

# +65°C AC Motor Start Capacitors

## Features-

- Plastic Case, Moisture and Oil Resistant
- Voltages from 110 VAC- 330 VAC
- 091A Meets EIA Type 1 Specifications
- 092A Meets EIA Type 2 Specifications
- UL Recognized Capacitors

## General Specifications-

### Operating Temperature:

-40 to +65°C

### Voltage Range:

110 - 330 VAC

### Capacitance Range:

21 - 1280 $\mu$ F

### Capacitance Tolerance:

-0%/+20%

### Operating Frequency:

50 - 60Hz

### Case Size:

8 Standard Sizes from

1.437" x 2.750" - 2.562" x 4.365"

### Termination:

¼" Quick Disconnect Terminals (Std.)

### Performance Specifications:

Meets Requirements of EIA-463-A

091A Meets Type 1, Heavy Duty,  
Specifications

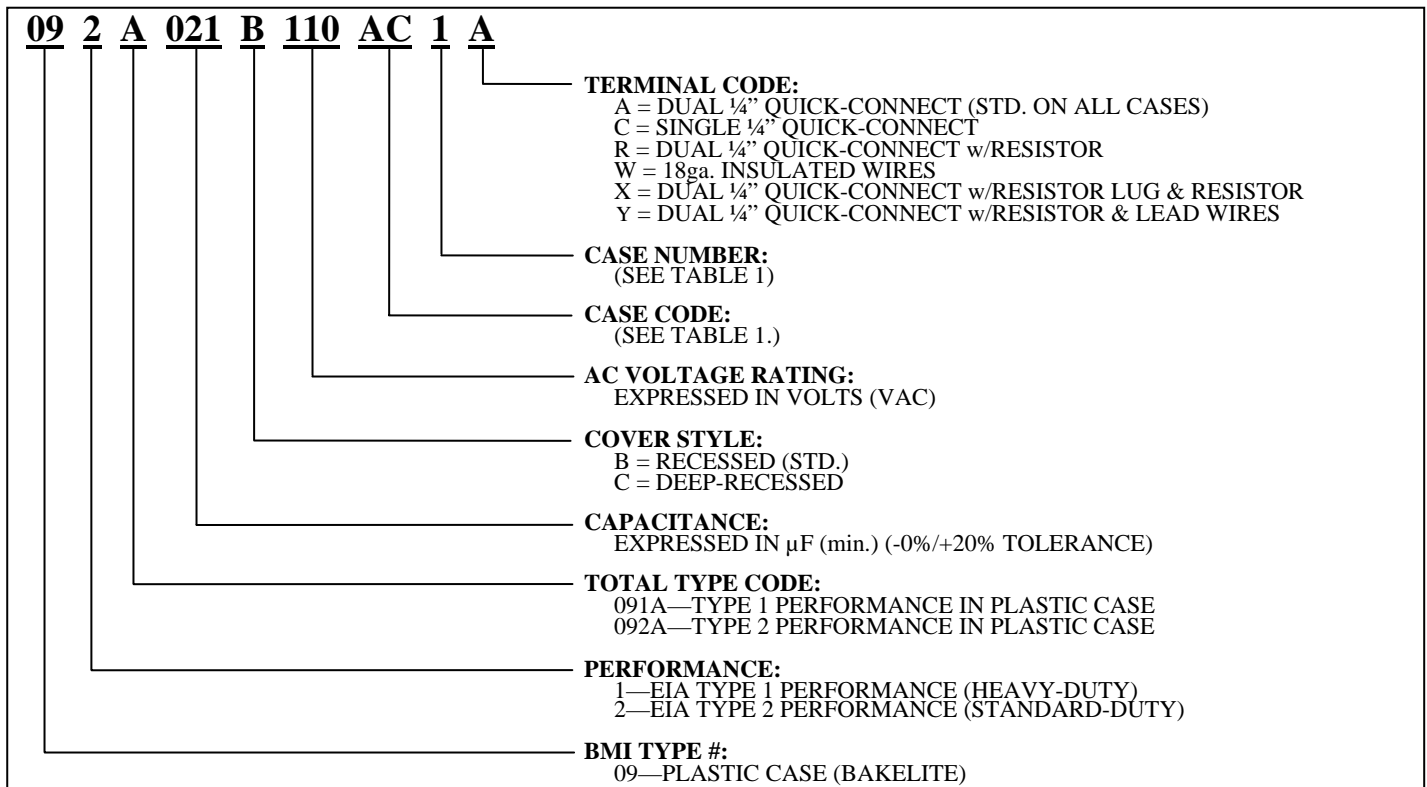
092A Meets Type 2, Standard Duty,  
Specifications.



