

AS-Interface module F90, digital 4 DI/4 DQ, IP20 4 x inputs for 3-wire sensor External sensor supply 4 x output, 2 A, 24 V DC maximal 6 A for all outputs Connection via screw terminals Width 90 mm



Figure similar

| General technical data                                    |    |                                                                                                                                                                                                                                        |
|-----------------------------------------------------------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Design of the product                                     |    | F90 module - I/O modules for operation in the control cabinet, IP20                                                                                                                                                                    |
| Type                                                      |    | 4 inputs / 4 outputs                                                                                                                                                                                                                   |
| Design of the slave type                                  |    | standard slave                                                                                                                                                                                                                         |
| I/O configuration                                         |    | 7                                                                                                                                                                                                                                      |
| ID/ID2 code                                               |    | 0/F                                                                                                                                                                                                                                    |
| Type of electrical connection of the inputs and outputs   |    | screw-type terminals                                                                                                                                                                                                                   |
| AS interface total current input max                      | mA | 30                                                                                                                                                                                                                                     |
| operating voltage according to AS-Interface spezification | V  | 26.5 ... 31.6                                                                                                                                                                                                                          |
| Addressing                                                |    | possible using integrated addressing socket                                                                                                                                                                                            |
| Watchdog                                                  |    | built-in                                                                                                                                                                                                                               |
| Note 1                                                    |    | The module has four floating inputs and four floating switching outputs. An external additional supply of 20 to 30 V DC according to VDE 0106 (PELV) protection class III is required for the supply of the input and output circuits. |

|               |  |                                                                                                                                                                                             |
|---------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Note 2</b> |  | An external additional supply (AUX POWER) of 20 to 30 V DC is required for the supply of the output circuits. The additional supply must comply with VDE 0106 (PELV), protection class III. |
|---------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| Sensor supply                                                             |    |               |
|---------------------------------------------------------------------------|----|---------------|
| Type of voltage supply for power supply                                   |    | via AUX POWER |
| Property of the sensor supply Short-circuit and overload resistant        |    | Yes           |
| Ampacity of the sensor supply for all inputs at ambient temperature 40 °C | mA | 200           |

| Inputs                                |    |                                             |
|---------------------------------------|----|---------------------------------------------|
| Number of digital inputs              |    | 4                                           |
| Type of connection                    |    | 2- and 3-conductor PNP transistor, floating |
| Input circuit                         |    | PNP transistor                              |
| Type of voltage of the input voltages |    | DC                                          |
| Input current at digital input        |    |                                             |
| • for signal <1> minimum              | mA | 5                                           |
| • with signal <0> maximum             | mA | 1.5                                         |
| Inputs                                |    |                                             |
| • switching level High min            | V  | 10                                          |
| • sensor supply using AS-Interface    |    | short-circuit and overload resistant        |
| • connection sensors                  |    | 2- and 3-conductor technology               |

| Outputs                                                     |   |                            |
|-------------------------------------------------------------|---|----------------------------|
| Number of digital outputs                                   |   | 4                          |
| Type of voltage of output voltages                          |   | DC                         |
| Outputs external power supply 24 V DC                       |   | using screw-type terminals |
| Output current at digital output for signal <1> Rated value | A | 2                          |
| Type of switching output                                    |   | solid state                |
| Outputs total current of all outputs                        | A | 6                          |
| Property of the output Short-circuit proof                  |   | Yes                        |
| Outputs                                                     |   |                            |
| • short-circuit protection                                  |   | built-in                   |
| • induction protection                                      |   | built-in                   |
| Status display                                              |   |                            |
| • display of I/Os                                           |   | yellow LEDs                |
| • display of AS-Interface/diagnostics                       |   | green/red dual LED         |
| Assignment of data bits                                     |   |                            |
| • D0                                                        |   | IN1/OUT1                   |
| • D1                                                        |   | IN2/OUT2                   |
| • D2                                                        |   | IN3/OUT3                   |
| • D3                                                        |   | IN4/OUT4                   |

## Ambient conditions

|                            |    |             |
|----------------------------|----|-------------|
| <b>Ambient temperature</b> |    |             |
| • during operation         | °C | -25 ... +70 |
| • during storage           | °C | -40 ... +85 |
| <b>Protection class IP</b> |    | IP20        |

## Mechanical data

|                      |    |                              |
|----------------------|----|------------------------------|
| <b>Width</b>         | mm | 90                           |
| <b>Height</b>        | mm | 75                           |
| <b>Depth</b>         | mm | 37                           |
| <b>Mounting type</b> |    | 35 mm standard rail mounting |

## Certificates/ approvals

| General Product Approval                                                          |                                                                                   | Declaration of Conformity                                                         | Shipping Approval                                                                   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |    |
| CSA                                                                               | UL                                                                                | EG-Konf.                                                                          |                                                                                     |
|                                                                                   |                                                                                   |                                                                                   |  |
|                                                                                   |                                                                                   |                                                                                   | ABS                                                                                 |

[Miscellaneous](#)

## Shipping Approval

## other

|                                                                                    |                                                                                     |                                                                                    |                                                                                    |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |  |  |
| BUREAU VERITAS                                                                     | LRS                                                                                 | PRS                                                                                | RINA                                                                               |

[Confirmation](#)

[Miscellaneous](#)

## Further information

**Information- and Downloadcenter (Catalogs, Brochures,...)**

<https://www.siemens.com/ic10>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RG9002-0DC00>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RG9002-0DC00>

**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RG9002-0DC00>

**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RG9002-0DC00&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RG9002-0DC00&lang=en)

last modified:

03/06/2020