

Size 155–STA® Pull Tubular Solenoids — 1-1/2" Dia. x 1-1/2"

LINEAR Tubular

Part Number: 152097 - X XX

All products are RoHS Compliant

Coil AWG Number
(from performance chart below)

Plunger Configurations and anti-rotation flat on mounting
2 60° plunger without anti-rotation flat
6 60° plunger with anti-rotation flat

Performance

Maximum Duty Cycle	100%	50%	25%	10%
Maximum ON Time (sec) when pulsed continuously ¹	∞	338	66	20
Maximum ON Time (sec) for single pulse ²	∞	855	308	84
Watts (@ 20°C)	11	22	44	110
Ampere Turns (@ 20°C)	1339	1894	2678	4234

Coil Data

awg (0XX) ³	Resistance (@20°C)	# Turns ⁴	VDC (Nom)	VDC (Nom)	VDC (Nom)	VDC (Nom)
23	4.74	900	7.2	10.2	14.4	22.8
24	7.41	1120	9.0	12.8	18.1	28.5
25	11.49	1386	11.2	15.9	22.5	35.6
26	17.51	1692	13.9	19.6	27.8	43.9
27	29.37	2212	18.0	25.4	35.9	56.8
28	43.70	2655	21.9	31.0	43.8	69.3
29	70.28	3366	27.8	39.3	55.6	87.9
30	110.6	4199	34.9	49.3	69.8	110.3
31	183.3	5434	44.9	63.5	89.8	142.0
32	279.1	6624	55.4	78.4	110.8	175.2
33	442.1	8289	69.7	98.6	139.5	220.5

¹ Continuously pulsed at stated watts and duty cycle

² Single pulse at stated watts (with coil at ambient room temperature 20°C)

³ Other coil awg sizes available — please consult factory

⁴ Reference number of turns

Specifications

Dielectric Strength	1000 VRMS
Recommended Minimum Heat Sink	Maximum watts dissipated by solenoid are based on an unrestricted flow of air at 20°C, with solenoid mounted on the equivalent of an aluminum plate measuring 6" square by 1/8" thick
Coil Resistance	±5% tolerance
Holding Force	9.7 lb (43.15 N) @ 20°C
Weight	11.3 oz (320 g)
Plunger Weight	1.6 oz (46 g)

How to Order

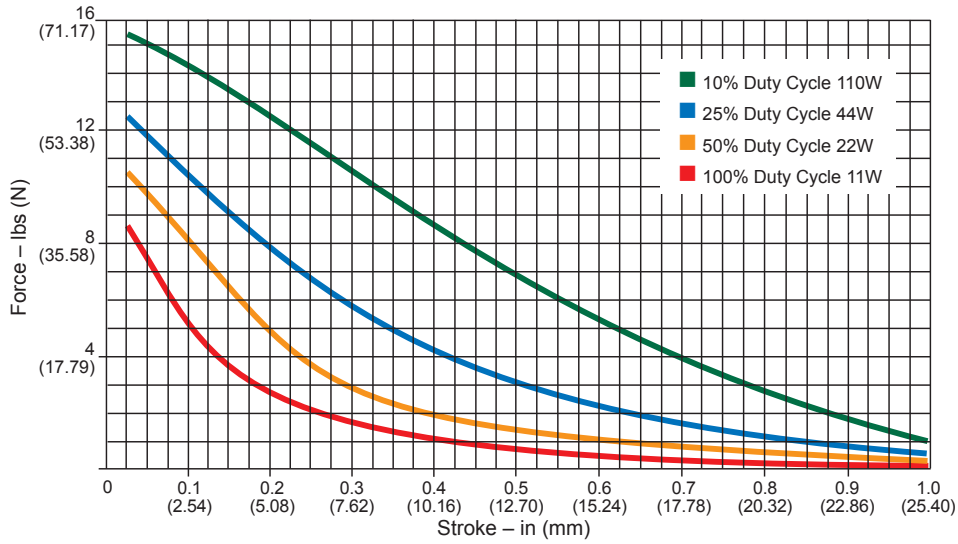
Add the plunger configuration number and the coil awg number to the part number (for example: to order a unit with a 60° plunger without an anti-rotation flat rated for 14 VDC at 25% duty cycle, specify 152097-223).

Please see www.johnsonelectric.com for our list of stock products available through distribution.

All specifications subject to change without notice.

