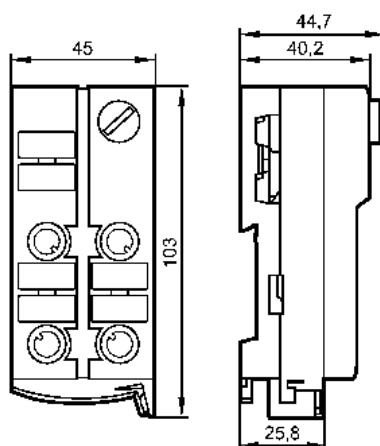


**AC509S**

ClassicLine 2x2SI 2DOT 2LO

Bussystem AS-Interface


**Produktmerkmale**

AS-i Safety at Work

AS-i Flachkabel direkt kontaktierbar

Steckbuchsen M12 x 1

Entspricht den Anforderungen:

EN ISO 13849-1: Kategorie 3 PL d

IEC 62061: SILcl 2

**Elektrische Daten**

|                                  |                                                                                |
|----------------------------------|--------------------------------------------------------------------------------|
| Elektrische Ausführung           | 2x2 sichere Eingänge / 2 nicht sichere LED-Ausgänge / 2 nicht sichere Ausgänge |
| Betriebsspannung [V]             | 26,5...31,6 DC; "supply class 2" gemäß cULus                                   |
| Stromaufnahme [mA]               | < 280                                                                          |
| Strombelastbarkeit je Modul [mA] | 200                                                                            |

**Eingänge**

|                                                     |        |
|-----------------------------------------------------|--------|
| Digital                                             |        |
| Beschaltung                                         | DC PNP |
| Sensorversorgung                                    | AS-i   |
| Strombelastbarkeit für alle Eingänge<br>gesamt [mA] | 200    |
| Eingangsstrom [mA]                                  | 8      |
| Kurzschluss-Erkennung                               | ja     |
| Querschluss-Erkennung                               | nein   |
| Kurzschlussfest                                     | ja     |

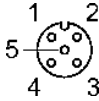
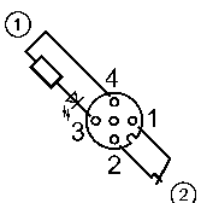
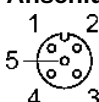
**Ausgänge**

|                                     |                    |
|-------------------------------------|--------------------|
| Spannungsbereich [V]                | 24 DC (18...30 DC) |
| LED-Ausgang                         | 2                  |
| LED Ausgang<br>Versorgung über AS-i | ja                 |
| Externe Spannungsversorgung         | AS-i               |
| Signalausgänge                      | 2                  |
| Strombelastbarkeit je Ausgang [mA]  | 50                 |
| Galvanisch entkoppelt               | nein               |
| Watchdog integriert                 | ja                 |
| Kurzschlussfest                     | ja                 |

