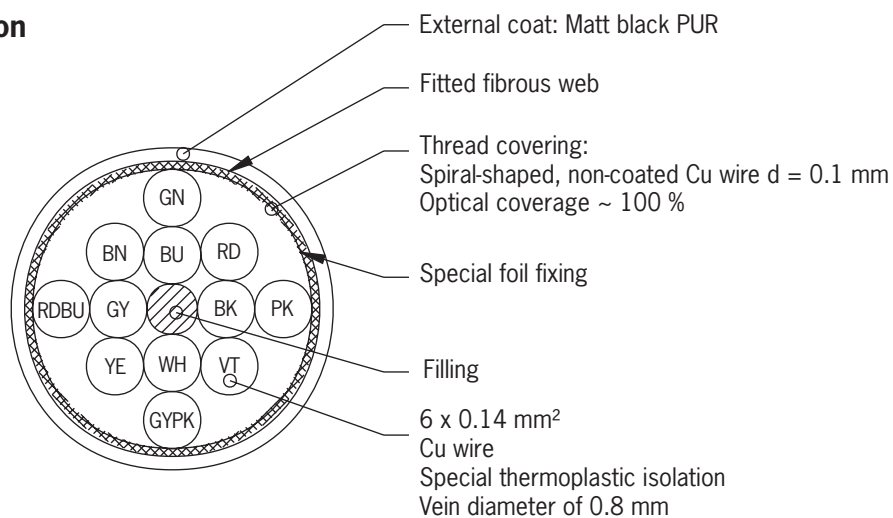
Parameters	Value	Unit
Connecting plug/Flange socket		
Housing material	Metal	
Number of pins	12 / 23 / 28 / 35	
Degree of protection according to EN 60529 (inserted)	to IP 65	
Contact material	0.4 µ Gold	

Order / type table

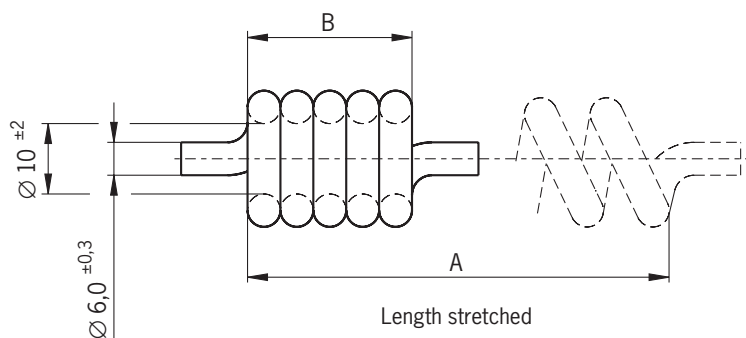
Type designation	Cat. no.
Plug connector, 35-pin with pin contacts	074 395
Plug connector, 28-pin with pin contacts	074 394
Plug connector, 23-pin with pin contacts	074 393
Plug connector, 12-pin with pin contacts	086 748
Flange socket, 35-pin with socket contacts	074 386
Flange socket, 28-pin with socket contacts	074 385
Flange socket, 23-pin with socket contacts	074 384
Flange socket, 12-pin with socket contacts	086 749

