



Single Input Device (SID) / Single Input/Output Device (SIOD)

A FireFinder™ compatible product

PDS201-0300

Description

The SID/SIOD are addressable loop devices designed for use on an Apollo XP95 or Discovery protocol to provide the user with a single monitored input. The SIOD has the added advantage of a voltage free relay output.

Both SID and SIOD are available in a DIN rail chassis or housed in an enclosure. The device is easy to install and provides access for termination of field wiring of up to 2.5mm².

The SID/SIOD input can be configured to respond to an 'Alarm', 'Fault' or 'Isolate' input condition. The input is monitored for open or short circuit, and conditioned with debounce circuitry for enhanced noise rejection. Each input is also protected from high transient voltages.

On board status indication is provided for the SID/SIOD. These are generally used for commissioning purposes and a facility is provided to deactivate this feature during normal operation to reduce the current draw on the system when the device is active.

The SID/SIOD is Loop Powered. The SIOD utilises low powered relay to reduce the overall current draw during operation.

Technical

Input Interface

The inputs are monitored for both open and short circuit. The resistor value used to achieve this monitoring function, are 20k End-of-Line and 4.7k ohm In-Line. The device has an "Input Operated" status indicator.

Device Addressing

Each SID/SIOD installed must be correctly addressed using SW1, the 8-way DIP switch found on the circuit board. 126 addresses are available. Switch 1 to 7 sets the address of the device.

Input Resistance	Status	Analogue Value
< 500 ohms	S/C fault	4
500 – 15k	Switch closed	64
15 – 30 k	Switch opened	16
> 30 k	O/C fault	4

Chart showing the relationship of the Device Analogue value to input resistance

Output Interface (SIOD only)

The device output is relay driven. The contact for the relay output is rated at 1A @ 24VDC. Normally open or close contact options are available. The output has an "Output Operated" status indicator.

The relay contacts can be used to switch 1A @ 24VAC, providing the ac voltage is floating. It is strongly recommended that the ac voltage is not referenced to earth; otherwise corruption of the loop communications data may result.

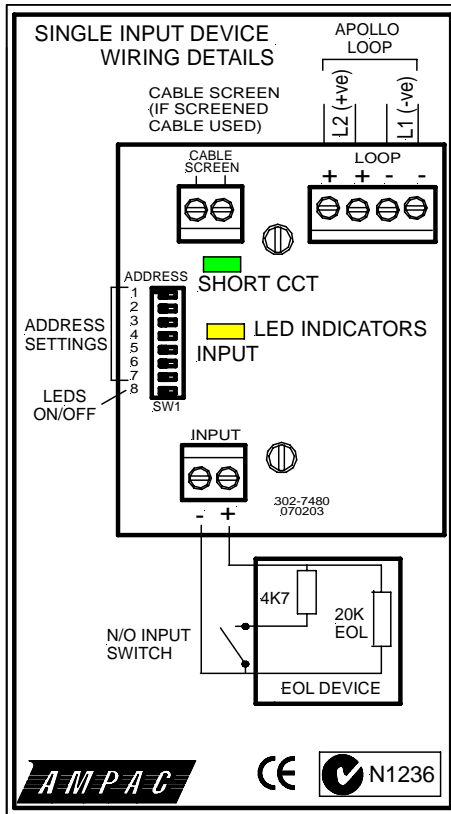
Loop Powered Device

The SID/SIOD is designed to operate on the Apollo loop and derive power from the loop.

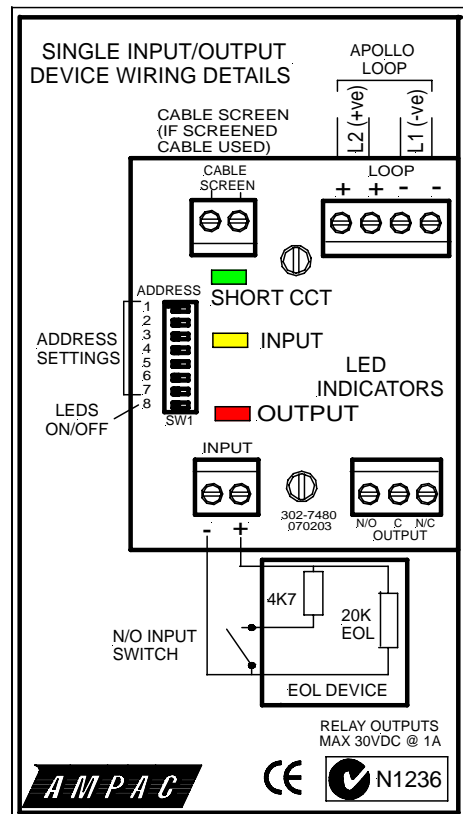
To reduce loop loading, turn off all visual indication by selecting position 8 of the DIP switch SW1 to 'OFF'. SIOD has 'voltage free' output.

Status Indication

Function	Colour	Mode	Description
Input	Yellow	Steady	Input is active
Input	Yellow	Flashing	Input is in fault
Output	Red	Steady	Output is active
SCI / Poll	Green	Flashing	Device is being polled
SCI / Poll	Green	On	Loop Short Circuit detected



Internal layout of the Single Input Device



Internal layout of the Single Input/Output Device

Applications

- Status of electric and diesel pumps
- Tank status indication
- Flow-switch testing and solenoid control
- Damper control and indication
- Fire fan control and indication
- Valve monitor

Specification

	LED's ON		LED's OFF	
	SID	SIOD	SID	SIOD
Quiescent Current (mA)	1.82	1.74	1.80	1.71
INPUT ON	2.37	2.13	2.12	1.84
OUTPUT ON	-	6.45	-	6.16
Total Current Draw	2.37	6.84	2.12	6.29
Size (mm)	Enclosed		DIN Rail	
Length	132		77	
Width	82		57	
Depth	55		40	
Cable entry	8 drillouts		N/A	
Enclosure	Grey ABS		N/A	
IP Rating	IP 55		N/A	

Item Number	SID	SIOD
Enclosed	201-0300	201-0301
DIN Rail Mounted	201-0350	201-0351
EOL Devices	4210-0001 (20 pieces per pack)	