

Designed for Dirt

No Filters

Never Lose Suction

NEW PRODUCT - REPLACEMENT FOR VDS-1000(N) SERIES

Electronic Vacuum Switch and Sensor with Digital Display – VDS Series

Ideal for applications:

- Robotic control
- Pick and place
- Part present detection
- Material handling
- Monitoring vacuum
- Leak testing



List Price: \$135.50

The VDS Series compact all-in-one output device and digital gauge reduces the number of components in your system. With two switch outputs and one analog output it's possible to monitor the high and low limits for vacuum control and system conditions. In pick and place and robotic material handling applications, use the first switch for part present so that the robot or tooling can move, and the second switch to signal the working vacuum level has been achieved.

The analog output allows software control over the entire vacuum and pressure range with the ability to track system vacuum/pressure changes in real time. The switches are highly flexible due to selectable output functions such as switching point hysteresis and window comparator.

Switch Options:

- 2 Output types – 2 NPN and 1 Analog, 2 PNP and 1 Analog
- 2 Inlet pressure ports – 1/8" NPT or G 1/8

Accessory Options:

- Mounting bracket kits – Rear and bottom mount kit, Panel Mount Kit
- 5M cordset with M12, 5-pin female connector with 5M lead wire

Features/Benefits:

- Fully Programmable – simple push button calibration – no tools required
- Full 3 digit display – red LED
- Choice of switched output types – PNP or NPN
- Analog output 1-5 VDC in addition to the switched outputs
- Globally accepted display scales: "Hg, mmHg, PSI, bar, mbar, gf/cm sq, kgf/cm sq, kPa
- Dust and drip proof enclosure to IP65 IEC standards
- 2 ports – back and bottom for easy plumbing and design flexibility
- Economical – standard with M12, 5-pin Quick Disconnect with 1M lead wire
- RoHS compliant

How to Specify:

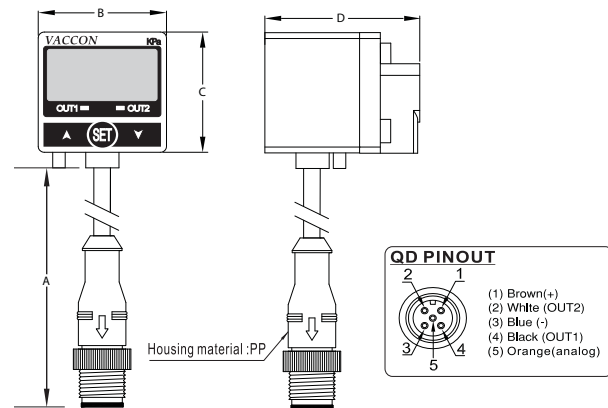
Switch/ Sensor - part number: VDSN (NPN), VDSP (PNP), I-VDSN (NPN), I-VDSP (PNP)

Mounting Bracket Kits - part number: MB (rear and bottom mount brackets)

PMC (panel mount with cover)

Cordset - part number: QDS-12-5F (M12, 5-pin, female connector with 5M lead wire)

VDS Series Digital Switch/ Sensor:

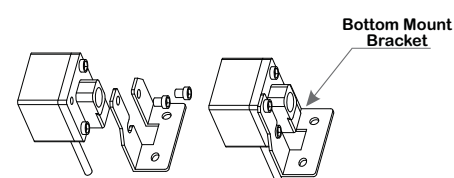
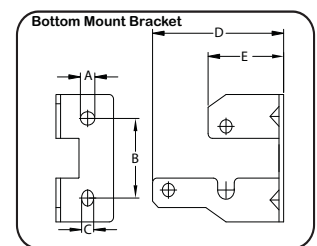
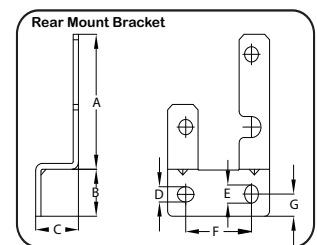
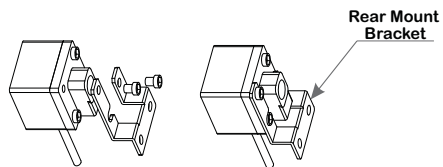


Model Number		A	B	C	D	Weight
VDS(N)(P)	in.	3.28 ft	1.22	1.22	1.44	3.4 oz
I-VDS(N)(P)	mm	1M	31.0	31.0	36.5	95g

Available Mounting Brackets:

MB - Mounting Bracket Kit: Rear & Bottom Mount Brackets

List Price: \$5.25

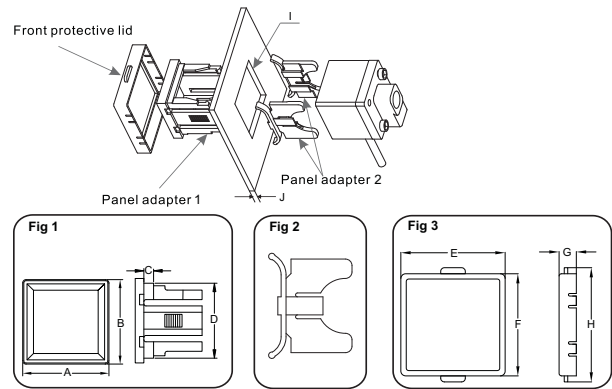


Model Number		A	B	C	D	E	F	G
MB (Rear Mount Bracket)	in.	1.46	0.51	0.51	0.17	0.20	0.78	0.24
	mm	37.1	12.9	13.0	4.2	5.1	20.0	6.1

