SIEMENS

## Data sheet 3RK2400-1BQ20-1AA3


AS-i compact module K45 digital A/B slave, 2 DI/2 DQ, IP67 2 x input, max. 200 mA 2 x output, 2 A 24 V DC max. 3 A for all outputs Special version without watchdog 4 x M12 socket Mounting plate 3RK1901-2EA00 or 3RK1901-2DA00 is to be ordered separately

| General technical data | |
|---|---|
| **Design of the product** | digital I/O modules for operation in the field, IP67 - K45 |
| **Type** | 2 outputs / 2 inputs |
| **Design of the slave type** | A/B slave |
| **I/O configuration** | B |
| **ID/ID2 code** | A/0 |
| **Number I/O sockets** | 4 |
| **Type of electrical connection of the inputs and outputs** | M12 screw-type terminals |
| **AS interface total current input max** | 270 mA |
| **operating voltage according to AS-Interface spezification** | 26.5 ... 31.6 V |
| **Ground terminal** | Using PIN5 on the M12 sockets. Outgoing via flat tab sleeve (2.8 x 0.8 mm form A) |
| **Addressing** | front addressing socket |
| **AS interface Connection Polarity reversal protection** | built-in |
| **Delivery note** | the modules are delivered without mounting plate |
| **Note 1** | 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** | using AS-Interface |
| **Input voltage** | 16.5 ... 30 V |
| **Property of the sensor supply Short-circuit and overload resistant** | Yes |
| **Ampacity of the sensor supply for all inputs** | |
| • at ambient temperature 40 °C | 200 mA |

| Inputs | |
|---|---|
| **Number of digital inputs** | 2 |
| **Type of connection** | 2- and 3-wire technology |
| **Input circuit** | PNP transistor |
| **Type of voltage of the input voltages** | DC |
| **Inputs switching level High min** | 10 V |
| **Input current at digital input** | |
| • for signal <1> minimum | 6 mA |
| • with signal <0> maximum | 1.5 mA |
| **Inputs sensor supply using AS-Interface** | short-circuit and overload resistant |
| **Inputs socket assignment** | |
| • PIN 1 | sensor supply L+ |
| • PIN 2 | data input |
| • PIN 3 | sensor supply L- |
| • PIN 4 | data input |
| • PIN 5 | ground terminal |
| **Design of the pin assignment of the inputs** | standard assignement |

| Outputs | |
|---|---|
| **Number of digital outputs** | 2 |
| **Type of voltage of output voltages** | DC |
| **Outputs external power supply 24 V DC** | using black AS-Interface flat cable |
| **Ampacity of the semiconductor output at DC-13 at 24 V** | 1.5 A |
| **Outputs aggregate current** | |
| • max | 3 A |
| **Type of switching output** | PNP transistor |
| **Design of the pin assignment of the outputs** | standard assignement |
| **Outputs socket assignment** | 3 = "-", 4 = output, 5 = ground terminal |
| **Property of the output Short-circuit proof** | Yes |
| **Outputs** | |
| • short-ciruit protection | built-in |
| • induction protection | built-in |
| • watchdog | without |

| Display | |
|---|---|
| **Status display** | |

| | |
|---|---|
| • display of I/Os | yellow LED |
| • display of Uaux | green LED |
| • display of AS-Interface/diagnostics | green/red dual LED |

## Assignment of the data bits

| | |
|---|---|
| **Assignment of data bits** | |
| • socket | PIN 4/2 = IN3 (D2) |
| • socket 2 | PIN 4/2 = IN4 (D3) |
| • socket 3 | PIN 4 = OUT1 (D0) |
| • socket 4 | PIN 4 = OUT2 (D1) |

## Ambient conditions

| | |
|---|---|
| **Ambient temperature** | |
| • during operation | -25 ... +85 °C |
| • during storage | -40 ... +85 °C |
| **Protection class IP** | IP67 |

## Mechanical data

| | |
|---|---|
| **Width** | 45 mm |
| **Height** | 80 mm |
| **Depth** | 30 mm |
| **Mounting type** | standard rail mounting/wall mounting using mounting plate for K45 compact module |

## Certificates/approvals

**General Product Approval** | **EMC** | **Declaration of Conformity**

CSA UL RCM EG-Konf.

Miscellaneous

**Shipping Approval** | **other**

ABS LRS PRS RMRS ASi

Confirmation

**other**

Miscellaneous

## Further information

**Information- and Downloadcenter (Catalogs, Brochures,…)**
http://www.siemens.com/industrial-controls/catalogs

**Industry Mall (Online ordering system)**
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RK2400-1BQ20-1AA3

**Cax online generator**
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RK2400-1BQ20-1AA3

**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/3RK2400-1BQ20-1AA3

**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RK2400-1BQ20-1AA3&lang=en

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