

# AD-HUB-01 – PROFINET Bus Coupler for Modular I/O

**Bertsch-Tech GmbH** | Field I/O Systems  
Article No.: AD-HUB-01 | EAN: 4012345678904

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## Overview

The AD-HUB-01 is a DIN-rail mounted bus coupler that acts as the gateway between a PROFINET fieldbus network and the modular IP-400 I/O system. It enables up to 32 I/O modules to be connected downstream without additional configuration overhead. The integrated PROFINET interface with media redundancy protocol (MRP) support ensures high availability in ring topologies.

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## Application

- Distributed I/O architectures in PROFINET networks
  - Cabinet-level I/O collection with central PLC control
  - Replacement and migration from legacy parallel wiring
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## Technical Specifications

### Fieldbus Interface

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Parameter	Value
Bus system	PROFINET IO (IRT and RT)
Physical interface	2 × RJ45, integrated PROFINET switch
Data transmission rate	100 Mbit/s, full duplex
Media Redundancy Protocol	MRP supported
Topology	Line, star, ring

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### I/O Expansion

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Parameter	Value
Number of connections sensor/actuator (EF000783)	Up to 32 downstream I/O modules

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Parameter	Value
Module bus	Proprietary high-speed backplane bus
Max. I/O data per coupler	512 bytes input / 512 bytes output
Hot-swap of I/O modules	Yes (during operation)

### Mounting

Parameter	Value
Mounting method	DIN rail mounting, 35 mm (EN 60715)
Type of fastening (EF002442)	Snap-on, tool-free release
Width in number of modular spacings (EF002950)	4 (72 mm)
Housing colour	White (RAL 9010)
Degree of protection	IP20

### Electrical

Parameter	Value
Supply voltage	24 V DC (18 ... 30 V)
Current consumption (coupler only)	≤ 180 mA at 24 V DC
Power supply for I/O bus	24 V DC (max. 4 A via power feed connector)
Electrical isolation	Bus / I/O supply galvanically isolated

### Diagnostics & Indicators

LED	Colour	Meaning
PWR	Green	Supply voltage OK
BF	Red	Bus fault / no PROFINET connection
SF	Red	System fault / module error
LINK1 / LINK2	Green/Yellow	Ethernet link / activity

### Configuration

The AD-HUB-01 is configured via a standard GSDML file (GSDML-V2.4-BertschTech-ADHUB01-20240101.xml). The device is identi-

fied and parameterised by the PROFINET controller during startup.  
No additional software tools required for basic operation.

### **PROFINET Device Identity**

- Device type name: BT-ADHUB-01
  - Vendor ID: 0x0489
  - Device ID: 0x0041
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### **Approvals & Standards**

- CE (EMC, LVD)
  - PROFINET certified (Conformance Class B)
  - RoHS compliant
  - UL 508 listed
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### **Compatible Modules (AD-HUB-01 Backplane)**

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Module No.	Description
AD-DI-16	16-channel digital input module, 24 V DC
AD-DO-16	16-channel digital output module, 24 V DC, 0.5 A
AD-AI-8	8-channel analogue input module, 4-20 mA / 0-10 V
AD-AO-4	4-channel analogue output module, 4-20 mA
AD-PWR-01	Potential feed module / power segment

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