

Man Machine at a glance

Hand-Held Pendant Stations



Hand-held pendant station
HBA



Hand-held pendant station
HBAS



Hand-held pendant station
HBE



Hand-held pendant station
HBL



Hand-held pendant station
HBLS

Kit available



Approvals



Housing material

Plastic

Plastic

Plastic

Plastic

Plastic

Color

Gray RAL 7040

Gray RAL 7040

Blue-gray RAL 7031

Gray RAL 7040

Gray RAL 7040

Weight

Approx. 1.3 kg

Approx. 0.85 kg

Approx. 1.8 kg

Approx. 2.1 kg

Approx. 2.2 kg

Operating temperature

0 to +50 °C

0 to +50 °C

0 to +55 °C

0 to +50 °C

0 to +50 °C

Storage temperature

-20 to +50 °C

-20 to +50 °C

-20 to +55 °C

-20 to +55 °C

-20 to +55 °C

Degree of protection acc.
to EN 60529/NEMA

IP 65/250-12

IP 65/250-12

IP 65

IP 65

IP 65/250-12

Connection

Spiral cable 3.5 m,
plug connector

Spiral cable 3.5 m,
plug connector

Cable 3.5 m straight,
plug connector

Cable 3.5 m straight,
plug connector

Cable 3.5 m straight,
plug connector

Selector switches

Up to 2
with 6 positions

–

Up to 2
with 6 positions

3/12
positions

2 x 12
positions

Membrane keypad

Up to 6/14

20

–

–

12

Enabling switches

2/3-stage

2/3-stage

2/3-stage

3-stage

2-stage

EMERGENCY STOP device
acc. to EN 418

○/●

●

●

●

●

Handwheel 100 pulses

●/–

–

●

●

●

Buttons

–

–

Up to 9

3

12

Key-operated switch

–

–

–

●

–

Interface

RS422A
(handwheel)

RS422A
3964R protocol

RS422A
(handwheel)

RS422A
(handwheel)

RS422A
3964R protocol

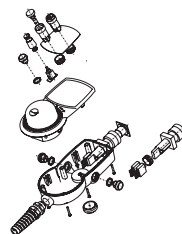
Kits for hand-held pendant stations

To enable you to use ergonomically designed housings even for small quantities, e. g. prototypes or special versions, EUCHNER provides kits for hand-held pendant stations. As a result you can assemble a hand-held pendant station in a user-friendly housing to suit your requirements.

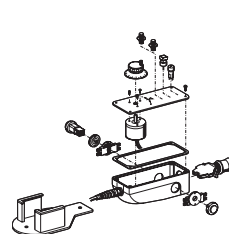
Custom hand-held pendant stations

Customized hand-held pendant stations based on the standard devices can also be produced in small quantities. EUCHNER offers the option of customized solutions so these ergonomically designed housings can be used for various requirements.

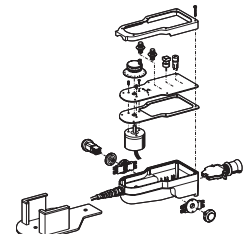
Kit HBA



Kit HBE



Kit HBL



Detailed information
in catalog

Hand-Held Pendant Stations/Handwheels

● available ○ available on request – not available

All given data refer to the respective minimum or maximum values for the entire series.

ManMachine at a glance



Joystick
WK



Joystick
WE

Environment	Approval	ⓂGL	ⓂGL
	Housing material	Reinforced thermoplastic/ aluminium	Reinforced thermoplastic/ aluminium
	Switching lever material	Stainless steel	Galvanized steel
	Weight	Approx. 0.17 kg	Approx. 0.65 kg
	Mechanical life, min.	1 x 10 ⁶	1 x 10 ⁶
	Ambient temperature with spring return switch	-5 to +65 °C	-5 to +65 °C
	Ambient temperature with stayput switch	-25 to +65 °C	-25 to +65 °C
	Mounting	IEC 947-5-1 D30	Front panel installation
	Degree of protection to IEC 529 on actuating side with/without bellows	IP 65/IP 54	IP 65/IP 54
	Connection	Switching elements, max.	8
Connection		Tab connector	Screw terminal
Contact elements		Changeover contact C IEC 947-5-1	Changeover contact Za IEC 947-5-1
Switching principle		Snap-action contact element	Snap-action contact element
Rated insulation voltage U _i		250V	250V
Rated impulse withstand voltage U _{imp}		2.5 kV	2.5 kV
Utilization category AC 15		230V/4A	230V/10A
Utilization category DC 13		24V/2A	24V/4A
Switching current, min. at 24V		12 mA	50 mA
Switching voltage, min.		10V	24V
Contact material		Silver alloy	Silver alloy
Short circuit protection (control circuit fuse)		T6/F10	T16/F25
Number of actuating directions, max.		8	8
All-round actuation R (spring return switch only)		○	○
Switching positions per direction		1	1
Pushbutton D		○	○

