SW-R-401

PROXIMITY CARD READER

Overview

SW-R-401 Card Reader is the most commonly installed model in the universal proximity card reader series SW-R-x01. It is available either as a normal RFID reader or along with an added PIN keypad in a black-coloured ABS plastic casing with dull finish. It allows for a wide range of 13.56 MHz card technologies. Alternatively, with an add-on module built in, it can be turned into a dual reader to accommodate 125 kHz Indala cards as well. Interface formats available include standard AbaTrack2, Wiegand, TTL serial, RS-232, CAN bus, and USB. Versions with CAN bus can be added an I/O module to run an access control point without need for an SC-1000 access control module. It can be mounted on metal surfaces via the spacers and brackets supplied, which offers use at vehicular access control points, or attached a card-pocket for use in card-present mode.

Features

- Compatible with any SW-500 or SC-1000 systems and controllers
- Automatic tuning adapting itself to ambient conditions
- Enlarged antenna surface for improved stability of readout
- Remote program downloads and updates; remote configuration capability
- Encrypted (AES128) communication can be set up between a reader and its controller
- Operating parameters setup by means of configuration cards
- Capability to enable / disable 'Quick LED' and 'Quick Beep' functions for each type of ID implements
- Monotone buzzer with 5-step volume control
- Longitudinal LED status signal in either of four colours incl. blue, red, green and yellow (standby status: blue)
- Capability to set up card-present mode with continuous readout
- Capacitive touch PIN keypad with luminous keys
- Tamper-proofing by means of a reed sensor mounted outside or, with CAN-bus interfacing, inside the reader
- Elegant appearance, black-coloured ABS casing with dull finish, outdoor design

System Details

- Modes of operation: read-and-write or read only
- Identification technique: RFID reader or RFID reader + PIN code
- ID implement types allowed for, with more than one of them usable at a time: Mifare Plus X, Mifare DESFire EV1, Mifare Classic, Mifare Ultralight, HID iClass, iCode, Seawing NFC, Indala, Dual: Mifare… + Indala
- Access modes: unique identifier (UID), encrypted sector reader, application/file (DESFire)
- Interface formats: AbaTrack2, Wiegand, TTL asynchronous serial, RS-232, CAN 2.0B, USB-A 2.0 CDC virtual serial port or keyboard emulation mode

Add-on Modules

- CAN I/O module: 1 input and 1 relay output (for CAN-bus readers only)
- Indala module: to accommodate 125 kHz Indala cards

Application Examples

- Access control and time & attendance systems
- High-security identification systems and payment systems
- Connected to an access control controller or module or self-contained use in its CAN-bus version
- Card read-and-write systems working on the 'data on card' principle (spa management)
- As dual reader maintaining Indala cards temporarily, upon system exchange
- In card-present detection mode, with a card-pocket attached

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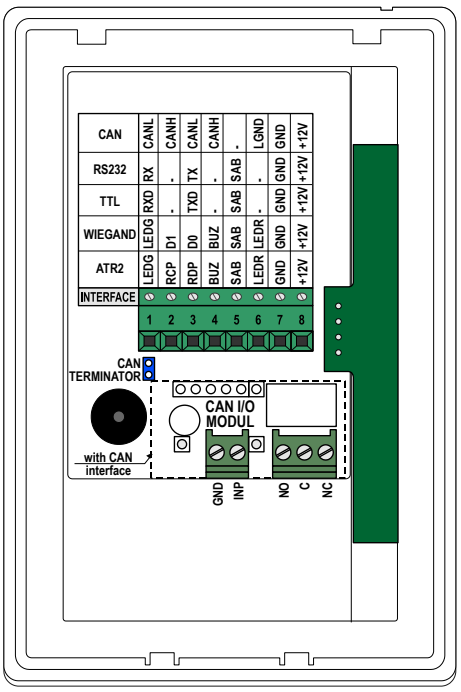
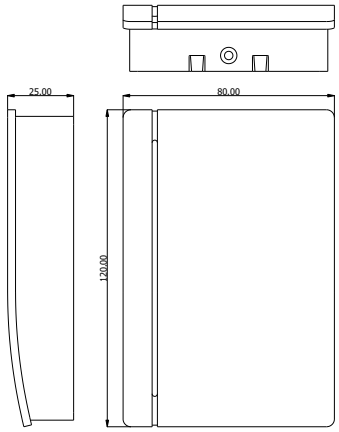
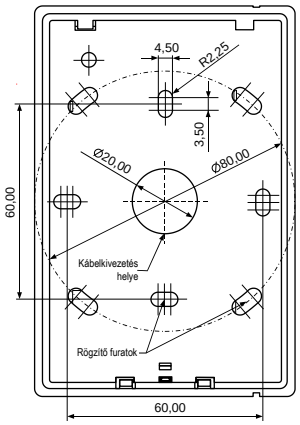


SW-R-401
Wiring diagram



SW-R-401
Outer overall dimensions



SW-R-401
Rear panel

Controllable inputs: (LEDG, LEDR, BUZ)	TTL inputs, controllable by active GND from open-collector outputs direct
Readout distance:	4 to 10 cm (depending on ambient conditions, type of ID implement, and access mode)
Add-on I/O modules:	1 two-state input (NC or NO) 1 Morse relay output (C, NC, NO)
Transmission frequency:	13.56 MHz and 125 kHz (with an Indala module added)

