

CEP7-EE_F/G/H Large Amp Overload Replacement Module

The larger amp CEP7-EE_F/G/H overload relays for CA6 Contactors are designed in two pieces so the overload relay module can be replaced. There are two options for this replacement module.

Question:

Can the large amp CEP7 overload relay (CT model) be repaired? What are the options?

Answer:

The CEP7-EE_F/G/H large amp current transformer overload relay model is designed in two pieces to facilitate replacement of the actual overload module. The cover can be removed to expose the mounting of the CT kit and a small frame size CEP7-EE_B-type overload relay.

In fact, page 6 of the CEP7-EE_F/G/H instruction sheet provides details of a specific part number CEP7-NREE_Z for the replacement small frame size overload relay.



Part Number	Current Range	Overload Relay
CEP7-NREEHZ CEP7-NREEJZ	30-150 A 40-200 A	CEP7-EE_F
CEP7-NREEJZ CEP7-NREEKZ CEP7-NREELZ	40-200 A 60-300 A 100-500 A	CEP7-EE_G
CEP7-NREEMZ CEP7-NREENZ	120-600 A 160-800 A	CEP7-EE_H

- CEP7-NREE_Z - the low/high ranges on the dial are marked with the appropriate large amp values
- CEP7-EECB - the low/high ranges on the dial are marked with 1.0...5.0A

CEP7-EECB can be used as a replacement overload in conjunction with the CEP7-EE_F/G/H CT kit. However, the dial setting would need to be recalculated to match the applicable motor protection needed. The Sprecher + Schuh E-Catalog has some information in Section B that helps calculate the application's ratio and FLA.

CEP7-NREE_Z represents the replacement overload portion inside the CEP7-EE_F/G/H device and is identical in production to part number CEP7-EECB; except for one feature - the dial.

Table For Using Current Transformer With CEP7-EECB (Range 1.0...5.0 Amps) Overload Relay

Current Setting	CT Ratio 150:5	CT Ratio 200:5	CT Ratio 300:5	CT Ratio 500:5	CT Ratio 600:5	CT Ratio 800:5	CT Ratio 1000:5	CT Ratio 1500:5
	Equivalent FLA	Equivalent FLA	Equivalent FLA	Equivalent FLA	Equivalent FLA	Equivalent FLA	Equivalent FLA	Equivalent FLA
1.00	30	40	60	100	120	160	200	300
1.25	38	50	75	125	150	200	250	375
1.50	45	60	90	150	180	240	300	450
1.75	53	70	105	175	210	280	350	525
2.00	60	80	120	200	240	320	400	600
2.25	68	90	135	225	270	360	450	675
2.50	75	100	150	250	300	400	500	750
2.75	83	110	165	275	330	440	550	825
3.00	90	120	180	300	360	480	600	900
3.25	98	130	195	325	390	520	650	975
3.50	105	140	210	350	420	560	700	1050
3.75	113	150	225	375	450	600	750	1125
4.00	120	160	240	400	480	640	800	1200

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How To Read The Table

- Current Setting - this is ultimately where you would set the FLA on the CEP7-EECB overload dial
- CT Ratio - this identifies which current transformer ratio is being used

Application Example

Motor rating of 125HP @ 460V...156 FLA

- 150:5 CT's would be just a bit too small, so the appropriate CT selection would be 200:5
- The calculation would appear as

$$\frac{X}{156} = \frac{5}{200} \quad X = \frac{5 \times 156}{200} \quad X = \frac{780}{200} \quad X = 3.9$$

Using the table - If our FLA were to have 150A, then the overload dial is to be set at 3.75. Since the example FLA is actually 156A, then the overload setting calculates to be set at 3.9. Proportionally it can be seen that 156A falling in between 150 (3.75)...160 (4.00) substantiates our calculation along with the 3.9A setting.

Therefore, in lieu of making a CEP7-NREE_Z selection, the CEP7-EECB, a readily available component, can be utilized as a replacement overload relay inside the large amp CEP7-EE_F/G/H overload relay, a significant savings over replacing the entire CEP7-EE_F/G/H.

