



ACTUATORS & DAMPERS

DIRECT COUPLED ACTUATOR REFERENCE CHART

NON-SPRING RETURN

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ACTUATORS & DAMPERS

MANUFACTURER	TORQUE in-lb (Nm)	POWER Volts	CONTROL SIGNAL		APPROXIMATE DAMPER AREA (ft ²)		
			Floating (Tri-state/2-pos)	Proportional (0/2-10 VDC, 4-20 mA)	No seals (4 in-lb/ft ²)	Opposed w/seals (5 in-lb/ft ²)	Parallel w/seals (7 in-lb/ft ²)
Kele	44 (5)	24 VAC	KA-44-2T		11.0	8.8	6.3
Honeywell	44 (5)	24 VAC	MN6105A1011		11.0	8.8	6.3
Johnson	35 (4)	24 VAC	M9104-AGA-2S		8.8	7.0	5.0
Johnson	53 (6)	24 VAC	M9106-AGA-2		13.3	10.6	7.6
Siemens	44 (5)	24 VAC	GDE131.1P		11.0	8.8	6.3
Invensys	35 (4)	24 VAC	MF4E-60430-100		8.8	7.0	5.0
Invensys	35 (4)	24 VAC	MF41-6043		8.8	7.0	5.0
Belimo	45 (5)	24 VAC/VDC	LMB24-3		11.3	9.0	6.4
Kele	44 (5)	24 VAC/VDC		KA-44-M	11.0	8.8	6.3
Honeywell	44 (5)	24 VAC/VDC		MN7505A2001	11.0	8.8	6.3
Johnson	35 (4)	24 VAC		M9104-GGA-2S	8.8	7.0	5.0
Johnson	53 (6)	24 VAC		M9106-GGA-2	13.3	10.6	7.6
Siemens	44 (5)	24 VAC		GDE161.1P	11.0	8.8	6.3
Invensys	35 (4)	24 VAC		MS41-6043	8.8	7.0	5.0
Belimo	45 (5)	24 VAC/VDC		LMB24-SR	11.3	9.0	6.4
Kele	88 (10)	24 VAC	KA-88-2T		22.0	17.6	12.6
Honeywell	88 (10)	24 VAC	MN6110A1003		22.0	17.6	12.6
Johnson	70 (8)	24 VAC/VDC	M9108-AGA-2		17.5	14.0	10.0
Siemens	88 (10)	24 VAC	GLB131.1P		22.0	17.6	12.6
Invensys	70 (8)	24 VAC	MF41-6083		17.5	14.0	10.0
Belimo	90 (10)	24 VAC/VDC	NMB24-3		22.5	18.0	12.9
Kele	88 (10)	24 VAC/VDC		KA-88-M	22.0	17.6	12.6
Honeywell	88 (10)	24 VAC/VDC		MN7510A2001	22.0	17.6	12.6
Johnson	70 (8)	24 VAC/VDC		M9108-GGA-2	17.5	14.0	10.0
Siemens	88 (10)	24 VAC		GLB161.1P	22.0	17.6	12.6
Invensys	70 (8)	24 VAC		MS41-6083	17.5	14.0	10.0
Belimo	90 (10)	24 VAC/VDC		NMB24-SR	22.5	18.0	12.9
Kele	175 (20)	24 VAC	KA-175-2T		43.8	35.0	25.0
Honeywell	175 (20)	24 VAC	MN6120A1002		43.8	35.0	25.0
Johnson	140 (16)	24 VAC/VDC	M9116-AGA-2		35.0	28.0	20.0
Siemens	132 (15)	24 VAC	GEB131.1P		33.0	26.4	18.9
Invensys	133 (15)	24 VAC	MF41-6153		33.3	26.6	19.0
Belimo	180 (20)	24 VAC/VDC	AMB24-3		45.0	36.0	25.7
Kele	175 (20)	24 VAC/VDC		KA-175-P	43.8	35.0	25.0
Honeywell	175 (20)	24 VAC/VDC		MN7220A2007	43.8	35.0	25.0
Johnson	140 (16)	24 VAC/VDC		M9116-GGA-2	35.0	28.0	20.0
Siemens	132 (15)	24 VAC		GEB161.1P	33.0	26.4	18.9
Siemens	177 (20)	24 VAC		GBB161.1P	44.3	35.4	25.3
Invensys	133 (15)	24 VAC		MS41-6153	33.3	26.6	19.0
Belimo	180 (20)	24 VAC/VDC		AMB24-SR	45.0	36.0	25.7
Kele	301 (34)	24 VAC	KA-301-2T		75.3	60.2	43.0
Honeywell	300 (34)	24 VAC	MN6134A1003		75.0	60.0	42.9
Johnson	210 (24)	24 VAC/VDC	M9124-AGA-2		52.5	42.0	30.0
Johnson	280 (32)	24 VAC/VDC	M9132-AGA-2		45.0	36.0	25.7
Invensys	300 (34)	24 VAC	MF41-6343		75.0	60.0	42.9
Belimo	360 (40)	24 VAC/VDC	GMB24-3		90.0	72.0	51.4
Kele	301 (34)	24 VAC/VDC		KA-301-P	75.3	60.2	43.0
Honeywell	300 (34)	24 VAC/VDC		MN7234A2008	75.0	60.0	42.9
Johnson	210 (24)	24 VAC/VDC		M9124-GGA-2	52.5	42.0	30.0
Johnson	280 (32)	24 VAC/VDC		M9132-GGA-2	70.0	56.0	40.0
Siemens	310 (35)	24 VAC		GIB161.1P	77.5	62.0	44.3
Invensys	300 (34)	24 VAC		MS41-6343	75.0	60.0	42.9
Belimo	360 (40)	24 VAC/VDC		GMB24-SR	90.0	72.0	51.4

