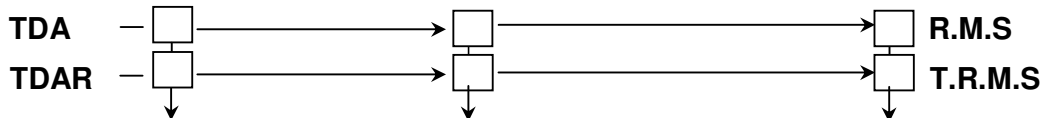


# AC&M AC Current Transducer

## Features:

- Dual Aux. Power 110/220V AC
- Accuracy  
TDA=0.2% RO at 23°C±5°C TDAR=0.5% RO at 23°C±5°C
- High Dielectric Strength  
2.6KV AC / Min, Between Input / Output / Power Case
- ABS Plastic Case, DIN Rail or Wall Mounting

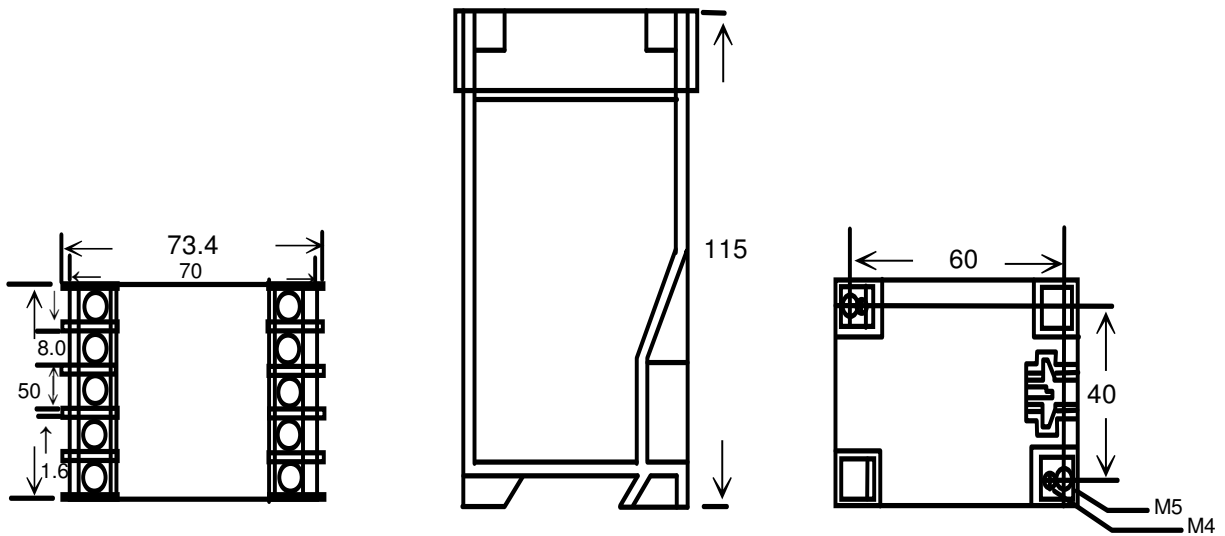


Input Current		Output Signal		Aux. Power	
A	AC 0~1A	A	DC 0~10mA	A	AC 110/220V
B	AC 0~5A	B	DC 0~20mA	B	AC 220V
C	AC 0~10A	C	DC 4~20mA	C	DC 22~72V
		D	DC 0~5V	F	AC/DC 85~265V
		E	DC 1~5V	N	Self-Power Mode
		F	DC 0~10V	Y	Other
Y	Other	Y	Other		

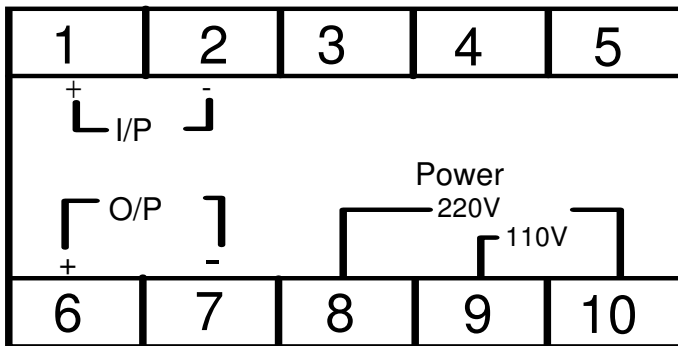
## SPECIFICATION

Accuracy	: TDA:0.2%RO at 23°C±5°C TDAR:0.5%RO at 23°C±5°C (Self-Power Mode 0.25%RO at 23°C±5°C).
Input Burden	: 0.3VA/60Hz, Self-Power Mode 3VA/60Hz.
Frequency	: 45 ~ 70Hz or 400Hz.
Input Over	: Normal AC 5A, Current Over 15A Continuous; 50A 10Sec/Hour; 400A 0.5Sec/Hour.
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 uS, 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) or Option.
Magnetic Effect	: DIN - IEC688 ≤ 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 part 100(Germany).
Mounting	: DIN Rail or Wall Mounting.
Size	: 1 § 50 <sup>W</sup> X 115 <sup>H</sup> X 73.4 <sup>L</sup> mm ; 3 § 120 <sup>W</sup> X 115 <sup>H</sup> X 73.4 <sup>L</sup> mm
*Self-Power Mode	: Effective Range 5~150%, Output 0~XmA DC.

