Data Sheet | Item Number: 750-849
Controller KNX IP
https://www.wago.com/750-849

DISCONTINUED: 30.06.2019

This controller can accommodate up to two KNX logic devices at the same time.

- 1. In conjunction with the WAGO I/O System, the KNX IP Controller is used as a user-programmable application controller within KNX IP networks. The controller supports all digital, analog and specialty modules found within the 750/753 Series. It permits data transmission rates of 10/100 Mbit/s and is programmable in accordance with IEC 61131-3. KNX objects of any type (EIS/DPT) can be created using the programming tool. Libraries including pre-made function blocks are readily available on the WAGO Website for programming. The controller supports a maximum of 253 communication objects, as well as 254 group addresses and 254 associations. Supported DPTs: All (per KNX standard 03_07_02 Datapoint Types V1.0).
- 2. Combined with the KNX/EIB/TP1 Module, the 750-849 KNX IP Controller operates as a router on an IP backbone (ETHERNET). No IEC application is required for router functionality.
- Both devices are commissioned and configured in ETS3/4 using the WAGO product database. The software includes a plug-in that automatically installs and opens for configuration.
- The KNX IP Controller features an integrated 2-port 10/100 Mbit/s switch, allowing a line structure to be easily created without additional network components. The maximum number of controllers that can be wired in series is 20.
- An internal server is available for Web-based applications.
- The controller provides 512 KB program memory, 256 KB data memory and 24 KB retain memory. It is capable of multitasking, has a battery-backed, real-time clock and is based on a 32-bit CPU. The controller offers many different application protocols for control tasks (MODBUS, KNXnet/IP) or for system management and diagnostics (HTTP, BootP, DHCP, DNS, AutoIP, SNTP, FTP, SNMP and SMTP).
- The number of KNX/EIB/TP1 Modules (750-646) supported by the KNX IP Controller does not depend on the application.

Technical data

Communication	KNX IP Modbus (TCP, UDP) ETHERNET
ETHERNET protocols	HTTP BootP DHCP DNS AutoIP SNTP FTP SNMP V3 SMTP
Visualization	Web-Visu
Programming languages per IEC 61131-3	Instruction List (IL) Ladder Diagram (LD) Function Block Diagram (FBD) Continuous Function Chart (CFC) Structured Text (ST) Sequential Function Chart (SFC)
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Device specification	KNX/TP1 Bus Specification: 1.0
Network length (max.)	≤ 2000 m; max. 20 controllers in series
Baud rate (communication/fieldbus 1)	10/100 Mbit/s
Baud rate	10/100 Mbit/s
Bus segment length (max.)	100 m
Transmission medium (communication/fieldbus)	S-UTP; 100 Ω; Cat. 5
Program memory	512 KB
Data memory	256 KB
Non-volatile software memory	24 KB
Memory for fieldbus input variables (max.)	512 bytes
Memory for fieldbus output variables (max.)	512 bytes
Number of modules per node (max.)	250
Number of modules without a bus extension (max.)	64
Input and output process image (fieldbus) max.	1953.125 bytes/1953.125 bytes
Device-specific	Number of group addresses: 254; Number of communication objects: 253; Number of associations: 254
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Input current (typ.) at nominal load (24 V)	500 mA
Power supply efficiency (typ.) at nominal load (24 V)	87 %
Current consumption (5 V system supply)	300 mA

Technical data

Total current (system supply)	1700 mA
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Current carrying capacity (power jumper contacts)	10 A
Number of outgoing power jumper contacts	3
Isolation	500 V system/supply
KNX certified	IP Controller: 61/8316/08; IP Router: 61/8317/08

Connection data

Connection technology: communication/fieldbus	KNX IP: 2 x RJ-45; Modbus (TCP, UDP): 2 x RJ-45
Connection technology: system supply	2 x CAGE CLAMP®
Connection technology: field supply	6 x CAGE CLAMP®
Connection type 1	System/field supply
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.31 … 0.35 inches
Connection technology: device configuration	1 x Male connector; 4-pole

Environmental requirements

Ambient temperature (operation)	0 … +55 °C
Ambient temperature (storage)	-25 … +85 °C
Protection type	IP20
Pollution degree	2 per IEC 61131-2
Operating altitude	without temperature derating: 0 … 2000 m; with temperature derating: 2000 … 5000 m (0.5 K/100 m); 5000 m (max.)
Relative humidity (without condensation)	95 %
Mounting position	any
Mounting type	DIN-35 rail
Vibration resistance	per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	per EN 61000-6-2, marine applications
EMC emission of interference	per EN 61000-6-3, marine applications
Exposure to pollutants	per IEC 60068-2-42 and IEC 60068-2-43
Fire load	3.692 MJ
Permissible H_2S contaminant concentration at a relative humidity 75 %	10 ppm
Permissible SO_2 contaminant concentration at a relative humidity 75 %	25 ppm

Approvals / Certificates

General approvals

Approval	Standard	Certificate Name
EAC Brjansker Zertifizierungs-stelle	TP TC 020/2011	EAC RU C-DE.AM02.B.00087/19
UL UL International Nether-lands B.V. (ORDINARY LO-CATIONS)	UL 508	E175199 Sec.1

Approvals for marine applications

Approval	Standard	Certificate Name
DNV DNV GL SE	DNV-CG-0339,Aug.2021	TAA0000194

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Approvals for hazardous areas

Approval	Standard	Certificate Name
EAC Brjansker Zertifizierungs-stelle	TP TC 012/2011	EAC RU C-DE.AM02. B.00163/19 (2Ex nA IIC T4 Gc X)

Protocol and fieldbus specific certificates

Approval	Standard	Certificate Name
KNX KNX Association cvba	-	61/7946/07; 61/8316/08; 61/8317/08