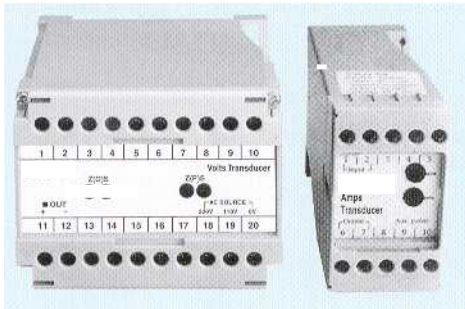


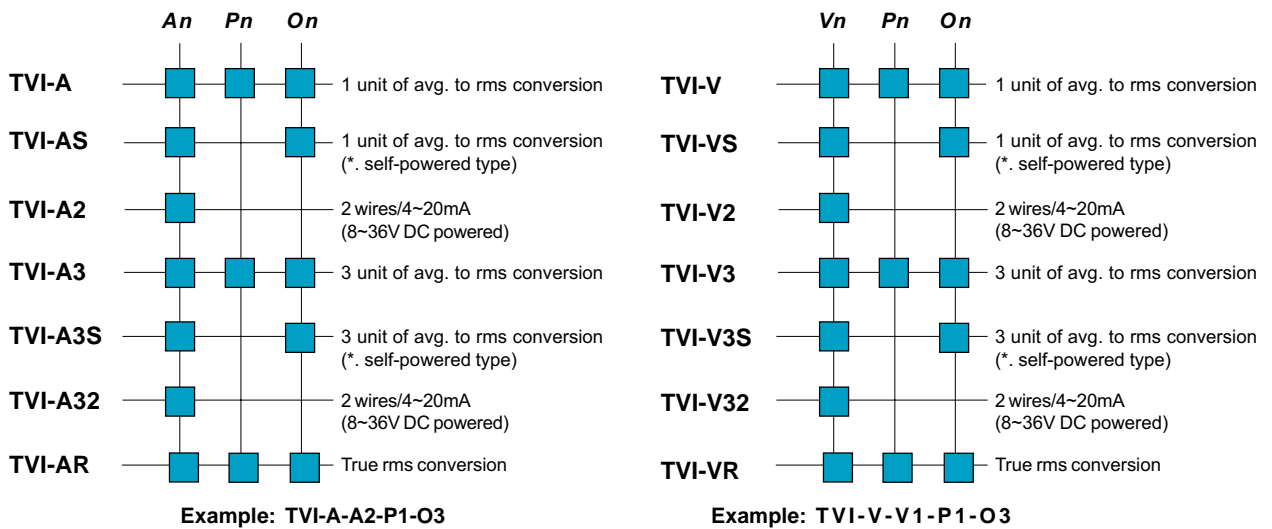
AC Current & Voltage Transducer



Features

- Measuring & Conversion DIN-IEC 688
- Dielectric Strength DIN-IEC 688
2 kVac 50/60Hz/1 minute
- Impulse test ANSI C37.90a/1974, IEEE 587/1983, IEC 255-4,
5KV (1.2x50µs)
- Surge test (ring wave) IEC 255-4 (2.5KV - 0.25ms/1 MHz)

Order Form



Input & Output Parameters

Vn: Voltage input	Vn rating range	V1	V2	V3	V4	V5	On: Output		
		150V AC 0~150V AC	300V AC 0~300V AC	500V AC 0~500V AC	110V AC 0~110V AC	440V AC 0~440V AC	O1 0~1mA	O2 0~20mA	O3 4~20mA
An: Current input	An rating range	A1 1A 0~1A	A2 5A 0~5A					O5 0~10mA	O6 0~1V
Pn: Auxiliary power input	Pn rating	P1 120V AC	P2 240V AC	P3 415V AC	P4 30V DC	P5 110V DC	O7 0~5V	O8 0~10V	O9 2~10V
							O10 1~5V		

Note: 1. For self-powered type zero based outputs only
2. TVI-AR & TVI-VR TRMS conversion with ability for a distortion wave form measurement

Specification

- Accuracy : 0.1% F.S. (TRMS) ($23 \pm 5^\circ\text{C}$)
0.2% F.S. (RMS) ($23 \pm 5^\circ\text{C}$)
- Temp. coefficient : 100ppm/ $^\circ\text{C}$ (0~50 $^\circ\text{C}$)
- Input burden : $\leq 0.2\text{VA}$ (voltage) $\leq 0.2\text{VA}$ (current)
- Maximum input over : Current related input: 3 x rated continuous 10 x rated 30 sec., 25 x rated 3 sec., 50 x rated 1 sec
Voltage related input: maximum 2 x rated continuous
- Response time : $\leq 250\text{ms}$ (0-90%)
- Output ripple (p-p) : $< 0.1\%$ F.S.
- Output drive capability : $\leq 10\text{mA}$ for voltage output mode
 $\leq 10\text{V}$ for current output mode
- Dielectric strength : 2kVAC/1 min. (input / output / aux. power / case)
- Surge test : ANSI C37.90a/1974, DIN-IEC 255-4 impulse voltage 5kV ($1.2 \times 50\mu\text{s}$)
- Operating condition : 0~55 $^\circ\text{C}$ (20 to 95% RH non-condensed)
- Storage condition : 0~70 $^\circ\text{C}$ (20 to 95% RH non-condensed)
- Power supply : AC 110V/220V $\pm 20\%$ (50/60Hz) $\leq 2\text{VA}$ (PA1), $\leq 3.5\text{VA}$ (PA3)
(Optional DC 48V or DC 110V $\pm 20\%$)
- Magnetic effect : $< 0.005\%$ change 1M center 100 ampere-turn, synchronized with line frequency
- Aux. power effect : $< 0.005\%$ per voltage change
- Impulse/surge test IEC255-4 : IEC 688, 5 kV, 1.2/50ms waveform, IEC 255-22-1, 2.5 kV (1MHz/400Hz)
- Housing : Flame proof, self-extinguishing grey polycarbonate.
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).