## AC509S

ClassicLine 2x2SI 2DOT 2LO

Bussystem AS-Interface

| Umgebungsbedingungen                                                                                                                                                                                                          |                            |                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------------------|
| Umgebungstemperatur                                                                                                                                                                                                           | [°C]                       | -25...55, -25...40 °C mit geschalteten Ausgängen               |
| Schutzart                                                                                                                                                                                                                     |                            | IP 67                                                          |
| Zulassungen / Prüfungen                                                                                                                                                                                                       |                            |                                                                |
| EMV                                                                                                                                                                                                                           | EN 62026-2<br>EN 61326-3-1 | / 2013<br>/ 2008                                               |
| Sicherheitskennwerte                                                                                                                                                                                                          |                            |                                                                |
| Gebrauchsdauer TM (Mission Time)                                                                                                                                                                                              | [h]                        | 175200, (20 Jahre)                                             |
| PFH                                                                                                                                                                                                                           |                            | 2,33 x 10E-11 / h                                              |
| AS-i Kennwerte                                                                                                                                                                                                                |                            |                                                                |
| AS-i Version                                                                                                                                                                                                                  |                            | 2.11 + 3.0                                                     |
| Erweiterter Adressmodus möglich                                                                                                                                                                                               |                            | nein                                                           |
| Max. Anzahl sicherer Module pro Master                                                                                                                                                                                        |                            | 31                                                             |
| AS-i Profil                                                                                                                                                                                                                   |                            | S-7.B.E                                                        |
| E/A-Konfiguration [Hex]                                                                                                                                                                                                       |                            | 7                                                              |
| ID-Code [Hex]                                                                                                                                                                                                                 |                            | B.E                                                            |
| AS-i Zertifikat                                                                                                                                                                                                               |                            | 128301                                                         |
| Mechanische Daten                                                                                                                                                                                                             |                            |                                                                |
| Kabellänge [m]                                                                                                                                                                                                                |                            | < 10 m                                                         |
| Gehäusewerkstoffe                                                                                                                                                                                                             |                            | PA; Piercingkontakte: CuSn6 Oberfläche vernickelt und verzinkt |
| Gewicht                                                                                                                                                                                                                       | [kg]                       | 0,262                                                          |
| Anzeigen / Bedienelemente                                                                                                                                                                                                     |                            |                                                                |
| Betrieb                                                                                                                                                                                                                       | LED                        | grün                                                           |
| Fehler                                                                                                                                                                                                                        | LED                        | rot                                                            |
| Funktionsanzeige                                                                                                                                                                                                              | LED                        | gelb                                                           |
| Elektrischer Anschluss                                                                                                                                                                                                        |                            |                                                                |
| Maximale Leitungslänge                                                                                                                                                                                                        | [m]                        | < 10                                                           |
| Anschlussbelegung                                                                                                                                                                                                             |                            |                                                                |
|   <p>1 Signalisierung<br/>2 Sicherheitskontakt (NC)</p> |                            |                                                                |
| Anschlussbelegung                                                                                                                                                                                                             |                            |                                                                |
|                                                                                                                                            |                            |                                                                |
| Buchse SI-1                                                                                                                                                                                                                   |                            | Buchse SI-2                                                    |
| Pin 1: I +                                                                                                                                                                                                                    |                            | Pin 1: I +                                                     |
| Pin 2: IN 1                                                                                                                                                                                                                   |                            | Pin 2: IN 1                                                    |
| Pin 3: I -                                                                                                                                                                                                                    |                            | Pin 3: I -                                                     |
| Pin 4: IN 2                                                                                                                                                                                                                   |                            | Pin 4: IN 2                                                    |
| Buchse O-3                                                                                                                                                                                                                    |                            | Buchse O-4                                                     |
| Pin 1: nicht belegt                                                                                                                                                                                                           |                            | Pin 1: nicht belegt                                            |
| Pin 2: nicht belegt                                                                                                                                                                                                           |                            | Pin 2: nicht belegt                                            |
| Pin 3: 0 V                                                                                                                                                                                                                    |                            | Pin 3: 0 V                                                     |



## AC509S

ClassicLine 2x2SI 2DOT 2LO

**Bussystem AS-Interface**

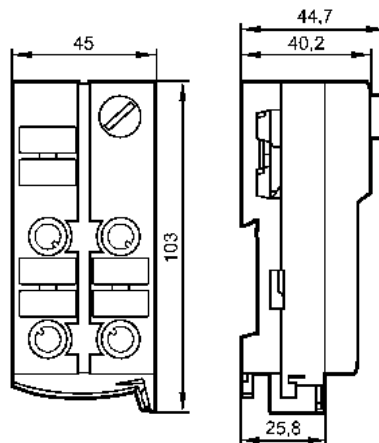
Pin 4: Ausgang O3 (pnp)    Pin 4: Ausgang O4 (pnP)

| Zubehör                    |                                                                                                    |
|----------------------------|----------------------------------------------------------------------------------------------------|
| Zubehör (mitgeliefert)     | Unterteil                                                                                          |
| Zubehör (optional)         | Adressierkabel E70213;<br>Verschlusskappe M12 (E73004)                                             |
| Bemerkungen                |                                                                                                    |
| Bemerkungen                | *) PL d, Kat.3, SILcl 2 nur wenn die im Handbuch beschriebenen Fehlerausschlüsse angewendet werden |
| Verpackungseinheit [Stück] | 1                                                                                                  |