ACTUATORS & DAMPERS

DIRECT COUPLED ACTUATOR REFERENCE CHART

SPRING RETURN



2

ACTUATORS & DAMPERS

MANUFACTURER	TORQUE in-lb (Nm)	POWER Volts	CONTROL SIGNAL			APPROXIMATE DAMPER AREA (ft ²)		
			2-Position (On/Off)	Floating (Tri-state)	Proportional (0/2-10 VDC, 4-20 mA)	No seals (4 in-lb/ft ²)	Opposed w/seals (5 in-lb/ft ²)	Parallel w/seals (7 in-lb/ft ²)
Kele	44 (5)	24 VAC	KAS-44-2			11.0	8.8	6.3
Honeywell	44 (5)	24 VAC	MS8105A1030			11.0	8.8	6.3
Invensys	35 (4)	24 VAC	MA40-7043			8.8	7.0	5.0
Belimo	18 (2)	24 VAC, VDC	TF24			4.5	3.6	2.6
Belimo	35 (4)	24 VAC, VDC	LF24			8.8	7.0	5.0
Kele	44 (5)	24 VAC		KAS-44-M		11.0	8.8	6.3
Honeywell	44 (5)	24 VAC		MS7505A2030		11.0	8.8	6.3
Invensys	35 (4)	24 VAC		MF40-7043		8.8	7.0	5.0
Belimo	18 (2)	24 VAC, VDC		TF24-3		4.5	3.6	2.6
Belimo	35 (4)	24 VAC, VDC		LF24-3		8.8	7.0	5.0
Kele	44 (5)	24 VAC			KAS-44-M	11.0	8.8	6.3
Honeywell	44 (5)	24 VAC			MS7505A2030	11.0	8.8	6.3
Invensys	35 (4)	24 VAC			MS40-7043	8.8	7.0	5.0
Belimo	18 (2)	24 VAC, VDC			TF24-SR	4.5	3.6	2.6
Belimo	35 (4)	24 VAC, VDC			LF24-SR	8.8	7.0	5.0
Honeywell	44 (5)	120 VAC	MS4105A1030			11.0	8.8	6.3
Invensys	35 (4)	120 VAC	MA40-7040			8.8	7.0	5.0
Belimo	18 (2)	120 VAC	TF120			4.5	3.6	2.6
Belimo	35 (4)	120 VAC	LF120			8.8	7.0	5.0
Kele	88 (10)	24 VAC	KAS-88-2			22.0	17.6	12.6
Honeywell	88 (10)	24 VAC	MS8110A1008			22.0	17.6	12.6
Johnson	53 (6)	24 VAC, VDC	M9206-BGA-2			13.3	10.6	7.6
Johnson	89 (10)	24 VAC, VDC	M9210-BGA-3			22.3	17.8	12.7
Siemens	62 (7)	24 VAC, VDC	GMA121.1P			15.5	12.4	8.9
Invensys	60 (7)	24 VAC	MA41-7073			15.0	12	8.6
Belimo	60 (7)	24 VAC, VDC	NF24			15.0	12	8.6
Kele	88 (10)	24 VAC		KAS-88-M		22.0	17.6	12.6
Honeywell	88 (10)	24 VAC		MS7510A2008		22.0	17.6	12.6
Johnson	53 (6)	24 VAC, VDC		M9206-AGA-2		13.3	10.6	7.6
Johnson	89 (10)	24 VAC		M9210-AGA-2		22.3	17.8	12.7
Siemens	62 (7)	24 VAC, VDC		GMA131.1U		15.5	12.4	8.9
Invensys	60 (7)	24 VAC		MF41-7073		15.0	12.0	8.6
Belimo	60 (7)	24 VAC, VDC		NF24-MFT-T		15.0	12.0	8.6
Kele	88 (10)	24 VAC			KAS-88-M	22.0	17.6	12.6
Honeywell	88 (10)	24 VAC			MS7510A2008	22.0	17.6	12.6
