

SERIES E5 compact



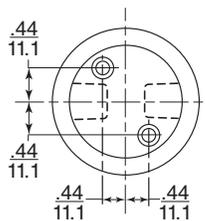
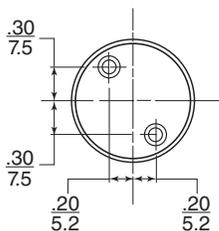
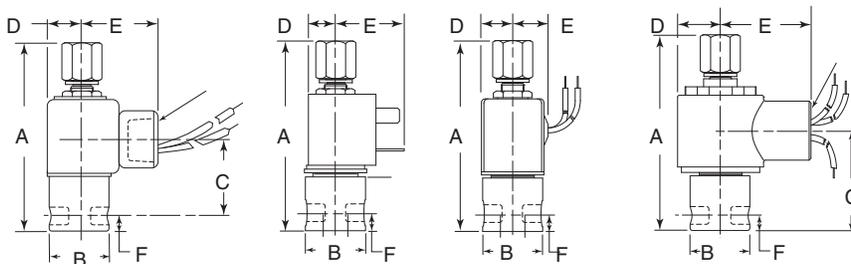
Side Ported Types

Series E5 compact valves are direct solenoid actuated Valves. They are physically smaller than the Series E full-size valves described on pages 18 through 21, but offer most of the same orifice sizes and operating pressure ranges as the larger valves. Ports are 1/8 NPT in the valve body and the valves are individually mounted.

| | |
|----------------------------|---------------------------------------------------------------------------|
| Function | 2-Way NC, 2-way NO, 3-way NC, 3-Way NO, & Directional. |
| Media | Air / Gas / Hydraulic |
| Pressure: | to 500 psi (see table page 14) |
| Flow: | to 0.26 Cv |
| Temperature: | 0°F to 180°F (-18°C to 82°C) |
| Ports, Inlet & Outlet: | 1/8" or 1/4" NPT |
| Exhaust/vent: | Vent to atmosphere, #10-32 thread (NPT port or dust protectors available) |
| Voltages: | AC or DC |
| Coil rating: | Class F, continuous duty |
| Power: | 8.5 - 10.5 watt |
| Connections: | 1/2" NPT |
| Ingress protection: | NEMA 1, 2,3 & 4/4X, |
| Ordinary Location | NEMA 1, 2,3 & 4/4X, |
| Hazardous Location | NEMA 7, 9, 4/4X, FM & ATEX |
| Materials of construction: | |
| Body: | 430 Stainless (316 Stainless Steel optional) |
| Seals | NBR (Nitrile) |
| Coil: | Epoxy molded |
| Mounting: | (2) threaded holes (optional bracket -WMA) |

ORDINARY LOCATION COILS (NEMA 1, 2, 3)

1/8" NPT Ports 1/4" NPT Ports



1/8" Body Mounting Hole Dimension 1/4" Body

HAZARDOUS LOCATION COILS (NEMA 7 & 9)



1/8" NPT Ports



1/4" NPT Ports

| | | A | | B | | C | | D | | E | | F | |
|------------|---------|------|------|------|------|------|------|------|------|------|------|------|-----|
| | | IN | mm | IN | mm |
| 1/8" Ports | -HC | 3 | 76.2 | 1 | 25.4 | 1.6 | 40.6 | 2.9 | 73.7 | 0.67 | 17 | 0.3 | 7.6 |
| | -243 | 3 | 76.2 | 1 | 25.4 | — | — | 0.52 | 13.2 | 0.69 | 17.5 | 0.3 | 7.6 |
| | STD | 3 | 76.2 | 1 | 25.4 | 1.26 | 32 | 0.52 | 13.2 | 1.34 | 34 | 0.3 | 7.6 |
| | -XX -XN | 3.28 | 83 | 1 | 25.4 | 1.35 | 34.3 | 0.72 | 18.2 | 1.5 | 38.5 | 0.3 | 7.6 |
| 1/4" Ports | -HC | 3.07 | 78 | 1.34 | .34 | 1.4 | 35.6 | .75 | 19 | 0.67 | 17 | 0.34 | 8.6 |
| | -243 | 3.2 | 81.2 | 1.34 | .34 | — | — | 0.52 | 13.2 | 0.69 | 17.5 | 0.34 | 8.6 |
| | STD | 3.2 | 81.2 | 1.34 | .34 | 1.09 | 27.7 | 0.52 | 13.2 | 1.34 | 34.1 | 0.34 | 8.6 |
| | XX -XN | 3.3 | 83 | 1.34 | .34 | 1.48 | 37.6 | 0.72 | 18.3 | 1.5 | 38.5 | 0.34 | 8.6 |

