CNPEM
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Laboratório Nacional
de Luz Síncrotron

STD-SOE Hardware Manual
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About this manual

This manual is intended for people who need information about the STD-SOE hardware. Information about the timing system structure and operation, firmware, or software can be found in the corresponding manuals.

Contents

1 Hardware Specification

STD-SOE is a 19 inches 1U module.
110/220V 50/60Hz AC power supply.

Figure 1: STD-SOE

Table 1: STD-SOE front panel connectors

Connector	**Type**	**Description / Specification**
OUT1 - OUT4	BNC	Outputs (5.0V TTL level)
IN1 - IN4	HFBR-4531/4532	Optical Input (Agilent HFBR-2528)

Table 2: STD-SOE front panel leds

LED	**Type**	**Description / Specification**
PWR	Green LED	Power on
TRIGGER1	Yellow LED	(On) Uplink established (Blink) Trigger output
TRIGGER2	Yellow LED	(On) Uplink established (Blink) Trigger output
TRIGGER3	Yellow LED	(On) Uplink established (Blink) Trigger output
TRIGGER4	Yellow LED	(On) Uplink established (Blink) Trigger output
ITL1	Red LED	Interlock input activated
ITL2	Red LED	Interlock input activated
ITL3	Red LED	Interlock input activated
ITL4	Red LED	Interlock input activated

Table 3: STD-SOE rear panel connectors

Connector	**Type**	**Description / Specification**
ITL_IN_1	BNC	Interlock input 1
ITL_IN_2	BNC	Interlock input 2
ITL_IN_3	BNC	Interlock input 3
ITL_IN_4	BNC	Interlock input 4
BYPASS	Switch	Bypass interlock input

2 STD-SOE Hardware Functions

The STD-SOE module is an Optical to Electrical converter used for converting Timing System triggers. The module has 4 Plastic Optical Fiber inputs (IN1 - IN4) in the front panel. The input signals are converted to 5V TTL level electrical signals, which are output in the corresponding BNC connectors (OUT1 - OUT4). The STD-SOE has 4 independent interlock inputs in the rear panel (ITL_IN_1 - ITL_IN_4) related to the front panel outputs (OUT1 - OUT4). In order to bypass the interlock inputs, the BYPASS switch (rear panel) can be used.