

ACTUATORS & DAMPERS

KMC ACTUATORS MEP SERIES

DESCRIPTION

The **KMC MEP-4000 Series** are compact but powerful direct-coupled actuators which provide tri-state, two-position, or proportional control for **small dampers or valves in HVAC systems**. A minimum torque of **40 (MEP-40xx)** or **80 (MEP-48xx)** in-lbs. is available over the 95° angular rotation. A minimum torque of **25 (MEP-4201)**, **45 (MEP-4501)**, or **90 (MEP-4901)** in-lb. is available over the 95° angular rotation in 35 seconds or less (or 45 seconds for the **MEP-4901**). This series of actuators comes in both non-fail safe and capacitor driven fail-safe models. **MEP-4xx1** tri-state/two-position models are designed for use with floating thermostats or controllers. **MEP-4xx4/4xx5** two-position models are available in 24 VAC/VDC or 100–240 VAC models. The **MEP-7000 Series** are powerful, efficient, durable, direct-coupled actuators which also provide tri-state or proportional control for large control air dampers or valves in HVAC systems. A minimum torque of 120, 180, or 320 in-lbs. is available over the 94° angular rotation. Capacitor-driven fail-safe models provide efficient operation with switch-selectable fail direction.

FEATURES

- Proportional models include “anti-jitter” circuitry
- Switch-selectable feedback on selected models
- Fully adjustable, built-in auxiliary switch on selected models
- Removable terminals and removable 1/2" NPS conduit fitting (except the MEP-4003)
- Direct mounting to standard shaft sizes
- Gear disengagement button
- Adjustable mechanical end stop
- Valve body quick-mount option on MEP-4002V/4003V
- A patent-pending noise reducer provides whisper-quiet operation on the MEP-4201, 4501, 4901 series
- Fast rotation—less than 35 seconds for 90° with 25 or 45 in-lb. of torque or less than 45 seconds with 90 in-lb. torque on the MEP-4201, 4501, 4901 series



MEP-4252



MEP-7852



SPECIFICATIONS

Supply Voltage

MEP-4xx5 Series	100 to 240 VAC
MEP-4000 (all others)	24 VDC/VAC (+20%/–15%), Class 2 only
MEP-7000 Series	24 VDC/VAC (+20%/–15%), Class 2 only or 22-35 VDC

Supply VA

MEP-4000 Series	2 VA Tri-state models, 4 VA Proportional models
MEP-750X Series	6 VA
MEP-755X Series	8 VA
MEP-780X Series	8 VA
MEP-785X Series	10 VA

Control Signal

Floating, Proportional, 2-Position

Wiring

14-22 AWG, 12-26 AWG

Wiring Terminations

Screw Terminals, Cable Pigtail

Conduit Connection

Yes, dual

Operating Torque

25 in-lbs to 320 in-lbs

Rotation

95 degrees

Drive Time

25 to 90 seconds

Operating Temperature

-22 to 131°F (-30 to 55°C)

Operating Humidity

5-95% RH non-condensing

Maximum Shaft Diameter

MEP-4000 Series	1/4" to 5/8" round, 1/4" to 7/16" square
MEP-7000 Series	3/8" to 1.05" round, 5/16" to 5/8" square

Noise Level

MEP-4000 Series	Less than 35 dbA maximum at 1 meter
MEP-7000 Series	Less than 45 dbA maximum at 1 meter

Enclosure Rating

Flame-retardant plastic

Dimensions

MEP-4003	5.3"H x 2.6"W x 1.8"D (13.5 x 6.6 x 4.6 cm)
MEP-4003V	5.3"H (w/o handle extended) x 2.6"W x 2.59"D (13.5 x 6.6 x 6.6 cm)
MEP-4002V	5.3"H (w/o handle extended) x 2.6"W x 3.28"D (13.5 x 6.6 x 8.32 cm)
MEP-4201, 4501, 4901	6.0"H x 2.8"W x 3.4"D (15.2 x 7.14 x 8.65 cm)
MEP-4000 (all others)	5.3"H x 2.6"W x 2.5"D (13.5 x 6.6 x 6.35 cm)
MEP-7000 Series	10.1"H x 5"W x 3"D (25.7 x 12.7 x 7.6 cm)

Weight

MEP-4000 Series	1.1 lb (0.49 Kg)
MEP-7x0x	5 lb (2.27 Kg)
MEP-7x5x	5.4 lb (2.45 Kg)

Approvals

MEP-4000 Series	SASO PCP Registration KSA R-103260; UL File #E145932; FCC Class B, Part 15, Subpart B and complies with Canadian ICES-003 Class B (MEP-4xx4 models only are Class A)
MEP-7000 Series	UL File #E145832; FCC Class B, Part 15

