Type IAC-800 Time-overcurrent Relays

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For Time-overcurrent Protection of A-c Circuits and Apparatus

The new IAC800 series relays have superseded all equivalent IAC models of the previous design. The Selection Guide, below, is a quick reference for selecting the IAC800 relays. The Substitution List, on the following page, lists the previous models with the superseding IAC800 models. For application, additional descriptive information and a complete listing of all 60Hz IAC relays refer to page 1 of this section.

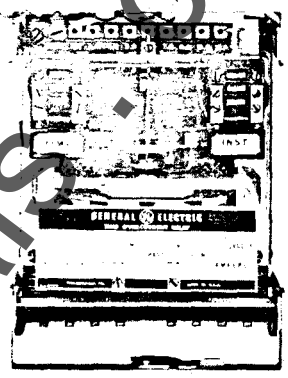
DESCRIPTION

The IAC800 series relays (form number above 800) are electrically and mechanically, interchangeable with the previous IAC's (form numbers 1 through 199). The main distinction is that the ratio of the maximum setting to the minimum setting for the time overcurrent or the instantaneous units is 8, whereas that ratio for the previous models is 4. Thus fewer models are required to cover the same ranges and applications. For example, the 1.5-12 amp time overcurrent range is designed for application in distribution ground relaying and phase relaying, replacing two separate previous ranges.

The time overcurrent unit is a foil wound coil with an 11 point tap block. The instantaneous unit uses a new bifilar coil with two separate windings which can be conected either in series (for low range) or parallel (for high range). It is continuously adjustable over both ranges.

IAC800 CHARACTERISTICS

The burden is the same or lower than the previous models at comparable tap settings, the continuous current carry capacity of the coils is 10 percent greater (see tables, below), the one-second current rating is equal or greater, the temperature rise in all coils is the same or lower and the time curves and dial settings are identical to those published for the previous design.



(Photo 8041298)

Fig. 1. IAC77B relay withdrawn from case

AVAILABLE SETTINGS

Time overcurrent unit taps are as follows:

0.5-4.0 amps—0.5, 0.6, 0.7, 0.8, 1, 1.2, 1.5, 2, 2.5, 3, and 4 amps

1.5-12 amps—1.5, 2, 2.5, 3, 4, 5, 6, 7, 8, 10 and 12 amps

2-16 amps—2, 2.5, 3, 4, 5, 6, 7, 8, 10, 12 and 16 amps

SELECTION GUIDE—60 Hz only

Ratings: Current Range (amperes)		1 N.O. Contact Per Unit			2 N.O. Contacts Per Unit (one side common)		
Time Overcurrent Unit	Instantaneous Unit	Inverse Time Type IAC 51	Very Inverse Time Type IAC 53	Extremely Inverse Time Type IAC 77	Invesre Time Type IAC 52	Very Inverse Time Type IAC 54	Extremely Inverse Time Type IAC 78
0.5–4.0	.....	12IAC51A801A	12IAC53A801A	12IAC77A801A	12IAC52A801A	12IAC54A801A	12IAC78A801A
1.5–12	.....	.....	803A	803A	.....	803A	803A
2–16	.....	802A	.....	.....	802A	.....	.....
0.5–4.0	0.5–4.0	12IAC51B801A	12IAC53B801A	12IAC77B801A	12IAC52B801A	12IAC54B801A	12IAC78B801A
0.5–4.0	2–16	803A	803A	803A	803A	803A	803A
0.5–4.0	10–80	805A	805A	805A	805A	805A	805A
0.5–4.0	20–160	807A	807A	807A	807A	807A	807A
1.5–12	0.5–4.0	.....	809A	809A	.....	809A	809A
1.5–12	2–16	.....	810A	810A	.....	810A	810A
1.5–12	10–80	.....	811A	811A	.....	811A	811A
1.5–12	20–160	.....	812A	812A	.....	812A	812A
2–16	0.5–4.0	12IAC51BF02A	.....	.....	12IAC52B802A	.....	.....
2–16	2–16	804A	.....	.....	804A	.....	.....
2–16	10–80	806A	.....	.....	806A	.....	.....
2–16	20–160	808A	.....	.....	808A	.....	.....

NOTE: On relays which have instantaneous and time overcurrent units, the contact(s) for each unit are not electrically separate

CONTINUOUS CURRENT RATING—* Time Overcurrent Unit

Tap Setting	IAC51 and 52		IAC53 and 54		IAC77 and 78	
	Taps 0.5–4.0	Taps 2–16	Taps 0.5–4.0	Taps 1.5–12	Taps 0.5–4.0	Taps 2–15
0.5	1.6 Amps		4.0 Amps		3.5 Amps	
0.6	1.8		4.5		3.7	
0.7	2.0		5.0		4.0	
0.8	2.1		5.5		4.5	
1.0	2.3		6.0		5.0	
1.2	2.7		7.0		5.5	
1.5	3.0		7.5	10 Amps	6.0	9.5
2.0	3.5	8 Amps	9.0	11.5	7.0	10.5
2.5	4.0	9	10.0	13.0	8.0	11.5
3.0	4.5	10	11.0	14.5	9.0	12.5
4.0	5.0	12	12.0	17.0	10.0	14.0
5.0		14		19.0		15.5
6.0		15		20.0		17.0
7.0		16		20.0		18.0
8.0		17.5		20.0		19.0
10.0		20		20.0		20.0
12.0		20		20.0		20.0
16.0		20				

* Relays with both time overcurrent and instantaneous units are limited to the lesser of the respective current ratings.

CONTINUOUS CURRENT RATING—* Instantaneous Unit

Instantaneous Unit Range	Connection of Instantaneous Unit—High or Low Range		Continuous Current Amps
0.5–4.0	Low	0.5–2.0	0.75
	High	1.0–4.0	1.50
2–16	Low	2–8	3.0
	High	4–16	6.0
10–80	Low	10–40	15.0
	High	20–80	25.0
20–160	Low	20–80	25.0
	High	40–160	25.0

Low Range refers to coils connected in series.
High Range refers to coils connected in parallel.

REFERENCES

Dimensions ..... Section 7340
How to Order ..... Section 7210
Prices and Case Sizes .... Section 7213
Instruction Books ..... Section 7206

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Data subject to change without notice