Insulation

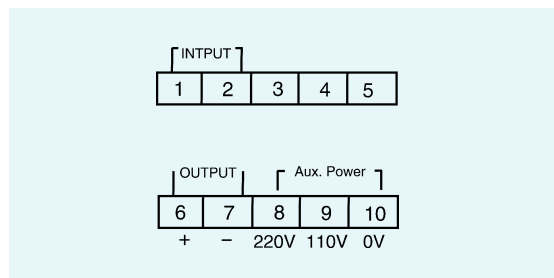
- Protection class : Class II complying with IEC 348 / BS 4735 / DIN 57411 / VDE 0411
- Test voltage : 4kV rms 50 Hz 1 min. between Input / Case / Auxiliary / Output

Applied Standards

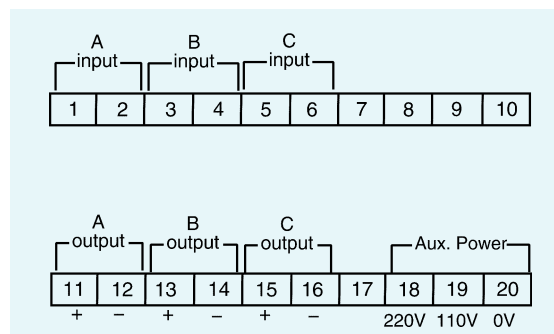
- General : IEC 688-1 / IEC 255-4 / BS 6253: Part 1
- Safety : IEC 348-1 / BS 4753 / DIN 57411 / VDE 0411 / ANSI C 37
- Surge withstand : IEC 801 / EN55020 / ANSI C37-90a
- Radio Screening : RFI degree N Complies with VDE 0875
- Adaptability for power system : EN 61010, IEC 0110-1

Terminal Connection

1 Unit

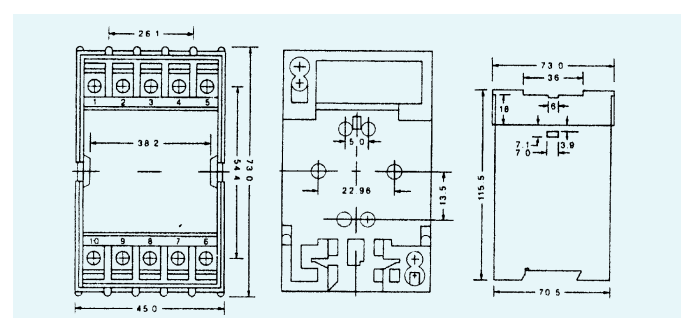


3 Units

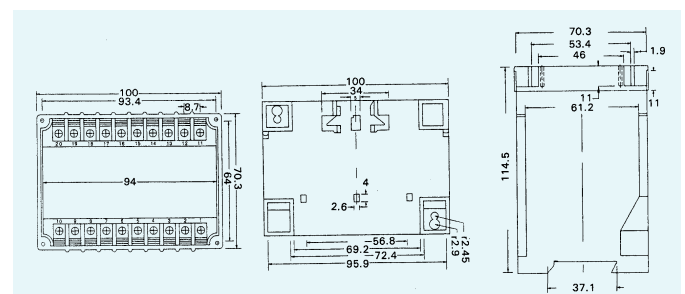


Dimension (unit: mm)

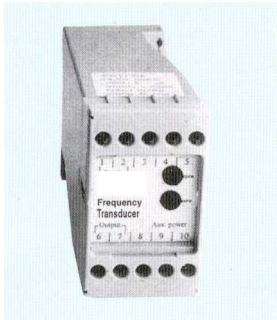
1 Unit



3 Units



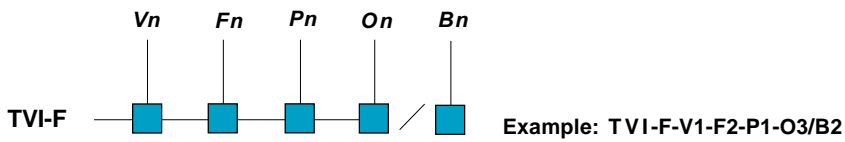
Frequency Transducer



Features

- Measuring & Conversion DIN-IEC 688
- Dielectric Strength DIN-IEC 688
2 kVAC 50/60Hz/1 minute
- Impulse test ANSI C37.90a/1974, IEEE 587/1983, IEC 255-4,
5kV (1.2x50µs)
- Surge test (ring wave) IEC 255-4 (2.5KV - 0.25ms/1 MHz)

Order Form



Input & Output Parameters

Vn: Voltage input	Vn range	V1 60~300V AC	V2 300~500V AC	On: Output		
				O1 0~1mA	O2 0~20mA	O3 4~20mA
Fn: Frequency	Fn rating	F1 50 Hz	F2 60 Hz		O5 0~10mA	O6 0~1V
Bn: Calibration band	Bn range	B1 ± 0.5 Hz	B2 ± 1 Hz	B3 ± 2 Hz	O7 0~5V	O8 0~10V
		B4 ± 5 Hz	B5 ± 10 Hz		O9 2~10V	O10 1~5V
Pn: Auxiliary power input	Pn rating	P1 120 V AC	P2 240 V AC	P3 415V AC	P4 30V DC	P5 110V DC

Note: For internal powered type zero based outputs and Vn operation range 85%~115%

