

Compact Limit Switches

AEM2G Series Compact Limit Switches

- Die-cast metal housings
- 3-meter cable on all units
- 1 N.O. and 1 N.C. contact on all units
- Compact size with standard 25 mm 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

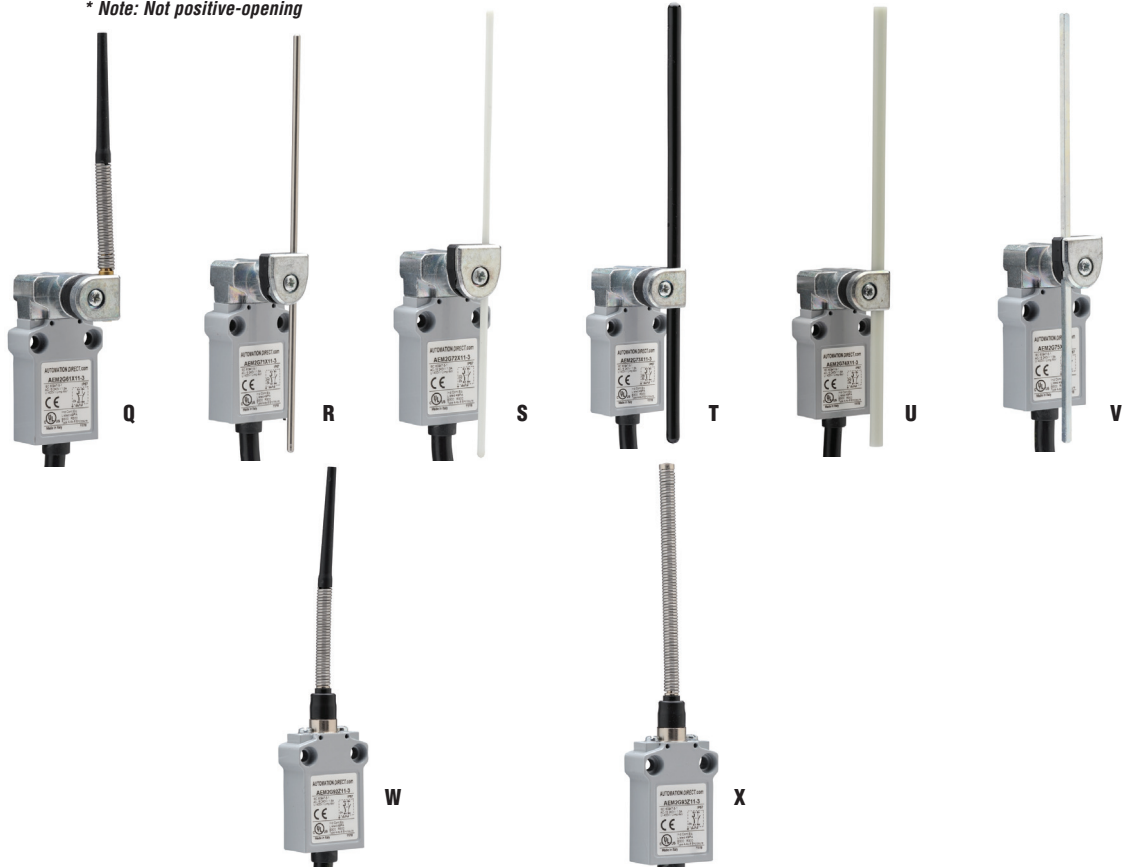
Part Number	Price	Actuator Type	Max. Actuation Speed (m/s)	Min. Actuation Force (N)/ Torque (Nm)	Min. Positive Opening Force (N)/ Torque (Nm)	Head Dimensions	Contact Config. Diagram	Photo
AEM2G11Z11-3		Metal plunger	0.5	15		Figure 1	1	A
AEM2G11X11-3	2							
AEM2G12Z11-3		Metal plunger with metal roller actuator				Figure 2	1	B
AEM2G12X11-3	2							
AEM2G13Z11-3		Metal plunger with nylon roller actuator	0.1	10			1	C
AEM2G13X11-3	2							
AEM2G14Z11-3		Metal plunger with metal cross roller actuator				Figure 3	1	D
AEM2G14X11-3	2							
AEM2G15Z11-3		Metal plunger with nylon cross roller actuator					1	E
AEM2G15X11-3	2							
AEM2G16Z11-3		Metal plunger with dust cap	0.5	15		Figure 4	1	F
AEM2G16X11-3	2							
AEM2G21Z11-3		Metal plunger actuator with fixing nuts				Figure 5	1	G
AEM2G21X11-3	2							
AEM2G22Z11-3		Metal plunger with metal roller actuator with fixing nuts				Figure 6	1	H
AEM2G22X11-3	2							
AEM2G23Z11-3		Metal plunger with nylon roller actuator with fixing nuts	0.1	10			1	I
AEM2G23X11-3	2							
AEM2G24Z11-3		Metal plunger with metal cross roller actuator with fixing nuts				Figure 7	1	J
AEM2G24X11-3	2							
AEM2G25Z11-3		Metal plunger with nylon cross roller actuator with fixing nuts					1	K
AEM2G25X11-3	2							
AEM2G41Z11-3		Lever with 14 mm nylon roller actuator	1.5	0.08	0.28	Figure 8	1	L
AEM2G41X11-3	2							