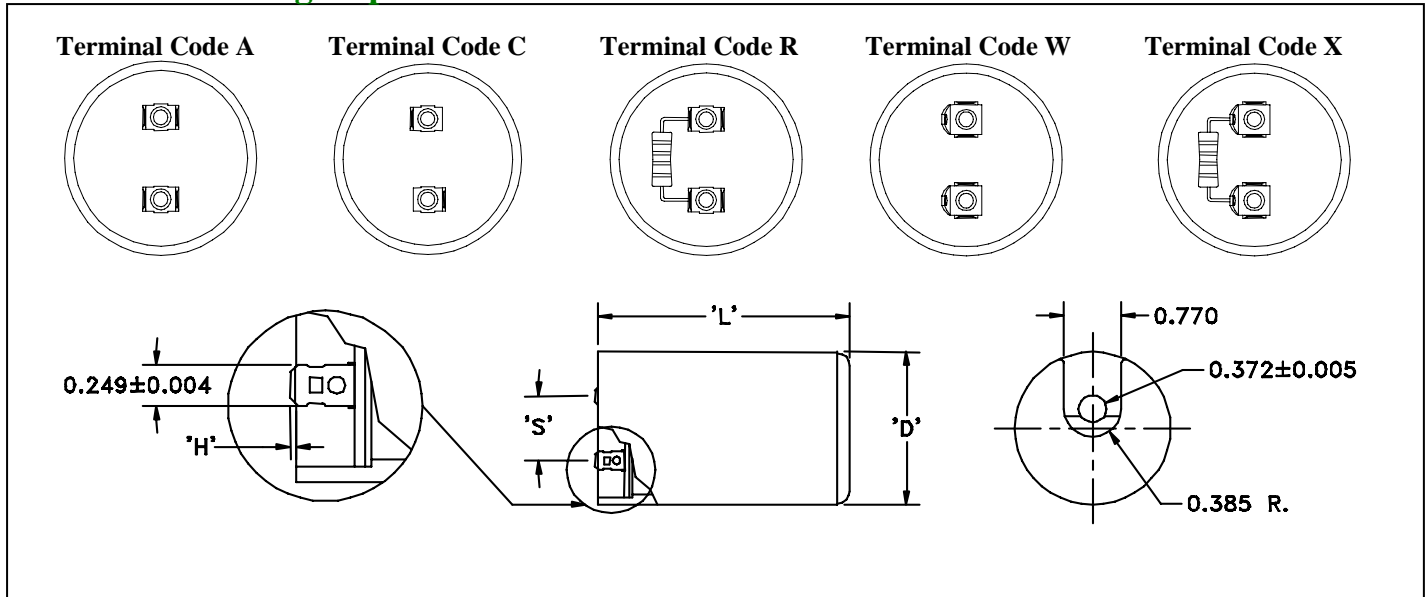
## Product Description:

BMI's type 091A and 092A AC Motor Start units are non-polarized aluminum electrolytic capacitors designed for intermittent AC duty. These capacitors are used in starting fractional horsepower, single-phase electric motors, as well as in gear motor applications. The capacitors are housed in rugged plastic cases, which require no added insulation. Mounting hardware, end caps and brackets are available to facilitate mounting. Units can be supplied with bleeder resistors and lead wires if required.

