

3.6 Interface modules SU12 and SU13

Article number

SU12	6DD1681-0AJ1
SU13	6DD1681-0GK0

General

SU12	SU13
Interface module SU12 is a 10-pole terminal block that is used to wire the analog or digital signals of a 10-pole ribbon cable connector (SIMATIC TDC / FM458-1DP side) to spring-loaded terminals (plant side).	Interface module SU13 is a 50-pole terminal block that is used to wire 50 signals of a 50-pole connector (SIMATIC TDC / FM458-1DP side) to screw terminals (plant side).

Module design

SU12	16 spring-loaded terminals (X2) 10 spring-loaded terminals for analog or digital signals on plant side 6 unused spring-loaded terminals 10-pole connector X1.
SU13	50 screw terminals (X2) Connection of 50 signals 50-pole connector X1.

3.6.1 Function description

Through use of interface modules SU12 and SU13, a 1:1 connection is established from the SIMATIC TDC / FM458-1DP-side ribbon cable connector X1 to the plant-side terminals X2, with the exception of the following terminals.

The following signal lines are fused at the terminals (0.5 A slow-blow, internal resistance 0.25 Ω):

Interface module	Terminal block X2
SU12	Pin 1 – 8
SU13	Pin 8, 17 – 23, 26 – 33, 36 – 43, 46 – 48

The following terminals have a protective diode (Schottky diode type Vishay BAT46) for the 24 V supply voltage of digital outputs in the following signal lines:

Interface module	Terminal block X2
SU12	Pin 10
SU13	Pin 10

A PTC resistor (internal resistance: 0.9 Ω , e.g. type Epcos B59910-C120-A70) element is installed at the following terminals for short-circuit protection of the 24 V supply voltage of digital outputs in the signal line:

Interface module	Terminal block X2
SU12	Pin 9
SU13	Pin 9

Process signals

The concept of the interface modules support signal flow on both sides. The process signals are transferred without additional electrical isolation and signal preparation.

Table 3- 7 Maximum permissible voltage and current values for signal processing

Voltage range	The maximum permitted voltages of the modules to which the interface modules are connected must be maintained.
Current range	Max. 0.5 A

3.6.2 Additional components

Cables for:

The following cables are required to wire the interface modules to the modules:

SU12

Table 3- 8 Modules and signal cables as additional components for SU12

Cable	Modules	Connectors
SC62	SM500	X3
SC66	CPU551	X2

SU13

Table 3- 9 Modules and signal cables as additional components for SU13

Cable	Modules	Connectors
SC63	SM500	X1, X2, X3
	CP52M0	X6

3.6.3 Application notes

The interface modules are suitable for **vertical and horizontal** mounting positions. The modules must be installed on mounting rails.

Other information

For more information on EMC and ambient conditions, refer to section Installation and EMC guidelines (Page 7).

3.6.4 Pin/terminal assignment X1/X2

The screw terminal numbers of X2 are identical with the numbering of ribbon cable connector in accordance with the pin counting mode.

Conductor cross-sections

Interface module	Minimum conductor cross-section on terminal block X2	Maximum conductor cross section on terminal block X2
SU12	0.2 mm ²	2.5 mm ²
SU13	0.2 mm ²	1.5 mm ²

SU12

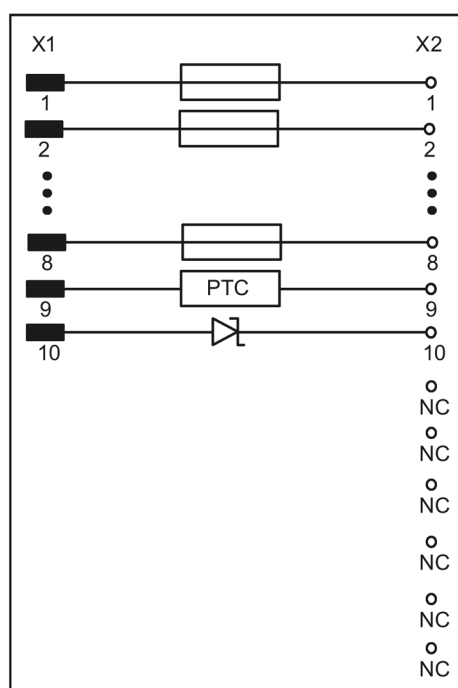


Figure 3-13 SU12 circuit diagram

The components are described in section Function description (Page 63).

SU13

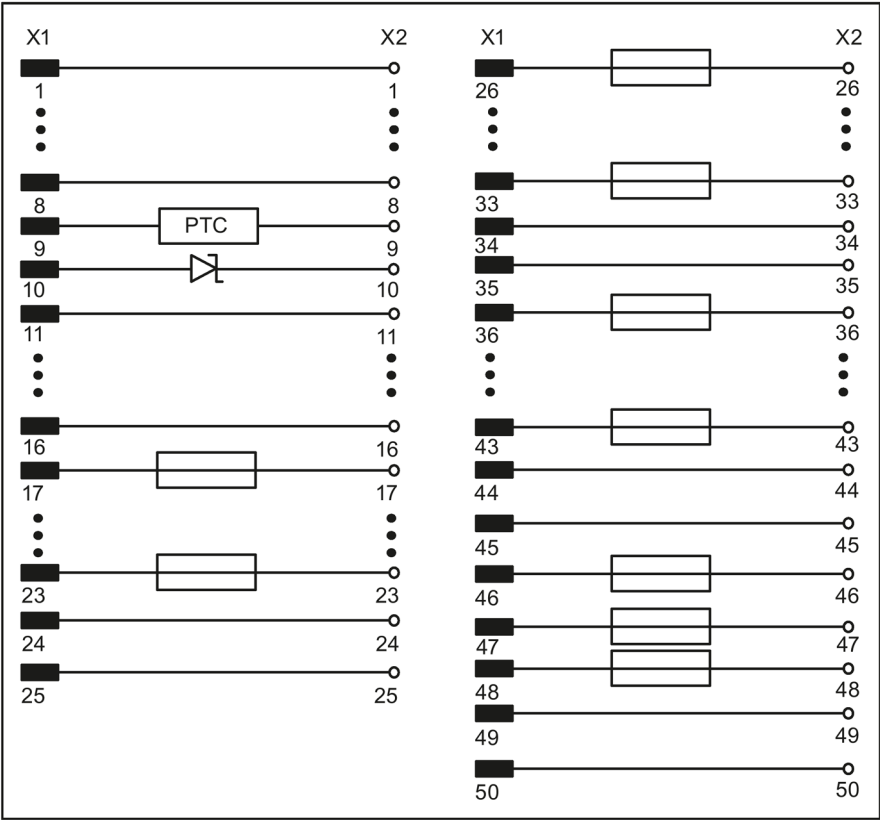


Figure 3-14 SU13 circuit diagram

The components are described in section Function description (Page 63).

3.6.5 Technical specifications

General data

Dimensions W x H x D [mm]	45 x 129 x 160 mm
Weight	0.3 kg

Ambient temperatures

Ambient temperatures	max. 60 °C
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