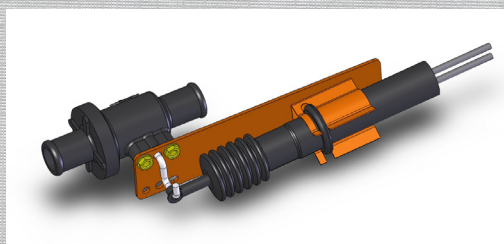
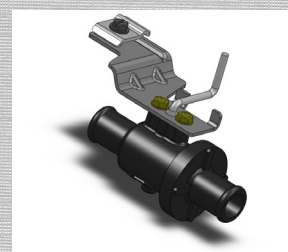




Heater Control Valves

What's at the Heart of Your Heater Control System?



6520 HOPKINS RD.
MENTOR, OH 44060

PH: (440) 639-8325
FX: (440) 639-8365

www.thermotion.com
EMAIL: sales@thermotion.com



Heater Control Valves

Thank you for your interest in Thermotion's heater control valves. We are proud to offer the most innovative line-up of valves in order to give you more design and application flexibility.

Thermotion heater control valves have been "on the road" since the 1960's and are designed to meet OEM requirements. Our valves are manufactured in the USA in our ISO certified facility.

What's at the Heart of Your Heater Control System?

Mailing address:
Thermotion, LLC
6520 Hopkins Rd.
Mentor, OH 44060

PHONE: (440)-639-8325
FAX: (440)-639-8365
EMAIL: sales@thermotion.com

Product Appearance & Specification

(All products are subject to appearance and specification change without notice)

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WITH DESIGN



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MODULATING 4-PORT VALVES MODULATING 2-PORT



FEATURES

- 2-PORT, 5/8" (16mm) HOSE CONNECTIONS OR 2-PORT, 3/4" (19mm) HOSE CONNECTIONS
- 4-PORT, 5/8" (16mm) HOSE CONNECTIONS
- 12 VDC THROUGH 24 VDC OPERATION
- INTEGRAL FEEDBACK CAPABILITY
- POSITIVE VALVE POSITION CONTROL WHEN INTERFACED WITH ON-BOARD CONTROLLER
- 6 GPM (23L/min) NOMINAL FLOW RATE
- LIGHTWEIGHT UNDER-HOOD DESIGN
- MEETS AUTOMOTIVE OEM SPECIFICATIONS
- VALVE OPERATING TEMPERATURE RANGE: -20°F TO 250°F (-28°C TO 121°C)
- ACTUATOR OPERATING TEMPERATURE RANGE: -40°F TO 185°F (-40°C TO 85°C)
- ENCLOSED PROTECTION CLASS: UNSEALED, IP-40

Please advise on intended use of heater control valve:

If your application calls for ON/OFF (not modulating)
a resistor must be added to the actuator.

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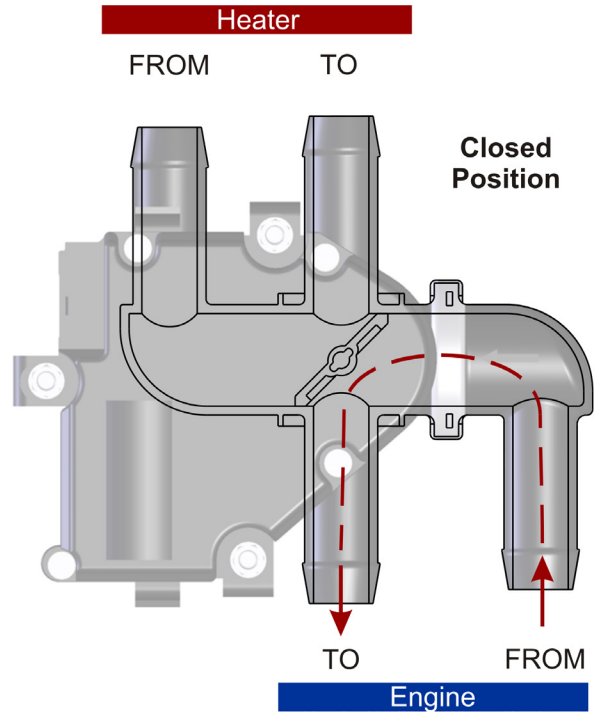
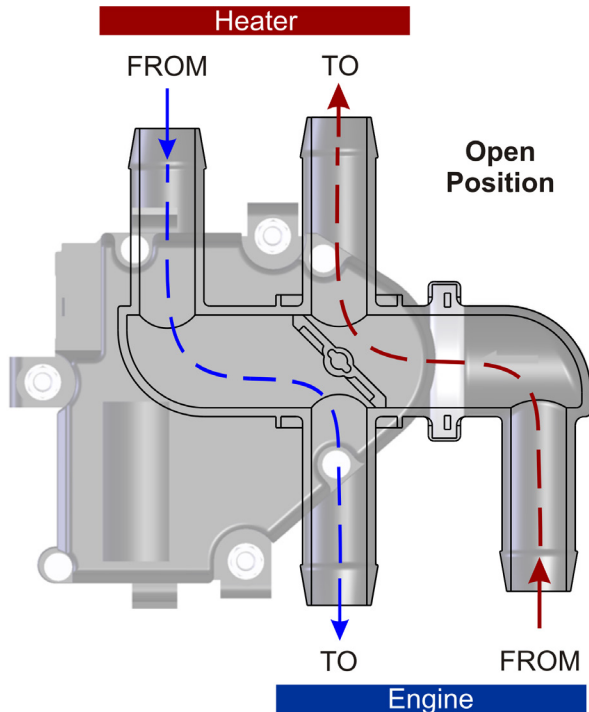
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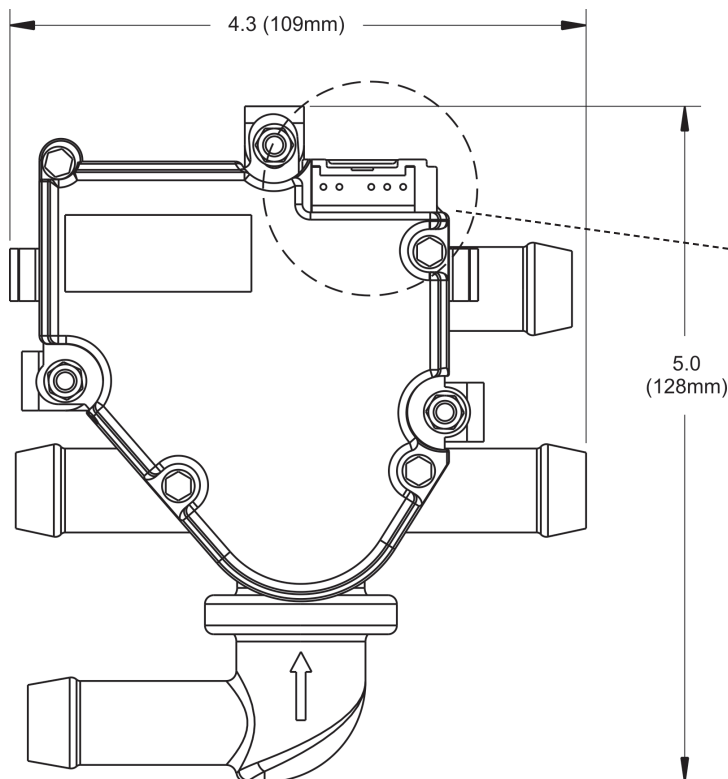
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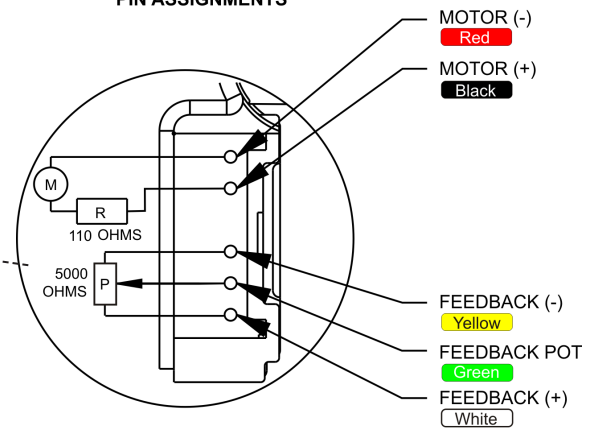
Thermotion, LLC
6520 Hopkins Rd.
Mentor, OH 44060
PH: (440)639-8325
FX: (440) 639-8365
EMAIL: sales@thermotion.com



