

Virtu™ Ultrasonic Sensors



Hyde Park's low cost Virtu VM1 and VM18 ultrasonic proximity sensors revolutionized the industry by making superior ultrasonic technology accessible.

Priced from \$89 to \$139, these powerful sensors feature a sensing range of 50 mm – 500 mm (2" – 20").

Now Hyde Park is expanding the Virtu product line with the new Virtu 30 long-range ultrasonic proximity sensor.

Capable of sensing up to 1 meter (39"), the new Virtu 30 ultrasonic proximity sensor makes long-range ultrasonic sensing affordable. This versatile, powerful sensor incorporates the same advanced ultrasonic technology as more expensive sensors, including a discriminating microprocessor program, but at a more economical price. Available for less than \$200, Virtu 30 is ideal for many long-range OEM applications as well as material handling, automotive and packaging applications.

While doubling the sensing distance of the Virtu VM1 and VM18 sensors, Virtu 30 offers many of the same great benefits:

- Longer sensing range, 100 mm – 1 m (4" – 39")
- Teach-in window capability
- Tamperproof, removable pushbutton teaching accessory
- Ability to sense changing materials, colors and shapes without downtime or recalibration
- Unfailing repeatability and reliability in harsh environments
- Sinking (NPN) or sourcing (PNP) output
- Discrete, analog or dual level output
- Quick-disconnect configuration
- NEMA 4X and IP67 ratings
- CE certification

Virtu™ Ultrasonic Sensors



	VM1 and VM18 - Proximity Output	VM1 and VM18 - Dual Level
Sensing Characteristics		
<i>Sensing Range</i>	50 mm to 500 mm (2" to 20")	50 mm to 500 mm (2" to 20")
<i>Sensing Frequency</i>	300 kHz	300 kHz
Power Requirements		
<i>Supply Voltage</i>	12-24 VDC	12-24 VDC
<i>Supply Current</i>	40 mA (excluding load)	40 mA (excluding load)
Environmental		
<i>Operating Temperature Range</i>	-30°C to 70°C (-22°F to 158°F)	-30°C to 70°C (-22°F to 158°F)
<i>Environmental Protection Ratings</i>	NEMA 4X, IP67	NEMA 4X, IP67
Construction		
<i>Barrel Dimensions (Ø x L)</i>	18 mm x 77.62 mm (0.70" x 3.06")	18 mm x 77.62 mm (0.70" x 3.06")
<i>Flat Profile Dimensions (W x H x D)</i>	43.7 mm x 18 mm x 59.7 mm (1.72" x 0.70" x 2.35")	43.7 mm x 18 mm x 59.7 mm (1.72" x 0.70" x 2.35")
<i>Housing Material</i>	VM1 = Valox®; VM18 = PBT	VM1 = Valox®; VM18 = PBT
<i>Transducer</i>	Glass Epoxy	Glass Epoxy

Output Type (by Part Number)			Output Type (by Part Number)		
	Cable	Quick Disconnect		Cable	Quick Disconnect
<i>PNP Sourcing NO</i>	VM1-PNO	VM1/18-PNO-Q	<i>Pump-in Normally Open</i>	VM1-PPI0000	VM1/18-PPI0000-Q
<i>PNP Sourcing NC</i>	VM1-PNC	VM1/18-PNC-Q	<i>Pump-in Normally Closed</i>	VM1-NPI0000	VM1/18-NPI0000-Q
<i>NPN Sinking NO</i>	VM1-NN0	VM1/18-NN0-Q	<i>Pump-out Normally Open</i>	VM1-PP00000	VM1/18-PP00000-Q
<i>NPN Sinking NC</i>	VM1-NNC	VM1/18-NNC-Q	<i>Pump-out Normally Closed</i>	VM1-NP00000	VM1/18-NP00000-Q

*The following models are available by adding the indicated digits to the part number
 Analog maximum: 1000, i.e., VM1-VD-1000
 Hold on Loss of Echo – analog minimum on power-up: 2000 (i.e., VM1-CA-2000-Q)
 Hold on Loss of Echo – analog maximum on power-up: 3000 (i.e., VM1-VA-3000-Q)



VM1 and VM18 - Analog Output	Virtu 30 and Virtu 80 - Proximity Output	Virtu 30 and Virtu 80 - Analog Output
50 mm to 500 mm (2" to 20") 300 kHz	100 mm to 1000 mm (4" to 39") 180 kHz	100 mm to 1000 mm (4" to 39") 180 kHz
15-24 VDC 40 mA (excluding load)	12-24 VDC 60 mA (excluding load)	15-24 VDC 70 mA (excluding load)
-30°C to 70°C (-22°F to 158°F) NEMA 4X, IP67	-30°C to 70°C (-22°F to 158°F) NEMA 4X, IP67	-30°C to 70°C (-22°F to 158°F) NEMA 4X, IP67
18 mm x 77.62 mm (0.70" x 3.06") 43.7 mm x 18 mm x 59.7 mm (1.72" x 0.70" x 2.35") VM1 = Valox®; VM18 = PBT Glass Epoxy	30 x 1 x 95.26 mm (1.18" x 3.75") 80 x 65 x 34 mm (3.15" x 2.55" x 1.33") PBT Valox 553 Glass Epoxy	31 x 1 x 95.26 mm (1.18" x 3.75") 80 x 65 x 34 mm (3.15" x 2.55" x 1.33") PBT Valox 553 Glass Epoxy

