

Soliphant® Vibration Rod Bulk Solids Level Switches

Overview

The Endress+Hauser Soliphant series is a robust point level switch for use with fine-grained or coarse-grained, non-fluidized bulk solids. The FTM20's design has a wide range of applications and allows for installation in any orientation, making it useful for indication of full, demand, or empty status.

A piezoelectric drive excites the vibrating rod of the Soliphant FTM20 to its resonance frequency. If the medium covers the vibrating rod, the rod's vibrating amplitude changes (the vibration is damped). Soliphant's electronics compare the actual amplitude with a target value and indicate whether the vibrating rod is vibrating freely or whether it is covered by the medium.

Features

- No calibration: easy commissioning (plug and play)
- Insensitive to build-up: maintenance-free operation
- No mechanically moving parts: no wear, long operating life
- Sensor material 316L: resists abrasion even from coarse building materials
- Available with either a polyester plastic housing and clear cover that allows for switch status visibility or a rugged aluminum housing with solid cover
- Resistant to external vibration and flow noises
- Available with FM or CSA approval on select models
- Typical applications: cereals, coffee beans, sugar, animal feed, rice, detergents, dye powder, chalk, gypsum, cement, sand, plastic granules

Part No. [FTM20-AM23A](#)Part No. [FTM20-DN46A](#)

Soliphant Vibration Rod Bulk Solids Level Switches

Model	Housing Material	Degree of Protection	Insertion Length	Wetted Parts Material	Process Connection	Output	Operating Voltage	Electrical Connection	Application Location	Weight (lb)	Price
FTM20-AM23A	Polyester	IP66 / IP67, NEMA4X	8.86 inches	316L stainless steel	1-1/4 inch male NPT	Switch PNP, 3-wire, N.O./N.C. selectable	10 to 45 VDC	Screw terminals	General Purpose / Non-hazardous	4.75	\$673.00
FTM20-AN23A					1-1/2 inch male NPT					5	\$673.00
FTM20-AM43A					1-1/4 inch male NPT	DPDT 6A relay	19 to 253 VAC, 19 to 55 VDC			4.85	\$709.00
FTM20-AN43A					1-1/2 inch male NPT					5.15	\$709.00
FTM20-CM26A	Aluminum				1-1/4 inch male NPT	Switch PNP, 3-wire, N.O./N.C. selectable	10 to 45 VDC		General Purpose, CSA C/US	5.5	\$715.00
FTM20-CN26A					1-1/2 inch male NPT					5.8	\$715.00
FTM20-CM46A					1-1/4 inch male NPT	DPDT 6A relay	19 to 253 VAC, 19 to 55 VDC			5.6	\$751.00
FTM20-CN46A					1-1/2 inch male NPT					5.5	\$751.00
FTM20-DM26A					1-1/4 inch male NPT	Switch PNP, 3-wire, N.O./N.C. selectable	10 to 45 VDC		FM DIP+CSA DIP Cl.II,III Div. 1+2 Gr. E-G, zone 20.21	5	\$866.00
FTM20-DN26A					1-1/2 inch male NPT					5.4	\$866.00
FTM20-DM46A					1-1/4 inch male NPT	DPDT 6A relay	19 to 253 VAC, 19 to 55 VDC			5.1	\$902.00
FTM20-DN46A					1-1/2 inch male NPT					5.6	\$902.00



Note: Check the chemical compatibility of the sensor's wetted parts with the medium to be measured.

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Soliphant Vibration Rod Bulk Solids Level Switch Resources

Model	Drawing Link	Vendor Technical Specifications	Vendor Operating Instructions
FTM20-AM23A	PDF	PDF	PDF
FTM20-AN23A	PDF		
FTM20-AM43A	PDF		
FTM20-AN43A	PDF		
FTM20-CM26A	PDF		
FTM20-CN26A	PDF		
FTM20-CM46A	PDF		
FTM20-CN46A	PDF		
FTM20-DM26A	PDF		
FTM20-DN26A	PDF		
FTM20-DM46A	PDF		
FTM20-DN46A	PDF		

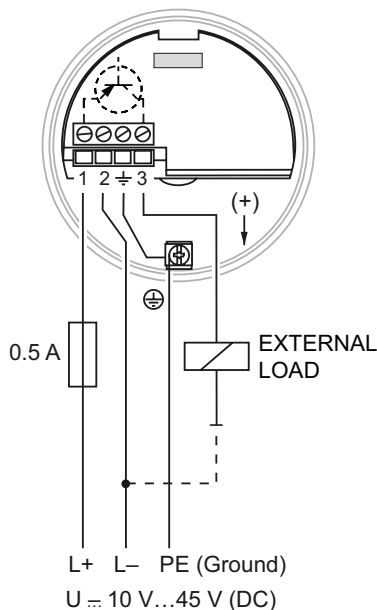
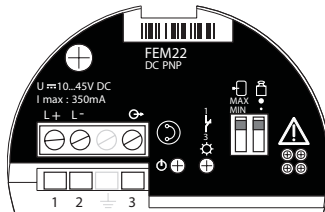


For a variety of wire and cable options see our website
www.AutomationDirect.com

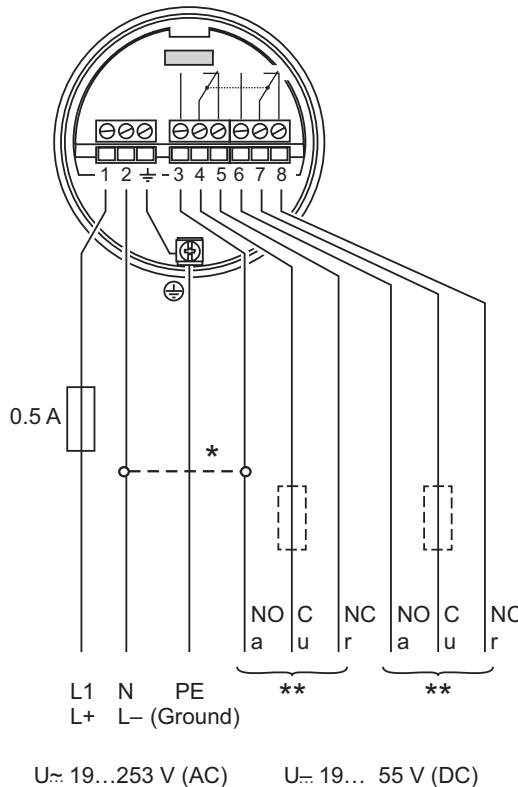
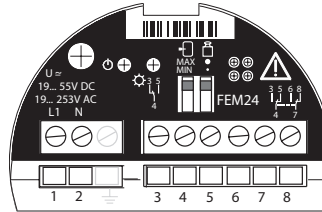
Note: For additional wiring, specifications and installation information refer to the additional Vendor Specs and Operating Instructions PDFs.

Wiring Information

3-wire PNP Models



DPDT Relay Models



* When jumpered, the relay output works with NPN logic.

** Relay outputs:

• Loads switched via 2 floating change-over contacts.

• $I = \text{max. } 6 \text{ A}$, $U = \text{max. } 253 \text{ V}$; $P = \text{max. } 1500 \text{ VA}$, $\cos = 1$, $P = \text{max. } 750 \text{ VA}$, $\cos > 0.7$;

• $I = \text{max. } 6 \text{ A}$ to 30 V , $I = \text{max. } 0.2 \text{ A}$ to 125 V .

• The following applies when connecting a functional extra-low voltage circuit with double insulation as per IEC 1010: Sum of voltages of relay output and power supply max. 300 V