

# 3 BTS3012 Auxiliary Equipment

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## About This Chapter

The BTS3012 auxiliary equipment include Sidepower, EMU, and EAC-2.

### [3.1 Sidepower](#)

The Sidepower is an auxiliary equipment of the BTS. It converts  $\pm 24$  V DC into  $-48$  V DC for the BTS.

### [3.2 EMU](#)

The EMU monitors the environment of the equipment room and reports the results to the main control board of the BTS.

### [3.3 EAC-2](#)

The EAC-2 monitors the environment parameter and voltage of the indoor BTS equipment room. The EAC-2 provides 32 extended Boolean value detection paths, 4 extended analog value detection paths. It also features voltage detection and alarm reporting.

### [3.4 BTS3012 Sensors](#)

The sensors detect the environment variables of the BTS and report various environment alarm information. The sensors include door sensor, water sensor, smoke sensor, infrared sensor, and humidity/temperature sensor.

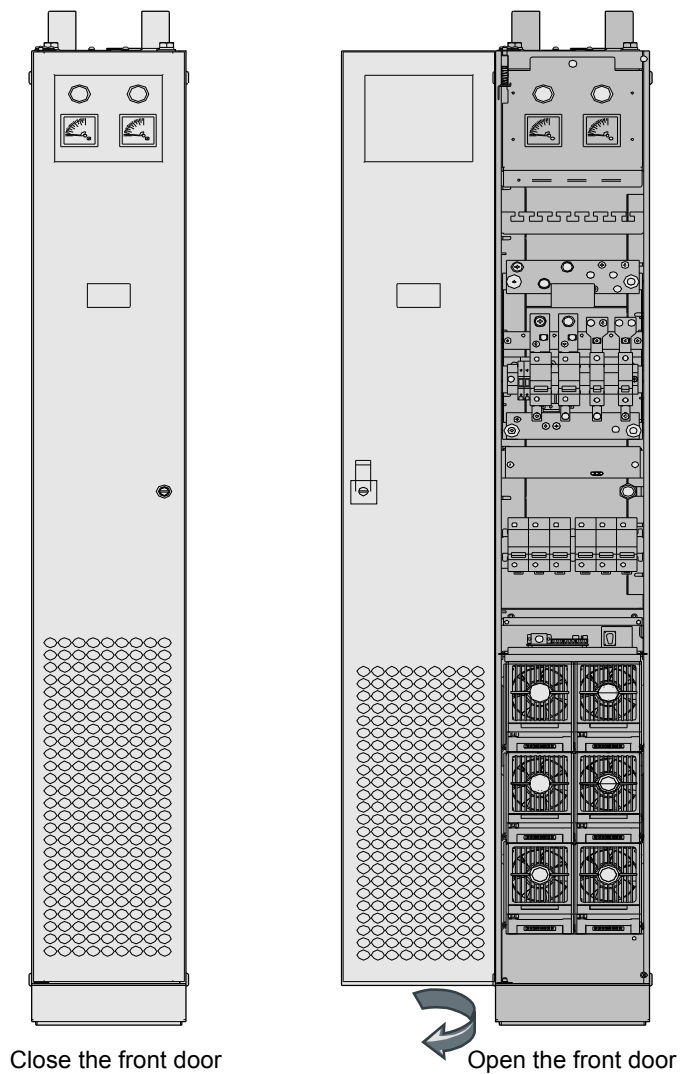
## 3.1 Sidepower

The Sidepower is an auxiliary equipment of the BTS. It converts  $\pm 24$  V DC into  $-48$  V DC for the BTS.

### Structure

**Figure 3-1** shows the structure of the Sidepower.

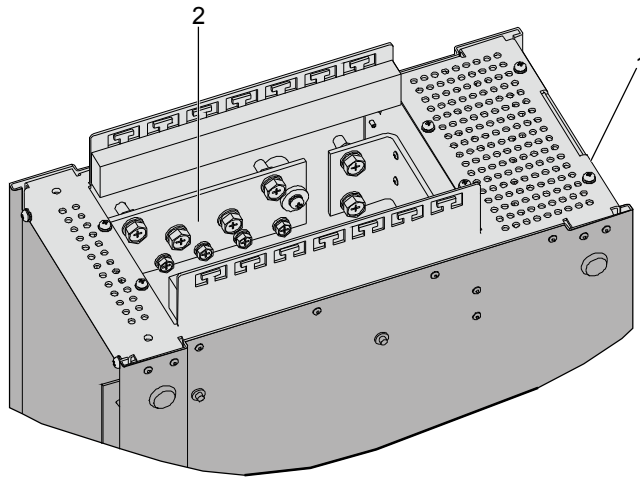
**Figure 3-1** Structure of the Sidepower



### Input Ports

The input ports of the Sidepower are on the top of the cabinet. **Figure 3-2** shows the positive input copper bar.

