

Item No. 18 371

P9 DI/DIF, P10 DI/DIF



Overview

The P9 DI/DIF and P10 DI/DIF modules have 32 digital inputs. In the case of the P9 DIF and P10 DIF modules, inputs X.00 ... X.07 can be configured as interrupt alarm inputs. The input signals must have a "high" level of

24 V AC (+13 ... +30 V AC) and a "low" level of 0 V AC (-3 ... +5 V AC).

The inputs are fitted with a filter and are galvanically isolated by means of optocouplers.

The code of the P9 DI and P10 DI modules in data block DB004 is 0020.

The code of the P9 DIF and P10 DIF modules in data block DB004 is 00A0.

The P9 DI and P9 DIF modules are intended for use in the module racks

- from the P9 series
- and the PSS 3100 series.

The P10 DI and P10 DIF module are intended for use in module racks

- from the P10 series
- and the PSS 3000 series.



NOTICE

The standard P9 DI, DIF and P10 DI, DIF modules are **not** approved for safety-related applications.

Functional description

The status of the inputs is sent to the CPU via the parallel bus as a "0" signal ("low" level) or "1" signal ("high" level). LEDs indicate the status of the inputs. An LED lights up as soon as a "1" signal is supplied present at the input.

A diagnostic circuit checks whether the inputs are functioning correctly. The central processing unit periodically sends "0" and "1" signals to the digital inputs and checks whether these signals are returned.

If a fault occurs, a message appears on the display of the CPU module.



INFORMATION

The interrupt alarm inputs of the P9 DIF and P10 DIF modules are **not** effective if the modules are used in the PSS.

The following applies if the modules are used in P9/P10 module racks:

The P9 DIF and P10 DIF modules interrupt the PLC program cycle sequence of the PLC when an interrupt alarm signal ("high" level) is present. As soon as an interrupt alarm signal (signal change) is present at one of the interrupt inputs, the signal is sent to the CPU via a hardware line. The CPU then determines from which module the interrupt alarm was triggered and calls up the associated interrupt alarm OB. The user can program the required measures in this interrupt alarm OB.

Commissioning



CAUTION!

The module is equipped with highly sensitive components.

Electrostatic discharge can damage the components.

