

## M9106 & M9109 Technical Data

<b>Product</b>	M9106-xGx-2 & M9109 Series Electric Non-Spring Return Actuators	
<b>Power Requirements</b>	AGx:	20 to 30 VAC at 50/60 Hz; 2.5 VA supply, Class 2
	IGx:	20 to 30 VAC at 50/60 Hz; 2.8 VA supply, Class 2
	GGx:	20 to 30 VAC at 50/60 Hz; 3.2 VA supply, Class 2
<b>Input Signal</b>	AGx and IGx:	20 to 30 VAC at 50/60 Hz
	GGx:	0 to 10 VDC or 0 to 20 mA
<b>Input Signal Adjustments</b>	AGx and IGx:	CW and COM Terminals, CW rotation CCW and COM Terminals, CCW rotation
	GGx (Voltage Input or Current Input):	
	Jumper Selectable:	0 (2) to 10 VDC or 0 (4) to 20 mA
	Factory Setting:	0 to 10 VDC, CW rotation with signal increase
	Action is jumper selectable Direct (CW) or Reverse (CCW) with signal increase.	
<b>Input Impedance</b>	AGx:	200 ohms, nominal
	IGx:	160 ohms, nominal
	GGx:	Voltage Input, 150,000 ohms; Current Input, 500 ohms
<b>Feedback Signal</b>	AGF:	10,000 ohm potentiometer, 1 W
	GGx:	0 to 10 VDC or 2 to 10 VDC for 90° (10 VDC at 1 mA)
	Corresponds to input signal span selection	
<b>Auxiliary Switch Rating</b>	xGC:	Two Single-Pole, Double-Throw (SPDT) switches rated at 24 VAC, 1.5 A inductive, 3.0 A resistive, 35 VA maximum per switch, Class 2
<b>Mechanical Output (Running Torque)</b>	1-, 1.5-, and 2-minute settings:	53 lb-in (6 N·m)
	5.5- and 11-minute settings:	35 lb-in (4 N·m)
<b>Cycles</b>	100,000 full cycles; 2,500,000 repositions rated at 53 lb-in (6 N·m)	
	60,000 full cycles; 2,500,000 repositions rated at 53 lb-in (6 N·m)	
<b>Audible Noise Rating</b>	35 dBA maximum at 1 m	
<b>Rotation Range</b>	Adjustable from 30 to 90°, CW or CCW (Mechanical limited to 93°)	
<b>Rotation Time</b>	IGx: Adjustable with switch settings (Factory set for 1 minute. See Figure 12.)	
	60, 90, 120, 330, or 660 seconds (1, 1.5, 2, 5.5 or 11 min.) at 60 Hz;	
	and 72, 108, 144, 396, or 792 seconds	
	(1.2, 1.8, 2.4, 6.6, or 13.2 minutes) at 50 Hz	
	All Other Models: Nominal 60 seconds at 60 Hz and 72 seconds at 50 Hz for 90°	
<b>Electrical Connection</b>	1/4 in. spade terminals	
<b>Mechanical Connection</b>	3/8 to 1/2 in. (10 to 12.7 mm) round shaft or 3/8 in. (10 mm) square shaft	
<b>Enclosure</b>	NEMA 2, IP32	
<b>Ambient Operating Conditions</b>	-4 to 125°F (-20 to 52°C); 90% RH maximum, non-condensing	
<b>Ambient Storage Conditions</b>	IGx:	-40 to 186°F (-40 to 86°C); 90% RH maximum, non-condensing
	All Other Models:	-40 to 176°F (-40 to 80°C); 90% RH maximum, non-condensing
<b>Dimensions (H x W x D)</b>	5.9 x 4.2 x 2.64 in. (150.1 x 106.5 x 67 mm)	
<b>Shipping Weight</b>	2.4 lb (1.08 kg)	
<b>Agency Compliance</b>	UL 873 Listed, File E27734, CCN XAPX	
	CSA C22.2 No. 139 Certified, File LR85083, Class 3221 02	
	CE Mark, EMC Directive 89/336/EEC	

The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products.

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**Controls Group**  
507 E. Michigan Street  
P.O. Box 423  
Milwaukee, WI 53201

www.johnsoncontrols.com