Frequency Transducer

Specification

- Accuracy : 0.1% F.S. (23 ± 5°C)
- Temp. coefficient : 50ppm/°C (0-50°C)
- Input burden : ≤ 0.2VA
- Maximum input over : Maximum 2 x rated continuous
- Response time : ≤ 250ms (0-90%)
- Output ripple (p-p) : < 0.1% F.S.
- Output drive capability : ≤ 10mA for voltage mode
≤ 10V for current mode
- Dielectric strength : 2kVAC/1 min. (input / output / aux. power / case)
- Surge test : ANSI C37.90a/1974, DIN-IEC 255-4
impulse voltage 5kV (1.2 x 50µs)
- Operating condition : 0~55°C (20 to 95% RH non-condensed)
- Storage condition : 0~70°C (20 to 95% RH non-condensed)
- Power supply : AC 110V/220V ± 20% (50/60Hz) ≤ 2VA
- Magnetic effect : < 0.005% change 1M center 100 ampere-turn, synchronized with line frequency
- Aux. power effect : < 0.005% per voltage change
- Impulse/surge test IEC255-4 : IEC 688, 5 kV, 1.2/50ms waveform, IEC 255-22-1, 2.5 kV (1MHz/400Hz)
- Housing : Flame proof, self-extinguishing grey polycarbonate.
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).

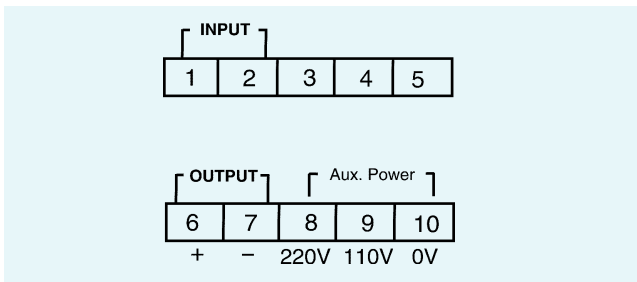
Insulation

- Protection class : Class II complying with IEC 348 / BS 4735 / DIN 57411 / VDE 0411
- Test voltage : 4kV rms 50 Hz 1 min. between Input / Case / Auxiliary / Output

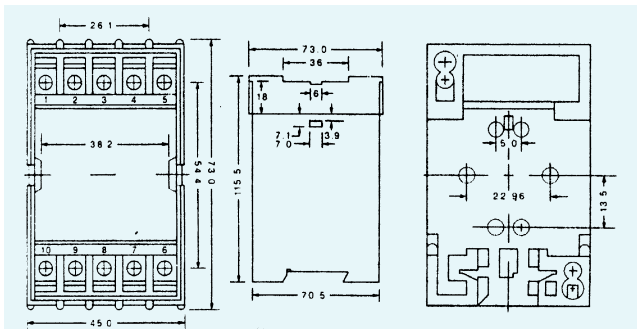
Applied Standards

- General : IEC 688-1 / IEC 255-4 / BS 6253: Part 1
- Safety : IEC 348-1 / BS 4753 / DIN 57411 / VDE 0411 / ANSI C37
- Surge withstand : IEC 801 / EN55020 / ANSI C37-90a
- Radio Screening : RFI degree N Complies with VDE 0875
- Adaptability for power system : EN 61010, IEC 0110-1

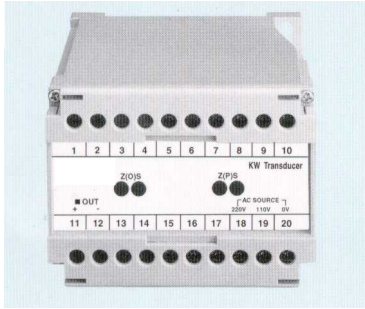
Terminal Connection



Dimension (unit: mm)



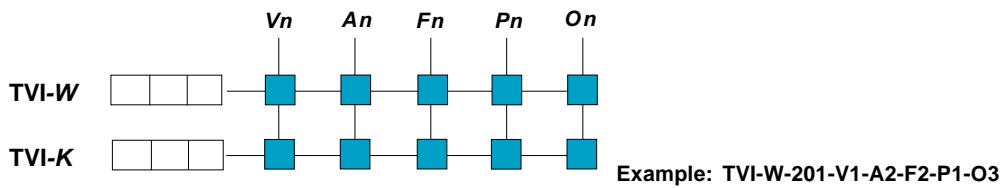
Watt & Var Transducer



Features

- Measuring & Conversion DIN-IEC 688
- Dielectric Strength DIN-IEC 688
2 kVAC 50/60Hz/1 minute
- Impulse test ANSI C37.90a/1974, IEEE 587/1983, IEC 255-4,
5KV (1.2x50µs)
- Surge test (ring wave) IEC 255-4 (2.5KV - 0.25ms/1 MHz)

Order Form



Connection	Model	Standard Analog Calibration			Note: Voltage input: Phase voltage for 3 phase 4 wire (V_P) Line to line voltage for 3 phase 3 wire (V_L)
			1A	5A	
1 Phase 2 Wire	TVI-W-101 TVI-K-101	$V1 = 120V$ $V2 = 240V$ $V3 = 415V$	100 200 400	500 1K 1.5K	
3 Phase 3 Wire Balance	TVI-W-200 TVI-K-200	$V1 = V_L = 120V$ $V2 = V_L = 240V$ $V3 = V_L = 415V$	100 200 400	500 1K 1.5K	
3 Phase 3 Wire Unbalance	TVI-W-201 TVI-K-201	$V1 = V_L = 120V$ $V2 = V_L = 240V$ $V3 = V_L = 415V$	200 400 800	1K 2K 4K	
3 Phase 4 Wire Balance	TVI-W-300 TVI-K-300	$V1 = V_L = 120V$ $V2 = V_L = 240V$ $V3 = V_L = 415V$	100 200 400	500 1K 1.5K	
3 Phase 4 Wire Unbalance	TVI-W-301 TVI-K-301	$V0 = V_P = 69.3V$ $V1 = V_P = 120V$ $V2 = V_P = 240V$ $V3 = V_P = 415V$	200 300 600 1.2K	1K 1.5K 3K 6K	

