

P1.x Electronic Stroke Limit Control

Standard



The P1.x Limit Switch control provides end of travel positioning through the use of a Hall effect sensor and motor mounted relay.

Hall effect sensors are factory mounted within the actuator cover tube. The sensor position is set at the factory and is not field adjustable (See EP.1 for adjustable switch functions). The Hall effect sensors are sealed for life and are not subject to wear.

The Electronic Stroke control package consists of the Hall effect sensors and a motor mounted relay within an enclosure suited for harsh environments.

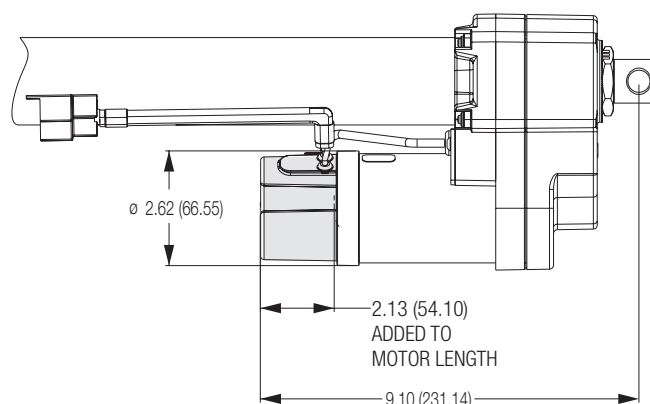
A Zener diode suppression is used on both input and outputs for added protection from electrical spikes. Unit reversing is achieved by reversing input power polarity to the motor.

Specifications

Power:	25 Amps max. @ 12 volts 12.5 Amps max. @ 24 volts
Operating Temperature:	-20° F to +150° F (-29° C to 66° C)

Options

P1.0	Standard Stoke Limit Control
P1.1	Same as P1.0 with two LEDs on the outside of the control module. LEDs indicate when end of travel has been reached.
P1.2	Same as P1.0 with two 12/24 volt, 0.5 Amps outputs that can be used to signal an external switch, relay, lamp or PLC input.
P1.2LE	Two +5 VDC 25ma outputs plus a ground to provide a signal when end of travel is reached. This output can be used to power LEDs.



BTc Controls P1-DC

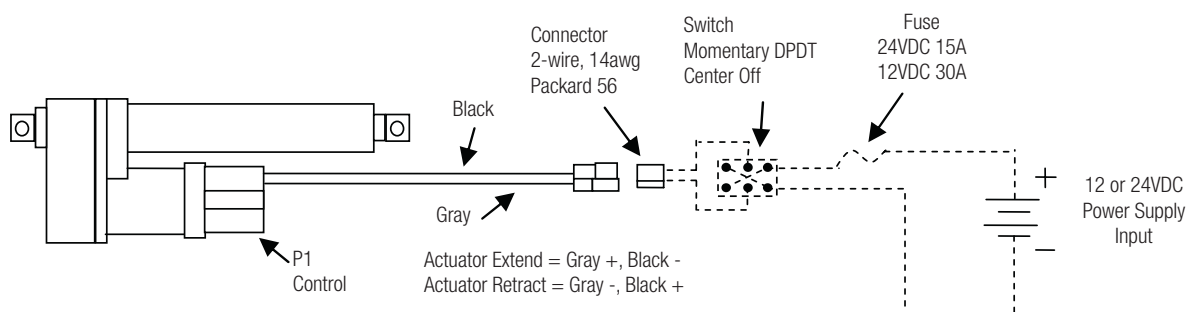
P1 Electronic Stroke Limit Control

Model Selection			
Model No.	Input Voltage (vdc)	Maximum Output Current (Amps)	Features
P1.0 (DC12)	12	25	Base = Electronic Stroke Limit with Electronic Dynamic Braking
P1.0 (DC24)	24	12.5	Base = Electronic Stroke Limit with Electronic Dynamic Braking
P1.1 (DC12)	12	25	Base & LED indicators on Housing
P1.1 (DC24)	24	12.5	Base & LED indicators on Housing
P1.2 (DC12)	12	25	Base & +12 vdc Outputs
P1.2 (DC24)	24	12.5	Base & +24 vdc Outputs
P1.2LE (DC12)	12	25	Base & LED Outputs +5 vdc
P1.2LE (DC24)	24	12.5	Base & LED Outputs +5 vdc

