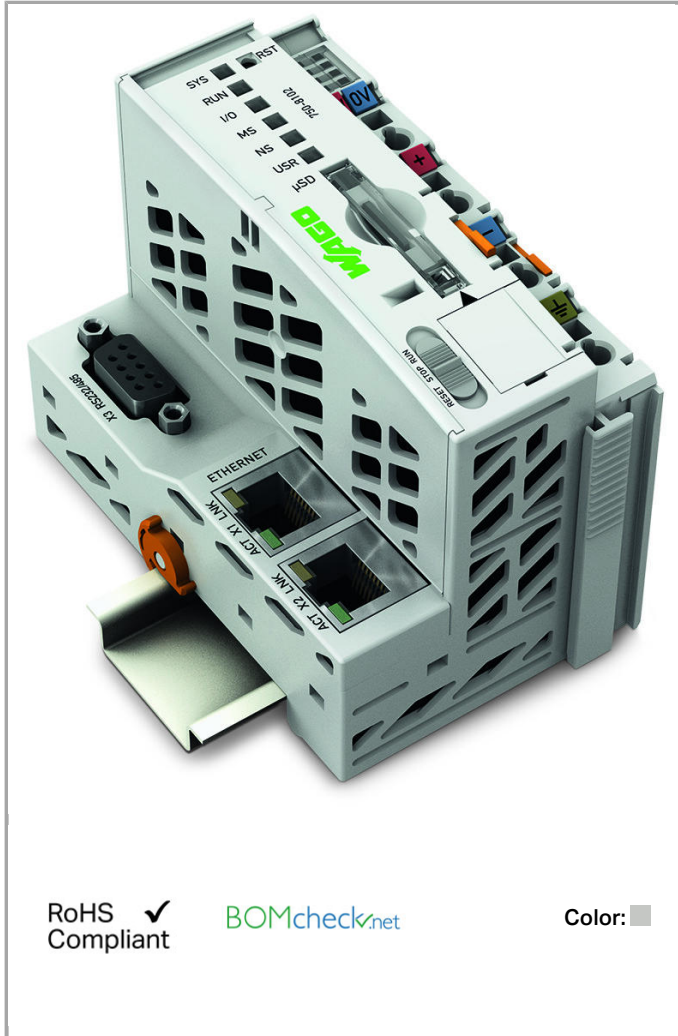


Data sheet | Item number: 750-8102
Controller PFC100; 2 x ETHERNET, RS-232/-485



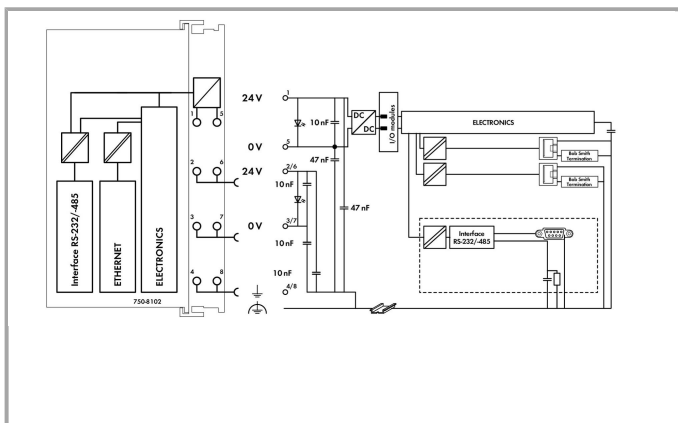
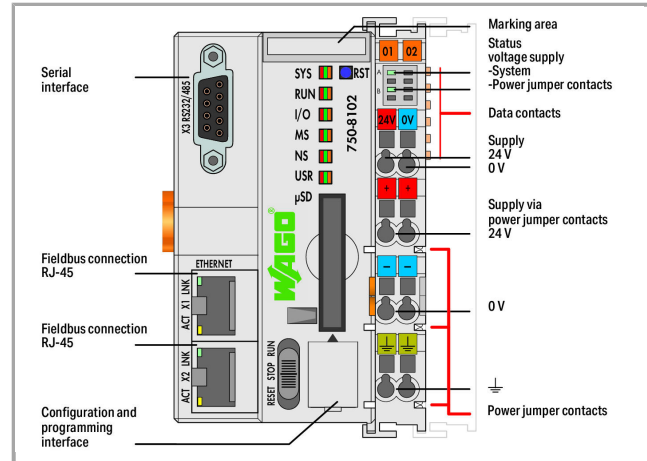
750-8102

