Interface N 148/04 **5WG1 148-1AB04**
RS 232, with standard and FT1.2 protocol

Product and Applications Description

The RS232 interface N 148/04 is a N-system DIN-rail mounted device.

The device with integrated bus coupling unit 2.1 is connected to the bus line via the pressure contact system.

The N 148/04 interface provides a galvanically separated connection to the bus system via its built-in Sub D 9-pin connector socket. The connection to the PC is made between the 9-pin Sub D-socket of the interface N 148/04 and the COM 1 or COM 2 interface of the PC.

It enables a personal computer (AT compatible PC) to be connected for addressing, parameterising, visualising, logging and diagnosis of bus devices.

With the N 148/04 interface it is possible to operate all bus devices in the whole bus system with one of two selectable protocols: the standard protocol and the FT1.2 protocol.

The standard protocol is used e.g. by ETS. The FT1.2 protocol is used by various operator software packages and software interfaces.

Application Programs

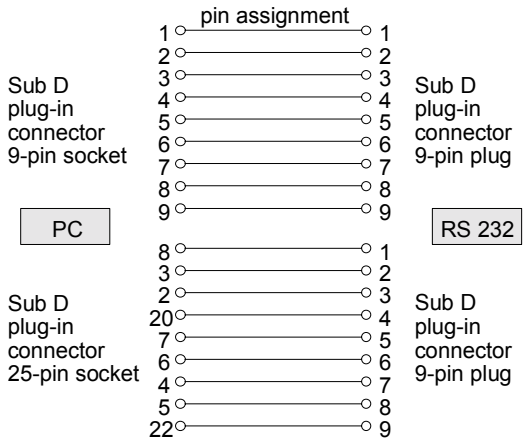
10 CO Dummy 700002

- Sets the internal bus coupling unit to interface mode and erases its memory.

Note:

Set the slider switch to the position „Standard“ to download the application program with ETS.
Set the slider switch to the position “FT 1.2” for a minimum of two seconds after completion of the download.

Example of Operation



Installation Instructions

- The device may be used for permanent interior installations in dry locations within distribution boards or small casings with DIN rail EN 60715-TH35-7,5.

⚠ WARNING

- The device may be built into distribution boards (230/400V) together with appropriate VDE-devices.
- The device must be mounted and commissioned by an authorised electrician.
- The 9-pin Sub D socket must be covered (cover is part of the package)
- Free DIN rail areas with sticked-in data rails must be covered with covers, order no. 5WG1 192-8AA01.
- The prevailing safety rules must be heeded.
- The device must not be opened.
- For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.

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Technical Specifications

Power supply
via bus cable

Transmission rate
9600 bit/s, 19200 bit/s

Control elements
1 learning button:
for switching between normal operating mode and addressing mode
1 slider switch:
for switching between standard and FT1.2 protocols

Display elements
1 red LED:
for monitoring bus voltage and displaying mode, selected with the learning button

Connections
- bus line, pressure contacts on data rail
- RS 232 interface: 9-pin Sub D socket
  length of data cable: max. 15 m
- connection cable available from authorised electronics stores (see example of operation)

Physical specifications
- housing: plastic
- N-system DIN-rail mounted device,
  width: 3 SUs (1SU = 18mm)
- weight: approx. 160 g
- installation: rapid mounting on EN 60715-TH35-7,5 rail

Electrical safety
- degree of pollution (according to IEC 60664-1): 2
- protection (according to EN 60529): IP 20
- protection class (according to IEC 61140): III
- overvoltage class (according to IEC 60664-1): III
- bus: safety extra low voltage SELV DC 24 V
- the device complies with
  EN 50 090-2-2 and IEC 60664-1

Electromagnetic compatibility
complies with
EN 61000-6-2, EN 61000-6-3 and EN 50090-2-2

Environmental specifications
- climatic conditions: EN 50090-2-2
- ambient temperature operating: - 5 ... + 45 °C
- ambient temperature non-op.: - 25 ... + 70 ° C
- relative humidity (non-condensing): 5 % to 93 %

Certification
EIB certificate

CE marking
complies with the EMC regulations (residential and functional buildings), and low voltage regulations