Input & Output Parameters

Vn: Voltage input	Vn rating range	V0 69.3V AC 45~86V AC	V1 120V AC 85~150V AC	V2 240V AC 180~300V AC	V3 415V AC 300~500V AC	Own: Watt output Okn: Var output		
						O1 0~1mA	O2 0~20mA	O3 (uni.) 4~20mA
An: Current input	An rating range	A1 1A 0~1.2A	A2 5A 0~6A			O4 (bi.) 4~12~20mA	O5 0~10mA	O6 0~1V
Fn: Frequency input	Fn rating range	F1 50Hz 48~52Hz	F2 60Hz 58~62Hz			O7 0~5V	O8 0~10V	O9 2~10V
Pn: Auxiliary power input	Pn rating	P1 120V AC	P2 240V AC	P3 415V AC	P4 30V DC	P5 110V DC		
						O10 (uni.) 1~5V	O11 (bi.) 1~3~5V	

- Note:**
1. uni. = uni-direction = 0 to +span bi. = bi-direction = -span to 0 to +span
 Example: 4-20mA = 0 to +1000W 4-12-20mA = -1000W to 0 to +1000W
 2. For uni-directional transducers watts for forward power and vars for lagging power
 3. For internal powered type zero based outputs and Vn operation range 85% ~115%

Watt & Var Transducer

Specification

- Accuracy : 0.2% F.S. (23 ± 5°C)
- Temp. coefficient : 100ppm/°C (0~50°C)
- Input burden : ≤ 0.2VA (voltage)
≤ 0.2VA (current)
- Maximum input over : Current related input: 3 x rated continuous
10 x rated 30 sec, 25 x rated 3 sec, 50 x rated 1 sec
Voltage related input: maximum 2 x rated continuous
- Response time : ≤ 250ms (0-90%)
- Output ripple (p-p) : < 0.1% F.S.
- Output drive capability : ≤ 10mA for voltage output model
≤ 10V for current output model
- Dielectric strength : 2kVAC/1 min. (input / output / aux. power / case)
- Surge test : ANSI C37.90a/1974, DIN-IEC 255-4 impulse voltage 5KV (1.2 x 50µs)
- Operating condition : 0~55°C (20 to 95% RH non-condensed)
- Storage condition : 0~70°C (20 to 95% RH non-condensed)
- Power supply : AC 110V/220V ± 20% (50/60Hz) ≤ 3.5VA (Optional DC 48V or DC 110V ± 20%)
- Magnetic effect : < 0.005% change 1M center 100 ampere-turn, synchronized with line frequency
- Aux. power effect : < 0.005% per voltage change
- Impulse/surge test IEC255-4 : IEC 688, 5 kV, 1.2/50ms waveform, IEC 255-22-1, 2.5 kV (1MHz/400Hz)
- Housing : Flame proof, self-extinguishing grey polycarbonate.
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).

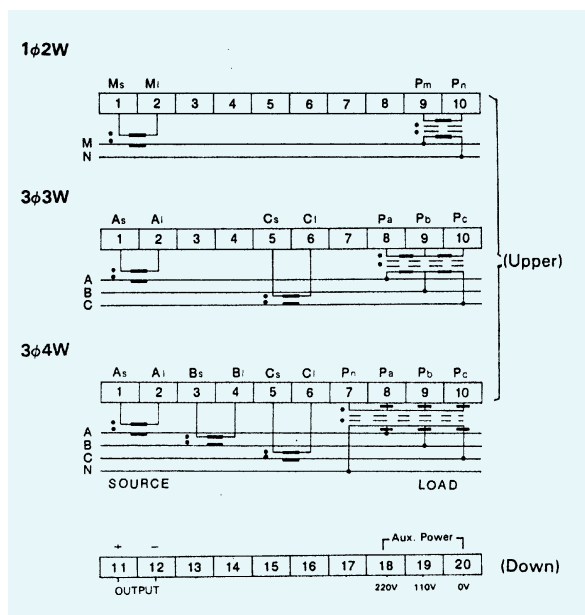
Insulation

- Protection class : Class II complying with IEC 348 / BS 4735 / DIN 57411 / VDE 0411
- Test voltage : 4kV rms 50 Hz 1 min. between Input / Case / Auxilliary / Output

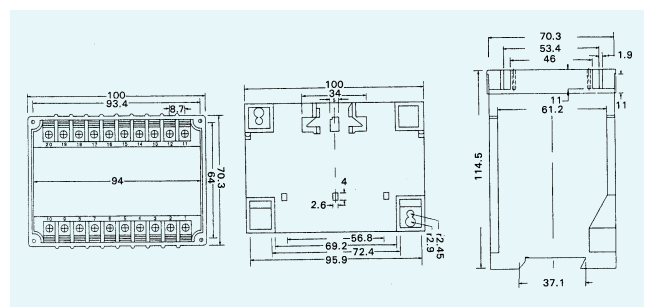
Applied Standards

- General : IEC 688-1 / IEC 255-4 / BS 6253: Part 1
- Safety : IEC 348-1 / BS 4753 / DIN 57411 / VDE 0411 / ANSI C 37
- Surge withstand : IEC 801 / EN55020 / ANSI C37-90a
- Radio Screening : RFI degree N Complies with VDE 0875
- Adaptability for power system : EN 61010, IEC 0110-1

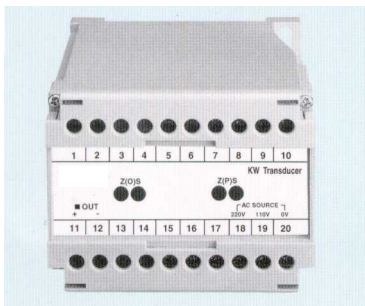
Terminal Connection



Dimension (unit: mm)



