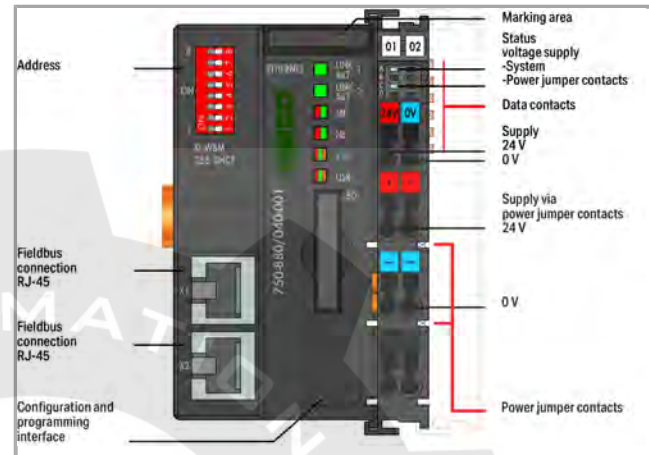


Data sheet | Item number: 750-880/040-001

Controller ETHERNET; 3rd Generation; SD Card Slot; Telecontrol technology; Extreme



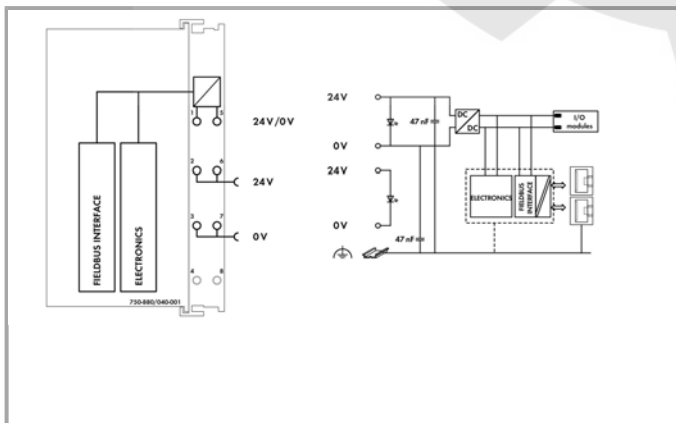
750-880/040-001

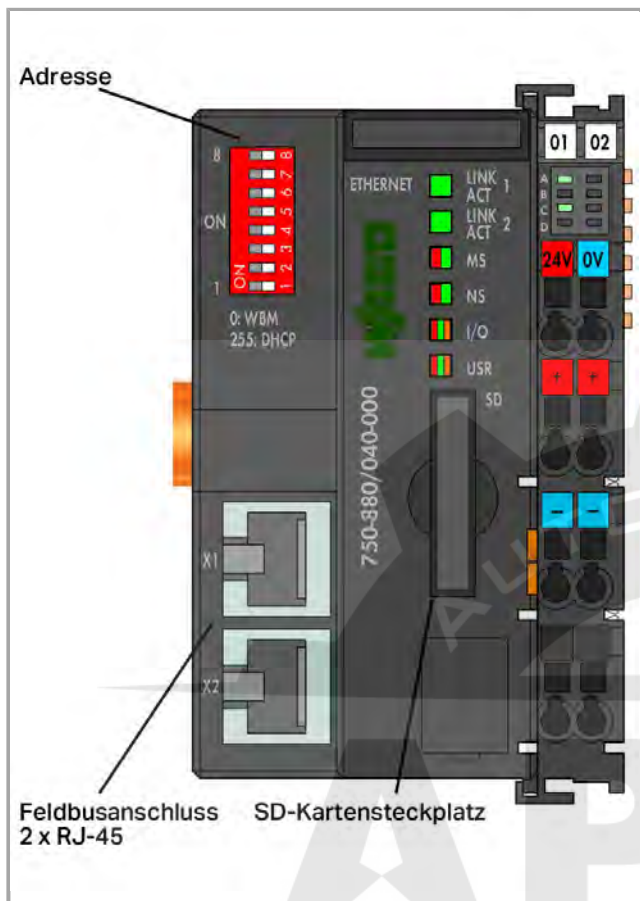


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Compliant

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Color: ■





Item description

In conjunction with the WAGO-I/O-SYSTEM, the ETHERNET Controller can be used as a programmable controller within ETHERNET networks.