Warranty

5 years

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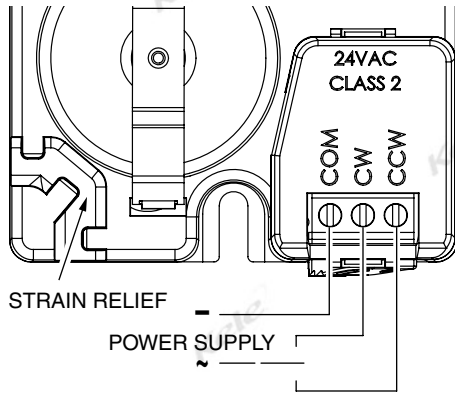
KMC ACTUATORS MEP SERIES



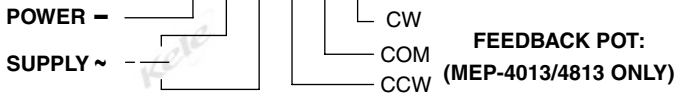
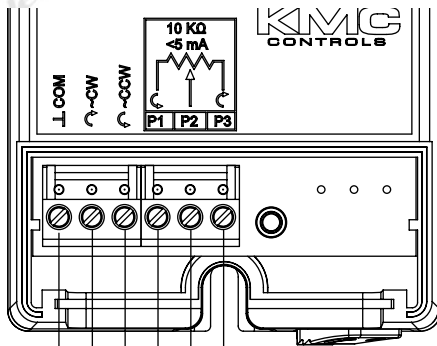
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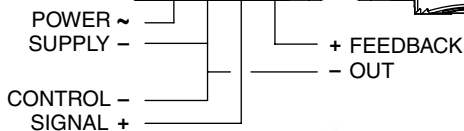
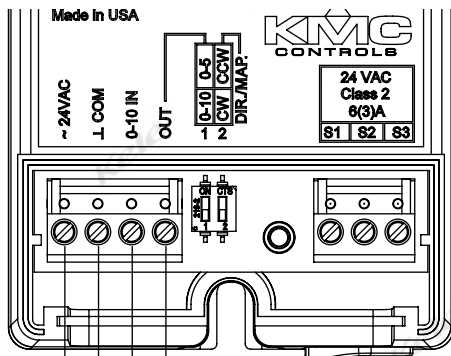
WIRING