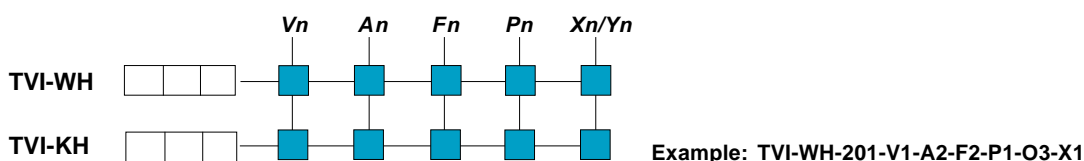
Watt hour & Var hour Transducer



Features

- Measuring & Conversion DIN-IEC 688
- Dielectric Strength DIN-IEC 688
2 kVAC 50/60Hz/1 minute
- Impulse test ANSI C37.90a/1974, IEEE 587/1983, IEC 255-4,
5kV (1.2x50µs)
- Surge test (ring wave) IEC 255-4 (2.5KV - 0.25ms/1 MHz)

Order Form



Connection	Model	Standard Analog Calibration			Note: Voltage input: Phase voltage for 3 phase 4 wire (V _P) Line to line voltage for 3 phase 3 wire (V _L)
			1A	5A	
1 Phase 2 Wire	TVI-WH-101	V1 = 120V V2 = 240V V3 = 415V	100 200 400	500 1K 1.5K	
3 Phase 3 Wire Balance	TVI-WH-200 TVI-KH-200	V1 = V _L = 120V V2 = V _L = 240V V3 = V _L = 415V	100 200 400	500 1K 1.5K	
3 Phase 3 Wire Unbalance	TVI-WH-201 TVI-KH-201	V1 = V _L = 120V V2 = V _L = 240V V3 = V _L = 415V	200 400 800	1K 2K 4K	
3 Phase 4 Wire Unbalance	TVI-WH-301 TVI-KH-301	V0 = V _P = 69.3V V1 = V _P = 120V V2 = V _P = 240V V3 = V _P = 415V	200 300 600 1.2K	1K 1.5K 3K 6K	

Input & Output Parameters

Parameter	Rating	V0	V1	V2	V3	Output
Vn: Voltage input	Vn rating range	69.3V AC 45~86V AC	120V AC 85~150V AC	240V AC 180~300V AC	415V AC 300~500V AC	Xn: standard pulse output for uni-direction X1 / X3 = 1 pulse / wh or varh X2 / X4 = 10 pulse / wh or varh
An: Current input	An rating range	A1 1A 0~1.2A	A2 5A 0~6A			Yn: optional pulse output for bi-direction Y1 / Y3 = 1 pulse / wh or varh Y2 / Y4 = 10 pulse / wh or varh
Fn: Frequency input	Fn rating range	F1 50Hz 48~52Hz	F2 60Hz 58~62Hz			X1, X2, Y1, Y2 : open collector type X3, X4, Y3, Y4 : reed relay type
Pn: Auxiliary power input	Pn rating	P1 120V AC	P2 240V AC	P3 415V AC	P4 30V DC	P5 110V DC

- Note:**
1. uni-direction for watt hour of forward power, for var hour of lagging power
 2. For internal powered type.... zero based outputs and Vn operation range 85%~115%

Watt-hour & Var-hour Transducer

Specification

- Accuracy : 0.2% F.S. ($23 \pm 5^\circ\text{C}$)
- Temp. coefficient : 100ppm/ $^\circ\text{C}$ (0-50 $^\circ\text{C}$)
- Input burden : $\leq 0.2\text{VA}$ (voltage)
 $\leq 0.2\text{VA}$ (current)
- Maximum input over : Current related input: 3 x rated continuous,
10 x rated 30 sec, 25 x rated 3 sec, 50 x rated 1 sec
Voltage related input: maximum 2 x rated continuous
- Response time : $\leq 250\text{ms}$ (0-90%)
- Output ripple (p-p) : $< 0.1\%$ F.S.
- Output of WH or VarH : Open collector type, max. 50V/30mA
- Dielectric strength : 2kVAC/1 min. (input / output / aux. power / case)
- Surge test : ANSI C37.90a/1974, DIN-IEC 255-4 impulse voltage 5kV (1.2 x 50 μs)
- Operating condition : 0-55 $^\circ\text{C}$ (20 to 95% RH non-condensed)
- Storage condition : 0-70 $^\circ\text{C}$ (20 to 95% RH non-condensed)
- Power supply : AC 110V/220V $\pm 20\%$ (50/60Hz) $\leq 3.5\text{VA}$ (Optional DC 48V or DC 110V $\pm 20\%$)
- Magnetic effect : $< 0.005\%$ change 1M center 100 ampere-turn, synchronized with line frequency
- Aux. power effect : $< 0.005\%$ per voltage change
- Impulse/surge test IEC255-4 : IEC 688, 5 kV, 1.2/50ms waveform, IEC 255-22-1, 2.5 kV (1MHz/400Hz)
- Housing : Flame proof, self-extinguishing grey polycarbonate.
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).

