

Pacbrake PowerHalt 5 Air Intake Emergency Shut-Off Valve is an electronically controlled emergency engine shutdown system which forces engine shutdown by blocking an engine's air intake path. It is available in an automatic engine speed sensing model where shutdown occurs if engine speed exceeds a pre-set speed (or by manual override). Alternatively, a manual activation only configuration is available where an operator or external input will activate emergency engine shut-down

- Reliable and safe emergency shutdown for diesel engines
- Operator friendly automatic operation with manual reset and override
- Aluminum flap and housing for durable seal
- High temperature design for challenging thermal applications
- In compliance with CSA B621-14 & B622-14
- Corrosion tested to ASTM B117-96 hours Salt Fog
- Designed for $18.6G_{RMS}$ vibration ($7.7G_{RMS}$ for 5" bore)
- Robust design – designed to pass 100k+ fatigue cycles, validated to pass 10k fatigue cycles
- IP 67 rated valve enclosure
- Low power consumption with smart control



Applications

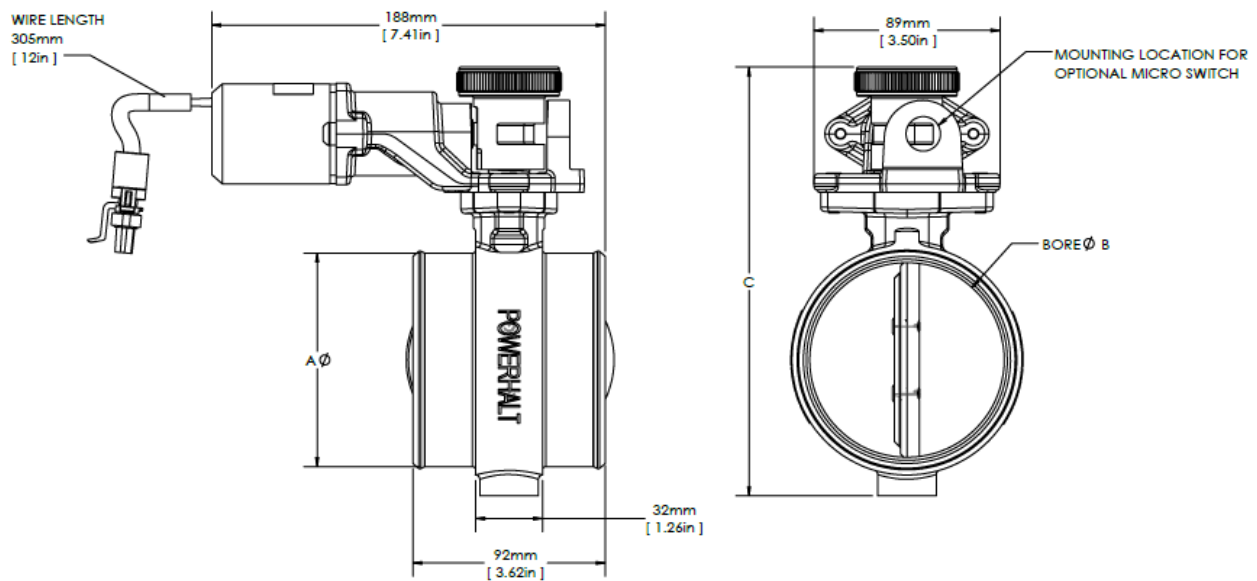
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|---------------------------|----------------|-------------------------|-------------------|
| • Bulk Haulers | • Tankers | • Power Generators | • Drilling Rigs |
| • Grain Processing Plants | • Cranes | • Forklifts | • Work Boats |
| • Refinery Processing | • Vehicles | • Underground Equipment | • Barges |
| • Fueling Vehicles | • Tow Vehicles | • Support Vehicles | • Welders |
| • Pump Trucks | • Fire Trucks | • Vacuum Trucks | • Lighting Trucks |
| • Lighting Units | • Frac Trucks | | |

Valve

Maximum Intake Boost Air Pressure	3.45 bar (gauge) [50 psig]
Continuous Intake Air Temperature	-55°C to +175°C [-67°F to +347°F]
Ambient Temperature Range	-40°C to +120°C [-40°F to +248°F]

Resting Position	Valve open
Activated Position	Valve closed

Standard Mounting Flanges	Hose to Hose
Pipe Sizes Supported	Ø38 mm to Ø140 mm [Ø1.5 in to Ø5.5 in]