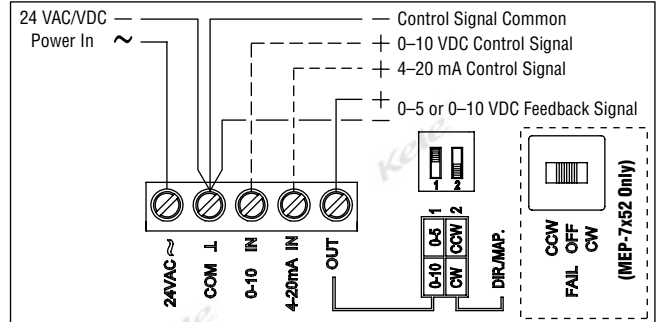
MEP-4003 (Only) Wiring Detail



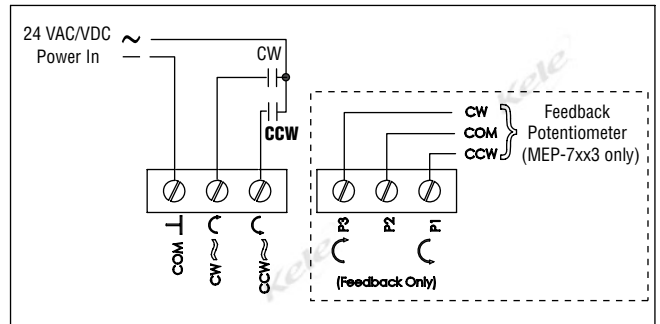
MEP-4x01/4x13/4x21 Wiring Detail



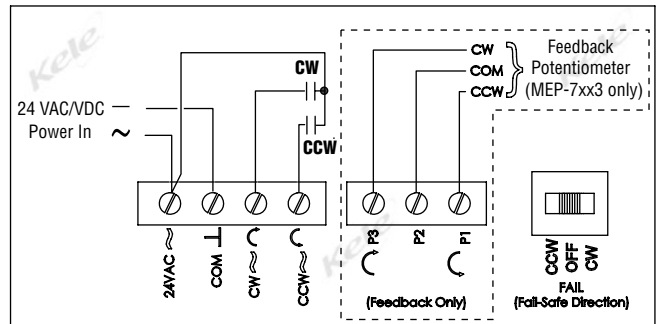
MEP-4x02/4x22 Wiring Detail



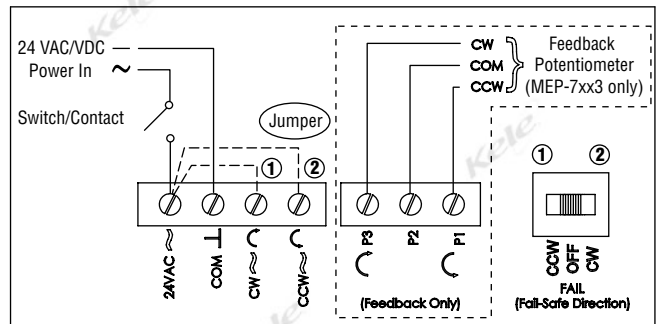
MEP-7xx2 Wiring (Proportional)



MEP-7x01/7x03 Wiring (Tri-State, Non-Fail-Safe)



**MEP-7x51/7x53 (Normal) Wiring
(Tri-State, Fail-Safe)**

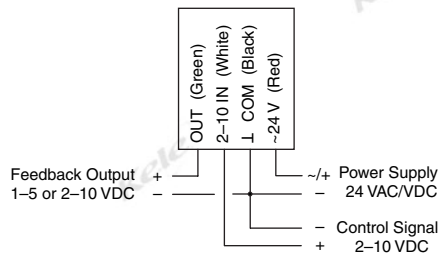


**MEP-7x51/7x53 Two-Position Wiring
(Tri-State, Fail-Safe)**

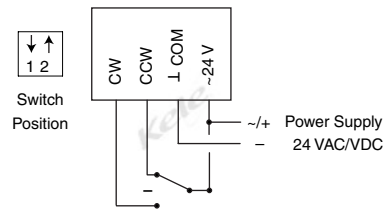
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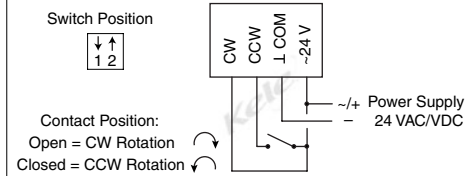
WIRING (continued)



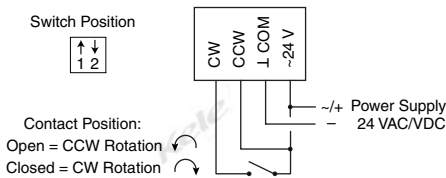
MEP-4xx2
Proportional Control



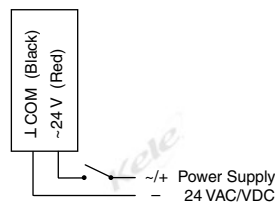
MEP-4x51
Tri-State Floating Point Control



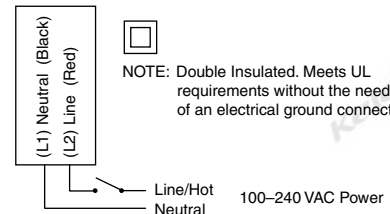
MEP-4x51
2-Position Control, CCW Leg



MEP-4x51
2-Position Control, CW Leg



MEP-4xx4
Two-Position 24 VAC/VDC



MEP-4xx5
Two-Position 100-240 VAC

ORDERING INFORMATION, NON-FAIL-SAFE MODELS

MODEL	DESCRIPTION
MEP-4001	Non-Failsafe, 40 in-lb, 24 VAC, Tri-state
MEP-4002	Non-Failsafe, 40 in-lb, 24 VAC, Proportional
MEP-4003	Non-Failsafe, 40 in-lb, 24 VAC, Tri-state 90 second no cover
MEP-4013	Non-Failsafe, 40 in-lb, 24 VAC, Tri-state w/potentiometer
MEP-4021	Non-Failsafe, 40 in-lb, 24 VAC, Tri-state w/auxilliary switch
MEP-4022	Non-Failsafe, 40 in-lb, 24 VAC, Proportional w/auxilliary switch
MEP-4201	Non-Failsafe, 25 in-lb, 24 VAC/VDC Tri-state or 2 position
MEP-4501	Non-Failsafe, 40 in-lb, 24 VAC/VDC Tri-state or 2 position
MEP-4801	Non-Failsafe, 80 in-lb, 24 VAC, Tri-state
MEP-4802	Non-Failsafe, 80 in-lb, 24 VAC, Proportional
MEP-4813	Non-Failsafe, 80 in-lb, 24 VAC, Tri-state w/potentiometer
MEP-4821	Non-Failsafe, 80 in-lb, 24 VAC, Tri-state w/ auxilliary switch
MEP-4822	Non-Failsafe, 80 in-lb, 24 VAC, Proportional w/ auxilliary switch
MEP-4901	Non-Failsafe, 90 in-lb, 24 VAC, Tri-state or 2 position
MEP-7501	Non-Failsafe, 180 in-lb, 24 VAC, Tri-state
MEP-7502	Non-Failsafe, 180 in-lb, 24 VAC, Proportional
MEP-7503	Non-Failsafe, 180 in-lb, 24 VAC, Tri-state w/potentiometer
MEP-7801	Non-Failsafe, 320 in-lb, 24 VAC, Tri-state
MEP-7802	Non-Failsafe, 320 in-lb, 24 VAC, Proportional
MEP-7803	Non-Failsafe, 320 in-lb, 24 VAC, Tri-state w/potentiometer



