

## EYK300: nova106, BACnet communication card

This communication card is used for the integration of SAUTER's modular nova106 automation station with the standardised 'BACnet / IP based on Ethernet' communication protocol as per EN 13321-1 and ISO 16484-5.

As a BACnet server, it provides all the objects required for HVAC applications, plus the associated properties with the necessary services. Typical users (BACnet clients) of this information are open management systems, bus-wide operating units, and other automation stations which have BACnet capability etc. In its function as a BACnet client, the communication card supports peer-to-peer transmission with 'present-value properties' for the specified objects.



### Products

Type	Description	Weight (kg)
EYK300F001	BACnet communication card	0.23

### Technical Data

Electrical supply		Permitted ambient conditions	
Power supply	from AS-Rack	Operating temperature	0...45 °C
Max. current	0.4 A	Storage and transport temperature	-25...70 °C
		Humidity	10...90% rh no condensation
Execution		Standards, guidelines and directives	
Number of BACnet objects	max. 1000 (Total)	Degree of protection	IP 00 (EN 60529)
Number of time programs	max. 100 (Schedule)	Environmental class	3K3 (IEC 60721)
Number of calendars	max. 40 (Calendar)	CE conformity as per	
Number of historical		EMC Directive 2004/108/EC	EN 61000-6-1/ EN 61000-6-2
Data objects	max. 50 (Trend Log)		EN 61000-6-3 <sup>1)</sup>
log data records (Total)	max. 10'000 (Log Buffer)		EN 61000-6-4
			EN 50024
Interfaces, communication		Additional information	
COM-interface	DB9 plug as per DTE	Fitting instructions	MV 505791
novaNet interface	RJ11 socket (6/6)	Wiring diagram	A09734
BACnet interface	RJ45 Ethernet		
Transport protocol	BACnet/IP		

1) This is Class A equipment. It may cause radio interference in the home, in which case the operator may be requested to carry out appropriate measures. (see Fitting instructions)

### Accessories

Type	Description
0367842002	Connecting cable, Ethernet RJ45-RJ45, 1.5 m
0367842003	Connecting cable, Ethernet RJ45-RJ45, 2.9 m
0367842004	Connecting cable, Ethernet RJ45-RJ45, 6 m
0367862004	Connecting cable, novaNet RJ11-RJ11, 0.21 m (supplied)
0386301001	Connecting cable, COM DB9-DB9, 3 m

### Engineering and fitting notes

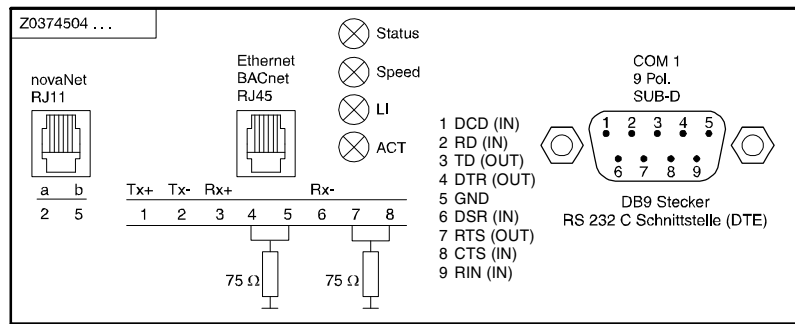
- The card is licensed with BACstac™ and bears a licence sticker. The second licence sticker supplied can be kept in the project file or in the subsidiary company or NSO for archiving purposes and as a back-up licence.
- The BACnet communication card should be inserted at Slot A in the EYU108 or EYU109 rack. The connection to the automation station is integrated via novaNet. The supplied cable (367862 004) should be connected to the RJ11 socket.
- The Ethernet link is via an RJ45 socket. Communication is effected via the BACnet/IP transport protocol.
- The configuration of this IP address and other parameters is effected via the SAUTER software module 'BACnet Server Configurator'. See BACnet manual 7001007 003.
- The BACnet communication card EYK300F001 implements the 'BACnet Server/Client functionality' in SAUTER DDC type nova106, or novaCom. The AS address of the novaCom can be between 1 and 4194 and of the novaCom between 2 and 4194.
- The MFAs (machine fine addresses) used in the automation station are converted – when the house address (data points) has been projected – into 'BACnet objects', whereby the management and updating of the relevant BACnet object list are done automatically. This means that there is no additional generating needed in order to integrate the BACnet functionality at DDC level.
- Using the similarly implemented Scheduler (day and week calendar) and the associated 'Schedule and Calendar BACnet objects', it is possible to process local BACnet time programs and also, therefore, to control process variables of the connected AS in accordance with a time programme.

- The processing capacity, with regard to BACnet objects per EYK300F001, is 1000 objects.
- The DDC data points can be transmitted either by BACnet clients via cyclical polling or by the COV (Change Of Valve) subscription mechanism on the BACnet communication card.
- Others BACnet specifications, as per separate BACnet PICS (Protocole Implementation Statement) specification. See document „SAUTER BACnet-PICS.pdf“.

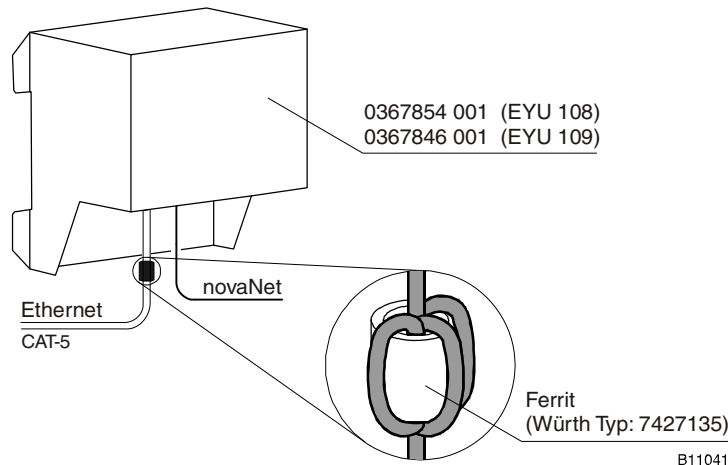
**LED display for Ethernet interface**

Status	off	Application could not be correctly initialised
	red	BACnet device offline; no novaNet connection; memory; capacity is near to its limit
	red	Flashing every ¼ second: communication error BACnet
	green	Flashing: novaNet communication
Speed	yellow	Data transmission speed; is recognised automatically: LED off: 10 Mbits/s LED on: 100 Mbits/s
LI	yellow	Physical link established (Link)
ACT	yellow	Transmission of BACnet protocol (Activity)

**Wiring Diagram**



A09734b



In cases where the industry emissions standard (EN 61000-6-3) has to be met, the Ethernet cable (min. CAT-5 cable) must be looped with three windings through a ferrite bead (Fürth Type: 7427135) in the immediate vicinity of the plug. The appropriate front panel for the card carrier must be fixed. This requirement is only met with hardware Index C.

Connection details