SERIES E5 COMPACT

Side Ported Types

| Type | Maximum Operating Pressure Differential psi (bar)†† | | ORDINARY LOCATIONS (For Coil Voltages See Page 4) | | Min. Orifice between Ports | | Piping Arrangement and Flow Pattern |
|----------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | Product Number | | | | |
| | AC | DC | 1/8" BODY PORTS | 1/4" BODY PORTS | "NC"- "COM" | "COM"- "NO" | |
| TWO-WAY 2/2 NORMALLY CLOSED Air, Oil or Water | 500 (34) 400 (27) 200 (14) 100 (6.9) 75 (5.2) | 250 (17) 150 (10) 100 (6.9) 45 (3.1) 25 (1.7) | E5SM-2201-20-(*) E5SM-2201-30-(*) E5SM-2201-40-(*) E5SM-2201-60-(*) E5SM-2201-80-(*) | E5SM-2301-20-(*) E5SM-2301-30-(*) E5SM-2301-40-(*) E5SM-2301-60-(*) E5SM-2301-80-(*) | 1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) 3/32" (2.4 mm) 1/8" (3.2 mm) | | <p>Port COM blocked to Port NC Port COM connected to Port NC</p> |
| TWO-WAY 2/2 NORMALLY OPEN Air, Oil or Water | 400 (27) 200 (14) 125 (8.6) | 200 (14) 100 (6.9) 60 (4.1) | E5SM-2202-03-H2-(*) E5SM-2202-04-H2-(*) E5SM-2202-06-H2-(*) | E5SM-2302-03-H2-(*) E5SM-2302-04-H2-(*) E5SM-2202-06-H2-(*) | | 1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) | <p>Port COM blocked to Port NO Port COM connected to Port NO</p> |
| THREE-WAY 3/2 NORMALLY CLOSED (EXHAUST TO ATMOSPHERE) Air Only | 200 (14) 150 (10) 100 (6.9) 60 (4.1) 30 (2.1) | 200 (14) 150 (10) 100 (6.9) 60 (4.1) 30 (2.1) | E5SM-3201-22-(*) E5SM-3201-33-(*) E5SM-3201-34-(*) E5SM-3201-44-(*) E5SM-3201-64-(*) E5SM-3201-84-(*) | E5SM-3301-22-(*) E5SM-3301-33-(*) E5SM-3301-34-(*) E5SM-3301-44-(*) E5SM-3301-64-(*) E5SM-3301-84-(*) | 1/32" (0.8 mm) 3/64" (1.2 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) 1/16" (1.6 mm) 3/32" (2.4 mm) 1/8" (3.2 mm) | 1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) 1/16" (1.6 mm) 1/16" (1.6 mm) 1/16" (1.6 mm) | <p>Port NC blocked Port COM; Port COM connected to Port NO Port NC connected to Port COM; Port NO blocked</p> |