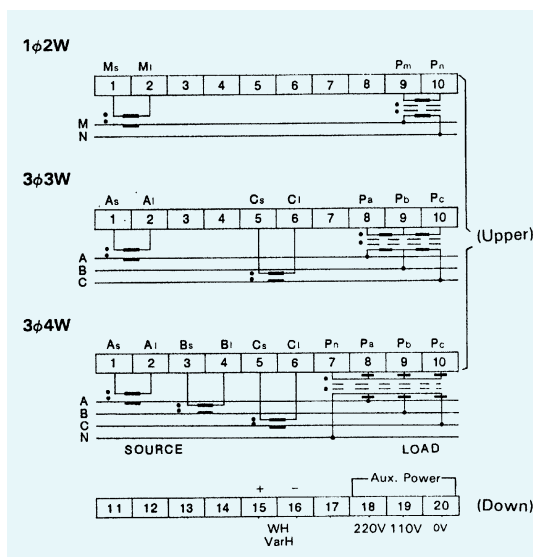
Insulation

- Protection class : Class II complying with IEC 348 / BS 4735 / DIN 57411 / VDE 0411
- Test voltage : 4kV rms 50 Hz 1 min. between Input / Case / Auxiliary / Output

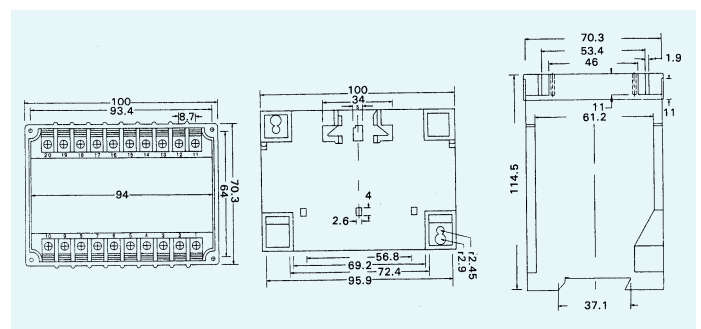
Applied Standards

- General : IEC 688-1 / IEC 255-4 / BS 6253: Part 1
- Safety : IEC 348-1 / BS 4753 / DIN 57411 / VDE 0411 / ANSI C37
- Surge withstand : IEC 801 / EN55020 / ANSI C37-90a
- Radio Screening : RFI degree N Complies with VDE 0875
- Adaptability for power system : EN 61010, IEC 0110-1

Terminal Connection

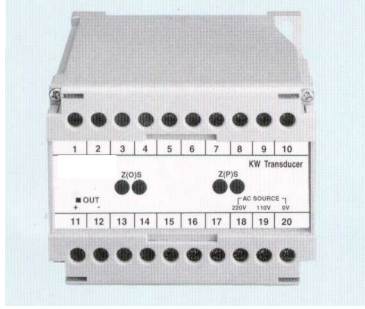


Dimension (unit: mm)



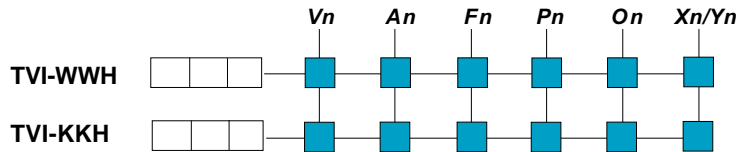
Watt/Watthour & Var/Varhour Transducer

Features



- Measuring & Conversion DIN-IEC 688
- Dielectric Strength DIN-IEC 688
2 kVAC 50/60Hz/1 minute
- Impulse test ANSI C37.90a/1974, IEEE 587/1983,
IEC 255-4, 5KV (1.2x50µs)
- Surge test (ring wave) IEC 255-4 (2.5KkV - 0.25ms/1 MHz)

Order Form



Example: TVI-WWH-201-V1-A2-F2-P1-O3-X1

Connection	Model	Standard Analog Calibration		
			1A	5A
	TVI-WWH-101	V1 = 120V V2 = 240V V3 = 415V	100 200 400	500 1K 1.5K
3 Phase 3 Wire Balance	TVI-WWH-200 TVI-KKH-200	V1 = V _L = 120V V2 = V _L = 240V V3 = V _L = 415V	100 200 400	500 1K 1.5K
3 Phase 3 Wire Unbalance	TVI-WWH-201 TVI-KKH-201	V1 = V _L = 120V V2 = V _L = 240V V3 = V _L = 415V	200 400 800	1K 2K 4K
3 Phase 4 Wire Unbalance	TVI-WWH-301 TVI-KKH-301	V0 = V _P = 69.3V V1 = V _P = 120V V2 = V _P = 240V V3 = V _P = 415V	200 300 600 1.2K	1K 1.5K 3K 6K

Note:
Voltage input:
Phase voltage for 3 phase 4 wire (V_P)
Line to line voltage for 3 phase 3 wire (V_L)

Input & Output Parameters

Input/Output	Rating	V0	V1	V2	V3	On : Output		
		Vn range	V1 range	V2 range	V3 range	O1	O2	O3 (uni.)
Vn: Voltage input	Vn rating range	69.3V AC 45~86V AC	120V AC 85~150V AC	240V AC 180~300V AC	415V AC 300~500V AC	0~20mA	0~20mA	4~20mA
An: Current input	An rating range	A1 1A 0~1.2A	A2 5A 0~6A			O4 4~12~20mA	O5 0~10mA	O6 0~1V
Fn: Frequency input	Fn rating range	F1 50Hz 48~52Hz	F2 60Hz 58~62Hz			O7 0~5V	O8 0~10V	O9 2~10V
Pn: Auxiliary power input	Pn rating	P1 120V AC	P2 240V AC	P3 415V AC	P4 30V DC	O10 (uni.) 1~5V	O11 (bi.) 1~3~5V	
Xn: Standard pulse output for uni-direction	Xn rating	X1 / X3 1 pulse / wh or varh		X2 / X4 10 pulse / wh or varh		X1, X2, Y1, Y2 : open collector type X3, X4, Y3, Y4 : reed relay type		
Yn: Optional pulse output for bi-direction	Yn rating	Y1 / Y3 1 pulse / wh or varh		Y2 / Y4 10 pulse / wh or varh				

