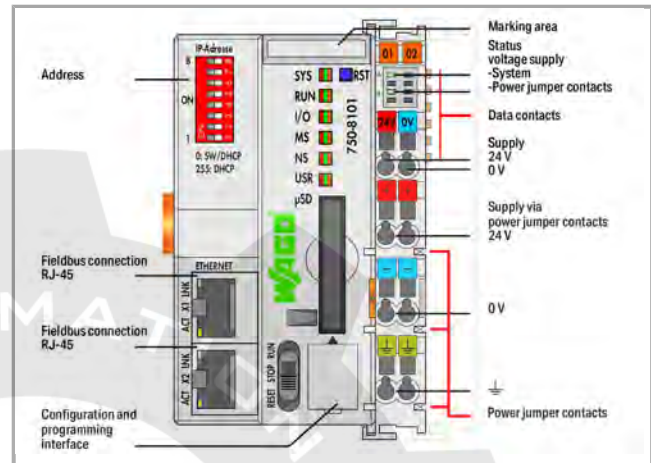


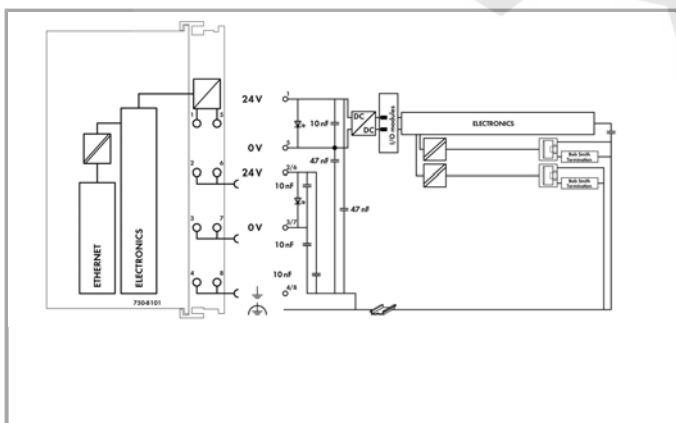
750-8101/025-000

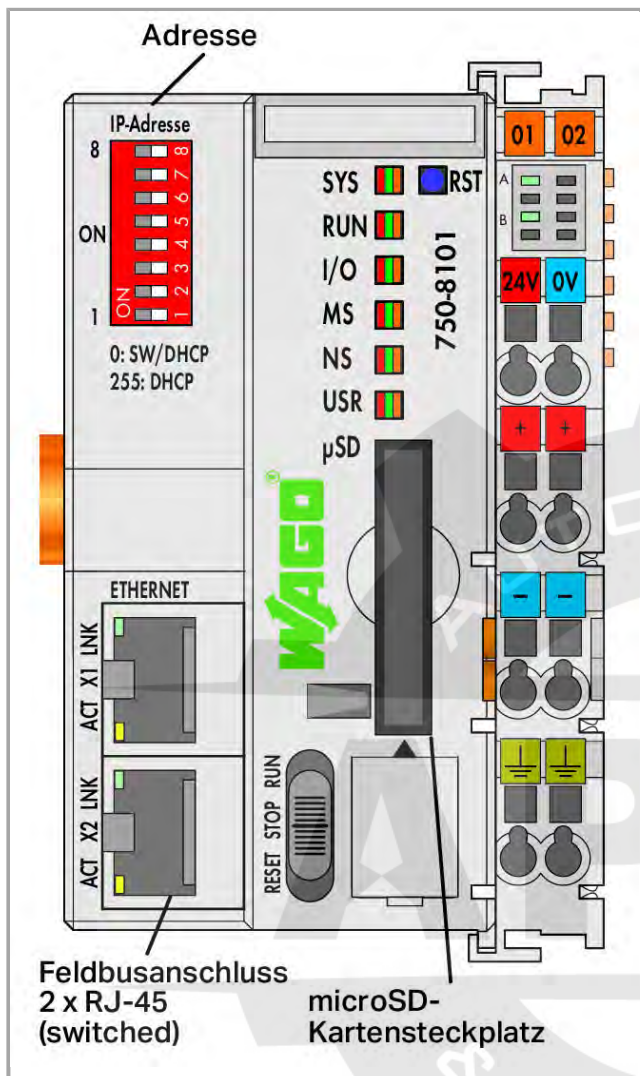


RoHS
Compliant

BOMcheck.net

Color:





Item description

The PFC100 Controller is a compact PLC for the modular WAGO-I/O-SYSTEM. Besides network and fieldbus interfaces, the controller supports all digital, analog and specialty I/O modules found within the 750/753 Series.

