



The PFC300 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 Webservice provides user configuration options, while displaying PFC300 status information.

Besides the processing industry and building automation, typical applications for the PFC300 include standard machinery and equipment control (e.g., packaging, bottling and manufacturing systems, as well as textile, metal and wood processing machines).

**Advantages:**

- Programmable per IEC 61131-3
- Programmable via CODESYS V3.5
- Direct connection of WAGO I/O Modules
- 2 x ETHERNET (configurable), RS-485
- Linux operating system with RT-Preempt patch
- Configuration via CODESYS or Web-Based Management user interface
- Maintenance-free

**Technical data**

**Communications**

Modbus (UDP), WagoAppPlcModbus Library  
 Modbus (RTU), WagoAppPlcModbus Library  
 EtherNet/IP™ Adapter (slave)  
 EtherNet/IP™ Scanner  
 EtherCAT® Master  
 PROFINET Controller (limited)  
 ETHERNET  
 RS-485 interface  
 MQTT  
 Fieldbuses integrated into CODESYS:  
 Modbus TCP master/slave  
 OPC UA Server/Client  
 OPC UA Pub/Sub (can be installed later)

**ETHERNET protocols**

DHCP  
 DNS  
 NTP  
 SFTP  
 FTP  
 FTPS  
 SNMP  
 HTTP  
 HTTPS  
 SSH

**Visualization**

Web-Visu

**Operating system**

Real-time Linux (with PREEMPT\_RT patch)

**CPU**

Dual Core Cortex A53 1.25 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)

## Technical data

|   |  |
|---|--|
| Programming environment                           | CODESYS V3.5<br>Includes the following CODESYS features: MULTICORE, WebVisu, License for IIoT Libraries, License for OPC UA PUB/SUB  |
| Configuration options                             | CODESYS Library<br>CODESYS V3<br>WAGO-I/O-CHECK<br>Web-Based Management  |
| Transmission rate                                 | 100/1000 Mbit/s  |
| Transmission medium (communication/fieldbus)      | Twisted pair S-UTP; 100 Ω; Cat. 5e; 100 m maximum cable length   |
| Main memory (RAM)                                 | 2 GB, LPDDR4 RAM   |
| Internal memory (flash)                           | 32 GB, eMMC Flash  |
| Non-volatile hardware memory                      | 128 KB   |
| Program memory                                    | 32 MB  |
| Data memory                                       | 512 MB   |
| Non-volatile software memory                      | 128 KB   |
| Type of memory card                               | SD, SDHC and SDXC (all guaranteed properties only valid with the WAGO 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 (internal) max.    | 1000 words/1000 words  |
| Input and output process image (Modbus®) max.     | CODESYS V3: 32000 words/32000 words  |
| Indicators  | LED (SYS, RUN, I/O, U1 ... U7) red/green/orange: Status of system, program, local data bus, status programmable by user (can be used via CODESYS library); LED (A, B) green: Status of system power supply, field supply |
| Supply voltage (system)                           | 24 VDC (-25 ... +30 %); via pluggable connector (CAGE CLAMP® connection)   |
| Input current (typ.) at nominal load (24 V)       | 550 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 VDC system/field   |

## Connection data

|   |  |
|---|--|
| Connection technology: communication/fieldbus | Modbus (TCP, UDP): 2 x RJ-45; Modbus RTU: 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®  |
| Connectable conductor materials               | Copper   |
| Connection type 1                             | System/field supply  |
| Solid conductor                               | 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG   |
| Fine-stranded conductor                       | 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG   |
| Strip length                                  | 8 ... 9 mm / 0.31 ... 0.35 inches  |
| Connection technology: device configuration   | 1 x USB-C 2.0  |

## Physical data

|                                   |                        |
|-----------------------------------|------------------------|
| Width                             | 78.6 mm / 3.094 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

|                    |                              |
|--------------------|------------------------------|
| Weight             | 207.7 g                      |
| Housing material   | Polycarbonate; polyamide 6.6 |
| Conformity marking | CE                           |

### Environmental requirements

|  |   |
|--|---|
| Ambient temperature (operation)  | -25 ... +60 °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.) |
| Relative humidity (without condensation)   | 95 %  |
| Mounting position  | Horizontal left, horizontal right, horizontal top, horizontal bottom, vertical top and vertical bottom              |
| Mounting type  | DIN-35 rail   |
| 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 in preparation  |
| EMC emission of interference   | per EN 61000-6-3, marine applications in preparation  |
| Exposure to pollutants   | per IEC 60068-2-42 and IEC 60068-2-43   |
| Fire load  | 2.523 MJ  |
| Permissible H <sub>2</sub> S contaminant concentration at a relative humidity 75 % | 10 ppm  |
| Permissible SO <sub>2</sub> contaminant concentration at a relative humidity 75 %  | 25 ppm  |

### Commercial data

|                       |               |
|-----------------------|---------------|
| PU (SPU)              | 1 pcs         |
| Packaging type        | Box           |
| Country of origin     | DE            |
| GTIN                  | 4066966650594 |
| Customs tariff number | 85371091990   |

### Environmental Product Compliance

|                        |                         |
|------------------------|-------------------------|
| RoHS Compliance Status | Compliant, No Exemption |
|------------------------|-------------------------|

### Approvals / Certificates

#### Declarations of conformity and manufacturer's declarations

| Approval   | Standard | Certificate Name |
|--|----------|------------------|
| EU-Declaration of Conformity<br>WAGO GmbH & Co. KG | -        | -                |
| UK-Declaration of Conformity<br>WAGO GmbH & Co. KG | -        | -                |