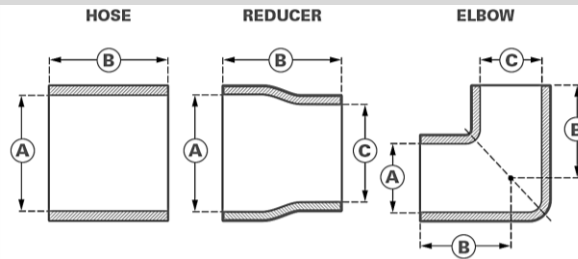


Dimensions			Weight
'A' - Hose Bore Diameter	'B' - Valve Bore Diameter	'C' - Height	
44.5 mm [1.75 in]	35.5 mm [1.40 in]	154 mm [6.06 in]	1.49 kg [3.3 lbs]
51 mm [2.0 in]	42 mm [1.65 in]	154 mm [6.06 in]	1.47 kg [3.2 lbs]
57 mm [2.25 in]	48 mm [1.89 in]	154 mm [6.06 in]	1.45 kg [3.2 lbs]
64 mm [2.5 in]	55 mm [2.17 in]	175 mm [6.89 in]	1.64 kg [3.6 lbs]
70 mm [2.75 in]	61 mm [2.40 in]	175 mm [6.89 in]	1.62 kg [3.6 lbs]
76 mm [3.0 in]	67 mm [2.64 in]	175 mm [6.89 in]	1.59 kg [3.5 lbs]
89 mm [3.5 in]	80 mm [3.15 in]	205 mm [8.07 in]	1.88 kg [4.1 lbs]
102 mm [4.0 in]	93 mm [3.66 in]	205 mm [8.07 in]	1.79 kg [3.9 lbs]
127 mm [5.0 in]	118 mm [4.65 in]	231 mm [9.09 in]	2.17 kg [4.8 lbs]

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PowerHalt Accessories

Hoses


Description
Temperature Rating
Pressure Rating

Silicone Class "A", 4 Ply Polyester Reinforced

-55°C to +175°C [-67°F to +347°F]

Conforms to SAE J20 (20R1 HD SW)

Part Number	Hose Type	Dimensions		
		'A' – Diameter	'B' – Hose Length	'C' – Diameter
C3912	Straight	44.5mm [1.75 in]	76.2 mm [3.0 in]	N/A
C3913	Straight	50.8 mm [2.0 in]	76.2 mm [3.0 in]	N/A
C3914	Straight	57.2 mm [2.25 in]	76.2 mm [3.0 in]	N/A
C3997	Straight	63.5 mm [2.5 in]	76.2 mm [3.0 in]	N/A
C3784	Straight	69.9 mm [2.75 in]	76.2 mm [3.0 in]	N/A
C3828	Straight	76.2 mm [3.0 in]	76.2 mm [3.0 in]	N/A
C3789	Straight	88.9 mm [3.0 in]	76.2 mm [3.0 in]	N/A
C3859	Straight	88.9 mm [3.5 in]	101.6 mm [4.0 in]	N/A
C3792	Straight	101.6 mm [4.0 in]	76.2 mm [3.0 in]	N/A
C3797	Straight	127 mm [5.0 in]	76.2 mm [3.0 in]	N/A
C5009	Straight	139.7 mm [5.5 in]	76.2 mm [3.0 in]	N/A
C4070	Reducer	44.5 mm [1.75 in]	76.2 mm [3.0 in]	38.1 mm [1.5 in]
C3835	Reducer	69.9 mm [2.75 in]	76.2 mm [3.0 in]	44.5 mm [1.75 in]
C3783	Reducer	69.9 mm [2.75 in]	76.2 mm [3.0 in]	63.5 mm [2.5 in]
C3786	Reducer	76.2 mm [3.0 in]	76.2 mm [3.0 in]	69.9 mm [2.75 in]
C3866	Reducer	88.9 mm [3.5 in]	76.2 mm [3.0 in]	63.5 mm [2.5 in]
C3831	Reducer	88.9 mm [3.5 in]	76.2 mm [3.0 in]	69.9 mm [2.75 in]
C3788	Reducer	88.9 mm [3.5 in]	76.2 mm [3.0 in]	76.2 mm [3.0 in]
C3860	Reducer	88.9 mm [3.5 in]	76.2 mm [3.0 in]	82.6 mm [3.25 in]
C3861	Reducer	95.3 mm [3.75 in]	76.2 mm [3.0 in]	88.9 mm [3.5 in]
C3791	Reducer	101.6 mm [4.0 in]	76.2 mm [3.0 in]	88.9 mm [3.5 in]
C3862	Reducer	101.6 mm [4.0 in]	76.2 mm [3.0 in]	95.3 mm [3.75 in]
C3863	Reducer	108 mm [4.25 in]	76.2 mm [3.0 in]	101.6 mm [4.0 in]
C3794	Reducer	114.3 mm [4.5 in]	76.2 mm [3.0 in]	101.6 mm [4.0 in]
C3796	Reducer	127 mm [5.0 in]	76.2 mm [3.0 in]	114.3 mm [4.5 in]
C3864	Reducer	127 mm [5.0 in]	76.2 mm [3.0 in]	120.7 mm [4.75 in]
C3865	Reducer	133.4 mm [5.25 in]	76.2 mm [3.0 in]	127 mm [5.0 in]
C3799	Reducer	139.7 mm [5.5 in]	76.2 mm [3.0 in]	127 mm [5.0 in]
C3832	120° Elbow	69.9 mm [2.75 in]	127 mm [5.0 in]	69.9 mm [2.75 in]
C3857	90° Elbow	76.2 mm [3.0 in]	127 mm [5.0 in]	69.9 mm [2.75 in]
C3834	90° Elbow	88.9 mm [3.5 in]	127 mm [5.0 in]	69.9 mm [2.75 in]
C3829	90° Elbow	88.9 mm [3.5 in]	127 mm [5.0 in]	76.2 mm [3.0 in]

