

OpenAir™

USB-PPS2 interface converter

AST22



USB-PPS2 interface converter with two cables and service bag

- USB-PPS2 connection on an OpenAir™ VAV compact/modular controller or a networked actuator for tool access with Microsoft® Windows® PCs
- Supports commissioning and servicing
- Pluggable interface to the PC's USB port
- Includes two connection plugs and the corresponding LED indicators on the AST22

Features

The AST22 interface converter provides the USB-PPS2 connection for accessing an OpenAir™ VAV compact/modular controller or a networked actuator with PPS2 interface using a Microsoft Windows PC.

Software ACS931 or ACS941 must be installed on the PC.

Delivery includes, in addition to the AST22 interface converter, two connection cables and a service bag.

The AST22 is powered over its USB and PPS2 connections. (VAV compact controllers require separate power).

Application

Together with PC software ACS931 / ACS941, the AST22 supports commissioning and servicing of OpenAir VAV compact and modular controllers:

- G..B181.1E/3
- G..B181.1E/KN
- G..B181.1E/MO
- G..B181.1E/BA
- ASV181.1E/3
- G..B111.1E/MO

Technical design


The AST22 interface converter includes two LED indicators and provides two connection plugs.



AST22 interface converter

LED indicators

The two LED indicators  and **PPS2** indicate the operational state.

| LED | Color and status | | Display |
|---|------------------|----------|---|
|  | Green | ON | USB power on |
| | | Flashing | Data exchange between the AST22 and PC |
| PPS2 | Green | ON | AST22 connected to a PPS2 device |
| | | Flashing | Data exchange between AST22 and PPS2 device |

Interfaces

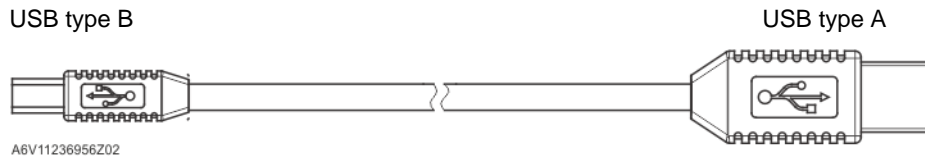
| | |
|------|--|
| USB | Connection plug, USB cable, type B |
| PPS2 | Connection plug RJ45 for PPS2 connection cable |

Note

The interfaces on the AST22 service interface are galvanically separated.

USB cable

The length of the USB cable is 1.0 m. The USB port connecting to the PC is USB 2.0 and is also compatible with USB 3.0, type A. The USB port connecting the interface (AST22) is USB type B.



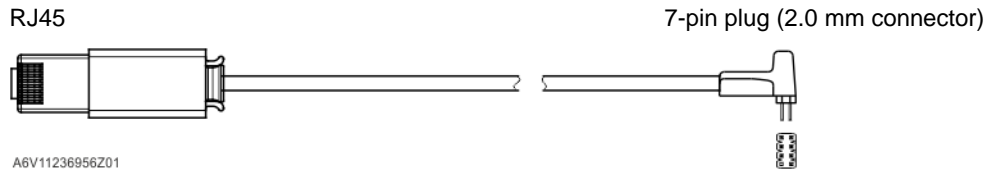
Power switch for PPS2 bus power supply

The slider switch on the side of the AST22 is used to manually switch on and off the PPS2 bus power supply.

PPS2 connection cable

A PPS2 connection cable (2.5 m) is included to connect to VAV compact/modular controllers as of production year 2012.

- RJ45 on 7-pin plug



Type summary

Ordering

Please indicate the product type and stock number when ordering, for example:

| Type | Stock number | Description |
|-------|--------------|------------------------------|
| AST22 | S55499-D373 | USB-PPS2 interface converter |

The ACS941 PC software can be downloaded free of charge at <https://support.industry.siemens.com>

Product documentation

| Topic | Title | Document no: |
|---------------------------------------|--|--------------|
| Conformity with European Directives | EU conformity (CE) | A5W00038809 |
| Conformity with British Directives | UKCA conformity | A5W00221284 |
| Manufacturer's conformity declaration | RCM conformity | A5W00038810 |
| Environmental compatibility | Environmental product declaration (EPD) | A5W00041532 |
| Service software datasheet | PC Software for VAV compact and modular controllers ACS941 | N5854 |



Related documents such as environmental declarations, CE declarations, etc., can be downloaded at <http://siemens.com/bt/download>

Engineering

The AST22 interface converter does not require a separate power supply.
The USB unit is powered over the PC's USB connection; the PPS2 unit over the connected actuator.

Mounting

The AST22 interface converter is designed for portable use.



Commissioning

The AST22 interface converter does not require parameterization.