Voltage	Cable	Quick Disconnect	Virtu 30	Quick Disconnect	Virtu 30	Quick Disconnect
<i>Auto Slope</i>	VM1-VA*	VM1/18-VA-Q*	PNP Sourcing NO	XX6V3A1PAM12	0-10 VDC	XX9V3A1F1M12
<i>Direct Slope</i>	VM1-VD*	VM1/18-VD-Q*	PNP Sourcing NC	XX6V3A1PBM12	4-20 mA	XX9V3A1C2M12
<i>Inverse Slope</i>	VM1-VI*	VM1/18-VI-Q*	NPN Sinking NO	XX6V3A1NAM12	Virtu 80	Quick Disconnect
Current	Cable	Quick Disconnect	NPN Sinking NC	XX6V3A1NBM12	0-10 VDC	XX9D1A1F1M12
<i>Auto Slope</i>	VM1-CA*	VM1/18-CA-Q*	Virtu 80	Quick Disconnect	4-20 mA	XX9D1A1C2M12
<i>Direct Slope</i>	VM1-CD*	VM1/18-CD-Q*	NPN Sinking NO	XX8D1A1NAM12		
<i>Inverse Slope</i>	VM1-CI*	VM1/18-CI-Q*	PNP Sourcing NO	XX8D1A1PAM12		

**Enhanced versions are ordered by changing the four digits in the model number as follows:
 Default: Analog Minimum on Loss-of-Echo and at Power Up: VM1-VD0000-Q
 Analog Maximum on Loss-of-Echo and at Power Up: VM1-VD1000-Q
 Hold on Loss-of-Echo and Analog Minimum at Power Up: VM1-VD2000-Q
 Hold on Loss-of-Echo and Analog Maximum at Power Up: VM1-VD3000-Q



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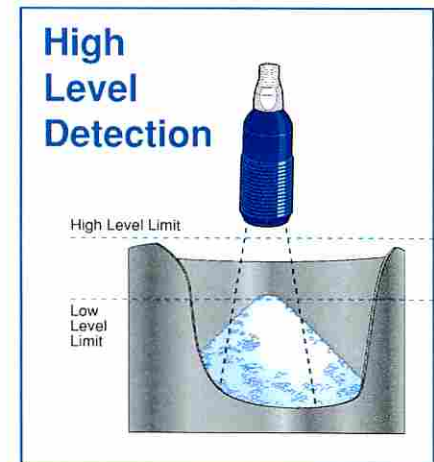
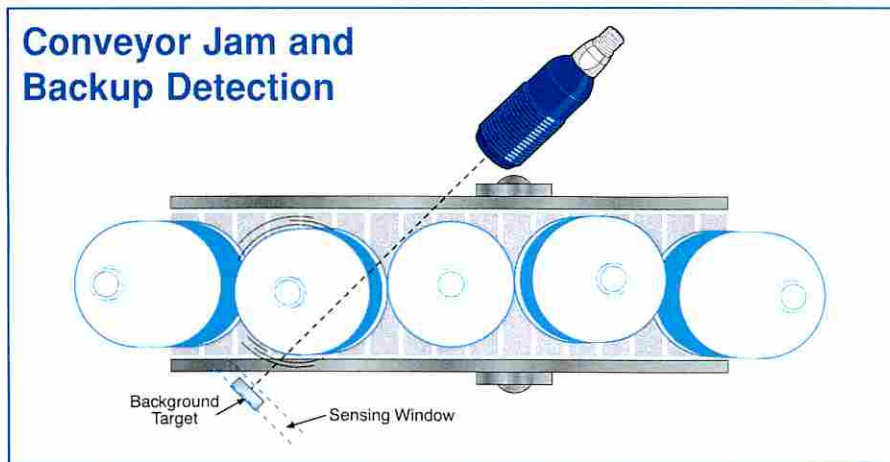


Virtu™ Applications & Accessories

Applications

With the Virtu Ultrasonic sensors, users and OEMs can benefit from the advantages of ultrasonic technology where once only photoelectrics were used due to expense or distance constraints. Irrespective to color, opacity or material, the Virtu sensors are able to detect objects up to 1 m (39") away. Furthermore, the various Virtu sensors make it easy to mount in normally tough-to-install areas.

- Conveyor systems
- Assembly lines
- Robotic applications
- Tank filling applications



Accessories

PB100

Removable pushbutton teaching device



XSZCD101Y*

Straight
2 m (6.6') PVC cable



9006PA18

18 mm Bright-plated steel mounting brackets



PM100 - 02

Power and output conversion device for DC sensors



XSZCD111Y*

Right angle
2 m (6.6') PVC cable



9006PA30

30 mm Bright-plated steel mounting brackets



XUZC24

24 mm diameter reflector



*5 m (16.4') cables available