Spiral-shaped and straight 12-pole cable

View of cable cross-section



Dimensions of spiral-shaped design

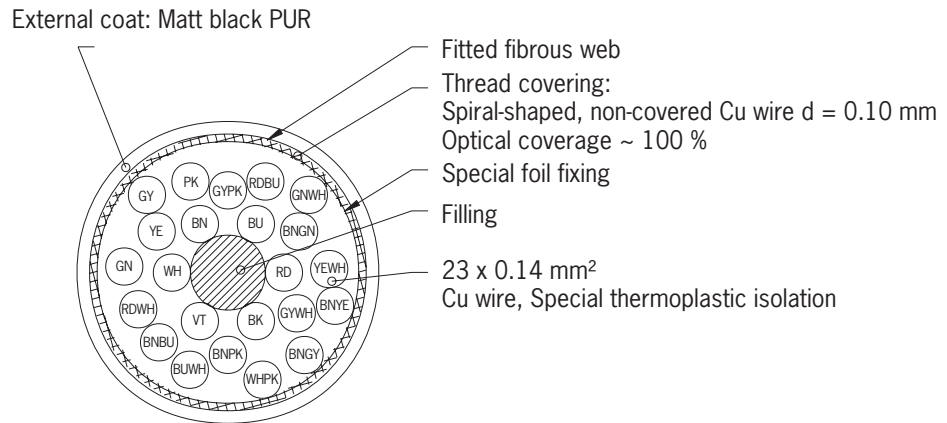


Order / type table

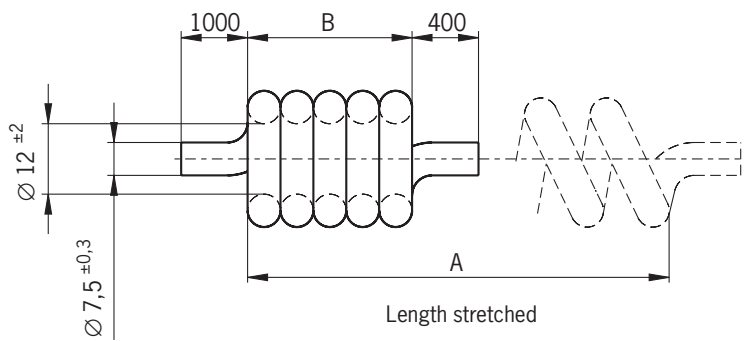
Type designation	Cable length [mm]	A [mm]	B [mm]	Cat. no.
12-veined, spiral-shaped cable	3900	approx. 2500	550 ± 20	086 721
12-veined, spiral-shaped cable	5400	approx. 4000	880 ± 20	086 722
12-veined, straight cable	3500	-	-	087 379
12-veined, straight cable	5000	-	-	087 380
12-veined, straight cable	10000	-	-	087 381

Spiral-shaped and straight 23-pole cable

View of cable cross-section



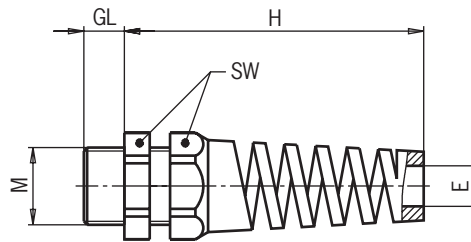
Dimensions



Order / type table

Type designation	Cable length [mm]	A [mm]	B [mm]	Cat. no.
23-veined, spiral-shaped cable	3900	approx. 2500	550 ± 20	087 408
23-veined, spiral-shaped cable	5400	approx. 4000	880 ± 20	087 409
23-veined, straight cable	3500	-	-	087 382
23-veined, straight cable	5000	-	-	087 383
23-veined, straight cable	10000	-	-	087 384

Cable gland with anti-kink spiral

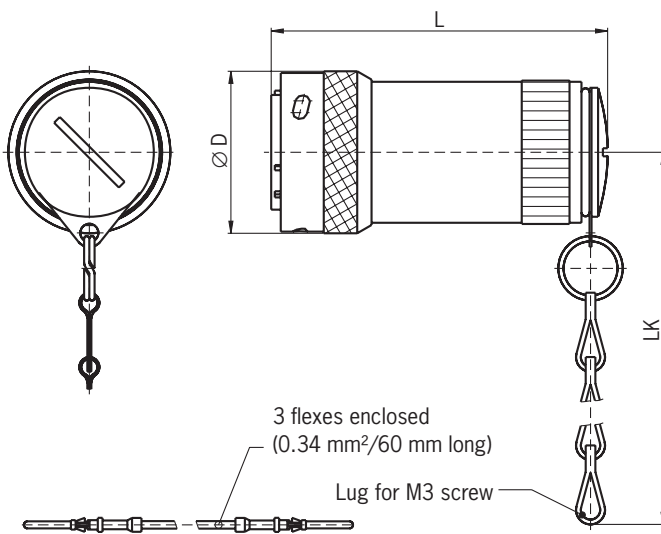


M	Cable diameter	SW	GL	H	E _{min.}	E _{max.}
M16x1.5	5 - 10	22	8	71	5	10

Order / type table

Type designation	Cat. no.
M16x1 cable gland, 5 with anti-kink spiral and fixing nut, black color	083 641