* Maximum operating current = 300 milliamps @ 12 VDC or 600 milliamps @ 24 VDC



PIN ASSIGNMENTS



MATING CONNECTOR: P/N 354-65001
CONNECTOR PINS (5) P/N 354-65000
20/22 Gauge Wire

P/N	DESCRIPTION
354-65002	WIRE HARNESS (2ft LEADS)
354-69492	2-PORT 3/4" (19mm)
354-69493	2-PORT 5/8" (16mm)
354-69494	4-PORT 5/8" (16mm)
354-69500	CONTROL MODULE RUNS ON USER SUPPLIED REF. VOLTAGE
354-69515	CONTROL MODULE WITH WIRE
354-69530	10 KΩ POTENTIOMETER & KNOB

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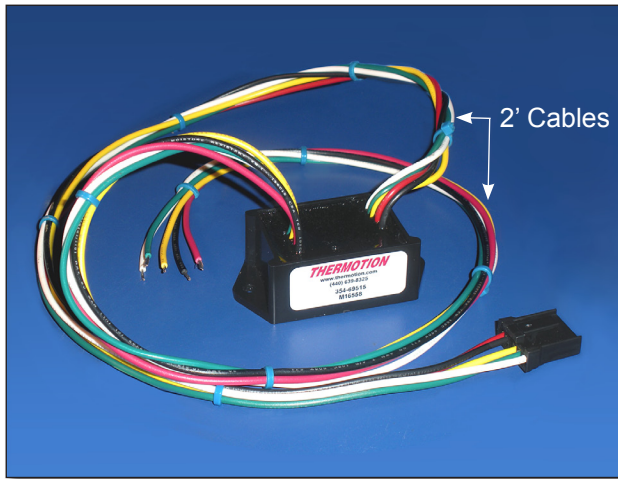


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THERMOTION™

CONTROL MODULE

Designed for Modulating 2-Port & Modulating 4-Port Valves



FEATURES

- **EASY INSTALLATION**
- **SMALL PROFILE — SIMPLE TO MOUNT**
- **PROVIDES A WIDE RANGE OF CONTROL**
- **SEALED CONTROL MODULE**
- **OPERATING TEMPERATURE RANGE**
-40°F to 180°F (-40°C to 82°C)

DESCRIPTION

Thermotion introduces its new ECCIII Control Module (with Harness).

This advanced Control Module interfaces between Thermotion's 2-Port (354-69492 3/4", 354-69493 5/8") and 4-Port (354-69494 5/8") Modulating Heater Control Valves and a 10 KΩ potentiometer (354-69530).

This Control Module provides precise control for the user, allowing for a wide range of control.

Standard model 354-69515 is designed for a command and feedback (5-10 KΩ) potentiometer to run on supply voltages of 12VDC through 24VDC.

Custom model 354-69500 is designed for a command and feedback (5-10 KΩ) potentiometer to run on a reference supply voltage supplied by the user.

