GEFRAN

R-CPU300

PLC CPU MODULE

Main applications

- *Automation systems*
- *Plastic processing machines*
- *Packaging and packing machines and lines*
- *Woodworking machines*
- *Food processing machines*
- *Test benches*

Main features

- *Installation: on R-BUS (x) backplane*
- *Programming: IEC 61131-3*
- *RS485 Modbus Master-Slave port*
- *Ethernet Modbus TCP port*
- *USB port for program update (option)*
- *16 I/O modules*
- *Conforms to UL508*

PROFILE

CPU module that allows development of high-performance modular PLCs. Installed on R-BUS(x) backplane with GILOGIK II series I/O modules.
R-CPU300 is programmed according to standard IEC 61131-3 and controls up to 16 I/O modules.
It has Ethernet port with Modbus TCP protocol for network/debug connection and RS485 port with Modbus RTU protocol to dialog with other devices (such as Geflex, GFX4, instruments, drives, etc.).
An optional USB port can be added to manage application program updating.
High-capacity memory: the program (including source) is stored on Flash Eprom.
Retentive data is saved on static RAM with rechargeable lithium buffer battery. The execution program is loaded on dynamic RAM.

TECHNICAL DATA

SDram: 32MB
Retentive memory: 256kB buffered
Program memory: 32MB
PLC cycle time: min 1ms
Processing time for 1K IL instruction: 40µs

Interfaces

- RS485 port Modbus RTU (master/slave) protocol.
  Terminations and polarizations normally inserted (default), to remove, see the connection diagram.
- Ethernet port Modbus over TCP protocol
- USB (optional) to manage program

Battery

- Lithium, rechargeable
- Duration without power supply: > 200 days
- Expected duration: > 7 years

Power supply

24Vdc ±25%, max. 2A

Diagnostics

- Yellow POWER LED: power on
- Green RUN LED: program running
- Red FAIL LED: module or system in alarm
- Yellow LINK LED: network connected
- Green DATA LED: data transfer