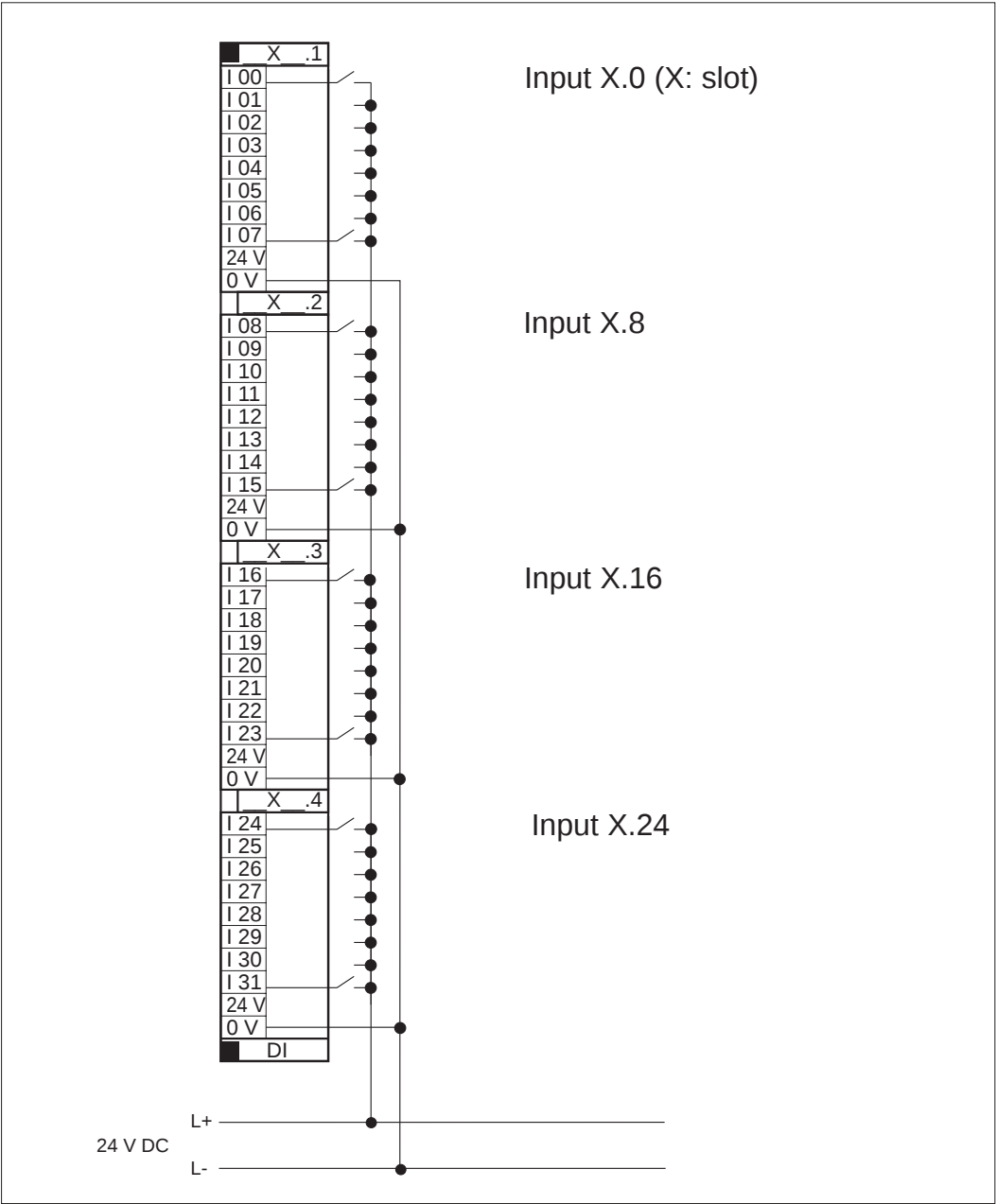
Ensure that you discharge yourself before touching the module, e.g. by touching an earthed, conductive surface or by wearing an earthed wristband.

- Install the module in the module rack in the way as described in the "PSS 3000/PSS 3100 Series Installation Manual".
- Wire up inputs (see the connection diagram).

Faults

If the P9 DI/DIF or P10 DI/DIF module is defective, the CPU indicates this fault automatically by means of a diagnostic circuit. In the user program, you determine which measures are to be taken in the event of a fault (e.g. whether the machine is to assume the stop status or whether an interrupt is to be triggered). Use the programming device to establish which module is defective and then exchange that module with a new one.

Connection diagram



Observe all safety regulations and EMC guidelines!

Technical details

Electrical data	
Supply voltage	24 V DC
Tolerance range	20 ... 30 V DC, including residual ripple
Galvanic isolation	Yes (opto-couplers)
Polarity protection	Yes
Type of connection	Screw-type plug connector, max. 2.5 mm ² (AWG12)
Inputs	
Number of inputs	P9 DI/P10 DI: 32 P9 DIF/P10 DIF: 32 8 of which are interrupt inputs (X.00...X.07)
Signal level of inputs:	
"1" level (high)	+13 ... +30 V DC
"0" level (low)	-3 ... +5 V DC
Input current	Typ. 6 mA
Input delay	<3 ms, interrupt inputs: <1 ms
Status indicator	One LED per input
Environmental data	
Protection type	IP 20 (mounted on module rack)
Mounting position	Vertical in module rack
Ambient temperature	0 ... +55 °C
Storage temperature	-40 ... +70 °C
Humidity rating	DIN 40040, Category F
Condensation	Not permitted
Vibration	2g/1 mm travel/all axes
Mechanical data	
Weight of P9 DI/DIF, P10 DI/DIF	510 g/1080 g

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