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# **E310 & ES310** **Military Specified**

**Meets MIL-PRF-83536**

## **General Characteristics**

Number of Poles:

Dimensions:

Weight:

3 Form C (3PDT)

0.810" x 0.810" x 0.640"

(20.6mm x 20.6mm x 16.3mm)

0.062 lb. (28.2 grams)

## **Switching Characteristics**

Operate Time @ 25°C:

Release Time @ 25°C:

Bounce Time:

Mechanical Life:

6 ms Max.

6 ms Max.

1 ms Max.

400,000 Cycles

## **Environmental Characteristics**

Temperature Range:

Vibration (Sinusoidal):

-Mounting Code 03:

-Mounting Code 04:

Shock (any axis):

-Mounting Code 03:

-Mounting Code 04:

Seal:

-70°C to +125°C

30g 10-3,000 Hz

20g 57-3,000 Hz

.06" Double Amplitude 10-55 Hz,

10g 55-500 Hz, 20g 500-3,000 Hz

200g, 6 ms

100g, 6 ms

50g, 11 ms

Hermetic ( $1 \times 10^{-8}$  atm cm<sup>3</sup>/s)

## **Electrical Characteristics**

Contact Voltage Drop (at rated resistive load)

-Initial:

-After Guaranteed Life:

Dielectric Strength

Coil to Case @ Sea Level

-Initial @ 60 Hz:

-After Life Test @ 60 Hz:

All Other Points @ Sea Level

-Initial @ 60 Hz:

-After Life Test @ 60 Hz:

Insulation Resistance

-Initial:

-After Life Tests:

Back EMF (Transient Voltage):

150 mV Max.

175 mV Max.

1,000 Vrms

750 Vrms

1,250 Vrms

1,000 Vrms

100 MΩ Min, @ 500 Vdc

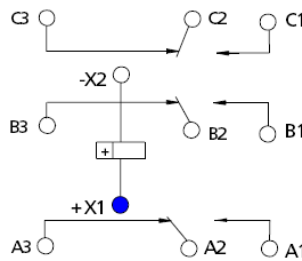
50 MΩ Min, @ 500 Vdc

42 Vdc Max. (ES310 Only)

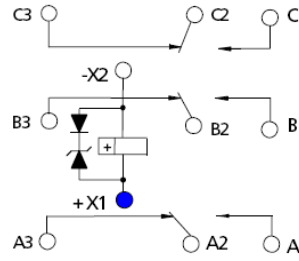
### Contact Rating (Amps)

Type of Load (High Level)	Cycles x 10 <sup>3</sup>	28 Vdc	115 Vac 400 Hz 1 Phase	115/200 Vac 400 Hz 3 Phase
Resistive	50	10	10	10
Inductive	10	6	N/A	N/A
Inductive	20	N/A	8	8
Motor	50	4	4	4
Lamp	50	2	2	N/A