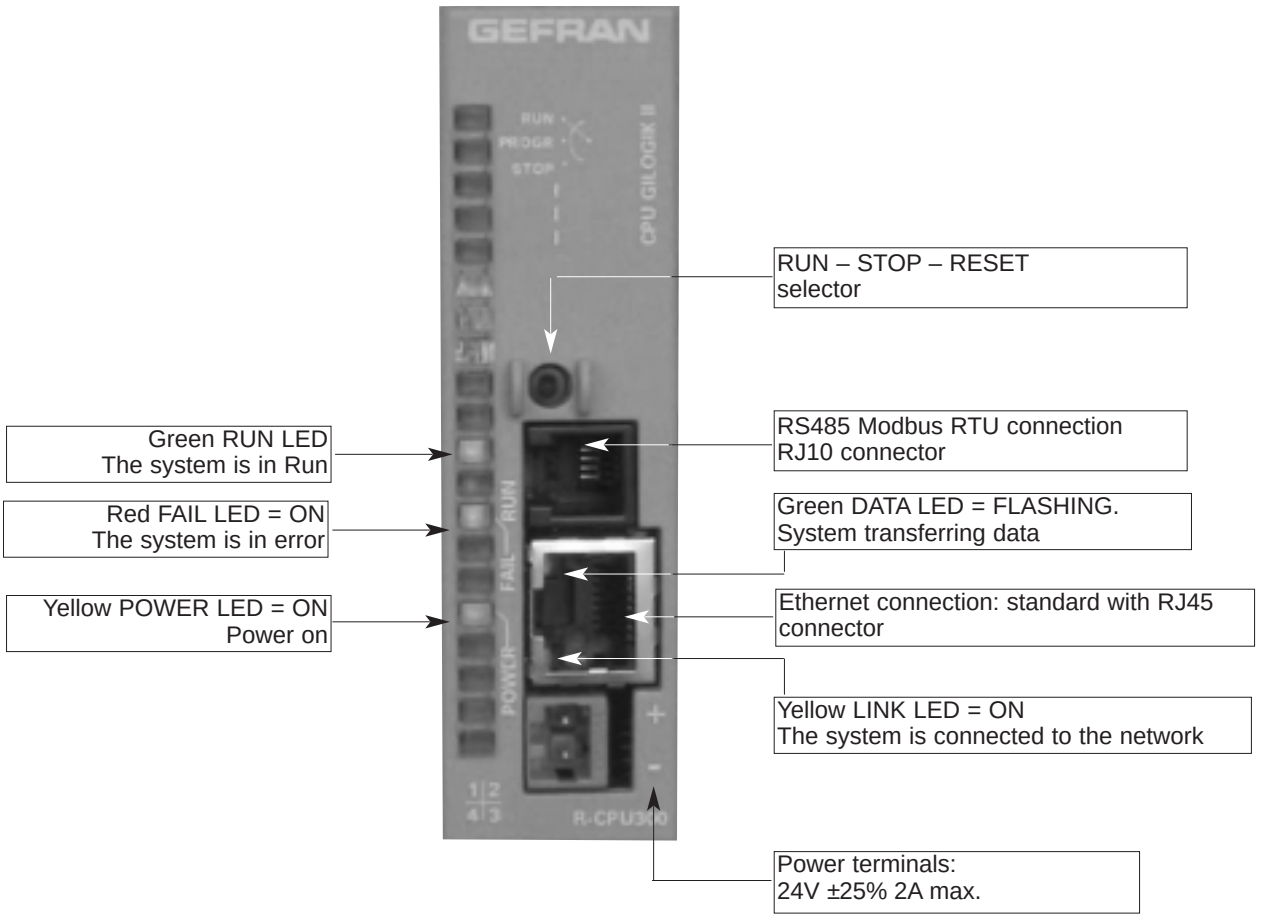
MECHANICAL CHARACTERISTICS

- Dimensions: 92x92x25,4mm
- Weight: 150 g
- Fastening: mechanical, snaps on R-BUS (x)
- Protection level: IP20
- Power connector: 2-pin female with spring clamp
- Ethernet interfaces: RJ45 connector
- USB interfaces: type A (option)
- RS485 serial interface: RJ10 connector

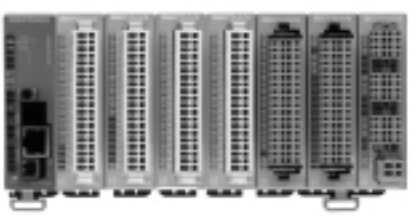
AMBIENT CONDITIONS

Working temperature: 0...50°C
Storage temperature: -20...70°C
Humidity: max. 90% RH non-condensing

FACEPLATE DESCRIPTION



INSTALLATION AND CONNECTIONS



The module installs on the R-BUS(x) in the first slot on the left.

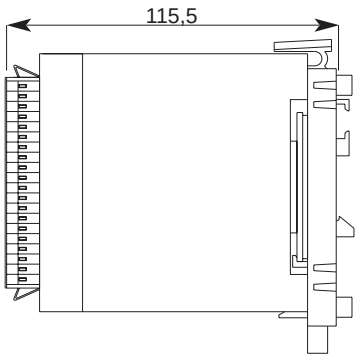
(*)

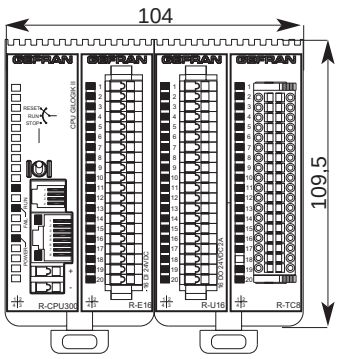
Max 16 module I/O

(*) With the 18-slot bus, slots 1 and 2 are reserved for modules R-CPU300 or R-SW5.

