

## Z2050Q-F Technical Data Sheet



Technical Data	
Fluid	chilled or hot water, up to 60% glycol
Flow characteristic	equal percentage
Controllable flow range	75°
Valve Size [mm]	0.5" [15]
Pipe connection	NPT female ends
Housing	forged brass
Ball	chrome plated brass
Stem	brass
Seat	PTFE
O-ring	EPDM (lubricated)
Body Pressure Rating	360 psi
Maximum Allowable Operating Temperature	212°F [100°C] *
Close-off pressure Δps	75 psi
Cv	1.4 m³/h
Weight	0.22 lb [0.10 kg]
Fluid Temp Range (water)	36...212°F [2...100°C]
Leakage rate	0%
Servicing	maintenance-free

\* If temperature exceeds 212°F operating range due to a boiler control failure the valve will safely contain the hot water but manufacturers product warranty becomes invalid. Valve and actuator replacement is at the expense of others.

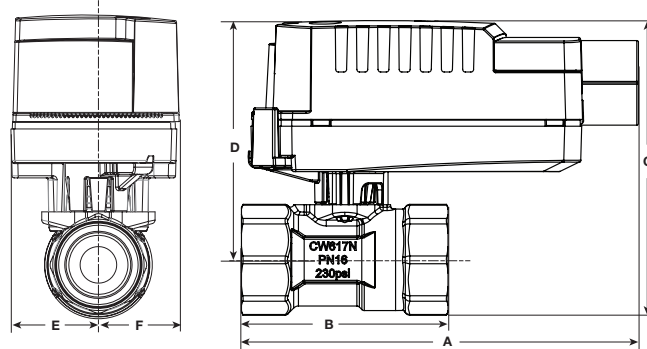
### Application

The QCV zone valves are suited for large commercial buildings where higher close-off and the ability to change flow is desired. Common applications include unit ventilators, fan coil units, VAV reheat coils, fin tube casing, radiant panels and duct coils. The valve fits in space restricted areas and can be assembled without the use of tools.

### Suitable Actuators

	Non-Spring	Electronic fail-safe
Z2050Q-F	CQB	CQKB(X)

### Dimensions (Inches [mm])

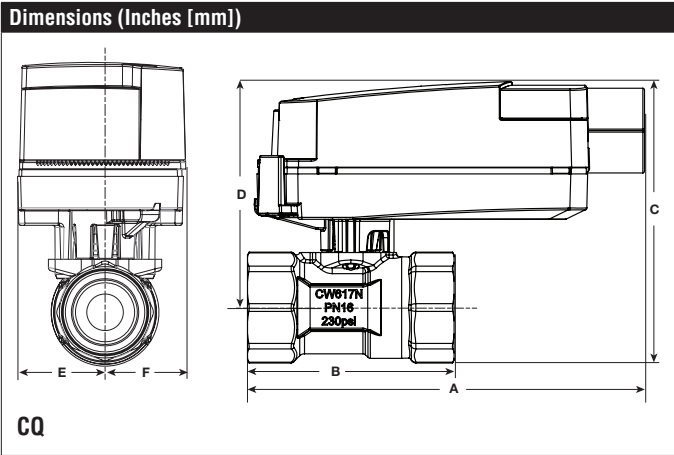


CQK

A	B	C	D	E	F
4.5" [114]	2.0" [52]	3.3" [83]	2.7" [69]	0.9" [24]	

### Safety Notes

**WARNING:** This product can expose you to lead which is known to the State of California to cause cancer and reproductive harm. For more information go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)



A	B	C	D	E	F
4.5" [114]	2.0" [52]	3.1" [80]	2.6" [65]	1.0" [25]	1.0" [26]

# CQKB24-S-RR Technical Data Sheet

## On/Off, Electronic-Fail-safe , 24 V, with Aux. Switch



5-year warranty



Technical Data	
Power Supply	24 VAC, ±20%, 50/60 Hz, 24 VDC, ±10%
Power consumption in operation	2.5 W
Power consumption in rest position	0.5 W
Transformer sizing	5 VA (class 2 power source)
Electrical Connection	18 GA plenum cable, 3 ft [1 m], with 1/2" conduit connector
Overload Protection	electronic throughout 0...90° rotation
Angle of rotation	90°, adjustable with mechanical stop
Position indication	pointer
Running Time (Motor)	75 s
Running time fail-safe	<60 s
Bridging time	2 s delay before fail-safe activates
Pre-charging time	5...20 s
Ambient humidity	max. 95% r.H., non-condensing
Ambient temperature	35...104°F [1.7...40°C]
Storage temperature	-40...176°F [-40...80°C]
Degree of Protection	IP40, NEMA 2
Housing material	UL94-5VA
Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU and 2014/35/EU
Noise level, motor	35 dB(A)
Noise level, fail-safe	35 dB(A)
Servicing	maintenance-free
Quality Standard	ISO 9001
Weight	0.56 lb [0.20 kg]
Auxiliary switch	1 x SPST, 1 A resistive @ DC 30 V,

† Use flexible metal conduit. Push the listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control pollution degree 3.

### Safety Notes

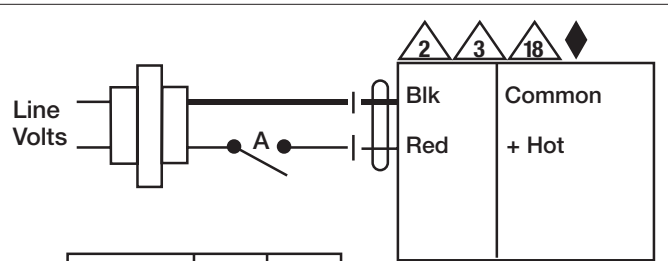
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## Wiring Diagrams

### INSTALLATION NOTES

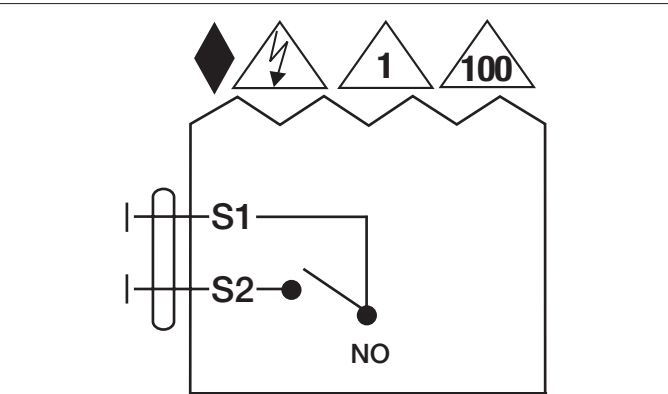
- (A) Actuators with appliance cables are numbered.
- 1 Provide overload protection and disconnect as required.
- 2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- 3 Actuators may also be powered by 24 VDC.
- 18 Actuators with plenum cable do not have numbers; use color codes instead.
- 100 One built-in auxiliary switch, 1x SPST 1A @ 30 VDC (resistive load), for end position indication, interlock control, fan startup, etc.
- Meets cULus requirements without the need of an electrical ground connection.
- Apply only AC line voltage or only UL-Class 2 voltage to the terminals of auxiliary switches. Mixed or combined operation of line voltage/safety extra low voltage is not allowed.

**WARNING! LIVE ELECTRICAL COMPONENTS!**  
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



Functions	A	
100%		
0%		
Fail Position	0%	Close

### 24 VAC Transformer



### Auxiliary Switch