Technical Documentation



KNX Consumption Interface ZRX-KCI4SO

FEATURES

- Compliant with UNE-EN 62053-31 Class B.
- DIN rail unit assembly (EN 50022), with snap fit clamp.
- Size 90 x 60 x 35 mm (2 DIN units).
- KNX BCU integrated.
- 4 channels for consumption counters (meters) with S0-pulse outputs (UNE-EN 62053-31) *.
- Total data saving on KNX bus power failure.
- CE directives compliant.

1. Battery holder	2. EMPTY batt. LED indicator	3. LOW batt. LED indicator	4. Programming button
5. Programming LED	6. Input Indicator LED	7. Input connectors	8. KNX connector

Programming button: short button press to set the programming mode. If this button is held while plugging the device into the KNX bus, it goes into safe mode.

Programming LED: programming mode indicator (red). When the device goes into safe mode, it blinks (red) every half second.

LOW batt. LED: if this LED is blinking in red, replace the batteries as soon as possible.

EMPTY batt. LED: if this LED is blinking in red, the batteries are empty.

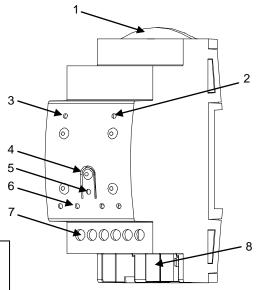


Figure 1: KNX Consumption Interface

GENERAL SYSTEM SPECIFICATIONS					
Concept			Description		
Type of device			Electric operation control device		
	Voltage		29V DC SELV		
Voltage range			2131V DC		
KNX Supply	Max consumption	24VDC	15mA		
		29VDC	12.5mA		
	Bus connection		Typical bus connector TP1, 0.50 mm² section		
Battery (auxiliary power supply)			2 CR2032 battery (2 x 3V). It allows to keep counting pulses without the KNX		
			bus power supply		
Working temperature			from 0°C to +45°C		
Storage temperature			from -20°C to +70°C		
Ambient humidity (relative)			30% to 85% RH (no condensation)		
Storage humidity (relative)			30% to 85% RH (no condensation)		
Complementary characteristics			Class B		
Safety class			III		
Operation type			Continuous operation		
Device action type			Type 1		
Electrical solicitations period			Long		
Type of protection			IP20, clean environment		
Assembly			Independent control assembly device to be mounted inside of electrical panels with DIN rail (EN 50022)		
KNX bus failure response			Data saving		
Response when restarting KNX bus		S	Data recovering and sending according to parameterization when recovering		
Operation indication			Programming LED indicates programming mode (red) or safe mode (blinking red). LOW and EMPTY batt. LED indicate the battery level when blinking in red (KNX supply necessary). LED input indicator blinks when a pulse is received.		
Weight			90g		
PCB CTI index			175 V		
Enclosure			PC FR V0 halogen free		

^{*}Other counters (meters) with dry-voltage output or not complying S0 standard may also work (previous test is recommended)

INPUTS: SPECIFICATIONS AND CONNECTIONS

Concept	Description
Number of S0 or dry inputs	4
Minimum pulse length	30ms
Inputs connection	Terminal block (screw)
Inputs per common	2
Recommended cable section	0.25 mm ² to 2.5 mm ²
Max. cable length	30m
Cable type	Stranded or solid wire
Operating voltage	6VDC

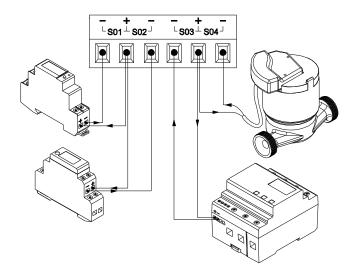
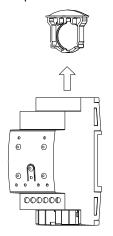


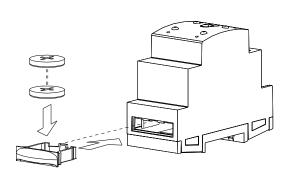
Figure 2: Example of connections with SO pulse generators

BATTERY REPLACEMENT

1. Extract the battery holder from the upper side of KCI. It is recommended to have the bus KNX connected during this process to prevent S0 pulses loss.



2. Place the batteries in the battery holder (respecting the polarity shown) and insert it as indicated in the figure.



INSTALLATION OF KCI ON DIN RAIL

Attaching KCI to DIN rail:







Removing KCI from DIN rail:







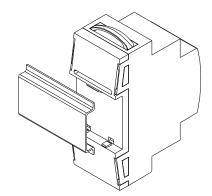


Figure 2: KCI and DIN rail

SAFETY INSTRUCTIONS



- Do not connect Mains Voltage (230 V) or any other external voltages to any point of the BUS. Connecting an external voltage might put the entire KNX system at risk.
- Make sure during the installation that there is always sufficient insulation between the mains voltage 230V and the bus or the extension inputs.
- Once the device is installed, the terminals should not be accessible.