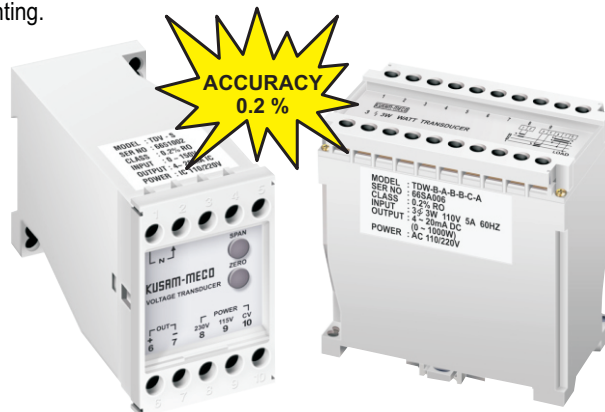


POWER TRANSDUCERS

"KUSAM-MECO" transducers are used for accurate measurement of electrical parameters, remote monitoring & automation, suitable for sinusoidal & true RMS inputs, with high accuracy (0.2%) separate AC or DC auxiliary supply or built in (self powered), suitable for single phase as well as 3 phase balanced or unbalanced load. Precision measurement even for distorted wave etc. The types of Transducer available are AC Current Transducer, AC Voltage Transducer, WATT or VAR Transducer, combined WATT & VAR Transducer, WATT HOUR or VAR HOUR Transducer, combined WATT & WATT HOUR or VAR & VAR HOUR Transducer & POWER FACTOR Transducers. All the transducers have high dielectric strength 2.6 KV AC / Min, between Input / Output / power case, high impulse & surge protection, ABS plastic case & DIN Rail or Wall mounting.

FEATURES :

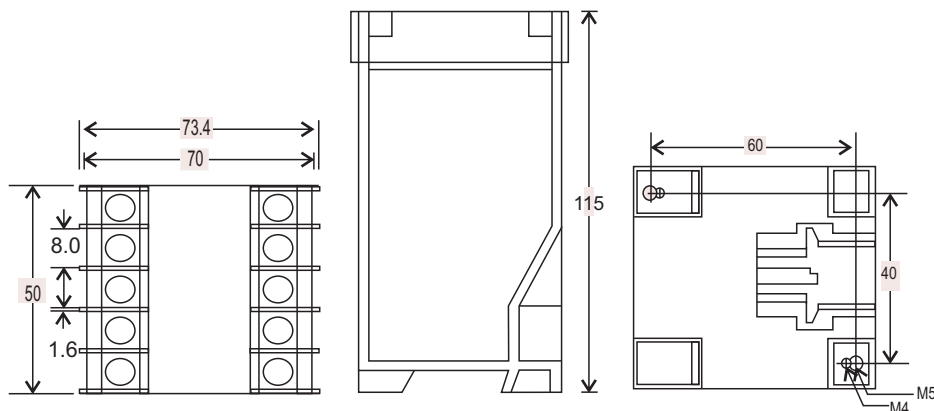
- Confirming to IEC-688.
- High Accuracy 0.2% RO at 23°C ± 5°C. On request 0.5% available.
- Aux. Power 110/220V AC; Self Powered / DC 240 / 110 / 125 / 85 ~ 265V available.
- High Dielectric Strength 2.6KVAC / Min, Between Input / Output / Power Case
- ABS Plastic Self - Extinguishing Case, DIN Rail or Wall Mounting
- High Impulse withstand voltage

