

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

IFM ELECTRONIC

AC1335

AS-INTERFACE PROFIBUS DP GATEWAY

Used with the applicable SmartLink DP configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: IFM AC1335 Operating Instructions 7390843/00

ifm electronic



Operating instructions

AS interface

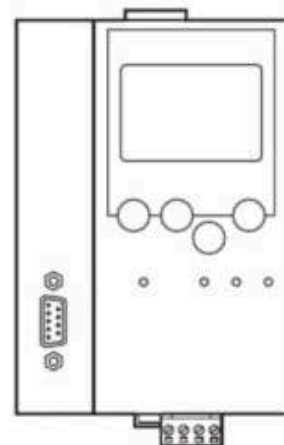
SmartLink DP

AC1335

UK



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1 Safety instructions

- Please read the product description prior to installing the unit. Ensure that the product is suitable for your application without any restrictions.
- The unit conforms to the relevant regulations and EU directives.
- Improper use or non-intended use may lead to malfunctions of the unit or to unwanted effects in your application.
- That is why installation, electrical connection, set-up, operation and maintenance of the unit must only be carried out by qualified personnel authorised by the machine operator.

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2 Functions and features



The SmartLink DP integrates one AS-i master in accordance with the AS-i version 2.1 and a Profibus DP interface



- It controls the exchange of data to the sensor/actuator level
- communicates with the higher control level (in the gateway mode)

3 Profibus-DP interface

- Baud rate 9600 to 12 MBaud
- Max. distance between gateway and host: depending on the baud rate
- Electrical separation from the gateway power supply
- Up to 31 gateways connected in parallel
- Pin connection: pin 3: signal B, pin 8: signal A

4 Installation

Fix the SmartLink DP onto a 35mm rail. The protection rating of the unit is IP20, therefore it should be mounted in a protected location (e.g. control cabinet).



Ensure a condensation-free environment. Avoid excessive dust, vibration and shock. The air circulation through the vents must not be impeded.

Avoid installation in direct vicinity of frequency inverters.

5 Electrical connection

Disconnect the installation from power. Connect the unit as indicated on the terminals. Never connect the minus potentials to each other or the minus potentials to the FE connection. Ensure an interference-free earth connection (low-noise earth) to the SmartLink DP terminal (FE: functional earthing). The terminal FE is internally connected to the housing and the Din rail clip. Ensure that interference currents of other units are not discharged via this connection.

5.1 Limited voltage

The device shall be supplied from an isolating transformer having a secondary Listed fuse rated as noted in the following table.

