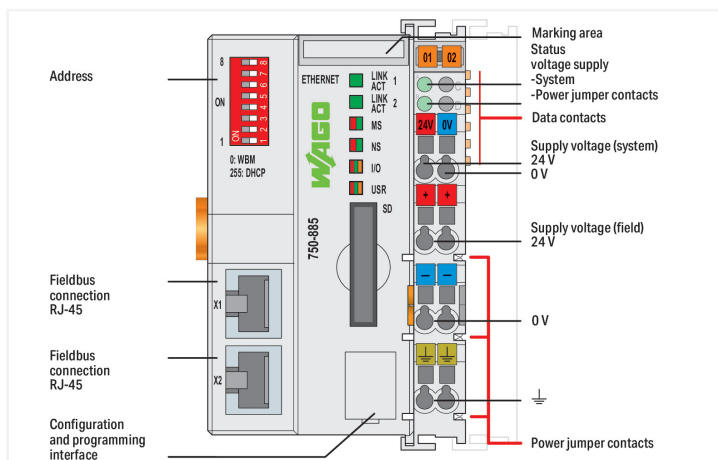
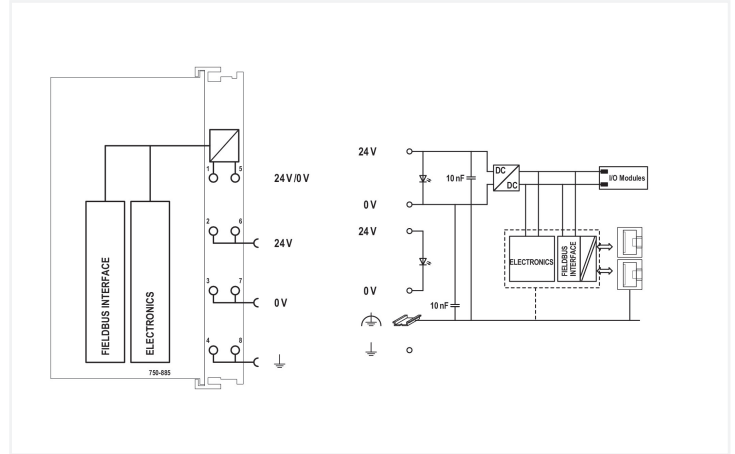


Data Sheet | Item Number: 750-885

Controller ETHERNET; 3rd Generation; SD Card Slot; Media Redundancy

<https://www.wago.com/750-885>



In conjunction with the WAGO I/O System, the ETHERNET Controller serves ETHERNET networks requiring fast and safe media redundancy. The controller supports all digital and analog input/output modules, as well specialty modules found within the 750/753 Series, and is suitable for data rates of 10/100 Mbit/s.

Media redundancy is achieved by operating the controller in two separate networks – which is accessible via two different IP addresses (including two MAC IDs). Cross communication between separate channels is not possible. The two separate ETHERNET interfaces allow redundant connection of two transmission paths (no hub or switch required). Both interfaces support autonegotiation and Auto-MDI(X). The DIP switch configures the last byte of both default IP addresses and may be used for IP address assignment (DHCP, BootP).

The media redundancy controller is designed for fieldbus communication via MODBUS/TCP in ETHERNET networks. It also supports a wide variety of standard ETHERNET protocols (HTTP, BootP, DHCP, DNS, FTP).

An integrated Webserver provides user configuration options, while displaying the controller's status information.

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

A data memory of 1 MB is available.

For memory expansion, the 750-885 Controller is equipped with a removable memory card slot.



Notes		
Note		For new installations, take the alternative items into account.