### Circuit Diagram



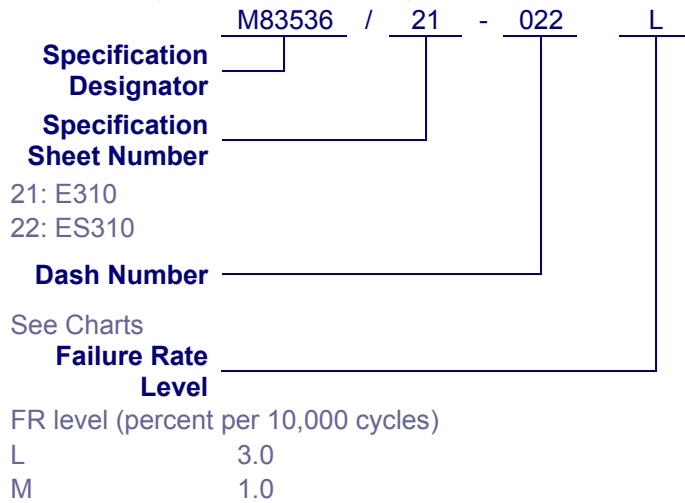
E310



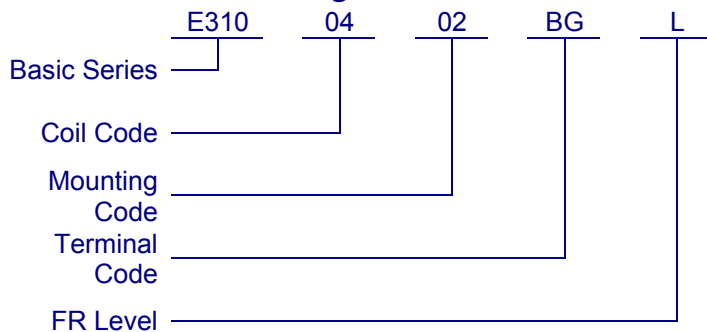
ES310

OPTIONAL INTERNAL  
VOLTAGE SUPPRESSOR

### Military Part Numbering



### QPL Part Numbering





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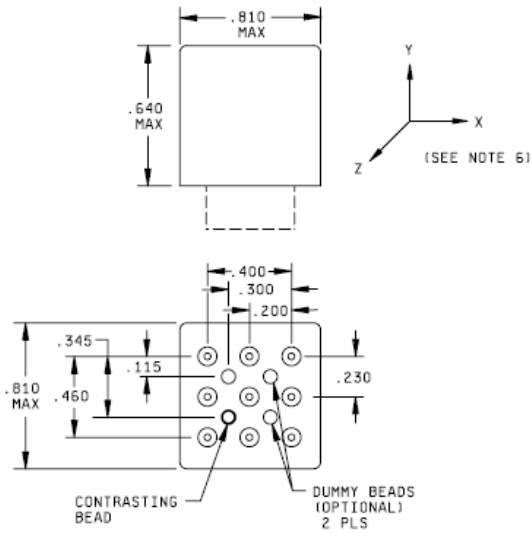
**Dash Numbers – Specification Sheet Number 21: E310**

Dash Number	Coil Code	Mount	Terminals	Coil Voltage	Max Pickup Voltage at 25°C	Max Pickup Voltage at 125°C	Max Hold Voltage at 125°C	Min Dropout Voltage at -70°C	Coil Resistance (Ω, +/- 10% at 25°C)
009	02	01	CT	12	6.6	9	4.5	0.5	72
010	02	01	AT	12	6.6	9	4.5	0.5	72
011	02	01	BG	12	6.6	9	4.5	0.5	72
012	02	02	CT	12	6.6	9	4.5	0.5	72
013	02	02	AT	12	6.6	9	4.5	0.5	72
014	02	02	BG	12	6.6	9	4.5	0.5	72
015	02	03	CT	12	6.6	9	4.5	0.5	72
016	02	03	AT	12	6.6	9	4.5	0.5	72
017	04	01	CT	28	13.5	18	7	1.5	400
018	04	01	AT	28	13.5	18	7	1.5	400
019	04	01	BG	28	13.5	18	7	1.5	400
020	04	02	CT	28	13.5	18	7	1.5	400
021	04	02	AT	28	13.5	18	7	1.5	400
022	04	02	BG	28	13.5	18	7	1.5	400
023	04	03	CT	28	13.5	18	7	1.5	400
024	04	03	AT	28	13.5	18	7	1.5	400

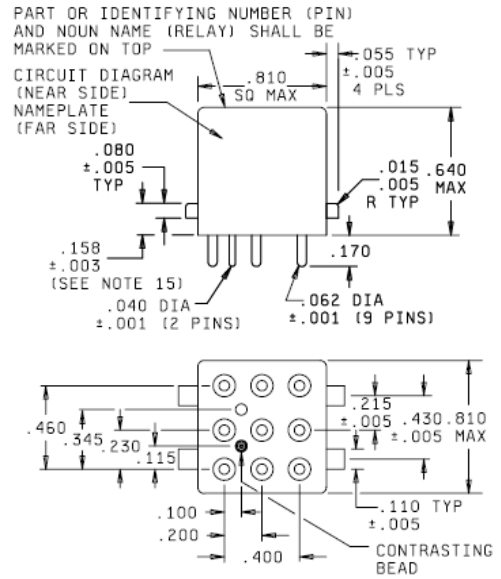
**Dash Numbers – Specification Sheet Number 22: ES310**

