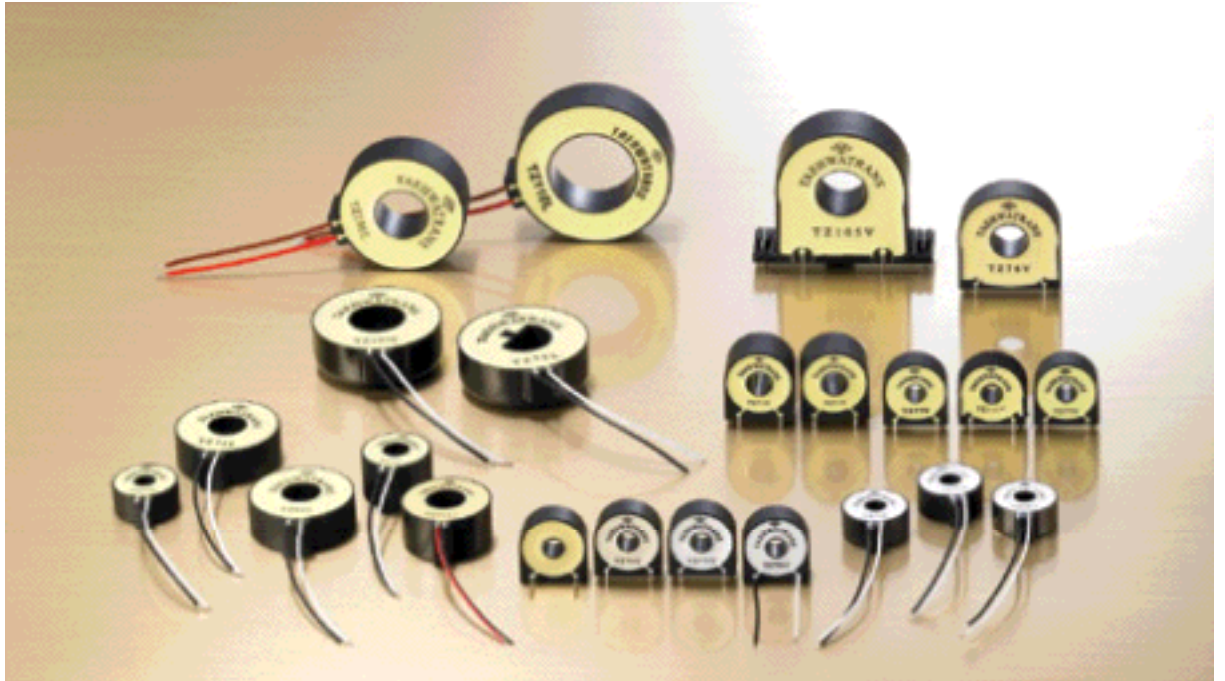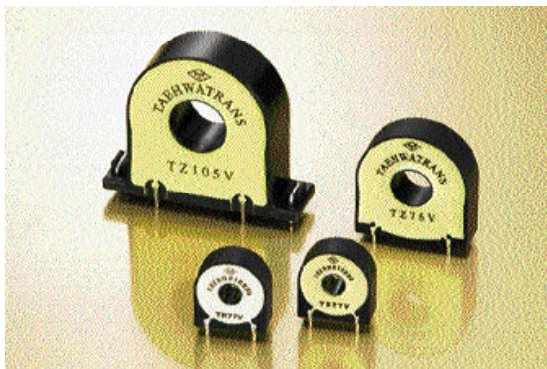# Supreme Accuracy Current Transformer

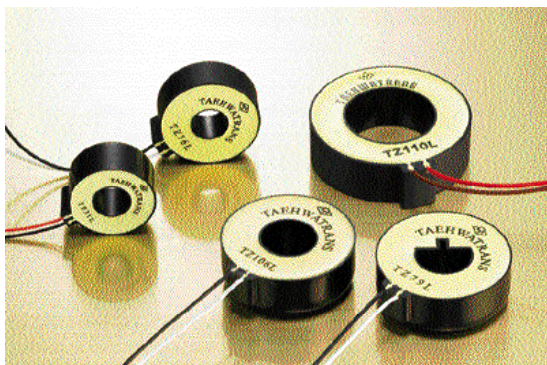## Super Accuracy for 0.1/0.2 Class Meter Grade

Standard Accuracy : Class 0.1

Application

- 0.2 class meters in HVCT & MVCT for power station, sub-station and industrial complex
- 0.2 class power meters
- Super accuracy power sensor & instruments