Technical data		
Communications		EtherNet/IP™ Modbus (TCP, UDP) ETHERNET
ETHERNET protocols		HTTP BootP DHCP DNS SNTP FTP SNMP
Redundancy function		via two logically separated ETHERNET interfaces
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
Transmission rate		10/100 Mbit/s
Transmission medium (communication/fieldbus)		Twisted pair S-UTP; 100 Ω; Cat. 5; 100 m maximum cable length
Transmission performance		Class D per EN 50173
Program memory		1024 KB
Data memory		1024 KB
Non-volatile software memory		32 KB
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
Input and output process image (fieldbus) max.		1020 words/1020 words
Powerfail RTC buffer		6 days (min.)
Indicators		LED (LINK/ACT) green: Network connection via ports 1 ... 2; LED (MS, NS) red/green: Status of node, network; 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 (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



Connection Data	
Connection technology: communication/fieldbus	EtherNet/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®
Connectable conductor materials	Copper
Connection type	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

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

Mechanical data	
Mounting type	DIN-35 rail

Material data	
Housing material	Polycarbonate; polyamide 6.6
Fire load	3.46 MJ
Weight	161.9 g
Conformity marking	CE

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.)
Mounting position	Horizontal left, horizontal right, horizontal top, horizontal bottom, vertical top and vertical bottom
Relative humidity (without condensation)	95 %
Vibration resistance	4g 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
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 (I/O System)	
PU (SPU)	1 pcs	
Packaging type	Box	
Country of origin	DE	
GTIN	4050821572206	
Customs tariff number	85371091990	

Product Classification		
UNSPSC	43201404	
eCl@ss 10.0	27-24-26-07	
eCl@ss 9.0	27-24-26-07	
ETIM 9.0	EC000236	
ETIM 10.0	EC000236	
ECCN	NO US CLASSIFICATION	

Environmental Product Compliance		
CAS-No.	12060-00-3 1303-86-2 1317-36-8 25550-51-0 693-98-1 7439-92-1 79-94-7 80-43-3	
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol 2-methylimidazole 4-Methyl-1,2-cyclohexanedicarboxylic anhydride Diboron trioxide Lead Lead monoxide Lead titanium oxide (PbTiO3) Peroxide, bis(1-methyl-1-phenylethyl)	
RoHS Compliance Status	Compliant,With Exemption	
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II	
SCIP notification number (Bulgaria)	5250ecce-6c5a-4aa3-a688-e5e13d517d4d	
SCIP notification number (Czech Republic)	983894ae-1d08-4021-a017-97c5a4588867	

Approvals / Certificates		
General approvals		
  		
Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03083
KC National Radio Research Agency	Article 58-2, Clause 3	MSIP-REM-W43-PFC750
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199
Approvals for marine applications		
     		
Approval	Standard	Certificate Name
ABS American Bureau of Ship-ping	-	25-0415412
BSH Bundesamt fuer Seeschiff-fahrt und Hydrographie	-	1104
DNV DNV GL SE	DNV-CG-0339,Aug.2021	TAA0000194
LR Lloyds Register EMEA	-	LR22180952TA
PRS Polski Rejestr Statków	-	TE/1101/880590/23
RINA RINA Germany GmbH	-	ELE343521XG001



Approvals for hazardous areas

PTB 0102 Ex CCC IECEX INMETRO TÜV Rheinland QCP 0004 DEKRA 8505 UKEX UL		
Approval	Standard	Certificate Name
ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV14ATEX148929X (II 3 G Ex ec IIC T4 Gc)
CCCEX CQST/CNEx	CNCA-C23-01	2020312310000213 (Ex ec IIC T4 Gc)
IECEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX TUN 14.0035 X (Ex ec IIC T4 Gc)
INMETRO TÜV Rheinland do Brasil Ltda.	IEC 60079-0	TÜV 12.1297 X
UKEx WAGO GmbH & Co. KG	EN 60079-0	UKCA_WA GO22UKEX003X_ec
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 750-885

Documentation

Manual			System Description		
System Manual Series 750/753			Overview on WAGO-I/O-SYSTEM 750 approvals	pdf 770.48 KB	
Product Manual ETHER-NET-MR/SD-Fieldbus Controller	V 1.4.0	pdf 15115.79 KB	750 Controller, General Product Information	pdf 507.50 KB	
Product Manual WAGO MODBUS Master Configurator	V 1.1.0	pdf 1761.59 KB			

