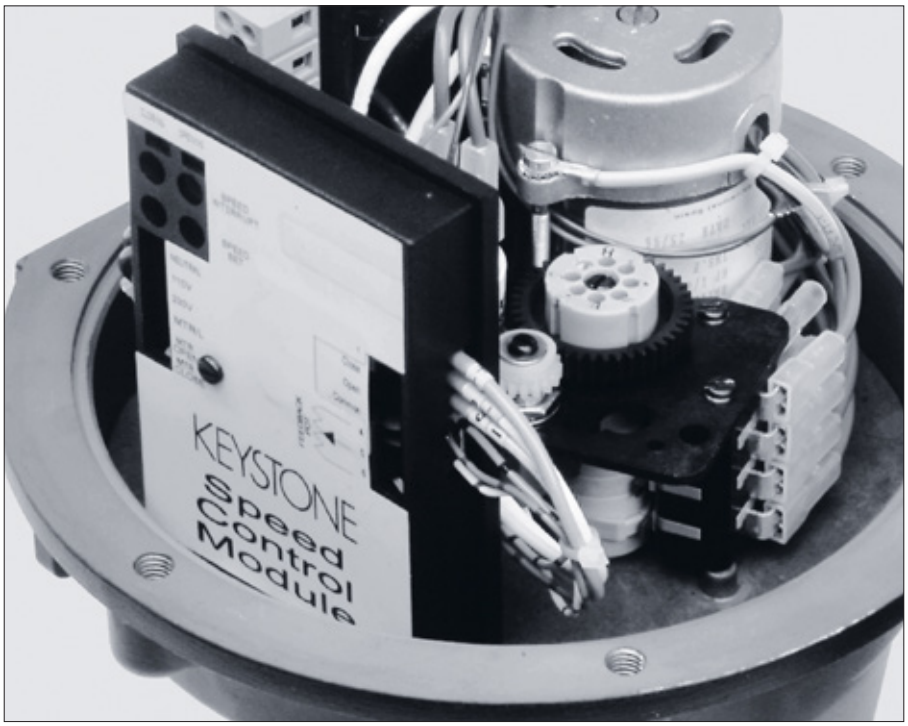
PENTAIR

KEYSTONE



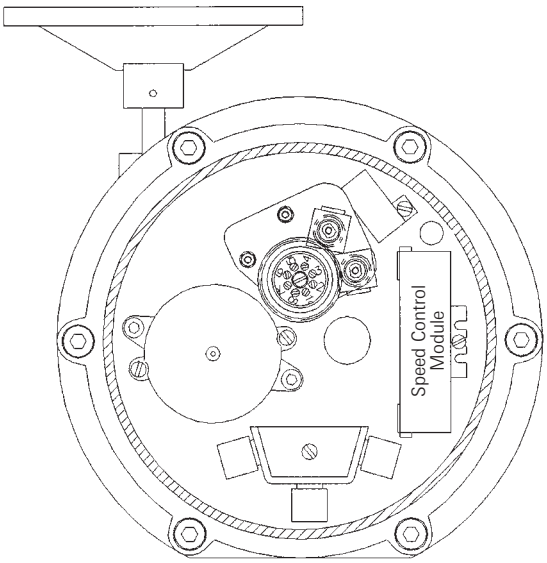
The Keystone Speed Control module is designed to reduce opening & closing times on full or part of actuator travel allowing valves to be pulsed in & out of the seat eliminating the possibility of waterhammer etc. This module can be fitted to the full range of electric actuators with the exception of the Electratorc 3.

Basic parameters - speed control only	
Mains supply -	110/115V - 1PH 50/60 Hz or 230/240v - 1PH 50/60 H
Switching Supply -	24V to 240V A.C. or D.C.
Maximum Switching Circuit Power -	3 v.a.
Maximum Switching Current -	12mA

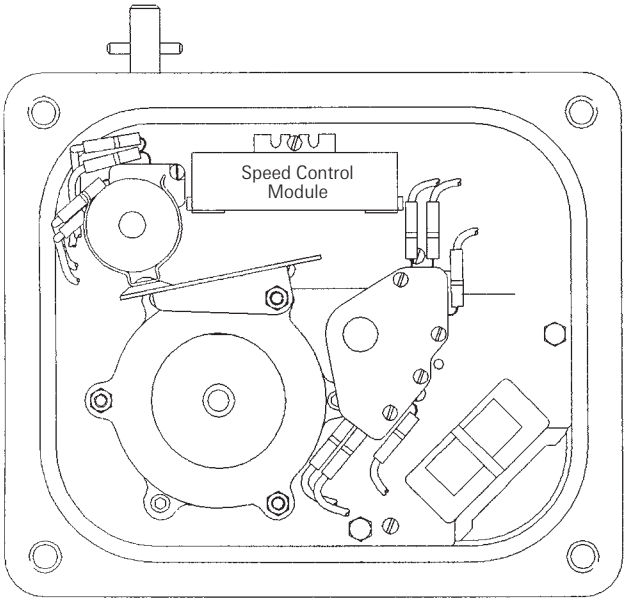
Consult Keystone for specific power and current values.