**GENERAL SPECIFICATION FOR ALL TRANSDUCERS**

Accuracy	"D" Series 0.2% RO at 23°C ± 5°C (Self-Power Mode 0.25% RO at 23°C ± 5°C) "S" Series 0.5% RO at 23°C ± 5°C (Self-Power Mode 0.6% RO at 23°C ± 5°C)
Input Burden	0.3VA / 50Hz, Self-Power Mode 3VA / 50Hz for AC Current Transducer & 0.1VA / 50Hz at 150V AC; Self Power Mode 2VA at 150V AC for Other Types Of Transducers.
Frequency	45 ~ 70Hz.
Output Load	DC Current Mode : 10V DC Maximum, DC Voltage Mode : 10mA DC Maximum.
Output Protection	Without Damage for Output Open or Short Circuit.
Dielectric Strength	2.6KV AC / 1 Min, between Input / Power / Case.
Impulse	5KV (1.2X50 S), ANSI C37. 90a / 1983. DIN, IEC 255 - 4, IEC 688-1992 2.5KV - 0.25mS / 1MHz IEC 801-3 (Ring WAVE).
Common Mode Rejection	> 120db, 50 / 60Hz.
Stability	< 0.2% / Year.
Calibration	SPAN and ZERO ± 10%.
Response Time & Ripple(p-p)	400mS. 0 ~ 99%; 0.5% P-P (STD)
Magnetic Effect	DIN - IEE 688 0.005% Change 10" Center 100A- Turn.
Temperature Coefficient	100ppm / °C from 0 ~ 60°C; 50ppm / 23°C ± 3°C
Operating Condition	-10°C ~ + 65°C, 20 ~ 95% RH Non - Condensed.
Storage Condition	-40°C ~ + 75°C, 20 ~ 95% RH Non - Condensed.
Power Supply	AC or DC ±20%, 50 / 60Hz 1 3VA / AC : 3 3VA / AC.
Aux. Power Effect	< 0.01% / V.
Housing Material	ABS Plastic, Self-Extinguishing to UL Subject 94 Class V-O. Case IP 50 Snap Mounting on DIN EN 50022-35 or Surface Mounting. Compliance with IEC 529, BS 5490, Din 40054. Protection Touch-Proof Terminals and Enclosure Meeting Requirements of VBG 4 & VDE 0106 oart 100(Germany).
Mounting	DIN Rail or Wall Mounting.
Size	1 [50W X 115H X 73.4L mm]; 3 [120W X 115H X 73.4L mm]. For Voltage & Current Transducers And [120W X 115H X 73.4L mm] for other types of Transducers
*Self-Power Mode	Effective Range 5 ~ 150%, Output 0~XmA DC for AC Current Transducer Effective Range 85 ~ 150V, Power Source from V1 Voltage for others , Self-Power Mode not available in Frequency Transducer.

FOR MORE DETAILS PLEASE CONTACT :**Note: All Specification are Subject to change without prior notice.**

Outline Dimension : (Unit : mm)

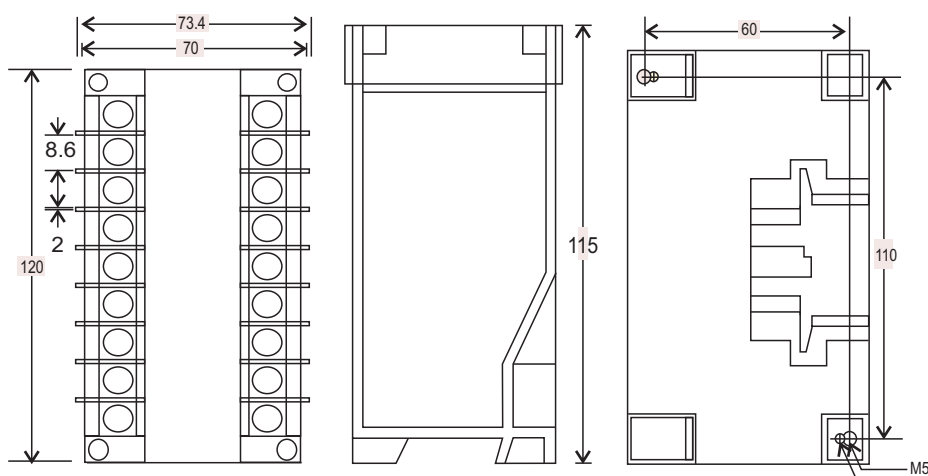


- 1 AC Voltage Transducer

Model - TDV, TSV

- 1 AC Current Transducer

Model - TDA, TSA



FOR MODELS :

- 3 AC Voltage Transducer with 2 & 3 outputs

Model- TDV, TDV3, TSV, TSV3

- 3 AC Current Transducer with 2 & 3 outputs

Model- TDA, TDA3, TSA, TSA3

- Watt or Var Transducer

Model- TDW, TDQ2, TSW, TSQ2

- Watt / Var Transducer

Model- TDWQ, TDWQ2, TSWQ, TSWQ2

- Watthour or Varhour Transducer

Model- TDWH, TDQH2, TSWH, TSQH2

- Watt / Watthour or Var / Varhour Transducer

Model- TDWWH, TDQQH2, TSWWH, TSQQH2

- Power Factor Transducer

Model- TDPF, TSPF

- Power Frequency Transducer

Model- TDF, TSF

- Multifunction Power Transducer

Model- TRMT

FOR MORE DETAILS PLEASE CONTACT :

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Email : kusam_meco@vsnl.net,

Website : www.kusamelectrical.com

AC VOLTAGE TRANSDUCER MODEL - TDV, TSV

SPECIFICATIONS :

- Input Range** : Normal Voltage 110V, Effective 50 ~ 150V AC.
- Input Over** : Normal AC 110V, Voltage Over 500V Continuous.
Self Power Mode 150V AC Maximum.

