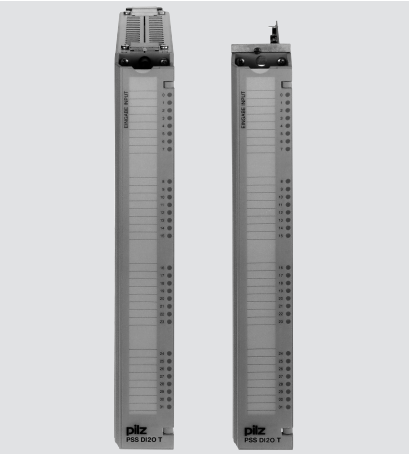
Digital Input/Output
PSS DI2O T, PSS1 DI2O T



Digital input and output circuits / test pulses with integral software algorithms and redundant design for safety-related functions.

Features

- Failsafe modules have type-approval
- Whole system is approved by BG
- Failsafe in accordance with EN IEC 61508, SIL 3 and with EN954-1, 11/94, up to category 3 ifno additional test pulses are used
- 16 digital inputs
- 16 digital outputs (2 A) or pulsed outputs
- Galvanic isolation for a high level of noise suppression
- Integral protection circuits

Approvals

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

Technical Details	PSS DI2O T	PSS1 DI2O T
Function	Digital input/output	
Application Range	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	16 (can also be used as test pulses)	
Potential Isolation	In groups of 8	In groups of 8
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 at the Load	ca. U_B -42 VDC	ca. U_B -42 VDC
Simultaneity	100 % up to max. 10 A per block of 8	
Residual Current at “0”-Signal	0 mA	0 mA
Signal Level at “0”	0 VDC	0 VDC
Signal Level at “1” and 2.5 A Load	U_B -1 VDC	U_B -1 VDC
Output Switch Delay	50 µs	50 µs
Status Indicator	LED	LED
Inputs		
Number	16	16
Potential Isolation	Yes (optocoupler)	Yes (optocoupler)
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	1380 g	590 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	

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Digital Input/Output
PSS DI2O T, PSS1 DI2O T

for trouble-free installation

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 (see also PSS DO, PSS1 DO) are suitable for connecting:
- resistive and inductive loads with a max. 2 A

In groups of 8, the outputs can be used to generate test pulses (pulsed signals). This means that, in conjunction with failsafe inputs, the external wiring can be monitored for shorts across the input contacts and external power sources.
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.
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

Vibration to IEC 68-2-6	Frequency range: 10 ... 100 Hz
	Amplitude: 0.1 mm, max. 5 g

Order References	**PSS DI2O T**	**PSS1 DI2O T**
System	PSS 3000	PSS 3100
Description	PSS DI2O T	PSS1 DI2O T
Order Number	301 112	302 112

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