

## Kuhnke FIO Controller

## Control Technology

Kuhnke FIO Controller 111

### Modular CODESYS PLC with integrated I/Os

The Kuhnke FIO Controller 111 is a low-cost PLC on ARM basis. It is programmed with CODESYS V3 and matches the FIO I/O modules, which can be attached directly to form a mechanically and electrically homogenous unit. Data with other systems can be exchanged via industrial Ethernet, CAN and RS485. It can be easily integrated by the number of interfaces (Industrial Ethernet, CAN), supported fieldbuses and attachable communication modules into existing control concepts. A built-in  $\mu$ SD-card slot allows local storage of process data and the exchange of application programs. By means of the integrated configurable IOs including fast counters, analogue I/Os, pulse-train-outputs (PTO) and encoder inputs a large number of additional functions, e.g. control of 2 single axis, can be realized in a cost optimized way.



#### Features

- Flexible with several communication interfaces
- Extendable with Kuhnke FIO modules
- Cost optimized with integrated IOs
- CODESYS V3 with EtherCAT®

| Technical Data            | Kuhnke FIO Controller 111  |
|---------------------------|--|
| Processor                 | 32-bit Arm® Cortex®  |
| RAM / Remanenter Speicher | 32 MB / 8 kB NVRAM   |
| Speicher                  | 16 MB Flash, $\mu$ SD-Card up to 32 GB   |
| Software                  | RTOS / CODESYS V3 Soft SPS   |
| Interfaces                | 1 x RS485 or CAN (configurable; not galvanically isolated)   |
| Network                   | 1 x Ethernet 10/100 Mbit – RJ45  |
| Fieldbus interfaces       | 1 x CANopen® or Modbus RTU Master (via RS485)<br>Modbus TCP Master (via Ethernet)<br>EtherCAT® internal via E-Bus-Interface, external via Extender-Modul   |
| Integrated I/Os           | 9 x DI                    24 V (8 x adjustable filter times, 1 x interrupt-capable)<br>8 x DO                    4 x 24 V 0,5 A (HighSide) / 4 x 24 V 0,2 A (PushPull)<br>2 x AI                    0...10 V, 0/4 ...20 mA, 12 Bit<br>2 x AO                    0...10 V, 0/4 ...20 mA, 12 Bit<br>special functions (reduce the no. of available digital IOs):<br>2 x AI                    0...10 V, 12 Bit<br>4 x event counter (200kHz), 2 x Encoder A-B-Z (100 kHz),<br>2 x frequency generator or 4x PTO or 4 x PWM (100 kHz) |
| Housing (W x H x D)       | Aluminum, plastic housing 25 x 120 x 90 mm   |
| Mounting                  | 35 mm DIN Rail   |
| Power supply              | 24 V DC / (19.2 ... 28.8)  |
| Power consumption         | approx. 3.5 W (@ 24 V DC)  |
| Operating temperature     | 0 °C ...+55 °C   |
| Certifications            | CE (Industry), cULus   |

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