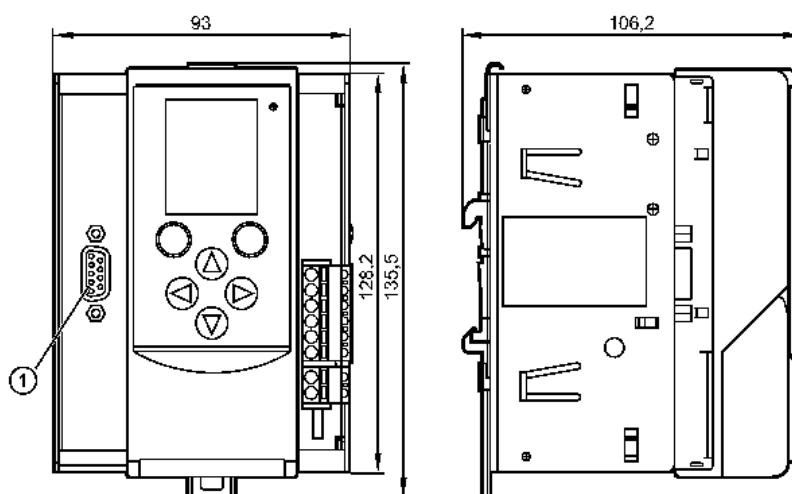


## AC412S

AS-i Gateway 2Master PB Safe

Bussystem AS-Interface



1: Sub-D (9-polig)



### Produktmerkmale

AS-i Profibus Gateway

Klemmschienengehäuse

Ethernet-Konfigurationsschnittstelle mit dynamischer Web-Schnittstelle zur Konfiguration und Diagnose inklusive Fernwartung

Profibus DP (DPV0 + DPV1)

LCD-Farbdisplay

Konfiguration und Inbetriebnahme mittels Konfigurationssoftware CODESYS V3

Entspricht den Anforderungen:

EN ISO 13849-1: 2008 Kategorie 4 PL e

IEC 61508: SIL 3

### Einsatzbereich

Einsatzbereich

Einsatz als AS-i Profibus Gateway mit sicherer Vorverarbeitung

### Elektrische Daten

Anzahl AS-i Master

2

Elektrische Ausführung

4 sichere lokale Eingänge (zweikanalig) und 2 sichere lokale Halbleiterausgänge

Betriebsspannung [V]

18...32 DC (AUX)

Stromaufnahme aus 24 V DC und AS-i [mA]

 $< 750 (24 V) / < 10 \text{ aus AS-i 1} / < 10 \text{ aus AS-i 2}$ 

Potentialtrennung

ja

### Eingänge

Digital

Beschaltung

 DC PNP  
(Typ 2 gemäß IEC 61131-2)

Sensorversorgung

nach SELV/PELV

Spannungsbereich [V]

24 DC (18...32 DC)

Eingangsstrom [mA]

7

### Ausgänge

Digital

Ausgangsfunktion

Transistor PNP

Spannungsbereich [V]

24 DC (18...32 DC)

Externe Spannungsversorgung

nach SELV/PELV

Strombelastbarkeit je Ausgang [mA]

500

## AC412S

AS-i Gateway 2Master PB Safe

Bussystem AS-Interface

|                                 |       |
|---------------------------------|-------|
| Max. Induktivität [mH]          | 400   |
| Max. Schaltfrequenz [Hz]        | 25    |
| Gebrauchskategorie der Ausgänge | DC-13 |
| Galvanisch entkoppelt           | ja    |
| Kurzschlussfest                 | ja    |

### Schnittstellen

|                          |                                                   |
|--------------------------|---------------------------------------------------|
| Programmierschnittstelle | Ethernet                                          |
| Datenschnittstelle       | Profibus DP (DPV0 + DPV1), max. 12 MBaud, EN50170 |

