

Tape Wound Current Transformers

810 Series Measuring and Protection

Features

- » Plain ring, foot mounting or busbar fixings
- » Substantial tag terminals or flexible leads
- » Measuring Duty ranges up to 3000A
- » Protection Duty Classes 5P10 and 10P10
- » Special designs to customers requirements
- » ABS American Bureau of Shipping Approved



The Crompton 810 Series provides a comprehensive range of Measuring and Protective duty ring current transformers for installation where traditional reliability, accuracy and quality are required.

Class X Current Transformers

In balanced earth fault protection systems, correct operation depends on the accuracy of the current transformers. Class 5P and 10P are suitable where the definite minimum times is greater than 0.2 seconds. For shorter operating time, transient conditions may require current transformers to have cross sectional areas many times greater than those of steady state faults.

The following information is required.

- (a) Turns ratio
- (b) Knee point voltage
- (c) Maximum excitation current
- (d) Secondary circuit resistance

Performance

Designed to highest standards, 810 Series transformers have accuracy classes, outputs and performance to IEC 60044-1:1999 for measuring and protective duties.

Operating voltage: 660V a.c. maximum
 Test voltage: 2500V a.c.
 System frequency: 50/60Hz or 400Hz
 Service temperature: -40°C to +70°C
 Insulation class: BS2757 class Y (Maximum 90°C)

Overload withstand to: BS3938 - IEC185

Construction

High grade silicon iron cores are carefully selected, then insulated and protected by a polypropylene or polycarbonate covering on which the secondary winding is toroidally wound by precision machines. The P.V.A. coated copper wire is additionally protected by a layer of half-lapped plasticised P.V.C. tape. A second layer of self bonding P.V.C. tape is applied and vulcanised to provide a

tough moisture-resistant coating.

A substantial terminal block with tag terminal and M6 screws and nuts is standard but M4 screws or insulated flex leads (normally 600mm) can be supplied. Integral fixing feet are normally provided but a busbar mount clamp or a plain ring may be specified.

Code	-940	-941	-942	-943	-944*	-947*
Style						
Mounting	Plain ring	Plain ring	Foot	Foot	Busbar	Busbar
Winding	Flexible leads	Tag terminals	Flexible terminals	Tag leads	Tag terminals	Flexible leads
Termination						

* Busbar mounted types - 944 and 947 have bore diameter 'A' reduced by 6mm.

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810 Series Measuring

Measuring Current Transformers

Current Transformers can be manufactured to meet specific dimensional and accuracy requirements. All enquiries should be directed to a local sales centre stating all current, accuracy and dimensional requirements.

Measuring Current Transformers will be coded 811-94 and Protection Current Transformers 81P-94.

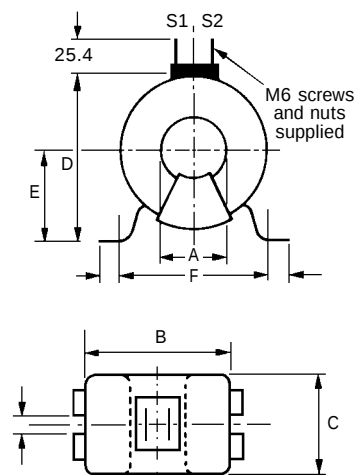
Selection Table

Accuracies comply with IEC 60044-1:1999

Busbar fixings are not available on Models 812 and 813

* Busbar mounted types 944 and 947 have bore diameter 'A' reduced by 6mm.

Model Type	Primary Current	VA at class			Approximate 5 amp Dimensions (mm's)						Weight Kgs
		3	1	0.5	A*	B	C	D	E	F	
812	40	2	-	-	20	60	48	66	40	75	0.48
812	50	2.5	-	-	20	60	48	66	40	75	0.48
812	60	2.5	-	-	20	60	48	66	40	75	0.48
812	75	5	-	-	20	60	48	66	40	75	0.50
812	80	5	-	-	20	60	48	66	40	75	0.50
814	100	5	-	-	42	84	35	90	52	85	0.50
814	120	5	2.5	-	42	84	35	90	52	85	0.55
814	150	7.5	5	-	42	84	35	90	52	85	0.55
814	200	10	5	-	42	84	35	90	52	85	0.60
814	250	10	5	-	42	84	35	90	52	85	0.65
814	300	10	5	-	42	84	35	90	52	85	0.70
814	400	20	10	5	42	84	35	90	52	85	0.75
816	500	20	15	5	74	112	30	118	66	105	0.65
816	600	20	15	5	74	112	30	118	66	105	0.70
816	750	20	15	5	74	112	30	118	66	105	0.70
816	800	30	20	10	74	112	30	118	66	105	0.70
818	1000	40	30	15	98	142	33	148	81	125	0.85
818	1200	50	30	15	98	142	33	148	81	125	0.90
818	1500	50	30	20	98	142	33	148	81	125	1.05
818	1600	50	30	20	98	142	33	148	81	125	1.15
818	2000	60	45	30	98	142	33	148	81	125	1.30
819	2500	60	45	30	114	170	36	176	95	140	1.55
819	3000	60	45	30	114	170	36	176	95	140	1.70
819	4000	60	45	30	110	172	39	178	97	140	2.00
819	5000	60	45	30	110	172	39	178	97	140	2.30



Dimensions of standard 5A current transformers given in mm

1A current transformer dimensions may vary by up to 10%.