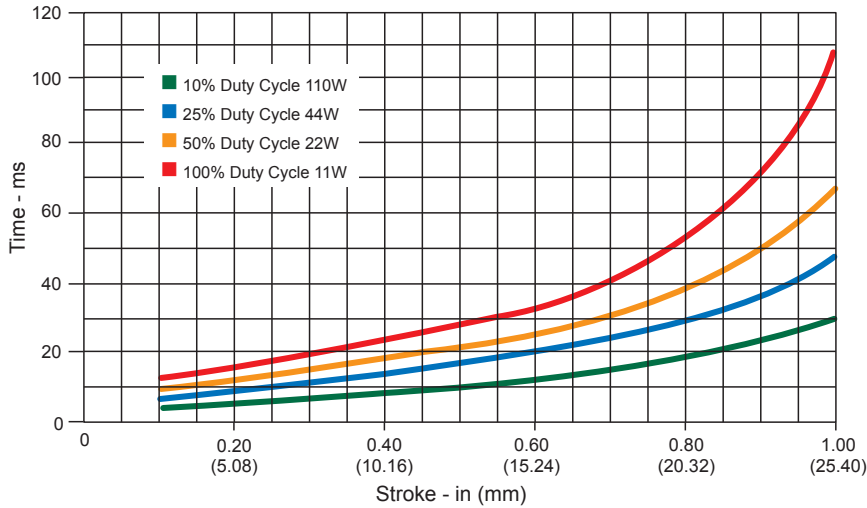
Size 155–STA® Pull Tubular Solenoids — 1-1/2" Dia. x 1-1/2"

Typical Force @ 20°C



Force values for reference only.

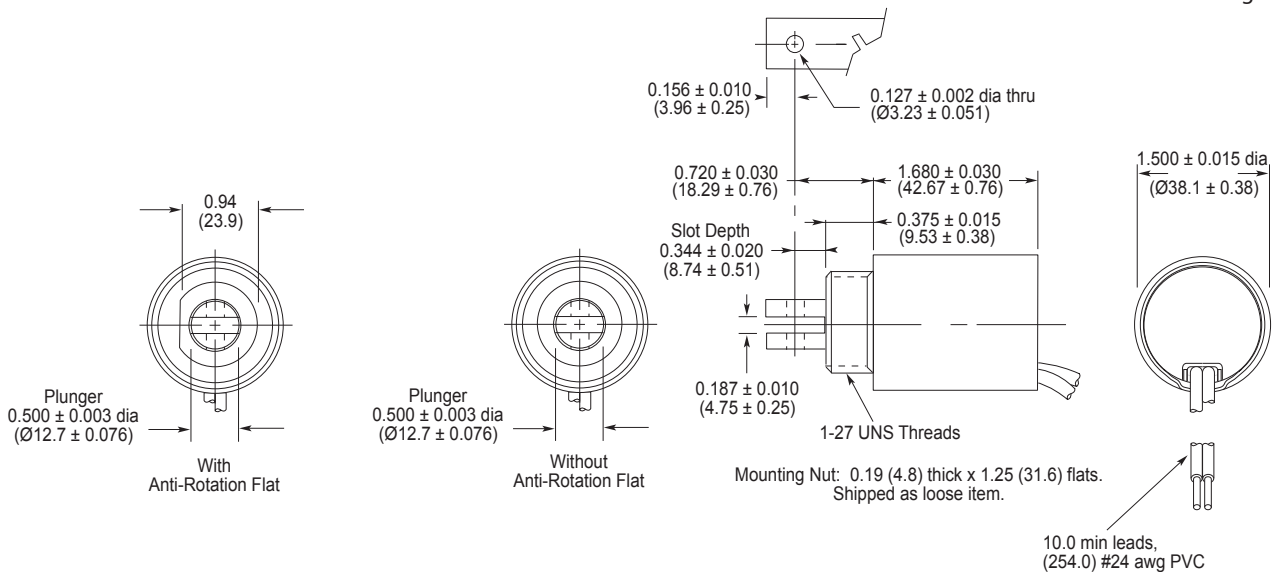
Typical Speed @ No Load, 20°C



Dimensions

Inches (mm)

All solenoids are illustrated in energized state



Size 155–STA® Push Tubular Solenoids — 1-1/2" Dia. x 1-1/2"

LINEAR Tubular

Part Number: 153205 - X XX

All products are RoHS Compliant

Coil AWG Number
(from performance chart below)

Plunger Configurations and anti-rotation flat on mounting
2 60° plunger without anti-rotation flat
6 60° plunger with anti-rotation flat

Performance

Maximum Duty Cycle	100%	50%	25%	10%
Maximum ON Time (sec) when pulsed continuously ¹	∞	338	66	20
Maximum ON Time (sec) for single pulse ²	∞	855	308	84
Watts (@ 20°C)	11	22	44	110
Ampere Turns (@ 20°C)	1339	1894	2678	4234