Also Available : ● AC Voltage Transducer with Single Input Dual Isolated Output.
● AC Voltage Transducer with Single Input Three Isolated Output.



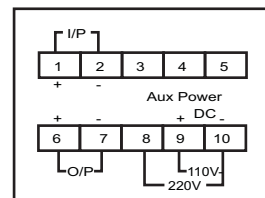
MODELS : CLASS

0.2%	0.5%	
TDV	TSV	— ☐ — ☐ — ☐ 1 Phase avg. to rms conversion
TDV3	TSV3	— ☐ — ☐ — ☐ 3 Phase avg. to rms conversion
TDVR	TSVR	— ☐ — ☐ — ☐ 1 Phase True RMS conversion
TDVR3	TSVR3	— ☐ — ☐ — ☐ 3 Phase True RMS conversion

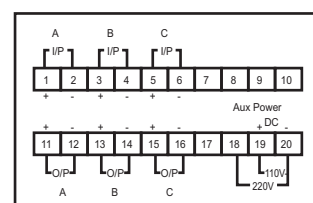
Input Voltage		Output		Aux. Power	
A	0 ~ 150V AC	A	0 ~ 10mA DC	A	AC 110/220V
B	0 ~ 300V AC	B	0 ~ 20mA DC		(Dual Power)
C	0 ~ 600V AC	C	4 ~ 20mA DC	C	DC 24V
		D	0 ~ 5V DC	D	DC 110V
		E	1 ~ 5V DC	E	DC 125V
Y	Other	F	0 ~ 10V DC	N	* Self-Power Mode
		Y	Other	Y	Other

TERMINAL CONNECTION :

**Model : TDV, TDVR
TSV, TSVR**



**Model : TDV3, TDVR3
TSV3, TSVR3**



AC CURRENT TRANSDUCER MODEL - TDA, TSA

SPECIFICATIONS :

- Input Over** : Normal AC 5A, Current Over 15A Continuous;
50A 10 Sec/Hour; 400A 0.5 Sec/Hour.

Also Available : ● AC Current Transducer with Single Input Dual Isolated Output.
● AC Current Transducer with Single Input Three Isolated Output.



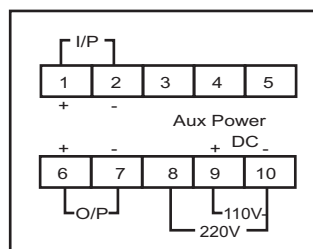
MODELS : CLASS

0.2%	0.5%	
TDA	TSA	— ☐ — ☐ — ☐ 1 Phase avg. to rms conversion
TDA3	TSA3	— ☐ — ☐ — ☐ 3 Phase avg. to rms conversion
TDAR	TSAR	— ☐ — ☐ — ☐ 1 Phase True RMS conversion
TDAR3	TSAR3	— ☐ — ☐ — ☐ 3 Phase True RMS conversion

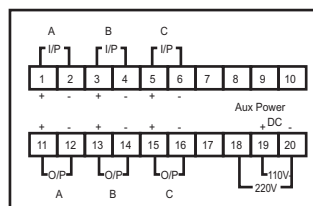
Input Current		Output		Aux. Power	
A	0 ~ 1AAC	A	0 ~ 10mA DC	A	AC 110/220V
B	0 ~ 5AAC	B	0 ~ 20mA DC		(Dual Power)
		C	4 ~ 20mA DC	C	DC 24V
		D	0 ~ 5V DC	D	DC 110V
		E	1 ~ 5V DC	E	DC 125V
		F	0 ~ 10V DC	N	* Self-Power Mode
Y	Other	Y	Other	Y	Other

TERMINAL CONNECTION :

**Model : TDA, TDAR
TSA, TSAR**



**Model : TDA3, TDAR3
TSA3, TSAR3**



FOR MORE DETAILS PLEASE CONTACT :

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Email : kusam_meco@vsnl.net, Website : www.kusamelectrical.com

