E-T-A Simulator switch, magnetic operation 9510-...

Description

Single pole, magnetic simulator switch with extremely low trip current and precise trip behavior. Available with threadneck mounting or flange mounting. Actuation is via a push-pull mechanism. Push button marking for simulation of various current ratings is optionally available as marking insert (plug-in, exchangeable) or marking label. Terminal designs include blade terminals, screw terminals or wire wrap terminals. Optionally available with auxiliary contact.

US patent number: US 7,038,562 B1

Typical application

Flight Simulators

Ordering information

Type No.

9510 switch with magnetic instantaneous trip for flight simulators

Mounting method and style

G threadneck mounting with standard push button

Threadneck design

1 M12x1x6.3

2 7/16-32UNx6.3

Number of poles

1 single pole

Accessories for threadneck

2 hex nut M12x1, aluminium, serrated lock washer ø12.1/ø17.2, fitted

3 hex nut 7/16-32UN, aluminium, serrated lock washer 11.3/14.9, fitted

Terminal configuration

J screw terminals with inch thread

1 6-32UNC-2B, silver plated bent 45° inwards

3 6-32UNC-2B, silver plated, with socket, bent 45° inwards

P blade terminals

1 A6.3x0.8 DIN 46244, silver plated

W wire wrap terminal

4 pin size 1.2x1.2 EN 60352-1, gold plated, with socket

Rated voltage

F0 DC 24 V

F1 DC 28 V

Accessories (terminal screws)

B Phillips screw 6-32UNC-2Ax4.8 fitted (MS 51957-25)

Z without accessories

Accessories (terminal washers)

0 without accessories

2 3.6 split washer fitted (MS 35338-136)

Internal circuit

R2 with logic diode

Colour of the push button

S black

A green, for marking insert

B black, for marking insert

0 without marking

1 hot-stamped marking, can be read when locating pin is above

9 without marking insert

Auxiliary contact versions:

blank: no auxiliary contact (standard)

S1 with auxiliary contact (female contact for male contacts to EN 3155-016 M2018)

S5 with polarized auxiliary contact (female contact for male contacts to EN 3155-016 M2018)

Current ratings

0.5...150 A

9510 - G 2 1 3 - J 1 F1 - B 0 R2 S 1 - S1 - 5 A ordering example

Please be informed that we have minimum ordering quantities to be observed.

9510-...

9510-... with auxiliary contact

Technical data

Voltage rating (Other voltage ratings upon request)	**DC 24 V**	**DC 28 V**
Trip current	< 170 mA	< 200 mA
Trip time	< 25 ms	< 25 ms
Min. switching voltage at +23 °C/+73.4 °F at +60 °C/+140 °F	 DC 22 V DC 24 V	 DC 25 V DC 28 V
Internal resistance	approx. 153 Ω	approx. 153 Ω
Rated voltage auxiliary circuit	DC 28 V / AC 5 V (400 Hz)	
Rated load, auxiliary circuit at DC 28 V at DC 28 V at AC 5 V (400 Hz) at DC 5 V	 0,5 A resistive 0,2 A lamp load 0,24 A lamp load 0,005 A minimum load	
Typical life	without auxiliary contact: 10 000 operations at rated voltage with auxiliary contact: 5 000 operations at rated voltage	
Temperature range	-30 °C ...60 °C (-22...+140 °F)	
Insulation resistance	> 100 MΩ (DC 500 V)	
Dielectric strength (leakage current < 1mA)	AC 1500 V main terminal to main terminal, main circuit open AC 800 V terminal to terminal, auxiliary circuit open AC 1500 V main circuit to main circuit	
Degree of protection (IEC 60529)	operating area IP40 terminal area IP00	
Vibration (sinusoidal)	x axis, y axis: 3 g (57-500 Hz), +-0.23 mm (10-57 Hz) to DIN IEC 60068-2-6, test Fc 10 cycles/frequency axis z axis: 2 g (57-500 Hz), +-0.23 mm (10-57 Hz) to DIN IEC 60068-2-6, test Fc 10 cycles/frequency axis	
Shock	5 g (11 ms), to DIN IEC 60068-2-27, test Ea	
Humidity	240 hours at 95 % RH, 40 °C to DIN IEC 60068-2-3, test Ca	
Mass	23 g without accessories 26 g with accessories approx. 27 g with auxiliary contact, without accessories approx. 30 g with auxiliary contact, with accessories	