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Clamps

**Description**

Stainless Steel, Constant Tension Gear Clamp, Heavy Duty

Standard

SAE J1508 Type SLHD

Size Range

45 mm to 80 mm [1.75 in to 3.13 in]

Installation Torque

8.5± 0.6 Nm [75 ± 5 in-lbf]

Part Number	SAE Size	Minimum Diameter	Maximum Diameter	Band Width
C3975	262	44.5 mm [1.75 in]	66.7 mm [2.625 in]	15.9 mm [0.625 in]
C3976	312	57.2 mm [2.25 in]	79.4 mm [3.125 in]	15.9 mm [0.625 in]

**Description**

Stainless Steel, Spring Loaded T-Bolt Clamp, Heavy Duty

Standard

SAE J1508 Type SLTB

Size Range

70 mm to 152 mm [2.75 in to 6 in]

Installation Torque

8.5± 0.6 Nm [75 ± 5 in-lbf]

Part Number	SAE Size	Minimum Diameter	Maximum Diameter	Band Width
C3871	60	69.9 mm [2.75 in]	77.8 mm [3.063 in]	19.1 mm [0.75 in]
C3872	68	76.2 mm [3.0 in]	84.1 mm [3.313 in]	19.1 mm [0.75 in]
C3873	76	82.6 mm [3.25 in]	90.5 mm [3.563 in]	19.1 mm [0.75 in]
C3874	84	88.9 mm [3.5 in]	96.8 mm [3.813 in]	19.1 mm [0.75 in]
C3875	92	95.3 mm [3.75 in]	103.2 mm [4.063 in]	19.1 mm [0.75 in]
C3977	96	98.4 mm [3.875 in]	106.4 mm [4.188 in]	19.1 mm [0.75 in]
C3876	102	103.2 mm [4.063 in]	111.1 mm [4.375 in]	19.1 mm [0.75 in]
C3877	104	104.8 mm [4.125 in]	112.7 mm [4.438 in]	19.1 mm [0.75 in]
C3878	116	114.3 mm [4.5 in]	122.2 mm [4.813 in]	19.1 mm [0.75 in]
C3879	124	120.7 mm [4.75 in]	128.6 mm [5.063 in]	19.1 mm [0.75 in]
C3880	136	130.2 mm [5.125 in]	138.1 mm [5.438 in]	19.1 mm [0.75 in]
C3881	140	133.4 mm [5.25 in]	141.3 mm [5.563 in]	19.1 mm [0.75 in]
C3882	148	139.7 mm [5.5 in]	147.6 mm [5.813 in]	19.1 mm [0.75 in]
C3883	154	144.5 mm [5.688 in]	152.4 mm [6.0 in]	19.1 mm [0.75 in]

