

Compact Limit Switches

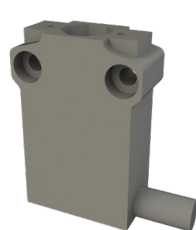
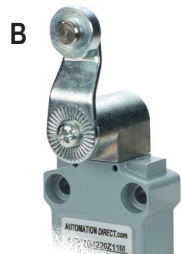
AEM2G Series (Lever with Roller Actuator)

- Die-cast metal housings
- 3m cable/5-pin M12 quick-disconnect (center and right)
- 1 N.O. and 1 N.C. contact on all units
- Compact size with standard 25mm [0.98 in] hole spacing
- Wide offering of head actuators
- Epoxy resin-filled for IP67 rating
- Both snap-action (Z11) and slow-make/slow-break (X11) contacts available
- N.C. contacts are positive-opening operated unless otherwise noted. →

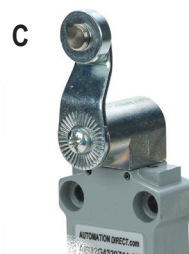
AEM2G Series Compact Limit Switches Selection Chart									
Part Number	Price	Drawing Link	Actuator Type	Max. Actuation Speed (m/s)	Min. Actuation Force (N) Torque (N•m)	Min. Positive Opening Force (N) Torque (N•m)	Contact Configuration	Connection Type	Photo
AEM2G41Z11-3		PDF	Side rotary lever with 14mm nylon roller	1.5	0.08	0.28	Diagram 1	Cable Out (bottom)	A
AEM2G41X11-3		PDF					Diagram 2		
AEM2G4120Z11-3R		PDF					Diagram 1	Cable Out (right)	
AEM2G4120Z11M		PDF						5-pin M12 quick-disconnect (bottom)	
AEM2G4120Z11MR		PDF					5-pin M12 quick-disconnect (right)		
AEM2G42Z11-3		PDF	Side rotary lever with 14mm metal roller	1.5	0.08	0.28	Diagram 1	Cable Out (bottom)	B
AEM2G42X11-3		PDF					Diagram 2		
AEM2G4220Z11-3R		PDF					Diagram 1	Cable Out (right)	
AEM2G4220Z11M		PDF						5-pin M12 quick-disconnect (bottom)	
AEM2G4220Z11MR		PDF					5-pin M12 quick-disconnect (right)		
AEM2G43Z11-3		PDF	Side rotary lever with 14mm ball bearing roller	1.5	0.08	0.28	Diagram 1	Cable Out (bottom)	C
AEM2G43X11-3		PDF					Diagram 2		
AEM2G4320Z11-3R		PDF					Diagram 1	Cable Out (right)	
AEM2G4320Z11M		PDF						5-pin M12 quick-disconnect (bottom)	
AEM2G4320Z11MR		PDF					5-pin M12 quick-disconnect (right)		
AEM2G45Z11-3		PDF	Side rotary lever with 18mm nylon roller	1.5	0.08	0.28	Diagram 1	Cable Out (bottom)	D
AEM2G45X11-3		PDF					Diagram 2		
AEM2G4520Z11-3R		PDF					Diagram 1	Cable Out (right)	
AEM2G4520Z11M		PDF						5-pin M12 quick-disconnect (bottom)	
AEM2G4520Z11MR		PDF					5-pin M12 quick-disconnect (right)		



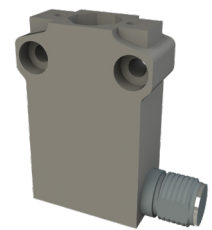
Cable Out (bottom)



Cable Out (right)



5-pin M12 quick-disconnect (bottom)



5-pin M12 quick-disconnect (right)

Compact Limit Switches

Compact Limit Switches Specifications		
Approvals	UL file E191072, CE	
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	
Electrical Ratings	AC15	Make: 100A @ 24VAC; 60A @ 120VAC; 30A @ 240VAC Break: 10A @ 24VAC; 6A @ 120VAC; 3A @ 240VAC
	DC13	2.8 A @ 24VDC; 0.55 A @ 125VDC; 0.27 A @ 250VDC
Maximum Switching Frequency	Contact blocks: all one cycle per second	
Repeat Accuracy	0.05 mm on the operating points at 1 million operations	
Short-Circuit Protection	10A @ <500V	
Contact Resistance	25mΩ	
Recommended Minimum Operating Speed	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	
Connection Type	Cable: 3m PVC cable, 5 x 0.75mm ² (18 AWG). Overall cable diameter: 8.20 mm (0.32 in.) Connector: 5-pin M12 quick-disconnect	
Wiring Terminal Markings	According to CENELEC EN50013	
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 Nm max)	

Compact Limit Switches

Contacts Configuration

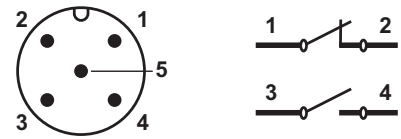
Limit switch types

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.

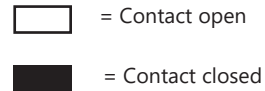
Slow-make/slow-break contacts: A contact element in which the contact motion is dependent on the actuator speed.

Contacts Configuration

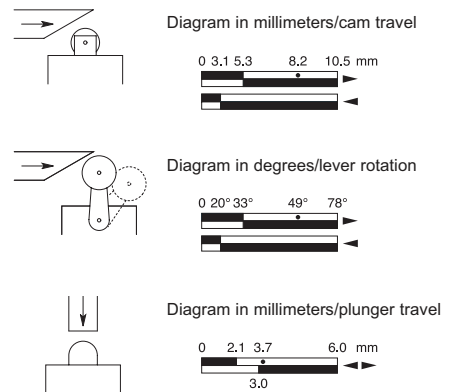
5-Pin M12 connector



Note: Green/yellow wire is physical earth ground.



Bar Chart Examples (cam angle is 30 degrees)



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

Diagram 1
Z11 Snap-action contacts
1 N.O. and 1 N.C.

Bar Charts

Z11

A = Max. travel of the operator in mm or degrees
 B = Tripping travel of both contacts on actuation
 C = Tripping travel of both contacts on release
 D = Differential travel (between actuation and release)
 P = Point from which positive opening is assured during actuation

Diagram 2
X11 Slow-make/slow-break contacts
1 N.O. and 1 N.C.

X11

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
 P = Point from which positive opening is assured during actuation

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]
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]
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°
AEM2G61	Z11	74°	32°	21°	Not positive-opening
AEM2G61	X11	74°	28°	48°	
AEM2G92	Z11		20°	10°	
AEM2G93	Z11		20°	10°	