

## Kuhnke FIO

### Kuhnke FIO digital input and output modules

The Kuhnke FIO digital EtherCAT I/O modules acquire and switch binary 24 V DC signals. The product family includes pure input modules, pure output modules, combined input/output modules and variants for the 2-wire connection. Depending on the version, 8, 16 or 32 digital inputs and 8 or 16 digital outputs are available. The input modules differ in the number of input channels and the input delay. The output modules are optionally designed with transistor outputs for 24 V DC loads or with relay outputs for DC and AC loads. The combined modules combine digital inputs and outputs in one device, thereby reducing the number of modules required. For applications with compact field wiring, 2-wire variants with 16 digital inputs or 16 digital outputs are available.



| Technical Data                  |                                                                    |               |                             |        |                                      |                                   |               |               |               |
|---------------------------------|--------------------------------------------------------------------|---------------|-----------------------------|--------|--------------------------------------|-----------------------------------|---------------|---------------|---------------|
| Type / order no.                | Input module<br>694 451...                                         |               | Output module<br>694 452... |        |                                      | In- / Output module<br>694 450... |               |               |               |
| Order number                    | ... 03                                                             | ... 04        | ... 01                      | ... 02 | ... 05                               | ... 03                            | ... 13        | ... 02        | ... 05        |
| Number of digital inputs        | 16                                                                 | 32            | 0                           | 0      | 0                                    | 16                                | 16 LS         | 16            | 8             |
| Characteristics of inputs       | 24 V,<br>1ms                                                       | 24 V,<br>1 ms | -                           | -      | -                                    | 24 V,<br>1 ms                     | 24 V,<br>1 ms | 24 V,<br>1 ms | 24 V,<br>1 ms |
| Number of digital outputs       | 0                                                                  | 0             | 16                          | 8      | 8                                    | 16                                | 16 LS         | 8             | 8             |
| Characteristics of outputs      | -                                                                  | -             | 24 V 0,5 A                  | 24V 1A | Relais NO<br>230V AC 2A<br>24V DC 2A | 24 V<br>0,5 A                     | 0 V<br>0,5 A  | 24 V<br>1 A   | 24 V<br>0,5 A |
| Fieldbus                        | EtherCAT® 100 Mbit/s LVDS: E-Bus                                   |               |                             |        |                                      |                                   |               |               |               |
| Mounting                        | 35 mm DIN-Rail                                                     |               |                             |        |                                      |                                   |               |               |               |
| Indication                      | LED, assigned to the clamping point locally                        |               |                             |        |                                      |                                   |               |               |               |
| Vibration- and shock-resistance | Acc. EN 60068-2-6/ EN 60068-2-27                                   |               |                             |        |                                      |                                   |               |               |               |
| Transient emissions             | Acc. EN 61000-6-2/ EN 61000-6-4                                    |               |                             |        |                                      |                                   |               |               |               |
| Protection class                | IP 20                                                              |               |                             |        |                                      |                                   |               |               |               |
| Shield connection               | Directly at module                                                 |               |                             |        |                                      |                                   |               |               |               |
| I/O connection                  | Spring- loaded plug with mechanical ejection                       |               |                             |        |                                      |                                   |               |               |               |
| Ambience conditions             | 0 °C...+55 °C, IP 20, Interference immunity Zone B acc. EN 61131-2 |               |                             |        |                                      |                                   |               |               |               |
| Housing (W x H x D)             | Aluminium, plastic, 25 x 120 x 90 mm                               |               |                             |        |                                      |                                   |               |               |               |
| Certifications                  | CE, cULus                                                          |               |                             |        |                                      |                                   |               |               |               |
| Order number                    | EtherCAT® 100 Mbit/s LVDS: E-Bus                                   |               |                             |        |                                      |                                   |               |               |               |



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