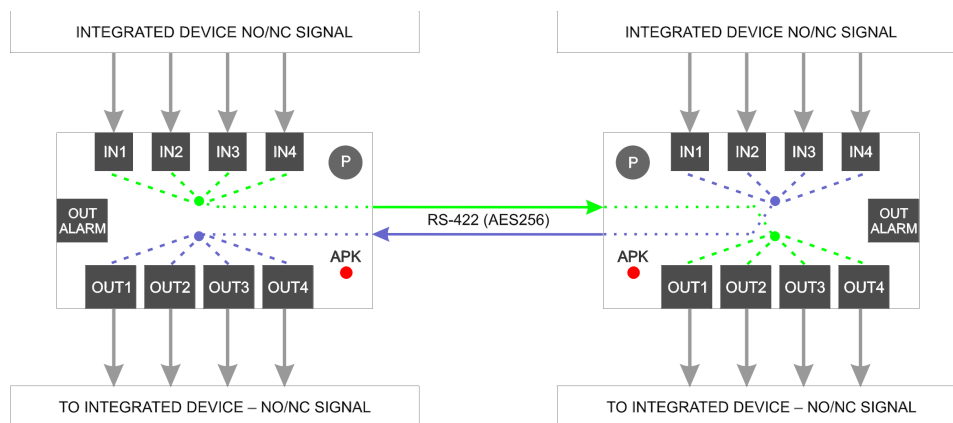# CHOMTECH

RELAY INTEGRATION CIPHER

Relay integration can be the weakest link in security systems, posing a risk due to the lack of protection in transmission between devices. The relay integration encryptor is a solution that prevents connection interception by transmitting encrypted relay signals, thus meeting the highest security standards.

This specialized microprocessor-based device is designed for secure, bidirectional transmission over industrial bus lines. It consists of a transmitter and a receiver that enable the transfer of encrypted relay signals between controllers/control panels of different systems (e.g., access control, intruder alarm systems, etc.).

The relay integration encryptor features 4/8 digital inputs, 4/8 relay outputs, and an additional/alarm relay output. Communication using the RS-422 serial transmission standard is further secured with a proprietary protocol based on AES-256 encryption (optionally OSDP v2). Any disruption or tampering with the connection between devices triggers the alarm relay output on both modules.

The integration interface configuration can only be performed within the first 15 seconds after powering up the receiver and transmitter (the APK LED blinks red). Device pairing is carried out by pressing the pairing buttons (P) for 5 seconds. Successful pairing and generation of encryption keys is indicated by the APK LED glowing green. In the event of interference or loss of communication between the modules, the APK LED glows red.

CONNECTION DIAGRAM

TECHNICAL SPECIFICATIONS

POWER SUPPLY	9-13V DC
POWER CONSUMPTION	~100mA / ~200mA
OVERVOLTAGE PROTECTION	TVS diode
APAS INPUTS	4 / 8
INPUTS SENSITIVITY	100ms
APAS OUTPUTS	4+1 / 8+1
RELAY PARAMETERS	2A 120V AC 2A 24V DC
TRANSMISSION BETWEEN MODULES	RS-422
TRANSMISSION ENCRYPTION	proprietary protocol (AES256) / OSDP v2 (option)
TRANSMISSION SPEED	115200kbps
MAXIMUM DISTANCE BETWEEN MODULES	1000m
COMMUNICATION INDICATION BETWEEN MODULES	green APK LED – correct communication red APK LED – no communication
DIMENSIONS [mm]	152 x 102 x 19
WEIGHT [g]	approx. 300
OPERATING TEMPERATURE	-10°C - +55°C
STORAGE TEMPERATURE	-20°C - +70°C
HUMIDITY RELATIVE	under 80%
OPTIONS	AC adapter 12V DC, 500mA; connection cables - 1m, housing (material - ABS)

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