**Figure 3-2** Positive input copper bar of the Sidepower

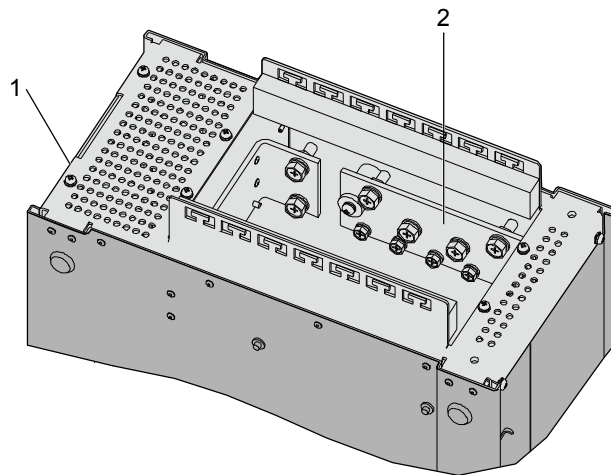


(1) Front door of the Sidepower

(2) Positive input copper bar

**Figure 3-3** describes the negative input copper bar on the Sidepower.

**Figure 3-3** Negative input copper bar of the Sidepower



(1) Front door of the Sidepower

(2) Negative input copper bar

**Table 3-1** describes the input ports on the Sidepower.

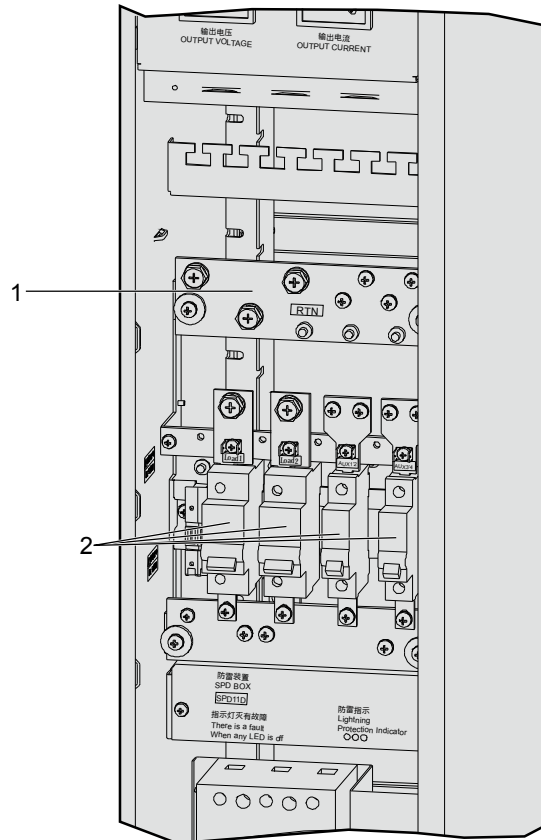
**Table 3-1** Input ports on the Sidepower

Port	Terminal Specifications	Connecting to...
Positive input copper bar	Four M8 bolts	Positive pole of the power supply
Negative input copper bar	Four M8 bolts	Negative pole of the power supply

## Output Ports

**Figure 3-4** describes the output ports on the Sidepower.

**Figure 3-4** Output ports on the Sidepower



(1) Positive output copper bar

(2) Negative output air breaker

**Table 3-2** describes the output ports on the Sidepower.

**Table 3-2** Output ports on the Sidepower

Port	Capacity	Terminal type	Connecting to...
Positive output copper bar	-	Two M8 bolts and four M5 screws	Positive pole of the power supply for the power system load
Negative output air breaker	100 A	One M8 bolt	Negative pole of the power supply for the power system load
	100 A	One M8 bolt	
	32 A	Two M5 screws	
	32 A	Two M5 screws	

## 3.2 EMU

The EMU monitors the environment of the equipment room and reports the results to the main control board of the BTS.

The EMU connects to the main equipment through the alarm cable and monitors the environment of the equipment room of the BTS. It performs the following functions:

- It provides four (S1+/S1– to S4+/S4–) Boolean value signal ports, through which the alarm signals are sent to the DSAC of the BTS3012.
- It provides single power supply input port. The power supply input port applies to the –48 V power system of the BTS3012. The power supply ranges from –36 V to –72 V.
- It provides single RS-485 serial port for communication with the DTMU.
- It provides reverse connection protection for power cable connectors.

For details about the functions and installations of the EMU, refer to [EMU User Guide](#).

## 3.3 EAC-2

The EAC-2 monitors the environment parameter and voltage of the indoor BTS equipment room. The EAC-2 provides 32 extended Boolean value detection paths, 4 extended analog value detection paths. It also features voltage detection and alarm reporting.

