

INSTRUMENT TRANSFORMERS

# IEEE Standard Ratings

## Current and voltage transformers (CTs and VTs)

IEEE C57.13-2016, Table 11: Standard multi-ratio current transformer taps\*

600:5		1200:5		2000:5		3000:5		4000:5		5000:5	
Ratio	Tap	Ratio	Tap	Ratio	Tap	Ratio	Tap	Ratio	Tap	Ratio	Tap
50:5	X2-X3	100:5	X2-X3	300:5	X3-X4	300:5	X3-X4	500:5	X1-X2	500:5	X2-X3
100:5	X1-X2	200:5	X1-X2	400:5	X1-X2	500:5	X4-X5	1000:5	X3-X4	1000:5	X4-X5
150:5	X1-X3	300:5	X1-X3	500:5	X4-X5	800:5	X3-X5	1500:5	X2-X3	1500:5	X1-X2
200:5	X4-X5	400:5	X4-X5	800:5	X2-X3	1000:5	X1-X2	2000:5	X1-X3	2000:5	X3-X4
250:5	X3-X4	500:5	X3-X4	1100:5	X2-X4	1200:5	X2-X3	2500:5	X2-X4	2500:5	X2-X4
300:5	X2-X4	600:5	X2-X4	1200:5	X1-X3	1500:5	X2-X4	3000:5	X1-X4	3000:5	X3-X5
400:5	X1-X4	800:5	X1-X4	1500:5	X1-X4	2000:5	X2-X5	3500:5	X2-X5	3500:5	X2-X5
450:5	X3-X5	900:5	X3-X5	1600:5	X2-X5	2200:5	X1-X3	4000:5	X1-X5	4000:5	X1-X4
500:5	X2-X5	1000:5	X2-X5	2000:5	X1-X5	2500:5	X1-X4			5000:5	X1-X5
600:5	X1-X5	1200:5	X1-X5			3000:5	X1-X5				

\*Contact factory for customer specific ratio taps.

IEEE C57.13-2016, Table 8: Standard accuracy class for metering service and corresponding limits of transformer correction factors\*

Accuracy class	Voltage Transformers		Current Transformers					
	90% to 100% rated voltage		100% rated current*		10% rated current		5% rated current	
	Min	Max	Min	Max	Min	Max	Min	Max
0.15S	-	-	0.9985	1.0015	-	-	0.9985	1.0015
0.15	0.9985	1.0015	0.9985	1.0015	-	-	0.9970	1.0030
0.3S	-	-	0.9970	1.0030	-	-	0.9970	1.0030
0.3	0.9970	1.0030	0.9970	1.0030	0.9940	1.0060	-	-
0.6	0.9940	1.0060	0.9940	1.0060	0.9880	1.0120	-	-
1.2	0.9880	1.0120	0.9880	1.0120	0.9760	1.0240	-	-

\*Other accuracy requirements may be specified and should be included on the nameplate.

\*For current transformers, the 100% rated current limit also applies to the current corresponding to the continuous thermal current rating factor.

IEEE C57.13-2016, Table 10: Standard 5A secondary CT burdens\*

Burden designation	Resistance (ohms)	Inductance (millihenrys)	Impedance (ohms)	Volt-amperes	Power factor
<b>Metering burdens</b>					
E-0.04*	0.04	0.0	0.04	1.0	1.0
E-0.2*	0.20	0.0	0.20	5.0	1.0
B-0.1	0.09	0.116	0.1	2.5	0.9
B-0.2	0.18	0.232	0.2	5.0	0.9
B-0.5	0.45	0.580	0.5	12.5	0.9
B-0.9	0.81	1.040	0.9	22.5	0.9
B-1.8	1.62	2.080	1.8	45.0	0.9
<b>Relaying burdens</b>					
B-1	0.5	2.3	1.0	25	0.5
B-2	1.0	4.6	2.0	50	0.5
B-4	2.0	9.2	4.0	100	0.5
B-8	4.0	18.5	8.0	200	0.5

\*at 60 Hz

\* electronic burden

IEEE C57.13-2016, Table 19: Standard VT burdens at 60 Hz

Burden designation	Secondary volt-amperes	Burden power factor
W	12.5	0.10
X	25.0	0.70
M	35.0	0.20
Y	75.0	0.85
Z	200.0	0.85
ZZ	400.0	0.85

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