Dimension (mm)



Connection Diagram Model :TDA,TDAR



工作電源為 DC Power 時, 9+ ; 10 -

**For DC Power ,9+; 10-**

# AC Current Transducer

## Features:

- Dual Aux. Power 110/220V AC
- High Accuracy  
0.2% RO at 23°C±5°C
- High Dielectric Strength  
2.6KV AC / Min, Between Input / Output / Power Case
- ABS Plastic Case, DIN Rail or Wall Mounting



Ordering : TDA —  —  —  1 Unit avg. to rms conversion  
 TDA3 —  —  —  3 Unit avg. to rms conversion  
 TDAR —  —  —  1 Unit True RMS conversion  
 TDAR3 —  —  —  3 Unit True RMS conversion

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

## STANDARD:

TDA-S INPUT: 0 ~ 5A AC, OUTPUT: 4 ~ 20mA DC, POWER: 110/220V AC

## SPECIFICATION

Accuracy	: 0.2%RO at 23°C±5°C (Self-Power Mode 0.25%RO at 23°C±5°C).
Input Burden	: 0.3VA/60Hz, Self-Power Mode 3VA/60Hz.
Frequency	: 45 ~ 70Hz or 400Hz.
Input Over	: Normal AC 5A, Current Over 15A Continuous; 50A 10Sec/Hour; 400A 0.5Sec/Hour.
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 uS, 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) or Option.
Magnetic Effect	: DIN - IEE688 ≤ 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 § 50 <sup>W</sup> X 115 <sup>H</sup> X 73.4 <sup>L</sup> mm ; 3 § 120 <sup>W</sup> X 115 <sup>H</sup> X 73.4 <sup>L</sup> mm
* Self-Power Mode	: Effective Range 5~150%, Output 0~XmA DC.

# Power Frequency Transducer

## Features:

- Dual Aux. Power 110/220V AC
- High Accuracy  
0.02% RO at 23°C±5°C
- High Dielectric Strength  
2.6KV AC / Min, Between Input / Output / Power Case
- ABS Plastic Case, DIN Rail or Wall Mounting



## Ordering : TDF

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

## SPECIFICATIONS

Accuracy	: 0.02%RO at 23°C±5°C of named frequency.
Time Base	: Quatrz Oscillator Type.
Input Range	: Normal Voltage 110V, Effective Range 50~300V.
Input Burden	: 0.1VA / 60Hz.
Input Over	: Normal AC 110V, Voltage Over 600V Continuous.
Output Load	: DC Current Mode : 10V DC Maximum, DC Voltage Mode : 10mA 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 uS, 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) or Option.
Magnetic Effect	: DIN - IEE688 ≤ 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 ≤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	: 120 <sup>W</sup> X 115 <sup>H</sup> X 73.4 <sup>L</sup> mm

# Power Factor Transducer

## Features:

- Dual Aux. Power 110/220V AC
- High Accuracy  
0.2% RO at 23°C±5°C
- High Dielectric Strength  
2.6KV AC / Min, Between Input / Output / Power Case
- ABS Plastic Case, DIN Rail or Wall Mounting



Ordering : TDPF □ □ □ □ □ □ Power Factor Bi-Direction\*

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

**3  $\phi$  4W Voltage Line-Neutral.**

## SPECIFICATIONS

Accuracy	: 0.2%RO at 23°C±5°C (Self-Power Mode 0.25%RO at 23°C±5°C).
Input Range	: Normal Voltage 110V, Effective Range 85~150V. Normal Voltage 220v, Effective Range 160~300V. Normal Current 5A, Effective Range 0~7.5A. Normal Current 1A, Effective Range 0~1.5A.
Input Burden	: 0.1VA / 60Hz at 150V AC ; Self-Power Mode 2VA at 150V AC.
Frequency	: 45 ~ 70Hz.
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.
Output Load	: DC Current Mode : 10V DC Maximum, DC Voltage Mode : 10mA 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 uS, 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 $\pm$ 10%.
Response Time & Ripple(p-p)	: $\leq$ 400mS. 0 ~ 99%; 0.5% P-P(STD) or Option.
Magnetic Effect	: DIN - IEE688 $\leq$ 0.005% Change 10" Center 100A-Turn.
Temperature Coefficient	: $\leq$ 100ppm / °C From 0~60°C; $\leq$ 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 $\pm$ 20%, 50 / 60Hz $\leq$ 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	: 120 <sup>W</sup> X 115 <sup>H</sup> X 73.4 <sup>L</sup> mm

