

DIC122

Digital Input Card with Galvanic Isolation



Features

- 32x digital/frequency input channels
- Single-wire or two-wire connection of signals
- Frequency measurement via any channel
- Generation of the event hardware interrupts at inputs
- System bus: 8 bit ISA bus
- Delay of input signals: 25 μ s
- Frequency measurement via any channel
- Isolated voltage source of: +12 V for potential-free contacts (isolation 1000 V)
- Optical isolation of inputs between channels: 500V
- Optical isolation of inputs between a channel and the "ground": 1000 V
- Programmed time interval for de-bouncing for inputs
- Software compatibility with DIC112
- Programming of interrupts
- Operating temperature range: -40...+85°C

Overview

The card is implemented in MicroPC standard, is equipped with 32-x channels and is designed for reading the states of digital signals or measuring frequency signals with voltage levels from 3.2 to 52 V.

The device uses the field-programmable gate array (FPGA), which makes it possible to change processing algorithm of inputs (or diagram) without changing the topology.

Channels can use a single-wire/two-wire connection (with common ground).

It is possible to connect signals of potential-free contact type using an internal isolated (12 V) or external (up to 52 V) power supply source. The card is hardware- and software-compatible with DIC112 digital I/O modules.

Technical Specifications

System Bus

- 8 bit ISA bus

Digital Input

- 32 digital/frequency input channels
- Single-wire or two-wire connection of signals
- Input voltages: ± 3.2 V ... ± 52 V

LED indicator

- LED indication of requests (addressing)

General features

- Delay of input signals: 25 μ s
- Measuring frequencies via any channel
- Isolated power supply source of +12 V for potential-free contacts (isolation: 1000 V)
- Optical isolation of inputs between channels: 500 V
- Optical isolation of inputs between a channel and the "ground": 1000 V
- Generation of event hardware interrupts at inputs
- Programmed time interval for de-bouncing for inputs

Additional features

- Five separable lines of IRQx hardware interrupts (where x = 3, 4, 5, 6, 7)

Main control possibilities

- Software compatibility with DIC112
- Programming of interrupts
- Programming of card's input range

Resistance to mechanical impacts

- Vibration resistance, acceleration amplitude: no more than 5g
- Resistance to single shocks, peak acceleration: no more than 100g
- Resistance to multiple shocks, peak acceleration: no more than 50g

MTBF

- DIC122-01 no less than 960000 hours
- DIC122-02 no less than 640000 hours

Weight

- No more than 0,08 kg

Dimensions

- No more than 125,0x115,0x13,5 mm

Operating temperature range

- -40...+85°C

Humidity

- Up to 80%, without condensation

Power supply

- Via MicroPC bus connector
- Maximum value of card's current consumption (exclusive of channel currents) 100 mA

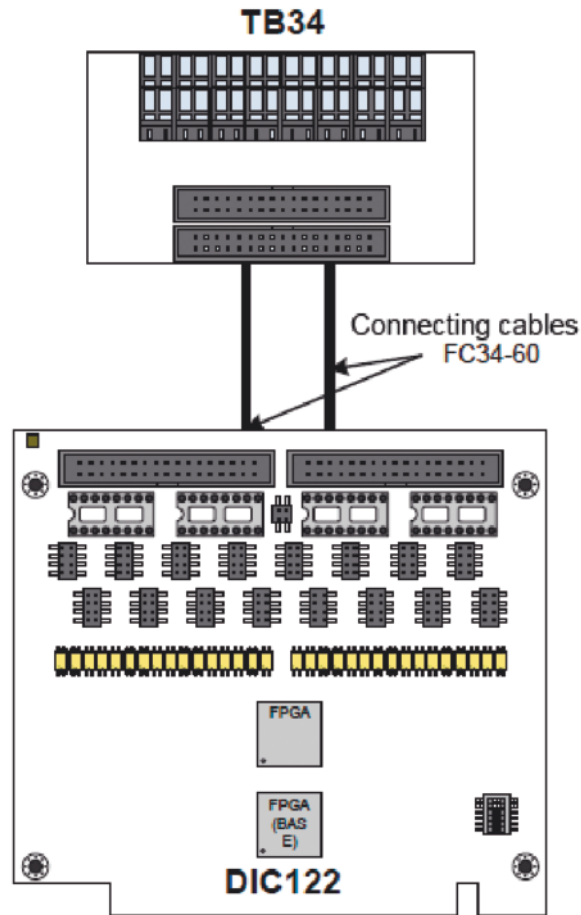
Software compatibility

- FDOS
- FreeDOS

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Board Layout



Fastwel



Fastwel



Fastwel

DIC122

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Ordering Information

DIC122 Configuration

DIC122 - 01 \ Coated

Configurations

01	Digital Input Card without support of potential-free contact
02	Digital Input Card with support of potential-free contact (the card differs from DIC122-01 by availability of the internal power supply source +12 V)
\Coated	Option of the card with conformal coating

Delivery checklist

1. DIC122 Digital Input Card
2. Installation kit (resistive assemblies: 470 kOhm – 4 pcs., 4,7 kOhm – 4 pcs., 10 kOhm – 4 pcs.)
3. Packaging

Additional accessories

ACS00003 (FC34-60) – flat ribbon cable, 34 threads, IDC, 0,6 m connectors
TIB96601 (TB34) – terminal board, 34 contacts

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