## PART NUMBER BREAK-DOWN:



## AC Motor Starting Capacitor Dimensions



**Table 1. Case Dimensions (in.)**

CASE CODE	CASE NUMBER	'D' ± 0.020	'L' ± 0.020	'S'	'H'
AC	1	1.437	2.750	0.500 nom	0.025 max
AD	2	1.437	3.365	0.500 nom	0.025 max
AE	3	1.437	4.365	0.500 nom	0.025 max
BD	4	1.812	3.365	0.625 nom	0.025 max
BE	5	1.812	4.365	0.625 nom	0.025 max
CD	6	2.062	3.365	0.875 nom	0.025 max
CE	7	2.062	4.365	0.875 nom	0.025 max
DE	8	2.562	4.365	0.875 nom	0.025 max

## STANDARD RATINGS FOR TYPE 091A EIA TYPE 1

Capacitance ( $\mu\text{F}$ )		Catalog Number	Case Code	Optional Case Code(s)
min.	max.			
<b>110 VOLTS AC</b>				
21	25	091A021B110AC1A	1	-
25	30	091A025B110AC1A	1	-
30	36	091A030B110AC1A	1	-
36	43	091A036B110AC1A	1	-
43	52	091A043B110AC1A	1	-
47	56	091A047B110AC1A	1	-
53	64	091A053B110AC1A	1	-
64	77	091A064B110AC1A	1	-
72	86	091A072B110AC1A	1	-
88	106	091A088B110AC1A	1	-
108	130	091A108B110AC1A	1	-
124	149	091A124B110AC1A	1	-
130	156	091A130B110AC1A	1	-
145	174	091A145B110AC1A	1	-
161	193	091A161B110AC1A	1	-
189	227	091A189B110AD2A	2	-
216	259	091A216B110AD2A	2	-
233	280	091A233B110AD2A	2	-
243	292	091A243B110BD4A	4	2,3
270	324	091A270B110BD4A	4	2,3
324	389	091A324B110BD4A	4	3
340	408	091A340B110BD4A	4	3
378	454	091A378B110BD4A	4	-
400	480	091A400B110BD4A	4	-
430	516	091A430B110BD4A	4	-
460	552	091A460B110BD4A	4	-
540	648	091A540B110CE7A	7	4,5,6
590	708	091A590B110CE7A	7	-
645	774	091A645B110CE7A	7	-
708	850	091A708B110DE8A	8	7
815	978	091A815B110DE8A	8	-
<b>125 VOLTS AC</b>				
21	25	091A021B125AC1A	1	-
25	30	091A025B125AC1A	1	-
30	36	091A030B125AC1A	1	-
36	43	091A036B125AC1A	1	-
43	52	091A043B125AC1A	1	-
47	56	091A047B125AC1A	1	-
53	64	091A053B125AC1A	1	-
64	77	091A064B125AC1A	1	-
72	86	091A072B125AC1A	1	-
88	106	091A088B125AC1A	1	-
108	130	091A108B125AC1A	1	-
124	149	091A124B125AC1A	1	-
130	156	091A130B125AC1A	1	-
145	174	091A145B125AD2A	2	-
161	193	091A161B125AD2A	2	-
189	227	091A189B125AD2A	2	1
216	259	091A216B125BD4A	4	2,3
233	280	091A233B125BD4A	4	2,3
243	292	091A243B125BD4A	4	2,3
270	324	091A270B125BD4A	4	2,3
324	389	091A324B125BE5A	5	-

