

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
<b>PPS2</b>	Green	ON	AST22 connected to a PPS2 device
		Flashing	Data exchange between AST22 and PPS2 device

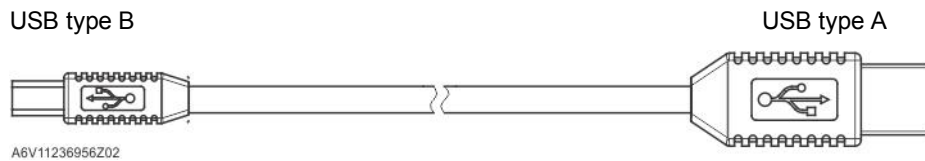
### Interfaces

- 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.



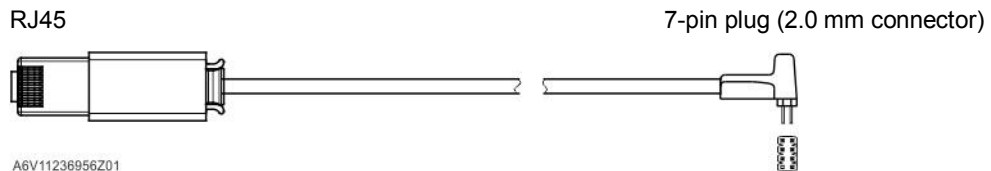
### Power switch for PPS2 bus power supply

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

## Product documentation

Topic	Title	Document no:
Conformity with European Directives	EU conformity (CE)	A5W00038809
Manufacturer's conformity declaration	RCM conformity	A5W00038810
Environmental compatibility	Environmental product declaration (EPD)	A5W00041532

Related documents such as environmental declarations, CE declarations, etc., can be downloaded at the following Internet address:

<http://siemens.com/bt/download>

### Engineering

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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

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The AST22 interface converter is designed for portable use.

### Commissioning

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The AST22 interface converter does not require parameterization.

### Maintenance

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The AST22 interface converter is maintenance-free.

### Disposal

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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.

- Dispose of the device through channels provided for this purpose.
- Comply with all local and currently applicable laws and regulations.

<b>Power supply</b>	
Operating voltage (from USB)	DC 5 V as per USB specifications
Power consumption	Max. 15 mA

<b>PPS2 device</b>	
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

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

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

<b>Standards</b>	
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).

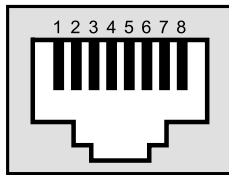
<b>General</b>	
Dimensions	74 x 44 x 19.5 mm
Weight (device with packaging)	208 g

## Diagrams

### Connection terminals

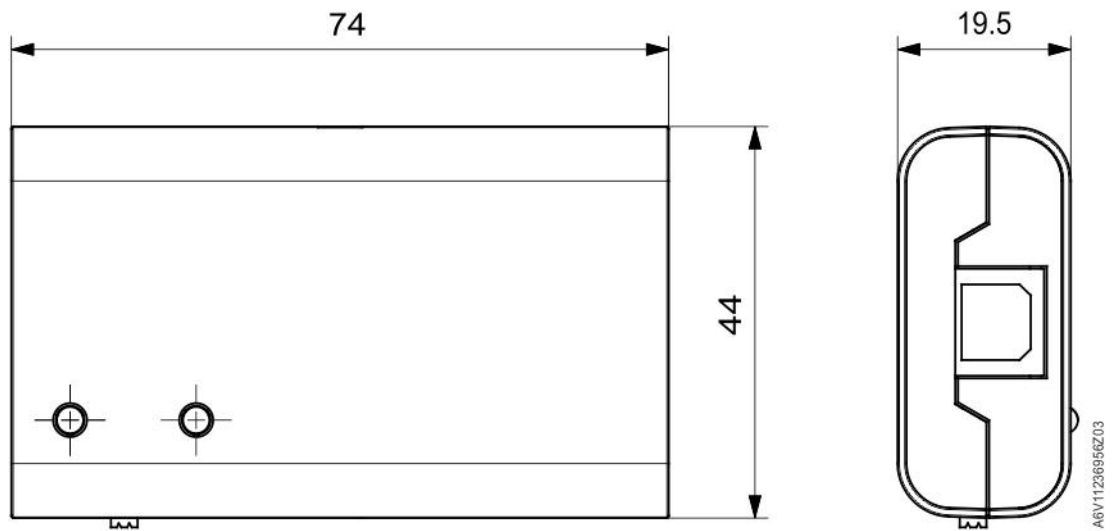
The following pin assignments apply to the PPS2 plug on the AST22 service interface:

#### 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