ORDERING INFORMATION, ELECTRONIC FAIL-SAFE MODELS

MODEL	DESCRIPTION
MEP-4251	Failsafe, 25 in-lb, 24 VAC, Tri-state
MEP-4252	Failsafe, 25 in-lb, 24 VAC, Proportional
MEP-4254	Failsafe, 25 in-lb, 24 VAC, 2-position
MEP-4255	Failsafe, 25 in-lb, 100-240 VAC, 2-position
MEP-4272	Failsafe, 25 in-lb, 24 VAC, Proportional w/auxilliary switch
MEP-4274	Failsafe, 25 in-lb, 24 VAC, 2-position w/auxilliary switch
MEP-4275	Failsafe, 25 in-lb, 100-240 VAC 2-position w/auxilliary switch
MEP-4551	Failsafe, 45 in-lb, 24 VAC, Tri-state
MEP-4552	Failsafe, 45 in-lb, 24 VAC, Proportional
MEP-4554	Failsafe, 45 in-lb, 24 VAC, 2-position
MEP-4555	Failsafe, 45 in-lb, 100-240 VAC, 2-position
MEP-4572	Failsafe, 45 in-lb, 24 VAC, Proportional w/auxilliary switch
MEP-4574	Failsafe, 45 in-lb, 24 VAC, 2-position w/auxilliary switch
MEP-4575	Failsafe, 45 in-lb, 100-240 VAC, 2-position w/auxilliary switch
MEP-4951	Failsafe, 90 in-lb, 24 VAC, Tri-state
MEP-4952	Failsafe, 90 in-lb, 24 VAC, Proportional
MEP-4954	Failsafe, 90 in-lb, 24 VAC, 2-position
MEP-4955	Failsafe, 90 in-lb, 100-240 VAC, 2-position
MEP-4972	Failsafe, 90 in-lb, 24 VAC, Proportional w/2 auxilliary switches
MEP-4974	Failsafe, 90 in-lb, 24 VAC, 2-position w/2 auxilliary switches
MEP-4975	Failsafe, 90 in-lb, 100-240 VAC, 2-position w/2 auxilliary switches
MEP-7551	Failsafe, 180 in-lb, 24 VAC, Tri-state
MEP-7552	Failsafe, 180 in-lb, 24 VAC, Proportional
MEP-7553	Failsafe, 180 in-lb, 24 VAC, Tri-state w/potentiometer
MEP-7851	Failsafe, 320 in-lb, 24 VAC, Tri-state
MEP-7852	Failsafe, 320 in-lb, 24 VAC, Proportional
MEP-7853	Failsafe, 320 in-lb, 24 VAC, Tri-state w/potentiometer

	ACCESSORIES
CTE-5202	Proportional thermostat (MEP-4000 series)
HLO-4001	Crank arm kit (MEP-4000 series)
HCO-1151	Weather shield kit (MEP-4000 series)
HMO-4001	non-rotation "t" bracket (MEP-4000 series)
HMO-4002	Replacement non-rotation bracket (MEP-4000 series)
HMO-4004	Non-rotation bracket kit for VEB series ball valves (MEP-4000 series)
HPO-5074	Ball valve to actuator quick mount kit for MEP-400xv only
HPO-5073	Ball valve to actuator repair kit for standard (MEP-4000 series)
CME-7001	Rotary auxilliary cam switch-single (MEP-7000 series)
CME-7002	Rotary auxilliary cam switch-double (MEP-7000 series)
HCO-1152	Weather shield kit (MEP-7000 series)
HLO-1020	Crank arm kit (MEP-7000 series)
HMO-4535	Replacement non-rotation bracket (MEP-7000 series)
HMO-4536	Adjustable end stop kit (MEP-7000 series)