| THREE-WAY 3/2 NORMALLY CLOSED (PIPED EX-HAUST) Air, Oil or Water | 200 (14) 150 (10) 100 (6.9) 60 (4.1) 30 (2.1) | 200 (14) 150 (10) 100 (6.9) 60 (4.1) 30 (2.1) | E5SM-3201-22-H2-(*) E5SM-3201-33-H2-(*) E5SM-3201-34-H2-(*) E5SM-3201-44-H2-(*) E5SM-3201-64-H2-(*) E5SM-3201-84-H2-(*) | E5SM-3301-22-H2-(*) E5SM-3301-33-H2-(*) E5SM-3301-34-H2-(*) E5SM-3301-44-H2-(*) E5SM-3301-64-H2-(*) E5SM-3301-84-H2-(*) | 1/32" (0.8 mm) 3/64" (1.2 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) 3/32" (2.4 mm) 1/8" (3.2 mm) | 1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) 1/16" (1.6 mm) 1/16" (1.6 mm) | <p>Port NO connected to Port COM; Port NC blocked Port NO blocked; Port COM connected to Port NC</p> |
| THREE-WAY 3/2 NORMALLY OPEN Air, Oil or Water | 150 (10) 125 (8.6) 100 (6.9) 75 (5.2) | 150 (10) 125 (8.6) 75 (5.2) 45 (3.1) | E5SM-3202-22-H2-(*) E5SM-3202-33-H2-(*) E5SM-3202-44-H2-(*) E5SM-3202-64-H2-(*) | E5SM-3302-22-H2-(*) E5SM-3302-33-H2-(*) E5SM-3302-44-H2-(*) E5SM-3302-64-H2-(*) | 1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) 3/32" (2.4 mm) | 1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) 1/16" (1.6 mm) | <p>Port COM connected to Port NO; Port NC blocked Port COM connected to Port NC; Port NO blocked</p> |
| THREE-WAY 3/2 DIRECTIONAL CONTROL Air, Oil or Water | 300 (21) 200 (14) 100 (6.9) 75 (5.2) | 200 (14) 100 (6.9) 50 (3.4) 25 (1.7) | E5SM-7202-22-H2-(*) E5SM-7202-33-H2-(*) E5SM-7202-44-H2-(*) E5SM-7202-64-H2-(*) | E5SM-7302-22-H2-(*) E5SM-7302-33-H2-(*) E5SM-7302-44-H2-(*) E5SM-7302-64-H2-(*) | 1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) 3/32" (2.4 mm) | 1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) 1/16" (1.6 mm) | <p>Port COM connected to Port NO; Port NC blocked Port COM connected to Port NC; Port NO blocked</p> |
| THREE-WAY 3/2 MULTI-PURPOSE Air, Oil or Water | 125 (8.6) 100 (6.9) 65 (4.5) | 125 (8.6) 100 (6.9) 50 (3.4) | E5SM-8202-22-H2-(*) E5SM-8202-33-H2-(*) E5SM-8202-44-H2-(*) | E5SM-8302-22-H2-(*) E5SM-8302-33-H2-(*) E5SM-8302-44-H2-(*) | 1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) | 1/32" (0.8 mm) 3/64" (1.2 mm) 1/16" (1.6 mm) | <p>Multi-purpose valves may be used as Three-Way, NC or Three-Way, NO or Directional Control Valves. Two-Way, NC or Two-Way, NO can be accomplished by plugging the appropriate port.</p> |

NOTES:

*Specify Voltage Code # from page 5.

†For air only.