### Umgebungsbedingungen

|                                              |                                        |
|----------------------------------------------|----------------------------------------|
| Umgebungstemperatur [°C]                     | 0...50, für UL-Applikation: max. 45 °C |
| Lagertemperatur [°C]                         | -20...70                               |
| Max. zulässige relative Luftfeuchtigkeit [%] | 95, nicht kondensierend                |
| Höhe über NN [m]                             | < 2000                                 |
| Schutzart                                    | IP 20                                  |

### Sicherheitskennwerte

|                                                  |                    |
|--------------------------------------------------|--------------------|
| Gebrauchsdauer TM (Mission Time) [h]             | 175200, (20 Jahre) |
| Sicherheitstechnische Zuverlässigkeit PFHd [1/h] | 1,21*10E-08        |
| PFD                                              | 1,04*10E-04        |

### AS-i Kennwerte

|                 |        |
|-----------------|--------|
| AS-i Version    | 3.0    |
| AS-i Profil     | M4     |
| AS-i Zertifikat | 125302 |

### Mechanische Daten

|                   |                                                            |
|-------------------|------------------------------------------------------------|
| Gehäusewerkstoffe | Aluminium pulverbeschichtet; Stahlblech verzinkt; Makrolon |
|-------------------|------------------------------------------------------------|

### Anzeigen / Bedienelemente

|                      |                            |
|----------------------|----------------------------|
| Anzeige              | Vollgrafik-LCD-Display     |
| Funktionsanzeige LED | 1 x rot / grün (Kombi-LED) |

### Elektrischer Anschluss

#### Anschlussbelegung

X1, X2 Power supply

|                          |         |
|--------------------------|---------|
| <input type="checkbox"/> | AS-i 2+ |
| <input type="checkbox"/> | AS-i 2- |
| <input type="checkbox"/> | AS-i 1+ |
| <input type="checkbox"/> | AS-i 1- |
| <input type="checkbox"/> | FE      |
| <input type="checkbox"/> | n.c.    |
| <input type="checkbox"/> | 24 V    |
| <input type="checkbox"/> | GND     |

#### Anschlussbelegung



**AC412S**

AS-i Gateway 2Master PB Safe

**Bussystem AS-Interface**

X4 Local inputs/outputs

|     |  |  |       |
|-----|--|--|-------|
| IN1 |  |  | OUT 1 |
| IN2 |  |  | OUT 2 |
| IN3 |  |  | OUT 3 |
| IN4 |  |  | OUT 4 |
| IN5 |  |  | GND   |
| IN6 |  |  | GND   |
| IN7 |  |  | 24 V  |
| IN8 |  |  | 24 V  |

**Zubehör**

|                        |                  |
|------------------------|------------------|
| Zubehör (mitgeliefert) | Anschlussklemmen |
|------------------------|------------------|

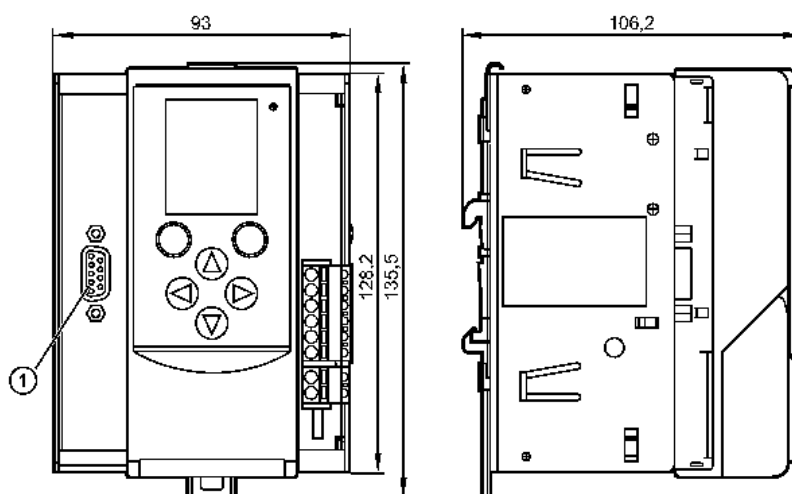
**Bemerkungen**

|                    |         |   |
|--------------------|---------|---|
| Verpackungseinheit | [Stück] | 1 |
|--------------------|---------|---|