Detailed information in catalog

Joystick Switches

● available ○ available on request – not available

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Joystick Switches



Joystick
KB



Joystick
KF



Joystick
KE



Joystick
KC



Joystick
KP

(GL)	(GL)	(GL)	(GL)	
Reinforced thermoplastic/ aluminium	Duroplast	Duroplast	Reinforced thermoplastic/ aluminium	Reinforced thermoplastic/ aluminium
Stainless steel	Stainless steel	Stainless steel	Galvanized steel	Galvanized steel
Approx. 0.2 kg 1 x 10 ⁶	Approx. 0.2 kg 1 x 10 ⁶	Approx. 0.1 kg 1 x 10 ⁶	Approx. 0.75 kg 1 x 10 ⁶	Approx. 0.75 kg 1 x 10 ⁶
-5 to +65 °C	-5 to +65 °C	-25 to +65 °C	-5 to +65 °C	-5 to +65 °C
-25 to +65 °C	-25 to +65 °C	-25 to +65 °C	-25 to +65 °C	-25 to +65 °C
IEC 947-5-1 D30	IEC 947-5-1 D22	IEC 947-5-1 D22	Front panel installation	Front panel installation
IP 65	IP 65	IP 65	IP 65/IP 50	IP 65/IP 50
4	4	4	3 per direction	1 per direction
Tab connector	Screw terminal	Tab connector	Tab connector/ screw terminal	Screw terminal
Changeover contact C IEC 947-5-1	Changeover contact C IEC 947-5-1	Changeover contact C IEC 947-5-1	Changeover contact C IEC 947-5-1	Analog output -10 to +10V
Snap-action contact element	Snap-action contact element	Snap-action contact element	Snap-action contact element	○
250V	250V	250V	250V	50V
2.5kV	2.5kV	2.5kV	2.5kV	-
230V/5A	230V/5A	230V/4A	230V/4A	-
24V/3A	24V/3A	24V/2A	24V/2A	-
10mA	10mA	12mA	12mA	-
12V	12V	10V	10V	-
Silver alloy	Silver alloy	Silver alloy	Silver alloy	Silver alloy
T10/F20	T10/F20	T10/F20	T6/F10	-
8	8	8	8	1 axis, 2 axes or 2 axes simultaneously
○	-	○	○	-
1	1	1	1	-
-	-	-	○	○

ManMachine at a glance



Handwheel
HKD



Handwheel
HKC



Handwheel
HKA

Environment	Approval			
	Housing material	Aluminium	Thermoplastic	Thermoplastic
	Weight	0.5 kg	0.25 kg	0.25 kg
	Mechanical life, min.	20 x 10 ⁶	20 x 10 ⁶	20 x 10 ⁶
	Operating temperature	0 to +70 °C	0 to +50 °C	0 to +50 °C
	Storage temperature	-25 to +85 °C	-20 to +50 °C	-20 to +50 °C
	Atmospheric humidity, max.	80%	80%	80%
	Front degree of protection, EN 60529/IEC 529	IP 65	IP 65	IP 65
	Front degree of protection, NEMA	250-12	250-12	250-12
Connection	Pulses per revolution	25 or 100, 2 signals each (A/B), 90° or 75° offset 	25 or 100, 2 signals each (A/B), 90° or 75° offset 	25 or 100, 2 signals each (A/B), 90° or 75° offset
	Detent mechanism	Magnetic	Magnetic	Magnetic
	Detent positions	100	100	100
	Shaft loading, axial, max.	25 N	25 N	25 N
	Shaft loading, radial, max.	40 N	40 N	40 N
	Resistance to vibration			
	Vibration (3 axes)	DIN/IEC 68-2-6	DIN/IEC 68-2-6	DIN/IEC 68-2-6
	Shock (3 axes)	DIN/IEC 68-2-27	DIN/IEC 68-2-27	DIN/IEC 68-2-27
	EMC protection requirement acc. to CE	EN 61000-6-2 EN 61000-6-4	EN 61000-6-2 EN 61000-6-4	EN 61000-6-2 EN 61000-6-4
	Output circuit	RS422 or push-pull	RS422 or push-pull	RS422 or push-pull
	Connection	Ribbon cable V, screw terminal S, D-Sub-Min X	Screw terminal S	Screw terminal S