Features

- Meeting international standard conforming to IEC62053-22 & ANSI C12.20
- Far exceeding the linearity within 0.1% through the whole range
- Excellent stability in the lowest miniature current level
- Perfect immunity to external magnetic influence
- Close to zero tolerance on the temperature changes
- High potential voltage of 2.5KV-4.0KV/min
- RoHS compliant

TAEHWATRANS

Model & Specification

Standard Accuracy : Class 0.1   (f=50Hz, Rb=1 , PF=1.0 unit : percent / minute)

Model No	Current Ratio	Im	DCR (± 6%)	Rn 0.25A	Pn 0.25A	Rn 5A	Pn 5A	Rnv 0.25-5A	Pnv 0.25-5A	Phase Shift at 1V
TS77V TS77L	2500 : 1	118A	128	± 0.05%	10´	± 0.05%	8.5´	0.02%	2´	2.52´
TS73V TS73L	1500 : 1	117A	46	± 0.05%	7´	± 0.05%	6´	0.01%	1.5´	3.50´
TZ76V TZ76L	2500 : 1	350A	51	± 0.10%	3.5´	± 0.10%	2.5´	0.01%	1´	1.10´
TZ105V TZ105L	2000 : 1	255A	26	± 0.10%	7´	± 0.10%	6´	0.01%	2´	1.17´
TZ79L	2500 : 1	460A	33	± 0.06%	5´	± 0.06%	4.5´	0.02%	2.5´	0.66´
TZ106V TZ106L	2500 : 1	460A	33	± 0.06%	5´	± 0.06%	4.5´	0.02%	2.5´	0.66´

Standard Accuracy : Class 0.1 / 0.2   (f=50Hz, Rb=1 , PF=1.0 unit : percent / minute)

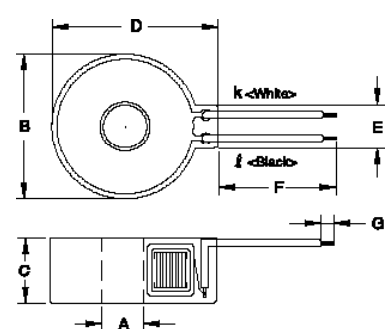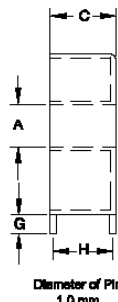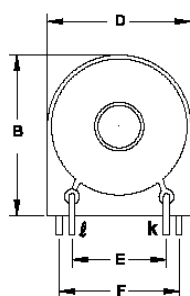| Model No	Current Ratio	Im	DCR (± 6%)	Rn 0.25A	Pn 0.25A	Rn 5A	Pn 5A	Rnv 0.25-5A	Pnv 0.25-5A	Phase Shift at 1V
TN77V TN77L	2500 : 1	120A	129	± 0.04%	48´	± 0.06%	47´	0.02%	3´	46´
TZ31L	5000 : 1	210A	400	± 0.10%	13´	± 0.10%	8.5´	0.08%	5.5´	1.98´
TZ87L	4000 : 1	312A	162	± 0.08%	9.5´	± 0.05%	4.5´	0.01%	5´	1.91´
TZ96L	5000 : 1	285A	251	± 0.05%	8´	± 0.06%	7´	0.01%	2´	2.16´
TZ110L	4000 : 1	390A	259	± 0.05%	6´	± 0.03%	5´	0.08%	2´	0.91´

TN77V/L shows close to zero harmonic loss and DC immune properties. But even though it has super linearity, it may have disadvantage at 0.5 PF due to high phase shift

Definition of Terms

Im : Max rated current DCR : DC Resistance of secondary winding Rn : Nominal ratio error at the mentioned primary current Pn : Nominal phase error at the mentioned primary current Rnv : Nominal variation of ratio error at the mentioned primary current range Pnv : Nominal variation of phase error at the mentioned primary current range

Remark : The data of maximum current, ratio and phase error on 60Hz testing would be around 20% better than that of above 50Hz
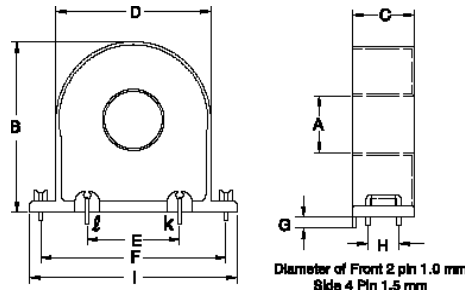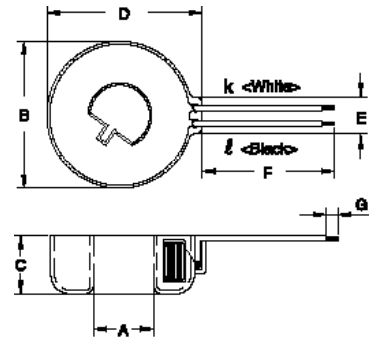
Drawing