Dash Number	Coil Code	Mount	Terminals	Coil Voltage	Max Pickup Voltage at 25°C	Max Pickup Voltage at 125°C	Max Hold Voltage at 125°C	Min Dropout Voltage at -70°C	Coil Resistance (Ω, +/- 10% at 25°C)
009	02	01	CT	12	6.6	9	4.5	0.5	72
010	02	01	AT	12	6.6	9	4.5	0.5	72
011	02	01	BG	12	6.6	9	4.5	0.5	72
012	02	02	CT	12	6.6	9	4.5	0.5	72
013	02	02	AT	12	6.6	9	4.5	0.5	72
014	02	02	BG	12	6.6	9	4.5	0.5	72
015	02	03	CT	12	6.6	9	4.5	0.5	72
016	02	03	AT	12	6.6	9	4.5	0.5	72
017	04	01	CT	28	13.5	18	7	1.5	400
018	04	01	AT	28	13.5	18	7	1.5	400
019	04	01	BG	28	13.5	18	7	1.5	400
020	04	02	CT	28	13.5	18	7	1.5	400
021	04	02	AT	28	13.5	18	7	1.5	400
022	04	02	BG	28	13.5	18	7	1.5	400
023	04	03	CT	28	13.5	18	7	1.5	400
024	04	03	AT	28	13.5	18	7	1.5	400
025	04	04	BG	28	13.5	18	7	1.5	400

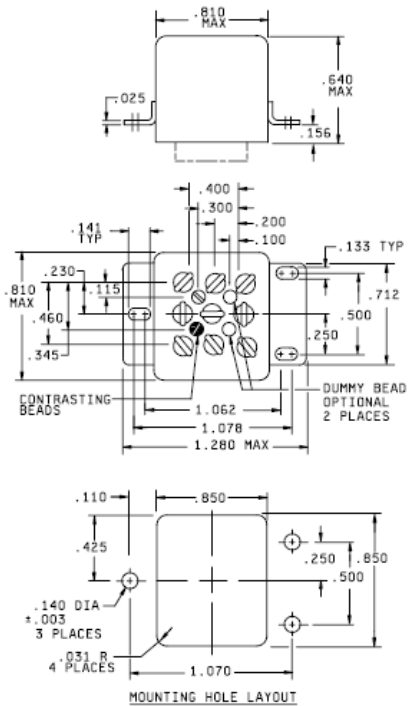
## Mounting Styles



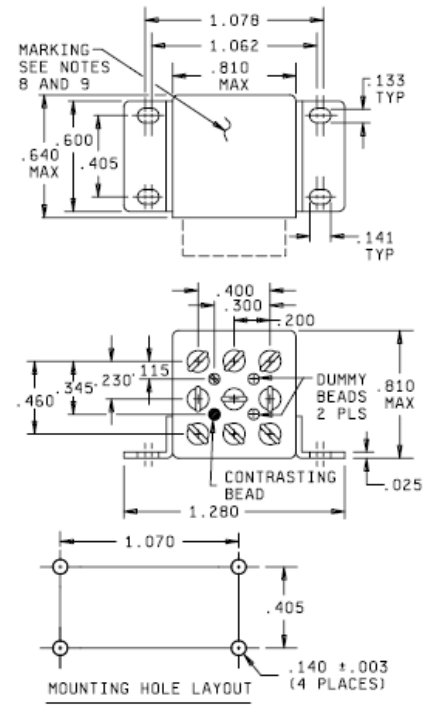
Mount 01:  
No Mount



Mount 04:  
Track Mount A

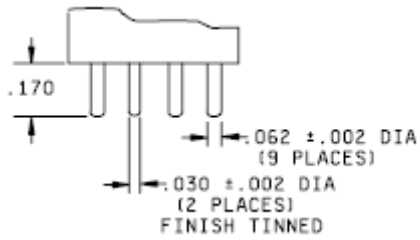


Mount 02: Raised  
Vertical Flange Mount

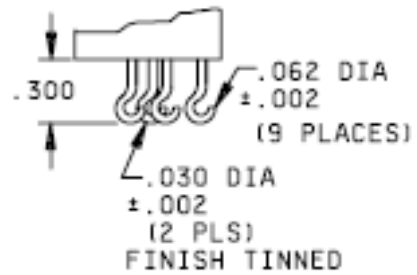


Mount 03:  
Horizontal Flange Mount

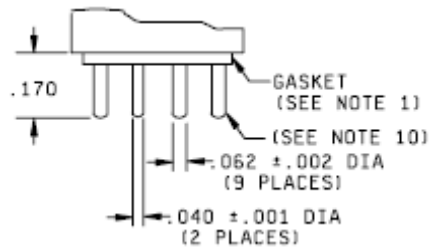
## Terminal Styles



Terminal CT:  
Tin Plated Solder Pin



Terminal AT:  
Tin Plated Solder Hook



Terminal BG:  
Gold Plated Plug in