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Find the *Pilz PSS1 SB CPU* at our website: ***Click HERE***

Central Processing Unit with SafetyBUS p® Connection

PSS SB CPU, PSS1 SB CPU



Central processing unit with integral test algorithms and redundant design, for use as part of a modular safety-related system with connection to SafetyBUS p®.

Features

- SafetyBUS p® connection
- Failsafe modules have type-approval
- Powerful CPU means programs are processed at high speed
- Failsafe (FS) and standard (ST) programs are processed without feedback
- Approved blocks are available for all key functions such as emergency stopping, thereby reducing development and commissioning costs
- Programmable communications interface available

Approvals

	PSS SB CPU	PSS1 SB CPU
	●	●
	●	●
	●	●

Technical details	PSS SB CPU	PSS1 SB CPU
Function	Central processing unit for decentralised applications	
Application range	Failsafe applications conforming to EN 954-1, 11/94, DIN V 19 250, 01/89, DIN VDE 0116	
Electrical data		
Processing time	Typ. 3 ms for 1000 instructions	
Real-time clock	Integrated into ST section	
Alarm processing	Max. 32 alarms in FS section	
Flags	2048 (ST section), 1152 (FS section)	
Timers	64 (ST section), 64 (FS section)	
Time base	50, 100 ms, 1, 10 s, 1 min	
Counters	64 (ST section), 64 (FS section)	
Data memory	FS section: 16 KByte (non-retentive) ST section: 170 KByte	
Program memory	FS section: Integral 256 KByte Flash-EPROM memory ST section: Integral 512 KByte Flash-EPROM memory	
Display	4-digit	
Serial interfaces, galvanically isolated	SafetyBUS p RS 232 for user, RS 485 for programming device	
SafetyBUS p®		
Transmission rate	Max. 500 kBit/s	
Cable runs	Max. 3500 m	
Transmission type	Differential two-wire cable	
Connection	9-pin D-Sub-coupling	
Mechanical data		
Size (H x W x D)	257 x 41 x 220 mm	265 x 41 x 218 mm
Weight	1300 g	715 g
Environmental data		
Protection type (EN 60529, 10/91)	IP 20	
Protection class (DIN VDE 0106, Part 1/A1, 04/90)	1	
Ambient temperature (DIN IEC 68-2-14, 06/87)	0 ... +60 °C	
Storage temp. (EN 60068-2-1/2, 03/93)	-25 ... +70 °C	
Climatic suitability (IEC 68-2-30, 09/86)	Max. 95% r.h.	
Condensation	Not permitted	
Vibration (EN 60068-2-6, 04/95)	Frequency range: 10 ... 100 Hz Amplitude: 0.1 mm, max. 5g	
Vibration resistance (DIN IEC 68-2-29)	30g, 11 ms/10g, 16 ms	
EMC	EN 50082-2, 03/95 EN 55011 A, 08/96	

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Central Processing Unit with SafetyBUS p® Connection
PSS SB CPU, PSS1 SB CPU

Description

The 3-channel diverse structure of the processing units PSS SB CPU (PSS 3000) and PSS1 SB CPU (PSS 3100), used in conjunction with integral test and safety algorithms, means that the PSS-range is suitable for applications conforming to EN 954-1, 11/94 up to category 4 and DIN V 19250, 01/89, AK 6.

Periphery devices may be connected separately (decentralised) via SafetyBUS p®, or via I/Os on local plug-in modules. An additional feature to the decentralised I/O modules is the ability to connect a safety-related network of PSS safety systems via SafetyBUS p®.

The CPU processes two independent sections of the program that operate without feedback: the failsafe (FS) program and the standard (ST) program. Within the FS program, all safety-related functions are processed through three channels. The program is generated once only; all compiling and copying functions are carried out by the CPU. Non-safety-related control functions are performed in the ST program through a single channel. Programs are generated using a PC and are downloaded via the RS 485 programming port.

Approved standard function blocks are available for all key functions, from emergency stopping through to the complete control of a machine such as a press. This can substantially reduce development and commissioning costs.

A serial interface or corresponding communications module is available through the ST program, enabling users to communicate with supervisory systems or connect to a graphics system. LEDs and a 4-digit display provide information on status and diagnostics.

Order reference	PSS SB CPU	PSS1 SB CPU
System	SafetyBUS p/PSS 3000	SafetyBUS p/PSS 3100
Description	PSS SB CPU	PSS1 SB CPU
Order number	301 070	302 070

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