Overview

PERSONAL SAFETY
The command circuit that authorises the start-up of the process is closed only by the complete insertion of the safety key, and the circuit is opened when this is removed. This prevents intentional tampering with the machine by the operator until the safety protection device is opened.

OPERATING SAFETY
Designed to lock the safety device when closed, when the key is inserted in the switch the multiple block device is activated and the NC contact can be closed.

SAFETY IN USE
The device has been designed to permit limited key vibration to make it relatively insensitive to mechanical disturbances.

B

5 WAY KEY SWITCHES

- The high precision PA6 thermoplastic drive head, reinforced with glass fibre, colour RAL 9005, for the correct insertion of the command key.
- The head can be rotated through 90°. Four possibilities for the lateral connection of the key and one on the upper surface (5 way).
- Contact element available for the E102-E202-E302 two contact series with slow action, 1NO + 1NC and 2NC. For the E400 series, it is also possible to add two 4-contact slow action contact elements, 3NC + 1NO (80) and 2NC + 2NC (81).

● 5 WAY COMMAND KEYS

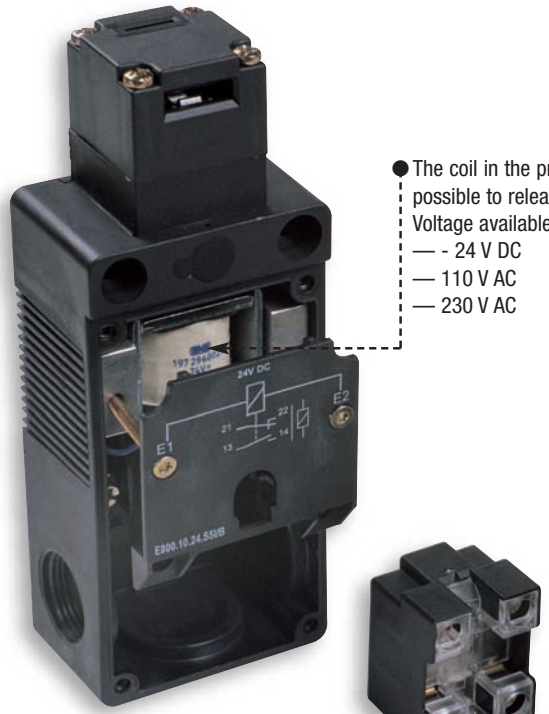
Z5 Z5-1 Z5-2 Z5-3 Z5-4

Overview

The E802 series electromagnetic lock/release 5-way key safety switches are used in the protection barriers of machines **with inertia** movement (machines whose stoppage time is greater than the access time to the action zone), which require controlled opening of the protection systems.
The switches are in accordance with the EN292, EN294, EN60204, EN1088 and EN945-1 safety standards.
The range is available in metal and thermoplastic versions, both with five types of contact element, each of which is associated with three types of coil, depending on the operating voltage.

E802...S5 - E802...S5/B

SPRING LOCK DESIGN (E802…S5 and E802…S5/B)
The spring lock holding mechanism operates on the **rest current** principle. When the power supply voltage of the electromagnet is cut off, it is not possible to open the safety barrier directly. This means that once the key has been inserted it is locked in place by elastic force and can be removed only by supplying power to the magnet or rotating the auxiliary release device.



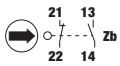
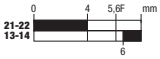
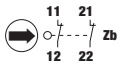
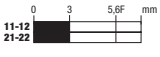
- The coil in the protection circuit makes it possible to release the command key.
  Voltage available:
  — - 24 V DC
  — 110 V AC
  — 230 V AC

- **Series E802…S5 auxiliary release:** This is used to release the holding mechanism irrespective of the condition of the electromagnet.
  — Undo the safety screw
  — Rotate the auxiliary release through 180° in the direction of the arrow or symbols using a screwdriver.
  After activation, the safety screw has to be returned to its position and sealed (using safety paint, for example) to avoid possible risks.

