

Stand-alone biometric switch
(XB5S1/XB5S2)Stand-alone USB biometric switch
(XB5S3/XB5S4)USB biometric switch dedicated to Schneider HMI
(XB5S5)

Biometric Switches

The biometric switches of the Harmony® XB5S range are designed to control and secure access to systems and machines by checking users' authorization through fingerprint recognition.

The following types of biometric switches are available:

- Stand-alone biometric switches
 - type XB5S1, with 2 fixed states (bistable)
 - type XB5S2, with pulse control (monostable)
- Stand-alone USB biometric switches
 - type XB5S3, with 2 fixed states (bistable)
 - type XB5S4, with pulse control (monostable)
- USB biometric switches dedicated to Schneider HMI
 - type XB5S5, connected permanently with HMI

The biometric switches are aimed at 2 categories:

- Administrators, who decide and manage the list of users
 - the only people who can record the fingerprints in the device memory
- Users, who are authorized to use the biometric switch as a control unit
 - at least 1 of their fingerprints should be recorded in the device memory
 - access is granted when the finger is placed on the sensing screen

The USB switches communicate with the PC/HMI via the USB port to manage the user database. This database can be visualized, saved, and duplicated by PC/HMI with XB5SSoft application [100] [101]. The fingerprint records can also be erased in the absence of users.

The Schneider HMI [102] with VijeoDesigner software [103] enables the switches to authorize different access levels and trace HMI operations of each user.

The switch operates on 24 Vdc and provides protection against:

- Reverse polarity
- Overload and short-circuit (switching capacity ≤ 200 mA)

Mounting

The product is of monolithic design (a single plastic housing) and is mounted by means of a nut (hand-tightened without need for tools) in a standard 22.5 mm/0.886 in. diameter hole. It can be installed on a flat, horizontal, or vertical surface.

A protective cover is available as an accessory to protect the active face of the sensing screen. This cover is mounted using a self-adhesive hinge.

A Female/Female USB extension cable makes it possible for the USB biometric switch to have the female USB port within a 22 mm/0.866 in. diameter hole on the control panel front.

Environment

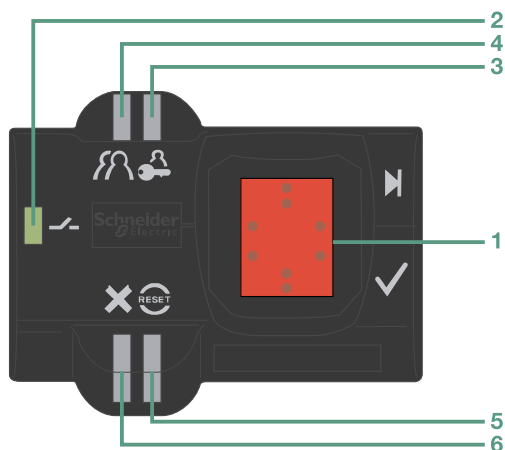
- Conformity to standards: UL, CSA, GOST, and CE
- Product certifications:
 - CSA C22-2 No. 14
 - UL 508
 - IEC 61000-6-2 and IEC 61000-6-4
- Degree of protection conforming to standard IEC 60529:
 - IP 65
 - NEMA 12
- Ambient air temperature:
 - For storage: -13 to 158°F (-25 to 70° C)
 - For operation: 23 to 122°F (-5 to 50° C)

[100] Compatible with all versions of Harmony XB5SSoft application. The XB5SSoft is a freeware application and can be downloaded from our website www.schneider-electric.com.

[101] The user database cannot be uploaded from USB biometric switch to the PC.

[102] Compatible with Magelis iPC, STU, OT, GXO, GT (except GT1000 series), GK, GH, and GTO models.

[103] Compatible with VijeoDesigner HMI editor software V6.1, Service pack 2.



Description

- The stand-alone biometric switch (XB5S1/XB5S2) consists of a dark gray housing, with the following on its front face:
 - A sensing screen **1** that allows the registration and subsequent recognition of the registered fingerprints,
 - A green LED output state indicator **2** that illuminates when the output is activated (solid-state N.O. contact),
 - An orange LED **3**, indicating an administrator's "Registration" mode,
 - An orange LED **4**, indicating an operator's "Registration" mode,
 - A red "RESET" LED **5** which indicates, in "Delete" mode, that the administrator is deleting all or part of the memory,
 - A red LED **6** which flashes when the reader is presented with an "unrecognized" fingerprint or in the event of incorrect operation.
- The stand-alone USB biometric switch (XB5S3/XB5S4) consists of a dark gray housing with a sensing screen **1** for fingerprints, a green LED **2** for indicating the output state, and a red LED **6** for the unrecognized fingerprint on its front face.
- The USB biometric switch dedicated to Schneider HMI (XB5S5) consists of a dark gray housing with a sensing screen **1** for fingerprints on its front face.

Table 19.198: Biometric Switch Catalog Numbers

Description	Connection	Catalog Number
Bistable biometric switch 24 V DC PNP output	By 2 m/6.56 ft cable	XB5S1B2L2
	By M12 connector	XB5S1B2M12
Monostable biometric switch 24 V DC PNP output	By 2 m/6.56 ft cable	XB5S2B2L2
	By M12 connector	XB5S2B2M12
Bistable USB biometric switch 24 V DC PNP output	By 2 m/6.56 ft cable	XB5S3B2L2
	By M12 connector	XB5S3B2M12
Monostable USB biometric switch 24 V DC PNP output	By 2 m/6.56 ft cable	XB5S4B2L2
	By M12 connector	XB5S4B2M12
USB biometric switch dedicated to Schneider HMI 24 V DC	By 2 m/6.56 ft cable	XB5S5B2L2



XB5S1B●●●●



XB5S3B●●●●



ZB5SZ70



ZB5SZ72

Table 19.199: Accessories

Description	Function	Catalog Number
Protective cover, translucent and self-adhesive	Protection of sensing screen	ZB5SZ70
Mounting nut, Ø 22 mm/0.866 in.	Spare part	ZB5SZ71
Legend plate, 27 x 8 mm/ 1.06 x 0.32 in., self-adhesive, blank, black background, for engraving	—	ZBY0101T
Stainless-steel protective cover	Protects switch from outside elements and vandalism	ZB5SZ72