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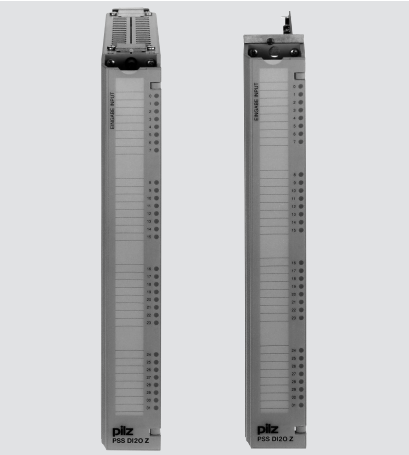
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Digital Input/Output
PSS DI2O Z, PSS1 DI2O Z



Dual-pole switching input and output circuits with integral software algorithms and redundant design for safety-related functions.

Features

- Failsafe modules have type-approval
- Whole system is approved by BG and TÜV
- Failsafe in accordance with EN IEC 61508, SIL 3 and with EN 954-1, 11/94, up to category 3 if no additional test pulses are used
- 16 digital inputs
- 8 digital dual-pole outputs (2 A)
- Outputs have a second shutdown route, providing the highest level of safety
- Galvanic isolation for a high level of noise suppression
- Integral protection circuits for trouble-free installation

Approvals

	PSS DI2O Z	PSS1 DI2O Z
BG-PRÜFZERT	●	●
TÜV PRODUCT SERVICE	●	●
UL LISTED	●	●

Technical Details	PSS DI2O Z	PSS1 DI2O Z
Function	Digital input/output	
Application Area	Failsafe applications conforming to EN 954-1, 11/94, DIN V 19 250, 01/89, DIN VDE 0116, EN IEC 61508	
Electrical Data		
Supply Voltage	24 VDC	24 VDC
Tolerance Range	20 ... 30 VDC including residual ripple	
Galvanic Isolation	Yes (optocoupler)	Yes (optocoupler)
Connection Type	AWG 12 screw connectors	
Outputs		
Number	8	8
Potential Isolation	Yes	Yes
Output Current at “1”	2 A	2 A
Permitted Current	0 ... 2.5 A	0 ... 2.5 A
Short Circuit Protection	Electronic	Electronic
Limitation of Inductive Switch-off	$-U_B$	$-U_B$
Simultaneity	100 % up to a max. 10 A	
Residual Current at “0”-Signal	During test pulse: 5 mA for max. 700 µs	
Signal Level at “0”	12 VDC (both output terminals)	
Signal Level at “1”	U_B -2 VDC at 2.5 A	
Output Switch Delay	50 µs	50 µs
Test Pulse	< 700 µs	< 700 µs
Status Indicator	LED	LED
Inputs		
Number	16	16
Potential Isolation	Yes	Yes
Signal Level at “0”	-3 ... +5 VDC	-3 ... +5 VDC
Signal Level at “1”	+15 ... +30 VDC	+15 ... +30 VDC
Input Current	Typ. 6 mA	Typ. 6 mA
Input Delay	< 1 ms	< 1 ms
Pulse suppression	≤ 300 µs (on condition that "Max. delay of dig. inputs“ or "DI test time“ in the PSS Configurator are configured as 3 ms)	
Status Indicator	LED	LED
Mechanical Data		
Size (H x W x D)	257 x 41 x 220 mm	265 x 41 x 218 mm
Space Requirement	1 slot	1 slot
Weight	1120 g	640 g
Environmental Data		
Protection Type	IP 20, installed on module rack	
Ambient Temperature	0 ... +60 °C	0 ... +60 °C
Storage Temperature	-25 ... +70 °C	-25 ... +70 °C
Climatic Suitability	IEC 68-2-30, IEC 68-2-14	
Condensation	Not permitted	
Vibration to IEC 68-2-6	Frequency Range: 10 ... 100 Hz Amplitude: 0.1 mm, max. 5 g	

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Digital Input/Output
PSS DI2O Z, PSS1 DI2O Z

Description

The PSS 3000/PSS 3100 can process the status of inputs and outputs in bits, bytes or words. Each input and output has space available for inscription and a status LED.
The inputs (see also PSS DI2, PSS1 DI2) are suitable for connecting:

- single-channel safety-related input devices, with or without test pulse
- dual-channel safety-related input devices, with or without test pulses

Depending on the regulations applicable to the respective application area, the module may be applied without the use of test pulses in applications up to Category 3 in accordance with EN 954-1, 11/94. Test pulses must be used for Category 4 applications.
The outputs are suitable for connecting:

- dual-pole resistive and inductive loads with a max. 2 A

The PSS monitors the value present at an output's plus and minus poles. Input devices and loads are connected via plug-in screw connectors. The module's address is established by its slot number on the module rack.
This module is particularly suitable for applications with stringent safety requirements (e.g. driving/monitoring a press safety valve).
On the CPUs listed below, the module is only supported from the version number stated:

- PSS CPU from Version 1.7 onwards
- PSS1 CPU from Version 1.1 onwards

Order References	PSS DI2O Z	PSS1 DI2O Z
System	PSS 3000	PSS 3100
Description	PSS DI2O Z	PSS1 DI2O Z
Order Number	301 109	302 109

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