## AC412S

AS-i Gateway 2Master PB Safe

Bus system AS-Interface



1: Sub-D (9-pole)



### Product characteristics

AS-i Profibus gateway

Housing for DIN rail mounting

Ethernet configuration interface with dynamic web interface for configuration and diagnosis including remote maintenance

Profibus DP (DPV0 + DPV1)

LCD colour display

Configuration and setup by configuration software CODESYS V3

Complies with the requirements:  
EN ISO 13849-1: 2008 category 4 PL e  
IEC 61508: SIL 3

### Application

|             |                                                                |
|-------------|----------------------------------------------------------------|
| Application | Einsatz als AS-i Profibus Gateway mit sicherer Vorverarbeitung |
|-------------|----------------------------------------------------------------|

### Electrical data

|                                                |                                                                           |
|------------------------------------------------|---------------------------------------------------------------------------|
| Number of AS-i masters                         | 2                                                                         |
| Electrical design                              | 4 safe local inputs (dual channel) and 2 safe local semiconductor outputs |
| Operating voltage [V]                          | 18...32 DC (AUX)                                                          |
| Current consumption from 24 V DC and AS-i [mA] | < 750 (24 V) / < 10 from AS-i 1 / < 10 from AS-i 2                        |
| Electrical separation                          | yes                                                                       |

### Inputs

|                    |                                             |
|--------------------|---------------------------------------------|
| Digital            |                                             |
| Circuit            | DC PNP<br>(Type 2 according to IEC 61131-2) |
| Sensor supply      | to SELV/PELV                                |
| Voltage range [V]  | 24 DC (18...32 DC)                          |
| Input current [mA] | 7                                           |

### Outputs

|                                   |                    |
|-----------------------------------|--------------------|
| Digital                           |                    |
| Output function                   | transistor PNP     |
| Voltage range [V]                 | 24 DC (18...32 DC) |
| External voltage supply           | to SELV/PELV       |
| Max. current load per output [mA] | 500                |



## AC412S

AS-i Gateway 2Master PB Safe

Bus system AS-Interface

|                                     |       |
|-------------------------------------|-------|
| Max. inductance [mH]                | 400   |
| Max. switching frequency [Hz]       | 25    |
| Utilisation category of the outputs | DC-13 |
| Electrically separated              | yes   |
| Short-circuit proof                 | yes   |

### Interfaces

|                       |                                                   |
|-----------------------|---------------------------------------------------|
| Programming interface | Ethernet                                          |
| Data interface        | Profibus DP (DPV0 + DPV1), max. 12 Mbaud, EN50170 |

### Environment

|                                |                                         |
|--------------------------------|-----------------------------------------|
| Ambient temperature [°C]       | 0...50, for UL applications: max. 45 °C |
| Storage temperature [°C]       | -20...70                                |
| Max. relative air humidity [%] | 95, non condensing                      |
| Height above sea level [m]     | < 2000                                  |
| Protection                     | IP 20                                   |

### Safety classification

|                                       |                    |
|---------------------------------------|--------------------|
| Mission time TM [h]                   | 175200, (20 years) |
| Safety-related reliability PFHd [1/h] | 1.21*10E-08        |
| PFD                                   | 1.04*10E-04        |

### AS-i classification

|                  |        |
|------------------|--------|
| AS-i version     | 3.0    |
| AS-i profile     | M4     |
| AS-i certificate | 125302 |

### Mechanical data

|                   |                                                           |
|-------------------|-----------------------------------------------------------|
| Housing materials | aluminium powder-coated; steel sheet galvanised; Makrolon |
|-------------------|-----------------------------------------------------------|

### Displays / operating elements

|                      |                                |
|----------------------|--------------------------------|
| Display              | full graphic LCD display       |
| Function display LED | 1 x red / green (combined LED) |

