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## **E205 & ES205**

### **Military Specified**

#### **Meets MIL-PRF-83536**

#### **General Characteristics**

Number of Poles:

Dimensions:

Weight:

-Mounting Code 18:

2 Form C (2PDT)

0.810" x 0.410" x 0.640"

(20.6mm x 10.4mm x 16.3mm)

0.034 lb. (15.4 grams)

0.045 lb. (20.4 grams)

#### **Switching Characteristics**

Operate Time @ 25°C:

Release Time @ 25°C:

Bounce Time:

Mechanical Life:

5 ms Max.

5 ms Max.

1 ms Max.

400,000 Cycles

#### **Environmental Characteristics**

Temperature Range:

Vibration (Sinusoidal):

-Mounting Code 04:

Shock (any axis):

Seal:

-70°C to +125°C

30g 70-3,000 Hz

.06" Double Amplitude 10-55 Hz,

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

200g, 6 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:

-Max. Leakage Current (Mounting Code 18):

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:

Coil to Case @ Sea Level (Mounting Code 18)

-Initial @ 60 Hz:

-After Life Test @ 60 Hz:

All Other Points @ Sea Level (Mounting Code 18)

-Initial @ 60 Hz:

-After Life Test @ 60 Hz:

Insulation Resistance

-Initial:

-After Life Tests:

Back EMF (Transient Voltage):

150 mV Max.

175 mV Max.

100  $\mu$ A RMS

1,000 Vrms

750 Vrms

1,000 Vrms

750 Vrms

1,050 Vrms

1,050 Vrms

1,050 Vrms

1,050 Vrms

100 M $\Omega$  Min, @ 500 Vdc

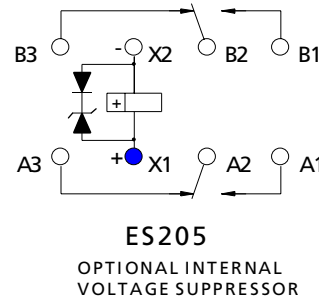
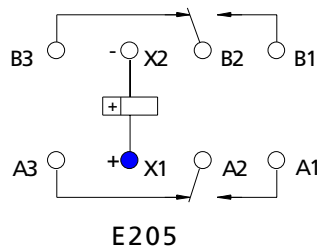
50 M $\Omega$  Min, @ 500 Vdc

42 Vdc Max. (ES205 Only)

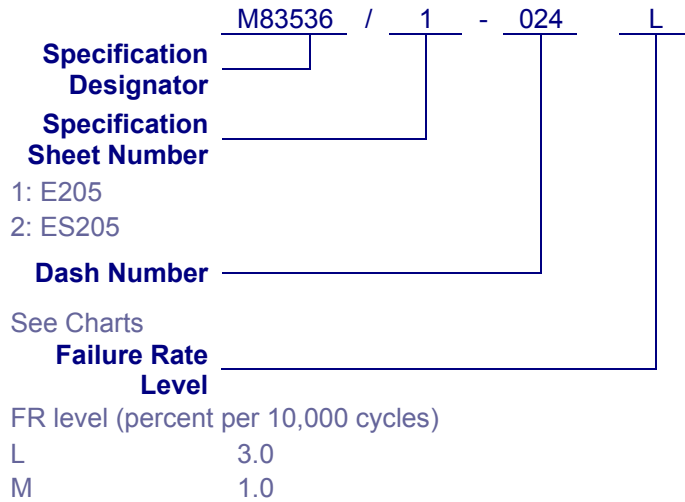
### Contact Rating (Amps)

Type of Load (High Level)	Cycles x 10 <sup>3</sup>	28 Vdc	115 Vac 400 Hz 1 Phase	115/200 Vac 50/60 Hz 3 Phase
Resistive	100	5	5	5
Inductive	20	3	5	5
Motor	100	2	3	3
Lamp	100	1	N/A	N/A

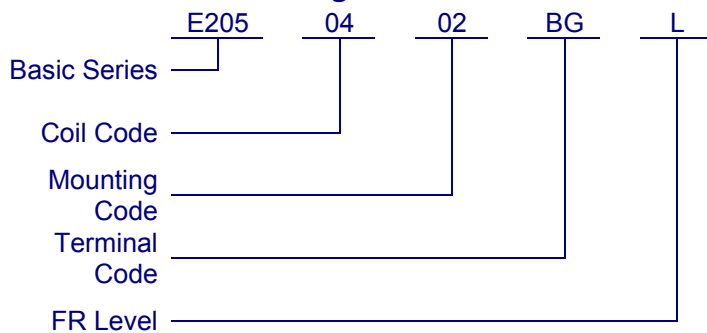
### Circuit Diagram



### Military Part Numbering



### QPL Part Numbering





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**Dash Numbers – Specification Sheet Number 1: E205**