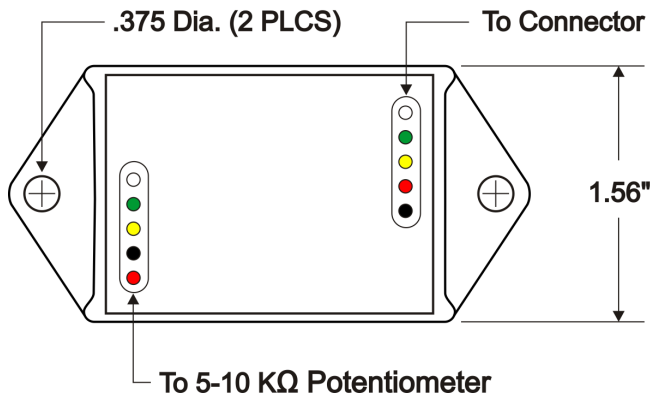
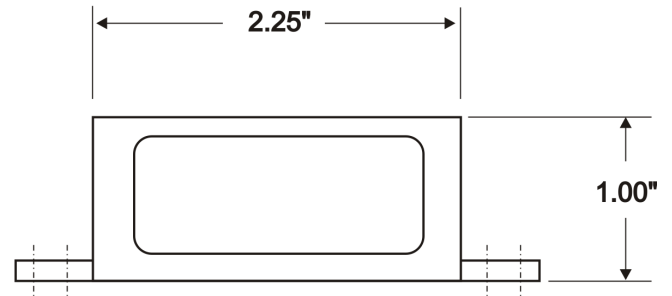
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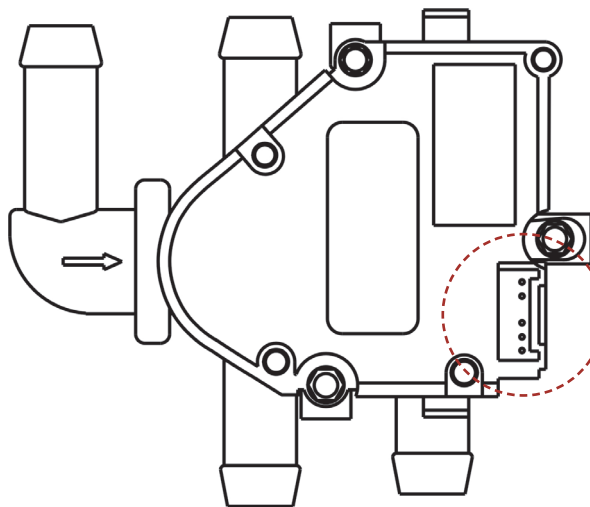
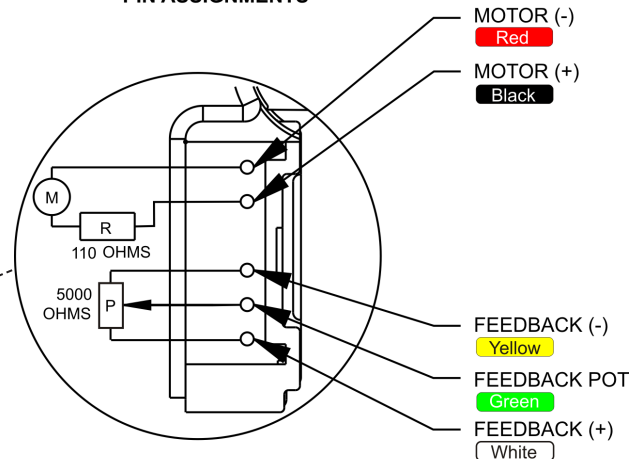


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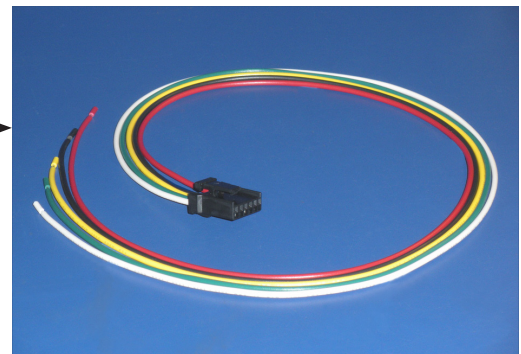
TOP VIEW

FRONT VIEW


* Maximum operating current = 300 milliamps @ 12 VDC or 600 milliamps @ 24 VDC


PIN ASSIGNMENTS


MATING CONNECTOR: P/N 354-65001
CONNECTOR PINS (5) P/N 354-65000
20/22 Gauge Wire

P/N	DESCRIPTION
354-65002	WIRE HARNESS (2ft LEADS)
354-69492	2-PORT 3/4" (19mm)
354-69493	2-PORT 5/8" (16mm)
354-69494	4-PORT 5/8" (16mm)
354-69500	CONTROL MODULE RUNS ON USER SUPPLIED REF. VOLTAGE
354-69515	CONTROL MODULE WITH WIRE
354-69530	10 KΩ POTENTIOMETER & KNOB



Sold Separately

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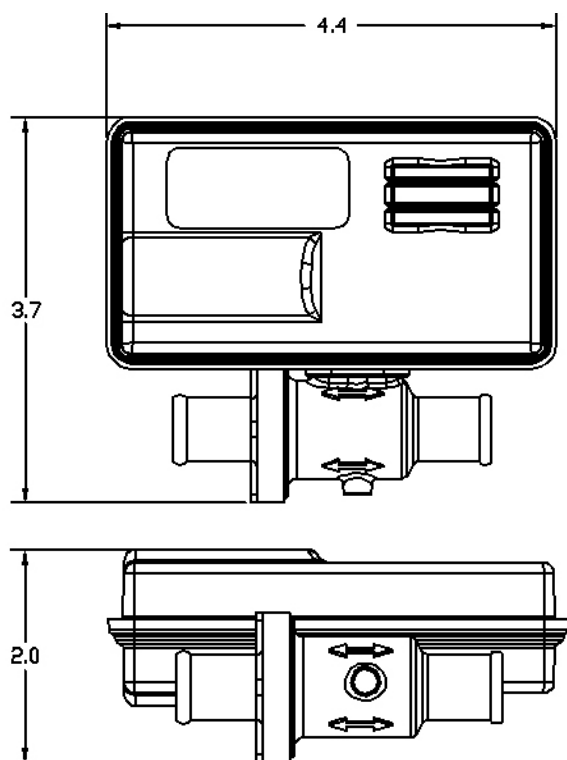


