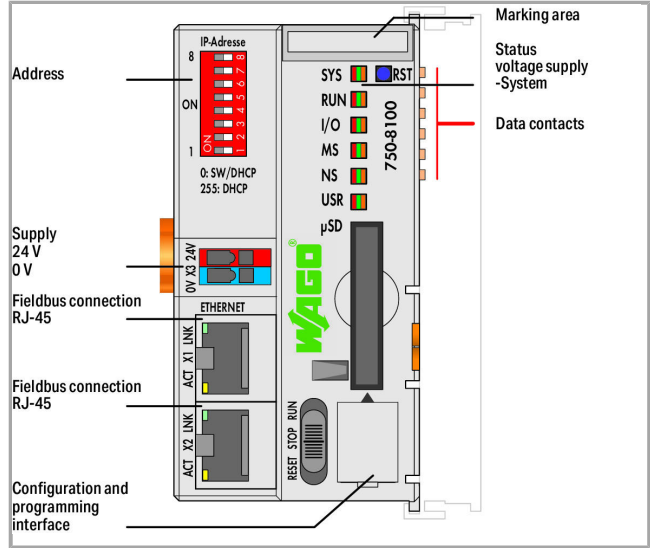


Data sheet | Item number: 750-8100
 Controller PFC100; 2 x ETHERNET; ECO



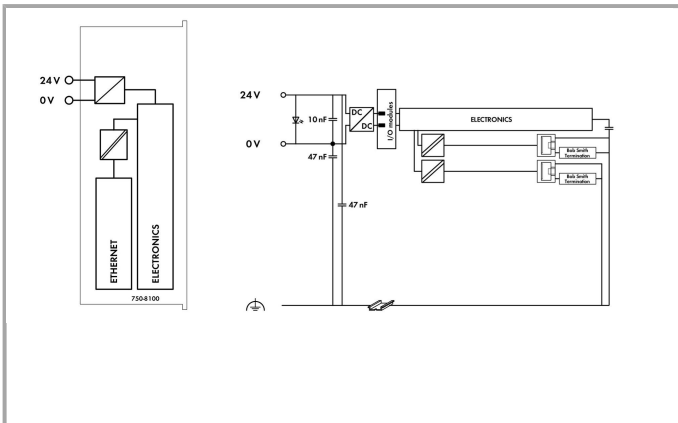
www.wago.com/750-8100

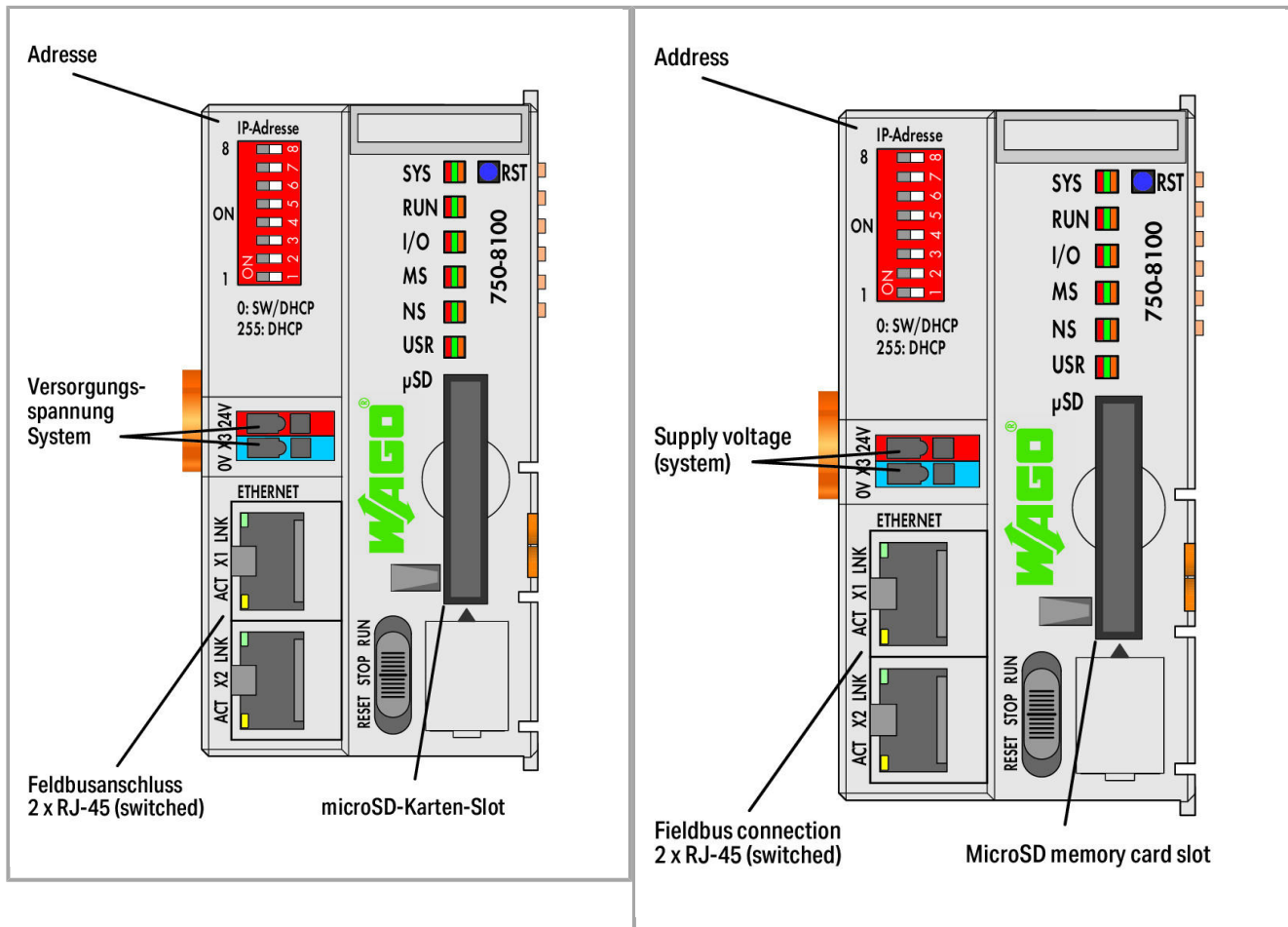


RoHS Compliant

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), Library for 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
Main memory (RAM)	256 MB
Internal memory (flash)	256 MB
Hardware non-volatile memory	64 Kbytes
Program memory	10 MB (Program and data memory (dynamically distributed))
Data memory	10 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)

System supply voltage	DC 24 V(-25 ... +30 %); via wiring level
Input current typ. at rated load (24 V)	300 mA
Total current for system supply	700 mA
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 type (1)	System supply
Solid conductor	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Strip length	5 ... 6 mm / 0.2 ... 0.24 inch
Connection technology: Device configuration	1 x 4-pole male connector

Geometrical Data

Width	49.5 mm / 1.949 inch
Height	71.9 mm / 2.831 inch
Height from upper-edge of DIN-35 rail	64.7 mm / 2.547 inch
Depth	96.8 mm / 3.811 inch

Mechanical data

Weight	112 g
Color	light gray
Housing material	Polycarbonate, polyamide 6.6
Conformity marking	CE

Environmental Requirements

Surrounding air (operating) temperature	0 ... 55 °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 %
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


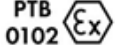

EMC immunity to interference	acc. to EN 61000-6-2, marine applications
EMC emission of interference	acc. to EN 61000-6-3, marine applications
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Permissible H ₂ S contaminant concentration at a relative humidity 75 %	10 ppm
Permissible SO ₂ contaminant concentration at a relative humidity 75 %	25 ppm

Commercial data


Country of origin	DE
GTIN	4055143351805

Approvals / Certificates


Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	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
	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-HG1821926
	DNV GL	-	TAA0000194



Det Norske Veritas, Germanischer Lloyd



LR
Lloyds Register

-

02/20026 (E6)