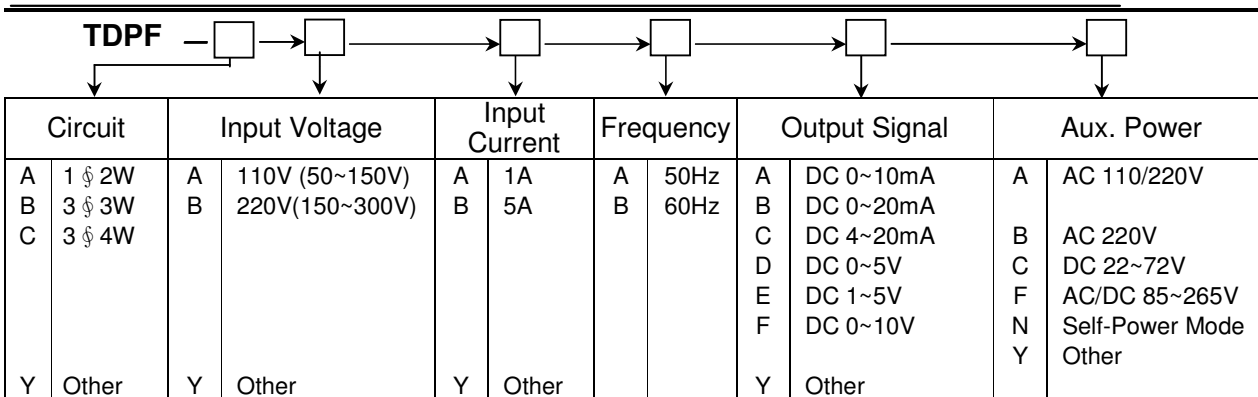
\* Bi-Direction for Power Factor. Example : O/P 4~20mA VS -0.5(C)~1~+0.5(L).

\* Self-Power Mode : Effective Range 85~150V AC, Power Source from V1 Voltage.

# AC&M Power Factor Transducer

## Features:

- Dual Aux. Power 110/220V AC
- High Accuracy  
0.2% RO at 23°C±5°C
- High Dielectric Strength  
2.6KV AC / Min, Between Input / Output / Power Case
- ABS Plastic Case, DIN Rail or Wall Mounting



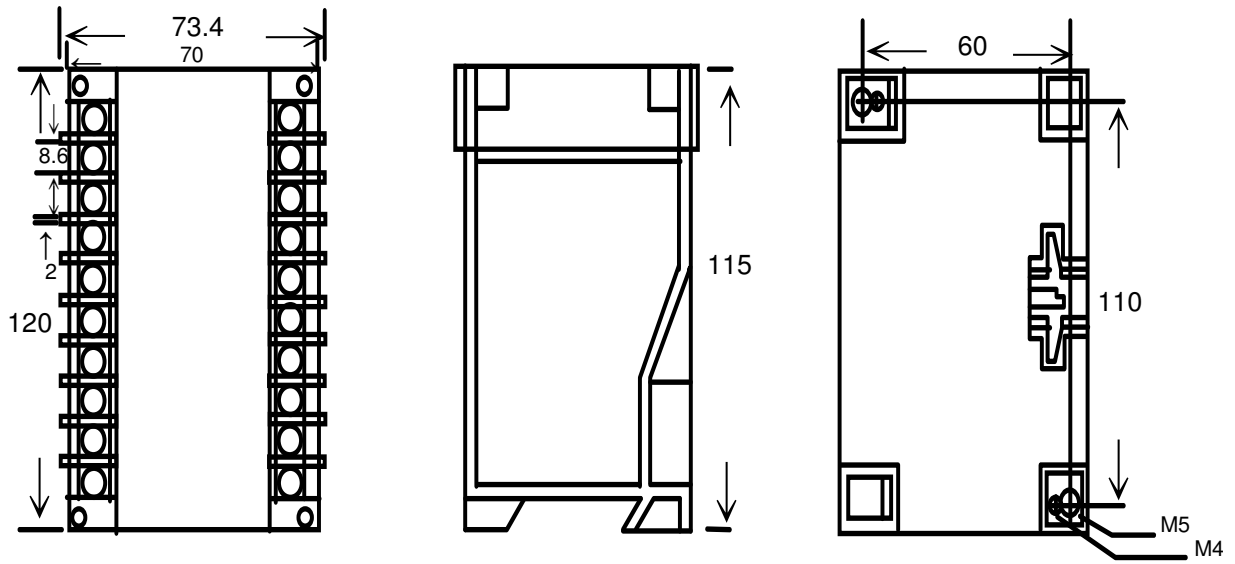
## SPECIFICATIONS

Accuracy	: 0.2%RO at 23°C±5°C (Self-Power Mode 0.25%RO at 23°C±5°C).
Input Range	: Normal Voltage 110V, Effective Range 85~150V. Normal Voltage 220V, Effective Range 160~300V. Normal Current 5A, Effective Range 0~7.5A. Normal Current 1A, Effective Range 0~1.5A.
Input Burden	: 0.1VA / 60Hz at 150V AC ; Self-Power Mode 2VA at 150V AC.
Frequency	: 45 ~ 70Hz.
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.
Output Load	: DC Current Mode : 10V DC Maximum, DC Voltage Mode : 10mA 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 uS, 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) or Option.
Magnetic Effect	: DIN - IEE688 ≤ 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 ≤ 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	: 120 <sup>W</sup> X 115 <sup>H</sup> X 73.4 <sup>L</sup> mm