Short-circuit plug



Number of pins	D	L	LK
35	40.2	84	255
28	37.2	78	255
23	33.9	72	252
12	27.5	59.4	251

Order / type table

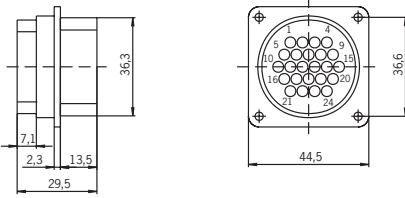
Type designation	Cat. no.
Short-circuit plug with chain, 35-pin	083 459
Short-circuit plug with chain, 28-pin	083 458
Short-circuit plug with chain, 23-pin	083 457
Short-circuit plug with chain, 12-pin	087 802

Accessories

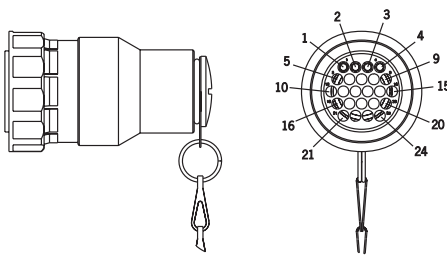
Connection kit

for HBA design - 072 910, consisting of 24-pin connection box and short-circuit plug

24-pin connection box



24-pin short-circuit plug for 24-pin flange socket (Bridged pin 1 with pin 4 and pin 2 with pin 3)



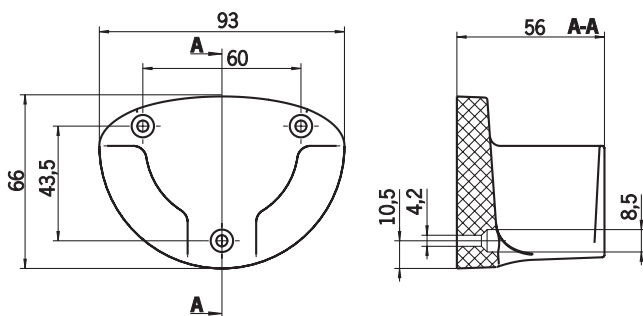
Technical data

Parameters	Value
ConnectionBox	
Housing material	Plastic
Number of pins	24
Degree of protection according to EN 60529 (inserted)	IP 65
Contact material	Copper base alloy
Short-circuit plug	
Housing material	Plastic
Number of pins	24
Degree of protection according to EN 60529 (inserted)	IP 65
Contact material	Copper base alloy

Order / type table

Designation	Cat. no.
Connection box and short-circuit plug	072 937

HBA holder



Technical data

Parameters	Value	Unit
Housing material	plastic	
Fixing system	Screws	
Ambient temperature	-5 to +60	°C
Weight	approx. 0.1	kg

Order / type table

Designation	Cat. no.
HBA holder	072 828

Appendix

- ▶ Customized hand-held pendant stations
- ▶ HBA top shell with domes and EMERGENCY-STOP position

Request form for HBA hand-held pendant stations without handwheels

Customer			
Company		Telephone	
Address		Telefax	
		E-mail	
Name		Department	
Surname		Date	

Housing

Basic Housing
 with hole for Emergency Stop
 with hole for Emergency Stop and 2 Enabling switches

Front foil

EUCHNER standard colors
 customized, see appendix

Logo

without EUCHNER
 customized appendix: label of the logo

Push button

without membrane push buttons, number: _____
 push buttons, number: _____
 not illuminated
 illuminated

Key-operated Rotary Switch

without
 with

Lamp/LED

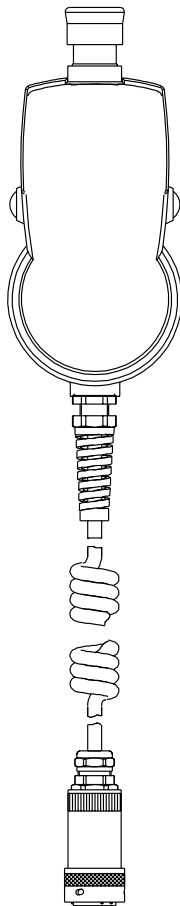
without
 customized, see appendix

Cable

spiral-shaped cable, expandable to 3.5 m
 spiral-shaped cable, expandable to 5.0 m
 straight: _____ m