Maintenance

The AST22 interface converter is maintenance-free.

Disposal

| | |
|---|---|
|   | <p>The device is considered electrical and electronic equipment for disposal in terms of the applicable European Directive and may not be disposed of as domestic garbage.</p> <ul style="list-style-type: none">• Dispose of the device through channels provided for this purpose.• Comply with all local and currently applicable laws and regulations. |
|---|---|

Technical data

| Power supply | |
|------------------------------|----------------------------------|
| Operating voltage (from USB) | DC 5 V as per USB specifications |
| Power consumption | Max. 15 mA |

| PPS2 device | |
|-------------------|--|
| Connection | 3-wire connection, non-interchangeable |
| PPS2 cable length | 2.5 m |
| Baud rate | 4800 baud |
| Bus power supply | 20 mA, DC 12 V, manual on/off switch using a slider switch VAV compact/modular controllers must be powered by a separate AC 24 V power source |

| USB interface | |
|---|---|
| Standard | USB 2.0 or higher |
| Device class | HID (human interface device) |
| USB cable <ul style="list-style-type: none"> • Plug side PC • Plug side AST22 • Cable length | <ul style="list-style-type: none"> • USB type A • USB type B • 1.0 m |

| Ambient conditions and protection classification | |
|---|--|
| Degree of protection of housing to IEC 60529 | IP20 |
| Permissible environmental conditions for transportation and storage <ul style="list-style-type: none"> • Temperature • Humidity | <ul style="list-style-type: none"> • -25...70 °C • <95% r.h. (non-condensing) |
| Permissible environmental conditions for operation <ul style="list-style-type: none"> • Temperature • Humidity | <ul style="list-style-type: none"> • -5...55 °C • <85% r.h. (non-condensing) |

| Standards | |
|-----------------------------|--|
| EU conformity (CE) | A5W00038809 |
| RCM conformity | A5W00038810 |
| EAC compliance | Eurasian compliance |
| Environmental compatibility | The product environmental declaration A5W00041532 contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal). |

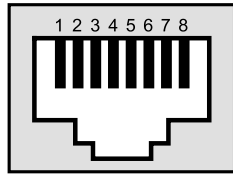
| General | |
|--------------------------------|-------------------|
| Dimensions | 74 x 44 x 19.5 mm |
| Weight (device with packaging) | 208 g |

Diagrams

Connection terminals

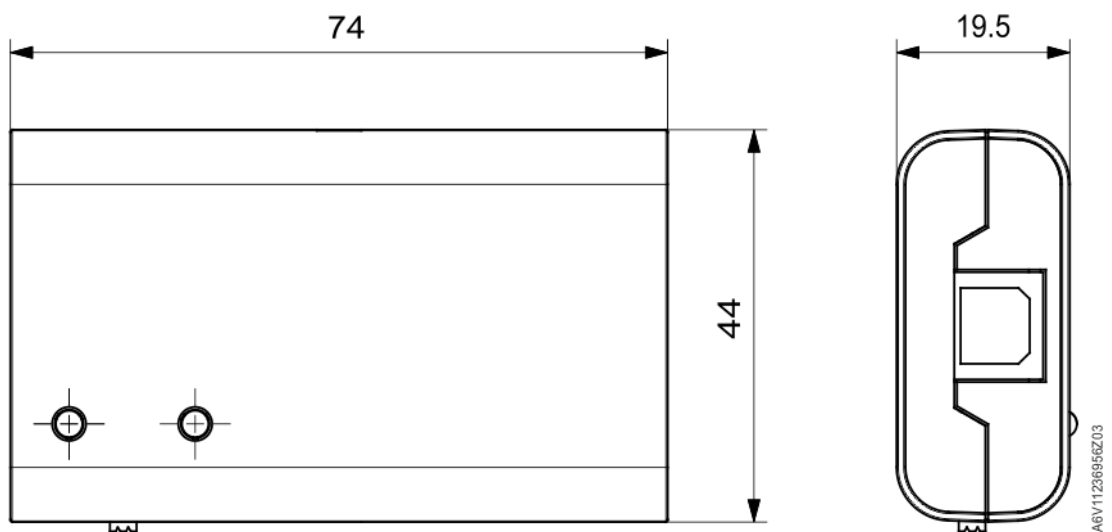
The following pin assignments apply to the PPS2 plug on the AST22 service interface:

Pin assignment PPS2, RJ45



| | | | |
|---|--------|---|----------------------|
| 1 | Unused | 5 | Unused |
| 2 | Unused | 6 | Unused |
| 3 | PPS2 | 7 | Voltage G (AC 24 V) |
| 4 | Unused | 8 | Voltage G0 (AC 24 V) |

Dimensions



Dimensions in mm