Two ETHERNET interfaces and an integrated switch enable line topology wiring.

An integrated Webserver provides user configuration options, while displaying PFC100 status information.

Besides the processing industry and building automation, typical applications for the PFC100 include standard machinery and equipment control (e. g., packaging, bottling and manufacturing systems, as well as textile, metal and wood processing machines).

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

Programming per IEC 61131-3

- Programmable via e!COCKPIT
- Direct connection of WAGO I/O modules
- 2 x ETHERNET (configurable)



- Linux 3.18 operating system with RT-Preemption patch
- Configuration via e!COCKPIT or Web-Based Management user interface
- Maintenance-free

Data

Technical Data

Communication	Modbus (TCP, UDP) Ethernet EtherNet/IP-Adapter (Slave), Bibliothek für e!RUNTIME MQTT
Ethernet protocol	DHCP DNS NTP FTP FTPS SNMP HTTP HTTPS SSH
Visualization	Web-Visu
Operating system	Real-time Linux 3.18 (with RT-Preemption patch)
CPU	Cortex A8, 600 MHz
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	e!COCKPIT (based on CODESYS V3)
Configuration options	e!COCKPIT WAGO-I/O-CHECK Web-based management
Baud rate (communication/fieldbus 1)	10/100 Mbit/s
Baud rate	ETHERNET: 10/100 Mbit/s
Transmission medium (communication/fieldbus)	ETHERNET: Twisted Pair S-UTP; 100 Ω; Cat. 5; Line length (max.): 100 m
Hardware non-volatile memory	64 Kbytes
Program memory	12 MB (Program and data memory (dynamically distributed))
Data memory	12 MB Program and data memory (dynamically distributed)
Software non-volatile memory	64 Kbytes
Type of memory card	microSD up to 32 GB (all guaranteed properties only valid with WAGO 758-879/000-3102 memory card)
Memory card slot	Push-push mechanism, sealable cover lid
Number of modules per node max.	250
Number of I/O modules without bus extension max.	64
Input and output process image (internal) max.	1000 Worte/1000 Worte

Input and output process image (MODBUS) max.	32000 Worte/32000 Worte
Indicators	LED (SYS, RUN, I/O, USR) red/green/orange: Status system, program, internal data bus, status programmable by user (can be used via CODESYS library); LED (A, B) green: System power supply status, field supply
System supply voltage	DC 24 V(-25 ... +30 %); via wiring level (CAGE CLAMP® connection)
Input current typ. at rated load (24 V)	550 mA
Total current for system supply	1700 mA
Field supply voltage	DC 24 V (-25 ... +30 %); via power jumper contacts
Current carrying capacity of the power jumper contacts	10 A
Number of outgoing power jumper contacts	3
Isolation	500 V system/supply

Connection data

Connection technology: communication/fieldbus	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 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	159 g
Color	light gray
Housing material	Polycarbonate, polyamide 6.6
Conformity marking	1

Environmental Requirements

Surrounding air (operating) temperature	-20 ... 60 °C
Surrounding air (storage) temperature	-40 ... 85 °C
Protection class	IP20
Degree of pollution (5)	2 per IEC 61131-2

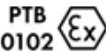
Operating altitude	without temperature derating: 0 ... 2000 m; with temperature derating: 2000 ... 5000 m (0.5 K/100 m); max.: 5000 m
Relative air humidity (no condensation)	95 %
Relative humidity	Short-term condensation per Class 3K6/IEC EN 60721-3-3 and E DIN 40046-721-3, taking a temperature range of -20 ... +60 °C into consideration (except wind-driven precipitation, water and ice formation)
Mounting position	any
Type of mounting	DIN-35 rail
Vibration resistance	4g per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	acc. to EN 61000-6-2, marine applications
EMC emission of interference	acc. to EN 61000-6-3, marine applications
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Fire load	0.71 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

Country of origin	DE
GTIN	4055143351812
Customs Tariff No.	85371091990

Approvals / Certificates

Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV_14_ATEX_148929_X
	ATEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX_TUN_14.0035_X
	ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV_14_ATEX_148929_X
	ATEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX_TUN_14.0035_X



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
	ABS American Bureau of Shipping	-	19- HG1821812- PDA
	PRS Polski Rejestr Statków	-	TE/2214 /880590/18

UL-Approvals

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

Compatible products

wiring and connectors

	Item no.: 750-975 ETHERNET RJ-45 connector, IP20; ETHERNET 10/100 Mbit/s; for field assembly	750-975
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**Item no.: 750-977/000-011**

