

Harmony™ Biometric Switch

Advanced fingerprint recognition technology means increased security for your employees, machines and systems, plus lower operating and administrative costs.

Schneider
Electric

Make the most of your energySM



Mastering your machine access control

Protect access to your operators and equipment,
while lowering costs.

Using fingerprint recognition, the Harmony biometric switch from
Schneider Electric is an innovative, stand-alone solution that
protects your equipment from unauthorized use at a price well
below competitive products.



Protect both your operators and your equipment from unauthorized access and usage



- Utilizing fingerprint recognition technology, Schneider Electric's Harmony biometric switch is a competitive alternative to other access control systems.
- Simple and efficient, it enables you to restrict access to sensitive areas and machine functions – including, start-up, adjustments, and maintenance – to only authorized personnel.
- The advances and level of performance achieved in biometric technology has now enabled us to offer a robust, cost-effective solution, which is essential in industrial environments.
- As a worldwide leader in operator dialogue components, Schneider Electric is excited to offer you an affordable machine access control solution, without forgetting the importance of user-friendliness and simplicity of installation.

Use secure “fingerprint recognition” technology to help ensure reliable machine access control



Specialized and secure technology

- Efficient protection against theft, forgery, loss and ID sharing (as opposed to keys, badges, codes and passwords, etc.)
- Possibility of falsification is greatly reduced due to uniqueness of fingerprint
- Very low error and rejection rate
- Authentication safeguards; registration managed by the administrator and usage by the operator

Robust industry solution

- Excellent resistance to mechanical shock and vibration
- EMC, IP65 and NEMA 12 protection
- UV protection to ISO 4892-142 (for 500 hrs.)

High performance

- Memory capacity: 200 fingerprints
- Prints from multiple or different fingers can be recorded for each operator increasing security
- High-intensity LEDs
- <1 second to authenticate an operator and to authorize or refuse their access
- <0.1% false acceptance rate (FAR)



Intuitive colored LED dialogue system



Reduce your costs

- Reduce maintenance and machine downtime resulting from unauthorized operation (inappropriate adjustment of machine settings, vandalism, etc.)
- Eliminate costs associated with the administration or loss of keys, cards, badges, etc.

With a stand-alone solution, no interface is required

Schneider Electric's Harmony biometric switch is an extremely-compact, easy-to-use product.



Secured by a single nut inside the panel (no tool required)



User-friendly

- No password to be remembered, no losing or forgetting a key or badge – your fingerprint is your key
- Fully stand-alone programming and operational status can be achieved without the use of a supplementary interface
- Simple and intuitive; registration/recording directly on the front face of the switch using LED dialog
- Ease of registration; rapid response

99% accuracy

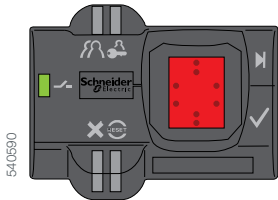
- Acceptance rate higher than 99% on first reading of fingerprint
- Fingerprint processing assures anonymity of persons, since the purpose of this product is authorization – not identification

Compact and simple to install

- Minimum size, enabling mounting in a standard Ø22 mm cut-out
- Quick connection using bared wires or M12 connector
- Integration as quick as any other Harmony control component, either on new or existing equipment

Control and signalling units

Harmony XB5 biometric switches 22 mm diameter, plastic



540690

Presentation

The fingerprint reader biometric switch is designed for use in industry to limit access to systems or machines, no type of interface is required for programming and operating the switch; it is an independent unit

Two types of product are available:

- Maintained biometric switches: Type XB5 S1B, with two output states
- Momentary biometric switches: Type XB5 S2B, with pulse control

The biometric switch is aimed at two types of users:

- The administrator who manages the registration and deletion of fingerprints
- The operator who, once registered, uses the product as a control unit
- The product is of monolithic design (a single-plastic housing) and is secured by means of a nut (hand-tightened without need for tools) in a standard, 22 mm diameter hole
- It operates on a 24 VDC supply
- Connection to the power supply and to the control output (relay or PLC) is by means of a 2 m cable or by an M12 connector
- 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 secured by means of a self-adhesive hinge
- A stainless-steel guard is also available to protect from outside elements and vandalism