PCB Mountable Type

Wire Lead Type

Supreme Accuracy Current Transformer

TZ105V / TZ106V

TZ79L / TZ96L
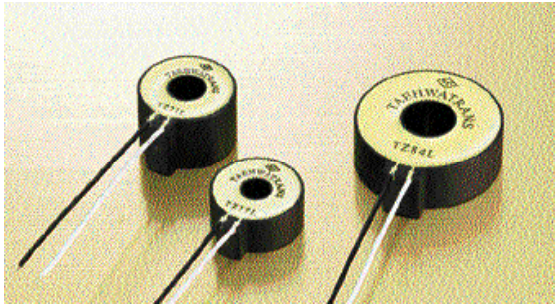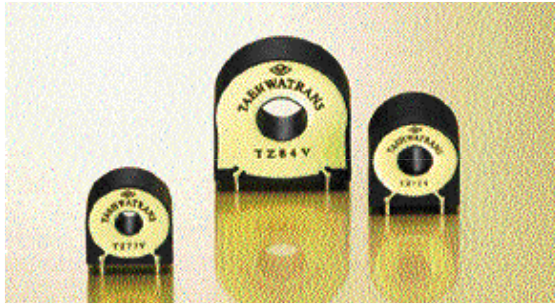
Dimension

PCB Mountable type
(unit : mm/inch)

Model No	A(min)	B(max)	C(max)	D(max)	E(± 0.3)	F(± 0.3)	G(± 0.5)	H(± 0.3)	I
TS77V TS73V TN77V	6.8 0.268	25.0 0.984	11.0 0.433	23.5 0.925	15.1 0.594	19.1 0.752	3.0 0.118	9.1 0.358	
TZ76V	12.9 0.508	39.9 1.547	14.0 0.551	38.0 1.496	25.2 0.992	32.8 1.291	3.0 0.118	12.1 0.476	
TZ105V TZ106V	18.6 0.732	55.5 2.185	20.3 0.799	50.5 1.988	30.0 1.181	60.0 2.362	4.0 0.157	10.0 0.394	67.6 2.661

Wire lead type
(unit : mm/inch)

Model No	A(min)	B(max)	C(max)	D(max)	E(max)	F(± 3.0)	G(± 1.0)
TS77L TS73L TN77L	6.9 0.272	23.6 0.930	11.0 0.433	26.8 1.055	7.1 0.280	71.0 2.795	3.0 0.118
TZ76L TZ87L	12.9 0.508	37.5 1.476	14.0 0.551	41.3 1.626	10.3 0.406	68.0 2.677	3.0 0.118
TZ31L	13.0 0.512	31.5 1.240	16.5 0.650	35.7 1.406	6.4 0.252	74.0 2.913	5.0 0.197
TZ79L TZ96L	19.5 0.768	48.2 1.898	19.3 0.760	51.2 2.016	12.2 0.480	270.0 10.630	5.0 0.197
TZ105L TZ106L	19.6 0.772	47.8 1.882	19.2 0.756	52.0 2.047	12.2 0.480	270.0 10.630	5.0 0.197
TZ110L	32.3 1.272	59.6 2.346	18.0 0.709	63.2 2.488	13.2 0.520	763± 7.0 30.039	6± 2.0 0.236

Supreme Accuracy for 0.5 Class Meter Grade

Standard Accuracy : Class 0.2

Application

- 0.5 class meters in HVCT & MVCT for power
  sation, sub- station and industrial complex
- 0.5 Class power meters
- Super accuracy power sensor & instruments

Features

- Meeting international standard conforming to
  IEC62053-22 & ANSI C12.20
- Far exceeding the linearity within 0.1% through the
  whole range
- Excellent stability in the lowest miniature current level
- Perfect immunity to external magnetic influence
- Close to zero tolerance on the temperature changes
- High potential voltage of 2.5KV-4.0KV/min
- RoHS compliant

Model & Specification

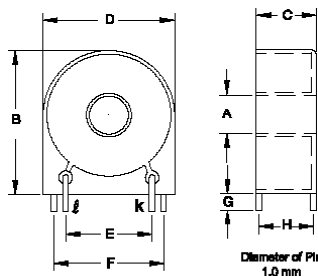Standard Accuracy : Class 0.2   (f=50Hz, Rb=1 , PF=1.0 unit : percent / minute)