Detailed information in catalog

Hand-Held Pendant Stations/Handwheels

● available ○ available on request – not available

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Electronic Handwheels



Handwheel
HWA



Handwheel
HWB



Handwheel
HWD



Handwheel
HWE



Handwheel
HWF

Plastic/metal	Plastic/metal	Plastic/metal	Plastic/metal	Plastic/metal
0.1 kg	0.125 kg	0.02 kg	0.015 kg	0.02 kg
1 x 10 ⁶	1 x 10 ⁶	0.25 x 10 ⁶	1 x 10 ⁶	1 x 10 ⁶
0 to +50 °C	0 to +50 °C	0 to +70 °C	0 to +60 °C	0 to +60 °C
-20 to +50 °C	-20 to +50 °C	-10 to +80 °C	-10 to +80 °C	-10 to +80 °C
80%	80%	-	-	-
IP 65	IP 65	IP 65	IP 65	IP 65
250-12	250-12	250-12	250-12	250-12
25 or 100, 2 signals each (A/B), 90° or 75° offset	25 or 100, 2 signals each (A/B), 90° or 75° offset	25 or 100, 2 signals (A/B)	25 or 100, 2 signals (A/B)	25 or 100, 2 signals (A/B)
Mechanical	Mechanical	Mechanical	Mechanical	Mechanical
100	100	50	20	25
25N	25N	-	-	-
40N	40N	-	-	-
-	-	-	-	DIN/IEC 68-2-6 DIN/IEC 68-2-27
-	-	-	-	-
RS422 or push-pull	RS422 or push-pull	Transistor 	CMOS level 	Transistor
Screw terminal T	Screw terminal T	Printed circuit board installation	Printed circuit board installation	Printed circuit board installation

Hand-Held Pendant Stations/Handwheels

ManMachine at a glance

Electronic-Key-System



General

Interface, data transfer

	RS232 serial RS422	USB	PROFIBUS
Approval			
Housing material	Plastic (PA 6 GF30 gray)	Plastic (PA 6 GF30 gray)	Plastic (PA 6 GF30 gray)
Ambient temperature at $U_b=DC24V$	0 to +55 °C	0 to +55 °C	0 to +55 °C
Mounting cut-out acc. to DIN 43700	33x68 mm	33x68 mm	33x68 mm
Operating voltage U_b (regulated, residual ripple < 5%)	20 to 28 V DC	Via USB	20 to 28 V DC
Current consumption, max.	100 mA	100 mA	150 mA
Degree of protection acc. to IEC 60529	IP 67 installed	IP 67 installed	IP 67 installed
Interface to the PC or to the control system	Serial RS232/RS422	USB full speed	RS485
Address range	–	–	0 to 126
Transfer protocol	ActiveX® module as protocol driver	ActiveX® module as protocol driver	Profibus DP acc. to EN 50170
Data transfer rate	9.6 kBaud	9.6 kBaud	9.6 to 500 kbit/s 1.5 to 12 Mbit/s
Connection type for power supply	Miniature plug connector, 3-pin	Via USB	Miniature plug connector, 3-pin
Interface connection type	Sub-D, 9-pin	USB type B	Sub-D, 9-pin
Cable length, max.	RS232 5 m/RS422 1000 m	3 m	100 to 1200 m
LED indicator	Green: »Ready« Yellow: »Electronic-Key active«	Green: »Ready« Yellow: »Electronic-Key active«	Green: »Ready« Yellow: »Electronic-Key active« Red: »Error«

System overview

The Electronic-Key-System EKS is used for electronic access management. It makes it possible to also log product parameters and operator entries (e. g. in accordance with FDA standard 21 CFR part 11). The Electronic-Key, in the form of a robust tag, contains a data carrier and an antenna (transponder). The data carrier has a combined read/write and fixed-code memory (see table Electronic-Key memory structure). In operation the Electronic-Key is inserted into the Electronic-Key adapter and is held in place by a spring clip. The data are transferred between the Electronic-Key adapter and the Electronic-Key without using any contacts. The Electronic-Keys are available in different colors. The colors can be used, for example, to indicate the different levels of access rights.

Electronic-Key memory structure

Byte no. [dec]	E ² PROM (programmable)						ROM (serial number)	
	0	1	...	114	115	116	...	123
Byte no. [hex]	00	01	...	72	73	74	...	7B
Quantity: 116 bytes						Quantity: 8 bytes		

Key management using the Electronic-Key-Manager EKM

With the Electronic-Key-Manager EKM EUCHNER also provides a flexible PC software package for programming and managing Electronic-Keys. The freely programmable memory on the Electronic-Key can be structured exactly as required using EKM. The full version of EKM is based on a client/server architecture with central database.

Detailed information in catalog

Electronic-Key-System

● available ○ available on request – not available

All given data refer to the respective minimum or maximum values for the entire series.

Please send a fax for contact

+49-(0)711 - 753316

Company _____

First Name/Last Name _____

Department _____

Street, No./P.O. Box _____

Post Code/City _____

Phone/Fax _____

Email _____

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