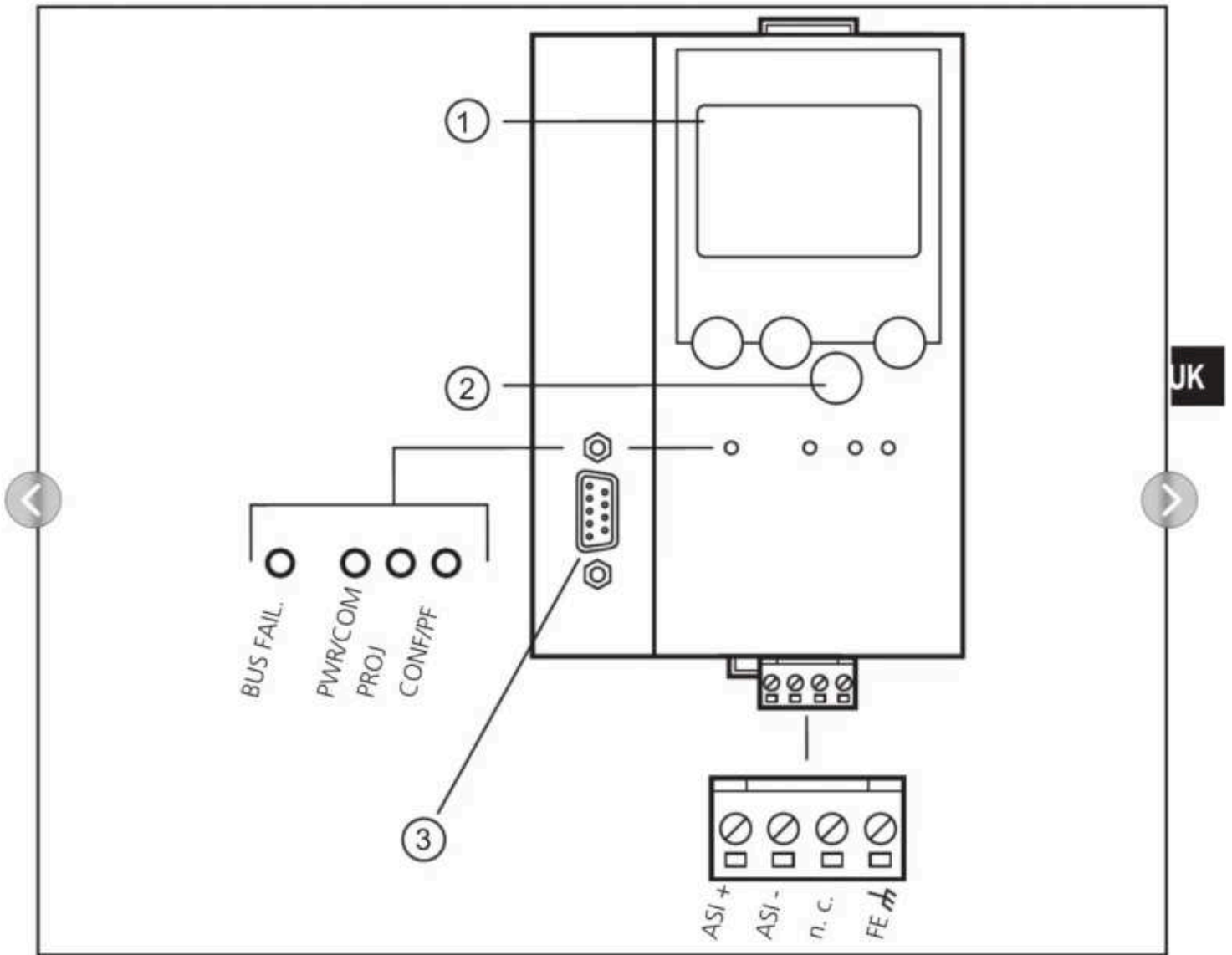
Overcurrent protection		
Control-circuit wire size		Maximum protective device rating [A]
AWG [mm	2]	
26 0.13	1	
24 0.20	2	
22 0.32	3	
20 0.52	5	
18 0.82	7	
16 1.3	10	

6 Operating and indicating elements

You are informed about the state of the master and the connected system by means of four diagnostic LEDs on the SmartLink DP.

- LED PWR/COM lights: AS-i voltage present, at least one slave was detected
- LED PWR/COM flashes: AS-i voltage present, but no slave was detected correctly
- LED PROJ lights: Projection mode active, the configuration monitoring is deactivated
- LED PROJ flashes: Projection mode active, switching to the protected mode not possible as a slave with the address 0 is connected.
- LED CONF/PF lights: Projected and current configuration do not match
- LED CONF/PF flashes: Peripheral fault on at least one connected slave
- LED Profibus DP lights: Bus error Profibus DP