Model Number		A	B	C	D	E
MB (Bottom Mount Bracket)	in.	0.20	0.98	0.17	1.79	1.03
	mm	5.0	25.0	4.2	45.5	26.2

PMC - Mounting Bracket Kit: - Panel Mount w/ Cover

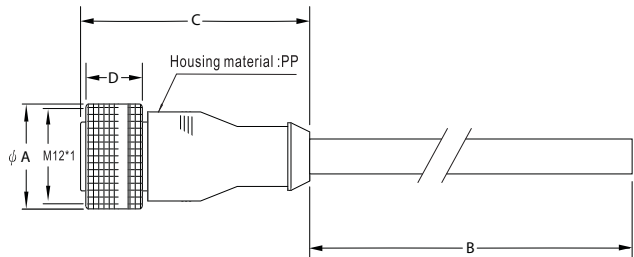
List Price: \$12.50



Model Number		A	B	C	D	E	F	G	H	I	J
PMC (Panel Mount w/ Cover)	in.	1.58	1.58	0.18	1.40	1.67	1.67	0.28	1.87	1.42x1.42 ± .01	≤ .18
	mm	40.0	40.0	4.5	35.5	42.4	42.4	7.0	47.4	36x36 ± 0.3	≤ 4.5

Additional Accessory:

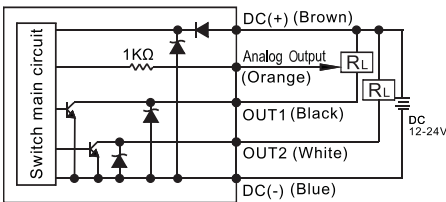
QDS-12-5F Cordset with M12, 5-pin female connector with 5M lead wire. **List Price: \$25.50**



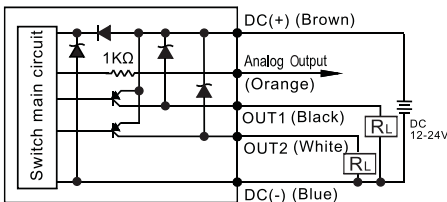
Model Number		A	B	C	D
QDS-12-5F	in.	0.35	16.4 ft	1.26	0.28
	mm	9	5M	32	7

VDS Series Wiring Schematics:

(I-)VDSN
NPN output



(I-)VDSP
PNP output



VDS Series Specifications:

SPECIFICATIONS		(I-)VDSN	(I-)VDSP
Rated pressure range		0.0 ~ -101.3kPa (0 ~ -29.9"Hg)	
Setting pressure range		10.0 ~ -101.3kPa (1.45 PSI ~ -29.9"Hg)	
Withstand pressure		300 kPa (43.5 PSI)	
Fluid		Air, Non-corrosive gases, incombustible gases	
Set pressure resolution	kPa	0.1	
	MPa	—	
	kgf/cm ²	0.001	
	bar	0.001	
	psi	0.01	
	InHg	0.1	
	mmHg	1	
	mmH ₂ O	0.1	
Power supply voltage		12 to 24VDC ±10%, Ripple (P-P) 10% or less	
Current consumption		≤55mA	
Switch output		NPN:open collector 2 outputs Max. load current : 80mA Max. supply voltage: 30VDC Residual voltage : ≤1V (load current 80mA)	PNP:open collector 2 outputs Max. load current : 80mA Max. supply voltage: 24VDC Residual voltage : ≤1V (load current 80mA)
Repeatability(Switch output)		≤±0.2% F.S. ±1digit	
Hysteresis	Hysteresis mode	Adjustable	
	Window comparator mode	Fixed(3 digits)	
Response time		≤2.5ms (chattering-proof function: 24ms, 192ms and 768ms selections)	
Output short circuit protection		Yes	
7 segment LED display		3 1/2 digit LED display (Sampling rate: 5 times/1sec.)	
Indicator accuracy		≤±2% F.S. ±1 digit (ambient temperature: 25 ±3°C)	
Indicator		Green LED (OUT1) Red LED (OUT2)	
Analog output		Output voltage: 1 to 5V ≤±2.5%F.S. (within rated pressure range) Linearity: ≤±1% F.S.	
Environment	Enclosure	IP 65	
	Ambient temp. range	Operation: 0 ~ 50°C, Storage: -20 ~ 60°C (No condensation or freezing)	
	Ambient humidity range	Operation/Storage: 35 ~ 85% RH (No condensation)	
	Withstand voltage	1000VAC in 1-min (between case and lead wire)	
	Insulation resistance	50Mohm min. (at 500VDC , between case and lead wire)	
	Vibration	Total amplitude 1.5mm,10Hz-55Hz-10Hz scan for 1 minute, two hours each direction of X,Y and Z	
	Shock	980m/s ² (100G),3 times each in direction of X,Y and Z	
Temperature characteristic		≤±2% F.S. of detected pressure (25°C) at temp. Range of 0~50°C	
Port size		1/8"NPT,G1/8"	
Lead wire		Oil-resistance cable(0.15mm ²)	
Weight		Approx.*95g(with male connector)	