PRS
Polski Rejestr Statków

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TE/2236
/880590/19




RINA
RINA Germany GmbH

-

ELE066419XG

UL-Approvals

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

Compatible products




memory card

















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

www.wago.com/758-879/000-3102

Marking accessories

















	Item no.: 2009-145 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	www.wago.com/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	www.wago.com/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	www.wago.com/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	www.wago.com/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	www.wago.com/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	www.wago.com/2009-145/000-012
	Item no.: 2009-145/000-023 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	www.wago.com/2009-145/000-023
	Item no.: 2009-145/000-024 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	www.wago.com/2009-145/000-024
	Item no.: 248-501 Miniature WSB Quick marking system; plain; Marker width 5 mm; 10 strips with 10 markers per card	www.wago.com/248-501
	Item no.: 248-501/000-002 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	www.wago.com/248-501/000-002
	Item no.: 248-501/000-005 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	www.wago.com/248-501/000-005
	Item no.: 248-501/000-006 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	www.wago.com/248-501/000-006
	Item no.: 248-501/000-007 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	www.wago.com/248-501/000-007
	Item no.: 248-501/000-012 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	www.wago.com/248-501/000-012
	Item no.: 248-501/000-017 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	www.wago.com/248-501/000-017
	Item no.: 248-501/000-023 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	www.wago.com/248-501/000-023
	Item no.: 248-501/000-024 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	www.wago.com/248-501/000-024








system box

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








www.wago.com/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	www.wago.com/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	www.wago.com/850-805
	Item no.: 850-814/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate	www.wago.com/850-814/002-000
	Item no.: 850-815/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate	www.wago.com/850-815/002-000
	Item no.: 850-816/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (400x120x200 mm); without flange plate	www.wago.com/850-816/002-000
	Item no.: 850-817/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (600x120x200 mm); without flange plate	www.wago.com/850-817/002-000
	Item no.: 850-825 IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20	www.wago.com/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	www.wago.com/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	www.wago.com/850-826/002-000
	Item no.: 850-827 IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip	www.wago.com/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	www.wago.com/850-827/002-000
	Item no.: 850-828 IP65 enclosure; Aluminium (RAL 7032); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip	www.wago.com/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	www.wago.com/850-828/002-000
	Item no.: 850-834 IP65 enclosure; Polyester (RAL 7032); WxHxD (164x100x164 mm); 9 x M12, 4 x M20	www.wago.com/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	www.wago.com/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	www.wago.com/850-836



software















	Item no.: 2759-101/1110-2002 e!COCKPIT; Workstation License	www.wago.com/2759-101/1110-2002
	Item no.: 2759-101/1110-2005 e!COCKPIT; Multi-User License; 05 pcs	www.wago.com/2759-101/1110-2005
	Item no.: 2759-101/1110-2010 e!COCKPIT; Multi-User License; 10 pcs	www.wago.com/2759-101/1110-2010
	Item no.: 2759-101/1110-2015 e!COCKPIT; Multi-User License; 15 pcs	www.wago.com/2759-101/1110-2015
	Item no.: 2759-101/1110-2020 e!COCKPIT; Multi-User License; 20 pcs	www.wago.com/2759-101/1110-2020
	Item no.: 2759-101/1110-3000 e!COCKPIT; Site License	www.wago.com/2759-101/1110-3000
	Item no.: 2759-101/1110-4000 e!COCKPIT; Buy-out License	www.wago.com/2759-101/1110-4000

shield connection










	Item no.: 790-108 Shield clamping saddle; 11 mm wide; diameter of compatible conductor	www.wago.com/790-108
	Item no.: 790-116 Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm	www.wago.com/790-116
	Item no.: 790-124 Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm	www.wago.com/790-124
	Item no.: 790-140 Shield clamping saddle; diameter of compatible conductor	www.wago.com/790-140
	Item no.: 790-208 Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm	www.wago.com/790-208
	Item no.: 790-216 Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm	www.wago.com/790-216
	Item no.: 790-220 Shield clamping saddle; 30 mm wide; 6 ... 20 mm	www.wago.com/790-220

wiring and connectors

	Item no.: 750-975 ETHERNET RJ-45 connector, IP20; ETHERNET 10/100 Mbit/s; for field assembly	www.wago.com/750-975
	Item no.: 750-977/000-011 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22	www.wago.com/750-977/000-011

