

Model ISS-102

two-channel intrinsically-safe switch, din rail mount, options include switch only (-DCS), single latching output (-LC), or multi-function controller (-MC)



The ISS-102

SymCom's Model ISS-102 two-channel, intrinsically-safe switch is designed for multiple uses including a pump-up/pump-down (latching) controller or two-channel switch. Two LEDs indicate the state of the intrinsically-safe inputs and output relays and user-selectable options are available including a variable resistance threshold for float inputs. The ISS-102 enclosure is surface mountable but is also compatible with DIN rail (35mm).

-LC Each input channel is active when the corresponding switch is closed. When the lag input (CH2) is activated, the output closes. Applying latching logic, the output contact remains closed until the lead (CH1) and the lag (CH2) inputs are deactivated. Sensitivity is fixed at 100kOhms with a debounce time delay of 2 seconds.

-DCS This dual-channel switch has a debounce delay feature of 0.5 seconds. Resistance probes or switches can be used on its inputs. Two LEDs illuminate the output state of either form A relay. Sensitivity is fixed at 100kOhms with a debounce time delay of 0.5 seconds.

-MC By selecting the proper functionality through the dip switches, you can define a pump-up or pump-down, single or dual channel non-latching switch. The sensitivity adjustment (4.7k-100kOhms) allows you to define the input impedance at which the output relays (one form A & one form C) will change state, with a debounce time delay of 0.5 or 2 seconds.

Available Models:

- ISS-102A-LC (Latching Controller)
- ISS-102AA-DCS (Dual Channel Switch)
- ISS-102ACI-MC (Multi-function Controller)
- ISS-102C-M-LC (MSHA* evaluated)
- ISS-102CCI-M-MC (MSHA* evaluated)

* Mine Safety and Health Administration

Features

- Compact design
- Finger-safe terminals
- DIN rail or surface mountable
- LED state indicator
- 2 input channels

Specifications

Supply Voltage	120VAC
Relay Output Rating	
General Purpose.....	5A @120VAC
Pilot Duty	180VA @120VAC, C150
Relay Contact Life (Electrical)	100,000 cycles min. @ rated load
Relay Contact Life (Mechanical)	10,000,000 cycles
Debounce Time	0.5 or 2 seconds
Operating Temperature	-20° to 55°C
Weight	9 oz.
Maximum Input Power	2 W
Wire range	12 to 20 AWG
Recommended Terminal Torque ..	3.5 to 4.5 in.-lbs. (max. 6 in.-lbs.)
Provides intrinsically-safe circuits in the following locations:	Division I and II Class I, Groups A,B,C,D; Class II, Groups E,F,G; and Class III

Entity Parameters	$V_{OC} = 16.8V$	$P_o = \frac{V_{OC} * I_{sc}}{4}$
	$I_{sc} = 1.2mA$	4
	$L_a = 100mH$	
	$C_a = 0.39uF$	

Standards Passed

Electrostatic Discharge (ESD)	IEC 61000-4-2, Level 3, 6kV contact, 8kV air
Radio Frequency Immunity (RFI)	IEC 61000-4-3, Level 3, 10V/m
Fast Transients.....	IEC 61000-4-4, Level 3, 4kV input power
Safety Mark	UL913 Sixth Edition
(except Models ISS-102C-M-LC & ISS-102CCI-M-MC which have been evaluated by MSHA)	

Output Replay Type:

ISS-102A-LC	One Form A
ISS-102AA-DCS	Two Form A
ISS-102ACI-MC.....	One Form A & One isolated Form C
ISS-102C-M-LC.....	One Form C
ISS-102CCI-M-MC	Two Form C (one isolated)