Location diagrams

Typical Layout of 777/778 006 Actuator
with Speed Control Module Fitted



Typical Layout of 777/778 012 - 150 Actuator
with Speed Control Module Fitted

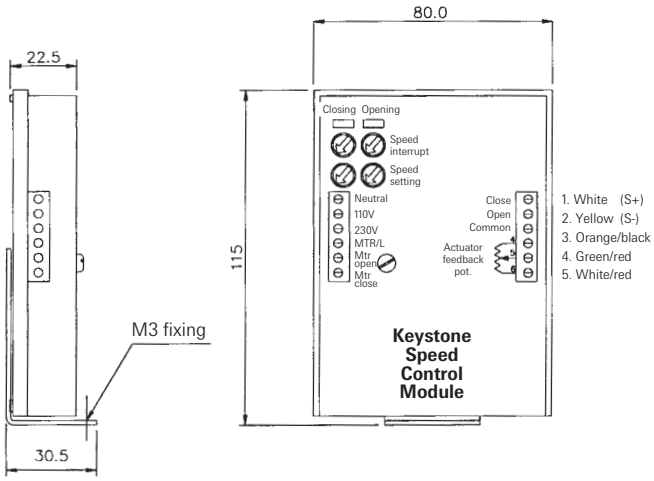


Trouble shooting

The module has been designed to give a minimum of problems. In the unlikely event of trouble the following chart gives some guidelines.

Problem	**Cause**	**Cure**
Motor will not run	1. Loss mains power	Check mains supply
	2. Loss of signal supply or wrong supply	Check signal
Motor runs in one direction only	1. Signal failure to one direction	Check signal
Difficulty in obtaining speed	1. Setting pot. faulty	Return to Keystone for repair

Dimensions and Terminal Identification



Settings Procedures

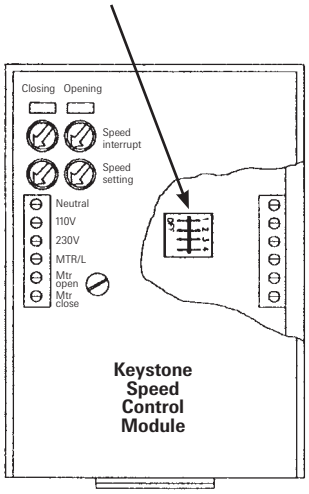
Speed Control Setting

Both speed and speed interrupt position can be set for open and close positions. Two LEDs are provided to aid setting, one for open and one for close. The LEDs are green between the Close position and the Speed Interrupt position and red between the Speed Interrupt position and the Open position. See Selector Switch Setting instructions for fuller explanation. Actuators are supplied with the speed control adjustment when the LEDs are Green and full speed when the LEDs are Red. If the default settings are not suitable see Selector Switch Setting instructions in the manual for fuller explanation.

1. Move Actuator to the position at which the speed is required to change from Slow to Fast.
2. Turn the appropriate Speed Interrupt pot clockwise until LED changes from Red to Green.
3. Repeat steps 1 and 2 for the other direction.
4. With the Actuator operating in the Green LED region adjust the appropriate Speed Setting pot to until the desired speed is obtained. T urning pots clockwise reduces the Actuator speed.
5. If slow speed is required throughout the Actuator stroke turn Speed Interrupt pots fully clockwise. The LEDs will remain Green from Open to Close.

Open and Close Speed Control/Interrupt settings

Selector Switch

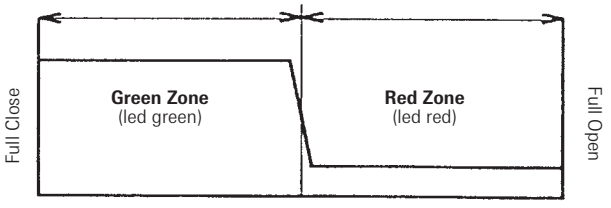


Selector Switch Setting

The selector switch is located under the cover - (see opposite). The switch allows for selection of Normal Action/Reverse Acting and the setting of the Speed Interrupt modes.

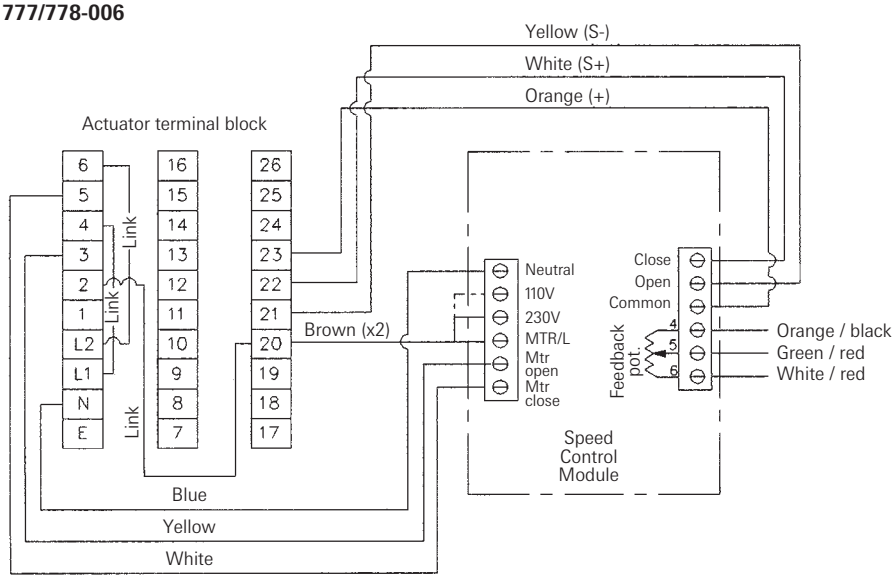
Switch	Servo Amp.	Speed Control	OFF	ON
1	Applicable	Non Applicable	Normal acting (4mA = close)	Reverse acting (4mA = close)
2	Applicable	Applicable	Opening slow speed in Green Zone	Opening slow speed in Red Zone
3	Applicable	Applicable	Closing slow speed in Green Zone	Closing slow speed in Red Zone
4	Not Used			

Speed interrupt settings



Schematic Wiring Diagram

777/778-006



777/778-012/150