Johnson	53 (6)	24 VAC, VDC			M9206-GGA-2	13.3	10.6	7.6
Johnson	89 (10)	24 VAC			M9210-GGA-2	22.3	17.8	12.7
Siemens	62 (7)	24 VAC			GMA151.1P (2-10 VDC)	15.5	12.4	8.9
Siemens	62 (7)	24 VAC, VDC			GMA161.1P (0-10 VDC)	15.5	12.4	8.9
Invensys	60 (7)	24 VAC			MS41-7073	15.0	12.0	8.6
Belimo	60 (7)	24 VAC, VDC			NF24-SR	15.0	12.0	8.6
Kele	88 (10)	120 VAC	KAS-88-120			22.0	17.6	12.6
Honeywell	88 (10)	120 VAC	MS4110A1002			22.0	17.6	12.6
Johnson	89 (10)	120 VAC	M9210-BAA-3			22.3	17.8	12.7
Siemens	60 (7)	120 VAC	GMA221.1U			15.0	12.0	8.6
Invensys	60 (7)	120 VAC	MA41-7070			15.0	12.0	8.6
Belimo	60 (7)	120 VAC	NF120			15.0	12.0	8.6
Kele	175 (20)	24 VAC	KAS-175-2			43.8	35.0	25.0
Honeywell	175 (20)	24 VAC	MS8120A1007			43.8	35.0	25.0
Johnson	177 (20)	24 VAC, VDC	M9220-BGA-3			44.3	35.4	25.3
Siemens	142 (16)	24 VAC	GCA121.1P			35.5	28.4	20.3
Invensys	133 (15)	24 VAC	MA41-7153			33.3	26.6	19.0
Invensys	150 (17)	24 VAC	MA40-7173			37.5	30.0	21.4
Belimo	133 (15)	24 VAC	AF24			33.3	26.6	19.0
Kele	175 (20)	24 VAC		KAS-175-M		43.8	35.0	25.0
Honeywell	175 (20)	24 VAC		MS7520A2007		43.8	35.0	25.0
Johnson	177 (20)	24 VAC		M9220-AGA-3		44.3	35.4	25.3
Siemens	142 (16)	24 VAC		GCA131.1P		35.5	28.4	20.3
Invensys	133 (15)	24 VAC		MF41-7153		33.3	26.6	19.0
Invensys	150 (17)	24 VAC		MF40-7173		37.5	30.0	21.4
Belimo	133 (15)	24 VAC		AF24-MFT-T		33.3	26.6	19.0
Kele	175 (20)	24 VAC			KAS-175-M	43.8	35.0	25.0
Honeywell	175 (20)	24 VAC			MS7520A2007	43.8	35.0	25.0
Johnson	177 (20)	24 VAC			M9220-GGA-3	44.3	35.4	25.3
Siemens	142 (16)	24 VAC			GCA161.1P, (151.1P)	35.5	28.4	20.3
Invensys	133 (15)	24 VAC			MS41-7153	33.3	26.6	19.0
Invensys	150 (17)	24 VAC			MS40-7173	37.5	30.0	21.4
Belimo	133 (15)	24 VAC			AF24-SR	33.3	26.6	19.0
Kele	175 (20)	120 VAC	KAS-175-120			43.8	35.0	25.0
Honeywell	175 (20)	120 VAC	MS4120A1001			43.8	35.0	25.0
Johnson	177 (20)	120 VAC	M9220-BAA-3			44.3	35.4	25.3
Siemens	142 (16)	120 VAC	GCA221.1U			35.5	28.4	20.3
Invensys	133 (15)	120 VAC	MA41-7150			33.3	26.6	19.0
Invensys	150 (17)	120 VAC	MA40-7170			37.5	30.0	21.4
Belimo	133 (15)	120 VAC	AF120			33.3	26.6	19.0