- Note:**
1. uni. = uni-direction = 0 to +span bi. = bi-direction = -span to 0 to +span
Example: 4-20mA = 0 to +1000W 4-12-20mA = -1000W to 0 to +1000W
 2. For uni-directional transducers watts for forward power and vars for lagging power
 3. For internal powered type zero based outputs and Vn operation range 85% ~115%

Watt/Watthour & Var/Varhour Transducer

Specification

- Accuracy : 0.2% F.S. (23 ± 5°C)
- Temp. coefficient : 100ppm/°C (0-50°C)
- Input burden : ≤ 0.2VA (voltage)
≤ 0.2VA (current)
- Maximum input over : Current related input: 3 x rated continuous,
10 x rated 30 sec, 25 x rated 3 sec, 50 x rated 1 sec
Voltage related input: maximum 2 x rated continuous
- Response time : ≤ 250ms (0-90%)
- Output ripple (p-p) : < 0.1% F.S.
- Output drive capability : ≤ 10mA for voltage mode
≤ 10V for current mode
- Output of WH or VarH : Open collector type, max. 50V/30mA
- Dielectric strength : 2kVAC/1 min. (input / output / aux. power / case)
- Surge test : ANSI C37.90a/1974, DIN-IEC 255-4 impulse voltage 5kV (1.2 x 50µs)
- Operating condition : 0~55°C (20 to 95% RH non-condensed)
- Storage condition : 0~70°C (20 to 95% RH non-condensed)
- Power supply : AC 110V/220V ± 20% (50/60Hz) ≤ 3.5VA (Optional DC 48V or DC 110V ± 20%)
- Magnetic effect : < 0.005% change 1M center 100 ampere-turn, synchronized with line frequency
- Aux. power effect : < 0.005% per voltage change
- Impulse/surge test IEC255-4 : IEC 688, 5 kV, 1.2/50ms waveform, IEC 255-22-1, 2.5 kV (1MHz/400Hz)
- Housing : Flame proof, self-extinguishing grey polycarbonate.
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).

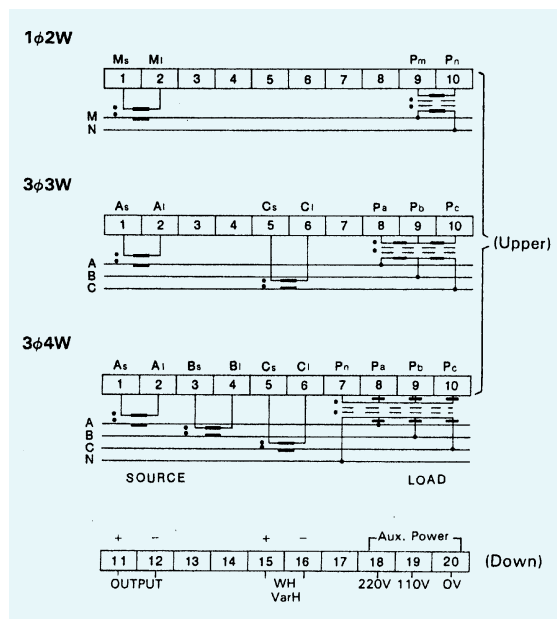
Insulation

- Protection class : Class II complying with IEC 348 / BS 4735 / DIN 57411 / VDE 0411
- Test voltage : 4kV rms 50 Hz 1 min. between Input / Case / Auxiliary / Output

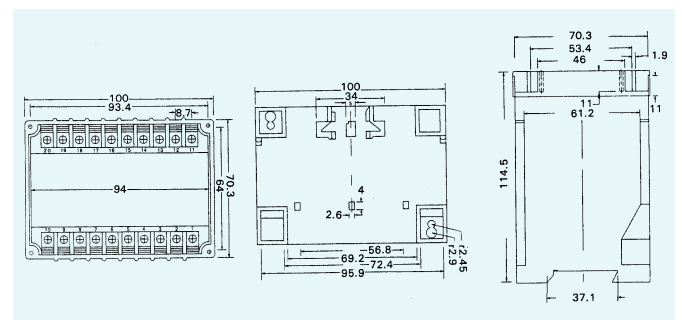
Applied Standards

- General : IEC 688-1 / IEC 255-4 / BS 6253: Part 1
- Safety : IEC 348-1 / BS 4753 / DIN 57411 / VDE 0411 / ANSI C37
- Surge withstand : IEC 801 / EN55020 / ANSI C37-90a
- Radio Screening : RFI degree N Complies with VDE 0875
- Adaptability for power system : EN 61010, IEC 0110-1

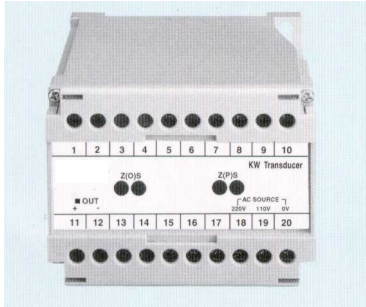
Terminal Connection



Dimension (unit: mm)



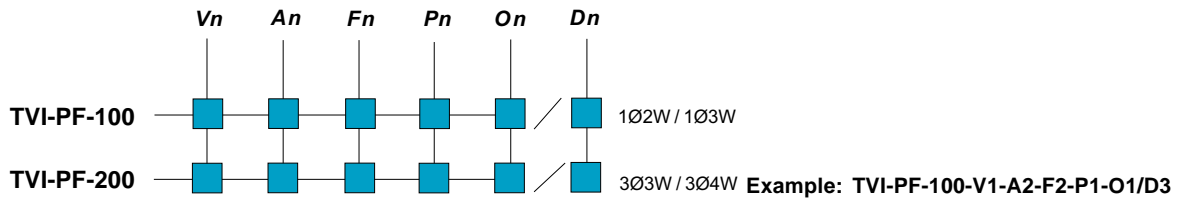
Power Factor (cos.) Transducer



Features

- Measuring & Conversion DIN-IEC 688
- Dielectric Strength DIN-IEC 688
2 kVAC 50/60Hz/1 minute
- Impulse test ANSI C37.90a/1974, IEEE 587/1983,
IEC 255-4, 5kV (1.2x50µs)
- Surge test (ring wave) IEC 255-4 (2.5KV - 0.25ms/1 MHz)