## AC509S

ClassicLine 2x2SI 2DOT 2LO

Bus system AS-Interface



### Product characteristics

AS-i Safety at Work

AS-i flat cable connection

Sockets M12 x 1

Complies with the requirements:  
EN ISO 13849-1: category 3 PL d  
IEC 62061: SILcl 2

### Electrical data

|                                   |                                                               |  |
|-----------------------------------|---------------------------------------------------------------|--|
| Electrical design                 | 2x2 safe inputs / 2 non-safe LED outputs / 2 non-safe outputs |  |
| Operating voltage [V]             | 26.5...31.6 DC; "supply class 2" to cULus.                    |  |
| Current consumption [mA]          | < 280                                                         |  |
| Max. current load per module [mA] | 200                                                           |  |

### Inputs

|                                             |        |
|---------------------------------------------|--------|
| Digital                                     |        |
| Circuit                                     | DC PNP |
| Sensor supply                               | AS-i   |
| Max. current load for all inputs total [mA] | 200    |
| Input current [mA]                          | 8      |
| Short-circuit detection                     | yes    |
| Cross-bridging detection                    | no     |
| Short-circuit proof                         | yes    |

### Outputs

|                                   |                    |
|-----------------------------------|--------------------|
| Voltage range [V]                 | 24 DC (18...30 DC) |
| LED output                        | 2                  |
| LED output / supply via AS-i      | ja                 |
| External voltage supply           | AS-i               |
| Signal outputs                    | 2                  |
| Max. current load per output [mA] | 50                 |
| Electrically separated            | no                 |
| Integrated watchdog               | yes                |
| Short-circuit proof               | yes                |

### Environment



## AC509S

ClassicLine 2x2SI 2DOT 2LO

Bus system AS-Interface

|                     |      |                                             |
|---------------------|------|---------------------------------------------|
| Ambient temperature | [°C] | -25...55, -25...40 °C with switched outputs |
|---------------------|------|---------------------------------------------|

|            |  |       |
|------------|--|-------|
| Protection |  | IP 67 |
|------------|--|-------|

### Tests / approvals

|     |              |        |
|-----|--------------|--------|
| EMC | EN 62026-2   | / 2013 |
|     | EN 61326-3-1 | / 2008 |

### Safety classification

|                 |     |                    |
|-----------------|-----|--------------------|
| Mission time TM | [h] | 175200, (20 years) |
|-----------------|-----|--------------------|

|     |  |                   |
|-----|--|-------------------|
| PFH |  | 2.33 x 10E-11 / h |
|-----|--|-------------------|

### AS-i classification

|              |  |            |
|--------------|--|------------|
| AS-i version |  | 2.11 + 3.0 |
|--------------|--|------------|

|                                   |  |    |
|-----------------------------------|--|----|
| Extended addressing mode possible |  | no |
|-----------------------------------|--|----|

|                                          |  |    |
|------------------------------------------|--|----|
| Max. number of safety modules per master |  | 31 |
|------------------------------------------|--|----|

|              |  |         |
|--------------|--|---------|
| AS-i profile |  | S-7.B.E |
|--------------|--|---------|

|                         |  |   |
|-------------------------|--|---|
| I/O configuration [hex] |  | 7 |
|-------------------------|--|---|

|               |  |     |
|---------------|--|-----|
| ID code [Hex] |  | B.E |
|---------------|--|-----|

|                  |  |        |
|------------------|--|--------|
| AS-i certificate |  | 128301 |
|------------------|--|--------|

### Mechanical data

|                  |  |        |
|------------------|--|--------|
| Cable length [m] |  | < 10 m |
|------------------|--|--------|

|                   |  |                                                            |
|-------------------|--|------------------------------------------------------------|
| Housing materials |  | PA; Piercing contacts: CuSn6 surface nickel and tin-plated |
|-------------------|--|------------------------------------------------------------|

|        |      |      |
|--------|------|------|
| Weight | [kg] | 0.27 |
|--------|------|------|

### Displays / operating elements

|           |     |       |
|-----------|-----|-------|
| Operation | LED | green |
|-----------|-----|-------|