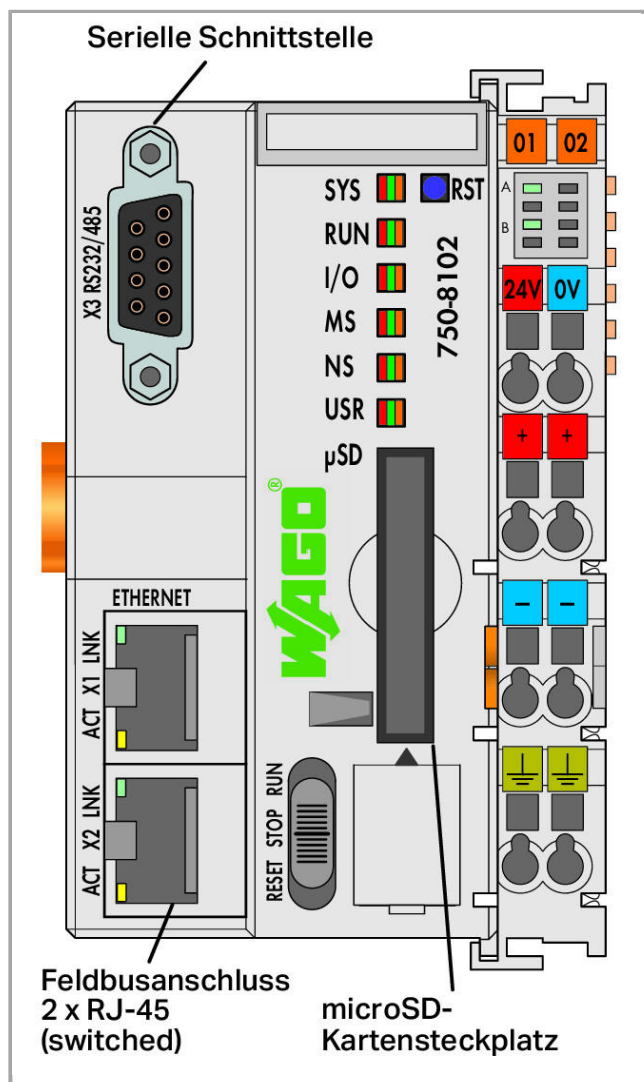


RoHS
Compliant

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 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).

Programming per IEC 61131-3

- Programmable via e!COCKPIT
- Direct connection of WAGO I/O modules
- 2 x ETHERNET (configurable), RS-232/-485
- 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 Modbus RTU RS-232 serial interface RS-485 interface 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	128 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; Modbus RTU: 1 x D-Sub 9 socket; RS-232 serial interface: 1 x D-Sub 9 socket; RS-485 interface: 1 x D-Sub 9 socket
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	163 g
Color	light gray
Housing material	Polycarbonate, polyamide 6.6
Conformity marking	1

Environmental Requirements

Surrounding air (operating) temperature	0 ... 55 °C
---	-------------

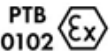
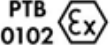
Surrounding air (storage) temperature	-40 ... 85 °C
Protection class	IP20
Degree of pollution (5)	2 per IEC 61131-2
Operating altitude	without temperature derating: 0 ... 2000 m; with temperature derating: 2000 ... 5000 m (0.5 K/100 m); max.: 5000 m
Relative air humidity (no condensation)	95 %
Mounting 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
Fire load	0.45 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	4055143351829
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- HG1821926
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAA0000194
	PRS Polski Rejestr Statków	-	TE/2236 /880590/19
	PRS Polski Rejestr Statków	-	TE/2210 /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

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

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 /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	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	248-501
	Item no.: 248-501/000-002 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501 /000-002
	Item no.: 248-501/000-005 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501 /000-005



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

/000-006

248-501



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

/000-007

248-501



Item no.: 248-501/000-012
Mini-WSB marking card; as card; not stretchable; plain; snap-on type

/000-012

248-501



Item no.: 248-501/000-017
Mini-WSB marking card; as card; not stretchable; plain; snap-on type

/000-017

248-501



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

/000-023

248-501



Item no.: 248-501/000-024
Mini-WSB marking card; as card; not stretchable; plain; snap-on type

/000-024

248-501



Item no.: 750-103
Group marker carrier

750-103



Item no.: 750-107
Group marker carrier

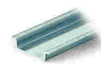
750-107

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



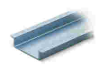
Item no.: 210-115
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm

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



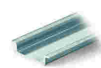
Item no.: 210-198
Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715

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; unslopped; 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; unslopped; galvanized; similar to EN 60715

210-506

**Item no.: 210-508**

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

210-508

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

/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

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

/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

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

/002-000

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

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

e!COCKPIT; Workstation License

/1110-2002

2759-101

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

e!COCKPIT; Multi-User License; 05 pcs

/1110-2005

2759-101

**Item no.: 2759-101/1110-2010**

e!COCKPIT; Multi-User License; 10 pcs

/1110-2010

2759-101

**Item no.: 2759-101/1110-2015**

e!COCKPIT; Multi-User License; 15 pcs

/1110-2015

2759-101

**Item no.: 2759-101/1110-2020**

e!COCKPIT; Multi-User License; 20 pcs

/1110-2020

2759-101

**Item no.: 2759-101/1110-3000**

e!COCKPIT; Site License

/1110-3000

2759-101

**Item no.: 2759-101/1110-4000**

e!COCKPIT; Buy-out License

/1110-4000

2759-101

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	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
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

Downloads

Documentation

Manual

PFC100 CS 2ETH RS PLC – PFC100 Controller	V 1.3.0	pdf 3.4 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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Bid Text

750-8102		doc 34.3 kB	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

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

Application Note CoDeSys 2.3

Application note WagoLibCloud

V 1.4.0

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.

Jul 31, 2018

4.0 MB

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: 750-8102 Controller PFC100; 2 x ETHERNET, RS-232/-485	12 Mar 11, 2019	zip 44.3 MB	Download
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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 750-8102	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.