Description



References

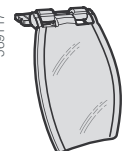
Complete units

Description	Output	Connection	Reference
Maintained biometric switch, 24 VDC	PNP	By 2 m cable	XB5 S1B2L2
		By M12 connector	XB5 S1B2M12
Momentary biometric switch, 24 VDC	PNP	By 2 m cable	XB5 S2B2L2
		By M12 connector	XB5 S2B2M12
Description	Function	Reference	
Protective cover, translucent and self-adhesive	Protection of the sensing screen	ZB5 SZ70	
Fixing nut, 22 mm diameter	Replacement part	ZB5 SZ71	
Legend plate, 28 mm x 7 mm, self-adhesive, blank, with black background, for engraving	—	ZBY 0101T	
Mounting adaptor	Allows product to mount in a 30 mm mounting hole	ZBZ 41	
Stainless steel guard	Protects switch from outside elements and vandalism	ZB5 SZ72	



XB5 S•B•••••

568941



ZB5 SZ70

569117



ZB5 SZ72


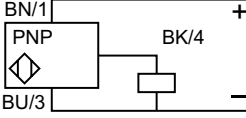
Control and signalling units

Harmony XB5 biometric switches 22 mm diameter, plastic

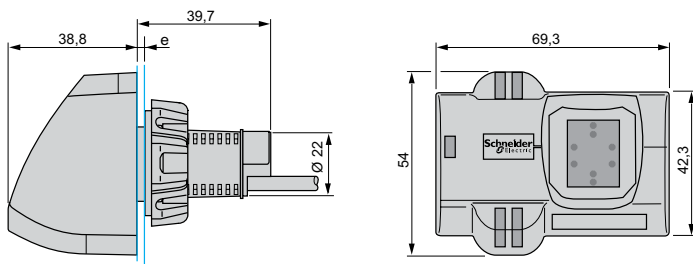
Characteristics

Biometric switch type		XB5 S1B and XB5 S2B	
Product certifications	—	—	UL, c _{us} , CE IEC 61000-6-2/IEC 61000-6-4
Ambient air	Storage	°C	-25...+70
	Operation	°C	-5...+50
Vibration resistance	Conforming to IEC 60068-2-6	—	1 gn-9 Hz to 500 Hz Amplitude 3 mm - 5 Hz to 9 Hz
Electric shock resistance	Conforming to IEC60068-2-27	—	50 gn, duration 11 ms
Connection method	Cable	—	Length: 2 m, 3-wire, pre-wired
	Connector	—	M12
Materials	Housing	—	Polyamide PA66
	Cable	—	PvR 3 x 0.34 mm ²
Memory capacity	—	—	200 records
Output state indicator	—	—	Green LED
Short-circuit protection	—	—	By gG fuse - 250 mA
Rated supply voltage	—	V	24 VDC with protection against reverse polarity
Voltage limits (including ripple)	—	V	20 - 30 VDC
Switching capacity	—	mA	≤ 200 with protection against overloads and short-circuits
Residual voltage, closed state	—	V	≤ 1
No-load current consumption	—	mA	≤ 50
Delays	First-up	S	<2
	Normal operating	S	<1

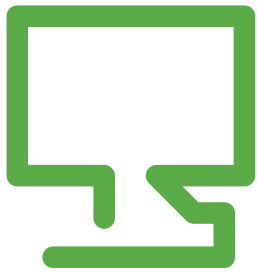
Characteristics

Connector	Cable	PNP
M12 	1 (+) 3 (-) 4 Output BU: Blue BN: Brown BK: Black	

Dimensions in mm



e = panel thickness 1-6 mm



For more
information

visit www.Schneider-Electric.us

Schneider Electric USA, Inc.

Automation and Control Center of Excellence
8001 Knightdale Boulevard
Knightdale, NC 27545
Tel: 919-266-3671
www.Schneider-Electric.us

Document Number 9001BR0901



*This document has been
printed on recycled paper*

December 2009 tk