## STANDARD RATINGS FOR TYPE 091A EIA TYPE 1

Capacitance ( $\mu\text{F}$ )		Catalog Number	Case Code	Optional Case Code(s)
min.	max.			
<b>125 VOLTS AC (CONTINUED)</b>				
340	408	091A340B125BE5A	5	4
378	454	091A378B125BE5A	5	4
400	480	091A400B125BE5A	5	4
430	516	091A430B125CE7A	7	4,5,6
460	552	091A460B125CE7A	7	4,5,6
540	648	091A540B125DE8A	8	4,5,6,7
645	774	091A645B125DE8A	8	7
<b>165 VOLTS AC</b>				
21	25	091A021B165AC1A	1	-
25	30	091A025B165AC1A	1	-
30	36	091A030B165AC1A	1	-
36	43	091A036B165AC1A	1	-
43	52	091A043B165AC1A	1	-
47	56	091A047B165AC1A	1	-
53	64	091A053B165AC1A	1	-
64	77	091A064B165AC1A	1	-
72	86	091A072B165AC1A	1	-
88	106	091A088B165AD2A	2	1
108	130	091A108B165AD2A	2	-
124	149	091A124B165BD4A	4	3
130	156	091A130B165BD4A	4	3
145	174	091A145B165BD4A	4	3
161	193	091A161B165BD4A	4	-
189	227	091A189B165BD4A	4	-
216	259	091A216B165BE5A	5	-
233	280	091A233B165BE5A	5	-
243	292	091A243B165BE5A	5	-
270	324	091A270B165BE5A	5	-
324	389	091A324B165BE5A	5	-
340	408	091A340B165CE7A	7	-
378	454	091A378B165DE8A	8	-
400	480	091A400B165DE8A	8	-
<b>220 VOLTS AC</b>				
21	25	091A021B220AC1A	1	-
25	30	091A025B220AC1A	1	-
30	36	091A030B220AC1A	1	-
36	43	091A036B220AD2A	2	1
43	52	091A043B220AD2A	2	1
47	56	091A047B220AD2A	2	1
53	64	091A053B220BD4A	4	2,3
64	77	091A064B220BD4A	4	2,3
72	86	091A072B220BD4A	4	3
88	106	091A088B220BD4A	4	-
108	130	091A108B220BE5A	5	-
124	149	091A124B220BE5A	5	-
130	156	091A130B220BE5A	5	-
145	174	091A145B220CE7A	7	-
161	193	091A161B220DE8A	8	7
189	227	091A189B220DE8A	8	7
216	259	091A216B220DE8A	8	-
233	280	091A233B220DE8A	8	-
243	292	091A243B220DE8A	8	-
270	324	091A270B220DE8A	8	-

## STANDARD RATINGS FOR TYPE 091A EIA TYPE 1

Capacitance ( $\mu\text{F}$ )		Catalog Number	Case Code	Optional Case Code(s)
min.	max.			
<b>250 VOLTS AC</b>				
21	25	091A021B250AC1A	1	-
25	30	091A025B250AC1A	1	-
30	36	091A030B250AD2A	2	1
36	43	091A036B250AD2A	2	1
43	52	091A043B250BD4A	4	1,2,3
47	56	091A047B250BD4A	4	2,3
53	64	091A053B250BD4A	4	2,3
64	77	091A064B250BD4A	4	-
72	86	091A072B250BD4A	4	-
88	106	091A088B250BE5A	5	4
108	130	091A108B250BE5A	5	4
124	149	091A124B250CE7A	7	4,5,6
130	156	091A130B250DE8A	8	5,6,7
145	174	091A145B250DE8A	8	6,7
161	193	091A161B250DE8A	8	7
189	227	091A189B250DE8A	8	7
216	259	091A216B250DE8A	8	7
233	280	091A233B250DE8A	8	7
270	324	091A270B250DE8A	8	7
<b>330 VOLTS AC</b>				
21	25	091A021B330AD2A	2	-
25	30	091A025B330AD2A	2	-
30	36	091A030B330BD4A	4	3
36	43	091A036B330BD4A	4	2,3
43	52	091A043B330BD4A	4	-
47	56	091A047B330BD4A	4	-
53	64	091A053B330BE5A	5	4
64	77	091A064B330BE5A	5	-
72	86	091A072B330BE5A	5	-
88	106	091A088B330CE7A	7	-
108	130	091A108B330DE8A	8	7
124	149	091A124B330DE8A	8	7
130	156	091A130B330DE8A	8	7
145	174	091A145B330DE8A	8	7
161	193	091A161B330DE8A	8	7
189	227	091A189B330DE8A	8	7

