



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. The IEC 61131-3 programmable controller is capable of 10/100 Mbit/s data rates. 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 associations.
- 2. Combined with the KNX/EIB/TP1 Module, the 750-889 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 via ETS software 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 1024 KB program memory, 1024 KB data memory and 32 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
CPU	32 bits
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)
Configuration options	WAGO-I/O-CHECK Web-Based Management
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
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Bus segment length (max.)	100 m
Transmission medium (communication/fieldbus)	S-UTP; 100 Ω; Cat. 5
Program memory	1024 KB
Data memory	1024 KB
Non-volatile software memory	32 KB
Memory for fieldbus input variables (max.)	512 bytes
Memory for fieldbus output variables (max.)	512 bytes
Type of memory card	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO's memory card)
Memory card slot	Push-push mechanism; cover lid (sealable)
Number of modules per node (max.)	250
Number of modules without a bus extension (max.)	64

### Technical data

Input and output process image (fieldbus) max.	1020 words/1020 words
Device-specific	Number of group addresses: 254; Number of communication objects: 253
Indicators	LED (LINK/ACT) green: Network connection via ports 1 ... 2; LED (MS/PRG IP, NS/PRG RT) red/green: IP device programming mode, router; LED (I/O, USR) red/green/orange: Local data bus status, status programmable by user; LED (A, B) green: System power supply status, field supply
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)	90 %
Current consumption (5 V system supply)	450 mA
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/field
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 mm <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches
Connection technology: device configuration	1 x Male connector; 4-pole

### Mechanical data

Weight	192 g
Color	gray
Housing material	Polycarbonate; polyamide 6.6
Conformity marking	CE

### Approvals / Certificates

#### General approvals



Approval	Standard	Certificate Name
EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC RU C-DE.AM02. B.00087/19
KC National Radio Research Agency	Article 58-2, Clause 3	MSIP-REM-W43-PFC750
UL UL International Netherlands B.V. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.1

#### Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications



Approval	Standard	Certificate Name
ABS American Bureau of Ship- ping	-	22-2219060
BSH Bundesamt fuer See- schiffahrt und Hydrogra- phie	-	1104
DNV DNV GL SE	DNV-CG-0339,Aug.2021	TAA0000194
LR Lloyds Register EMEA	-	LR22180952TA
RINA RINA Germany GmbH	-	ELE343521XG001

Approvals for hazardous areas



Approval	Standard	Certificate Name
UL Underwriters Laboratories Inc. (HAZARDOUS LOCA- TIONS)	UL 121201	E198726 Sec.1

Subject to changes. Please also observe the further product documentation!

Current addresses can be found at: [www.wago.com](http://www.wago.com)