### Electrical connection

#### Wiring

X1, X2 Power supply

|                          |         |
|--------------------------|---------|
| <input type="checkbox"/> | AS-i 2+ |
| <input type="checkbox"/> | AS-i 2- |
| <input type="checkbox"/> | AS-i 1+ |
| <input type="checkbox"/> | AS-i 1- |
| <input type="checkbox"/> | FE      |
| <input type="checkbox"/> | n.c.    |
| <input type="checkbox"/> | 24 V    |
| <input type="checkbox"/> | GND     |

#### Wiring



AC412S

AS-i Gateway 2Master PB Safe

Bus system AS-Interface

X4 Local inputs/outputs

|     |  |  |       |
|-----|--|--|-------|
| IN1 |  |  | OUT 1 |
| IN2 |  |  | OUT 2 |
| IN3 |  |  | OUT 3 |
| IN4 |  |  | OUT 4 |
| IN5 |  |  | GND   |
| IN6 |  |  | GND   |
| IN7 |  |  | 24 V  |
| IN8 |  |  | 24 V  |

Accessories

|                        |           |
|------------------------|-----------|
| Accessories (included) | terminals |
|------------------------|-----------|

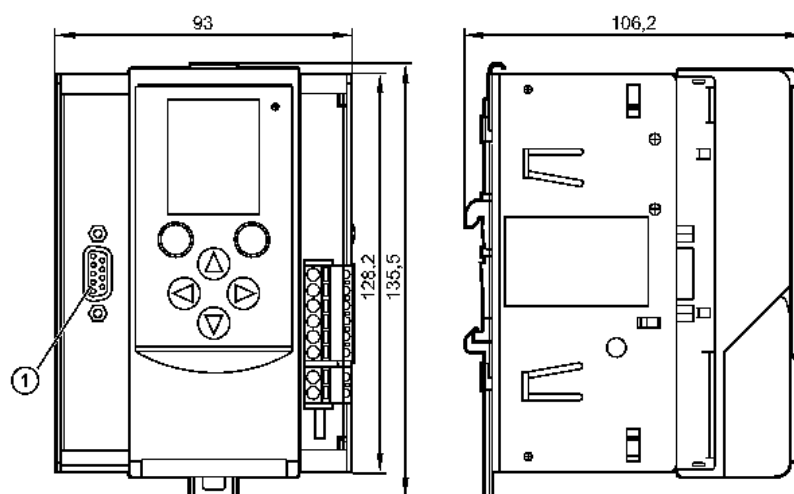
Remarks

|               |         |   |
|---------------|---------|---|
| Pack quantity | [piece] | 1 |
|---------------|---------|---|

## AC412S

AS-i Gateway 2Master PB Safe

Système bus AS-interface



1: Sub-D (9 pôles)



### Caractéristiques du produit

Passerelle AS-i Profibus

Montage en glissière

Interface de configuration Ethernet avec interface web dynamique pour configuration et diagnostic, y compris télémaintenance

Profibus DP (DPV0 + DPV1)

afficheur LCD couleur

Configuration et mise en service par logiciel de configuration CODESYS V3

Conforme aux exigences:

EN ISO 13849-1: 2008 Catégorie 4 PL e

CEI 61508: SIL 3

### Application

|             |                                                                |
|-------------|----------------------------------------------------------------|
| Application | Einsatz als AS-i Profibus Gateway mit sicherer Vorverarbeitung |
|-------------|----------------------------------------------------------------|

### Données électriques

|                                       |                                                                                       |
|---------------------------------------|---------------------------------------------------------------------------------------|
| Nombre de maîtres AS-i                | 2                                                                                     |
| Technologie                           | 4 entrées locales de sécurité (deux voies) et 2 sorties à semi-conducteur de sécurité |
| Tension d'alimentation [V]            | 18...32 DC (AUX)                                                                      |
| Consommation via 24 V DC et AS-i [mA] | < 750 (24 V) / < 10 via AS-i 1 / < 10 via AS-i 2                                      |
| Isolation galvanique                  | oui                                                                                   |