Interfaces:	PIN code	Add-on modules		Reader cable	
		CAN I/O	*Indala*	*Length*	*Type*
– AbaTrack2 (RDP, RCP):	x	-	x	15 m	2x0.5 + 6x0.22 mm²
– Wiegand (D0, D1):	-	-	x	15 m	2x0.5 + 6x0.22 mm²
– TTL asynchronous serial (RXD, TXD):	-	-	-	2 m	2x0.5 + 2x0.22 mm²
– RS-232 (RX, TX):	-	-	-	15 m	2x0.5 + 2x0.22 mm²
– CAN 2.0B (CANH, CANL):	x	either one		500 m	U/UTPcat5e AWG 24 (CAN data line only)
– USB-A 2.0:	-	-	x	1.5 m	assembled USB

On-site parametrization:	by means of configuration cards
– Quick Beep function	Enable/disable short audio signal upon readout
– Quick Flash function	Enable/disable short light signal upon readout
– Built-in volume control	5-step, monotone (factory setting: highest)
– Status LED standby status colour	4 options incl. blue, green, red and yellow (factory setting: blue)

MECHANICAL FEATURES

Outer overall dimensions (W x L x H):	120 x 80 x 25 mm
Casing:	ABS plastic with dull finish
Colour:	Black
Weight:	113 g
Connections:	8-pole terminal strip; 0.75 mm² max., AWG 19 With USB reader: USB-A

AMBIENT CONDITIONS

Operating temperature range:	-20 to +40°C
Storage temperature range:	-20 to +50°C
Operational vibration:	Not permissible
Direct sunlight:	Permissible
Permissible relative humidity:	< 95%, non-condensing
Positioning:	to be mounted on a flat vertical surface at a recommended height of 1.20 m
Protection rating:	Outdoor: IP64; Indoor (PIN-code readers): IP40

CONFORMITY

Electromagnetic compatibility (EMC):	EN 50130-4:2011
Radio-frequency equipment (RED):	EN 300 330:2017
Environment protection (RoHS):	EN 50581:2013
Product-specific conformity:	ISO/IEC 14443A, ISO/IEC 15693; EN 60839-11-1, EN 60839-11-2; MABISZ
Hardware compatibility:	SC-1000 Series; SW-500 Series; external systems
Software compatibility:	irrelevant

ORDER INFORMATION

Article No.	*Model*	*Description*
01PROMIF710	SW-R-401-M-ATR2-MFPX	Reader with AbaTrack2 interface for MFPX cards
01PROMIF760	SW-R-401-M-CAN2-MFPX	Reader with CAN interface for MFPX cards
01PROMIF750	SW-R-401-M-RS232-MFPX	Reader with RS-232 interface for MFPX cards
01PROMIF730	SW-R-401-M-USB-MFPX	Reader with USB interface for MFPX cards
Related products		
01PROMIF780	SW-R-401-M-ATR2-MFPXIND	DUAL reader with AbaTrack2 interface for MFPX cards
	SW-R-401-M-CAN2-MFPXIND	DUAL reader with CAN interface for MFPX+IND. cards
01PROMIF790	SW-R-401-M-USB-MFPXIND	DUAL reader with USB interface for MFPX+IND. cards
01PROMIF770	SW-R-401-M-ATR2-PIN-MFPX	Reader with AbaTrack2 interface and keypad for MFPX+INDALA cards
	SW-R-401-M-CAN2-PIN-MFPX	Reader with CAN interface and keypad for MFPX cards
	SW-R-401-M-K-ATR2-PIN-MFPX	Reader with AbaTrack2 interface and keypad, outdoor
	SW-R-401-M-K-CAN2-PIN-MFPX	Reader with CAN interface and keypad, outdoor
01PROMIF558	SW-RW-401-MFPX-USB	Read-and-write unit with USB interface for MFPX cards
	SW-R Custom encoding	Reader for NON standard RFID ID implements
	SW-CA-CONF-QB	QUICK BEEP function setup card
	SW-CA-CONF-QF	QUICK FLASH function setup card
	SW-CA-CONF-VOL	Buzzer volume control card
	SW-CA-CONF-LED	LED standby status colour setup cards
Add-ons		
93MM0000420	SW-MP-400	Card-pocket for use in card/wristband-present mode
93MM0000425	SW-MP-400	Card stay-piece for use in card-present mode
	SW-R-SP400	Plastic mounting underplate for Series 400 readers
07XXSOT0010	SOT-10A	Card reader pedestal (60 x 60 x 1100 mm)
07XXSOT0012	SOT-10M	Card reader pedestal (60 x 60 x 1300 mm)
07XXSOT0100	Base SOT-30/71/76	Base with concrete installation capability for card reader pedestal

ELECTRICAL FEATURES

Operating voltage range:	11-14 VDC
Current consumption:	100 mA / 150 mA max @ 12 VDC
Power supply input:	protected from reverse polarity

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