

Protection of transformers and their lines (continued)

Three - phase: Control, safety isolating, isolating, equipment and installation transformers

Nominal power	24 V				42 V				230 V				400 V			
	Rating	Cartridge Cat.Nos	Rating	MCBS Cat.Nos	Rating	Cartridge Cat.Nos	Rating	MCBS Cat.Nos	Rating	Cartridge Cat.Nos	Rating	MCBS Cat.Nos	Rating	Cartridge Cat.Nos	Rating	MCBS Cat.Nos
400 VA	10	0 133 10	10	4 078 96	6	0 133 06	6	4 078 94	1	0 133 01	1	4 078 90	1	0 133 01	1	4 078 90
630 VA	16	0 133 16	16	4 078 98	10	0 133 10	10	4 078 96	2	0 133 02	2	4 078 91	1	0 133 01	1	4 078 90
1000 VA	25	0 133 25	25	4 079 00	16	0 133 16	16	4 078 98	4	0 133 04	3	4 078 92	2	0 133 02	2	4 078 91
1600 VA	40	0 143 40	40	4 079 02	25	0 133 25	20	4 078 99	4	0 133 04	6	4 078 94	4	0 133 04	3	4 078 92
2500 VA	63	0 153 63	63	4 079 04	40	0 143 40	32	4 079 01	6	0 133 06	6	4 078 94	4	0 133 04	6	4 078 94
4 kVA	100	0 153 96	100	4 093 63	63	0 153 63	50	4 079 03	10	0 133 10	10	4 078 96	6	0 133 06	6	4 078 94
6.3 kVA	160	0 163 55	160	4 200 17	100	0 153 96	80	4 093 62	16	0 133 16	16	4 078 98	10	0 133 10	10	4 078 96
10 kVA	250	0 173 65	250	4 202 19	160	0 163 55	125	4 093 64	25	0 133 25	25	4 079 00	16	0 133 16	16	4 078 98
16 kVA	-	-	-	-	-	-	-	-	40	0 143 40	40	4 079 02	25	0 133 25	25	4 079 00
25 kVA	-	-	-	-	-	-	-	-	63	0 153 63	63	4 079 04	40	0 143 40	40	4 079 02
40 kVA	-	-	-	-	-	-	-	-	100	0 153 96	100	4 093 63	63	0 153 63	63	4 079 04
50 kVA	-	-	-	-	-	-	-	-	125	0 153 97	125	4 093 64	80	0 153 80	80	4 093 62
63 kVA	-	-	-	-	-	-	-	-	160	0 163 55	160	4 200 17	100	0 153 96	100	4 093 63
80 kVA	-	-	-	-	-	-	-	-	200	0 168 60	200	4 202 18	125	0 153 97	125	4 093 64
100 kVA	-	-	-	-	-	-	-	-	250	0 173 65	250	4 202 19	160	0 163 55	160	4 200 17
125 kVA	-	-	-	-	-	-	-	-	315	0 178 70	400	4 220 07	200	0 168 60	200	4 202 18
160 kVA	-	-	-	-	-	-	-	-	400	0 178 75	400	4 220 08	250	0 173 65	250	4 202 19
200 kVA	-	-	-	-	-	-	-	-	500	0 181 25	630	4 220 09	315	0 178 70	320	4 220 06
250 kVA	-	-	-	-	-	-	-	-	630	0 181 30	630	4 222 09	400	0 178 75	400	4 220 07
315 kVA	-	-	-	-	-	-	-	-	800	0 185 85	800	4 222 69	500	0 181 75	500	4 220 08
400 kVA	-	-	-	-	-	-	-	-	1000	0 185 90	1000	4 222 70	630	0 181 80	630	4 220 09

■ Main transformer functions:

• Changing voltage:



Isolation transformer
(basic insulation between primary and secondary)



Auto-transformer
(no insulation between primary and secondary)

• Control circuit power supply



Control transformer
(basic insulation between primary and secondary)

The transformer function(s) can either be defined by the equipment designer or can be imposed by installation guidelines or the equipment standard

Definitions:

- Electric shocks: physiological effect resulting from an electrical current through a human or animal body (IEV 195-01-04)
- Direct contact: electric contact of persons or animals with live parts (195-06-03)
- Indirect contact: electric contact of persons or animals with exposed-conductive-parts which have become live under fault conditions (195-06-04)