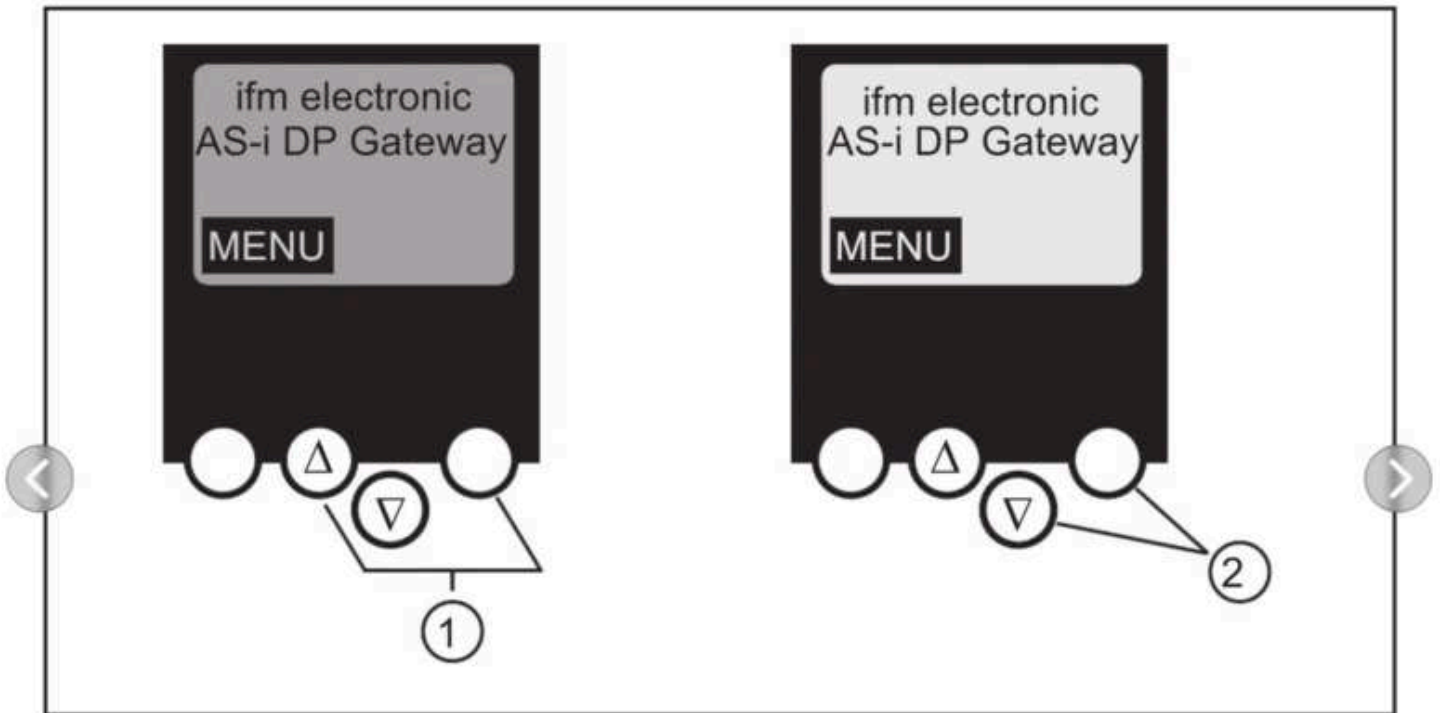
6.1 LED indicators and pin connection



- 1. display
 - 2. pushbuttons
 - 3. Profibus DP interface
- FE: functional earth

6.2 Contrast setting

The contrast can be directly changed by simultaneously pressing the right button and the Δ -button (too bright) or the ∇ -button (too dark).



1: increase contrast

2: decrease contrast

7 Operation

To operate an AS-i system a special AS-i power supply is required (e.g. AC1216). The AS-i power supply supplies the yellow AS-i cable with energy and implements a data decoupling to the voltage regulator of the power supply. Standard power supplies would consider the AS-i data signals as interference signals and suppress them.

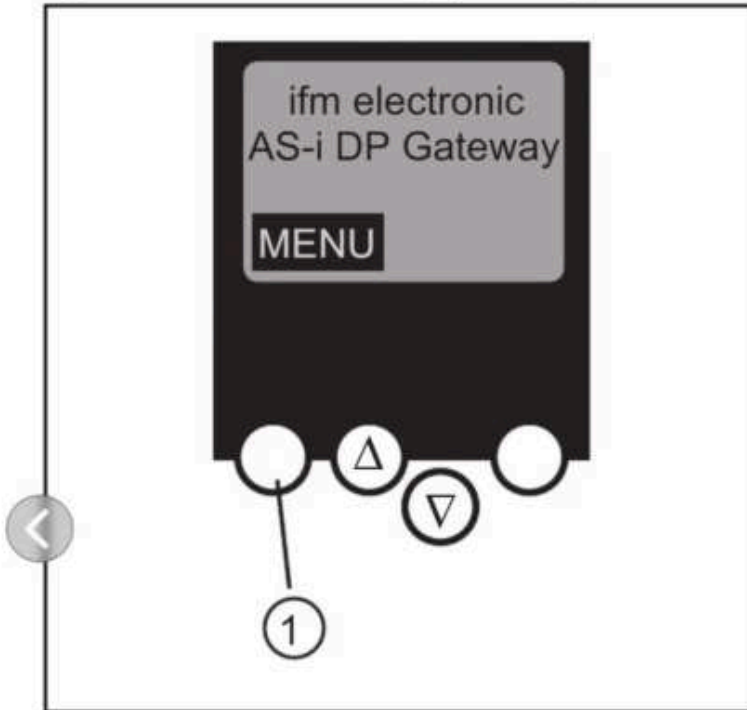


Disconnect the power supply before connecting the AS-i DP gateway.

The AS-i system is operated ungrounded. AS-i + and AS-i - are to be symmetrical to the ground potential of the installation. Ensure a low-resistance connection of the symmetry point of the AS-i power supply (terminal „shield“) to the ground of the installation.