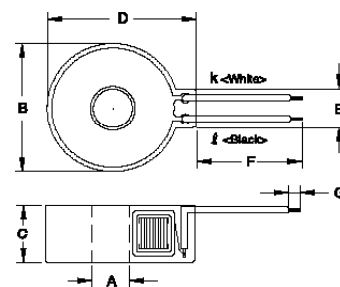| Model No	Current Ratio	Im	DCR (± 6%)	Rn 0.25A	Pn 0.25A	Rn 5A	Pn 5A	Rnv 0.25-5A	Pnv 0.25-5A	Phase Shift at 1V
TZ7 V TZ7 L	2500 : 1	8.2A	128	± 0.05%	12.5´	± 0.05%	9´	0.02%	6´	5.91´
TZ71L TZ71L	2500 : 1	10.2A	188	± 0.05%	9´	± 0.05%	7.5´	0.02%	3´	3.55´
TZ84V TZ84L	1000 : 1	15.0A	19	± 0.25%	9´	± 0.25%	7´	0.03%	5´	2.07´
TZ85V TZ85L	2000 : 1	28.8A	39	± 0.10%	7´	± 0.10%	6´	0.01%	1´	1.48´

Definition of Terms

Im : Max rated current DCR : DC Resistance of secondary winding Rn : Nominal ratio error at the mentioned primary current Pn : Nominal phase error at the mentioned primary current Rnv : Nominal variation of ratio error at the mentioned primary current range Pnv : Nominal variation of phase error at the mentioned primary current range

Remark : The data of maximum current, ratio and phase error on 60Hz testing would be around 20% better than that of above 50Hz

Drawing

PCB Mountable Type

Wire Lead Type

Suprema Accuracy Current Transformer

Dimension
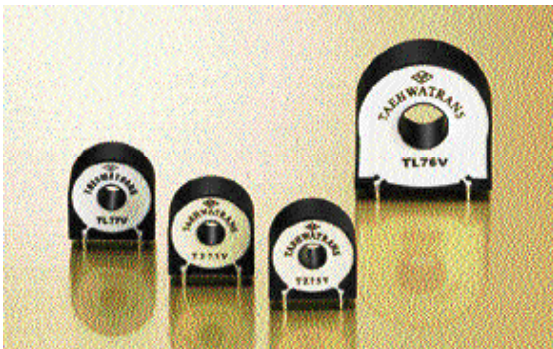
PCB Mountable type
(unit : mm/inch)

Model No.	A(min)	B(max)	C(max)	D(max)	E(±0.3)	F(±0.3)	G(±0.5)	H(±0.3)
TZ77V	6.8 0.268	25.0 0.984	11.0 0.433	23.5 0.925	15.1 0.594	19.1 0.752	3.0 0.118	9.1 0.358
TZ71V	8.9 0.350	27.5 1.083	17.0 0.670	25.3 0.996	15.1 0.594	19.1 0.752	3.0 0.118	15.1 0.594
TZ84V TZ85V	12.9 0.508	39.3 1.547	14.0 0.551	38.0 1.496	25.2 0.992	32.8 1.291	3.0 0.118	12.1 0.476

Wire lead type
(unit : mm/inch)

Model No.	A(min)	B(max)	C(max)	D(max)	E(max)	F(±3.0)	G(±1.0)
TZ77L	6.9 0.272	23.6 0.930	11.0 0.433	26.8 1.055	7.1 0.280	71.0 2.795	3.0 0.118
TZ71L	8.9 0.350	25.0 0.984	17.0 0.670	28.4 1.118	7.7 0.303	64.0 0.520	3.0 0.118
TZ84L TZ85L	12.9 0.508	37.5 1.476	14.0 0.551	41.3 1.626	10.3 0.406	68.0 2.677	3.0 0.118

Excellent Accuracy for 1.0 Class Meter Grade

Standard Accuracy : Class 0.5

Application

- 1.0class meters in MVCT & LVCT for industrial complex & commercial watt hour meters
- 1.0class power meters
- Good accuracy power sensor & instruments

Features

- Far exceeding the linearity within 0.2% through the whole range
- Good stability in the lowest miniature current level
- Perfect external magnetic immunity
- Close to zero tolerance on the temperature changes
- High potential voltage of 2.5KV-4.0KV/min
- RoHS compliant