ABB i-bus® KNX
AC/S 1.2.1
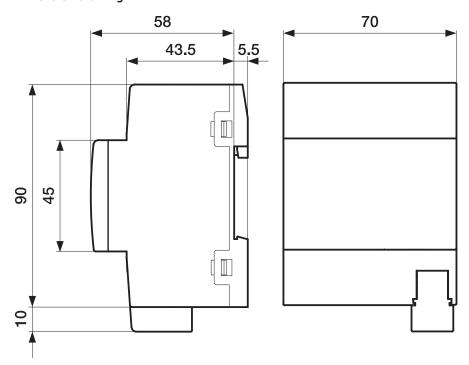## Application Controller

Description of product

Automation controller with pre-defined automation modules for comprehensive heating, ventilation and air conditioning automation (HVAC automation). For use from central systems to room automation, supports the achievement of energy efficiency goals such as EN 15232.

The device contains pre-defined application-specific automation modules (ASM) for the most common areas of application, for instance the calculation of heat demand, trends or schedulers. You can create your own automation modules using a graphic logic editor.
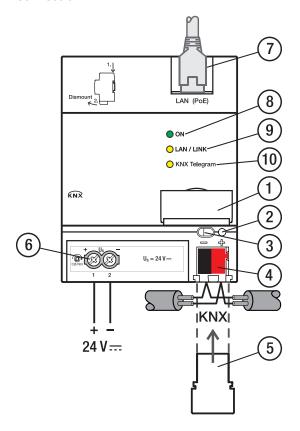
The device has a web user interface for the display of data and operation, this interface is generated automatically, as well as an integrated BACnet/IP gateway for the connection of the KNX system to the building control system and other higher level BACnet systems for the bidirectional exchange of data between KNX and BACnet.

Commissioning is undertaken entirely in ETS version 5.6.5 or later. Additional external software is not required. The device has a KNX TP connection and requires a supply voltage of 24 V DC or PoE for operation.

Dimension drawing

2CDC072033F0015

Connection

2CDC072062F0017

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LEGEND

  1 Label carrier
  2 KNX programming LED (red)
  3 KNX programming button
  4 KNX connection
  5 Cover cap
  6 Power supply connection U_s
  7 Ethernet/LAN connection
  8 On LED (green)
  9 LAN/LINK LED (yellow)
 10 KNX telegram LED (yellow)

Operating and display elements		
Button/LED	**Description**	**LED indicator**
⬭ 🔴	Assignment of the physical address	On: Device is in programming mode
🟢	ON	Off: No auxiliary voltage (24 V or PoE) available On: System initialized Flashing slowly (1 Hz): System starting up Flashing quickly (4 Hz): Error
🟡	LAN/LINK	On: Auxiliary voltage and Ethernet connection available Flickering: Data traffic via LAN
🟡	Telegram	On: Auxiliary voltage and KNX connection available Flickering: Data traffic via KNX/TP
⚪	Reset (behind label carrier)	Press for less than 2 seconds: no reaction. Press for 2 to 10 seconds: device restart. Retains configuration and last states. Press for more than 10 seconds: factory reset. Deletes configuration and all states.

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NOTE
Device restart and factory reset are only possible
when bus voltage and auxiliary voltage are applied.

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NOTE
A firmware update cannot be undone after a factory
reset.

Technical data		
Supply	Bus voltage	21…32 V DC
	Current consumption, bus	< 12 mA
	Leakage loss, bus	Maximum 250 mW
	Leakage loss, device	Maximum 3 W
	Auxiliary voltage U_S	24 V DC (+20 % / -15 %) or PoE (IEEE 802.3af class 2)
	Auxiliary voltage current consumption	90 mA typical, 120 mA peak current
	KNX connection	0.25 W
	KNX current consumption	< 10 mA
Connections	KNX	Via bus connection terminal
	Auxiliary voltage	Via screw terminals 0.2…2.5 mm² stranded 0.2…4 mm² solid
	LAN	RJ45 socket for 10/100BaseT, IEEE 802.3 networks, AutoSensing
Protection degree	IP 20	To EN 60529
Protection class	II	To EN 61140
Isolation category	Overvoltage category	III to EN 60664-1
	Pollution degree	II to EN 60664-1
SELV	KNX safety extra low voltage	SELV 30 V DC
Temperature range	Operation	- 5…+45 °C
	Transport	-25…+70 °C
	Storage	-25…+55 °C
Ambient conditions	Maximum air humidity	93 %, no condensation allowed
	Atmospheric pressure	Atmosphere up to 2,000 m
Design	Modular installation device (MDRC)	Modular installation device
	Design	pro *M*
	Housing/color	Plastic, halogen free, gray
Dimensions	Dimensions	90 x 70 x 64 mm (H x W x D)
	Mounting width in space units	4x 17.5 mm modules
	Mounting depth	68 mm
Mounting	35 mm mounting rail	To EN 60715
Mounting Position	Any	
Weight		0.192 kg
Fire classification		Flammability V-0 as per UL94
Approvals	KNX certification	To EN 50090-1, -2
	Certification	To EN 60669
CE conformity	In accordance with the EMC directive and low voltage directive	

Software		
Device type	Application Controller	AC/S 1.2.1
	Application	HVAC application/…*
	Maximum number of KNX group objects	2000
	Maximum number of KNX group address assignments	16000
	Maximum number of BACnet objects	500
	Maximum number of BACnet COV subscriptions	2500
	Maximum number of application-specific automation modules (ASM)	500
	• Of which schedulers	15
	• Of which central HVAC	15
	Maximum number of trends	50 values for up to 3 years
	Automation ASM	
	• Maximum number of logic elements	1000
	• Maximum number of sockets	200
	• Maximum number of web user interface I/O	30
	Maximum number of web user interface accesses	5

* … = Current version number of the application. **Please refer to the software information on our website for this purpose.**

Ordering details					
Device type	**Product Name**	**Order No.**	**bbn 40 16779 EAN**	**Weight 1 pcs. [kg]**	**Packaging [pcs.]**
AC/S 1.2.1	Application Controller, BACnet	2CDG110206R0011		0.192	1

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NOTE
Please refer to the AC/S 1.x.1 Application Controller product manual for a detailed description of the application. It is available free of charge at www.abb.com/knx.
ETS and the current version of the device application are required for programming.
The latest version of the application and corresponding software information is available for download from www.abb.com/knx. After import into ETS, it appears in the Catalogs window under Manufacturers/ABB/Heating, air conditioning, ventilation/Automation controller.
In addition to the ETS application, you will require ETS DCA "ABB AC/S" for commissioning; this can be obtained free of charge from the KNX online shop.
The device does not support the locking function of a KNX device in ETS. Using a BCU code to inhibit access to all the project devices has no effect on this device. Data can still be read and programmed.

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NOTE
The application „HVAC Application/1.0" and the DCA „ABB AC/S" are supported in ETS 5 only from version 5.6.5. Earlier versions are not supported.

ABB

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