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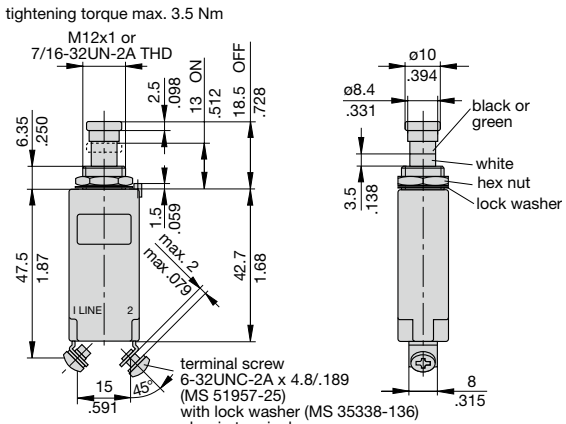
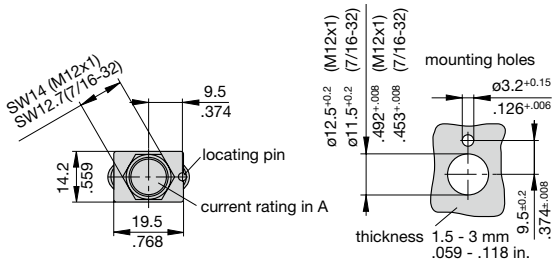
Dimensions

9510-G...-J1..-B2....

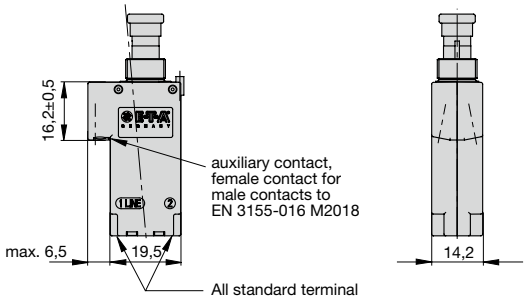
tightening torque max. 3.5 Nm

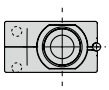




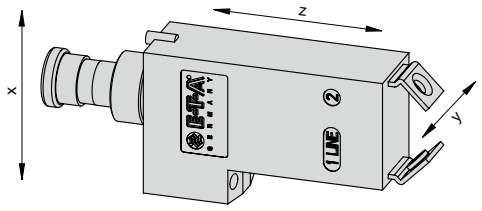
9510-G...-J1..-B0....-S1...

9510 with auxiliary contact



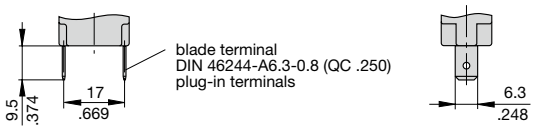


Other dimensions see type 9510
without auxiliary contact

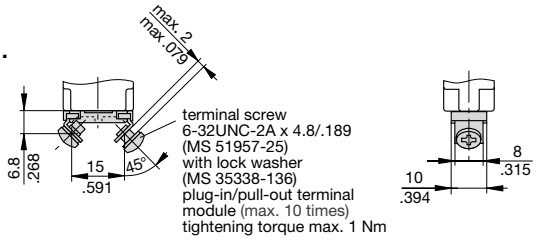


Other main terminal designs

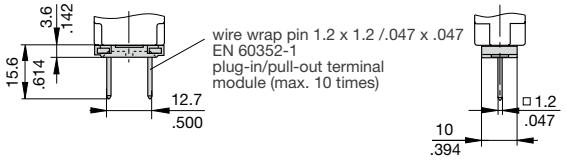
-P1...



-J3...

