EMI-Lock 2.0

Type III 13.56MHz (MIFARE HID iClass)

No.: 925-530-00

For software version 6.0 or later
v. 1.0

Description

The **EMI-Lock 2.0** series is the second generation of electronic handles developed by the apra group. The new handle body allows to meet the requirements of modern server cabinet closing systems.

The most important features

- Possibility of reconfiguration and expansion in the future without the need to replace the handle,
- Possibility to expand the handle functionality by 2 factor authentication by adding a dedicated display module that can be mounted in the upper part of the handle,
- Mechanically compatible with the most popular types of holes: 150x25 and 200x25mm,
- Possibility of using both 1-point and 3-point type closures,
- Opening control through the EMI-One access control system or other,
- Integrated RFID reader operating at 13.56MHz frequency: MIFARE and HID iClass
- Built-in magnetic opening sensor for high reliability,
- Integrated temperature and humidity sensor,
- IP54 protection class for external side of the swing handle,
- Opening system based on a servo motor instead of an electric coil that allows reduction of generated electromagnetic disturbance,
- Outer handle side ensures IP54 protection,
- Half-cylinder insert that allows emergency opening,
- Possibility of selection of the locking code configuration - individually, in groups, master key, secure insert compliant with DIN18252.

The emergency opening insert is sold separately due to the importance of individual choice of specific emergency opening insert type and key code.

Opening mechanism control

After connecting the device to the power supply, the device is ready for operation and automatically switches to the safe - closing mode.

- Unlocking the mechanism is activated by providing ground signal (GND) to the control line (yellow wire),
- Optionally, the logic levels can be changed to (5/12V) on demand via dedicated **Management display** (**925-489-00**).

The possibility to adjust accepted control signal logic enables easy integration with many different access control units from a 3rd party manufacturers.

The minimum duration of the opening impulse that unlocks the handle is 100ms. If the control line is constantly connected with GND (or optionally 5/12V), the mechanism will remain open.

This feature allows to achieve the function of constantly open lock, e.g. in a range of hours. Disconnection of the control circuit automatically closes the handle within 10 seconds.

Handle status indication – closure sensor line

The state of the lock is simultaneously represented by the change in the state on the Open Collector type position sensor line (grey wire) as follows:

- Open circuit - open handle,
- Closed circuit (short to GND) - closed handle.

Handle status indication – built-in LED diode

The handle status is signaled by the built-in LED. It is possible to adjust the LED indication logic at factory configuration level or by using the dedicated management display module (**925-489-00**). The default indication logic has been described below :

- Green - mechanism in the safe mode – closed,
- Red - mechanism in the open mode,
- *Alternately flashing green/red - alarm condition (if an EMI-One SE / PRO controller is connected and alarm condition has been met).

RFID cards readout

The RFID reader module was placed inside the handle at the height of the LED, in the area shown in the picture. To authorize with a card, connect to the EMI controller and then bring the card closer to marked place.

The handle has a protection mechanism against repeated reading of the same card - between subsequent readings, the RFID card/tag should be removed from the reader's reach (about 5 cm) for at least 1 second.

Dedicated display support (optional)

The handle can be upgraded in the future with an additional 1,5” display module in the upper part of the handle enclosure.

Display-less EMI-Locks 2.0 can be easily upgraded by replacing the cover blind and connecting the dedicated display module.

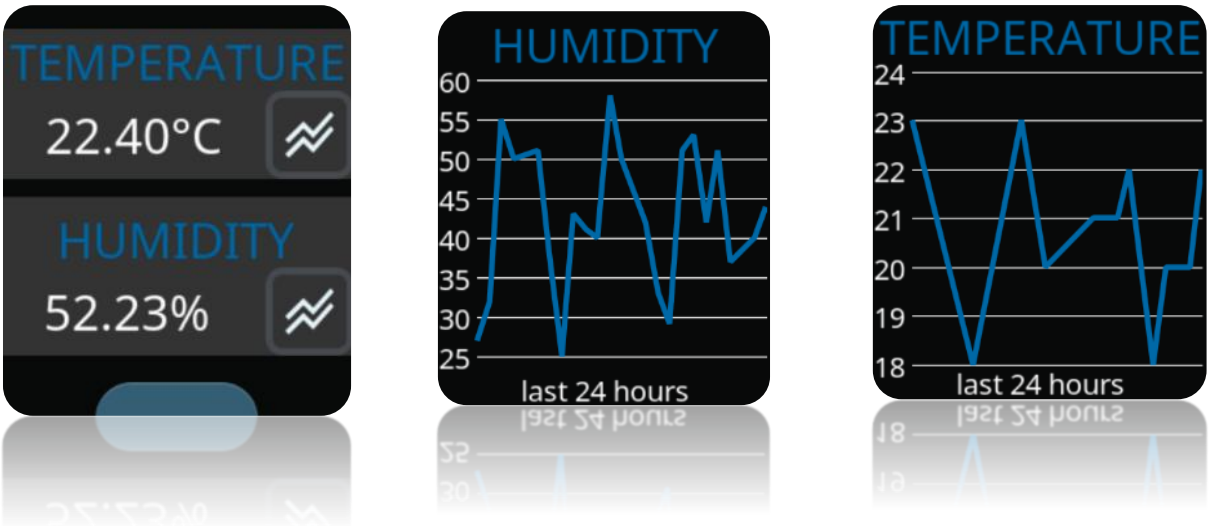
The upgraded handle enables authorisation via PIN code as well as via RFID which combined allows to increase security level by supporting 2-factor authentication.

