

## General applications

When the following instructions are observed, these current transformers can be used for a broad range of applications with rated outputs up to 75 VA.

If the c.t.'s are employed in exactly the same manner as for differential protection, in respect of connection and current values, larger current errors are obtained at the higher outputs because the winding correction was only carried out corresponding to the low output of 4 VA laid down for differential protection. The error to be expected at higher outputs can be seen in Fig. 2 and 3. The fine current graduation of the universal c.t. allows a subsequent error correction to be made, especially the correction of the increased error experienced at higher outputs. This is done simply by connecting the c.t. for a corrected current value corresponding to the given error. The current errors obtained from the diagrams can thus be utilized as correction factors.

The transformers undergo the routine tests listed on page 2 on completion of series manufacture, i.e. at an output of 4 VA. For relaying and regulation purposes, as well as for measurements where the conditions are not unduly strict, the attainable accuracy is still quite sufficient for higher outputs if the correction factors given in the diagrams were taken into account and the required output is known fairly exactly. The current errors quoted are average values, for which a tolerance of up to  $\pm 0.5\%$  may be reckoned with in some cases. In conformity with the normal classification the accuracy of the transformation ratio is therefore to be given in the form

"current error at rated current and rated output, max. 1, 3 or 5%".

The calculated error, however, should be well below the quoted maximum value.

