

## WARRANTY

This product is accepted through a thorough quality management and inspection process. Therefore, this warranty is valid for five (5) years from the date of purchase by the consumer. (However, the quality is assured up to 60 months from the manufacturing date if the date of purchase is unknown.)

- Any failures caused by the manufacturing defects or defective parts during the warranty period are fully repaired at no cost. (Excluding the defects under the paid service).
- The repair for the same defects for 4 consecutive times during the warranty period will be exchanged with a new product at no cost.

### Paid Service Requirements

- Product expired the warranty period
- Failure caused by the user's random modification, disassembly or repair
- Failure caused by the uses of peripheral devices that were not provided by the company
- Failure caused by the overcurrent of power and failure of connection device
- Failure caused by user's fault (fall, shock, flooding, contamination, corrosion)
- Exterior damages and deformation caused by the organic solvent such as thinner, benzene, etc.
- Failure caused by the natural disasters such as fire, salt stress, flooding, thunder stroke, earthquake, etc.

The product to be exchanged or returned should returned at the same condition as it was delivered and any damages or lost components or parts are not able to get refunded.

**Help Hotline :** Technical supports are available to all our customers for assistance in installation and operation.  
[+82-2-855-0501]

2019. 03. 25

# Surge Protector

SP-1010DIT/232, SP-1010DIT/combo



Industrial  
Grade

User's Manual  
Version 1.0



RS232 ☐ RS422/RS485 ☐



16F Daerung Post Tower-1, 288, Digital-ro, Guro-gu, Seoul, Korea  
Tel. +82-2-855-0501 Fax. +82-2-855-0580  
<http://www.sysbas.com> / [marketing@sysbas.com](mailto:marketing@sysbas.com)

# SP-1010DIT

SystemBase  
IoT Experts  
Since 1987

## 1. Overview

The SP-1010DIT series are mounted on RS232 or RS422/RS485 signal lines to protect the equipment from surge impacts from various external equipment. It also supports industrial grade operating temperatures of  $-40^{\circ}\text{F}$  to  $185^{\circ}\text{F}$  ( $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$ ). Both RS232 and RS422/RS485 sides are industrial surge protectors that meet IEC 61000-4-2 (ESD), IEC 61000-4-4 (EFT) and IEC 61000-4-5 (Surge) standards.

## 2. Protects RS232, RS422/485 signal lines

The SP-1010DIT series is divided into RS232 version supporting RS232 specification and combo version supporting RS422/RS485 specification. RS232 version protects TXD, RXD, RTS and CTS signal lines in RS232 specification, and RS422/RS485 version protects TXD+, TXD-, RXD+, RXD- signal lines in RS422 specification and TRXD+, TRXD signal lines in RS485 specification from external surges.

## 3. Hardware

### 3.1 Specifications

Division	SP-1010DIT/232	SP-1010DIT/combo
Peak Pulse Power ( $t_p=8/20\mu\text{s}$ )	500W	400W
Peak Pulse Current ( $8/20\mu\text{s}$ )	17A	
ESD Protection per IEC 61000-4-2		
Contact - Min	$\pm 8\text{kV}$	
Contact - Max	$\pm 15\text{kV}$	
Air - Min	$\pm 15\text{kV}$	
Air - Max	$\pm 30\text{kV}$	
Working Peak Voltage	+12V	+12V/-7V
Typical Junction Capacitance @ 0V, 1MHz	15pF	75pF

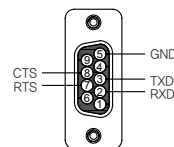
### Operating Environment

Operation Temperature	$-40\sim 85^{\circ}\text{C}$ ( $-40\sim 185^{\circ}\text{F}$ )
Storing Temperature	$-40\sim 85^{\circ}\text{C}$ ( $-40\sim 185^{\circ}\text{F}$ )
Humidity	5~95% Non-Condensing

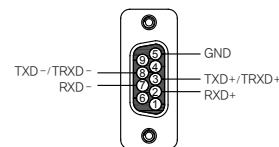
### 3.2 Pin Assignment

#### DB9 Female side

SP-1010DIT/232

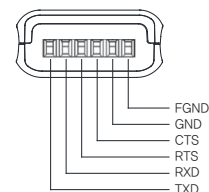


SP-1010DIT/combo



#### Terminal Block side

SP-1010DIT/232



SP-1010DIT/combo