To navigate between the displayed windows, press the bar icon on the lower part of the display.

The displayed keypad enables entering the PIN code.

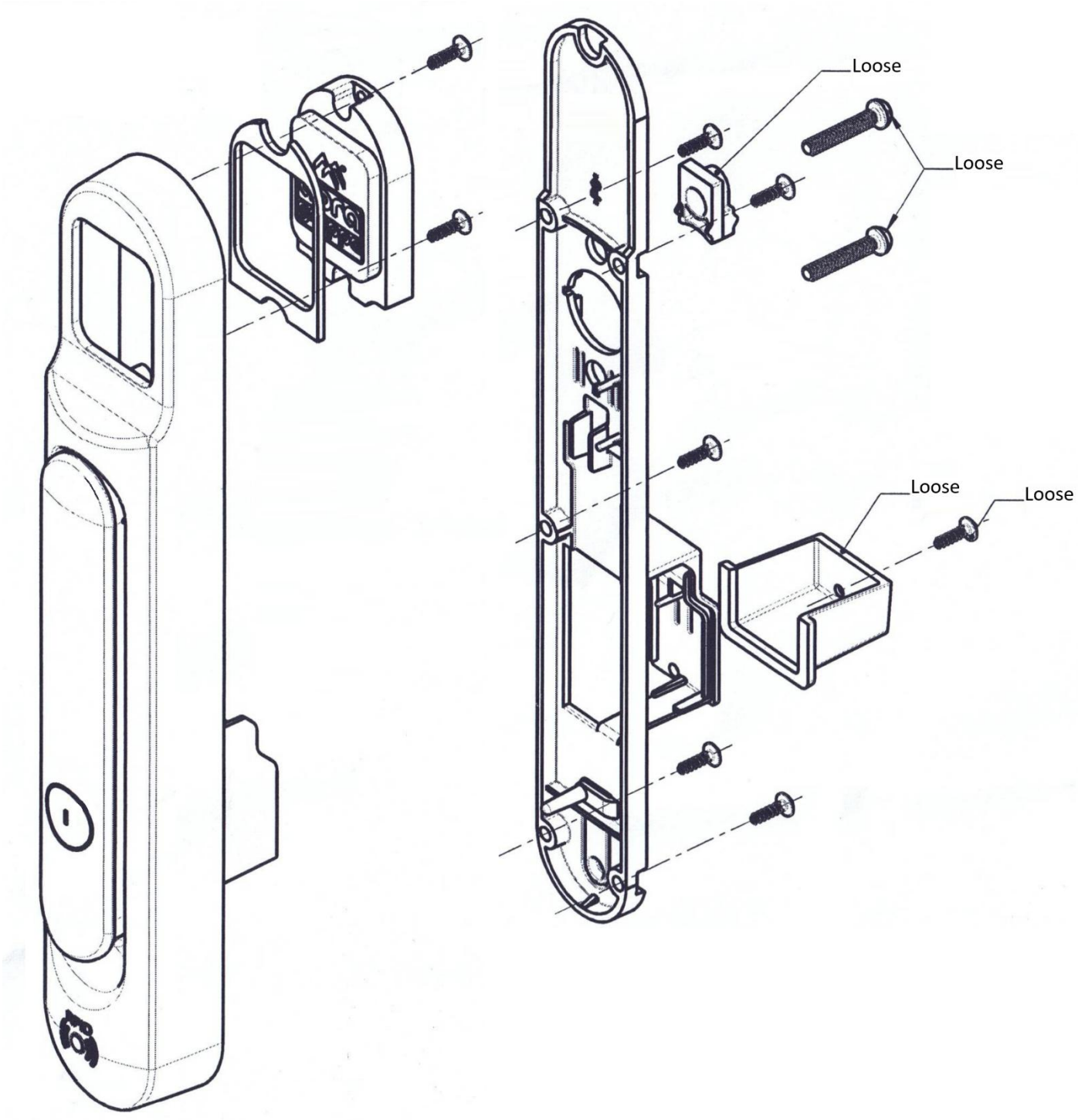
The EMI-Lock 2.0 handles are equipped with a high quality temperature and humidity sensor, that allows to accurately monitor the environmental parameters of the cabinet. The dedicated display module enables visualisation of the measured values.

