IP Router

KNX-IP Router

ZSYIPR **TECHNICAL DOCUMENTATION**

FEATURES

- KNXnet/IP tunnelling and routing protocol (up to 10 connections)
- Maximum APDU length of 254 bytes
- Ethernet 10/100 BaseT IP with RJ45 socket
- Auxiliary power supply is not required
- Security Proxy and Segment coupler
- KNX Data Secure and KNX IP Secure supported
- Integrated KNX BCU (TP1-256)
- Dimensions 67 x 90 x 18 mm (1 DIN unit)
- DIN rail mounting according to IEC 60715 TH35, with fixing clamp
- Conformity with the CE, RCM directives (marks on the side)

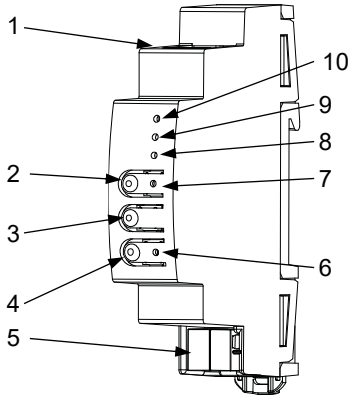


Figure 1: IP Router

1. Ethernet connection with LED indicators	2. IP Configuration Button	3. Pass IA/GA Button	4. Programming button	5. KNX connector
6. Programming LED	7. IP Configuration LED	8. TP indicator LED	9. Mode indicator LED	10. IP indicator LED

Programming button: short press to set programming mode. If this button is held while plugging the device into the KNX bus, it enters the safe mode. In order to perform a KNX Secure factory reset, while the device is in safe mode, press the button for 10 seconds until the programming LED changes its state.
Pass IA/GA button: short press to switch between temporary route all frames with an Individual Address as destination, a Group Address as destination or both.
IP Configuration button: long press (3 seconds) to switch temporally the parameterized IP assignment between Static, DHCP and Auto-IP (APIPA / Link-Local).

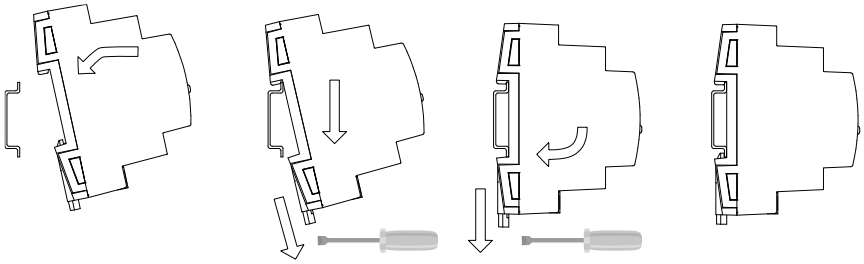
Programming LED: programming mode indicator (red). When the device enters the safe mode, it blinks (red) every half second. During the start-up (reset or after KNX bus failure) and if the device is not in safe mode, it emits a red flash.
IP indicator LED: Indicates the status of the IP connection: no Ethernet connection and no IP address assigned (off), Ethernet connection but no IP address assigned (yellow), no Ethernet connection but an IP address assigned (red), Ethernet connection and an IP address assigned (green). Traffic is indicated by a green flashing, or red flashing in case of frame error.
Mode indicator LED: shows the operation mode of the device as normal filtering (LED off), with "Pass GA" active (slow yellow blink), with "Pass IA" active (fast yellow blink) or with "Pass IA" and "Pass GA" active (yellow color) temporally. If it is operating as a segment coupler, this is indicated in green.
TP indicator LED: shows that the device is powered through the KNX bus (green color). Traffic is indicated by a green flashing, or red flashing in case of frame error.
IP configuration LED: it indicates that the device has the assignment configured in ETS (off), the DHCP assignment forced (green color) or the Auto-IP assignment (yellow color).
Ethernet connector LEDs: shows that data is being transferred (yellow blinking) and that there is an established connection (green color).

GENERAL SPECIFICATIONS

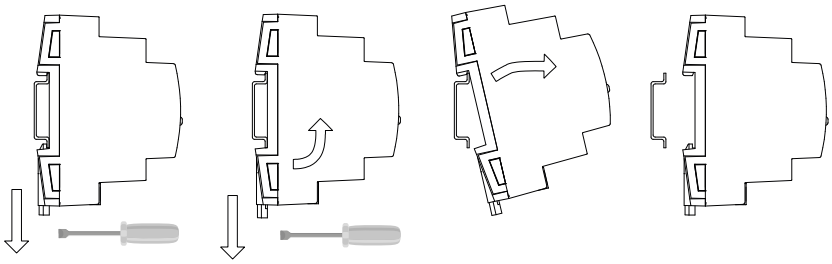
CONCEPT			DESCRIPTION	
Type of device			Electric operation control device	
KNX supply	Voltage (typical)		29 VDC SELV	
	Voltage range		21-31 VDC	
	Maximum consumption	Voltage	mA	mW
		29 VDC (typical)	20.0	580.0
		24 VDC[1]	25	600
	Connection type		Typical TP1 bus connector for 0.8 mm Ø rigid cable	
External power supply			Not required	
Operation temperature			0 .. +55 °C	
Storage temperature			-20 .. +55 °C	
Operation humidity			5 .. 95%	
Storage humidity			5 .. 95%	
Complementary characteristics			Class B (residential)	
Protection class			III (100 V)	
Operation type			Continuous operation	
Device action type			Type 1	
Electrical stress period			Long	
Degree of protection			IP20, clean environment	
Installation			Independent device to be mounted inside electrical panels with DIN rail (IEC 60715)	
Minimum clearances			Not required	
Response on KNX bus failure			Data saving	
Response on KNX bus restart			Data recovery	
Operation indicator			See explanation above.	
Weight			49 g	
Housing material			PC FR V0 halogen free	

[1] Maximum consumption in the worst-case scenario (KNX Fan-In model).

Attaching IP Router to DIN rail:



Removing IP Router from DIN rail:



SAFETY INSTRUCTIONS AND ADDITIONAL NOTES

- Installation should only be performed by qualified professionals according to the laws and regulations applicable in each country.
- Do not connect the mains voltage nor any other external voltage to any point of the KNX bus; it would represent a risk for the entire KNX system. The facility must have enough insulation between the mains (or auxiliary) voltage and the KNX bus or the wires of other accessories, in case of being installed.
- Once the device is installed (in the panel or box), it must not be accessible from outside.
- Keep the device away from water (condensation over the device included) and do not cover it with clothes, paper or any other material while in use.
- The WEEE logo means that this device contains electronic parts and it must be properly disposed of by following the instructions at https://www.zennio.com/weee-regulation.
- This device contains software subject to specific licences. For details, please refer to https://zennio.com/licenses.
- EMC emission and immunity parameters are available on request.