Note: For adjustable external end limits add E before P

Wiring Diagrams

P1 Module P1.0-DC12/24



All dashed lines are customer supplied connections

Operation

When the “Customer Supplied Switch” is held in the direction allowing positive 12 or 24VDC to the gray wire and 12 or 24VDC ground to the black wire, the actuator will extend until it reaches the end of stroke. At the end of stroke, which is determined by the factory set location of the Hall effect switches inside the actuator cylinder, power will be removed to the actuator by the P1.0 control. The actuator will no longer move in that direction even if the customer supplied switch is held.

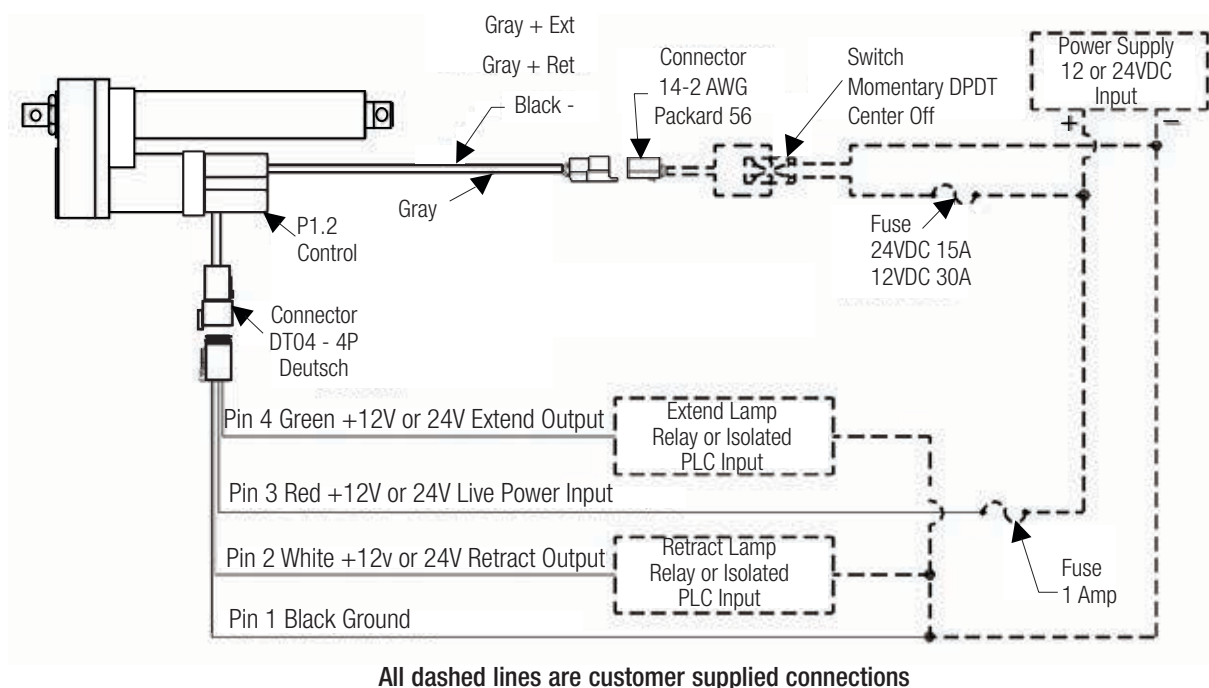
When the switch is held in the opposite direction so the positive lead of the 12 or 24VDC signal is on the black wire and the 12 or 24VDC ground is on the gray wire, the actuator will retract until it returns to the full home position which is determined by the factory set location of the second Hall effect switch.