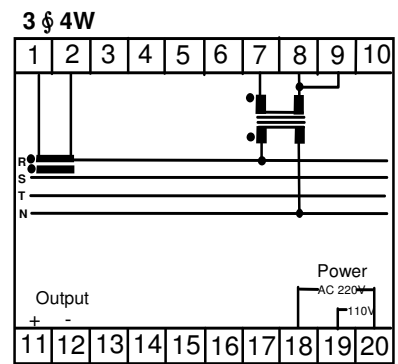
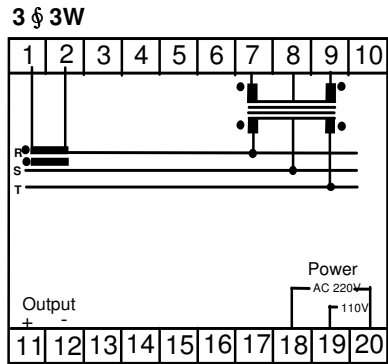
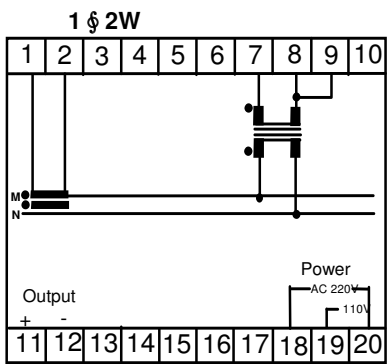
\*Bi-Direction for Power Factor. Example : O/P 4~20mA VS -0.5(C)~1~+0.5(L).

\*Self-Power Mode : Effective Range 85~150V AC, Power Source from V1 Voltage.

Dimension (mm)



Connection Diagram Model :TDPF



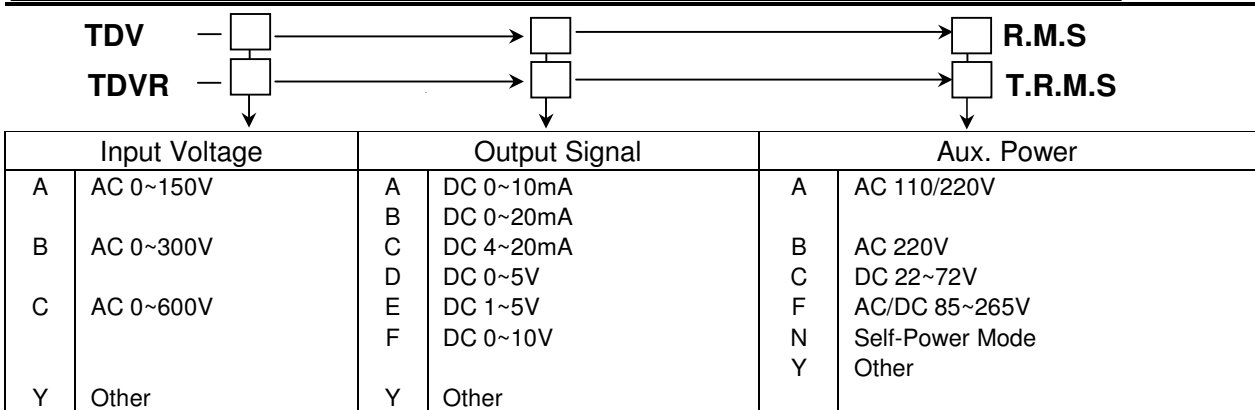
工作電源為 DC Power 時 ,19 + ; 20 -

**For DC Power ,19+; 20-**

# AC&M AC Voltage Transducer

## Features:

- Dual Aux. Power 110/220V AC
- Accuracy  
TDV=0.2% RO at 23°C±5°C TDVR=0.5% RO at 23°C±5°C
- High Dielectric Strength  
2.6KV AC / Min, Between Input / Output / Power Case
- ABS Plastic Case, DIN Rail or Wall Mounting