## STANDARD RATINGS FOR TYPE 092A EIA TYPE 2

Capacitance ( $\mu$ F)		Catalog Number	Case Code	Optional Case Code(s)
min.	max.			
<b>110 VOLTS AC</b>				
21	25	092A021B110AC1A	1	-
25	30	092A025B110AC1A	1	-
30	36	092A030B110AC1A	1	-
36	43	092A036B110AC1A	1	-
43	52	092A043B110AC1A	1	-
47	56	092A047B110AC1A	1	-
53	64	092A053B110AC1A	1	-
64	77	092A064B110AC1A	1	-
72	86	092A072B110AC1A	1	-
88	106	092A088B110AC1A	1	-
108	130	092A108B110AC1A	1	-
124	149	092A124B110AC1A	1	-
130	156	092A130B110AC1A	1	-
145	174	092A145B110AC1A	1	-
161	193	092A161B110AC1A	1	-
189	227	092A189B110AC1A	1	-
216	259	092A216B110AD2A	2	-
233	280	092A233B110AD2A	2	-
243	292	092A243B110AD2A	2	-
270	324	092A270B110AD2A	2	-
324	389	092A324B110BD4A	4	2,3
340	408	092A340B110BD4A	4	3
378	454	092A378B110BD4A	4	3
400	480	092A400B110BD4A	4	-
430	516	092A430B110BD4A	4	-
460	552	092A460B110BD4A	4	3
540	648	092A540B110BE5A	5	-
590	708	092A590B110BE5A	5	-
645	774	092A645B110CE7A	7	-
708	850	092A708B110CE7A	7	5,6
720	864	092A720B110CE7A	7	-
800	960	092A800B110CE7A	7	-
815	978	092A815B110CE7A	7	5,6
829	995	092A829B110CE7A	7	-
850	1020	092A850B110DE8A	8	7
1000	1200	092A1000B110DE8A	8	-
1020	1224	092A1020B110DE8A	8	7
1175	1410	092A1175B110DE8A	8	7
1280	1536	092A1280B110DE8A	8	-
<b>125 VOLTS AC</b>				
21	25	092A021B125AC1A	1	-
25	30	092A025B125AC1A	1	-
30	36	092A030B125AC1A	1	-
36	43	092A036B125AC1A	1	-
43	52	092A043B125AC1A	1	-
47	56	092A047B125AC1A	1	-
53	64	092A053B125AC1A	1	-
64	77	092A064B125AC1A	1	-
72	86	092A072B125AC1A	1	-
88	106	092A088B125AC1A	1	-
108	130	092A108B125AC1A	1	-
124	149	092A124B125AC1A	1	-

## STANDARD RATINGS FOR TYPE 092A EIA TYPE 2

Capacitance ( $\mu\text{F}$ )		Catalog Number	Case Code	Optional Case Code(s)
min.	max.			
<b>125 VOLTS AC (CONTINUED)</b>				
130	156	092A130B125AC1A	1	-
145	174	092A145B125AC1A	1	-
161	193	092A161B125AC1A	1	-
189	227	092A189B125AD2A	2	-
216	259	092A216B125AD2A	2	-
233	280	092A233B125AD2A	2	-
243	292	092A243B125AD2A	2	3
270	324	092A270B125AD2A	2	3
324	389	092A324B125BD4A	4	3
340	408	092A340B125BD4A	4	3
378	454	092A378B125BD4A	4	3
400	480	092A400B125BD4A	4	3
430	516	092A430B125BD4A	4	3
460	552	092A460B125BD4A	4	3
540	648	092A540B125BE5A	5	4
590	708	092A590B125CE7A	7	5,6
645	774	092A645B125CE7A	7	-
708	850	092A708B125CE7A	7	5,6
720	864	092A720B125CE7A	7	-
800	960	092A800B125CE7A	7	-
815	978	092A815B125CE7A	7	-
829	995	092A829B125DE8A	8	-
850	1020	092A850B125DE8A	8	-
1000	1200	092A1000B125DE8A	8	-
1020	1224	092A1020B125DE8A	8	7
1175	1410	092A1175B125DE8A	8	7
<b>165 VOLTS AC</b>				
21	25	092A021B165AC1A	1	-
25	30	092A025B165AC1A	1	-
30	36	092A030B165AC1A	1	-
36	43	092A036B165AC1A	1	-
43	52	092A043B165AC1A	1	-
47	56	092A047B165AC1A	1	-
53	64	092A053B165AC1A	1	-
64	77	092A064B165AC1A	1	-
72	86	092A072B165AC1A	1	-
88	106	092A088B165AC1A	1	-
108	130	092A108B165AD2A	2	-
124	149	092A124B165AD2A	2	-
130	156	092A130B165BD4A	4	2,3
145	174	092A145B165BD4A	4	2,3
161	193	092A161B165BD4A	4	2,3
189	227	092A189B165BD4A	4	2,3
216	259	092A216B165BD4A	4	3
233	280	092A233B165BE5A	5	3,4
243	292	092A243B165BE5A	5	3,4
270	324	092A270B165BE5A	5	3,4
324	389	092A324B165BE5A	5	4
340	408	092A340B165CE7A	7	5,6
378	454	092A378B165CE7A	7	5,6
400	480	092A400B165DE8A	8	5,6,7
460	552	092A460B165DE8A	8	5,6,7
540	648	092A540B165DE8A	8	7