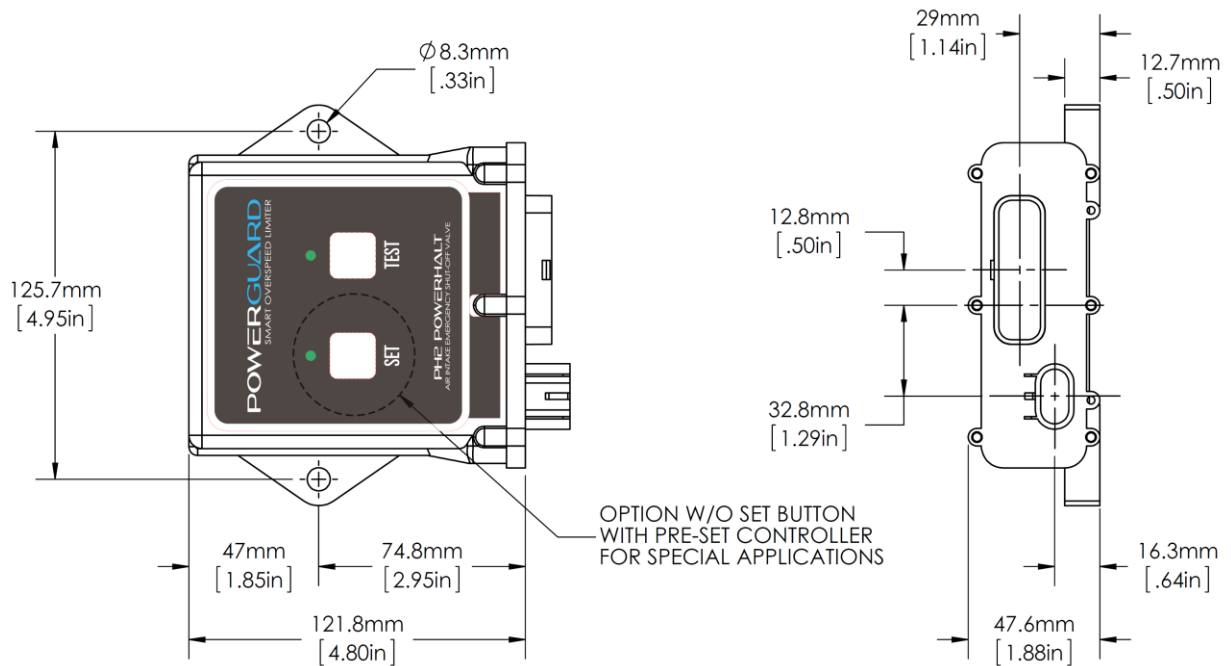
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PowerGuard Automatic Control

PowerGuard Automatic Control monitors engine speed through a gear tooth sensor mounted to the transmission bell housing using an existing auxiliary port or by the drilling and tapping of a new port. The controller has a programmable trip speed – when the programmed trip speed is exceeded, emergency engine shutdown will occur automatically. Emergency shutdown can be activated at any time through a manual override switch.

- Automatically activates after programmable engine trip speed is exceeded
- Manual override from cab/panel mounted switch

Controller



Controller Housing Material Compliance

Controller Voltage

Maximum Relay Rating

Power Consumption

SAE J1455 (-40°C to +85°C [-40°F to +185°F])