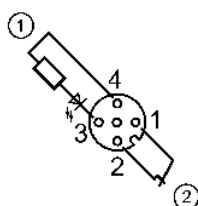
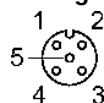
|       |     |     |
|-------|-----|-----|
| Error | LED | Red |
|-------|-----|-----|

|                  |     |        |
|------------------|-----|--------|
| Function display | LED | yellow |
|------------------|-----|--------|

### Electrical connection

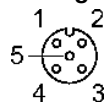
|                   |     |      |
|-------------------|-----|------|
| Max. cable length | [m] | < 10 |
|-------------------|-----|------|

#### Wiring



1 signalling  
2 safety contact (NC)

#### Wiring



|                 |                           |
|-----------------|---------------------------|
| Socket<br>SI-1  | Socket<br>SI-2            |
| Pin 1: I +      | Pin 1: I +                |
| Pin 2: IN 1     | Pin 2: IN 1               |
| Pin 3: I -      | Pin 3: I -                |
| Pin 4: IN 2     | Pin 4: IN 2               |
| Socket<br>O-3   | Socket O-4                |
| Pin 1: not used | Pin 1: not used           |
| Pin 2: not used | Pin 2: not used           |
| Pin 3: 0 V      | Pin 3: 0 V                |
|                 | Pin 4: Output O4<br>(pnP) |

## AC509S

ClassicLine 2x2SI 2DOT 2LO

**Bus system AS-Interface**

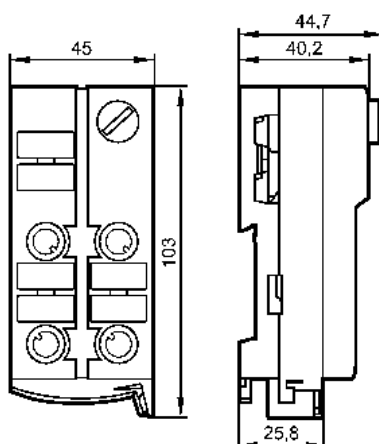
Pin 4: Output O3  
(pnp)

| Accessories            |                                                                                        |
|------------------------|----------------------------------------------------------------------------------------|
| Accessories (included) | lower part                                                                             |
| Accessories (optional) | Addressing cable E70213;<br>M12 protective cap (E73004)                                |
| Remarks                |                                                                                        |
| Remarks                | *) PL d, cat. 3, SILcl 2 only if the fault exclusions described in the manual are used |
| Pack quantity [piece]  | 1                                                                                      |

## AC509S

ClassicLine 2x2SI 2DOT 2LO

Système bus AS-interface



### Caractéristiques du produit

AS-i Safety at Work

Câble plat AS-i à embrocher directement

Prises M12 x 1

Conforme aux exigences:

EN ISO 13849-1: Catégorie 3 PL d

CEI 62061: SILcl 2

### Données électriques

|                                   |                                                                               |  |
|-----------------------------------|-------------------------------------------------------------------------------|--|
| Technologie                       | 2x2 entrées de sécurité / 2 sorties LED non sécurité / 2 sorties non sécurité |  |
| Tension d'alimentation [V]        | 26,5...31,6 DC; "supply class 2" selon cULus                                  |  |
| Consommation [mA]                 | < 280                                                                         |  |
| Courant de sortie par module [mA] | 200                                                                           |  |

### Entrées

TOR

|                                                      |        |
|------------------------------------------------------|--------|
| Technologie                                          | DC PNP |
| Alimentation des capteurs                            | AS-i   |
| Courant de sortie total pour toutes les entrées [mA] | 200    |
| Courant d'entrée [mA]                                | 8      |
| Détection de courts-circuits                         | oui    |
| Détection de ponts de croix                          | non    |
| Résistant aux courts-circuits                        | oui    |

### Sorties

|                                    |                    |
|------------------------------------|--------------------|
| Plage de tension [V]               | 24 DC (18...30 DC) |
| Sortie LED                         | 2                  |
| Sortie LED / alimentation via AS-i | ja                 |
| Alimentation externe en tension    | AS-i               |
| Sorties signaux                    | 2                  |
| Courant max. par sortie [mA]       | 50                 |
| Séparation galvanique              | non                |
| Chien de garde intégré             | oui                |
| Résistant aux courts-circuits      | oui                |