Coil Data

awg (0XX) ³	Resistance (@20°C)	# Turns ⁴	VDC (Nom)	VDC (Nom)	VDC (Nom)	VDC (Nom)
23	4.74	900	7.2	10.2	14.4	22.8
24	7.41	1120	9.0	12.8	18.1	28.5
25	11.49	1386	11.2	15.9	22.5	35.6
26	17.51	1692	13.9	19.6	27.8	43.9
27	29.37	2212	18.0	25.4	35.9	56.8
28	43.70	2655	21.9	31.0	43.8	69.3
29	70.28	3366	27.8	39.3	55.6	87.9
30	110.6	4199	34.9	49.3	69.8	110.3
31	183.3	5434	44.9	63.5	89.8	142.0
32	279.1	6624	55.4	78.4	110.8	175.2
33	442.1	8289	69.7	98.6	139.5	220.5

¹ Continuously pulsed at stated watts and duty cycle

² Single pulse at stated watts (with coil at ambient room temperature 20°C)

³ Other coil awg sizes available — please consult factory

⁴ Reference number of turns

Specifications

Dielectric Strength	1000 VRMS
Recommended Minimum Heat Sink	Maximum watts dissipated by solenoid are based on an unrestricted flow of air at 20°C, with solenoid mounted on the equivalent of an aluminum plate measuring 6" square by 1/8" thick
Coil Resistance	±5% tolerance
Holding Force	8.2 lb (36.52 N) @ 20°C
Weight	11.3 oz (320 g)
Plunger Weight	1.3 oz (37 g)

How to Order

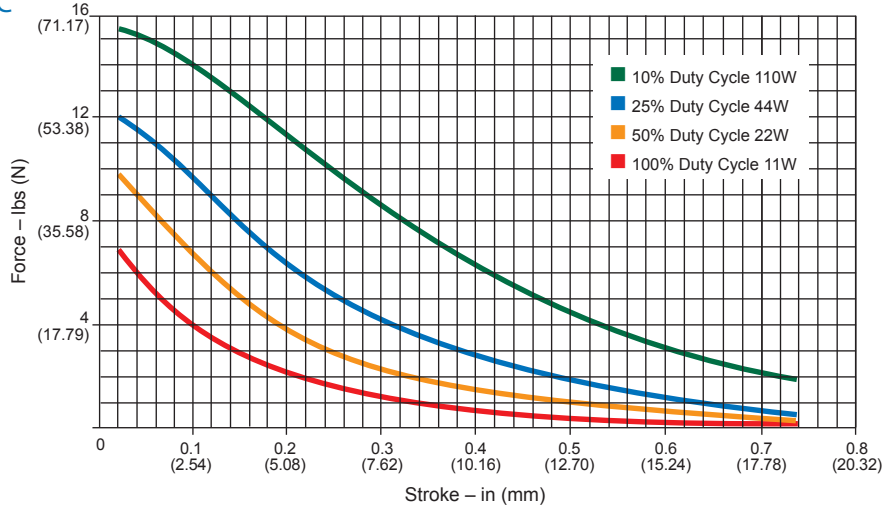
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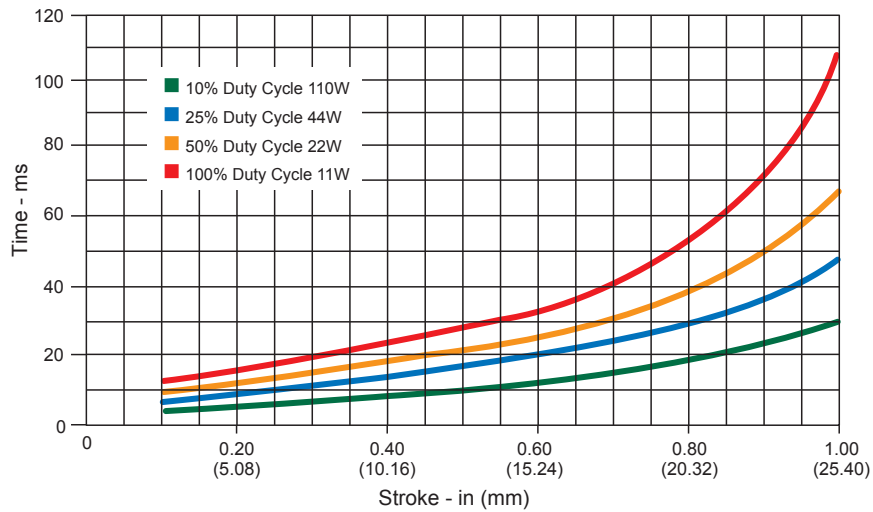
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Size 155–STA® Push Tubular Solenoids — 1-1/2" Dia. x 1-1/2"

Typical Force @ 20°C



Typical Speed @ No Load, 20°C



Dimensions

Inches (mm)

All solenoids are illustrated in energized state