Compact Limit Switches

AEM2G Series Compact Limit Switches Selection Chart, Continued											
Part Number	Price	Actuator Type	Max. Actuation Speed (m/s)	Min. Actuation Force (N)/ Torque (Nm)	Min. Positive Opening Force (N)/ Torque (Nm)	Head Dimensions	Contact Config. Diagram	Photo			
AEM2G42Z11-3		Lever with 14 mm metal roller actuator	1.5	0.08	0.28	Figure 8	1	M			
AEM2G42X11-3							2				
AEM2G43Z11-3							Figure 9	1	N		
AEM2G43X11-3		2									
AEM2G45Z11-3		Lever with 18 mm nylon roller actuator					Figure 10	1	O		
AEM2G45X11-3								2			
AEM2G51Z11-3		Adjustable lever with 18 mm nylon roller actuator				Figure 11	1	P			
AEM2G51X11-3							2				
AEM2G61Z11-3		Lever with nylon-tipped stainless steel spring actuator				Figure 11	1*	Q			
AEM2G61X11-3							2*				
AEM2G71Z11-3		Adjustable 3 mm stainless steel rod actuator				0.28	0.28	Figure 12	1	R	
AEM2G71X11-3									2		
AEM2G72Z11-3		Adjustable 3 mm fiberglass rod actuator							Figure 12	1	S
AEM2G72X11-3										2	
AEM2G73Z11-3		Adjustable 6 mm nylon rod actuator							Figure 13	1	T
AEM2G73X11-3			2								
AEM2G74Z11-3		Adjustable 6 mm fiberglass rod actuator	Figure 13	1	U						
AEM2G74X11-3				2							
AEM2G75Z11-3		Adjustable 3 mm square steel actuator	Figure 12	1	V						
AEM2G75X11-3				2							
AEM2G92Z11-3		360 degree stainless steel spring with nylon tip actuator	1.0	0.10	Figure 14			1*	W		
AEM2G93Z11-3								Figure 15	1*	X	

* Note: Not positive-opening

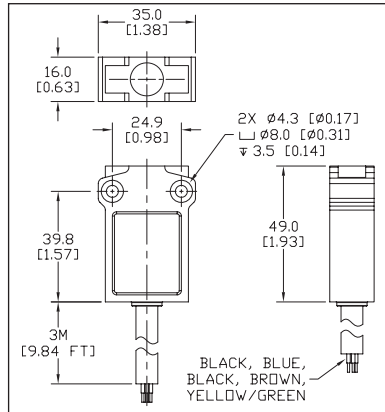


Compact Limit Switches Dimensions

Dimensions

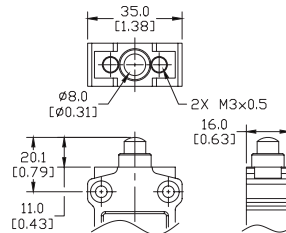
mm [inches]