The controller supports all digital, analog and specialty modules found within the 750/753 Series, and is suitable for data rates of 10/100 Mbit/s.

Two ETHERNET interfaces and an integrated switch allow the fieldbus to be wired in a line topology. This eliminates additional network devices, such as switches or hubs. Both interfaces support Auto-Negotiation and Auto-MDI(X).

The DIP switch configures the last byte of the IP address and may be used for IP address assignment.

The controller supports both MODBUS/TCP and EtherNet/IP for use in industrial environments. It also supports a wide variety of standard ETHERNET protocols for easy integration into IT environments (e.g., HTTP, BootP, DHCP, DNS, SNTP, SNMP, FTP).

For telecontrol applications, the 750-880/040-001 Controller supports the IEC 60870-5-101/-103-104, IEC 61850-7 and IEC 61400-25 communication protocols.

An integrated Webserver provides user configuration options, while displaying PLC status information.

The IEC 61131-3 programmable controller is multitasking-capable and features a battery-backed RTC.

A data memory of 1 MB is available.

The 750-880 Controller is equipped with a removable memory card slot. A memory card can be used to transfer device parameters or files (e.g., boot files) from one controller to another. The memory card can be accessed via FTP and be used as an additional drive.

The device is ideal for operation in harsh environments:

- Extended temperature range
- Greater immunity to impulse voltages and electromagnetic interference
- Higher vibration and shock resistance

Data

Technical Data

Communication	EtherNet/IP Modbus (TCP, UDP) Ethernet Telecontrol protocols
Ethernet protocol	HTTP BootP DHCP DNS SNTP FTP SNMP
Telecontrol protocols	IEC 60870-5-101/-103/-104 IEC 61400-25 IEC 61850-7 DNP3
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 CODESYS Library
Baud rate (communication/fieldbus 1)	10/100 Mbit/s
Baud rate	10/100 Mbit/s
Transmission medium (communication/fieldbus)	Twisted Pair S-UTP; 100 Ω; Cat. 5; Line length (max.): 100 m
Transmission performance	Class D acc. to EN 50173
Program memory	1024 kByte
Data memory	1024 kByte
Software non-volatile memory	32 Kbytes
Type of memory card	SD and SDHC up to 32 GB (All guaranteed properties are only valid in connection with the WAGO 758-879/000-001 memory card.)
Memory card slot	Push-push mechanism, sealable cover lid
Number of modules per node max.	64
Input and output process image (Fieldbus) max.	1020 Worte/1020 Worte

Indicators	LED (LINK/ACT) green: Network connection Port 1 ... 2; LED (MS, NS) red/green: Status of node, network; LED (I/O, USR) red/green /orange: Internal data bus status, status programmable by user; LED (A, B) green: System power supply status, field supply
Derating	Total current for system supply: 1700 mA (ambient temperature (operation) < 60 °C), 1500 mA (ambient temperature (operation) 60–70 °C)
System supply voltage	DC 24 V(–25 ... +30 %); via wiring level (CAGE CLAMP® connection). Specified values for ambient temperatures under laboratory conditions +15 ... +35 °C. For –40 ... +55 °C: 24 V (–25 ... +20 %). For +55 ... +70 °C: 24 V (–25 ... +10 %). Lower limit in all temperature ranges: –27.5 % (including 15 % residual ripple)
Input current typ. at rated load (24 V)	500 mA
Efficiency of the power supply (typ.) at nominal load (24 V)	90 %
Current consumption, system supply (5 V)	450 mA
Total current for system supply	1700 mA
Field supply voltage	DC 24 V; via power jumper contacts
Current carrying capacity of the power jumper contacts	10 A
Number of outgoing power jumper contacts	2
Ratings per	IEC/EN 60664-1
Rated surge voltage	1 kV

