

SINGLE PHASE TRANSFORMER PRIMARY FUSE/MCB PROTECTION

SUGGESTED PRIMARY FUSE VALUES

For the standard range of single phase transformers we suggest a type 'T' characteristic fuse rated at approximately 2 x Full Load Current.

VA	230V RANGE FUSE TYPE T (AMPS)	400V RANGE FUSE TYPE T (AMPS)
50	0.500	0.315
100	0.800	0.500
150	1.25	0.800
200	2.00	1.25
250	3.15	1.60
350	4.00	2.50
500	6.30	3.15
750	8.00	5.00
1000	10.0	6.30
2000	16.0	8.00
2500	20.0	10.0
3000	25.0	16.0
4000	32.0	20.0
5000	40.0	25.0
6000	50.0	32.0

Inrush Current Note

When a transformer is first energised, a transient current much larger than the normal full load current flows for a short period. Because of this inrush current, special consideration is required when selecting protective devices for the primary side.

SUGGESTED PRIMARY MCB VALUES

We suggest the following equation for the sizing of mcb's for use on the primary side of transformers:

$$\text{RATING} = \frac{15 \times \text{FULL LOAD CURRENT}}{\text{MINIMUM INSTANTANEOUS TRIPPING COEFFICIENT OF MCB}}$$

VA	INPUT VOLTS	APPROX FLC (AMPS)	SUGGESTED TYPE D MCB RATING (AMPS)
50	230	0.28	.
	400	0.16	.
100	230	0.51	1
	400	0.30	1
150	230	0.75	1
	400	0.43	1
200	230	0.99	2
	400	0.57	1
300	230	1.47	2
	400	0.84	2
400	230	1.94	4
	400	1.12	2
500	230	2.40	4
	400	1.38	2
750	230	3.59	6
	400	2.07	4
1000	230	4.75	10
	400	2.73	4
1500	230	6.92	10
	400	3.98	6
2000	230	9.16	16
	400	5.26	10
2500	230	11.4	20
	400	6.56	10
3000	230	13.6	20
	400	7.83	16
4000	230	18.1	32
	400	10.4	16
5000	230	22.6	40
	400	13.0	20
6000	230	27.1	40
	400	15.6	25