### Conditions d'utilisation

## AC509S

ClassicLine 2x2SI 2DOT 2LO

Système bus AS-interface

|                      |      |                                              |
|----------------------|------|----------------------------------------------|
| Température ambiante | [°C] | -25...55, -25...40 °C avec sorties commutées |
| Protection           |      | IP 67                                        |

### Tests / Homologations

|     |              |        |
|-----|--------------|--------|
| CEM | EN 62026-2   | / 2013 |
|     | EN 61326-3-1 | / 2008 |

### Classification de sécurité

|                                       |     |                   |
|---------------------------------------|-----|-------------------|
| Durée d'utilisation TM (Mission Time) | [h] | 175200, (20 ans)  |
| PFH                                   |     | 2,33 x 10E-11 / h |

### Classification AS-i

|                                               |            |
|-----------------------------------------------|------------|
| Version AS-i                                  | 2.11 + 3.0 |
| Mode d'adressage étendu possible              | non        |
| Nombre maxi de modules de sécurité par maître | 31         |
| Profil AS-i                                   | S-7.B.E    |
| Configuration E/S [hexa]                      | 7          |
| Code ID [hexa]                                | B.E        |
| Certificat AS-i                               | 128301     |

### Données mécaniques

|                       |                                                         |
|-----------------------|---------------------------------------------------------|
| Longueur de câble [m] | < 10 m                                                  |
| Matières boîtier      | PA; Contacts vampires: Surface nickelée et étamée CuSn6 |
| Poids                 | [kg] 0,27                                               |

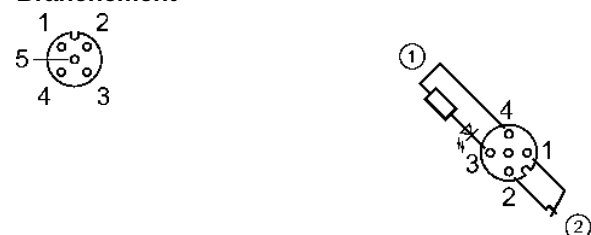
### Afficheurs / éléments de service

|                        |     |       |
|------------------------|-----|-------|
| Disponibilité          | LED | vert  |
| Erreur                 | LED | rouge |
| Indication de fonction | LED | jaune |

### Raccordement électrique

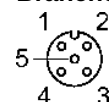
|                        |     |      |
|------------------------|-----|------|
| Longueur de câble maxi | [m] | < 10 |
|------------------------|-----|------|

#### Branchement



1 signalisation  
2 contact de sécurité (NF)

#### Branchement



|                         |                         |
|-------------------------|-------------------------|
| Connecteur femelle SI-1 | Connecteur femelle SI-2 |
| broche 1: I +           | broche 1: I +           |
| broche 2: IN 1          | broche 2: IN 1          |
| broche 3: I -           | broche 3: I -           |
| broche 4: IN 2          | broche 4: IN 2          |
| Connecteur femelle O-3  | Connecteur femelle O-4  |
| broche 1: non utilisé   | broche 1: non utilisé   |
| broche 2: non utilisé   | broche 2: non utilisé   |
| broche 3: 0 V           | broche 3: 0 V           |





**AC509S**

ClassicLine 2x2SI 2DOT 2LO

**Système bus AS-interface**

broche 4: Sortie O3 (pnp)    broche 4: Sortie O4  
(pnP)

**Accessoires**

|                       |                                                    |
|-----------------------|----------------------------------------------------|
| Accessoires (fournis) | embase                                             |
| Accessoires (option)  | cordon d'adressage E70213;<br>bouchon M12 (E73004) |

**Remarques**

|                  |                                                                                                         |
|------------------|---------------------------------------------------------------------------------------------------------|
| Remarques        | *) PL d, cat. 3, SILcl 2 uniquement si les exclusions de défaut décrites dans le manuel sont appliquées |
| Quantité [pièce] | 1                                                                                                       |