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)
010	02	01	CT	12	6.5	9	4.5	0.5	72
011	02	01	AT	12	6.5	9	4.5	0.5	72
012	02	01	BG	12	6.5	9	4.5	0.5	72
013	02	02	CT	12	6.5	9	4.5	0.5	72
014	02	02	AT	12	6.5	9	4.5	0.5	72
015	02	02	BG	12	6.5	9	4.5	0.5	72
016	02	03	CT	12	6.5	9	4.5	0.5	72
017	02	03	AT	12	6.5	9	4.5	0.5	72
018	02	03	DT	12	6.5	9	4.5	0.5	72
019	04	01	CT	28	13.5	18	7	1.5	400
020	04	01	AT	28	13.5	18	7	1.5	400
021	04	01	BG	28	13.5	18	7	1.5	400
022	04	02	CT	28	13.5	18	7	1.5	400
023	04	02	AT	28	13.5	18	7	1.5	400
024	04	02	BG	28	13.5	18	7	1.5	400
025	04	03	CT	28	13.5	18	7	1.5	400
026	04	03	AT	28	13.5	18	7	1.5	400
027	04	03	DT	28	13.5	18	7	1.5	400

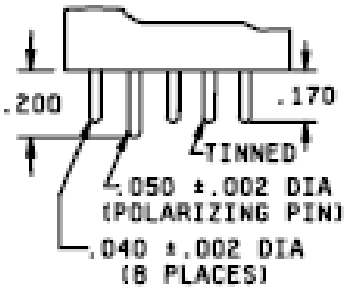
**Dash Numbers – Specification Sheet Number 2: ES205**

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)
010	02	01	CT	12	6.5	9	4.5	0.5	72
011	02	01	AT	12	6.5	9	4.5	0.5	72
012	02	01	BG	12	6.5	9	4.5	0.5	72
013	02	02	CT	12	6.5	9	4.5	0.5	72
014	02	02	AT	12	6.5	9	4.5	0.5	72
015	02	02	BG	12	6.5	9	4.5	0.5	72
016	02	03	CT	12	6.5	9	4.5	0.5	72
017	02	03	AT	12	6.5	9	4.5	0.5	72
018	02	03	DT	12	6.5	9	4.5	0.5	72
019	04	01	CT	28	13.5	18	7	1.5	400
020	04	01	AT	28	13.5	18	7	1.5	400
021	04	01	BG	28	13.5	18	7	1.5	400
022	04	02	CT	28	13.5	18	7	1.5	400
023	04	02	AT	28	13.5	18	7	1.5	400
024	04	02	BG	28	13.5	18	7	1.5	400
025	04	03	CT	28	13.5	18	7	1.5	400
026	04	03	AT	28	13.5	18	7	1.5	400
027	04	03	DT	28	13.5	18	7	1.5	400
028	04	04	BG	28	13.5	18	7	1.5	400
029	00	18	KG	28	13.5	18	7	1.5	500
039*	28	02	BG	28	13.5	18	7	1.5	500
040*	28	03	BG	28	13.5	18	7	1.5	500
041	04	05	BG	28	13.5	18	7	1.5	500

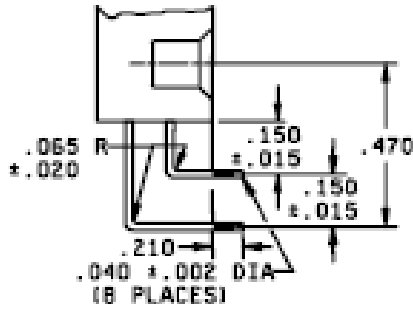
\*These relays are supplied without internal Arc Barriers and are not rated for AC loads



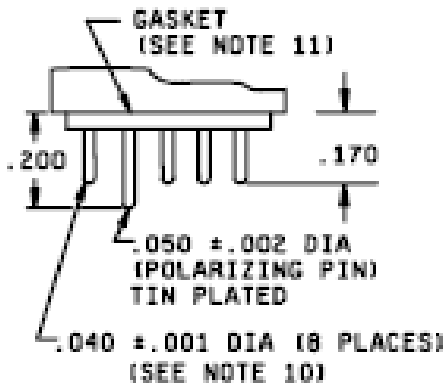
## Terminal Styles



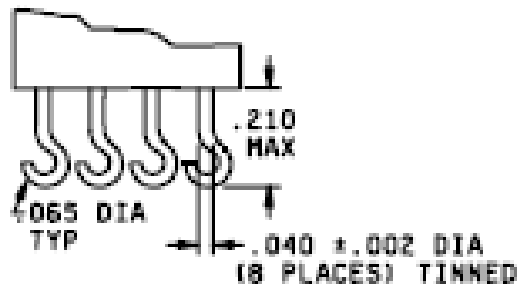
Terminal CT:  
Tin Plated Solder Pin



Terminal DT:  
Tin Plated 90° Solder Pin



Terminal BG & KG:  
Gold Plated Plug in  
Note: Grounding Pin not shown  
for mount KG



Terminal AT:  
Tin Plated Solder Hook