12/24 VDC, nominal

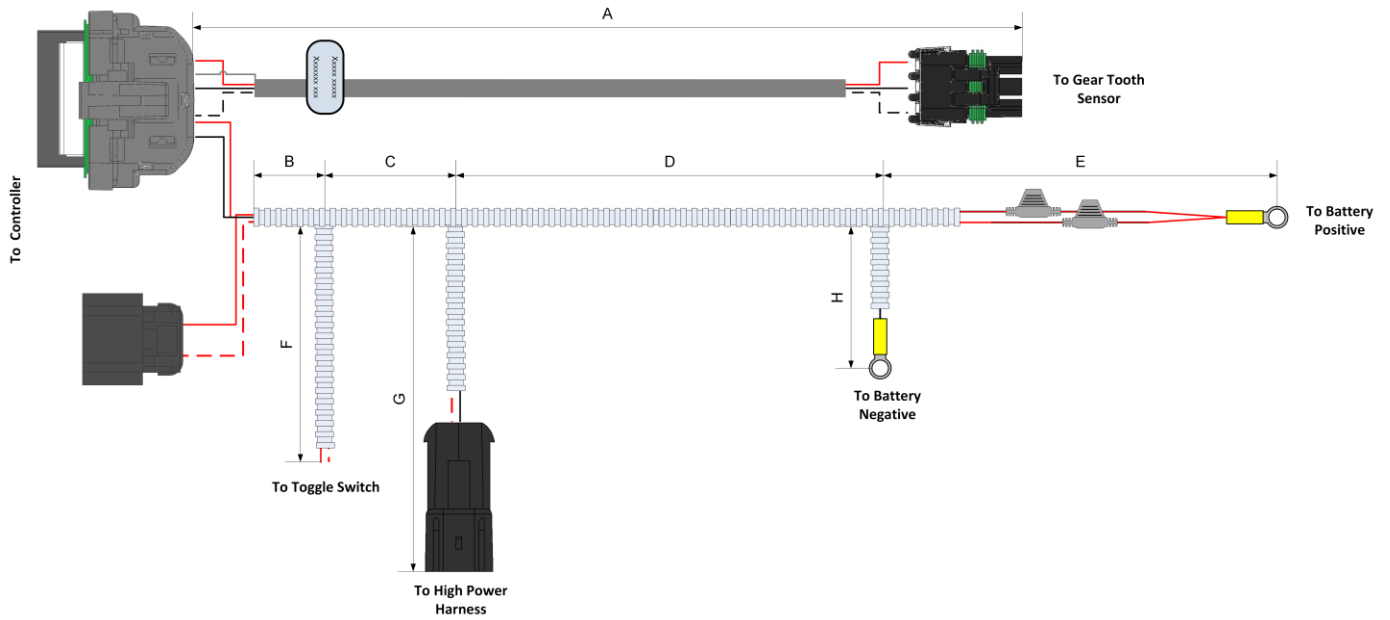
20 A@28 VDC

30 mA max continuous, nominal

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Wiring Harness, Low Power, Universal (Automatic)

Signal Voltage	12/24 VDC, nominal
Temperature Rating (Continuous)	-40°C to +105°C [-40°F to +221°F]
Sealed Connectors	Yes
Flammability Rating	FT2
RoHS Compliant	Yes
Environmental Resistance	Fuel, oil, and solvent compatible
Wiring	SAE J1128, Tinned Copper Conductor



Part Number	Dimension								Engine RPM Sensor
	A	B	C	D	E	F	G	H	
C20254	2692 mm [106 in]	102 mm [4 in]	76 mm [3 in]	737 mm [29 in]	406 mm [16 in]	2616 mm [103 in]	940 mm [37 in]	406 mm [16 in]	OEM Hall Effect Sensor (1 Wire)
C20528	2743 mm [108 in]	102 mm [4 in]	89 mm [3.5 in]	2565 mm [101 in]	406 mm [16 in]	2616 mm [103 in]	2515 mm [99 in]	406 mm [16 in]	Hall Effect (3 Pin)

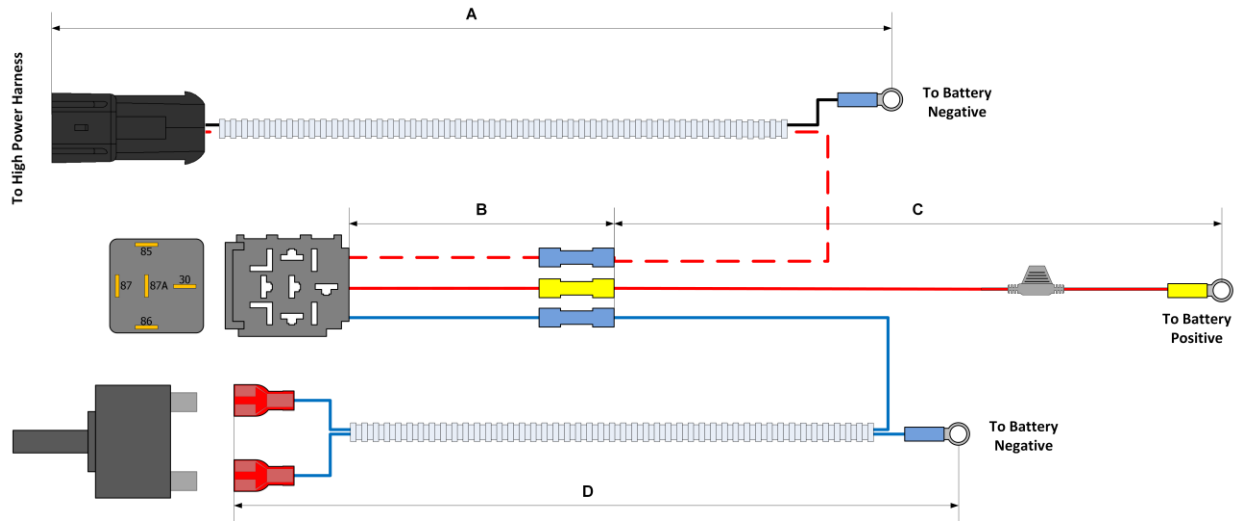
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Wiring Harness, Low Power, Universal, (Manual)

