

Compact Limit Switches

Adjustable Lever with SS Nylon Tip AEM2G Series

- Die-cast metal housings
- 3m cable/5-pin M12 quick-disconnect (center and right)
- (1) N.O./ (1) N.C. contact on all units
- Compact size with standard 25mm hole spacing
- Epoxy resin-filled for IP67 rating
- Both snap action (Z11) and slow make/slow break (X11) contacts available

| Compact Limit Switches AEM2G Series Selection Chart | | | | | | | | | |
|---|---------|---------------------|--|----------------------------|--|---|-----------------------|-------------------------------------|-------|
| Part Number | Price | Drawing Link | Actuator Type | Max. Actuation Speed (m/s) | Min. Actuation Force (N) Torque (N•m) | Min. Positive Opening Force (N) Torque (N•m) | Contact Configuration | Connection Type | Photo |
| AEM2G61Z11-3 | \$35.00 | PDF | Side rotary lever with nylon tipped stainless steel spring | 1.5 | 0.08 | 0.28 | Diagram 1 | Cable Out (bottom) | A |
| AEM2G61X11-3 | \$35.00 | PDF | | | | | Diagram 2 | | |
| AEM2G6120Z11-3R | \$30.50 | PDF | | | | | Diagram 1 | Cable Out (right) | |
| AEM2G6120Z11M | \$28.00 | PDF | | | | | | 5-pin M12 quick-disconnect (bottom) | |
| AEM2G6120Z11MR | \$28.00 | PDF | | | | | | 5-pin M12 quick-disconnect (right) | |



A



Cable Out (bottom)



Cable Out (right)



5-pin M12 quick-disconnect (bottom)



5-pin M12 quick-disconnect (right)



Compact Limit Switches Specifications

| Compact Limit Switches Specifications AEM Series | | |
|--|---|--|
| Type | (1) N.O. / (1) N.C. | (2) N.O. / (2) N.C. |
| Environmental | | |
| Degree of Protection | IP67 according to IEC 60529 | |
| Temperature Range | Storage: -40 to 70°C (-40 to 158°F). Operating: -25 to 70°C [-13 to 158°F] | |
| Mechanical Ratings | | |
| Mechanical Life | 10 million operations. Models G16, G92, G93: 5 million operations. | |
| Enclosure Material | ZAMAK (zinc alloy) | |
| Contact Blocks Rating | | |
| Positive Opening | Yes, except G61, G92, G93 | All models except 92, 93 operating heads |
| Electrical Ratings | AC-15 | Make: 100A @ 24VAC; 60A @ 120VAC; 30A @ 240VAC Break: 10A @ 24VAC; 6A @ 120VAC; 3A @ 240VAC |
| | DC-13 | 2.8 A @ 24VDC; 0.55 A @ 125VDC; 0.27 A @ 250VDC |
| Maximum Switching Frequency | Contact blocks: all one cycle per second | 3600 [cycles/hour] |
| Repeat Accuracy | 0.05 mm on the operating points at 1 million operations | |
| Short-Circuit Protection | 10A @ <500V | 4A @ <500VAC Part number AEM2G9301Z22-3 is 10A @ <500VAC |
| Contact Resistance | 25mΩ | |
| Recommended Min Operating Speed | With snap-action contacts: 20mm per minute With slow-action contacts: 500mm per minute | |
| Rated Insulation Voltage | B300, R300 according to UL508; 400V (degree of pollution: 3) according to IEC 60947-1 | C300 - R300 according to UL508, 250V (degree of pollution 3) |
| Connection Type | Cable: 3m [9.8 ft] PVC cable, 5 x 0.75 mm ² (18AWG). Overall cable diameter: 8.20 mm (0.32 in) Connector: 5-pin M12 quick-disconnect | Pigtail 3m [9.8 ft], PVC, 0.5 mm ² [20AWG] |
| Wiring Terminal Markings | According to CENELEC EN50013 | N.C. Gray/Brown Red/Pink N.O. Blue/Yellow Green/White |
| Electrical Protection | Class I according to IEC60536-1 | |
| Contact Blocks Performance | | |
| Operation Frequency | 3600 ops/h | |
| Electrical Durability (according to IEC 947-5-1) | Utilization categories AC-15 and DC-13; load factor of 0.5. | |
| Torque | All: 0.5 N•m [0.8 N•m max] | N/A |
| Approvals | UL file E191072, CE | |

*To obtain the most current agency approval information, see the Agency Compliance & Certifications Checklist section on the specific part number's web page.