Connector

Burndy metal
 Coninvers metal
 other: _____
 without connector



Emergency Stop

Moeller (pull to unlock) without Emergency Stop
 2 x NC
 1 X NC

Enabling switch

1 NO left and right
 1 NO/NC left and right
 without enabling switch

Selector switch 1

___ positions gray-code
 ___ positions 1 of X
 Inscription _____

Selector switch 2

___ positions gray-code
 ___ positions 1 of X
 Inscription _____

Inscription Selector Switch

on front foil customized, see appendix
 without

Color Rotary knob Selector Switch

black
 grey

Special requests	

Quotation			
Quantity	nonrecurring project demand		Series demand per year
Requested delivery date	Week		

Date	Signature

Request form for HBA hand-held pendant stations with handwheels

Customer			
Company		Telephone	
Address		Telefax	
		E-mail	
Name		Department	
Surname		Date	

Housing with magnetic clamp
 without magnetic clamp

LED without LED
 green
 other color: _____

Colors of the foil Euchner standard
 basic color: _____

Logo Euchner standard
 customized
 appendix: label of the logo

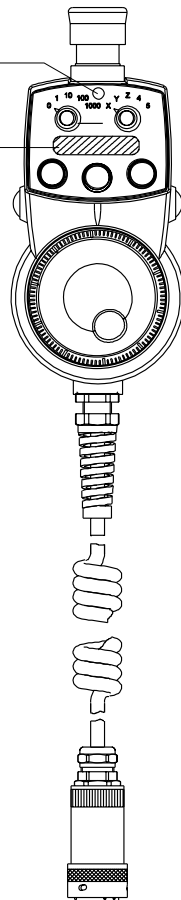
Push button 3 membrane push buttons
 other: ¹⁾ _____

without push buttons

without LEDs
 with LEDs

¹⁾ appendix: label of the push buttons

Connector Burndy metal
 Coninvers metal
 other: _____
 without connector



Emergency Stop Moeller (pull to unlock)
 without Emergency Stop
 2 x NC
 1 x NC

Selector switch left ___ positions gray-code
 ___ positions 1 of X
 without selector switch
 Inscription: _____

Selector switch left + right Knob color black
 Knob color grey

Selector switch right ___ positions gray-code
 ___ positions 1 of X
 without selector switch
 Inscription: _____

Enabling switches 1 NO left and right
 1 NO/NC left and right
 without enabling switch

Handwheel Supply voltage $U_b = 5V$
 Supply voltage $U_b = 10-30V$
 Output RS422
 Output Push-pull 5V
 Output Push-pull + U_b
 100 pulses
 25 pulses ²⁾
²⁾ only for Mitsubishi controls

Which control is used? Siemens
 Fanuc
 Mitsubishi
 others: _____

Cable spiral-shaped cable, expandable to 3.5 m
 spiral-shaped cable, expandable to 5.0 m
 straight: _____ m

