

**Functional description of PLC interfaceboard SPISPS11 for  
G4 Pulsed Fibre Laser from SPI LASERS UK Ltd.**

SPISPS11 is used as interface between a PLC and a SMART MOVE scanner to a 68 pin connector of a SPI G4 laser. The DB25 scanner connector supports also scanner cards from other manufacturers. Two jumpers adapt inputs from PLC and scanner to user requirements. SPISPS11 PCB is mounted as DIN rail (144\*108mm).

SPS Mode: ( Jumper1 On ) ( Jumper Off --- 11 pin connector has no function )

CONNECTOR PARALLEL: 11 pin Cageclamp Input ( signals 24V / 0V )

Pin 1:	Signal	D0	
Pin 2:		D1	
Pin 3:		D2	
Pin 4:		D3	
Pin 5:		D4	IMPORTANT NOTE: PIN 10 und PIN11 no connection!
Pin 6:		D5	
Pin 7:		D6	
Pin 8:		D7	
Pin 9		GND	
Pin 10		NC	
Pin 11		NC	

CONNECTOR MONITOR: 9 pin Cageclamp Output ( signals 24V / 0V )

Pin 1:	Monitor
Pin 2:	Laser Temperature
Pin 3:	ALARM
Pin 4:	System Fault
Pin 5:	Beam Delivery
Pin 6:	Laser Deactivated
Pin 7:	Laser is on
Pin 8:	Laser Emission Warning
Pin 9:	GND

SPS Mode: ( Jumper 2 On ) ( Jumper 2 Off --- 5 pin connector has no function )

CONNECTOR LASER CONTROL: 5 pin Cageclamp Input ( signals 24V / 0V )

Pin 1:	Laser Enable
Pin 2:	Laser Disable
Pin 3:	Pilot enable
Pin 4:	CW Mode
Pin 5:	GND

DB25 Male: REAL TIME SCANNER CONTROL: Input/Output ( 5V / 0V CMOS signals ).  
DB25 is used for SPS and Scanner Mode depending on use.

**DB25 Male** pinout: ( OUT = Scanner Karte OUTPUT / IN = Scanner INPUT )

Pin 1:	DI_0	OUT	
Pin 2:	DI_1	OUT	
Pin 3:	DI_2	OUT	
Pin 4:	DI_3	OUT	
Pin 5:	DI_4	OUT	
Pin 6:	DI_5	OUT	
Pin 7:	DI_6	OUT	
Pin 8:	DI_7	OUT	
Pin 9:	DI_LATCH	OUT	
Pin 10:	GND		
Pin 11:	Laser_Temperature	IN	
Pin 12:	Alarm	IN	
Pin 13:	First_Pulse_Equ.	OUT	#
Pin 14:	GND		
Pin 15:	Laser_has_pulsed	IN	#
Pin 16:	System_Fault	IN	
Pin 17:	Task_Active	IN	#
Pin 18:	Laser_Enable_H	OUT	
Pin 19:	Laser_Emission_Gate_H	OUT	
Pin 20:	Pulse_Trigger_H	OUT	
Pin 21:	Laser_Ready_To_Pulse	IN	#
Pin 22:	Pilot_Laser_Enable	OUT	
Pin 23:	PRF_Sync_Out	IN	#
Pin 24:	AI_1 ( 0-10V )	OUT	
Pin 25:	AI_2 ( 0-10V )	OUT	

**Note1:** # Pins 13/15/17/21/23 are not supported by SMART MOVE card.  
Pin 24/25 (AI\_1 und AI\_2) are on smart-move side interconnected!

**Note2:** DB25 Pin 11/12/16 are available also on connector MONITOR.  
Signals are inverted, i.e. a High on Pin 8  
(68Pin) results as Low an DB25 Pin 11 ( ex. Laser Temperature ).

RS232: SUB D 9Pin Female: Pin 2=TX, Pin 3 = RX, Pin 5 = GND

Diagrams: SPISPS11 SCANNER MODE CONNECTIONS  
SPISPS11 SPS MODE CONNECTIONS

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