ABB Service Manual

07DI92

1. Description

ABB Digital Input Module 07 DI 92

2. Specifications

Specification	Value
In	general, the technical system data listed under "System data and system configuration" in chapter 1 of volume 2 of
the	Advant Controller 31 system description are valid. Additional data or data which are different from the system data
are	listed as follows.
Permissible	temperature range during operation 0...55 °C
Rated	supply voltage 24 V DC
Nominal	signal voltage at inputs 24 V DC
Max.	current consumption 0.15 A
Max.	nominal load capacity for supply terminals 4.0 A
Max.	power dissipation inside the unit 10 W
Protection	against incorrect polarity of supply voltage yes
Conductor	cross section
for	removable connectors
power	supply max. 2.5 mm2
CS31	system bus max. 2.5 mm2
signal	terminals max. 1.5 mm2
reference	potentials ZP0, ZP1, ZP2, ZP3 max. 1.5 mm2
Number	of inputs 32
Electrical	isolation CS31 system bus from the rest of the unit
inputs	group from group, all groups from the rest of the unit
Reference	potential for inputs each group has a separate reference potential
see	Fig. 4.1-

3. Product Information

ABB Digital Input Module 07 DI 92

32 digital inputs 24 V DC, electrically isolated in groups,

CS31 system bus

Intended purpose

The digital input module 07 DI 92 is used as a remote

module on the CS31 system bus. It contains 32 inputs,

24 V DC, in 4 groups with the following features:

• The 4 groups of the inputs are electrically isolated

from each other and from the rest of the unit.

The module occupies two digital addresses for

inputs on the CS31 system bus.

The unit works with a supply voltage of 24 V DC.

The system bus connection is electrically isolated from

the rest of the unit.

Display and operating elements on the

front panel

1 32 green LEDs to indicate the signal status of the

inputs

3 Red LED for error messages

4 Test button

Electrical connection

The module can be mounted on a DIN rail (15 mm high) or

with 4 screws. The following illustration shows the electrical connection of the input module.

Technical data 07 DI 92

In general, the technical system data listed under "System data and system configuration" in chapter 1 of volume 2 of

the Advant Controller 31 system description are valid. Additional data or data which are different from the system data

are listed as follows.

Technical data for the complete unit

Permissible temperature range during operation 0...55 °C

Rated supply voltage 24 V DC

Nominal signal voltage at inputs 24 V DC

Max. current consumption 0.15 A

Max. nominal load capacity for supply terminals 4.0 A

Max. power dissipation inside the unit 10 W

Protection against incorrect polarity of supply voltage yes

Conductor cross section

for removable connectors

power supply max. 2.5 mm2

CS31 system bus max. 2.5 mm2

signal terminals max. 1.5 mm2

reference potentials ZP0, ZP1, ZP2, ZP3 max. 1.5 mm2

Number of inputs 32

Electrical isolation CS31 system bus from the rest of the unit

inputs group from group, all groups from the rest of the unit

Reference potential for inputs each group has a separate reference potential

see Fig. 4.1-2

Number of interfaces 1 CS31 system bus interface

Address setting Coding switch under the cover located on the right side

of the housing

Operation and error displays a total of 33 LEDs

Technical data for the digital inputs

Number of channels per module 32

Division of channels into groups 4 groups with 8 channels each,

channels En,00...En,07 and En,08...En,15

channels En+1,00...En+1,07 and En+1,08...En+1,15

Reference potentials for the inputs ZP0, ZP1, ZP2 and ZP3

Electrical isolation group from group,

all groups from the rest of the unit

Input signal delay typ. 7 ms

Signalization of the input signals one green LED per channel,

LEDs activated according to the input signal

Input signal voltage 24 V DC

0 signal - 30 V...+ 5 V

1 signal + 13 V...+ 30 V

residual ripple for 0 signal within - 30 V...+ 5 V

for 1 signal within + 13 V...+ 30 V

Input current per channel

input voltage = + 24 V typ. 7.0 mA

input voltage = + 5 V > 0.2 mA

input voltage = + 13 V > 2.0 mA

input voltage = + 30 V < 9.0 mA

Conductor cross section

for the removable terminal blocks max. 1.5 mm2 (distance between terminals 3.81 mm)

Connection to the CS31 system bus

Interface standard EIA RS-485

Electrical isolation against supply voltage, inputs and outputs

Conductor cross section

for the removable terminal blocks max. 2.5 mm2

(grid space 5.08 mm)

Mechanical data

Mounting and DIN rail according to DIN EN 50022–35, 15 mm deep.

The DIN rail is centrally positioned between upper

and lower edge of the module.

Mounting with screws 4 screws M4

Width x height x depth 120 x 140 x 85 mm

Connection method removable connectors with screw-type terminals

cross section max. 2.5 mm2

(grid space 5.08 mm)

max. 1.5 mm2

(grid space 3.81 mm)

Weight 450 g

Dimensions for installation see illustration on next page

Installation instructions

Mounting position vertical, connectors must point upward and downward

Cooling The natural convection cooling must not be obstructed

by cable ducts or other components in the cabinet

Ordering data

Module 07 DI 92 Order No. GJR5 2524 00 R0101

Scope of delivery Digital input module 07 DI 92

1 5-pin connector (grid space 5.08 mm)

1 3-pin connector (grid space 5.08 mm)

4 10-pin connectors (grid space 3.81 mm)