	<p>Item no.: 750-977/000-012 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22</p>	www.wago.com/750-977/000-012
	<p>Item no.: 750-977/000-021 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24</p>	www.wago.com/750-977/000-021
	<p>Item no.: 750-977/000-022 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24</p>	www.wago.com/750-977/000-022
	<p>Item no.: 750-978/000-011 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22; Strain relief</p>	www.wago.com/750-978/000-011
	<p>Item no.: 750-978/000-012 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22; Strain relief</p>	www.wago.com/750-978/000-012
	<p>Item no.: 750-978/000-021 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24; Strain relief</p>	www.wago.com/750-978/000-021
	<p>Item no.: 750-978/000-022 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24; Strain relief</p>	www.wago.com/750-978/000-022
	<p>Item no.: 750-979/000-011 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 22; Strain relief</p>	www.wago.com/750-979/000-011
	<p>Item no.: 750-979/000-012 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 22; Strain relief</p>	www.wago.com/750-979/000-012
	<p>Item no.: 750-979/000-021 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 24; Strain relief</p>	www.wago.com/750-979/000-021
	<p>Item no.: 750-979/000-022 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 24; Strain relief</p>	www.wago.com/750-979/000-022
General accessories		
	<p>Item no.: 750-921 Bluetooth® Adapter</p>	www.wago.com/750-921
	<p>Item no.: 750-923 Configuration cable; USB connector; Length: 2.5 m</p>	www.wago.com/750-923
	<p>Item no.: 750-923/000-001 Configuration cable; USB connector; Length: 5 m</p>	www.wago.com/750-923/000-001
Carrier rail		
	<p>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</p>	www.wago.com/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	www.wago.com/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	www.wago.com/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	www.wago.com/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	www.wago.com/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	www.wago.com/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	www.wago.com/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	www.wago.com/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	www.wago.com/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	www.wago.com/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	www.wago.com/210-506
	Item no.: 210-508 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715	www.wago.com/210-508

Downloads

Documentation

Manual

PFC100 CS 2ETH ECO PLC – PFC100 Controller	V 1.4.0	pdf 3.1 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 18-Dec-2017	mp4 88.3 MB	Download
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.	1.0 05-Aug-2017	mp4 29.0 MB	Download



Contents: 0:21 Download and install the SSH client; 0:40 Establish the SSH connection; 0:50 Log on to the Controller

Additional Information

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

System Description

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

Application Notes

Application Note e!COCKPIT

e!COCKPIT application note WagoAppCloud 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.	2019-07-17 17-Jul-2019	zip 4.0 MB	Download
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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 the cloud. The libraries WagoLibCloud for WAGO-I/O-PRO V2.3 and WagoAppCloud for e!COCKPIT are used.	2019-07-17 17-Jul-2019	zip 4.1 MB	Download
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Libraries

Library

Library WagoLibCloud_02.lib Die Bibliothek dient zur Kommunikation des WAGO Controller PFC100 und PFC200 mit Cloud Diensten wie Microsoft Azure (WAGO Cloud), Amazon AWS and IBM Bluemix. Daten können zur Cloud gesendet und Kommandos von der Cloud empfangen werden.	V2.2.3 29-Apr-2019	zip 57.1 kB	Download
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Engineering-Software

e!COCKPIT

<i>e!COCKPIT</i>	V 1.5.1	ZIP	Download
Register at no cost and test our engineering software for 30 days.	10-Jul-2019	2.8 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.	27-Aug-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: 750-8100 Controller PFC100; 2 x ETHERNET; ECO	13	zip	Download
	11-Jul-2019	83.4 MB	

IoT/ Cloud

Cloud Connectivity

Cloud Connectivity beta version	04-Jun-2019	ZIP	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.		8.7 MB	

CAD/CAE - Smart Data

CAD data

3D Download 750-8100		URL	Download
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Product family

Controller 750

[Show all products from the family](#)

Subject to changes.

WAGO Kontakttechnik GmbH & Co. KG

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Email: info.de@wago.com | Web: www.wago.com

Do you have any questions about our products?

We are always happy to take your call at 01788 568 008.