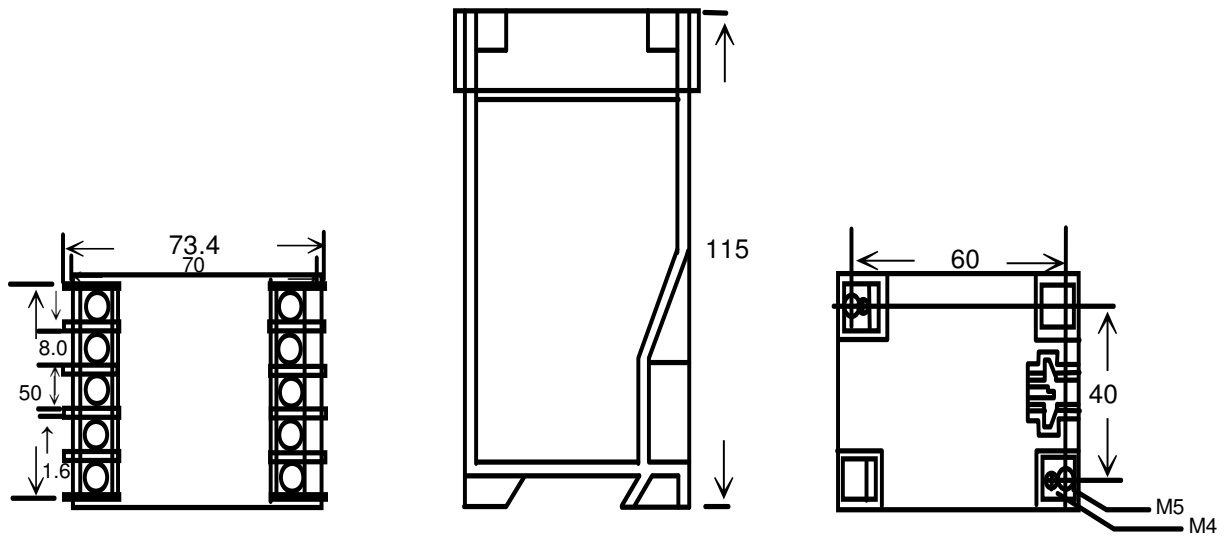


## SPECIFICATIONS

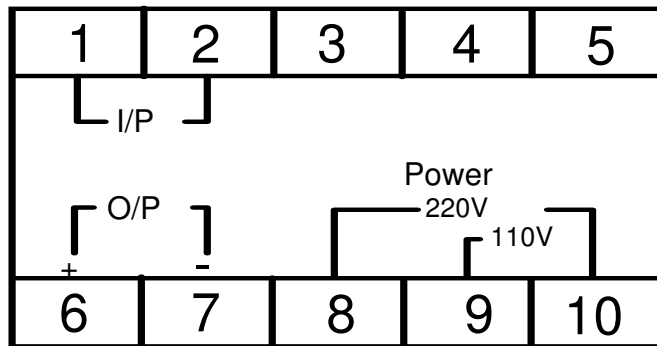
Accuracy	: TDV=0.2%RO at 23°C±5°C TDVR=0.5%RO at 23°C±5°C (Self-Power Mode 0.25%RO at 23°C±5°C).
Input Range	: Normal Voltage 110V Effective 50 ~ 150V.
Input Burden	: 0.1VA / 60Hz at 150V AC ; Self-Power Mode 2VA at 150V AC.
Input Over	: Normal AC 110V, Voltage Over 500V Continuous. : Self-Power Mode 150V AC Maximum.
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 uS, 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) or Option.
Magnetic Effect	: DIN - IEE688 ≤ 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 part 100(Germany).
Mounting	: DIN Rail or Wall Mounting.
Size	: 1 § 50 <sup>W</sup> X 115 <sup>H</sup> X 73.4 <sup>L</sup> mm ; 3 § 120 <sup>W</sup> X 115 <sup>H</sup> X 73.4 <sup>L</sup> mm
*Self-Power Mode	: Effective Range 85~150V, Power Source From V, Voltage.



Dimension (mm)



Connection Diagram 型號 :TDV,TDVR



工作電源為 DC Power 時, 9 + ; 10 -

For DC Power ,9+; 10-

# AC Voltage Transducer

## Features:

- Dual Aux. Power 110/220V AC
- High Accuracy  
0.2% RO at 23°C±5°C
- High Dielectric Strength  
2.6KV AC / Min, Between Input / Output / Power Case
- ABS Plastic Case, DIN Rail or Wall Mounting



Ordering : TDV —  —  —  1 Unit avg. to rms conversion  
 TDV3 —  —  —  3 Unit avg. to rms conversion  
 TDVR —  —  —  1 Unit True RMS conversion  
 TDVR3 —  —  —  3 Unit True RMS conversion

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

## STANDARD:

TDV-S INPUT: 0 ~ 150V AC, OUTPUT: 4 ~ 20mA DC, POWER: 110/220V AC

## SPECIFICATIONS

Accuracy	: 0.2%RO at 23°C±5°C (Self-Power Mode 0.25%RO at 23°C±5°C).
Input Range	: Normal Voltage 110V Effective 50 ~ 150V.
Input Burden	: 0.1VA / 60Hz at 150V AC ; Self-Power Mode 2VA at 150V AC.
Input Over	: Normal AC 110V, Voltage Over 500V Continuous. : Self-Power Mode 150V AC Maximum.
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 uS, 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) or Option.
Magnetic Effect	: DIN - IEE688 ≤ 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 § 50 <sup>W</sup> X 115 <sup>H</sup> X 73.4 <sup>L</sup> mm ; 3 § 120 <sup>W</sup> X 115 <sup>H</sup> X 73.4 <sup>L</sup> mm

\* Self-Power Mode : Effective Range 85~150V, Power Source From V, Voltage.