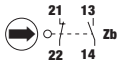
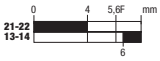
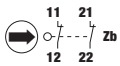
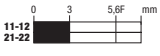
- **Series E802…S5/B auxiliary release:** In this product, the release mechanism is a key lock for speed and simplicity of operation.

Dual insulation plastic

E102 - 5 way with Z5 key

Code	Model	Description	Type	Travel diagram	Weight
EN840010	**E102 01 S5I**	1NO+1NC Slow action	**01** 		0,100
EN840020	**E102 04 S5I**	2NC Slow action	**04** 		0,100

E202 - 5 way with Z5 key

Code	Model	Description	Type	Travel diagram	Weight
EN840030	**E202 01 S5I**	1NO+1NC Slow action	**01** 		0,105
EN840040	**E202 04 S5I**	2NC Slow action	**04** 		0,105

- Accessories page **B13**
- Installation examples page **B15**
- Dimensions page **B17**
- Technical information page **B4**
- Operating features page **B5**
- Approval and certification page **D8**

5 way – command keys – E102...E402

Code	Model	Description	Weight
ER840130	**Z5**	Angle key with fixing perpendicular to the drive direction, supplied as series	0,100

Code	Model	Description	Weight
ER840140	**Z5-1**	Straight key for straight line shift	0,100

Code	Model	Description	Weight
ER840150	**Z5-2**	Hinged key with screw for key angle regulation	0,150

Code	Model	Description	Weight
ER844510	**Z5-3**	Long straight key for straight line shift	0,200

Code	Model	Description	Weight
ER844500	**Z5-4**	Long angle key with fixing perpendicular to the drive direction	0,200

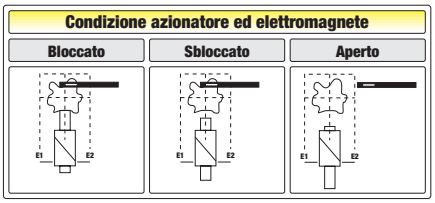
• Installation examples page **B15**
• Dimensions page **B18**

Dual insulation plastic

5 way with electromagnetic release

Driver locked mechanically. Can be removed electrically by supplying power to the electromagnet or rotating the auxiliary release device.

Code	Model	Description	Type	Contact release position Locked	Contact release position Open	Electrom. voltage	Weight
EN842600	**E802 10 24 S5I/B**	1NO+1NC Slow action	**10**	21 13 / 22 14 Zb	21 13 / 22 14 Zb	24 V DC	0,375
EN842610	**E802 10 110 S5I/B**					110 V AC	0,375
EN842620	**E802 10 230 S5I/B**					230 V AC	0,375



Locked: electromagnet de-energised, key in
Released: electromagnet excited, key in
Open: electromagnet excited, key out

Accessories

5 way – command keys – E802

Code	Model	Description	Weight
ER840150	**Z5-2**	Hinged key with screw for key angle regulation 0,150	

Code	Model	Description	Weight
ER844510	**Z5-3**	Long straight key for straight line shift	0,200

Code	Model	Description	Weight
ER844500	**Z5-4**	Long angle key with fixing perpendicular to the drive direction	0,200