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

750-977

/000-011

**Item no.: 750-977/000-012**

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

750-977

/000-012

**Item no.: 750-977/000-021**

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

750-977

/000-021

**Item no.: 750-977/000-022**

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

750-977

/000-022

**Item no.: 750-978/000-011**

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

750-978

/000-011

**Item no.: 750-978/000-012**

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

750-978

/000-012

**Item no.: 750-978/000-021**

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

750-978

/000-021

**Item no.: 750-978/000-022**

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

750-978

/000-022

**Item no.: 750-979/000-011**

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

750-979

/000-011

**Item no.: 750-979/000-012**

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

750-979

/000-012

**Item no.: 750-979/000-021**

Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 24; Strain relief

750-979

/000-021

**Item no.: 750-979/000-022**

Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 24; Strain relief

750-979

/000-022

software**Item no.: 2759-101/1110-2002**

e!COCKPIT; Workstation License

2759-101

/1110-2002

**Item no.: 2759-101/1110-2005**

e!COCKPIT; Multi-User License; 05 pcs

2759-101

/1110-2005



Item no.: 2759-101/1110-2010
e!COCKPIT; Multi-User License; 10 pcs

2759-101
/ 1110-2010



Item no.: 2759-101/1110-2015
e!COCKPIT; Multi-User License; 15 pcs

2759-101
/ 1110-2015



Item no.: 2759-101/1110-2020
e!COCKPIT; Multi-User License; 20 pcs

2759-101
/ 1110-2020



Item no.: 2759-101/1110-3000
e!COCKPIT; Site License

2759-101
/ 1110-3000



Item no.: 2759-101/1110-4000
e!COCKPIT; Buy-out License

2759-101
/ 1110-4000

memory card



Item no.: 758-879/000-3102
Memory Card SD Micro; 2 GByte

758-879
/ 000-3102

system box



Item no.: 850-804
IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 4 x M20, 16 x M16, 28 x M12 cable grip

850-804



Item no.: 850-804/000-001
IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 2 x M20, 13 x M16, 32 x M12 cable grip

850-804
/ 000-001



Item no.: 850-805
IP65 enclosure; Stainless steel; WxHxD (600x123x200 mm); 4 x M20, 19 x M16, 67 x M12 cable grip

850-805



Item no.: 850-814/002-000
IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate

850-814
/ 002-000



Item no.: 850-815/002-000
IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate

850-815
/ 002-000



Item no.: 850-816/002-000
IP65 enclosure; Sheet steel (RAL 7035); WxHxD (400x120x200 mm); without flange plate

850-816
/ 002-000



Item no.: 850-817/002-000
IP65 enclosure; Sheet steel (RAL 7035); WxHxD (600x120x200 mm); without flange plate

850-817
/ 002-000



Item no.: 850-825
IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20

850-825



Item no.: 850-826
IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip

850-826

	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	850-826
	Item no.: 850-827 IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip	850-827
	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	850-827
	Item no.: 850-828 IP65 enclosure; Aluminium (RAL 7032); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip	850-828
	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	850-828
	Item no.: 850-834 IP65 enclosure; Polyester (RAL 7032); WxHxD (164x100x164 mm); 9 x M12, 4 x M20	850-834
	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
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
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	Item no.: 210-508 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715	210-508
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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
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	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
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	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
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	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
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	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
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	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
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	Item no.: 2009-145/000-023 Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-145 /000-023
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	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 /000-024
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	Item no.: 248-501 Miniature WSB Quick marking system; plain; Marker width 5 mm; 10 strips with 10 markers per card	248-501
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	Item no.: 248-501/000-002 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501 /000-002
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	Item no.: 248-501/000-005 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501 /000-005
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	Item no.: 248-501/000-006 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501 /000-006
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	Item no.: 248-501/000-007 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501 /000-007
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**Item no.: 248-501/000-012**

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

248-501

/000-012

**Item no.: 248-501/000-017**

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

248-501

/000-017

**Item no.: 248-501/000-023**

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

248-501

/000-023

**Item no.: 248-501/000-024**

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

248-501

/000-024

**Item no.: 750-103**

Group marker carrier

750-103

**Item no.: 750-107**

Group marker carrier

750-107

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

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

/000-001

Downloads

Documentation

Manual

PFC100 CS 2ETH PLC – PFC100 Controller	V 1.3.0	pdf 3.3 MB	Download
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Cyber Security for Controller PFC100 / PFC200	V 1.2.0	pdf 8.3 MB	Download
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Tutorial