Connection data

Connection technology: communication/fieldbus	EtherNet/IP: 2 x RJ-45; Modbus TCP/UDP: 2 x RJ-45; Telecontrol protocols: 1 x Serial interface via I/O module; Telecontrol protocol IEC 60870-5-104: 1 x RJ-45; Telecontrol protocol IEC 61850: 1 x RJ-45; Telecontrol protocol DNP3: 1 x RJ-45
Connection technology: system supply	2 x CAGE CLAMP®
Connection technology: field supply	4 x CAGE CLAMP®
Connection type (1)	System/field supply
Solid conductor	0.25 ... 2.5 mm² / 24 ... 14 AWG
Fine-stranded conductor	0.25 ... 2.5 mm² / 24 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Connection technology: Device configuration	1 x 4-pole male connector

Geometrical Data

Width	61.5 mm / 2.421 inch
Height	71.9 mm / 2.831 inch
Height from upper-edge of DIN-35 rail	64.7 mm / 2.547 inch
Depth	100 mm / 3.937 inch

Mechanical data

Weight	154.499 g
Color	dark gray
Housing material	Polycarbonate, polyamide 6.6
Conformity marking	1

Environmental Requirements

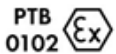
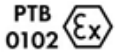
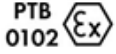
Surrounding air (operating) temperature	-40 ... 70 °C
Surrounding air (storage) temperature	-40 ... 85 °C
Protection class	IP20
Degree of pollution (5)	2 per IEC 61131-2
Operating altitude	without temperature derating: 0 ... 2000 m; with temperature derating: 2000 ... 5000 m (0.5 K/100 m); max.: 5000 m
Relative air humidity (no condensation)	95 %
Relative humidity	Short-term condensation per Class 3K7/IEC EN 60721-3-3 and E DIN 40046-721-3 (except wind-driven precipitation, water and ice formation)
Mounting position	horizontal (standing/lying) or vertical
Type of mounting	DIN-35 rail
Vibration resistance	acc. to IEC 60068-2-6 (acceleration: 5g), EN 60870-2-2, IEC 60721-3-1, -3, EN 50155, EN 61373
Shock resistance	acc. to IEC 60068-2-27 (15g/11 ms/half-sine/1000 shocks; 25g/6 ms /1000 shocks), EN 50155, EN 61373
EMC immunity to interference	acc. to EN 61000-6-1, -2, EN 61131-2, marine applications, EN 50121-3-2, -4, -5, EN 60255-26, EN 60870-2-1, EN 61850-3, IEC 61000-6-5, IEEE 1613, VDEW: 1994
EMC emission of interference	acc. to EN 61000-6-3, -4, EN 61131-2, EN 60255-26, marine applications, EN 60870-2-1, EN 61850-3, EN 50121-3-2, EN 50121-4, -5
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Fire load	0.232 MJ
Permissible H ₂ S contaminant concentration at a relative humidity 75 %	10 ppm
Permissible SO ₂ contaminant concentration at a relative humidity 75 %	25 ppm

Commercial data

Product Group	15 (Remote I/O)
Country of origin	DE
GTIN	4050821827184
Customs Tariff No.	85371091990

Approvals / Certificates

Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV 17 ATEX 193969X
	ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV 17 ATEX 193969X
	ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV 17 ATEX 193969X
	IECEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX TUN 16.0046X
	IECEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX TUN 16.0046X
	IECEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX TUN 16.0046X
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726 Sec.1

Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
	KC National Radio Research Agency	Article 58-2, Clause 3	MSIP- REM-W43- PFC750

Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	LR Lloyds Register	-	17/20073 LR



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/18

UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL UL International Netherlands B.V. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.1

Compatible products

Marking accessories

	Item no.: 2009-145 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-145
	Item no.: 2009-145/000-002 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-145 /000-002
	Item no.: 2009-145/000-005 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-145 /000-005
	Item no.: 2009-145/000-006 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-145 /000-006
	Item no.: 2009-145/000-007 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-145 /000-007
	Item no.: 2009-145/000-012 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-145 /000-012

