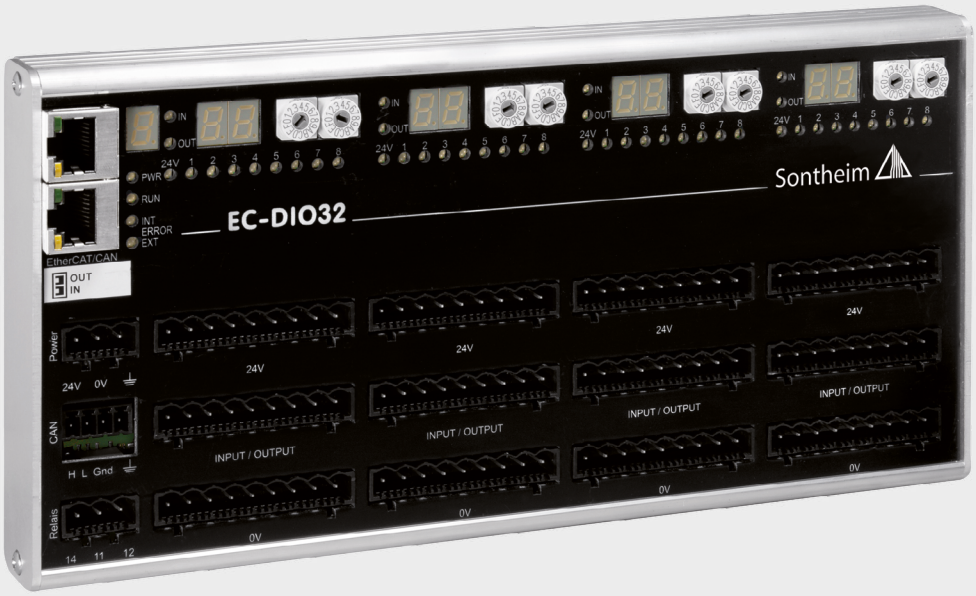
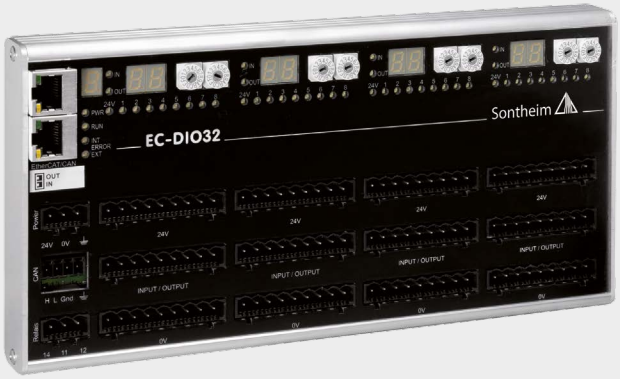
Sontheim

EC-DIO32

Small, compact, powerful



We live electronics!



EC-DIO32

Digital 24 V module with 32 freely configurable in- and outputs and an EtherCAT and CAN interface.

Key Features

- **Signal delay with less than 400 µs**
- **Safety features for high running safety**
- **Easy access to all interfaces**
- **Own intelligence for complex EtherCAT networks**
- **Galv. isolated in- and outputs**
- **Free configuration of in- and outputs**
- **Analog and digital diagnostic functions**
- **Compact aluminium housing with IP20 and integrated top hat rail mounting**

Flexibility

The key to slim fieldbus networks as well as to efficient process automation is flexibility. The user has to be able to meet changing process requirements with existing products. The EC-DIO32 has been designed for these particular cases, where either the fieldbus system, the number or the kind of actors and sensors changes.

Freely configurable inputs and outputs

EC-DIO32 is a digital 24 V remote IO module, housing a 16-bit Motorola Freescale microprocessor and 32 freely configurable inputs and outputs. It is separated into four blocks of 8 interfaces each that can be configured and addressed via HEX-switches. Every block is galvanically isolated and has an own power supply. This enables the module to handle different voltages and allows the use in safety-relevant applications, e. g. guard doors.

Displays, switches and LEDs for a maximum of usability

LEDs and two 7-segment displays for each block show the status of the module channels. The network can therefore be created and monitored very easily.

Technical Data

Hardware	
CPU	16-bit microcontroller
Connection technology	Two-wire, three-wire connection
Operating system display	1× LED green for supply voltage (5 V) 1× LED green for operating mode (run) 1× LED red for error status (err) 32× LED green for set input/output
Dimensions (l×w×h)	241 mm × 120 mm × 48 mm
Weight	850 g
Protection class	IP20, EMC-requirements acc. to CE
Storage temperature	–30 °C up to +70 °C
Operating temperature	0 °C up to +60 °C
Humidity	90 % non-condensing
Power supply	24 V DC ±20 %
Total current (all in- and outputs active, including LEDs)	500 mA

Digital inputs	
Number of inputs	Freely configurable in 8-blocks (max. 32)
Switching level "1"	+15.0 V up to +28.8 V
Switching level "0"	0.0 V up to +8.0 V
Potential isolation	Optocoupler
Input current/input	11 mA
Sampling frequency (Fg)	2.5 kHz
Signal delay	< 400 µs

Digital outputs	
Number of ouputs	Freely configurable in 8-blocks (max. 32)
Power	24 V DC ±20 %
Curcuit type	FET-Highside switch
Potential isolation	Optocoupler
Output current/output	1 A (short circuit proof)
Freewheel diodes	Yes, controlled inductors require external freewheel diodes
Signal delay	< 100 µs
Relay contact (when module active)	1× UM / 1 A
Switching level "1"	+15.0 V to +28.8 V DC

Rugged interfaces

3-point connection technology facilitates the direct connection of all sensors and actors with the module. The EC-DIO32 contains Phoenix clamps for easy and rugged conctact, making it robust and process proof in multiple applications.

EtherCAT and CAN interfaces

Many automation processes need a decentralized deployment of communication modules. That is why the EC-DIO32 has a 3-pole CAN interface and two RJ45 plugs for connecting different modules via Ethernet patch cable. In addition to that there is an automatic detection of CAN and EtherCAT network technology.

Diagnostic features via revertive monitoring

The device offers various possibilities for revertively monitoring power levels and switching habits. These features facilitate the detection of defect outputs. By monitoring the levels of input signals the module can also verify input faults. All the data is made available while running the EC-DIO32. It is also possible to implement a current measurement at the inputs and outputs for controlling absorption and delivery.

Pin assignment

RJ 45 Ethernet

1	LAN/EtherCAT_TX+
2	LAN/EtherCAT_TX–
3	LAN/EtherCAT_RX+
4	CAN L (low) (optional)
5	CAN H (high) (optional)
6	LAN/EtherCAT_RX–
7	CAN GND (ground) (optional)
8	–

RJ 45

4	CAN L (low)
5	CAN H (high)
7	CAN GND

HEX-Switches module adress

Minimum 01 HEX	1
Maximum 7F HEX	127

HEX-Switch baud rate (in Kbit/s)

0	10
1	25
2	50
3	125
4	250
5	500
6	800
7	1000

Order information

V966210000	EC-DIO32

Mobile Automation

Industrial Automation

Diagnostics

Connectivity

We are looking forward to your enquiry!

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