7.1 Menu overview

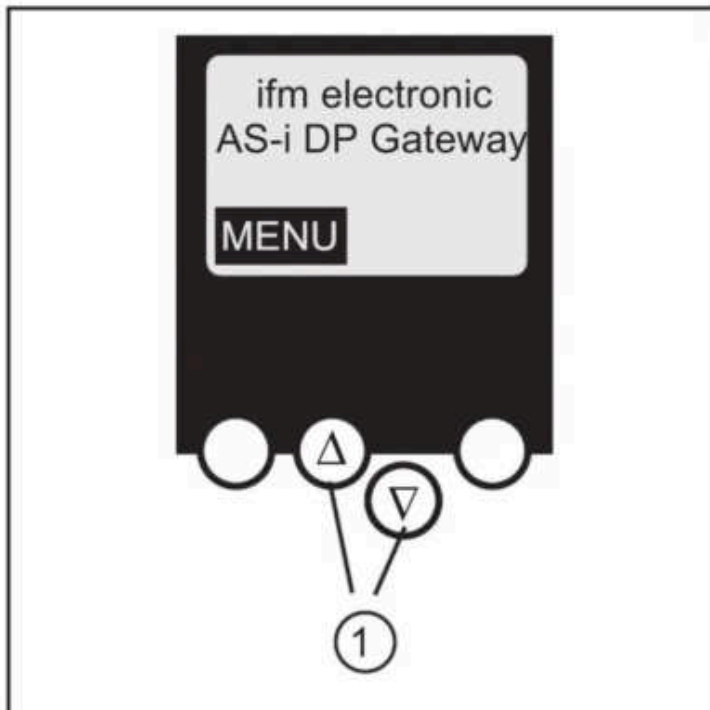
Open the main menu by pressing the left button „MENU“ in the start display.



1: Menu button

To navigate within a menu point press the button Δ or ▽.

Press the buttons simultaneously to switch between the German and English menu.



1: navigation buttons

7.2 Menu navigation

- **Quick setup**

- (Summary of the menu points required for a basic configuration)

- ▼ Reading of the current AS-i configuration (config all)

- ▼ Setting of the field bus connection

- **Slave lists**

- (Checking of the addresses of the connected AS-i slaves)

- ▼ List of the detected AS-i slaves (LDS)

- ▼ List of the projected AS-i slaves (LPS)

- ▼ List of the activated AS-i slaves (LAS)

- ▼ List of the AS-i slaves with peripheral fault (LPF)

- **Address slave**

- (Programming of the correct addresses in the connected AS-i slaves)

- ▼ Re-addressing of an AS-i slave connected to the gateway

- ▼ Automatic addressing of new AS-i slaves to the next free address (easy Start-up)

- **Diagnostics**

- ▼ (Diagnosis of the AS-i network and the slave communication)

- **Master setup**

- (AS-i master flags)

- ▼ Reading of the current AS-i configuration (config all)

- ▼ Changeover to the projection mode: configuration of the AS-i system

- ▼ Changeover to the protected mode: standard mode (the master monitors the configuration)

- ▼ Deactivation of the automatic AS-i slave addressing in the protected mode

- ▼ Deactivation of the AS-i reset when exiting the projection mode

- ▼ Display of the config error counter of the connected AS-i system

- ▼ Reset of the config error counter

- ▼ Display of the fault rate percentage of the connected AS-i system

-

- **Slave Info**

- (Detailed information about the connected AS-i slaves)

- ▼ Digital or analogue inputs/outputs of the connected AS-i slaves

- ▼ Current and projected parameters of the connected AS-i slaves

- ▼ Current and projected I/O and I/D codes of the connected AS-i slaves

- ▼ Message faults in the communication to the connected AS-i slaves

- **Fieldbus setup**

- (Setting of the fieldbus interface)

- ▼ Input of the slave address of the gateway in the higher-level Profibus DP

- ▼ Further information about the higher-level Profibus DP

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- **System setup**

- (Setting of the gateway unit)

- ▼ Input of the password to enable changes in the system configuration

- ▼ Storage of the current configuration setting

- ▼ Reset of the unit to the factory setting

- **System info**

- (Device information)

- ▼ Hardware and firmware version numbers of this gateway

- ▼ Serial number of this gateway

8 Technical data

Technical data and further information at

www.ifm.com --> Select your country --> Data sheet direct

9 Scale drawing