# Watt or Var Transducer

## Features:

- Dual Aux. Power 110/220V AC
- High Accuracy  
0.2% RO at 23°C±5°C
- High Dielectric Strength  
2.6KV AC / Min, Between Input / Output / Power Case
- ABS Plastic Case, DIN Rail or Wall Mounting



Ordering : TDW          Watt Uni-Direction\*

TDW2          Watt Bi-Direction\*

TDQ2          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
Y Other	Y Other	Y Other		D 0 ~ 5 V DC	E DC 125V
				E 1 ~ 5 V DC	N * Self-Power Mode
				F 0 ~ 10V DC	Y Other
				Y Other	

### 3 § 4W Voltage Line-Neutral.

## SPECIFICATIONS

Accuracy	: 0.2%RO at 23°C±5°C (Self-Power Mode 0.25%RO at 23°C±5°C).
Input Range	: Normal Voltage 110V, Effective Range 50~150V. Normal Voltage 220v, Effective Range 160~300V. Normal Current 5A, Effective Range 0~7.5A. Normal Current 1A, Effective Range 0~1.5A.
Input Burden	: 0.1VA / 60Hz at 150V AC ; Self-Power Mode 2VA at 150V AC.
Frequency	: 45 ~ 70Hz.
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.
Output Load	: DC Current Mode : 10V DC Maximum, DC Voltage Mode : 10mA 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 uS, 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) or Option.
Magnetic Effect	: DIN - IEE688 ≤ 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 ≤ 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	: 120 <sup>W</sup> X 115 <sup>H</sup> X 73.4 <sup>L</sup> mm

\* Uni-Direction and Bi-Direction for Watt, Bi-Direction for Var only.

\* Self-Power Mode : Effective Range 85~150V AC, Power Source from V1 Voltage.

# Watthour or Varhour Transducer

## Features:

- Dual Aux. Power 110/220V AC
- High Accuracy  
0.2% RO at 23°C±5°C
- High Dielectric Strength  
2.6KV AC / Min, Between Input / Output / Power Case
- ABS Plastic Case, DIN Rail or Wall Mounting



Ordering : TDWH         Watthour Uni-Direction\*

TDWH2         Watthour Bi-Direction\*

TDQH2         Varhour Bi-Direction\*

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

3 § 4W Voltage Line-Neutral.

## SPECIFICATIONS

Accuracy	: 0.2%RO at 23°C±5°C (Self-Power Mode 0.25%RO at 23°C±5°C).
Input Range	: Normal Voltage 110V, Effective Range 50~150V. Normal Voltage 220v, Effective Range 160~300V. Normal Current 5A, Effective Range 0~7.5A. Normal Current 1A, Effective Range 0~1.5A.
Input Burden	: 0.1VA / 60Hz at 150V AC ; Self-Power Mode 2VA at 150V AC.
Frequency	: 45 ~ 70Hz.
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.
Output of WH & VarH	: Open Collect Type, Effective Range 5~30V DC, 5~100mA; Option Dry Contact.
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 uS, 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) or Option.
Magnetic Effect	: DIN - IEE688 ≤ 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 ≤ 3VA.
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	: 120 <sup>W</sup> X 115 <sup>H</sup> X 73.4 <sup>L</sup> mm

\* Uni-Direction and Bi-Direction for Watthour, Bi-Direction for Varhour only.

\* Self-Power Mode : Effective Range 85~150V AC, Power Source from V1 Voltage.

# Watt & Var Transducer

Features :

- Dual Aux. Power 110/220V AC
- High Accuracy  
0.2% RO at 23°C ± 5°C
- High Dielectric Strength  
2.6KV AC / Min, between Input / Output / Power / Case
- ABS Plastic Case, DIN Rail or Wall Mounting



Ordering : TDW         Watt Uni-Direction  
 TDW2         Watt Bi-Direction  
 TDQ2         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) DC 24V
B 3 § 3 W	B 220V	B 5A	B 60Hz	B 0 ~ 20mA DC	C DC 110V
C 3 § 4 W				C 4 ~ 20mA DC	D DC 125V
				D 0 ~ 5V DC	E Self-Power Mode
				E 1 ~ 5V DC	F Other
				F 0 ~ 10V DC	
	Y Other	Y Other		Y Other	