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THERMO-MAGNETIC ACTUATOR

Rotate and Hold Design



FEATURES

- 2-PORT, 5/8" (16mm) HOSE CONNECTIONS
- 2-PORT, 3/4" (19mm) HOSE CONNECTIONS
- FLOW: 6 GPM (23L/min) NOMINAL
- 12 VOLT, 24 VOLT
- LESS THAN 5 WATTS OF POWER USED
- LONG LIFE – DESIGN TARGET OF 250,000+ CYCLES
- ENCLOSURE PROTECTION CLASS: IP-68
- FAIL-SAFE, SPRING RETURN

GLASS FILLED NYLON INLET/GLASS FILLED NYLON BODY W/ THERMO-MAGNETIC ACTUATOR

P/N	DESCRIPTION
TRC101	12V, 5/8" x 5/8" NORMALLY CLOSED
TRC102	12V, 3/4" x 3/4" NORMALLY CLOSED
TRO101	12V, 5/8" x 5/8" NORMALLY OPEN
TRO102	12V, 3/4" x 3/4" NORMALLY OPEN
TRC201	24V, 5/8" x 5/8" NORMALLY CLOSED
TRC202	24V, 3/4" x 3/4" NORMALLY CLOSED
TRO201	24V, 5/8" x 5/8" NORMALLY OPEN
TRO202	24V, 3/4" x 3/4" NORMALLY OPEN

ISO 9001: 2008
WITH DESIGN

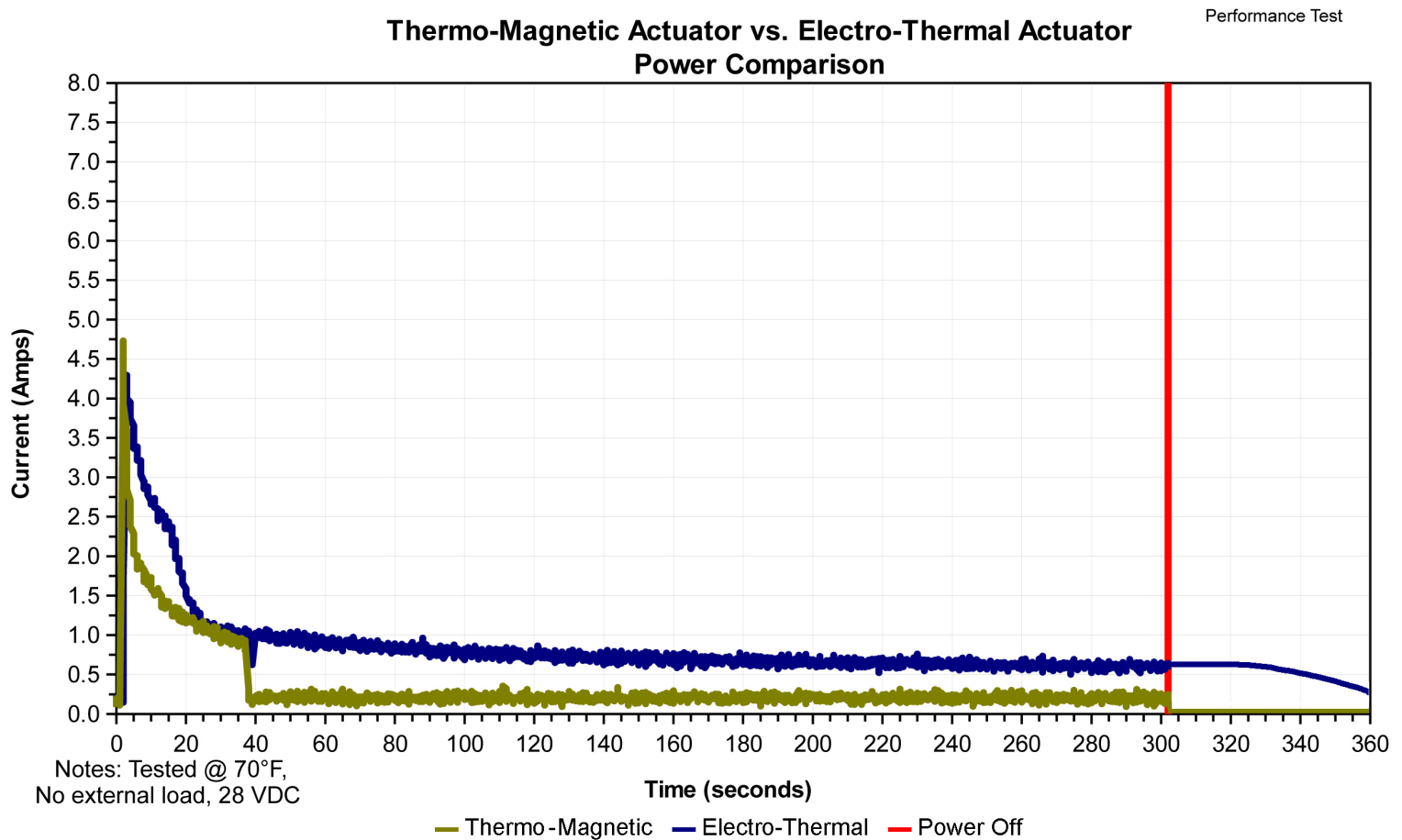
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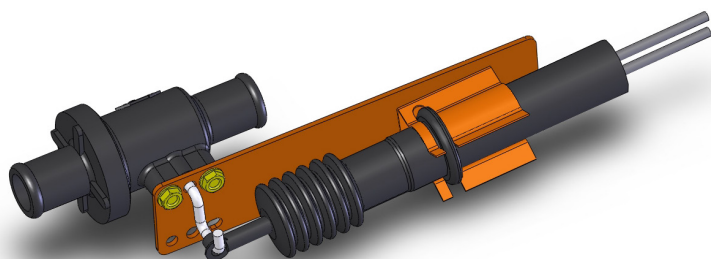
Thermo-Magnetic Actuator vs. Electro-Thermal Actuator Power Comparison