Bid Text			
750-885	19.02.2019	xml 7.61 KB	
750-885	19.05.2015	doc 31.50 KB	

Instruction Leaflet			
CCC Ex (Additional information)	26.04.2023	pdf 159.76 KB	

Application Notes

Application Note CoDeSys 2.3			
HART Tool Routing via ETHERNET with 750-820x/750-88x and CODESYS 2.3 (a116120)	1.0.0 22.03.2019	pdf 3798.36 KB	↓
Using the web visualization with Java™ runtime environment (JRE, JVM) 7 update 51 (7u51) (a500690)	1.2.4 26.02.2019	zip 4896.43 KB	↓
Application Note Power-Measurement_03 Library	19.01.2011 19.03.2012	zip 932.08 KB	↓
Application Note: DMX_02	26.04.2017 26.04.2017	zip 733.43 KB	↓
HVAC System Macros	10.03.2017 15.03.2019	zip 13252.92 KB	↓
Application Note: Mp-Bus_03 Library	2020-08-14 14.08.2020	zip 513.66 KB	↓
Connection of a Thermokon Thanos SR L MODBUS room control unit to the WAGO-I/O-SYSTEM	02.05.2013 13.05.2013	zip 305.89 KB	↓
Anbindung der HKW-Elektronik Wetterprognose-Station WS-K xx T ModBus	1.1 07.07.2017	zip 762.78 KB	↓
Application Note Scheduler_03.lib	20.05.2011 20.05.2011	zip 1717.92 KB	↓
GRUNDFOS GENIbus interface, application note	20.03.2017 20.03.2017	zip 279.86 KB	↓
Connection of Thermokon Multi-function room control units WRF 08	10.04.2019 10.04.2019	zip 855.84 KB	↓
Connection of DMX devices to the WAGO-I/O-SYSTEM via the ArtNet-DMX STAGE-PROFI 1.1	11.01.2013 11.01.2013	zip 1450.63 KB	↓
Connection of Thermokon Multi-function room control units WRF 06	10.04.2019 08.04.2016	zip 826.10 KB	↓
Application Note for the 750-494 3-Phase Power Measurement Module	24.01.2014 11.11.2014	zip 1629.99 KB	↓
Application Note: EnOcean_06 Library	30.11.2016 30.11.2016	zip 822.25 KB	↓
Application Note for the 750-495 3-Phase Power Measurement Module	24.01.2014 24.01.2014	zip 1806.18 KB	↓
Application Note Weather Station Elsner P03 Modbus	01.12.2011 28.10.2011	zip 269.09 KB	↓
HLK-Anlagenmakros für TRIC	2015-07-10 10.07.2015	zip 74963.43 KB	↓
Application Note Library ModuleAccess_01	05.01.2016 29.01.2016	zip 1001.22 KB	↓



CAD/CAE-Data

CAD data	CAE data
2D/3D Models 750-885	EPLAN Data Portal 750-885
	WSCAD Universe 750-885
	ZUKEN Portal 750-885

Engineering-Software

Configuration and Commissioning Software			
(759-316) WAGO Ether-net Settings / Serie 750	06.18.01.01 02.09.2021	zip 26678.54 KB	
WAGUpload	1.16.1.0 02.02.2022	zip 12111.45 KB	

Runtime Software

Firmware			
0750-0885, Controller ETHERNET	V 17 22.07.2022	zip 1507.11 KB	

Libraries

Library			
WagoLibConfigETH_01	1.0.0	pdf 381.48 KB	
ModuleAccess_01.lib	1.8.7 27.01.2020	zip 2114.60 KB	

1 Compatible Products

1.1 Optional Accessories

1.1.1 Cables and connectors

1.1.1.1 Connector plug

 Item No.: 750-979/000-011 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 22; Strain relief	 Item No.: 750-978/000-021 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 24; Strain relief	 Item No.: 750-979/000-012 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 22; Strain relief	 Item No.: 750-979/000-022 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 24; Strain relief
 Item No.: 750-977/000-011 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22	 Item No.: 750-978/000-011 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22; Strain relief	 Item No.: 750-977/000-021 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24	 Item No.: 750-978/000-021 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24; Strain relief
 Item No.: 750-977/000-012 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22	 Item No.: 750-978/000-012 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22; Strain relief	 Item No.: 750-977/000-022 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24	 Item No.: 750-978/000-022 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24; Strain relief