## STANDARD RATINGS FOR TYPE 092A EIA TYPE 2

Capacitance ( $\mu\text{F}$ )		Catalog Number	Case Code	Optional Case Code(s)
min.	max.			
<b>165 VOLTS AC (CONTINUED)</b>				
590	708	092A590B165DE8A	8	7
645	774	092A645B165DE8A	8	-
708	850	092A708B165DE8A	8	7
720	864	092A720B165DE8A	8	-
800	960	092A800B165DE8A	8	-
815	978	092A815B165DE8A	8	-
829	995	092A829B165DE8A	8	-
850	1020	092A850B165DE8A	8	-
<b>220 VOLTS AC</b>				
21	25	092A021B220AC1A	1	-
25	30	092A025B220AC1A	1	-
30	36	092A030B220AC1A	1	-
36	43	092A036B220AC1A	1	-
43	52	092A043B220AD2A	2	-
47	56	092A047B220AD2A	2	-
53	64	092A053B220AD2A	2	-
64	77	092A064B220BD4A	4	2,3
72	86	092A072B220BD4A	4	3
88	106	092A088B220BD4A	4	3
108	130	092A108B220BD4A	4	-
124	149	092A124B220BE5A	5	-
130	156	092A130B220BE5A	5	-
145	174	092A145B220CE7A	7	5,6
161	193	092A161B220CE7A	7	5,6
189	227	092A189B220CE7A	7	-
216	259	092A216B220DE8A	8	7
233	280	092A233B220DE8A	8	7
243	292	092A243B220DE8A	8	7
270	324	092A270B220DE8A	8	7
324	389	092A324B220DE8A	8	7
340	408	092A340B220DE8A	8	-
378	454	092A378B220DE8A	8	-
400	480	092A400B220DE8A	8	-
430	516	092A430B220DE8A	8	-
<b>250 VOLTS AC</b>				
21	25	092A021B250AC1A	1	-
25	30	092A025B250AC1A	1	-
30	36	092A030B250AD2A	2	-
36	43	092A036B250AD2A	2	-
43	52	092A043B250AD2A	2	-
47	56	092A047B250AD2A	2	-
53	64	092A053B250BD4A	4	2,3
64	77	092A064B250BD4A	4	2,3
72	86	092A072B250BD4A	4	3
88	106	092A088B250BE5A	5	3,4
108	130	092A108B250BE5A	5	-
124	149	092A124B250BE5A	5	-
130	156	092A130B250BE5A	5	-
145	174	092A145B250CE7A	7	-
161	193	092A161B250CE7A	7	-
189	227	092A189B250DE8A	8	-
216	259	092A216B250DE8A	8	-
233	280	092A233B250DE8A	8	-