Order Form



Input & Output Parameters

Vn: Voltage input	Vn rating range	V1 120V AC 85~150V AC	V2 240V AC 180~300V AC	V3 415V AC 300~500V AC	On: Output		
					O1 0~1mA	O2 0~20mA	O3 (uni.) 4~20mA
An: Current input	An rating range	A1 1A 0~1.2A	A2 5V 0~6V		O4 (bi.) 4~12~20mA	O5 0~10mA	O6 0~1V
Fn: Frequency input	Fn rating range	F1 50Hz 48~52Hz	F2 60V 58~62V		O7 0~5V	O8 0~10V	O9 2~10V
Pn: Auxiliary power input	Pn rating	P1 120V AC	P2 240V AC	P3 415V AC	P4 30V DC	P5 110V DC	
					O10 (uni.) 1~5V	O11 (bi.) 1~3~5V	

Note: 1. Uni. = uni-direction = 0 to +span bi. = bi-direction = -span to 0 to +span referring to calibration
2. For internal powered type zero based outputs and Vn operation range 85% ~115%

Power Factor (cos θ) Transducer

Specification

- Accuracy : 0.2% F.S. \pm 0.25° (23 \pm 5°C)
- Temp. coefficient : 100ppm/°C (0-50°C)
- Input burden : \leq 0.2VA (voltage); \leq 0.2VA (current)
- Maximum input over : Current related input: 3 x rated continuous,
10 x rated 30 sec, 25 x rated 3 sec, 50 x rated 1 sec
Voltage related input: maximum 2 x rated continuous
- Response time : \leq 250ms (0-90%)
- Output ripple (p-p) : $<$ 0.1% F.S.
- Output drive capability : \leq 10mA for voltage mode
 \leq 10V for current mode
- Dielectric strength : 2kVAC/1 min. (input / output / aux. power / case)
- Surge test : ANSI C37.90a/1974, DIN-IEC 255-4
impulse voltage 5KV (1.2 x 50 μ s)
- Operating condition : 0~55°C (20 to 95% RH non-condensed)
- Storage condition : 0~70°C (20 to 95% RH non-condensed)
- Power supply : AC 110V/220V \pm 20% (50/60Hz) \leq 3.5VA (Optional DC 48V or DC 110V \pm 20%)
- Magnetic effect : $<$ 0.005% change 1M center 100 ampere-turn, synchronized with line frequency
- Aux. power effect : $<$ 0.005% per voltage change
- Impulse/surge test IEC255-4 : IEC 688, 5 kV, 1.2/50ms waveform, IEC 255-22-1, 2.5 kV (1MHz/400Hz)
- Housing : Flame proof, self-extinguishing grey polycarbonate.
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).

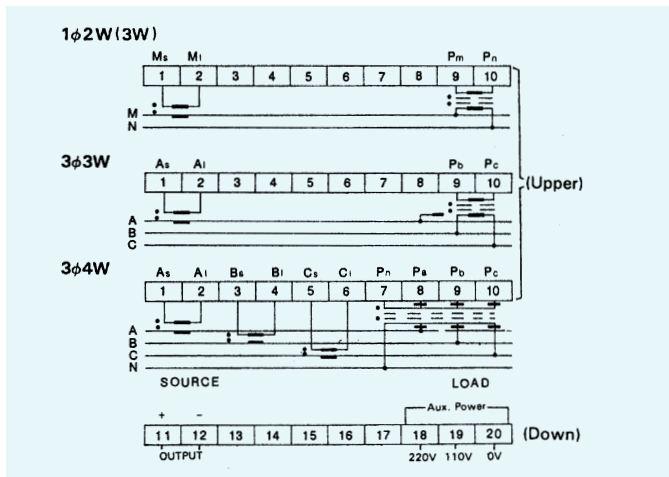
Insulation

- Protection class : Class II complying with IEC 348 / BS 4735 / DIN 57411 / VDE 0411
- Test voltage : 4kV rms 50 Hz 1 min. between Input / Case / Auxiliary / Output

Applied Standards

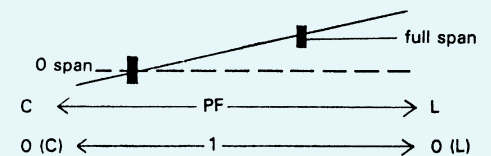
- General : IEC 688-1 / IEC 255-4 / BS 6253: Part 1
- Safety : IEC 348-1 / BS 4753 / DIN 57411 / VDE 0411 / ANSI C 37
- Surge withstand : IEC 801 / EN55020 / ANSI C37-90a
- Radio Screening : RFI degree N Complies with VDE 0875
- Adaptability for power system : EN 61010, IEC 0110-1

Terminal Connection



Calibration: Dn

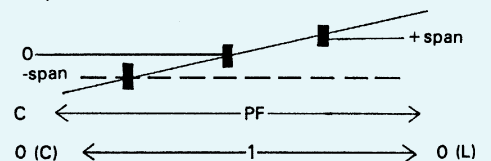
D1: 0.5(C) to 1 vs 0 to full span output
D2: 0(C) to 1 vs 0 to full span output



Note: (C) Capacitive (L) Inductive Load

D3: 0.5(C) to 1 to 0.5(L) vs 0 to 1/2 span to full span output

D4: 0(C) to 1 to 0(L) vs 0 to 1/2 span to full span output



Dimension (unit: mm)