Rated primary current	Con- nection to	Join together		Rated primary current	Con- nection to	Join together		Appr. total consumption [VA] at sec. current [A]		Appr. total consumption [VA] at sec. current [A]	
		link 1	link 2			link 1	link 2	5	2.89	1	0.577
1.6	F - G			0.418	C - M	A + F	G + I	2.6	2.4	2.1	0.577
1.545	A - G			0.414	C - M	B + F	G + I	2.6	2.4	2.1	2.15
1.485	C - G			0.41	C - M	C + F	G + I	2.55	2.35	2.05	2.1
1.435	B - G			0.406	B - M	A + F	G + I	2.5	2.3	2	2.05
1.385	A - G			0.402	F - M	G + I		2.45	2.25	1.95	2
1.34	B - G			0.398	A - M	B + F	G + I	2.4	2.2	1.9	1.95
1.295	A - G			0.394	C - M	D + F	G + I	2.4	2.2	1.9	1.95
1.255	D - G			0.39	B - M	C + F	G + I	2.4	2.2	1.9	1.95
1.215	D - G			0.386	A - M	C + F	G + I	2.35	2.15	1.85	1.9
1.18	C - G			0.382	B - M	D + F	G + I	2.4	2.2	1.9	1.95
1.145	C - G			0.379	A - M	D + F	G + I	2.4	2.2	1.9	1.95
1.115	D - G			0.375	D - M	A + E	G + I	2.4	2.2	1.9	1.95
1.085	B - G			0.372	D - M	B + E	G + I	2.35	2.15	1.85	1.9
1.055	E - G			0.368	C - M	A + E	G + I	2.3	2.1	1.8	1.85
1.03	A - G			0.365	C - M	B + E	G + I	2.3	2.1	1.8	1.85
1	C - G			0.362	D - M	C + E	G + I	2.25	2.05	1.75	1.8
0.98	B - G			0.358	B - M	A + E	G + I	2.25	2.05	1.75	1.8
0.955	A - G			0.355	E - M	G + I		2.2	2	1.7	1.75
0.935	B - G			0.352	C - M	B + E	G + I	2.2	2	1.7	1.75
0.912	A - G			0.349	C - M	D + E		2.15	1.95	1.65	1.7
0.89	C - I			0.346	B - M	C + E	G + I	2.15	1.95	1.65	1.7
0.873	D - I			0.343	A - M	D + E	G + I	2.15	1.95	1.65	1.7
0.855	B - I			0.34	B - M	D + E	G + I	2.15	1.95	1.65	1.7
0.835	H - I			0.337	A - M	D + E	G + I	2.15	1.95	1.65	1.7
0.82	A - I			0.335	C - M	B + H		2.25	2.05	1.75	1.8
0.802	C - I			0.332	D - M	C + H		2.2	2	1.7	1.75
0.786	B - I			0.329	H - M	A + H		2.2	2	1.7	1.75
0.772	A - I			0.326	H - M	A + H		2.2	2	1.7	1.75
0.757	B - I			0.324	A - M	B + H		2.15	1.95	1.65	1.7
0.743	A - I			0.321	C - M	D + H		2.15	1.95	1.65	1.7
0.73	D - I			0.319	B - M	C + H		2.15	1.95	1.65	1.7
0.716	D - I			0.316	A - M	C + H		2.1	1.9	1.6	1.65
0.705	C - I			0.311	B - M	D + H		2.1	1.9	1.6	1.65
0.692	C - I			0.309	D - M	A + E		2.15	1.95	1.65	1.7
0.67	B - I			0.306	D - M	B + E		2.1	1.9	1.6	1.65
0.657	E - I			0.304	C - M	A + E		2.1	1.9	1.6	1.65
0.648	A - I			0.302	C - M	B + E		2.05	1.85	1.55	1.6
0.638	C - I			0.3	D - M	C + E		2.05	1.85	1.55	1.6
0.628	B - I			0.297	B - M	A + E		2	1.8	1.5	1.55
0.618	A - I			0.295	E - M	F + H		2	1.8	1.5	1.55
0.608	B - I			0.291	C - M	B + E		2	1.8	1.5	1.55
0.6	A - I			0.289	B - M	C + E		2	1.8	1.5	1.55
0.59	D - I			0.287	A - M	C + E		2	1.8	1.5	1.55
0.582	C - I			0.285	B - M	D + E		1.95	1.75	1.45	1.5
0.574	C - I			0.283	A - M	D + E		1.95	1.75	1.45	1.5
0.565	D - I			0.281	D - M	B + F		1.95	1.75	1.45	1.5
0.558	B - I			0.279	C - M	A + F		1.95	1.75	1.45	1.5
0.55	F - I			0.277	C - M	B + F		1.9	1.7	1.4	1.45
0.543	A - I			0.275	D - M	C + F		1.9	1.7	1.4	1.45
0.535	C - I			0.271	F - M	A + F		1.9	1.7	1.4	1.45
0.528	B - I			0.269	A - M	B + F		1.9	1.7	1.4	1.45
0.521	A - I			0.268	C - M	D + F		1.9	1.7	1.4	1.45
0.515	B - I			0.266	B - M	C + F		1.85	1.65	1.35	1.4
0.508	A - I			0.264	A - M	C + F		1.85	1.65	1.35	1.4
0.496	D - I			0.262	B - M	D + F		1.85	1.65	1.35	1.4
0.49	C - I			0.261	A - M	D + F		1.85	1.65	1.35	1.4
0.484	C - I			0.259	D - M	A + E		1.85	1.65	1.35	1.4
0.478	D - I			0.257	D - M	B + E		1.85	1.65	1.35	1.4
0.472	B - I			0.256	C - M	A + E		1.85	1.65	1.35	1.4
0.467	E - I			0.254	C - M	B + E		1.85	1.65	1.35	1.4
0.462	A - I			0.252	D - M	C + E		1.8	1.6	1.3	1.3
0.456	C - I			0.251	B - M	A + E		1.8	1.6	1.3	1.3
0.451	B - I			0.249	E - M	G + H		1.8	1.6	1.3	1.3
0.446	A - I			0.248	A - M	B + E		1.8	1.6	1.3	1.3
0.441	B - I			0.246	C - M	D + E		1.8	1.6	1.3	1.3
0.436	A - I			0.245	B - M	C + E		1.75	1.55	1.25	1.25
0.432	B - M			0.243	A - M	D + E		1.75	1.55	1.25	1.25
0.427	A - M			0.242	B - M	C + E		1.75	1.55	1.25	1.25
0.423	D - M			0.24	A - M	D + E		1.75	1.55	1.25	1.25

\* For primary currents of 1.6-1.2, the more finely graduated WI 23 D 5 should be given preference.