GM-17
Gamma-detecting Point Level Switch

Application Area
The GM-17 Level Switch uses Geiger-Mueller tube technology to provide point level measurement in difficult applications including:

- High and low point level indication of a variety of vessels, bins, and silos
- Plugged chutes

Advantages
Recognizable benefits of the GM-17 include:

- Single point or dual point calibration
- Up to six Geiger-Mueller tubes for maximum sensitivity
- Polyester powder coating and o-ring seal for use in harsh environments

Function
The GM-17 uses multiple Geiger-Mueller tubes to monitor radiation passing through a vessel. When the process material in the vessel blocks the gamma radiation, the detection drop is used to energize or (de-energize) a relay. A second relay may be used as a redundant process indicator or for alarm purposes.

Technical Data

Power Requirements
- AC 110 or 220 VAC, ±10%, 50 ... 60 Hz., 4 VA max, power consumption
- DC 10 ... 30 VDC (< 100 mV, 1 ... 1000 Hz ripple), 4 VA max. power consumption
- Wire size 1.63 ... 0.64 mm (14 ... 22 AWG) per local electrical code

Ambient Conditions
- Temperature -40 … +70 °C (-40 … 158 °F)
- Humidity 0-95% non-condensing
- Vibration Tested to IEC 68-2-6, IEC 68-2-27, and IEC 68-2-36

Relay Output
- Process Alarm 6A at 240 VAC, 6A at 24 VDC, ¼ HP at 120 VAC (SPDT Form C)
- Failsafe/Process Alarm 6A at 240 VAC, 6A at 24 VDC, ¼ HP at 12VAC (SPDT Form C)

Sensor Geiger Mueller Tubes (2 standard, up to 6 total)

Weight 3.2 kg (7 lbs.)

Materials
Housing Cast Aluminum ASTM A359
Housing Coating Polyester powder coating (Standard) or PVC coating

Housing Versions
The housing carries a NEMA 4X (IP 66) rating and features two ¾" NPT conduit entries. Options for ½" NPT or M20 conduit entry adapters are available.

Electronic Versions
Relay Output
- Process Alarm 6A at 240 VAC, 6A at 24 VDC, ¼ HP at 120 VAC (SPDT Form C)
- Failsafe/Process Alarm 6A at 240 VAC, 6A at 24 VDC, ¼ HP at 12VAC (SPDT Form C)
- Wire Size 1.63 ... 0.64 mm (14 ... 22 AWG)
Specifications Sheet

Approvals
CSA, FM, GOST-R
Class I, Div I, GR. B, C, D; Class II, Div I, GR. E, F, G; Class III; T6; Ta= -40°C to +70°C

ATEX
11 2 G Ex d IIB+Hz T6, Ta= -40°C to +70°C
11 2 D, T80°C, IP66

Operation
The relay operation can be energized by a radiation level above or below a given amount. The radiation switch point level is determined by two rotary switches located at the top of the PC board. The relay operation is determined by a jumper near the center of the PC board. There is also a second relay which can be configured as a second process relay, or a “fail safe” relay in order to provide an indication of proper operation.

Electrical Connection
Terminals
1  L1  (AC input power)
2  L2/N (AC input power)
3  DC+  (DC input power)
4  DC-  (DC input power)
5  Relay 1: N/O
6  Relay 1: COM
7  Relay 1: N/C
8  Relay 2: N/O
9  Relay 2: COM
10 Relay 2: N/C
11 Not used

Relay 2 can be configured as process or diagnostic

Dimensions

Information
You can find additional information about VEGA product offerings from our home page, www.vega-americas.com. Brochures, operating instructions, quick reference guides, specification sheets, and drawings are also available from the Downloads section of our homepage.

Device Selection
The Downloads section of our home page, www.vega-americas.com provides application data sheets so you can select the measuring principle or product for your particular application.

Contact
Please call 1-513-272-0131, Monday through Friday, 8:00 A.M.-5:00 P.M., EST (Eastern Standard Time) if you have any questions. For emergencies after hours, call the number above and follow the voice mail instructions.

All information is subject to change without notice.