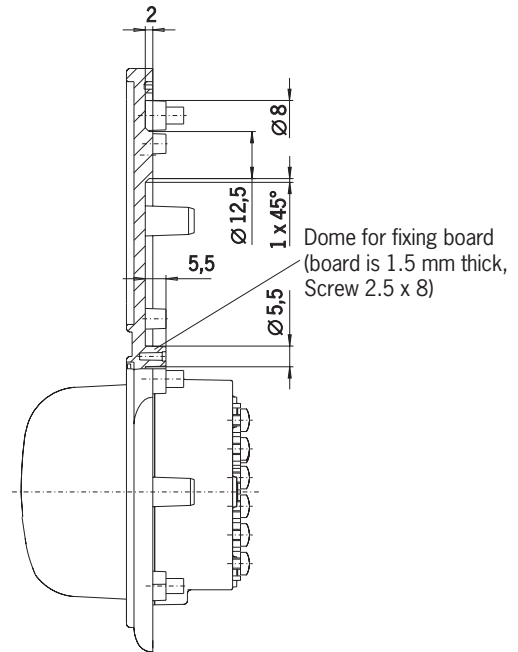
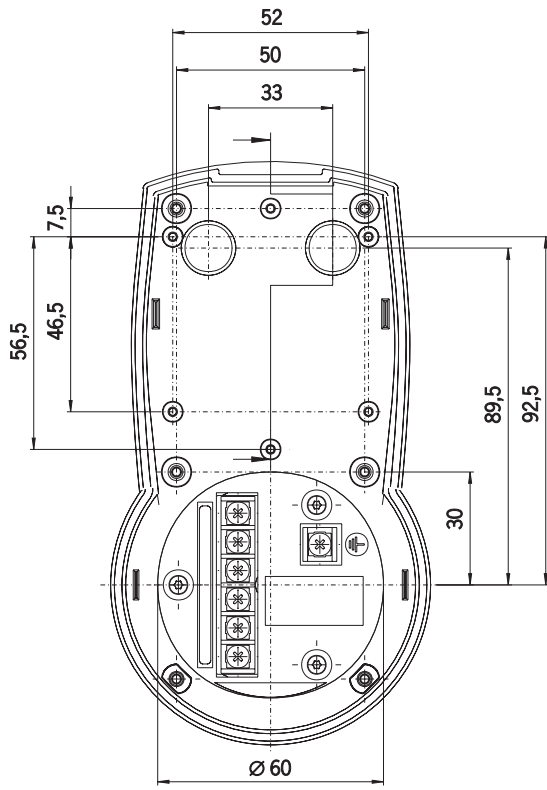
Special requests	

Quotation			
Quantity	nonrecurring project demand	Series demand per year	
Requested delivery date	Week		

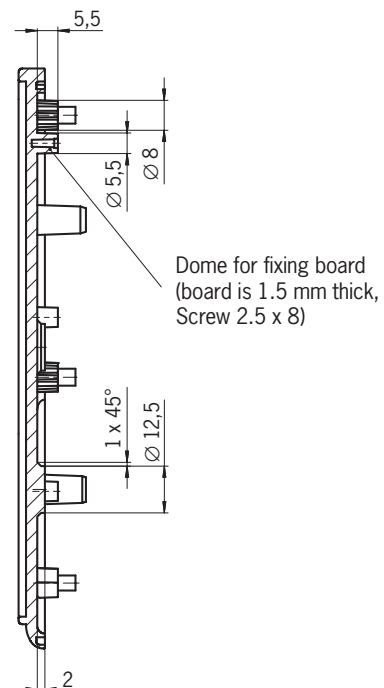
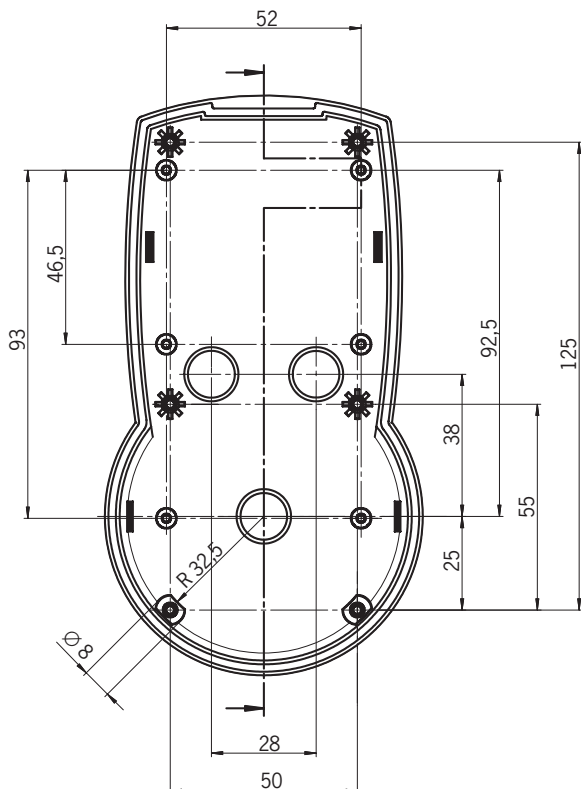
Date	Signature

Dimensions HBA top shell with domes

- ▶ HBA top shell with handwheel



- ▶ HBA top shell without handwheel



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