ELECTRO-THERMAL ACTUATOR

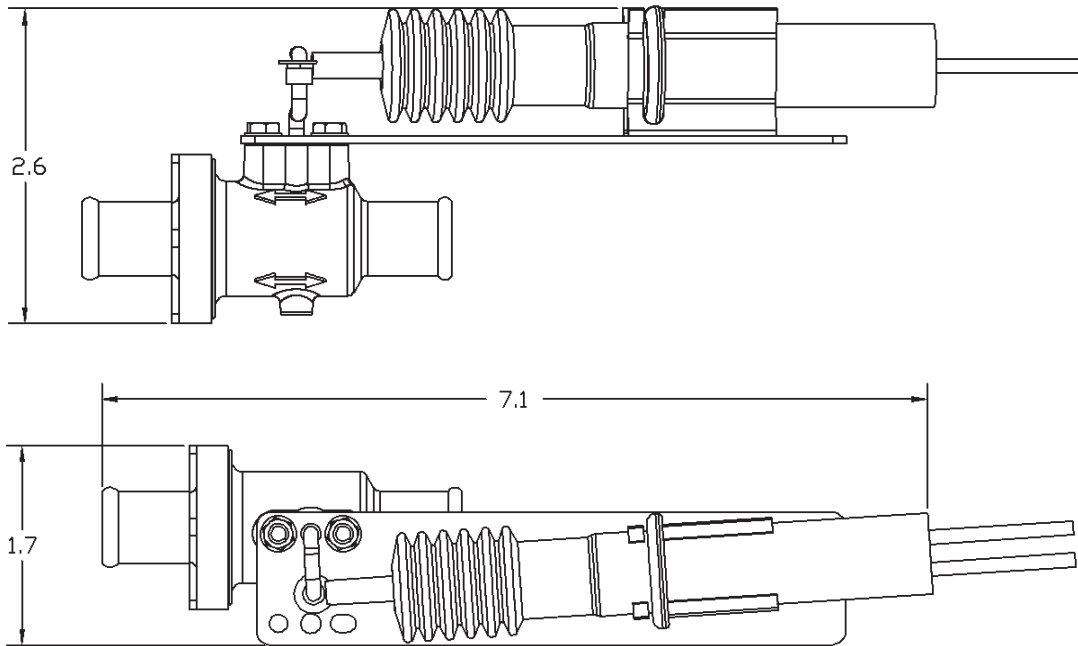
FEATURES

- 2-PORT, 5/8" (16mm) HOSE CONNECTIONS
- 2-PORT, 3/4" (19mm) HOSE CONNECTIONS
- FLOW: 6 GPM (23L/min) NOMINAL
- FAIL-SAFE, SPRING RETURN
- 12VDC, 24VDC OPERATION
- OPERATING TEMPERATURE RANGE
-20°F to 180°F (-28°C TO 82°C)