WATT OR VAR TRANSDUCER

MODEL - TDW - WATT TRANSDUCER

TDQ - VAR TRANSDUCER

SPECIFICATIONS :

- Input Range : Normal Voltage 110V, Effective Range 50 ~ 150V AC.
Normal Voltage 220V, Effective Range 160 ~ 300V.
Normal Current 5A, Effective Range 0 ~ 7.5A
Normal Current 1A, Effective Range 0 ~ 1.5A
- Input Over : Normal AC 110V, Voltage Over 500V Continuous.
Self Power Mode 150V AC Maximum.
Normal AC 5A, Current Over 15A Continuous;
50A 10 Sec / Hour; 400A 0.5 Sec / Hour.
- Uni-Direction and Bi-Direction for Watt, Bi-direction for Var only.



Also Available : ● WATT or VAR Transducer with Single Input Dual Isolated Output.

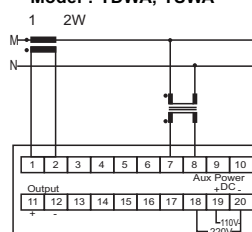
MODELS : CLASS

0.2%	0.5%	
TDW	TSW	— ☐ — ☐ — ☐ — ☐ — ☐ — ☐ Watt Uni-Direction*
TDW2	TSW2	— ☐ — ☐ — ☐ — ☐ — ☐ — ☐ Watt Bi-Direction*
TDQ2	TSQ2	— ☐ — ☐ — ☐ — ☐ — ☐ — ☐ Var Bi-Direction*

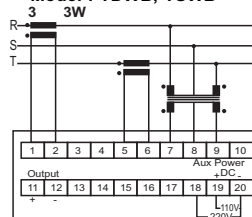
Circuit	I/P Voltage	I/P Current	Frequency	Output	Aux. Power
A 1 2 W	A 110V	A 1A	A 50Hz	A 0~10mA DC	A AC 110/220V (Dual Power)
B 3 3 W	B 220V	B 5A	B 60Hz	B 0~20mA DC	C DC 24V
C 3 4 W				C 4~20mA DC	D DC 110V
				D 0~5V DC	E DC 125V
				E 1~5V DC	N * Self-Power Mode
				F 0~10V DC	Y Other
Y Other	Y Other	Y Other	Y Other	Y Other	

TERMINAL CONNECTION :

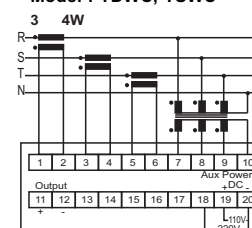
Model : TDWA, TSWA



Model : TDWB, TSWB



Model : TDWC, TSWC



WATT / VAR TRANSDUCER

MODEL - TDWQ, TSWQ - WATT / VAR TRANSDUCER

TDWQ2, TSWQ2 - WATT / VAR TRANSDUCER

SPECIFICATIONS :

- Input Range : Normal Voltage 110V, Effective Range 50 ~ 150V AC.
Normal Voltage 220V, Effective Range 160 ~ 300V.
Normal Current 5A, Effective Range 0 ~ 7.5A
Normal Current 1A, Effective Range 0 ~ 1.5A
- Input Over : Normal AC 110V, Voltage Over 500V Continuous.
Self Power Mode 150V AC Maximum.
Normal AC 5A, Current Over 15A Continuous;
50A 10 Sec / Hour; 400A 0.5 Sec / Hour.
- Uni-Direction and Bi-Direction for Watt, Bi-direction for Var only.



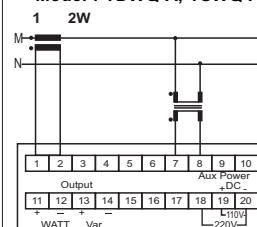
MODELS : CLASS

0.2%	0.5%	
TDWQ	TSWQ	— ☐ — ☐ — ☐ — ☐ — ☐ — ☐ Watt & Var Uni-Direction*
TDWQ2	TSWQ2	— ☐ — ☐ — ☐ — ☐ — ☐ — ☐ Watt & Var Bi-Direction*