Signal Voltage	12/24 VDC, nominal
Temperature Rating (Continuous)	-40°C to +105°C [-40°F to +221°F]
Sealed Connectors	Yes
Flammability Rating	FT2
RoHS Compliant	Yes
Environmental Resistance	Fuel, oil, and solvent compatible
Wiring	SAE J1128, Tinned Copper Conductor



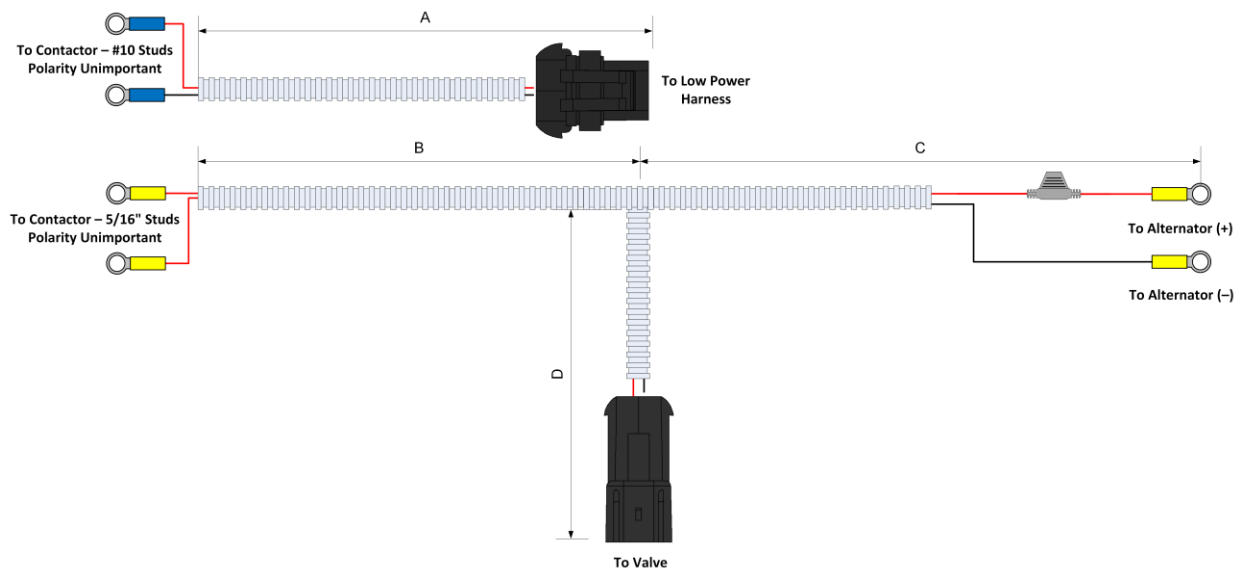
Part Number	Voltage	Dimension			
		A	B	C	D
C20527	12 VDC	3861 mm [152 in]	305 mm [12 in]	1194 mm [47 in]	2134 mm [84 in]
C20527-24	24 VDC	3861 mm [152 in]	305 mm [12 in]	1194 mm [47 in]	2134 mm [84 in]

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Wiring Harness, High Power (Automatic & Manual)

Used in conjunction with the low power wiring harness, to supply high power current to the PH5 solenoid. Integrates with existing PH2 low power wiring harness.