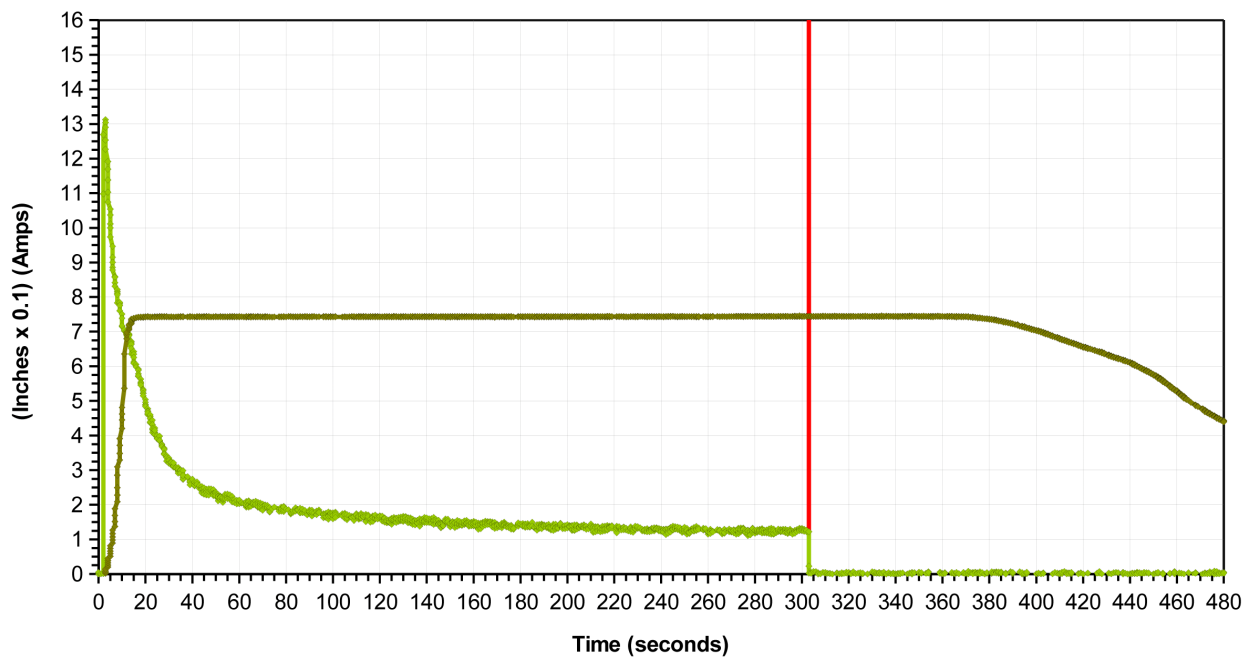


740 SERIES - GLASS FILLED NYLON INLET/GLASS FILLED NYLON BODY W/ ELECTRO-THERMAL ACTUATOR		
Part Number	Description	
740975WV	5/8" x 5/8" 12 Volts	Std. NC specify NO
740976WV	3/4" x 3/4" 12 Volts	Std. NC specify NO
740982WV	5/8" x 5/8" 12 Volts	Std. NC specify NO
740984WV	3/4" x 3/4" 12 Volts	Std. NC specify NO

5/8", 3/4" NIPPLE/BODY ARE INTERCHANGEABLE – PLEASE SPECIFY



740975WV
5/8" x 5/8"
12V- Normally Closed



Note:
 2 lb Load @ 70°F

— Displacement — Current — Power Off

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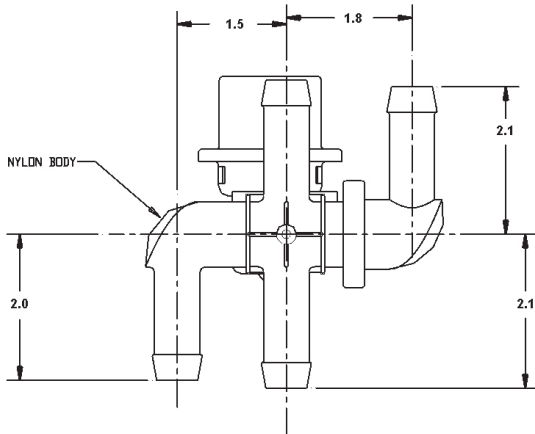


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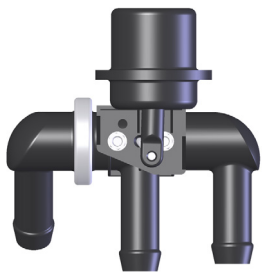
VACUUM ACTUATOR 266-SERIES 4-PORT



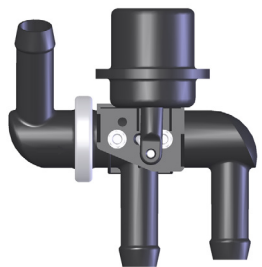
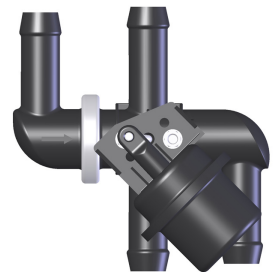
FEATURES

- **4-PORT:** 4 x 5/8" (16mm) HOSE CONNECTIONS
- **FLOW:** 6 GPM (23L/min) NOMINAL
- **VACUUM ACTUATOR:** 6.2-10 inHg
- **MEETS OEM SPECIFICATIONS**

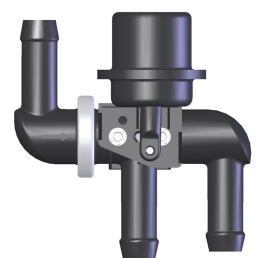
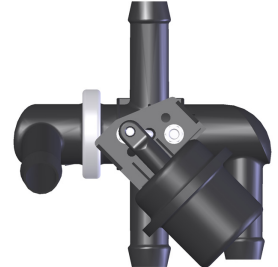
All drawings show "Flow Direction" from left to right →



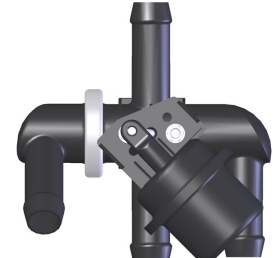
Part Number	Description
266-67727-51	
266-67727-52	Replaces M-56315-59, -22, and -24



Part Number	Description
266-67727-53	Replaces M-56315-6
266-67727-54	Replaces M-56315-7, -12, and -18



Part Number	Description
266-67727-55	Replaces M-56315-11, -25, and -40
266-67727-56	Replaces M-56315-19, and -20



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WITH DESIGN

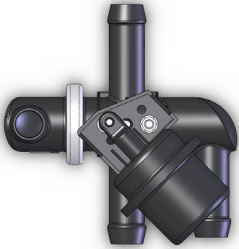
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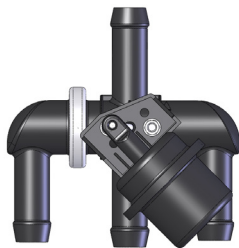
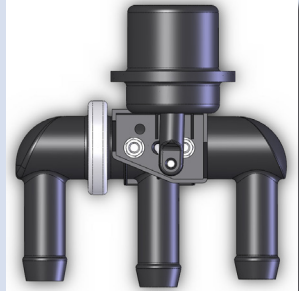
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VACUUM ACTUATOR 266-SERIES 4-PORT (CONTINUED)