AEM2G Series Body



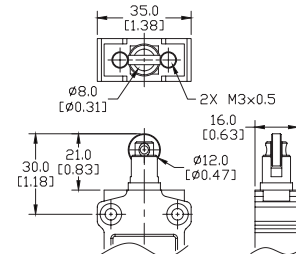
AEM2G Series Heads Figures 1 thru 15

Figure 1



AEM2G11*11-3

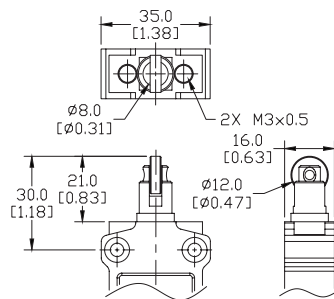
Figure 2



AEM2G12*11-3

AEM2G13*11-3

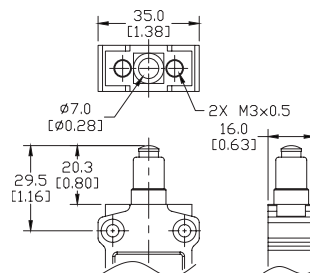
Figure 3



AEM2G14*11-3

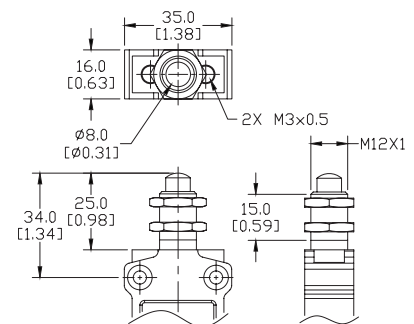
AEM2G15*11-3

Figure 4



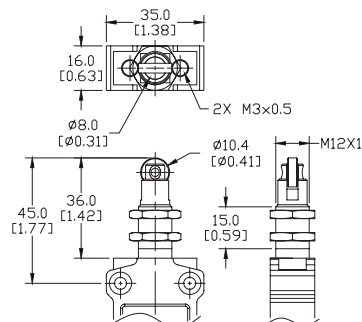
AEM2G16*11-3

Figure 5



AEM2G21*11-3

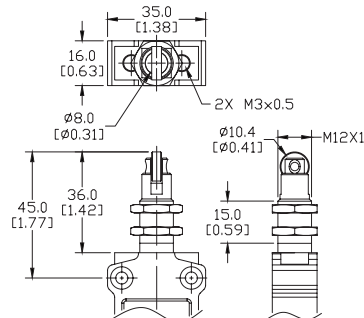
Figure 6



AEM2G22*11-3

AEM2G23*11-3

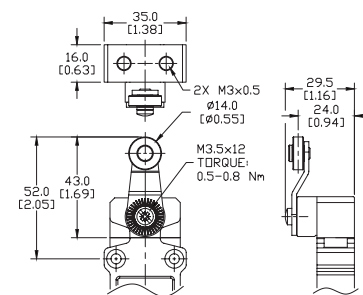
Figure 7



AEM2G24*11-3

AEM2G25*11-3

Figure 8



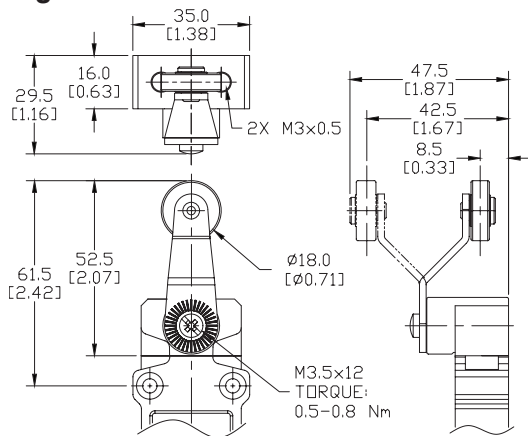
AEM2G41*11-3

AEM2G42*11-3

AEM2G43*11-3

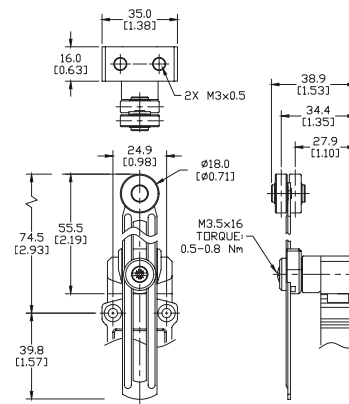
Compact Limit Switches Dimensions, cont.