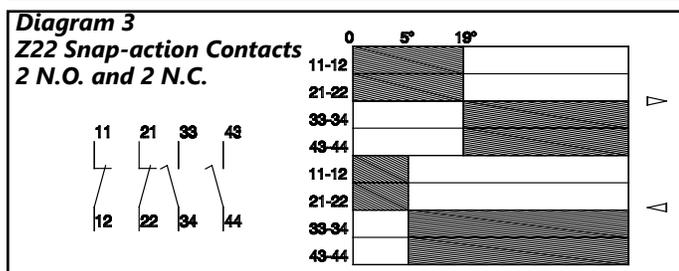
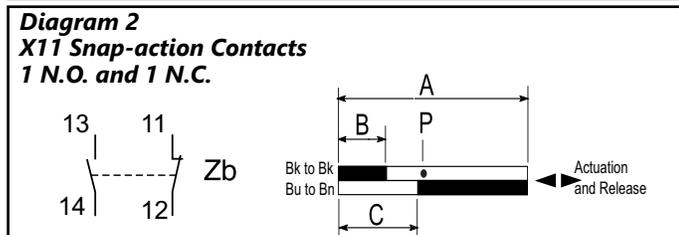
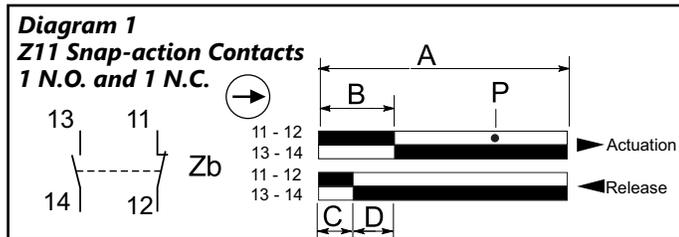
Achieve™ Compact Limit Switches Supplemental

Limit Switch Types

Snap action contact: A contact element in which the contact motion is independent of the speed of the actuator. This feature ensures reliable electrical performance even in applications involving very slow moving actuators.

Slow make/slow break contacts: A contact element in which the contact motion is dependent on the actuator speed.

Contact Displacement Values and Bar Charts



A = Max. travel of the operator in mm or degrees

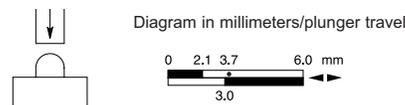
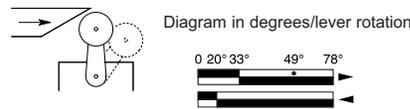
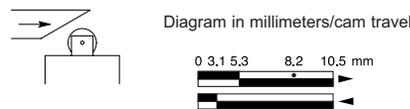
B = Tripping travel of the N.C. contact

C = Tripping travel of the N.O. contact

D = Differential travel (between actuation and release)

P = Point from which positive opening is assured during actuation

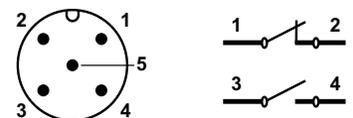
Bar Chart Examples (cam angle is 30 degrees)



Note: Values represent travel of cam in direction of arrow.

| Contact Displacement Values | | | | | |
|--|-----------------------|--|------------|------------|----------------------|
| Part Series | Contact Configuration | Displacement Values mm [in] or degrees | | | |
| | | A | B | C | P |
| AEM2G11, AEM2G16, AEM2G18, AEM2G21 | Z11 | 5.0 [0.20] | 2.2 [0.09] | 1.4 [0.06] | 4.3 [0.17] |
| AEM2G11, AEM2G16, AEM2G21 | X11 | 5.0 [0.20] | 1.9 [0.07] | 3.2 [0.13] | 3.4 [0.13] |
| AEM2G11, AEM2G16, AEM2G21 | Z22 | 5.0 [0.20] | 2.1 [0.82] | 1.3 [0.05] | 4.0 [0.16] |
| AEM2G12, AEM2G13, AEM2G14, AEM2G15, AEM2G17, AEM2G18, AEM2G22, AEM2G23, AEM2G24, AEM2G25 | Z11 | 8.7 [0.34] | 3.8 [0.15] | 2.4 [0.09] | 7.5 [0.30] |
| AEM2G12, AEM2G13, AEM2G14, AEM2G15, AEM2G22, AEM2G23, AEM2G24, AEM2G25 | X11 | 8.7 [0.34] | 3.3 [0.13] | 5.7 [0.22] | 5.9 [0.23] |
| AEM2G12, AEM2G22 | Z22 | 3.6 [0.14] | 8.7 [0.34] | 2.3 [0.09] | 7.0 [0.27] |
| AEM2G41, AEM2G42, AEM2G43, AEM2G45, AEM2G51, AEM2G71, AEM2G72, AEM2G73, AEM2G74, AEM2G75 | Z11 | 74° | 32° | 21° | 65° |
| AEM2G41, AEM2G42, AEM2G43, AEM2G45, AEM2G51, AEM2G71, AEM2G72, AEM2G73, AEM2G74, AEM2G75 | X11 | 74° | 28° | 48° | 50° |
| AEM2G41, AEM2G51 | Z22 | 75° | 30° | 10° | 55° |
| AEM2G61 | Z11 | 74° | 32° | 21° | Not positive-opening |
| AEM2G61 | X11 | 74° | 28° | 48° | |
| AEM2G92 | Z11 | — | 20° | 10° | |
| AEM2G93 | Z11 | — | 20° | 10° | |
| AEM2G93 | Z22 | — | 19° | 5° | — |

5-Pin M12 connector



Note: Green/yellow wire is physical earth ground.