Location and Function of the Display and Operator Elements

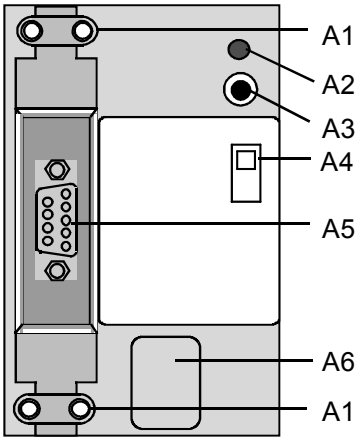

Figure 1: Location of the display and operator elements

A1 Clamp for connection cable (max. ∅ 8 mm)
A2 LED for indicating normal operating mode (LED off) and addressing mode (LED on); upon receiving the physical address the device automatically returns to normal operating mode
A3 Learning button for switching between normal operating mode and addressing mode for receiving the physical address
A4 Slider switch to change between the protocols standard (bottom position) and FT1.2 (top position)
A5 9-pin Sub D socket
A6 Label for noting the physical address

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Mounting and Wiring

General description
The N-system DIN-rail device can be installed to N-system distribution boards, surface or flush mounted, or to any DIN-rail available that has a data rail installed. The connection to the bus line is established by clicking the device onto the DIN-rail (with a data rail installed). Take care that the type plates of all devices on a DIN-rail can be read in the same direction, guaranteeing the devices are polarised correctly.

Mounting DIN-rail devices (Figure 2)
- Slide the device (B1) onto the DIN-rail (B2) and
- swivel back the device (B1) until the slide clicks into place audibly.

Dismounting DIN-rail devices (Figure 2)
- Remove the cover.
- Remove the clamps for connection cables.
- Unplug the 9-pin Sub D connector.
- Press down the slide (C3) with a screw-driver, click it into place by a slight pressure and
- swivel the device (C1) from the DIN-rail (C2).

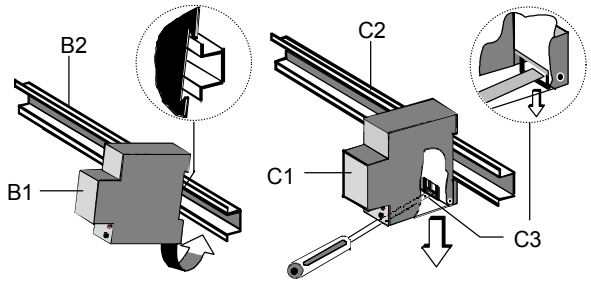
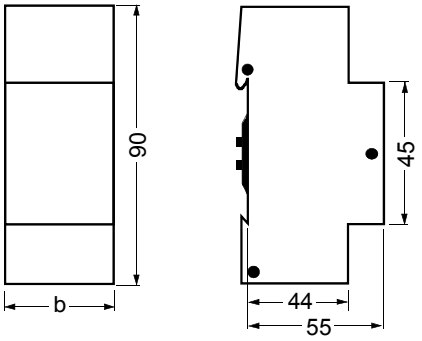


Figure 2: Mounting and dismounting a DIN-rail device

Dimension Diagram

Dimensions in mm



b = 3 SU

1 Space unit (1 SU) = 18 mm

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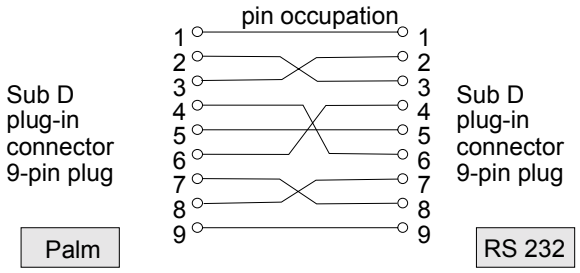
Example application for N148/04: Changing schedules with a Palm OS PDA

The schedule programs of the event-schedule-logic module N350 and the event module N341 receive their original configuration by using the ETS.
To change schedule programs of the event-schedule-logic module N350 and the event module N341 after the initial setup you can employ not only the ETS but also a Personal Digital Assistant (PDA) with a Palm operating system (Palm OS).
To use the PDA you must set the protocol section slider switch of the serial interface N148/04 to FT1.2. The Palm OS PDA is connected to the interface N148/04 via a serial null modem cable



The Palm OS program "EASY Logic Controller – ELC“ can be downloaded from
http://www.hto.fh-deggendorf.de/komm/building/projekte/palm.html.

The program connects to the bus and support the search for N350 and N341 modules with different methods: search for devices with pressed programming button, scan a line, or direct entry of the physical address of a module.
The module configuration is read and the schedules can be displayed and changed.