Signal Voltage	12/24 VDC, nominal
Temperature Rating (Continuous)	-40°C to +105°C [-40°F to +221°F]
Sealed Connectors	Yes
Flammability Rating	FT2
RoHS Compliant	Yes
Environmental Resistance	Fuel, oil, and solvent compatible
Wiring	SAE J1128, Tinned Copper Conductor



Part Number	Voltage	Dimension			
		A	B	C	D
C20590-12	12 VDC	305 mm [12 in]	2438 mm [96 in]	1219 mm [48 in]	152 mm [6 in]
C20590-24	24 VDC	305 mm [12 in]	2438 mm [96 in]	1219 mm [48 in]	152 mm [6 in]

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Gear Tooth Sensor (Magnetic Pickup)

Temperature Range -40°C to +105°C [-40°F to +221°F]
 Signal Output 0 to 5 VDC TTL
 Connector Weather-Pack, Male, 3 Pin

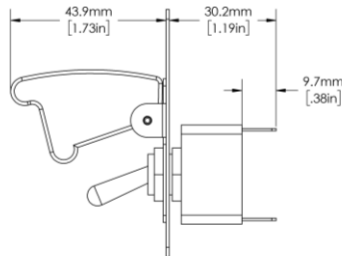
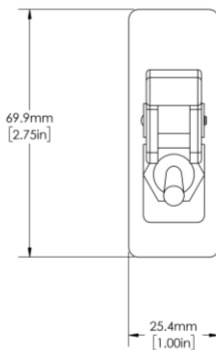


Sizes Available:

Part Number	Thread Size	Available Sensor Lengths	Installation Torque
C50032, C50095	3/8 - 24 UNF	51 mm, 76 mm [2 in, 3 in]	5.1 ± 0.3 Nm [45 ± 3 in-lbf]
C50033, C50279	5/8 - 18 UNF	51 mm, 64 mm [2 in, 2.5 in]	25.8 ± 1.4 Nm [19 ± 1 ft-lbf]
C50034	3/4 - 16 UNF	64 mm [2.5 in]	81.3 ± 2.7 Nm [60 ± 2 ft-lbf]

Toggle Switch, Toggle Guard, Label

Temperature Range -25°C to +80°C [-13°F to +176°F]
 Signal Voltage 12/24 VDC, nominal



Part Number	Thru-Hole Drill Size	Max Mounting Panel Thickness	Current Rating	
C50274	12.7 mm [0.5 in]	6.75 mm [0.266 in]	6.25 A @ 12 VDC	3.13 A @ 24 VDC

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Valve Position Switch (Optional)

Optional valve position switch, allows for additional indicator of valve position. Switch is supplied with a harness and is easily installed into provision in all PH5 valves. Available in 2 different configurations: Normally Open & Normally Closed.

Temperature Rating	-40°C to +150°C [-40°F to +302°F]
Supply Voltage	9 to 32 VDC, nominal
Ingress Protection	IP67

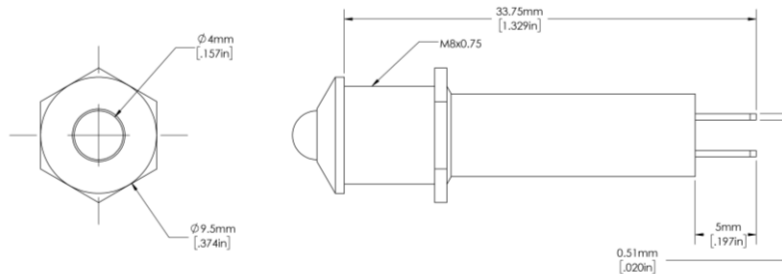


Part Number	Configuration	Mounting Threads	Current Rating	Installation Torque
C50288	Normally Open	M18 x 1.5 6g	1 A	38 ± 2.8 Nm [28 ± 2 ft-lbf]
C50289	Normally Closed	M18 x 1.5 6g	1 A	38 ± 2.8 Nm [28 ± 2 ft-lbf]

Panel Indicator Light (Optional)

For use with valve position switch. Allows for visual indication of valve position.

Temperature Rating	-40°C to +85°C [-40°F to +185°F]
Supply Voltage	12 VDC, nominal



Part Number	Thru-Hole Drill Size	Connection	Max Mounting Panel Thickness
C11313	8 mm [0.315 in]	2.79 mm x 0.5 mm [0.11 in x 0.02 in] quick connect terminals	6.75 mm [0.266 in]

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