- Installation examples page **B16**
- Dimensions page **B17**
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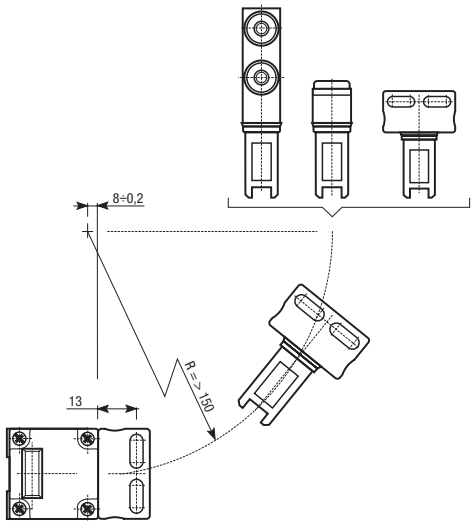
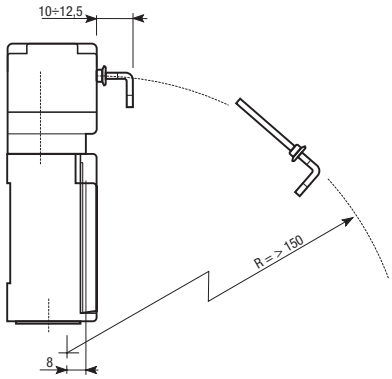
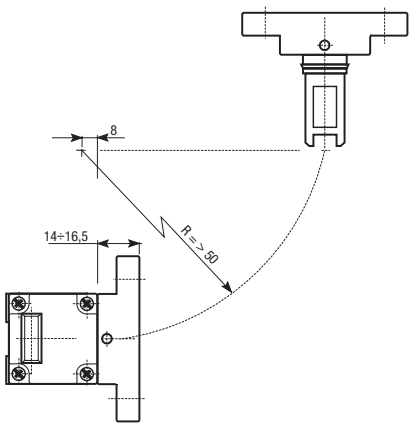
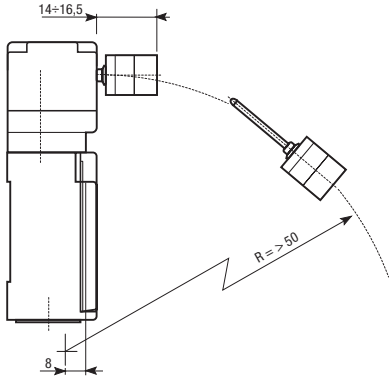
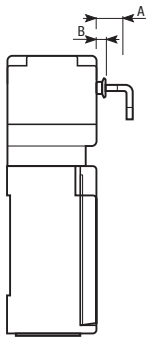
- Operating features page **B5**
- Approval and certification page **D8**

5 way – Examples of installation

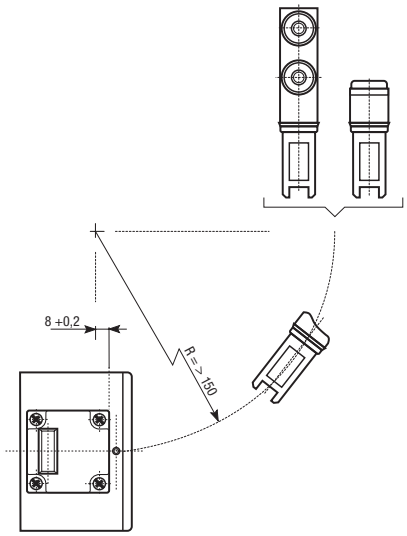
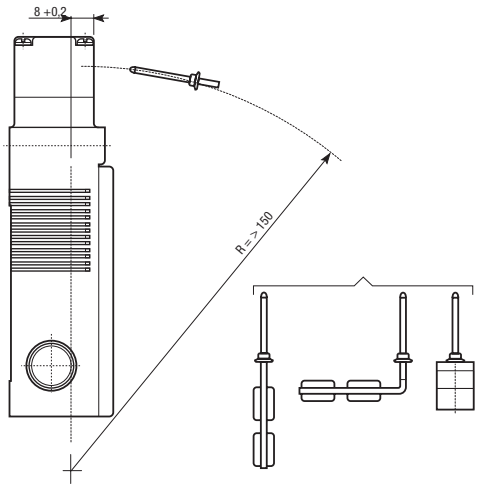
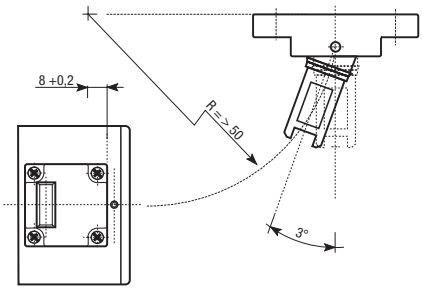
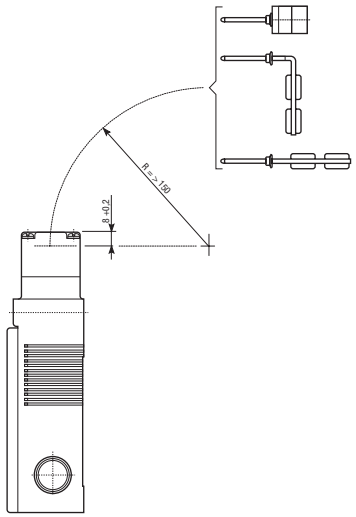
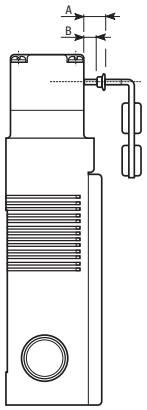
Installing the key driver