Figure 9



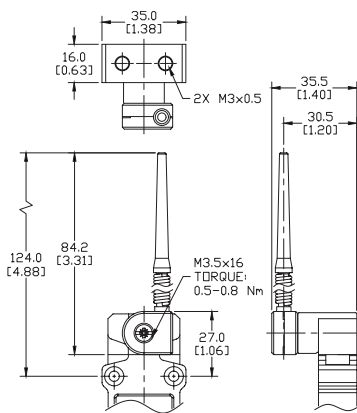
AEM2G45*11-3

Figure 10



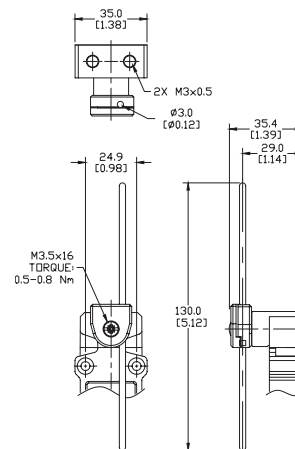
AEM2G51*11-3

Figure 11



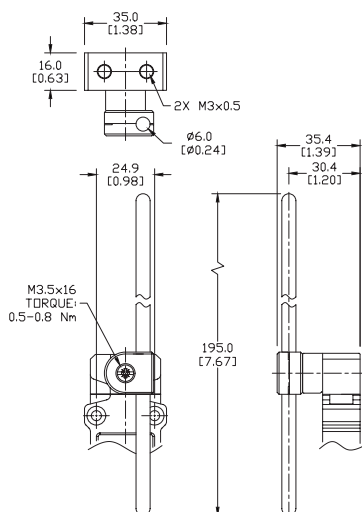
AEM2G61*11-3

Figure 12



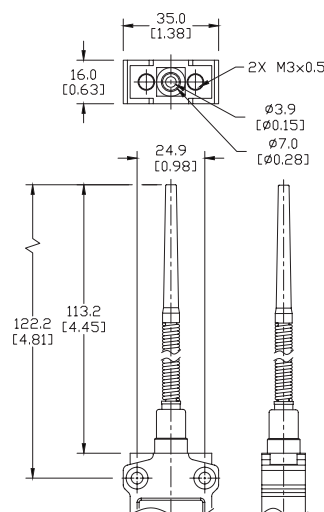
**AEM2G71*11-3 AEM2G75*11-3
AEM2G72*11-3**

Figure 13



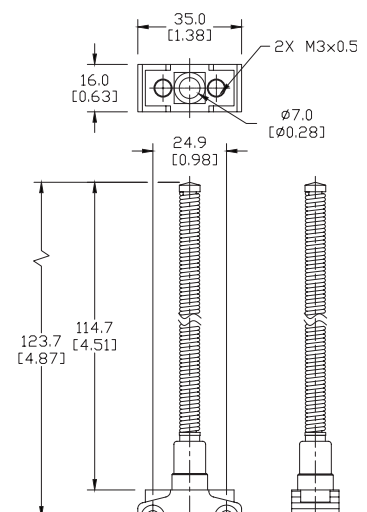
**AEM2G73*11-3
AEM2G74*11-3**

Figure 14



AEM2G92Z11-3

Figure 15



AEM2G93Z11-3

Compact Limit Switches

Compact Limit Switches Specifications		
Approvals		
UL file E191072, CE, RoHS		
Environmental		
Degree of Protection	IP67 according to IEC 529	
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	
Enclosure Material	ZAMAK (zinc alloy)	
Contact Blocks Rating		
Positive Opening	Yes, except G61, G92, G93	
Electrical Ratings	AC15	Make: 50A @ 24VAC; 30A @ 120VAC; 15A @ 240VAC Break: 5A @ 24VAC; 3A @ 130VAC; 1.5A @ 230VAC
	DC13	1.1A @ 24VDC; 0.22A @ 125VDC; 0.1A@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	6A @ <500V	
Contact Resistance	25 milli Ω	
Recommended Minimum Operating Speed	With slow-action contacts: 500 mm per minute	
Rated Insulation Voltage	B300, R300 according to UL508; 400V (degree of pollution: 3) according to IEC 947-1	
Cable Type	3m PVC cable, 5 x 0.75mm ² (18 AWG). Overall cable diameter: 8.20 mm (0.32 in.)	
Wiring Terminal Markings	According to CENELEC EN50013	
Electrical Protection	Class I according to IEC536	
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.	
Screw Size	Heads G11 to G25, G92 and G93: M3 x 5mm screw. Heads G41 and over (except G92 and G93): M3 x 18 mm screw	
Torque	All: 0.5 Nm (0.8 Nm max)	

Compact Limit Switches Contacts Configuration

Limit switch types

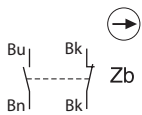
Snap-action contact: A contact element in which the contact motion is independent of the speed of the actuator. This feature ensures reliable electrical performance even in applications involving very slow moving actuators.

