STS-8857

Transmissive Switch Assembly

Features

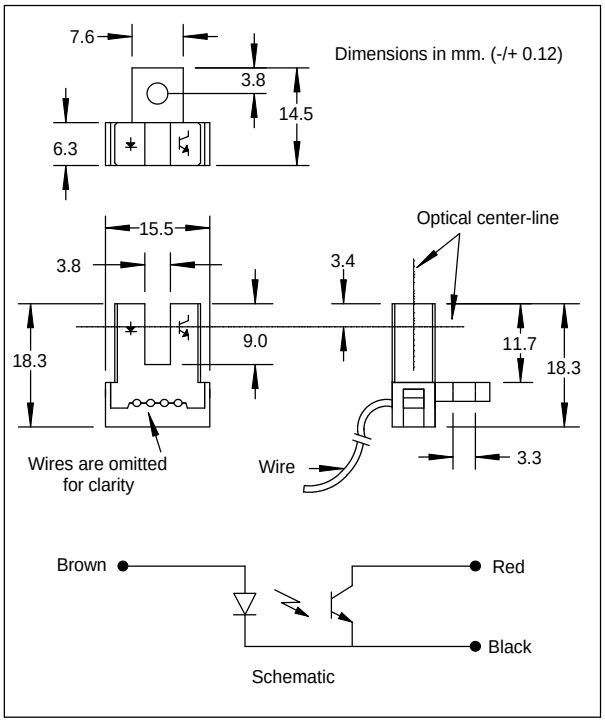
- Non contact switching
- Three wires for electrical connection
- Fast switching speed

Description

The STS-8857 consists of an infrared emitting diode and an NPN silicon phototransistor mounted on opposite sides of a 3.8 mm wide slot. Phototransistor switching takes place whenever an opaque object passes through the slot. The polysulfone housing (2) reduces interference from ambient light and provides dirt and dust protection. The 40 cm minimum length wires simplify the connection to the PC board.

Absolute Maximum Ratings

Operating & Storage Temperature	-40°C to +85°C
Input Diode	
Reverse Voltage	3 V
Continuous Forward Current	50 mA
Peak Forward Current (1µs pulse)	3 A
Power Dissipation (1)	100 mW
Phototransistor	
Collector-Emitter Voltage	30 V
Emitter-Collector Voltage	5 V
Power Dissipation (1)	100 mW



Notes:

(1) Derate linearly 1.33 mW/°C above 25°C.

(2) Plastic housing is soluble in chlorinated hydrocarbons and ketones. Recommended cleaning agents are methanol or isopropanol.

Electrical Characteristics (T_A=25°C unless otherwise noted)

Symbol	Parameter	Min	Typ	Max	Units	Test Conditions
Input Diode						
V_F	Forward Voltage		1.2	1.7	V	I_F = 20 mA
I_R	Reverse Current			10	µA	V_R = 3 V
Output Phototransistor						
I_{CEO}	Collector Dark Current			100	nA	V_{CE}=10V, Ee=0
BV_{CEO}	Collector-Emitter Breakdown Voltage	30			V	I_C=100µA, Ee=0
BV_{ECO}	Emitter-Collector Breakdown Voltage	5			V	I_C=100µA, Ee=0
Coupled						
$V_{CE(SAT)}$	Collector Emitter Saturation Voltage			0.4	V	I_C=100µA, I_F = 20 mA
$I_{C(ON)}$	On-State Collector Current	1.5			mA	V_{CE} =10V, I_F = 20 mA

Specifications subject to change without notice

103057 REV 1

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