



# 1-895

## Vibration Switch



### Applications

- Industrial Fans
- Compressors
- Centrifugal Pumps
- Motors
- Cooling Towers

### Features

- Dual Alarms
- 3-digit LCD display
- 30-second start-up trip delay, prevents false alarms
- 4-20 mA output
- Velocity or Displacement response

### Description

The 1-895 is a versatile multi-purpose Vibration Switch. It features a built-in accelerometer and solid state electronics. The 1-895 is available in a variety of ranges.

The 1-895 constantly monitors the vibration levels on critical machinery and provides timely feedback in the event of machine breakdown. There is a 30-second monitor start-up delay that is initiated by the application of power or the grounding of the start input.

The delay does not begin until the start input is released. The current vibration level is displayed on a 3-digit LCD, and output on a proportional 4-20 mA current loop. The alarm levels are set by two front-panel push-buttons and the display. Two alarm indicators are present and indicate when an alarm level is exceeded. The corresponding output is also enabled. The alarms are latched and must be reset at the 1-895 or via a remote alarm reset input.

Monitoring Systems



# 1-895 Vibration Switch

## Performance Specifications

### Vibration Range (See ordering guide)

<b>Velocity:</b>	inches per second (ips), peak
<b>Acceleration:</b>	g's, peak
<b>Displacement:</b>	mils, peak-peak
<b>Frequency Range:</b>	5 Hz to 500 Hz $\pm$ 3 dB (internal sensor)
<b>Alarm Setpoints:</b>	User programmable 0 - full scale
<b>Alarm Outputs:</b>	Dual alarm relays are isolated from system electronics
<b>Analog Output:</b>	4-20 mA current loop proportional to the full scale output
<b>Alarm reset / start inputs:</b>	External inputs must be shorted to return to activate
<b>Display:</b>	3-digit LCD display
<b>Power:</b>	18-30 VDC @ 125 mA
<b>Temperature Range</b>	
<b>Operating:</b>	0°F to +185°F (-18°C to +85°C)
<b>Storage:</b>	-67°F to +185°F (-55°C to +85°C)
<b>Humidity:</b>	0 to 95% relative humidity non-condensing

### I/O Connections

<b>Power Connections:</b>	+24 VDC -Return (24 VDC)
<b>Analog Output:</b>	4-20 mA+ 4-20 mA-
<b>Control Inputs:</b>	Start Input Reset Input
<b>Alarms:</b>	1 Out - 1 Out + 2 Out - 2 Out +

## Ordering Information

In keeping with CEC's policy of continuing product improvement, specifications may be changed without notice.

ORDERING GUIDE		P/N 1-895 -			
		A	B	C	C
<b>A</b>	<b>SENSOR INPUT TYPE</b>				
	0 = Internal Sensor				
	Remote Sensor Options				
	1 = 100 mV/g constant current (use with CEC model 4-160)				
	2 = 100 mV/ips constant current (use with CEC model 4-161)				
	3 = 100 mV/ips velocity coil				
<b>B</b>	<b>RELAY TYPE (Solid state, Optically isolated)</b>				
	0 = DC contact rating is 3 to 60 VDC @ 1 Amp 1 = AC contact rating is 12 to 240 VAC @ 1 Amp				
<b>C</b>	<b>OUTPUT TYPE (Full Scale Range &amp; Unit of Measure)</b>				
	Displacement	Velocity	Acceleration	Velocity (Metric Units)	
	01 = 0-5 mils, pk-pk	10 = 0-0.5 ips, peak	21 = 0-5 g's, peak	31 = 3-40 mm/s, peak	
	02 = 0-10 mils, pk-pk	11 = 0-1 ips, peak	22 = 0-10 g's, peak	32 = 6-80 mm/s, peak	
	03 = 0-20 mils, pk-pk	12 = 0-2 ips, peak	23 = 0-25 g's, peak		
	04 = 0-150 mils, pk-pk	13 = 0-5 ips, peak	25 = 0-5 g's, rms		
	05 = 0-100 mils, pk-pk	14 = 0-10 ips, peak	26 = 0-10 g's, rms		
		15 = 0-1.5 ips, rms			
		16 = 0-3 ips, rms			

NOTE: Special configurations can be accommodated. Please consult the factory for assistance.

Example: P/N 1-895 - 0 0 1 2

The example unit is housed in an explosion proof enclosure. This switch has an internal sensor, and DC relay contacts. The display and 4-20 mA output are scaled for 0 to 2 ips, peak velocity.

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## Hazardous Approvals

CSA C/US Class I, Division 2, Groups A, B, C and D T5

ATEX EExd IIC T5