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

Contacts Configuration

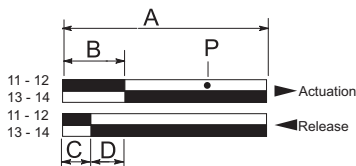
Diagram 1

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



Bar Charts

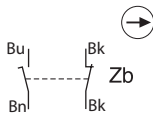
Z11



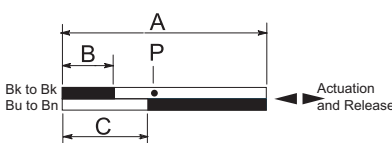
A = Max. travel of the operator in mm or degrees
B = Tripping travel of both contacts on actuation
C = Tripping travel of both contacts on release
D = Differential travel (between actuation and release)
P = Point from which positive opening is assured during actuation

Diagram 2

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



X11

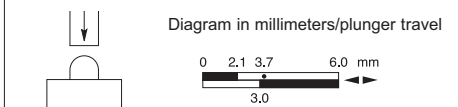
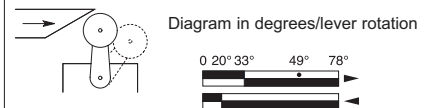
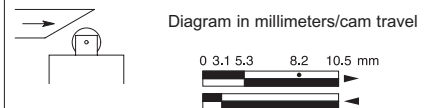


A = Max. travel of the operator in mm or degrees
B = Tripping travel of the N.C. contact
C = Tripping travel of the N.O. contact
P = Point from which positive opening is assured during actuation

Note: Green/yellow wire is physical earth ground.

= Contact open
 = Contact closed

Bar Chart Examples (cam angle is 30 degrees)



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

Part Series	Contact Configuration	Displacement Values mm(in) or degrees			
		A	B	C	P
AEM2G11, AEM2G16, AEM2G21	Z11	5.0 (0.20)	1.9 (0.07)	1.0 (0.04)	4.0 (0.16)
AEM2G11, AEM2G16, AEM2G21	X11	5.0 (0.20)	1.9 (0.07)	3.2 (0.13)	3.4 (0.13)
AEM2G12, AEM2G13, AEM2G14, AEM2G15, AEM2G22, AEM2G23, AEM2G24, AEM2G25	Z11	8.7 (0.34)	3.3 (0.13)	1.7 (0.07)	6.9 (0.27)
AEM2G12, AEM2G13, AEM2G14, AEM2G15, AEM2G22, AEM2G23, AEM2G24, AEM2G25	X11	8.7 (0.34)	3.3 (0.13)	5.5 ((0.21)	5.9 (0.23)
AEM2G41, AEM2G42, AEM2G43, AEM2G45, AEM2G51, AEM2G71, AEM2G72, AEM2G73, AEM2G74, AEM2G75	Z11	74°	26°	14°	58°
AEM2G41, AEM2G42, AEM2G43, AEM2G45, AEM2G51, AEM2G71, AEM2G72, AEM2G73, AEM2G74, AEM2G75	X11	74°	27°	45°	49°
AEM2G61	Z11	74°	26°	14°	Not positive-opening
AEM2G61	X11	74°	27°	45°	
AEM2G92	Z11		14°	5°	
AEM2G93	Z11		14°	5°	

Compact Limit Switches Cross-reference Table

Compact Limit Switches Cross Reference				
<i>ADC</i>	<i>Allen-Bradley</i>	<i>Honeywell</i>	<i>Eaton Cutler-Hammer</i>	<i>Omron</i>
<i>AEM2G11Z11-3</i>	802B-CSABXSXC3	914CE1-3	E47BCC05	D4C-1601
<i>AEM2G12Z11-3</i>	802B-CSADXSXC3	914CE2-3	E47BCC07	D4C-1602
<i>AEM2G14Z11-3</i>	802B-CSAD1XSXC3	914CE3-3	E47BCC11	D4C-1603
<i>AEM2G16Z11-3</i>	802B-CSABBSXC3	914CE18-3	E47BCC06	D4C-1631
<i>AEM2G42Z11-3</i>	802B-CSAAXSXC3	914CE16-3	E47BCC15	D4C-1620
<i>AEM2G51Z11-3</i>	NA	NA	E47BCC21	NA
<i>AEM2G71Z11-3</i>	NA	NA	E47BCC22	NA
<i>AEM2G92Z11</i>	802B-CSACXSXC3	NA	E47BCC20	D4C-1650
<i>AEM2G93Z11</i>	NA	914CE20-3	NA	NA