If the actuator does not stop when at either end then something in the actuator or P1.0 control may be damaged. Please call the factory for further analysis.

The actuators are 100% tested before leaving the factory.

BTc Controls P1-DC

P1 Electronic Stroke Limit Control



Operation

When the "Customer Supplied Switch" is held in the direction allowing positive 12 or 24VDC to the gray wire and 12 or 24VDC ground to the black wire, the actuator will extend until it reaches the end of stroke. At the end of stroke the "Extend Output" (green wire) will have +12 or 24 Volts to ground, indicating it is at the end. This signal can be used to light a Lamp, signal a relay coil, or an isolated PLC input that only requires 500mA or less. This output will only be on as long as power is maintained from the "Customer Supplied Switch".

However, if the output needs to be on even if the "Customer Supplied Switch" is not activated then the "Live Power input" can be used. This will provide power all the time for the output to remain on whenever the Actuator is at either travel end.

Apply +12 VDC (for 12VDC unit) or +24 VDC (for @24VDC unit) to the red wire of the Deutsch (DT04-4P) 4 pin connector and ground to the black wire. This supply needs to be the same supply as the actuator and will require less than 500mA.

When the switch is held in the opposite direction so the positive lead of the 12 or 24VDC signal is on the black wire and the 12 or 24VDC ground is on the gray wire, the actuator will retract until it returns to full home position. At the full home position, the "Retract Output" (white wire) will have +12 or 24 volts to ground.

CAUTION Do not reverse polarity at live power input (i.e. 22GA red & black wires) or damage will occur.

EP1.x Electronic Stroke Limit Control

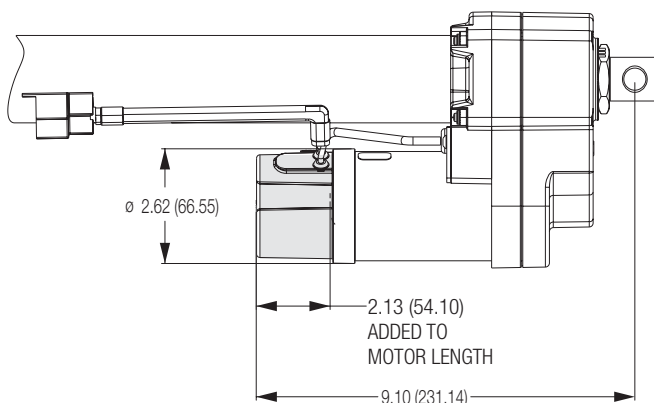


The EP1.x Limit Switch control provides end of travel positioning through the use of a magnetic switch and motor mounted relay.

The EP1 limit switches are mounted in a channel on the actuator cover tube accessible below a durable cover. (For factory set limit switches see P1.0 designs). The EP1 switches are field adjustable.

The Electronic Stroke control package consists of the magnetic sensors and a motor mounted relay within an enclosure suited for harsh environments.

A Zener diode suppression is used on both input and outputs for added protection from electrical spikes. Unit reversing is achieved by reversing input power polarity to the motor.



Specifications

Power:	25 Amps max. @ 12 volts 12.5 Amps max. @ 24 volts
Operating Temperature:	-20° F to +150° F (-29° C to 66° C)

Options

EP1.0	Standard Stroke Limit Control
EP1.1	Same as P1.0 with two LEDs on the outside of the control module. LEDs indicate when end of travel has been reached.
EP1.2	Same as P1.0 with two 12/24 volt, 0.5 Amps outputs that can be used to signal an external switch, relay, lamp or PLC input.
EP1.2LE	Two +5 VDC 25ma outputs plus a ground to provide a signal when end of travel is reached. This output can be used to power LEDs.
EP1.4	Same as P1.0, end limit stopping with 0-10K ohm potentiometer output.
EP1.5	End limit stopping with end limit outputs and 0-10K potentiometer outputs.



Scan to watch!

How to Adjust the Limit Switches for a K2 or K2X Actuator with External or EP Limit Switches
<https://p.widencdn.net/imzc9v>