Tape Wound Current Transformers

810 Series Protection

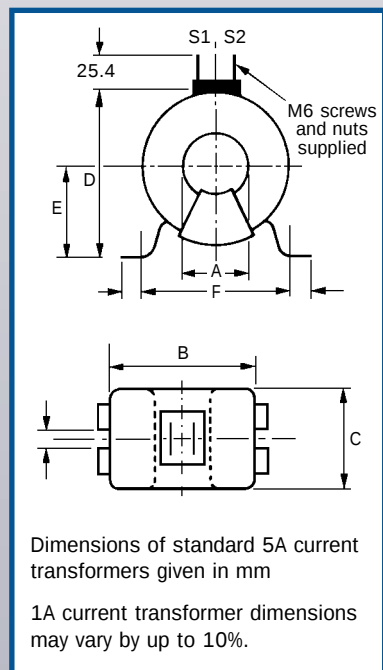
Selection Table

Accuracies comply with IEC 60044-1:1999 Accuracy Class 5P10

Busbar fixings are not available on Model 81A

* Busbar mounted types 944 and 947 have bore diameter 'A' reduced by 6mm.

Model Type	Primary Current	VA Burden	Approximate 5 amp Dimensions (mm's)						Weight Kgs
			A*	B	C	D	E	F	
81A	100	2.5	38	140	76	150	78	125	5.4
		5	38	140	142	150	78	125	10.8
	150	2.5	38	140	54	150	78	125	3.6
		5	38	140	98	150	78	125	7.2
	200	2.5	38	140	54	150	78	125	3.6
		5	38	140	76	150	78	125	5.4
	250	2.5	38	140	54	150	78	125	3.6
		5	38	140	54	150	78	125	3.6
	300	2.5	38	140	32	150	78	125	1.8
		5	38	140	54	150	78	125	3.6
81B	400	2.5	53	140	32	150	78	125	1.8
		5	53	140	54	150	78	125	3.3
	500	2.5	53	140	32	150	78	125	1.9
		5	53	140	54	150	78	125	3.4
	600	2.5	53	140	32	150	78	125	2.0
		5	53	140	54	150	78	125	3.5
81C	750	5	63	114	42	124	65	105	1.4
		7.5	63	114	66	124	65	105	2.0
		10	63	114	66	124	65	105	2.0
	800	5	63	114	42	124	65	105	1.4
		7.5	63	114	66	124	65	105	2.0
		10	63	114	66	124	65	105	2.0
	1000	5	63	114	37	124	65	105	1.3
		7.5	63	114	42	124	65	105	1.5
		10	63	114	66	124	65	105	2.1
	1200	5	63	114	37	124	65	105	1.4
		7.5	63	114	42	124	65	105	1.6
		10	63	114	66	124	65	105	2.2
81D	1500	5	73	132	35	142	74	125	1.5
		7.5	73	132	35	142	74	125	1.5
		10	73	132	57	142	74	125	2.5
	1600	5	73	132	35	142	74	125	1.6
		7.5	73	132	35	142	74	125	1.6
		10	73	132	57	142	74	125	2.6
81E	2000	5	82	148	30	158	82	125	1.7
		7.5	82	148	35	158	82	125	2.0
		10	82	148	47	158	82	125	2.6
		15	82	148	57	158	82	125	3.2
		5	80	150	30	160	83	125	1.8
	2500	7.5	80	150	35	160	83	125	2.1
		10	80	150	35	160	83	125	2.1
		15	80	150	47	160	83	125	2.8
		5	78	152	30	162	84	125	2.1
		7.5	78	152	35	162	84	125	2.5
	3000	10	78	152	35	162	84	125	2.5
		15	78	152	47	162	84	125	3.2



Tape Wound Current Transformers

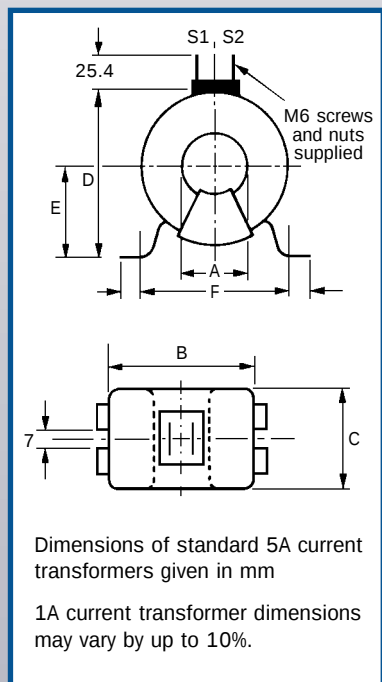
810 Series Protection

Selection Table (continued)

Accuracies comply with IEC 60044-1:1999 Accuracy Class 10P10

Busbar fixings are not available on Model 81F

* Busbar mounted types 944 and 947 have bore diameter 'A' reduced by 6mm.

