SG-785 Hardware User Guide *Ver. 1.0*

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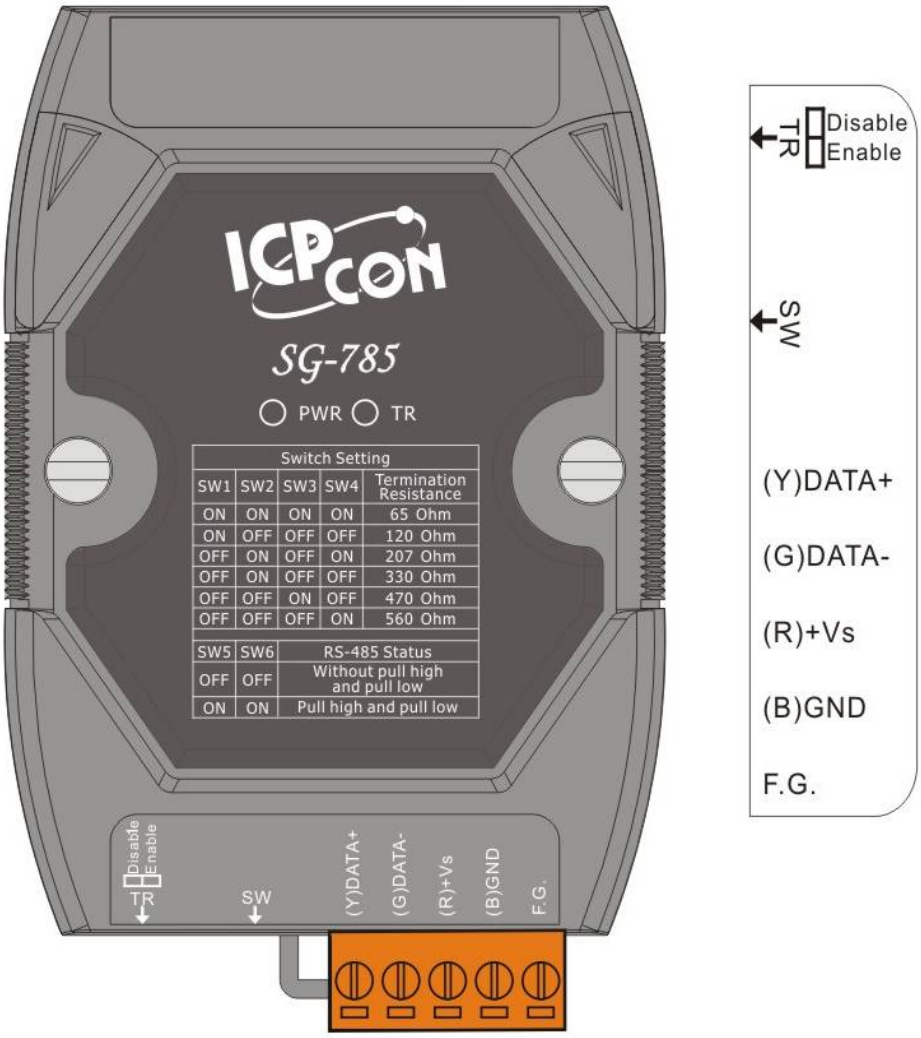
Introduction

The SG-785 is an optional module that is used to improve the communication of RS-485 network. It provides switch selectable pull-high and pull-low resistors on RS-485 network. It also has 15-step switch selectable termination resistor such that the user can select a proper termination resistor to be connected to the RS-485 network easily.

Specifications

General	
Interface	RS-485
Pull-high/pull-low Resistance	1k Ω
Termination Resistance	15 steps, 65 ~ 560 Ω
LED Display	1 red LED as power indicator 1 green LED as termination indicator
Power	
Input Range	10 ~ 30 V_{DC}
Power Consumption	0.5W, 24 V_{DC}
Environment	
Operating Temperature	-25 °C ~ +75 °C
Storage Temperature	-40 °C ~ +80 °C
Humidity	5 ~ 95 % RH, non-condensing

SG-785 Pin Assignment



LED Display	
PWR	Power LED, Red
TR	Termination Resistor LED, Green
Switches	
TR	Termination Resistor Setting
SW	Termination Resistance and Pull-high/Pull-low Setting
Terminal Block	
(Y)DATA+, (G)DATA-	RS-485 Data Line
(R)+Vs, (B)GND	Power Line
F. G.	Frame Ground

SG-785 Switch Setting

RS-485 Termination Resistance Setting

SW1	SW2	SW3	SW4	Termination Resistance (ohm)
ON	ON	ON	ON	65
ON	ON	ON	OFF	74
ON	ON	OFF	ON	76
ON	OFF	ON	ON	81
ON	OFF	OFF	ON	99
ON	OFF	ON	OFF	96
ON	ON	OFF	OFF	88
ON	OFF	OFF	OFF	120
OFF	ON	ON	ON	144
OFF	ON	ON	OFF	193
OFF	ON	OFF	ON	207
OFF	ON	OFF	OFF	330
OFF	OFF	ON	ON	256
OFF	OFF	ON	OFF	470
OFF	OFF	OFF	ON	560

RS-485 pull-high and pull-low setting

SW5	SW6	RS-485 Data Line Status
OFF	OFF	No pull-high/pull-low to RS-485 data line
ON	OFF	Add a pull high resistor to DATA+ line
OFF	ON	Add a pull low resistor to DATA- line
ON	ON	Add a pull high resistor to DATA+ line and add a pull low resistor to DATA- line