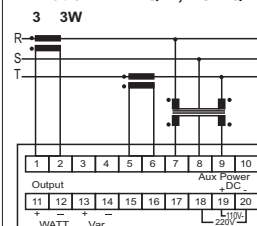
Circuit	I/P Voltage	I/P Current	Frequency	Output	Aux. Power
A 1 2 W	A 110V	A 1A	A 50Hz	A 0~10mA DC	A AC 110/220V (Dual Power)
B 3 3 W	B 220V	B 5A	B 60Hz	B 0~20mA DC	C DC 24V
C 3 4 W				C 4~20mA DC	D DC 110V
				D 0~5V DC	E DC 125V
				E 1~5V DC	N * Self-Power Mode
				F 0~10V DC	Y Other
Y Other	Y Other	Y Other	Y Other	Y Other	

TERMINAL CONNECTION :

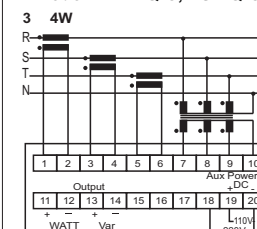
Model : TDWQ-A, TSWQ-A



Model : TDWQ-B, TSWQ-B



Model : TDWQ-C, TSWQ-C



FOR MORE DETAILS PLEASE CONTACT :

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POWER FACTOR TRANSDUCER MODEL - TDPF, TSPF

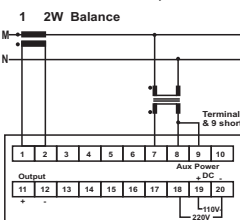
SPECIFICATIONS :

- Input Range : Normal Voltage 110V, Effective Range 50 ~ 150V AC.
Normal Voltage 220V, Effective Range 160 ~ 300V.
Normal Current 5A, Effective Range 0 ~ 7.5A
Normal Current 1A, Effective Range 0 ~ 1.5A
- Input Over : Normal AC 110V, Voltage Over 500V Continuous.
Self Power Mode 150V AC Maximum.
Normal AC 5A, Current Over 15A Continuous;
50A 10 Sec / Hour; 400A 0.5 Sec / Hour.
- Bi-Direction for Power Factor.
Example : O/P 4~20mA VS -0.5(C)~1~+0.5(L).

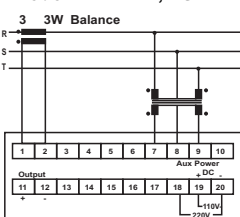


TERMINAL CONNECTION :

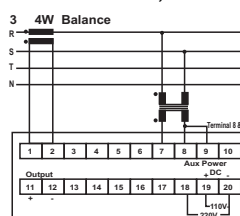
Model : TDPF-A, TSPF-A



Model : TDPF-B, TSPF-B



Model : TDPF-C, TSPF-C



MODELS : CLASS

0.2%			0.5%									
TDPF			TSPF			Power Factor Bi-Direction*						
Circuit			I/P Voltage		I/P Current		Frequency		Output		Aux. Power	
A	1	2 W	A	110V	A	1A	A	50Hz	A	0~10mA DC	A	AC 110/220V
B	3	3 W	B	220V	B	5A	B	60Hz	B	0~20mA DC	B	(Dual Power)
									C	4~20mA DC	C	DC 24V
									D	0~5V DC	D	DC 110V
C	3	4 W						E	1~5V DC	E	DC 125V	
								F	0~10V DC	N	* Self-Power Mode	
Y	Other	Y	Other	Y	Other			Y	Other	Y	Other	

POWER FREQUENCY TRANSDUCER MODEL - TDF, TSF

SPECIFICATIONS :

- Input Range : Normal Voltage 110V, Effective Range 50 ~ 300V AC.
- Input Over : Normal AC 110V, Voltage Over 600V Continuous.



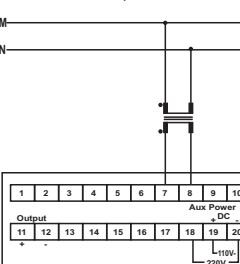
MODELS : CLASS

0.2%		0.5%					
TDF	TSF	—		—		—	
Input Frequency		Input Range		Output		Aux. Power	
A	50Hz	A	±1Hz	A	0~10mA DC	A	AC 110/220V
B	60Hz	B	±2Hz	B	0~20mA DC		(Dual Power)
		C	±3Hz	C	4~20mA DC	C	DC 24V
		D	±5Hz	D	0~5V DC	D	DC 110V
		E	±10Hz	E	1~5V DC	E	DC 125V
Y	Other	Y	Other	Y	Other	Y	Other

Y - Max. range upto 1000Hz.

TERMINAL CONNECTION :

Model : TDF, TSF



FOR MORE DETAILS PLEASE CONTACT :

Note: All Specification are Subject to change without prior notice.