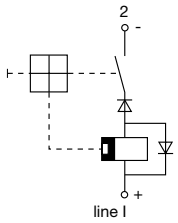


-W4...

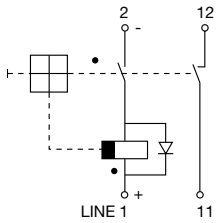


Internal connection diagram

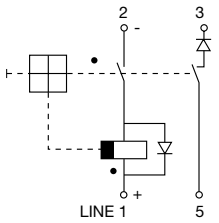
internal circuit R 2



with auxiliary contact



with polarized auxiliary contact



This is a metric design and millimeter dimensions take precedence (mm / inch)

Accessories

Label (black) for push/pull button (S0)

Rated current (A)	Part number
0.5	Y 307 082 01
1/2	Y 307 082 02
1	Y 307 082 03
1.5	Y 307 082 04
1 1/2	Y 307 082 05
2	Y 307 082 06
2.5	Y 307 082 29
2 1/2	Y 307 082 30
3	Y 307 082 07
3 1/2	Y 307 082 31
4	Y 307 082 35
5	Y 307 082 08
5.5	Y 307 082 33
6	Y 307 082 17
7.5	Y 307 082 09
7 1/2	Y 307 082 10
10	Y 307 082 11
15	Y 307 082 12
17	Y 307 082 34
20	Y 307 082 13
25	Y 307 082 14
30	Y 307 082 15
35	Y 307 082 16
40	Y 307 082 18
50	Y 307 082 19
60	Y 307 082 20
70	Y 307 082 21
75	Y 307 082 22
80	Y 307 082 23
90	Y 307 082 24
100	Y 307 082 25
120	Y 307 082 26
125	Y 307 082 27
150	Y 307 082 28
R	Y 307 082 32

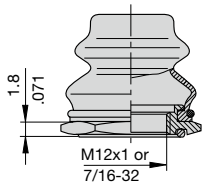
Plug-in screw terminal,
bent at 45° inwards (2 pcs needed per unit)
Y 307 187 02 terminal silver plated
Y 304 508 02 Phillips screw 6-32 UNC-2Ax4.8 (MS 51957-25)
Y 304 509 01 split washer (MS 35338-136)

Plug-in blade terminal (2 pcs needed per unit)
Y 307 202 02 P10 terminal silver plated

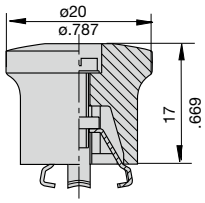
Plug-in/pull-out screw terminals with socket,
bent at 45° inwards
X 222 173 11 terminals silver plated

Plug-in/pull-out wire wrap terminals with socket
X 222 174 12 terminals gold plated

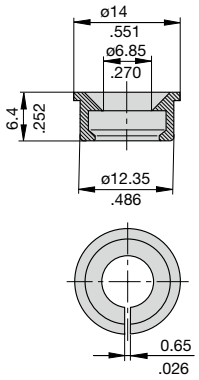
Splash cover/hex nut assembly with O ring (IP66 and IP67)
(approved to VG 95345, part 23)
X 200 801 03 matt black finish nut M12x1x1.8, black cover
X 200 801 08 nickel plated nut M12x1x1.8, transparent cover
X 200 801 09 matt black finish nut 7/16-32x1x1.8, black cover
X 200 801 10 matt black finish nut 7/16-32x1x1.8, transparent cover
X 200 801 12 with blackened nut and transparent cover



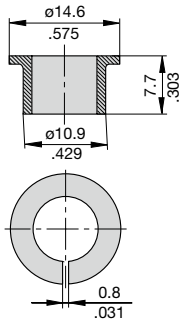
Actuator extension (black) to be fitted on the push button
(approved to VG 95345, T23)
X 200 803 01



Identification collar to be snapped on the push button
Y 307 004 01 black
Y 307 004 02 white
Y 307 004 03 red
Y 307 004 04 green
Y 307 004 05 blue



Lock out ring to block the push button in OFF position
Y 307 005 01 red
Y 307 005 02 black



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