Assembly of the driver on a rotating protective device (allow space for pivot points)

Type of key	Horizontal mounting	Vertical mounting
Z5 Z5-1 Z5-3 Z5-4		
Z52		
NFC		**Assembly** Never use the safety switch as a mechanical travel stop. Recommended positioning for correct operation A (contact switching point) = 4 mm B (driver limit switch point) = 0 to 1 mm max The contacts remain closed from point A to point B (4 mm max travel)

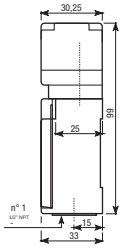
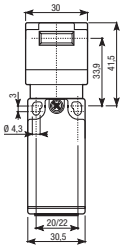
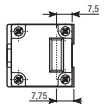
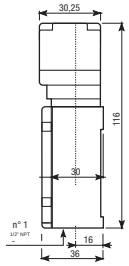
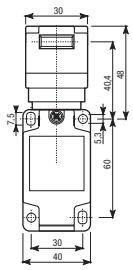
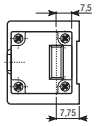
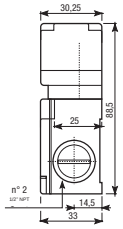
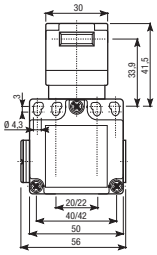
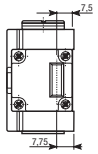
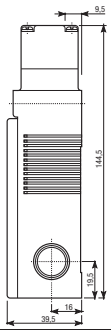
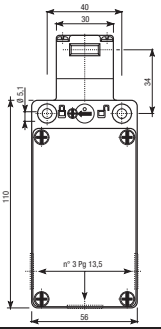
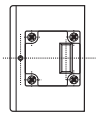
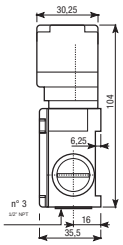
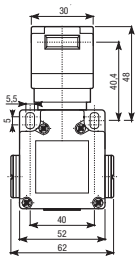
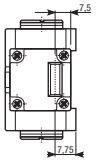
5 way – Examples of installation

Installing the key driver
Assembly of the driver on a rotating protective device (allow space for pivot points)

Type of key	Horizontal mounting	Vertical mounting
Z5-3 Z5-4		
Z5-2		
NFC		**Assembly** Never use the safety switch as a mechanical travel stop. Recommended positioning for correct operation A (contact switching point) = 4 mm B (driver limit switch point) = 0 to 1 mm max The contacts remain closed from point A to point B (4 mm max travel)

5 way - Dimensions (mm)

Dual insulation plastic – Metal

Series	Side view	Front view	Top view	Series	Side view	Front view	Top view
E102 S5I (5 way)				**E402 S5I S5M (5 way)**			
E202 S5I S5M (5 way)				**E802 S5I S5M S5I.../E S5M.../E (5 way)**			
E302 S5M (5 way)				**E802 S5I.../B S5M.../B (5 way)**