

Data Sheet | Item Number: 750-8216/040-000

Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485, CAN, CANopen, PROFIBUS Slave; Extreme

<https://www.wago.com/750-8216/040-000>



The PFC200 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 PFC200 status information.

Besides the processing industry and building automation, typical applications for the PFC200 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 with CODESYS V3.5 from Firmware Release 23, WAGO-I/O-PRO V2.3 or **e!COCKPIT** up to Firmware Release 22
 - Direct connection of WAGO's I/O modules
 - 2 x ETHERNET (configurable), RS-232/-485, CAN, CANopen, PROFIBUS DP Slave
 - Linux operating system with RT-Preempt patch
 - Configuration via CODESYS, **e!COCKPIT** or Web-Based Management user interface
 - Maintenance-free
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- The device is ideal for operation in extreme environments thanks to:
 - An extended temperature range
 - Greater immunity to impulse voltages and electromagnetic interference
 - Higher vibration and shock resistance

Technical data


| | |
|---------------------------------------|--|
| Communication | PROFIBUS CANopen Modbus TCP master/slave Modbus (UDP), WagoAppPlcModbus Library Modbus (RTU), WagoAppPlcModbus Library ETHERNET EtherNet/IP™ Adapter (slave) EtherNet/IP™ Scanner EtherCAT® Master OPC UA Server/Client OPC UA Pub/Sub (can be installed later) MQTT RS-232 serial interface RS-485 interface BACnet/IP, requires an additional license Telecontrol protocols, requires an additional license |
| ETHERNET protocols | DHCP DNS NTP FTP FTPS SNMP HTTP HTTPS SSH |
| Telecontrol protocols | IEC 60870 (additional license as slave or master) IEC 61850 (additional license as Client or Server) DNP3 (additional license as Slave or Master) |
| Visualization | Web-Visu |
| Operating system | Real-time Linux (with RT-Preempt patch) |
| CPU | Cortex A8; 1 GHz |
| 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 | CODESYS V3.5, Firmware Release 23 or higher e!COCKPIT (based on CODESYS V3) up to Firmware Release 22 WAGO-I/O-PRO V2.3 (based on CODESYS V2.3), up to Firmware Release 22 |

| Technical data | |
|---|--|
| Configuration options | CODESYS V3 e!COCKPIT WAGO-I/O-CHECK Web-Based Management e!RUNTIME library CODESYS Library |
| 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; 100 m maximum cable length |
| Main memory (RAM) | 512 MB |
| Internal memory (flash) | 4096 MB |
| Non-volatile hardware memory | 128 KB |
| Program memory | CODESYS V2: 16 MB; CODESYS V3: 32 MB |
| Data memory | CODESYS V2: 64 MB; CODESYS V3: 128 MB |
| Non-volatile software memory | 128 KB 128 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.) | 64 |
| Number of modules without a bus extension (max.) | 64 |
| Input and output process image (internal) max. | 1000 words/1000 words |
| Input and output process image (Modbus®) max. | CODESYS V2: 1000 words/1000 words; CODESYS V3: 32000 words/32000 words |
| Input and output process image (PROFIBUS) max. | 244 bytes/244 bytes |
| Input and output process image (CAN) max. | 2000 words/2000 words |
| Indicators | LED (SYS, RUN, I/O, CAN, BF, DIA, U1 ... U4) red/green/orange: Status system, program, internal data bus, CANopen, PROFIBUS, PROFIBUS diagnostics, status programmable by user (can be used via CODESYS library); LED (A, B) green: System power supply status, field supply |
| Derating | Derating (supply voltage): Ambient temperatures under laboratory conditions: (-25 ... +30°C); for -40 ... +55°C: 24V (-25 ... +20%); for +55 ... +70°C: 24V (-25 ... +10%); Lower limit in all temperature ranges: -27.5% (including 15% residual ripple) |
| Supply voltage (system) | 24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed! |
| Input current (typ.) at nominal load (24 V) | 550 mA |
| Total current (system supply) | 1700 mA |
| Supply voltage (field) | 24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed! |
| Current carrying capacity (power jumper contacts) | 10 A |
| Number of outgoing power jumper contacts | 2 |
| Rated surge voltage | 1 kV |



| Connection data | |
|---|--|
| Connection technology: communication/fieldbus | PROFIBUS: 1 x D-sub 9 socket; CANopen: 1 x D-sub 9 plug; 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 | 4 x CAGE CLAMP® |
| Connection type 1 | System/field supply |
| Solid conductor | 0.25 ... 2.5 mm ² / 24 ... 14 AWG |
| Fine-stranded conductor | 0.25 ... 2.5 mm ² / 24 ... 14 AWG |
| Strip length | 8 ... 9 mm / 0.31 ... 0.35 inches |
| Connection technology: device configuration | 1 x Male connector; 4-pole |

| Environmental requirements | |
|--|--|
| Ambient temperature (operation) | -40 ... +70 °C |
| Ambient temperature (storage) | -40 ... +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.) |
| Relative humidity (without condensation) | 95 % |
| Relative humidity (with condensation) | Short-term condensation per Class 3K7/IEC EN 60721-3-3 and E-DIN 40046-721-3 (except for wind-driven precipitation, water and ice formation) |
| Mounting position | horizontal (standing/lying); vertical |
| Mounting type | DIN-35 rail |
| Vibration resistance | per IEC 60068-2-6 (acceleration: 5g), EN 60870-2-2, IEC 60721-3-1, -3, EN 50155; EN 61373 |
| Shock resistance | per IEC 60068-2-27 (15g/11 ms/half-sine/1,000 shocks; 25g/6 ms/1,000 shocks), EN 50155, EN 61373 |
| EMC immunity to interference | per EN 61000-6-1, -2; EN 61131-2; marine applications; EN 50121-3-2; EN 50121-4, -5; EN 60255-26; EN 60870-2-1; EN 61850-3; IEC 61000-6-5; IEEE 1613; VDEW: 1994 |
| EMC emission of interference | per 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 | 3.292 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 |





Approvals / Certificates

| General approvals | | | Declarations of conformity and manufacturer's declarations | | |
|--|----------|------------------|--|----------|------------------|
|  | | | | | |
| Approval | Standard | Certificate Name | Approval | Standard | Certificate Name |
| UL | - | E175199 | EU-Declaration of Conformity WAGO GmbH & Co. KG | - | - |
| Underwriters Laboratories Inc. (ORDINARY LOCATIONS) | | | UK-Declaration of Conformity WAGO GmbH & Co. KG | - | - |

Approvals for marine applications

| Approval | Standard | Certificate Name |
|--|----------|-------------------|
|   | - | TAA00000Y7 |
| DNV DNV GL SE | | |
| PRS Polski Rejestr Statków | - | TE/1099/880590/23 |

Approvals for hazardous areas

| Approval | Standard | Certificate Name |
|--|-------------|---|
|     | | |
| ATEX TUEV Nord Cert GmbH | EN 60079-0 | TUEV 17 ATEX 193969X (II 3 G Ex ec IIC T4 Gc) |
| CCC CNEX | CNCA-C23-01 | 2020312310000214 (Ex ec IIC T4 Gc) |
| IECEx TUEV Nord Cert GmbH | IEC 60079-0 | IECEx TUN 16.0046X (Ex ec IIC T4 Gc) |
| UKEx WAGO GmbH & Co. KG | EN 60079-0 | UKCA_WA GO22UKEX005X_ec |
| UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS) | UL 121201 | E198726 Sec.1 |

Subject to changes. Please also observe the further product documentation!

Current addresses can be found at: www.wago.com