	Item no.: 2009-145/000-023 Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-145
		7000-023
	Item no.: 2009-145/000-024 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-145
		7000-024
	Item no.: 248-501 Miniature WSB Quick marking system; plain; Marker width 5 mm; 10 strips with 10 markers per card	248-501
	Item no.: 248-501/000-002 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501
		7000-002
	Item no.: 248-501/000-005 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501
		7000-005
	Item no.: 248-501/000-006 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501
		7000-006
	Item no.: 248-501/000-007 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501
		7000-007
	Item no.: 248-501/000-012 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501
		7000-012
	Item no.: 248-501/000-017 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501
		7000-017
	Item no.: 248-501/000-023 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501
		7000-023
	Item no.: 248-501/000-024 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501
		7000-024
	Item no.: 750-103 Group marker carrier	750-103
	Item no.: 750-107 Group marker carrier	750-107
software		
	Item no.: 759-333 WAGO-I/O-PRO	759-333
	Item no.: 759-333/000-923 WAGO-I/O-PRO; USB-Set	759-333
		7000-923
	Item no.: 759-911	



WAGO-I/O-PRO; CD

759-911

memory card



Item no.: 758-879/000-001

Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C

/000-001

758-879

shield connection



Item no.: 790-108

Shield clamping saddle; 11 mm wide; diameter of compatible conductor

790-108



Item no.: 790-116

Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm

790-116



Item no.: 790-124

Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm

790-124



Item no.: 790-140

Shield clamping saddle; diameter of compatible conductor

790-140



Item no.: 790-208

Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm

790-208



Item no.: 790-216

Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm

790-216



Item no.: 790-220

Shield clamping saddle; 30 mm wide; 6 ... 20 mm

790-220

wiring and connectors



Item no.: 750-975

ETHERNET RJ-45 connector, IP20; ETHERNET 10/100 Mbit/s; for field assembly

750-975



Item no.: 750-977/000-011

Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22

/000-011

750-977



Item no.: 750-977/000-012

Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22

/000-012

750-977



Item no.: 750-977/000-021

Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24

/000-021

750-977



Item no.: 750-977/000-022

Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24

/000-022

750-977



Item no.: 750-978/000-011

Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22; Strain relief

/000-011

750-978



Item no.: 750-978/000-012

Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22; Strain relief

/000-012

750-978



Item no.: 750-978/000-021
Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24; Strain relief

/000-021

750-978



Item no.: 750-978/000-022
Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24; Strain relief

/000-022

750-978



Item no.: 750-979/000-011
Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 22; Strain relief

/000-011

750-979



Item no.: 750-979/000-012
Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 22; Strain relief

/000-012

750-979



Item no.: 750-979/000-021
Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 24; Strain relief

/000-021

750-979



Item no.: 750-979/000-022
Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 24; Strain relief

/000-022

750-979

Carrier rail

Item no.: 210-112
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; Hole width 25 mm

210-112



Item no.: 210-113
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715

210-113



Item no.: 210-114
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715

210-114



Item no.: 210-115
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; Hole width 18 mm

210-115



Item no.: 210-118
Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715

210-118



Item no.: 210-196
Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715

210-196



Item no.: 210-197
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715

210-197



Item no.: 210-198
Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715

210-198



Item no.: 210-504
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715

210-504



Item no.: 210-505
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715

210-505



Item no.: 210-506
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715

210-506

**Item no.: 210-508**

210-508

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715

system box**Item no.: 850-804**

850-804

IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 4 x M20, 16 x M16, 28 x M12 cable grip

**Item no.: 850-804/000-001**

850-804

IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 2 x M20, 13 x M16, 32 x M12 cable grip

/000-001

**Item no.: 850-805**

850-805

IP65 enclosure; Stainless steel; WxHxD (600x123x200 mm); 4 x M20, 19 x M16, 67 x M12 cable grip

**Item no.: 850-814/002-000**

850-814

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate

/002-000

**Item no.: 850-815/002-000**

850-815

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate

/002-000

**Item no.: 850-816/002-000**

850-816

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (400x120x200 mm); without flange plate

/002-000

**Item no.: 850-817/002-000**

850-817

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (600x120x200 mm); without flange plate