## SPECIFICATION

Accuracy	: 0.2%RD at 23°C ±5°C (Self-Power Mode 0.5%RO at 23°C ±5°C)
Input Range	: Normal Voltage 110V, Effective Range 85 ~ 150V. Normal Voltage 220V, Effective Range 160 ~ 300V AC. Normal Current 5A, Effective Range 0 ~ 7.5A. Normal Current 1A, Effective Range 0 ~ 1.5A.
Input Burden	: 0.1VA/60Hz at 150V AAC; Self-Power Mode 2VA at 150V AC.
Input Frequency	: 45 ~ 70Hz.
Input Over	: Normal AC 110V, Voltage Over 500V Continous. Self-Power Mode 150V AC Maximum. Normal AC 5A, Current Over 15A Continous; 50A 10Sec / Hour; 400A 0.5Sec / Hour.
Output Load	: DC Current Mode: 10VDC Maximum, DC Voltage Mode: 10mA Maximum.
Output Protection	: Without Damage for Output Open or Short Circuit.
Dielectric Strength	: 2.6KV AC / Min between Input / Power / Case.
Impulse	: 4KV 1.2x50 uS, ANSI C37.90a / 1983.DIN IEC 255 - 4.
Common Mode Rejection	: > 120db, 50 / 60Hz.
Stability	: < 0.2%/Year.
Calibration	: SPAN and ZERO ±10%.
Response Time	: < 400mS, 0 ~ 99%.
Ripple	: < 0.5%rms Max.
Magnetic Effect	: DIN - IEE688 < 0.05% Change 10" Center 100A - Turn.
Temperature Coefficient	: < 100ppm / °C From 0 ~ 60°C
Operating Condition	: -10°C ~ +55°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.
Aux. Power Effect	: < 0.01% / V.
Housing Material	: ABS Plastic, Self-Extinguishing to UL Subject 94 Class V - O.
Mounting	: DIN Rail or Wall Mounting.

\* Uni-Direction and Bi-Direction fir Watt, Bi-Direction for Var only.

\* Self-Power Mode : Effective Range 85~150V AC, Power Source from V1 Voltage.

# Watt / Var Transducer

Features :

- Dual Aux. Power 110/220V AC
- High Accuracy  
0.2% RO at 23°C ± 5°C
- High Dielectric Strength  
2.6KV AC / Min, between Input / Output / Power / Case
- ABS Plastic Case, DIN Rail or Wall Mounting



Ordering : TDWQ         Watt/Var Uni-Direction\*  
 TDWQ2         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) DC 24V
B	3 § 3 W	B	220V	B	5A	B	60Hz	B	0 ~ 20mA DC	C	DC 110V
C	3 § 4 W							C	4 ~ 20mA DC	D	DC 125V
								D	0 ~ 5V DC	E	Self-Power Mode
								E	1 ~ 5V DC		
								F	0 ~ 10V DC		
Y	Other	Y	Other	Y	Other			Y	Other		

## SPECIFICATION

Accuracy	: 0.2%RD at 23°C ± 5°C (Self-Power Mode 0.5%RO at 23°C ± 5°C)
Input Range	: Normal Voltage 110V, Effective Range 85 ~ 150V. Normal Voltage 220V, Effective Range 160 ~ 300V AC. Normal Current 5A, Effective Range 0 ~ 7.5A. Normal Current 1A, Effective Range 0 ~ 1.5A.
Input Burden	: 0.1VA/60Hz at 150V AAC; Self-Power Mode 2VA at 150V AC.
Input Frequency	: 45 ~ 70Hz.
Input Over	: Normal AC 110V, Voltage Over 500V Continuous. Self-Power Mode 150V AC Maximum. Normal AC 5A, Current Over 15A Continuous; 50A 10Sec / Hour; 400A 0.5Sec / Hour.
Output Load	: DC Current Mode: 10VDC Maximum, DC Voltage Mode: 10mA Maximum.
Output Protection	: Without Damage for Output Open or Short Circuit.
Dielectric Strength	: 2.6KV AC / Min between Input / Power / Case.
Impulse	: 4KV 1.2x50 uS, ANSI C37.90a / 1983.DIN IEC 255 - 4.
Common Mode Rejection	: > 120db, 50 / 60Hz.
Stability	: < 0.2%/Year.
Calibration	: SPAN and ZERO ±10%.
Response Time	: < 400mS, 0 ~ 99%.
Ripple	: < 0.5%rms Max.
Magnetic Effect	: DIN - IEE688 < 0.05% Change 10" Center 100A - Turn.
Temperature Coefficient	: < 100ppm / °C From 0 ~ 60°C
Operating Condition	: -10°C ~ +55°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.
Aux. Power Effect	: < 0.01% / V.
Housing Material	: ABS Plastic, Self-Extinguishing to UL Subject 94 Class V - O.
Mounting	: DIN Rail or Wall Mounting.

\* Uni-Direction and Bi-Direction fir Watt, Bi-Direction for Var only.

\* Self-Power Mode : Effective Range 85~150V AC, Power Source from V1 Voltage.

# Watt / Var Transducer

## Features:

- Dual Aux. Power 110/220V AC
- High Accuracy  
0.2% RO at 23°C±5°C
- High Dielectric Strength  
2.6KV AC / Min, Between Input / Output / Power Case
- ABS Plastic Case, DIN Rail or Wall Mounting



Ordering : TDWQ        Watt Uni-Direction\*  
 TDWQ2        Watt Bi-Direction\*

Circuit	I/P Voltage		I/P Current		Frequency		Output			Aux. Power			
	A	B	A	B	A	B	A	B	C	D	E		
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		C	4 ~ 20mA DC	D	DC 110V
D								D		D	0 ~ 5 V DC	E	DC 125V
E								E		E	1 ~ 5 V DC	N	*Self-Power Mode
F								F		F	0 ~ 10V DC	Y	Other
Y	Other			Y	Other			Y		Y	Other		