Set IP address with Ethernet Settings In this video we are demonstrating how you can set a IP address with Ethernet Settings. Content: 00:27 – Chapter #1 Download and install software; 00:56 – Chapter #2 Open Ethernet Settings; 01:10 – Chapter #3 Establish serial Connection; 01:34 – Chapter #4 Set IP address; 02:10 – Chapter #5 Check IP address	3.0 Dec 18, 2017	mp4 88.3 MB	Download
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Establish connection to a controller using SSH In this video we are demonstrating how to establish a SSH connection with a controller using for example PuTTY to be able to work with the LINUX console. Contents: 0:21 Download and install the SSH client; 0:40 Establish the SSH connection; 0:50 Log on to the Controller	1.0 Aug 5, 2017	mp4 29.0 MB	Download
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Additional Information

Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf 265.8 kB	Download
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External license agreement for open source software In Wago products	V 1.0.0	pdf 1.5 MB	Download
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System Description

Design Notes Basic conditions and recommendations for higher operational safety	V 2.0.0	pdf 1.5 MB	Download
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Overview on WAGO-I/O-SYSTEM 750 approvals		pdf 780.2 kB	Download
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Application Notes

Application Note CoDeSys 2.3

Application note WagoLibCloud This application note explains how the WAGO controllers PFC100 and PFC200 can communicate with cloud services like Microsoft Azure (WAGO Cloud), Amazon AWS and IBM Bluemix. Data could be send to the cloud and commands could receive from	V 1.4.0 Jul 31, 2018	zip 4.0 MB	Download
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the cloud. The libraries WagoLibCloud for WAGO-I/O-PRO V2.3 and WagoAppCloud for e!COCKPIT are used.

Application Note e!COCKPIT

e!COCKPIT application note WagoAppCloud	V 1.4.1	zip	Download
This application note explains how the WAGO controllers PFC100 and PFC200 can communicate with cloud services like Microsoft Azure (WAGO Cloud), Amazon AWS and IBM Bluemix. Data could be send to the cloud and commands could receive from the cloud. The libraries WagoLibCloud for WAGO-I/O-PRO V2.3 and WagoAppCloud for e!COCKPIT are used.	Apr 26, 2019	4.5 MB	

Libraries

Library

Library WagoLibCloud.lib	V1.4.0	zip	Download
This library lets the WAGO controllers PFC100 and PFC200 communicate with cloud services like Microsoft Azure (WAGO Cloud), Amazon AWS and IBM Bluemix. Data could be send to the cloud and commands could receive from the cloud.		100.3 kB	

Engineering-Software

e!COCKPIT

e!COCKPIT	V 1.5.0	ZIP	Download
Register at no cost and test our engineering software for 30 days.	Mar 11, 2019	2.7 GB	

Runtime Software

Linux® Toolchain

Linux® Board Support Package (BSP)	2018.2.8.FW(11)35	TXT	Download
With the PFC BSP, WAGO offers Linux® enthusiasts the opportunity to compile the PFC firmware themselves, and to expand it according to their own wishes.	Aug 27, 2018	14.1 kB	

The WAGO PFC BSP includes a Pengutronix build environment, optimized for the PFC, and the OSELAS Toolchain, which open up the following possibilities, among others:

- Expanding the firmware functions using open source packages like: Python, SQLite3, PHP, etc.
- Compiling their own C/C++ applications with direct or indirect bus access to the local bus, CANopen, or PROFIBUS.
- Compiling external libraries using CODESYS V2 to expand the PLC applications.
- There are detailed instructions for many of these tasks and ideas (see How To's).



Firmware

Firmware: 750-8101/025-000 Controller PFC100; 2 x ETHERNET; Ext. Temperature	12 Mar 11, 2019	zip 44.3 MB	Download
Firmware: 750-8101/025-000 Controller PFC100; 2 x ETHERNET; Ext. Temperature	12 Mar 11, 2019	zip 44.3 MB	Download

IoT/ Cloud

Cloud Connectivity

Cloud Connectivity beta version	Jul 2, 2018	ZIP 5.7 MB	Download
Since January 2018, cloud connectivity has been a component of Firmware 11. Thus, all WAGO PFCs are inherently IoT-ready, so they can send data from the field level to the cloud via MQTT. Here, the data can be aggregated and used for analysis. New features are provided as beta versions. Register here at no cost to test the latest beta functions.			

"Remote Access" Beta Software

"Remote Access" Beta Software	V 0.9 Mar 26, 2019	ZIP 1.3 MB	Download
Register for the beta version of "Remote Access" for the WAGO Cloud.			

CAD/CAE - Smart Data

CAD data

3D Download 750-8101/025-000	URL	Download
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Product family

Controller 750
[Learn more about the product family.](#)
[Show all products from the family](#)

Subject to changes.