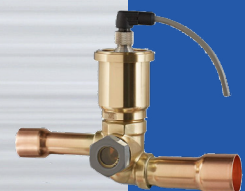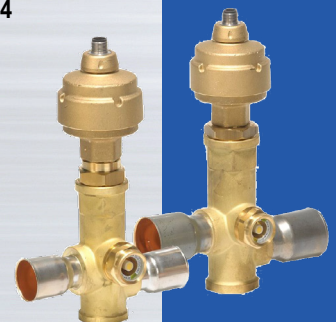# MCS-EXV-DRIVER

MCS-EXV-DRIVER
110-240VAC

MCS-EXV-DRIVER-24
24VAC

Used for the positioning

of

Stepper Expansion Valves

MCS-EXV-DRIVER

The MCS-EXV-DRIVER is used to move an electronic stepper expansion valve. The position of the valve is based on an analog input voltage of 0-10 VDC (0 VDC = 0% valve is closed, 10 VDC = 100% valve is fully opened).

The MCS-EXV-DRIVER also supports overdriving on full opened and full closed voltage signals.

Another advantage of using the MCS-EXV-DRIVER is that it eliminates the need for having a liquid line solenoid. The MCS-EXV-DRIVER has capacitors that store enough power to close the valve when input power fails.

The amount of time to charge can be seen from the LED indicator. At power up the LED indicator will blink until the storage system is fully charged. At power off the valve is driven closed and the LED indicator will blink.
When the valve is closed and the storage system is depleted the LED indicator will be off.

The MCS-EXV-DRIVER supports several electronic valve manufacturers including Sporlan, Alco, Danfoss and Carel.

VALVE TYPE IDENTIFIER -

Valve Code	Firmware Ver.	# of Steps	EXV TYPE
A1	5.5	750	Alco/Emerson EX4, EX5, EX6
A2	5.5	1660	Alco/Emerson EX7
A3	5.5	2600	Alco/Emerson EX8
CL	6.2	500	CAREL E2V, E3V, E4V, E5V, E6V, E7V
DA	9.2	4999	Danfoss ETS500L
DB	9.2	3810	Danfoss ETS175L
D1	5.5	2625	Danfoss ETS-12B, -24B, -25B, -50B, KVS-15
D2	5.5	3530	Danfoss ETS-100B
D3	5.5	3810	Danfoss ETS-250, -400, KVS-42
D4	5.5	600	Danfoss ETS-12C, -24C, -25C, -50C, -100C
D5	7.9	1100	Danfoss CCTM-2, CCMT-4, CCMT-8
D6	7.9	800	Danfoss CCMT-16
D7	7.9	1400	Danfoss CCMT-24
D8	7.9	2300	Danfoss CCMT-30
D9	7.9	2200	Danfoss CCMT-42
H3	7.5	2600	Sanhua VPF-12.5, -25
H4	7.5	2600	Sanhua VPF-50
H5	7.5	3500	Sanhua VPF-100
H6	7.5	3800	Sanhua VPF-150, -250, -400
P1	7.5	2500	Sporlan GC-10, -20, -30, -40, -50; FGB-60, -70
S1	5.5	1596	Sporlan SEI 0.5-11
S2	5.5	1596	Sporlan SER 1.5-20
S3	5.5	3193	Sporlan SEI 30; SDR –3, SDR-3X
S4	5.5	2500	Sporlan SER-AA, -A, -B, -C, -D; SER(I)-F, -G, -J, -K, -L; CDS -2, -4, -7
S5	5.5	6386	Sporlan SEI-50, SEH (I)-100, -175, -400, T; Y1218/ Y1231; SEH-P; CDS –9, -16, -17; SDR –4, -5, MTW-9S, -17S, -21S
T1	6.1	1596	Sporlan SEI 0.5-11 - two valves wired to one MCS-EXV-DRIVER
T2	6.1	1596	Sporlan SER 1.5-20 - two valves wired to one MCS-EXV-DRIVER
T3	6.1	3193	Sporlan SEI 30; SDR –3, SDR-3X - two valves wired to one MCS-EXV-DRIVER
T4	6.1	2500	Sporlan SER-AA, -A, -B, -C, -D; SER(I)-F, -G, -J, -K, -L; CDS -2, -4, -7 - two valves wired to one MCS-EXV-DRIVER
T5	6.1	6386	Sporlan SEI-50, SEH (I)-100, -175, -400, T; SEH-P; CDS –9, -16, -17; SDR –4, -5, MTW-9S, -17S, -21S - two valves wired to one MCS-EXV-DRIVER

MCS-EXV-DRIVER

Features

- Modes of operation: **Auto/Manual**
- Closing of the valve on loss of power.
- Universal main supply operation (accepts 110 to 240 VAC ±10% (50/60 Hz); 44 VA or 24 VAC ± 10% (50/60 hZ)
- Supports a variety of expansion valves
- POWER OK indicator LED
- FUSE BLOWN indicator LED
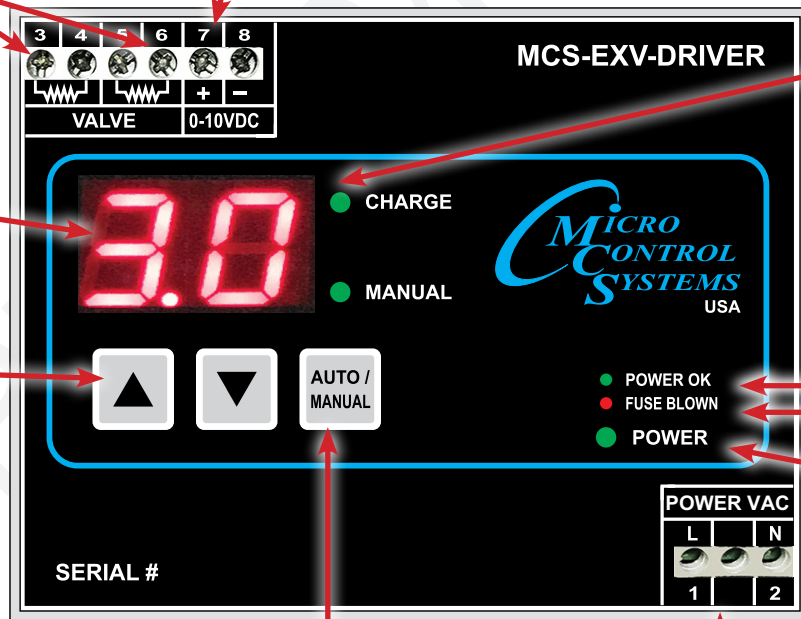- If a power failure occurs it activates the **MCS-EXV-DRIVER** into power down mode.

User Interface

The #7 terminal is Analog Input + and the #8 terminal is Analog Input - (ground).
Recommended #22-2 Shielded Wire

The #3 through #6 terminals are for wiring the EXV valve.

Once power is applied, the charge LED will pulse until fully charged.

2 Digit LCD Display Screen

Power OK LED

FUSE BLOWN LED turns red if fuse is blown and power is normal.

Up/Down Arrow Keys

POWER LED turns green during normal power. POWER LED turns off if power fails.

Auto / Manual Mode Key

Power input- the L terminal is line and the N terminal is neutral. If utilizing 240 volt L is Phase1 and N is Phase2.
Recommended maximum wire size of 16 AWG

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The founders of Micro Control Systems Inc. have been in the manufacture of Microprocessor Controls their entire careers and have over eight decades of combined HVAC/R Microprocessor Controls experience. MCS was founded to meet the needs of the Utility and HVAC/R Industries with products based on the following design criteria:

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