†† MPa = $\frac{\text{bar}}{10}$

| Standard Wattage | Maximum Operating Pressure Differential psi (bar)†† | HAZARDOUS LOCATION VALVES | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------------|---------------------------|-----------|
| | | Product Number | | | | |
| | | 1/8" BODY PORTS | | 1/4" BODY PORTS | | |
| | | AC or DC | 1.8 Watt | 0.85 Watt | 1.8 Watt | 0.85 Watt |
| E5SM-2201-20-XX-(*) E5SM-2201-30-XX-(*) E5SM-2201-40-XX-(*) E5SM-2201-60-XX-(*) E5SM-2201-80-XX-(*) | 120 (8.3) 80 (5.5) 50 (3.4) | E5SM-2201-20-LB-XX-(*) E5SM-2201-30-LB-XX-(*) E5SM-2201-40-LB-XX-(*) | E5SM-2201-20-LA-XX-(*) | E5SM-2301-20-LB-XX-(*) E5SM-2301-30-LB-XX-(*) E5SM-2301-40-LB-XX-(*) | E5SM-2301-20-LA-XX-(*) | |
| E5SM-2202-02-H2-XX-(*) E5SM-2202-03-H2-XX-(*) E5SM-2202-04-H2-XX-(*) | 120 (8.3) 80 (5.5) 50 (3.4) | E5SM-2202-02-H2-LB-XX-(*) E5SM-2202-03-H2-LB-XX-(*) E5SM-2202-04-H2-LB-XX-(*) | E5SM-2202-02-H2-LA-XX-(*) | E5SM-2302-02-H2-LB-XX-(*) E5SM-2302-03-H2-LB-XX-(*) E5SM-2302-04-H2-LB-XX-(*) | E5SM-2302-02-H2-LA-XX-(*) | |
| E5SM-3201-22-XX-(*) E5SM-3201-33-XX-(*) E5SM-3201-34-XX-(*) E5SM-3201-44-XX-(*) E5SM-3201-64-XX-(*) E5SM-3201-84-XX-(*) | 120 (8.3) 60 (4.1) 30 (2.1) | E5SM-3201-23-LB-XX-(*) E5SM-3201-33-LB-XX-(*) E5SM-3201-44-LB-XX-(*) | E5SM-3201-22-LA-XX-(*) | E5SM-3301-23-LB-XX-(*) E5SM-3301-33-LB-XX-(*) E5SM-3301-44-LB-XX-(*) | E5SM-3301-22-LA-XX-(*) | |
| E5SM-3201-22-H2-XX-(*) E5SM-3201-33-H2-XX-(*) E5SM-3201-34-H2-XX-(*) E5SM-3201-44-H2-XX-(*) E5SM-3201-64-H2-XX-(*) E5SM-3201-84-H2-XX-(*) | 120 (8.3) 60 (4.1) 30 (2.1) | E5SM-3201-23-H2-LB-XX-(*) E5SM-3201-33-H2-LB-XX-(*) E5SM-3201-44-H2-LB-XX-(*) | E5SM-3201-22-H2-LA-XX-(*) | E5SM-3301-23-H2-LB-XX-(*) E5SM-3301-33-H2-LB-XX-(*) E5SM-3301-44-H2-LB-XX-(*) | E5SM-3301-22-H2-LA-XX-(*) | |
| E5SM-3202-22-H2-XX-(*) E5SM-3202-33-H2-XX-(*) E5SM-3202-44-H2-XX-(*) E5SM-3202-64-H2-XX-(*) | | | | | | |
| E5SM-7202-22-H2-XX-(*) E5SM-7202-33-H2-XX-(*) E5SM-7202-44-H2-XX-(*) E5SM-7202-64-H2-XX-(*) | | | | | | |
| E5SM-8202-22-H2-XX-(*) E5SM-8202-33-H2-XX-(*) E5SM-8202-44-H2-XX-(*) | | | | | | |



**1/8" Body
1/2" NPT Conduit
Connector
(-XX Type)**



**1/4" Body
1/2" NPT Conduit
Connector
(-XN Type)**

| Orifice & Cv Data | | | |
|-------------------|-------|---------|------|
| Orifice | Cv | Orifice | Cv |
| 1/32" | 0.022 | 1/8" | 0.26 |
| 3/64" | 0.06 | 5/32" | 0.45 |
| 1/16" | 0.106 | 3/16" | 0.56 |
| 3/32" | 0.21 | 1/4" | 0.79 |