

Technical Sheet For KNX IP Router

BNIPR-00/00.1



The worldwide STANDARD for home and building control

CHARACTERISTICS

The IP Router can be used as line or backbone coupler. It provides a data connection between the upper KNXnet/IP line (main line or backbone) and the lower TP KNX bus line (sub line). The basic functionality of the IP Router is to couple the Ethernet with one or more KNX-TP lines. The IP Router features a galvanic isolation between the Ethernet and the KNX-TP line(s). Due to its flexibility the IP Router can be used as a line coupler e.g. to connect several KNX TP lines via Ethernet. And it can be used as a backbone coupler to connect several TP areas or different TP installation systems via Ethernet.

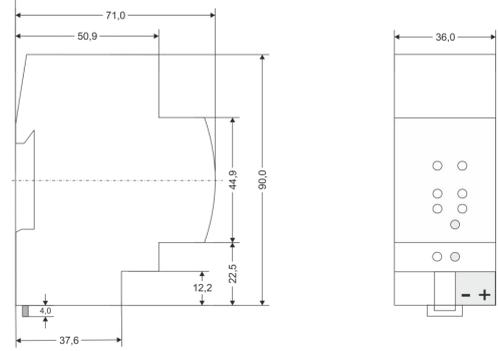
The main task of the IP Router is filtering the traffic according to the installation hierarchy. For group oriented communication the traffic is filtered according to the built-in filter tables.

With the ETS or any other KNX compatible commissioning tool the IP Router can be used as the programming interface. For this purpose the device provides up to 4 additional physical addresses that can be used for tunneling.

PARAMETERS

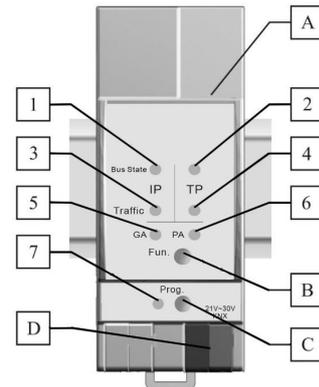
Power supply	Bus voltage	21-30V DC, via the KNX bus
	Bus current	<20mA
Connections	KNX	Bus connection terminal (Red/Black) RJ45 socket for 100 Mbit and 10
	LAN	Mbit BaseT, IEEE 802.3 networks
Operation and display	Bus State IP LED Green	Bus State IP LED Orange
	Bus State TP LED Green	Traffic IP LED Green
	Traffic IP LED Red	Traffic TP LED Green
	Traffic TP LED Red	GA LED Green
	GA LED Red	GA LED Orange
	PA LED Green	PA LED Red
	PA LED Orange	Function button
Temperature	Operation	-5 °C ... + 45 °C
	Storage	-25 °C ... + 55 °C
	Transport	- 25 °C ... + 70 °C
Ambient	Humidity	<93%, except dewing
Design		Standard 35mm DIN rail installation
Housing		Plastic PA66 housing, grey

DIMENSIONS



Model	Dimension	Weight
BNIPR-00/00.1	36 x 90 x 71 mm	0.1kg

DESCRIPTIONS



- ① Bus State IP LED(Main line)-- green on: IP line OK; off: IP line error or not connected; orange on: Manual function active.
 - ② Bus State TP LED(Sub line)-- green on: sub line OK; off: sub line not connected.
 - ③ Traffic IP LED(Main line)-- green blinking: telegram traffic on IP line; off: no telegram traffic; red blinking: traffic error.
 - ④ Traffic TP LED(Sub line)-- green blinking: telegram traffic on sub line; off: no telegram traffic; red blinking: traffic error.
 - ⑤ GA LED(Group Address Routing)-- green on: filter table active; red on: block all; orange on: route all; off: routing different on main and sub.
 - ⑥ PA LED(Physical Address Routing)-- green on: filter table active; red on: block all; orange on: route all; off: routing different on main and sub.
 - ⑦ Programming LED-- red on: assign the physical address; green on: device run normally.
- Ⓐ Ethernet connector Ⓑ Function button Ⓒ Programming button Ⓓ KNX bus connection terminal

INSTALLATION FIGURE

The devices are suitable for installation on the distribution boards with 35mm mounting rail which complies with DIN EN 60715 or a small box in order to facilitate quick installation of the device. Must ensure that the device operation, testing, detecting, maintenance correctly.

IMPORTANT INFORMATION

Installation and commissioning of the device may only be carried out by trained electricians. The relevant standards, directives, regulations and instructions must be observed when planning and implementing the electrical installation.

- Protect the device against moisture, dirt and damage during transport, storage and operation!
- Do not operate the device outside the specified technical data (e.g. temperature range)!
- The device may only be operated in closed enclosures (e.g. distribution boards).

Should the device become soiled, it may be cleaned with a dry cloth. If this does not suffice, a cloth lightly moistened with soap solution may be used. On no account should caustic agents or solvents be used.