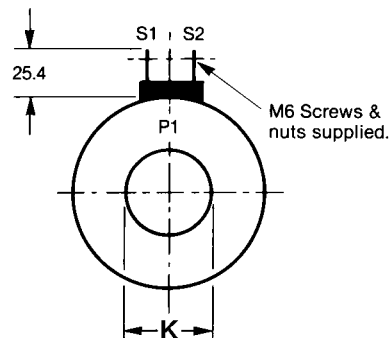


Model Type	Primary Current	VA Burden	A*	Approximate 5 amp Dimensions (mm's)					Weight Kgs
				B	C	D	E	F	
81F	100	5	32	102	93	112	59	105	3.30
		7.5	32	102	115	112	59	105	4.50
		10	36	140	119	150	78	125	9.25
	150	5	32	102	61	112	59	105	2.10
		7.5	32	102	93	112	59	105	3.35
		10	36	140	75	150	78	125	5.60
	200	5	32	102	56	112	59	105	1.95
		7.5	32	102	77	112	59	105	2.80
		10	32	102	93	112	59	105	3.40
	250	15	36	140	97	150	78	125	7.50
		5	32	102	51	112	59	105	1.75
		7.5	32	102	61	112	59	105	2.15
	300	10	32	102	83	112	59	105	3.00
		15	36	140	75	150	78	125	5.70
		5	32	102	46	112	59	105	1.55
		7.5	32	102	61	112	59	105	2.20
		10	32	102	72	112	59	105	2.65
		15	36	140	75	150	78	125	5.75
81G	400	5	47	100	56	110	58	105	1.45
		7.5	47	100	83	110	58	105	2.25
		10	47	100	93	110	58	105	2.55
		15	51	140	75	150	78	125	5.15
	500	5	47	100	51	110	58	105	1.35
		7.5	47	100	83	110	58	105	2.30
		10	47	100	88	110	58	105	2.50
		15	51	140	75	150	78	125	5.15
	600	5	44	103	49	113	60	105	1.25
		7.5	44	103	59	113	60	105	1.55
		10	44	103	86	113	60	105	2.35
		15	44	103	96	113	60	125	2.71
81H	800	5	58	115	44	125	66	105	1.20
		7.5	58	115	66	125	66	105	1.95
		10	58	115	66	125	66	105	1.95
		15	58	115	93	125	66	105	2.90
	1000	5	58	115	39	125	66	105	1.10
		7.5	58	115	44	125	66	105	1.30
		10	58	115	66	125	66	105	2.10
		15	58	115	76	125	66	105	2.45
	1200	5	58	115	39	125	66	105	1.20
		7.5	58	115	44	125	66	105	1.40
		10	58	115	66	125	66	105	2.20
		15	58	115	66	125	66	105	2.20
81J	1500	5	71	131	34	141	74	124	1.25
		7.5	71	131	34	141	74	125	1.25
		10	71	131	56	141	74	125	2.30
		15	71	131	56	141	74	125	2.30
	1600	5	68	134	37	144	75	125	1.30
		7.5	68	134	37	144	75	125	1.30
		10	68	134	59	144	75	125	2.35
		15	68	134	59	144	75	125	2.35
81K	2000A	5	78	149	33	159	83	125	1.35
		7.5	78	149	38	159	83	125	1.65
		10	78	149	50	159	83	125	2.35
		15	78	149	60	159	83	125	3.00
		5	78	149	33	159	83	125	1.50
	2500A	7.5	78	149	38	159	83	125	1.85
		10	78	149	38	159	83	125	1.85
		15	78	149	50	159	83	125	2.55
		5	78	152	30	162	84	125	2.10
		7.5	78	152	35	162	84	125	2.50
	3000A	10	78	152	35	162	84	125	2.50
		15	78	152	47	162	84	125	3.20

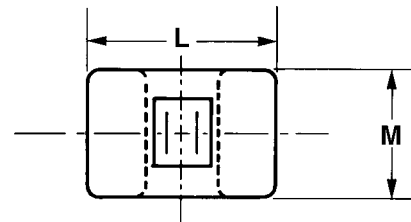
Tape Wound Current Transformers

810 Series Protection

Model 81L Dimensions (mm's)



Fixing feet or Busbar clamps
available on request



* Busbar mounted types 944 and 947 have bore diameter reduced by 6mm.

Accuracy Class 10P10

Model Type	Primary Current	VA Burden	Approximate Dimensions		
			K*	L	M
81L	100	5	40	108	90
	150	5	40	108	68
	200	7.5	40	108	73
	300	10	40	108	68
	400	10	61	112	90
	500	10	61	112	73
	600	10	61	112	73
	800	15	81	145	60
	1000	15	81	145	53
	1200	15	81	145	45
	1600	15	94	153	49
	2000	15	117	163	66
	2500	15	114	166	59
	3000	15	114	166	59