/002-000

**Item no.: 850-825**

850-825

IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20

**Item no.: 850-826**

850-826

IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip

**Item no.: 850-826/002-000**

850-826

IP65 enclosure; Aluminium (RAL 7035); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip

/002-000

**Item no.: 850-827**

850-827

IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip

**Item no.: 850-827/002-000**

850-827

IP65 enclosure; Aluminium (RAL 7035); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip

/002-000

**Item no.: 850-828**

850-828

IP65 enclosure; Aluminium (RAL 7032); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip

**Item no.: 850-828/002-000**

850-828

IP65 enclosure; Aluminium (RAL 7035); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip

/002-000

**Item no.: 850-834**

850-834

IP65 enclosure; Polyester (RAL 7032); WxHxD (164x100x164 mm); 9 x M12, 4 x M20

**Item no.: 850-835**

IP65 enclosure; Polyester (RAL 7032); WxHxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip

850-835

**Item no.: 850-836**

IP65 enclosure; Polyester (RAL 7032); WxHxD (324x100x164 mm); 4 x M20, 8 x M16, 17 x M12 cable grip

850-836

General accessories**Item no.: 750-921**

Bluetooth® Adapter

750-921

**Item no.: 750-923**

Configuration cable; USB connector; Length: 2.5 m

750-923

**Item no.: 750-923/000-001**

Configuration cable; USB connector; Length: 5 m

750-923

Downloads**Documentation****Manual**

WAGO-I/O-SYSTEM 750

V 1.5.0

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4.3 MB

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DNP3 Solution

WAGO MODBUS Master Configurator

V 1.1.0

pdf

1.3 MB

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for configuration of MODBUS networks in WAGO-I/O-PRO (CODESYS)

WAGO-I/O-SYSTEM 750

V 1.8.0

pdf

19.7 MB

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IEC-61850 Solution

WAGO-I/O-SYSTEM 750

V 1.8.0

pdf

6.0 MB

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IEC-60870 Solution

ETHERNET Telecontroller/XTR

V 1.2.0

pdf

13.8 MB

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for eXTReme environmental conditions; 32-bit CPU, multitasking

Bid Text

750-880/040-001

doc

39.4 kB

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Additional Information

Disposal; Electrical and electronic equipment, Packaging

V 1.0.0

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265.8 kB

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System Description

System Manual /XTR

V 1.2.0

pdf

2.9 MB

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Basic conditions and recommendations for higher operational safety



750 XTR Controller, General Product Information

pdf
517.0 kB

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Engineering-Software

Configuration and Commissioning Software

WAGUpload Full Version	1.10.0.0	zip	Download
WAGUpload is an independent PC software for transmission, backing up and restoring of PLC applications on WAGO 750 Series controllers.	Feb 18, 2019	60.5 MB	

WAGO Ethernet Settings / 750 Series	6.8.2.2	exe	Download
759-316	Aug 5, 2015	16.0 MB	

WAGUpload Small Version	1.10.0.0	exe	Download
WAGUpload is an independent PC software for transmission, backing up and restoring of PLC applications on WAGO 750 Series controllers.	Feb 18, 2019	4.1 MB	

WAGO BootPServer / 750 and 767 Series	1.0	zip	Download
	Mar 7, 2000	1.1 MB	

Runtime Software

Firmware

Firmware: 750-880/040-001 Controller ETHERNET; 3rd Generation; SD Card Slot; Telecontrol technology; Extreme	14	zip	Download
	Apr 11, 2019	6.0 MB	

CAD/CAE - Smart Data

CAD data

3D Download 750-880/040-001	URL	Download
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Device Files

Device Description File

EDS files for EthernetIP / 750 and 767 Series	10	zip	Download
	Sep 24, 2014	71.0 kB	

MIB file for Ethernet controller / 750 Series	2.0	zip	Download
	Apr 3, 2012	6.1 kB	

Device Driver

WAGO USB Service Cable Driver / 750 and 857 Series	6.5.3.0	zip	Download
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Product family

Controller 750 XTR

[Learn more about the product family.](#)

[Show all products from the family](#)



Subject to changes.