适用型号:

BNIPR-00/00.1

国际标准的家庭和楼宇控制系统



产品功能

IP 路由器可用作线耦合器或骨干耦合器。它提供了在 KNXnet/ IP 线路（主线或骨干线）和 TP KNX 总线（支线）之间的数据连接。IP 路由器的基本功能是把以太网跟一个或多个 KNX-TP 总线耦合。IP 路由器在以太网和 KNX-TP 总线之间采用了电隔离。由于其灵活性，IP 路由器可被用作一个线耦合器，例如通过以太网连接多条 KNX TP 总线。它也可以用作一个骨干耦合器，通过以太网连接多个 TP 区域或不同的 TP 安装系统。

IP 路由器的主要任务是根据安装层级过滤通讯报文。IP 路由器提供了一个过滤表，所有存在于过滤表中的组报文，它们将按路线传送，否则被阻止，从而减少总线负荷。

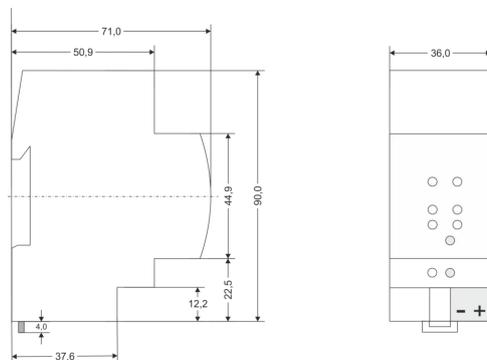
在 ETS 或任何其他 KNX 兼容的调试工具中，IP 路由器可被用作编程接口。鉴于此目的，此设备提供了多达 4 个额外的物理地址，可用于通道。

IP 路由器支持 KNXnet/IP, ARP, ICMP, IGMP, HTTP, UPnP 发现, UDP/IP, TCP/IP, DHCP 和自动 IP。

技术参数

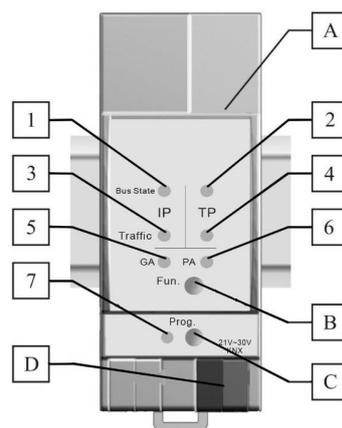
电源	总线电压	21-30V DC, 由 KNX 总线提供	
	总线电流	< 20mA	
连接	KNX	总线连接端子（红/黑）	
	LAN	RJ45 端口 10/100Base-T, IEEE 802.3 网络, 自适应	
操作与指示	Bus State IP LED (主线)	绿色: LAN 连接 OK; 灭: LAN 错误或未连接 橙色: 手动操作激活	
	Bus State TP LED (支线)	绿色: KNX 连接 OK; 灭: KNX 未连接	
	Traffic IP LED (主线)	绿闪: 报文在 LAN 中传输; 灭: 无报文传输 红闪: LAN 中有传输错误	
	Traffic TP LED (支线)	绿闪: 在 KNX 和 LAN 之间有报文通讯; 灭: 无报文路由; 红闪: 在 KNX 线上有传输错误	
	GA LED	绿色: 路由过滤表中的组地址报文 红色: 阻止; 橙色: 路由所有组地址报文	
	PA LED	灭: 主线和支线上组报文的路由设置不同 绿色: 路由过滤表中的物理地址报文 红色: 阻止; 橙色: 路由所有物理地址报文 灭: 主线和支线上物理地址报文的路由设置不同	
	编程按钮和 LED	给设备分配物理地址	
	功能按钮	长按 3s 切换到手动操作或退出; 长按 15s 后退出, 并再次短按 3s 可重置到出厂设置	
	温度	运行	-5 °C ... +45 °C
		存储	-25 °C ... +55 °C
运输		-25 °C ... +70 °C	
环境	湿度	<93%, 结露除外	

尺寸规格



型号	尺寸	重量
BNIPR-00/00.1	36 x 90 x 71 mm	0.1kg

接线图



说明

- ① Bus State IP LED
- ② Bus State TP LED
- ③ Traffic IP LED
- ④ Traffic TP LED
- ⑤ GA LED
- ⑥ PA LED
- ⑦ 编程 LED
- A LAN 端口
- B 功能按钮
- C 编程按钮
- D KNX 总线连接端子

安装说明

此设备为了方便快速安装到配电箱或小盒子里面，根据 EN 60715 系列设计成模块化安装设备，能安装在 35 毫米丁导轨上。安装时必须确保设备操作、测试、检测、维护、维修正确无误。

重要提示

安装和调试设备只能由合格的熟练电工来操作。在计划与实施电气安装的过程中相关的标准、指令、规则和指示都要严格执行。

- 需要避免器件在运输、储存、使用的过程中受潮、脏污以及受损。
- 不要使器件运行在指定的技术指标之外（例如温度范围）。
- 器件只可以运行在封闭的环境中（例如配电箱）。

当设备脏污时，只可以使用干燥的布来清洁。如果这样不足以清洁干净，可以使用湿布蘸少许肥皂溶液轻轻擦拭。绝不能使用碱剂或者腐蚀性溶剂。