1.1.1.1 Connector plug



Item No.: 750-975
ETHERNET RJ-45 connector, IP20; ETHERNET 10/100 Mbit/s; for field assembly

1.1.2 Communication

1.1.2.1 Communication cable



Item No.: 750-923
Configuration cable; USB connector; Length: 2.5 m



Item No.: 750-923/000-001
Configuration cable; USB connector; Length: 5 m

1.1.3 DIN-rail

1.1.3.1 Mounting accessories



Item No.: 210-196
Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslopped; similar to EN 60715; silver-colored



Item No.: 210-198
Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslopped; according to EN 60715; copper-colored



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



Item No.: 210-114
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslopped; similar to EN 60715; silver-colored



Item No.: 210-118
Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslopped; according to EN 60715; silver-colored



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; silver-colored



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; silver-colored



Item No.: 210-113
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslopped; according to EN 60715; silver-colored

1.1.4 Marking

1.1.4.1 Group marker carrier



Item No.: 750-106
Group marker carrier

1.1.4.2 Marker



Item No.: 750-100
Marker card; as a DIN A4 sheet; plain



Item No.: 2009-145/000-006
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue



Item No.: 2009-145/000-007
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray



Item No.: 2009-145/000-023
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green



Item No.: 2009-145/000-012
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange



Item No.: 2009-145/000-005
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red



Item No.: 2009-145/000-024
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet



Item No.: 2009-145
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white



Item No.: 2009-145/000-002
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow



Item No.: 248-501/000-006
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue



Item No.: 248-501/000-007
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray



Item No.: 248-501/000-023
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green

1.1.4.2 Marker


Item No.: 248-501/000-017

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green


Item No.: 248-501/000-012

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange


Item No.: 248-501/000-005

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red


Item No.: 248-501/000-024

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet


Item No.: 248-501

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white


Item No.: 248-501/000-002

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow

1.1.4.3 Marker carrier


Item No.: 750-103

Group marker carrier

1.1.5 Memory card

1.1.5.1 Memory card

Item No.: 758-879/000-2116

Memory Card SD; pSLC-NAND; 16 GB; Temperature range: -40 to 85°C

1.1.6 Shield termination

1.1.6.1 Shield clamping saddles


Item No.: 790-108

Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 ... 8 mm


Item No.: 790-208

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


Item No.: 790-116

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


Item No.: 790-216

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


Item No.: 790-124

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


Item No.: 790-220

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


Item No.: 790-140

Shield clamping saddle; diameter of compatible conductor

1.1.8 System enclosure

1.1.8.1 System enclosure


Item No.: 850-825

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


Item No.: 850-826

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


Item No.: 850-827

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


Item No.: 850-828

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


Item No.: 850-826/002-000

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


Item No.: 850-827/002-000

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


Item No.: 850-828/002-000

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


Item No.: 850-834

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

1.1.8.1 System enclosure

 Item No.: 850-835 IP65 enclosure; Polyester (RAL 7032); Wx-HxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip	 Item No.: 850-836 IP65 enclosure; Polyester (RAL 7032); Wx-HxD (324x100x164 mm); 4 x M20, 8 x M16, 17 x M12 cable grip	 Item No.: 850-814/002-000 IP65 enclosure; Sheet steel (RAL 7035); Wx-HxD (200x120x200 mm); without flange plate	 Item No.: 850-815/002-000 IP65 enclosure; Sheet steel (RAL 7035); Wx-HxD (300x120x200 mm); without flange plate
 Item No.: 850-816/002-000 IP65 enclosure; Sheet steel (RAL 7035); Wx-HxD (400x120x200 mm); without flange plate	 Item No.: 850-817/002-000 IP65 enclosure; Sheet steel (RAL 7035); Wx-HxD (600x120x200 mm); without flange plate		