After choosing the chart symbol, a graph presents measured values from the last 24 hours.



Display upgrade / blind cover replacement (optional)

To replace the blind cover or upgrade the handle with a display module a torx screwdriver is required. Unscrew the screws on the rear side of the handle enclosure and remove the back cover. Unscrew the 2 mounting screws that hold the display module or blind cover and secure the harness connector.



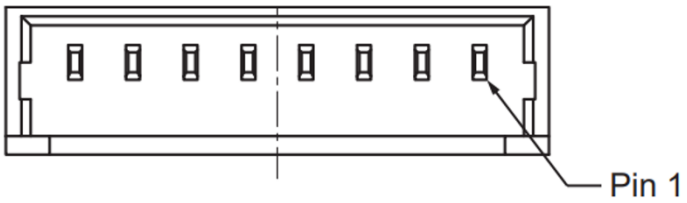
Replace the blind cover with a display module and plug in the display harness connector. Fix the handle display with the 2 screws. Place the back cover and fix it with the remaining screws.

Technical data	
Power supply	12-24V, DC, typ. 12V DC
Power consumption	150mA
Electrical connectors	7-pin WE, 4-pin WE
Supported protocols	1-Wire, Wiegand*: 26-bit, 32-bit, 34-bit, 37-bit, *Requires activation on factory level
Built-in RFID reader	13.56 MHz
Type of cards supported	HID iCLass, MIFARE: ULTRALIGHT C, DESFIRE: EV1, EV2, EV3, FELICA and other compliant with ISO14443A, ISO14443B, ISO18092, ISO15693
Casing	Plastic
International Protection rating	IP54 (outer handle side)
Permissible temperature range	From 0°C to 60°C
Permissible humidity range	From 10% to 90%, non-condensing
Dimensions	273x45x60mm
Weight	350g handle, 500g set
Casing colour	Black
Accessories	Electrical harness 5m, user manual, set of mounting brackets
Certifications	CE, RoHS

Description of connection

CONNECTOR DESCRIPTION - HANDLE

No.	Color		Signal	Comments
1	Blue		Power supply	Permissible supply voltage is 12-24V DC
2	Yellow		Control signal (opening)	Contact with the GND or optionally (5/12V) activates the opening
3	Grey		Handle position sensor	Open Collector output
4	Green		EMI Module Line 1 \ D0*	* Open Collector output
5	Pink		EMI Module Line 2 \ D1*	* Open Collector output
6	White		EMI Module Line 3	Connect only with the EMI-One SE / EMI-Pro module!
7	Brown		Ground (GND)	



The maximum allowable voltage on terminals 4-6 is 5V, terminals 2-3 – 12V. Over-voltage will result in damage to the control module!
Maximum allowed current on Handle position (pin no.3) is 100mA.

CONNECTOR DESCRIPTION
EMI-One SE / EMI-Pro

No.	Color		Signal	Comments
1	White		EMI Module Line 3	Connect only with the EMI-One SE / EMI-Pro module! **If other access control system is utilized, connect to GND**
2	Green		EMI Module Line 1 / D0*	Input / * Open Collector output
3	Brown		Ground (GND)	
4	Yellow		Control signal (opening)	Contact with GND or optionally (5/12V) activates the opening
5	Blue		Power suppply	Permissible supply voltage is 12-24V DC
6	Grey		Handle position sensor	Open Collector output
7	Pink		EMI Module Line 2 / D1*	Input / * Open Collector output
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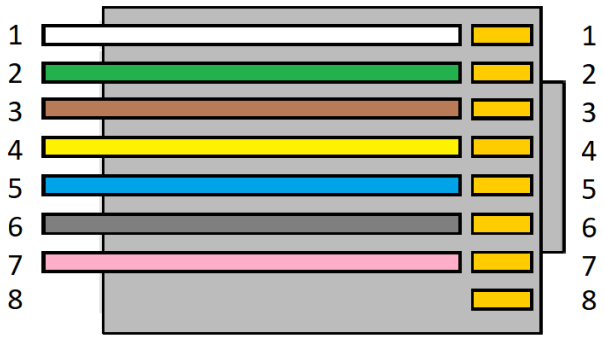

*Custom (special) variants only. For further information, please contact us at the following address: service@apra-optinet.pl

Mechanical assembly variants