## STANDARD RATINGS FOR TYPE 092A EIA TYPE 2

Capacitance ( $\mu\text{F}$ )		Catalog Number	Case Code	Optional Case Code(s)
min.	max.			
<b>250 VOLTS AC (CONTINUED)</b>				
243	292	092A243B250DE8A	8	-
270	324	092A270B250DE8A	8	-
324	389	092A324B250DE8A	8	-
340	408	092A340B250DE8A	8	-
378	454	092A378B250DE8A	8	-
400	480	092A400B250DE8A	8	-
430	516	092A430B250DE8A	8	-
<b>330 VOLTS AC</b>				
21	25	092A021B330AD2A	2	1
25	30	092A025B330AD2A	2	1
30	36	092A030B330BD4A	4	1,2,3
36	43	092A036B330BD4A	4	2,3
43	53	092A043B330BD4A	4	3
47	56	092A047B330BD4A	4	3
53	64	092A053B330BE5A	5	3,4
64	77	092A064B330BE5A	5	-
72	86	092A072B330BE5A	5	-
88	106	092A088B330CE7A	7	5,6,7
108	130	092A108B330DE8A	8	7
124	149	092A124B330DE8A	8	7
130	156	092A130B330DE8A	8	7
145	174	092A145B330DE8A	8	7
161	193	092A161B330CE7A	8	-
189	227	092A189B330DE8A	8	-
216	259	092A216B330DE8A	8	-
233	280	092A233B330DE8A	8	-
243	292	092A243B330DE8A	8	-
270	324	092A270B330DE8A	8	-

# AC MOTOR START MOUNTING ACCESSORIES

## TERMINALS



Type 'A'  
Dual QC



Type 'C'  
Single QC



Type 'X'  
Dual QC  
w/Solder Lug



Type 'W'  
w/Female QC



Type 'W'  
#18ga. Insulated,  
Stranded Copper Wire  
[Standard: 12-14" length with 1/2" stripped  
ends(other length's available.)]

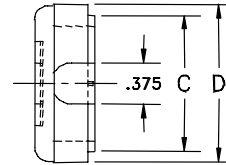
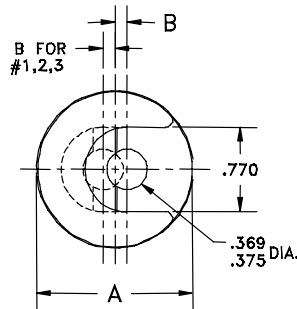
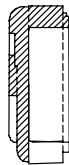
## END CAPS



Standard

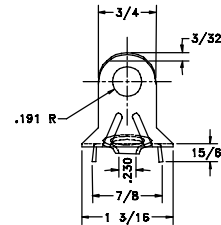
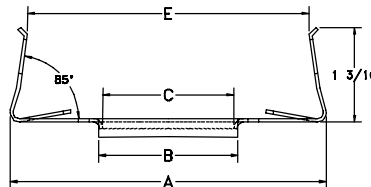
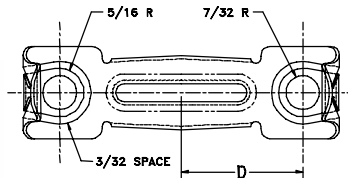


Type 'A'



Case #	P/N	Dia.	'A', ±0.010	'B', ±0.003	'C', ±0.005	'D', ±0.003
1,2,3	670400 0074	1 <sup>7</sup> / <sub>16</sub>	1.437	0.080	1.093	1.241
4&5	670400 0075	1 <sup>13</sup> / <sub>16</sub>	1.812	0.110	1.468	1.611
6&7	670400 0076	2 <sup>1</sup> / <sub>16</sub>	2.062	0.235	1.718	1.866
8	670400 0102C	2 <sup>9</sup> / <sub>16</sub>	2.562	0.485	2.218	2.366

## BRACKET



Case #	P/N	'A'	'B'	'C'	'D'	'E'
1	670036 0941	3.375	1.171	1.062	1.258	3.015
2,4,6	670036 0943	4.050	1.812	1.703	1.578	3.656
3,5,7,8	670036 0944	5.050	2.718	2.000	2.078	4.656

All dimensions ±0.015".

Material—0.042" Spring Steel.

Finish—Black Parkerize.