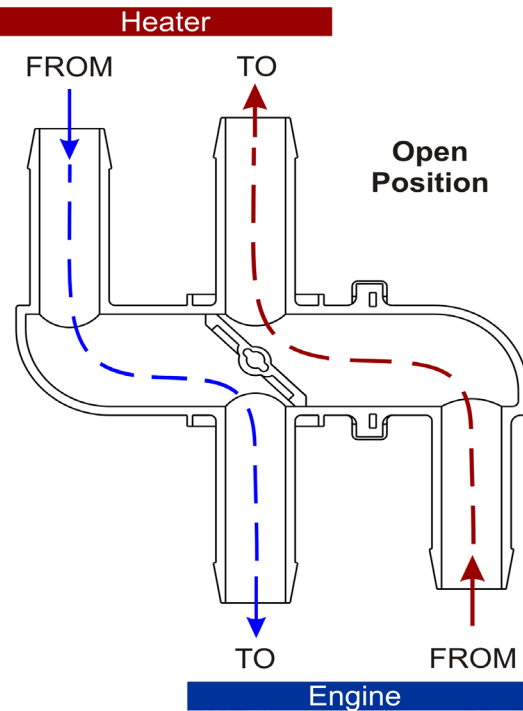


Part Number	Description
266-67727-57	Replaces M-56315-57
266-67727-58	

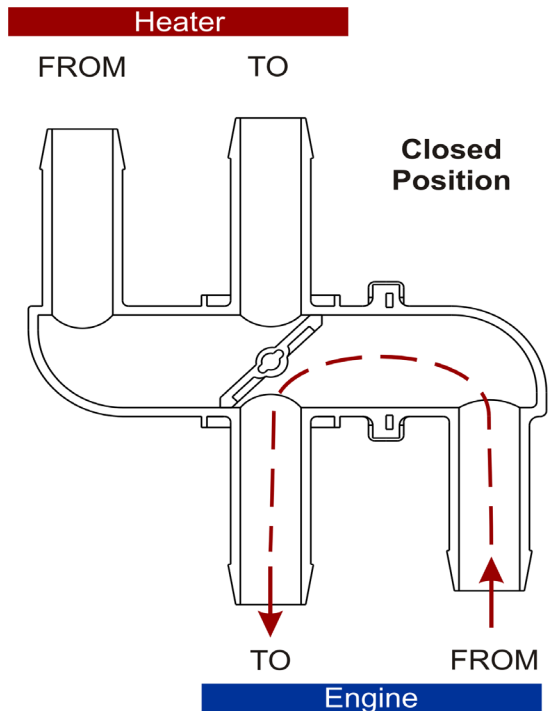


Part Number	Description
266-67727-59	

Normally Open — No Power



Power Applied Closes



ISO 9001: 2008
WITH DESIGN

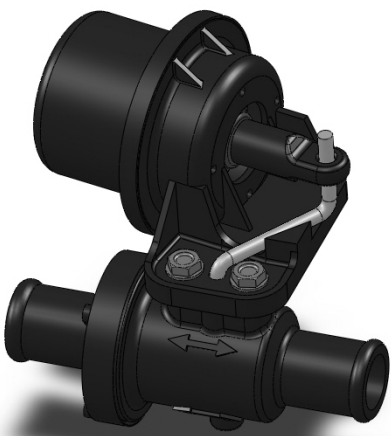
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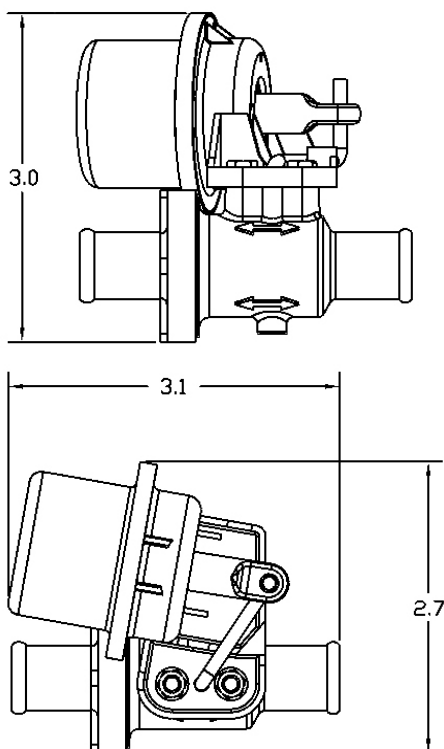

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VACUUM ACTUATOR V-SERIES 2-PORT



FEATURES

- 2-PORT, 5/8" (16mm) HOSE CONNECTIONS
- 2-PORT 3/4" (19mm) HOSE CONNECTIONS
- FLOW: 6 GPM (23L/min) NOMINAL
- BI-DIRECTIONAL
- SHUT-OFF CAPABLE
- VACUUM ACTUATOR: 6.2-10 inHg
- MEETS OEM SPECIFICATIONS
- COMPACT DESIGN
- FAIL-SAFE, SPRING RETURN



V-SERIES - GLASS FILLED NYLON INLET/ GLASS FILLED NYLON BODY WITH GLASS FILLED NYLON VACUUM ACTUATOR	
Part Number	Description
V2P625NO	5/8" X 5/8" NORMALLY OPEN
V2P625NC	5/8" X 5/8" NORMALLY CLOSED
V2P750NO	3/4" X 3/4" NORMALLY OPEN
V2P750NC	3/4" X 3/4" NORMALLY CLOSED
V2P6H7NO	5/8" X 3/4" NORMALLY OPEN
V2P6H7NC	5/8" X 3/4" NORMALLY CLOSED
V2P7H6NO	3/4" X 5/8" NORMALLY OPEN
V2P7H6NC	3/4" X 5/8" NORMALLY CLOSED

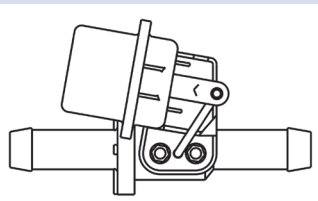
VACUUM ACTUATOR 266-SERIES 2-PORT



FEATURES

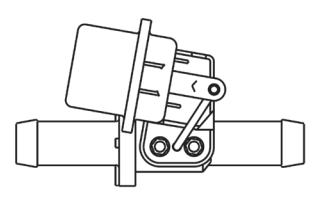
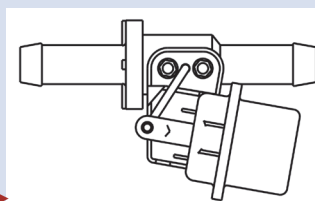
- 2-PORT, 5/8" (16mm) HOSE CONNECTIONS
- 2-PORT, 3/4" (19mm) HOSE CONNECTIONS
- FLOW: 6 GPM (23L/min) NOMINAL
- INTERNAL BY-PASS RATE: 10cc/min MAX
- MEETS OEM SPECIFICATIONS
- FAIL-SAFE, SPRING RETURN