The EAC-2 connects to the main equipment through the alarm cable and monitors the environment of the equipment room of the BTS. It performs the following functions:

- Detecting the environment of the equipment room to ensure the smooth operations of the BTS by means of temperature sensor, humidity sensor, smoke sensor, infrared sensor, door sensor, water sensor, and extended sensor
- Reporting the environment parameters and alarms to the BTS through the communication ports and receiving the configuration and relay control commands from the BTS
- Providing 32 extended Boolean value detection paths and 4 extended analog value detection paths

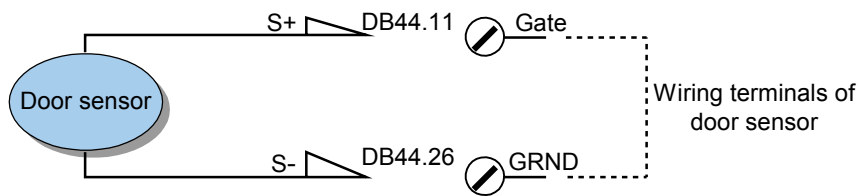
For details about the functions and installations of the EAC-2, refer to [EAC-2 User Guide](#).

## 3.4 BTS3012 Sensors

The sensors detect the environment variables of the BTS and report various environment alarm information. The sensors include door sensor, water sensor, smoke sensor, infrared sensor, and humidity/temperature sensor.

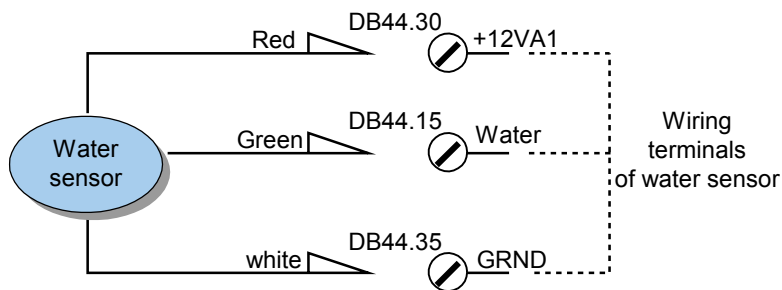
### Door Sensor

The door sensor is placed at the intersection of the door frame and door. It detects the opening and closing of the door. [Figure 3-5](#) shows its wiring terminals.

**Figure 3-5** Wiring terminals of the door sensor

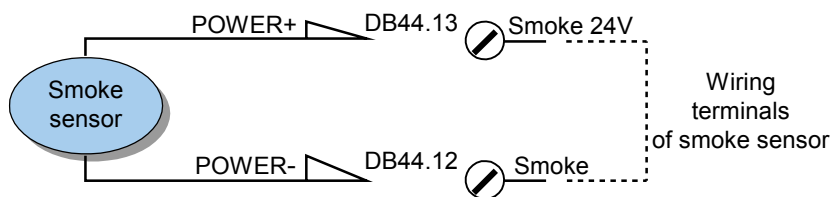
## Water Sensor

The water sensor is horizontally placed in the places that are subject to be immersed by water in the equipment room. It detects whether the BTS is immersed by water. [Figure 3-6](#) shows its wiring terminals.

**Figure 3-6** Wiring terminals of the water sensor

## Smoke Sensor

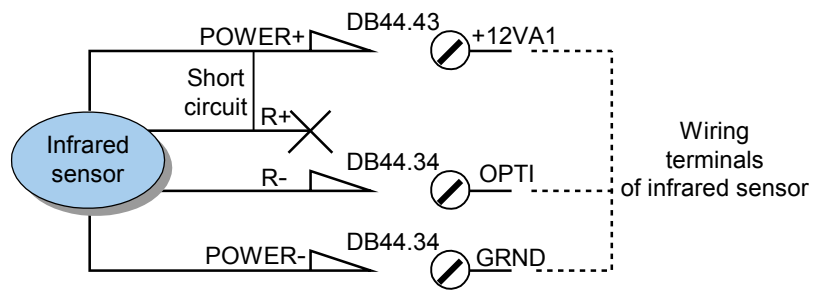
The smoke sensor is placed at the center of the ceiling. It detects whether the BTS or the equipment is on fire. [Figure 3-7](#) shows its wiring terminals.

**Figure 3-7** Wiring terminals of the smoke sensor

## Infrared Sensor

The infrared sensor is placed on the wall, 1.5 m higher than the floor. It detects whether there are illegal intrusion. [Figure 3-8](#) shows its wiring terminals.

**Figure 3-8** Wiring terminals of the infrared sensor



## Humidity/Temperature Sensor

The humidity/temperature sensor is placed on the wall, 1.5 m higher than the door. It detects whether the humidity/temperature exceeds the threshold. [Figure 3-9](#) shows its wiring terminals.

**Figure 3-9** Wiring terminals of the humidity/temperature sensor