### Entrées

|                           |                                      |
|---------------------------|--------------------------------------|
| TOR                       |                                      |
| Technologie               | DC PNP<br>(Type 2 selon CEI 61131-2) |
| Alimentation des capteurs | selon TBTS/TBTP                      |
| Plage de tension [V]      | 24 DC (18...32 DC)                   |
| Courant d'entrée [mA]     | 7                                    |

### Sorties

|                                 |                    |
|---------------------------------|--------------------|
| TOR                             |                    |
| Sortie                          | transistor PNP     |
| Plage de tension [V]            | 24 DC (18...32 DC) |
| Alimentation externe en tension | selon TBTS/TBTP    |
| Courant max. par sortie [mA]    | 500                |

## AC412S

AS-i Gateway 2Master PB Safe

Système bus AS-interface

|                                     |       |
|-------------------------------------|-------|
| Inductance max. [mH]                | 400   |
| Fréquence de commutation max. [Hz]  | 25    |
| Catégorie d'utilisation des sorties | DC-13 |
| Séparation galvanique               | oui   |
| Résistant aux courts-circuits       | oui   |

### Interfaces

|                            |                                                   |
|----------------------------|---------------------------------------------------|
| Interface de programmation | Ethernet                                          |
| Interface de données       | Profibus DP (DPV0 + DPV1), max. 12 MBaud, EN50170 |

### Conditions d'utilisation

|                                     |                                           |
|-------------------------------------|-------------------------------------------|
| Température ambiante [°C]           | 0...50, pour applications UL : max. 45 °C |
| Température de stockage [°C]        | -20...70                                  |
| Humidité relative de l'air max. [%] | 95, sans condensation                     |
| Altitude d'utilisation [m]          | < 2000                                    |
| Protection                          | IP 20                                     |

### Classification de sécurité

|                                                               |                  |
|---------------------------------------------------------------|------------------|
| Durée d'utilisation TM (Mission Time) [h]                     | 175200, (20 ans) |
| Fiabilité relative à la technologie de la sécurité PFHd [1/h] | 1,21*10E-08      |
| PFD                                                           | 1,04*10E-04      |

### Classification AS-i

|                 |        |
|-----------------|--------|
| Version AS-i    | 3.0    |
| Profil AS-i     | M4     |
| Certificat AS-i | 125302 |

### Données mécaniques

|                  |                                                                                |
|------------------|--------------------------------------------------------------------------------|
| Matières boîtier | aluminium surface protégée par pulvérisation; tôle d'acier galvanisé; Makrolon |
|------------------|--------------------------------------------------------------------------------|

### Afficheurs / éléments de service

|                            |                                        |
|----------------------------|----------------------------------------|
| Indication                 | afficheur LCD entièrement graphique    |
| Indication de fonction LED | 1 x rouge / vert (LED à deux couleurs) |

### Raccordement électrique

#### Branchement

X1, X2 Power supply

|                          |         |
|--------------------------|---------|
| <input type="checkbox"/> | AS-i 2+ |
| <input type="checkbox"/> | AS-i 2- |
| <input type="checkbox"/> | AS-i 1+ |
| <input type="checkbox"/> | AS-i 1- |
| <input type="checkbox"/> | FE      |
| <input type="checkbox"/> | n.c.    |
| <input type="checkbox"/> | 24 V    |
| <input type="checkbox"/> | GND     |

#### Branchement



## AC412S

AS-i Gateway 2Master PB Safe

Système bus AS-interface

X4 Local inputs/outputs

|     |  |  |       |
|-----|--|--|-------|
| IN1 |  |  | OUT 1 |
| IN2 |  |  | OUT 2 |
| IN3 |  |  | OUT 3 |
| IN4 |  |  | OUT 4 |
| IN5 |  |  | GND   |
| IN6 |  |  | GND   |
| IN7 |  |  | 24 V  |
| IN8 |  |  | 24 V  |

### Accessoires

Accessoires (fournis)

boîte de raccordement

### Remarques

Quantité

[pièce]

1