### 3 $\phi$ 4W Voltage Line-Neutral.

## SPECIFICATIONS

Accuracy	: 0.2%RO at 23°C±5°C (Self-Power Mode 0.25%RO at 23°C±5°C).
Input Range	: Normal Voltage 110V, Effective Range 50~150V. Normal Voltage 220v, Effective Range 160~300V. Normal Current 5A, Effective Range 0~7.5A. Normal Current 1A, Effective Range 0~1.5A.
Input Burden	: 0.1VA / 60Hz at 150V AC ; Self-Power Mode 2VA at 150V AC.
Frequency	: 45 ~ 70Hz.
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.
Output Load	: DC Current Mode : 10V DC Maximum, DC Voltage Mode : 10mA 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 uS, 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 $\pm$ 10%.
Response Time & Ripple(p-p)	: $\leq$ 400mS. 0 ~ 99%; 0.5% P-P(STD) or Option.
Magnetic Effect	: DIN - IEE688 $\leq$ 0.005% Change 10" Center 100A-Turn.
Temperature Coefficient	: $\leq$ 100ppm / °C From 0~60°C; $\leq$ 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 $\pm$ 20%, 50 / 60Hz $\leq$ 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 part 100(Germany).
Mounting	: DIN Rail or Wall Mounting.
Size	: 120 <sup>W</sup> X 115 <sup>H</sup> X 73.4 <sup>L</sup> mm

\* Uni-Direction and Bi-Direction for Watt ; Bi-Direction for Var only.

\* Self-Power Mode : Effective Range 85~150V AC, Power Source from V1 Voltage.



# Watt/Watthour or Var/Varhour Transducer

## Features:

- Dual Aux. Power 110/220V AC
- High Accuracy  
0.2% RO at 23°C±5°C
- High Dielectric Strength  
2.6KV AC / Min, Between Input / Output / Power Case
- ABS Plastic Case, DIN Rail or Wall Mounting



Ordering : TDWWH          Watt/Watthour Uni-Direction\*

TDWWH2          Watt/Watthour Bi-Direction\*

TDQQH2          Var/Varhour Bi-Direction\*

Circuit	I/P Voltage	I/P Current	Frequency	W(VAR)O/P	WH(VARH)O/P	Aux. Power
A	1 $\phi$ 2 W	A 110V	A 1A	A 50Hz	A WH / 1 Pulse QH / 1 Pulse	A AC 110/220V (Dual Power) DC 24V
B	3 $\phi$ 3 W	B 220V	B 5A	B 60Hz	B WH / 10 Pulse QH / 10 Pulse	C DC 110V
C	3 $\phi$ 4 W					D DC 125V
Y	Other	Y Other	Y Other	Y Other	Y Other	N * Self-Power Mode

3  $\phi$  4W Voltage Line-Neutral.

## SPECIFICATIONS

Accuracy	: 0.2%RO at 23°C±5°C (Self-Power Mode 0.25%RO at 23°C±5°C).
Input Range	: Normal Voltage 110V, Effective Range 85~150V. Normal Voltage 220V, Effective Range 160~300V. Normal Current 5A, Effective Range 0~7.5A. Normal Current 1A, Effective Range 0~1.5A.
Input Burden	: 0.1VA / 60Hz at 150V AC ; Self-Power Mode 2VA at 150V AC.
Frequency	: 45 ~ 70Hz.
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.
Output of WH & VarH	: Open Collect Type, Effective Range 5~30V DC, 5~100mA.
Output Protection	: Without Damage for Output Open or Short Circuit.
Dielectric Strength	: 2.6KV AC / Min between Input / Output / Power / Case.
Impulse	: 5KV AC 1.2X50us, ANSI C37.90a / 1983.DIN IEC 255 - 4, IEC 688 - 1992.
Common Mode Rejection	: $\geq 120$ bd, 50 / 60Hz.
Stability	: $\leq 0.2\%$ /Year.
Calibration	: SPAN and ZERO $\pm 10\%$ .
Response Time & Ripple	: $\leq 400$ mS, 0 ~ 99% & 0.5% rms Max.
Magnetic Effect	: DIN - IEE688 $\leq 0.005\%$ Change 10" Center 100A-Turn.
Temperature Coefficient	: $\leq 100$ ppm / °C From 0~60°C; $\leq 50$ ppm/23°C $\pm 3$ °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 $\pm 20\%$ , 50 / 60Hz $\leq 3$ VA.
Aux. Power Effect	: $\leq 0.01\%$ / V.
Housing material	: ABS Plastic, Self-Extinguishing to UL Subject 94 Class V-O.
Mounting	: DIN Rail or Wall Mounting.
Size	: 120 <sup>W</sup> X 115 <sup>H</sup> X 73.4 <sup>L</sup> mm

\* Uni-Direction and Bi-Direction for Watt/Watthour, Bi-Direction for Var/Varhour only.

\* Self-Power Mode : Effective Range 85~150V AC, Power Source from V1 Voltage.