All drawings show "Flow Direction" from left to right →



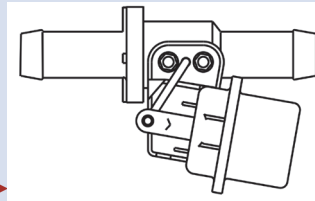
266 SERIES - GLASS FILLED NYLON BODY W/ GLASS FILLED NYLON INLET & GLASS FILLED NYLON VACUUM ACTUATOR

Part Number	Description
266-67625	5/8" x 5/8" Normally Open
266-68936	5/8" x 5/8" Normally Closed

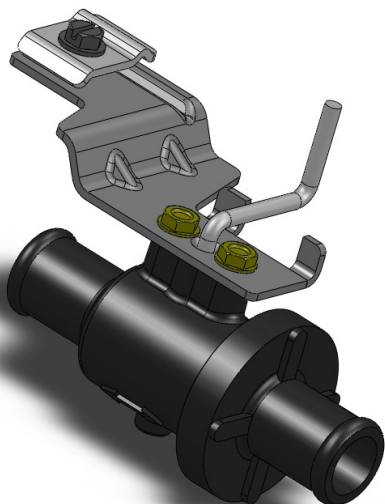


266 SERIES - GLASS FILLED NYLON BODY W/ GLASS FILLED NYLON INLET & GLASS FILLED NYLON VACUUM ACTUATOR

Part Number	Description
266-67750	3/4" x 3/4" Normally Open
266-67751	3/4" x 3/4" Normally Closed

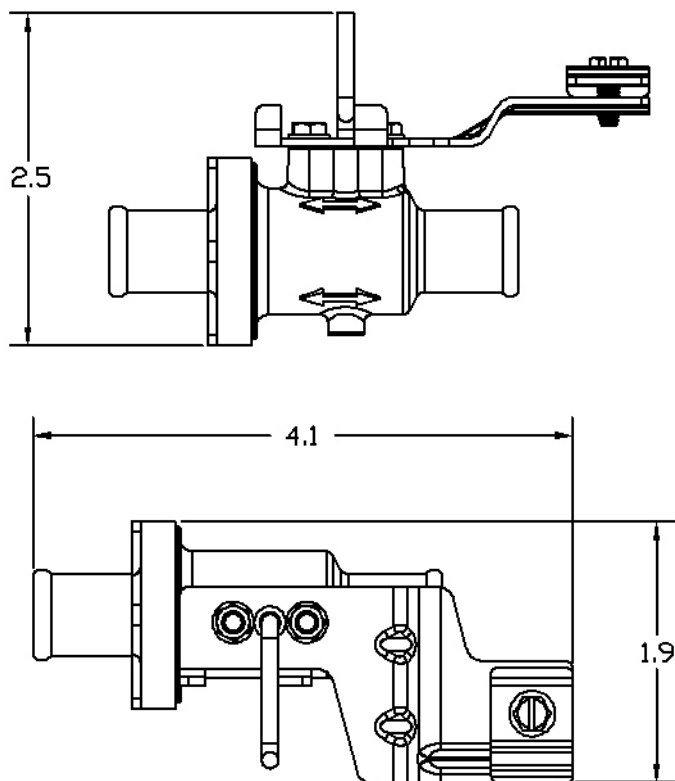


CABLE PULL C-SERIES 2-PORT



FEATURES

- 2-PORT, 5/8" (16mm) HOSE CONNECTIONS
- 2-PORT, 3/4" (19mm) HOSE CONNECTIONS
- FLOW: 6 GPM (23L/min) NOMINAL
- SHUT-OFF CAPABLE
- BI-DIRECTIONAL VALVE
- COMPACT DESIGN
- PULL TO OPEN
- PULL TO CLOSE



C-SERIES - GLASS FILLED NYLON INLET/GLASS FILLED NYLON BODY W/ METAL SUPPORT BRACKET

Part Number	Description
C2P625PO	5/8" X 5/8" PULL TO OPEN
C2P625PC	5/8" X 5/8" PULL TO CLOSE
C2P750PO	3/4" X 3/4" PULL TO OPEN
C2P750PC	3/4" X 3/4" PULL TO CLOSE
C2P6H7PO	5/8" X 3/4" PULL TO OPEN
C2P6H7PC	5/8" X 3/4" PULL TO CLOSE
C2P7H6PO	3/4" X 5/8" PULL TO OPEN
C2P7H6PC	3/4" X 5/8" PULL TO CLOSE

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THERMOTION™

WARRANTY

THERMOTION, LLC warrants that the products manufactured by it are free from defects in material and workmanship. Seller's liability under this warranty shall be limited to the repair or replacement - at Seller's sole discretion - of any products it finds defective under this warranty, upon return of product per its RETURNS policies.

DURATION: The warranty period shall begin on the date of shipment to the first purchaser and extend for twelve (12) months.

DISCLAIMER: Purchaser shall be solely responsible for determining suitability for use and in no event shall THERMOTION be liable in this respect.

LIMITATION OF LIABILITY: SELLER MAKES NO OTHER WARRANTY OR REPRESENTATION OF ANY KIND WHATSOEVER, EXPRESSED, OR IMPLIED, EXCEPT THAT OF TITLE AND ALL IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED.



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