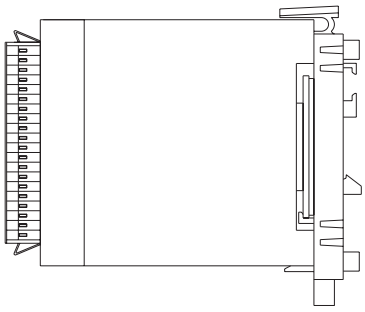
DIMENSIONS

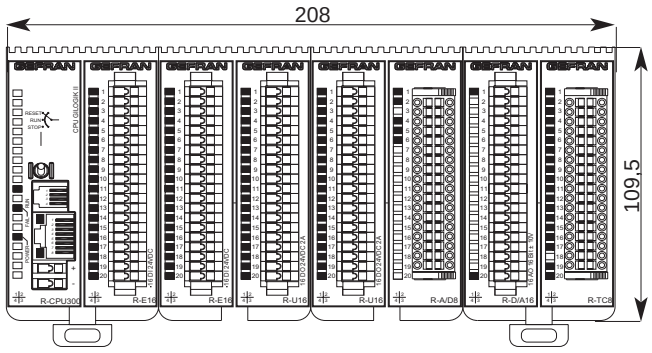
4 SLOT



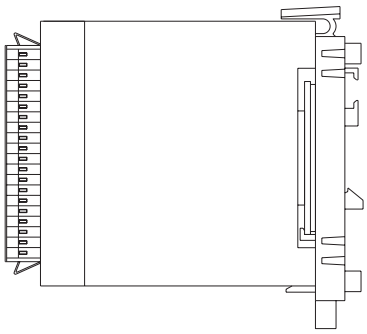


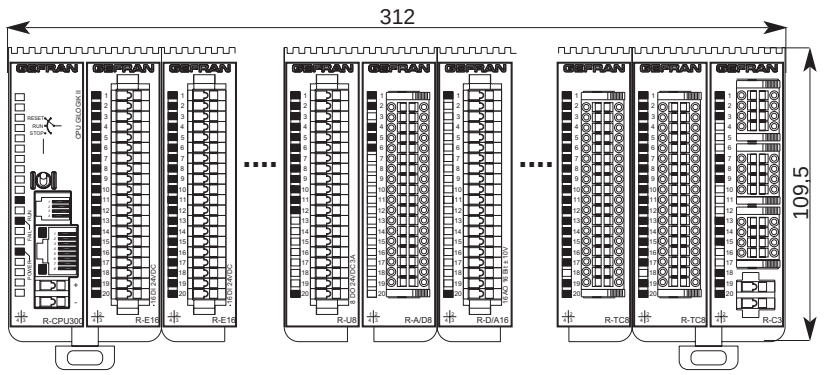
8 SLOT



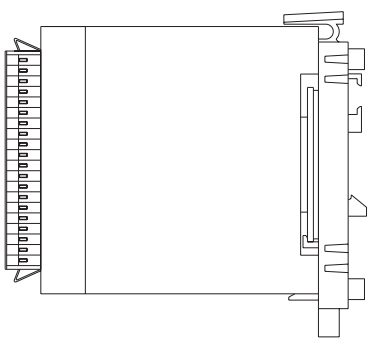


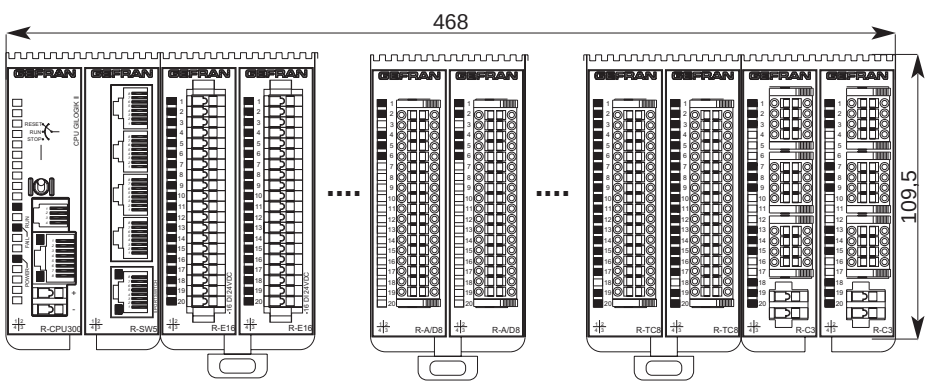
12 SLOT



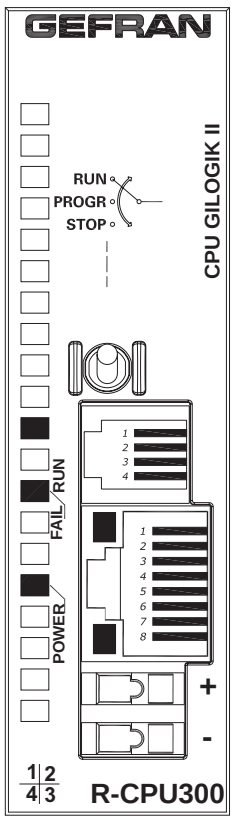


18 SLOT





CONNECTIONS



485 serial line — RJ10

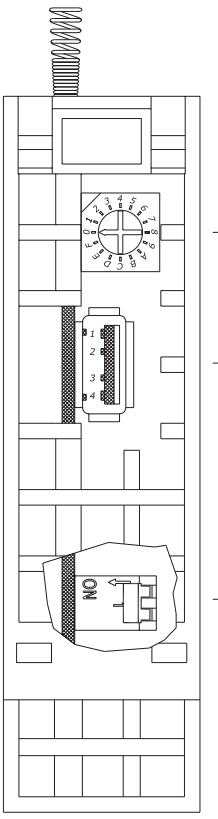
1	= GND_485
2	= TX/RX +
3	= TX/RX -
4	= N.C.

Ethernet network(*) — RJ45

1	= TX+
2	= TX-
3	= RX+
4	= N.C.
5	= N.C.
6	= RX-
7	= N.C.
8	= N.C.

Power supply (**) — + / -

24Vcc ± 25%
Max 2A



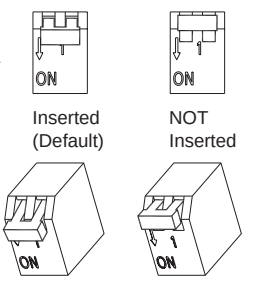
Node selector

0	= INACTIVE
1...F	= NODE 1...F (1...15)

USB connection (optional) — USB

1	= Vcc
2	= Data–
3	= Data+
4	= GND

Insertion of RS-485 serial terminations and polarizations (***)



Inserted (Default) — NOT Inserted

(*) Use standard category 6 cable according to standard TIA/EIA-568A

(**) Use unipolar cable with 1-1.5 mm section. Do not attach a lug to the cable.

(***) To move the switch, use a screwdriver for slotted head screws (3.5 mm max.)
Do this with the module NOT POWERED.

ORDER CODE

R-CPU300 □

VERSION		
0	without USB port	cod. F032733
1	with USB port	cod. F032732

GEFRAN spa reserves the right to make any aesthetic or functional change at any time and without prior notice

c UL us	Conformity UL508 File no. E198546
CE	The instrument conforms to the European Directives 2004/108/CE and 2006/95/CE with reference to the generic standards: - **EN 61000-6-2** (immunity in industrial environments) - **EN 61000-6-3** (emission in residential environments) - **EN 61010-1** (safety) - **EN 61131-2** (product standard). The Declaration of conformity is available on GEFRAN web: www.gefran.com

GEFRAN

GEFRAN spa via Sebina, 74 - 25050 Provaglio d'Iseo (BS)
Tel. 03098881 - fax 0309839063 - Internet: http://www.gefran.com