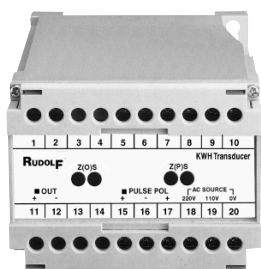


RUDOLF™ Transducer

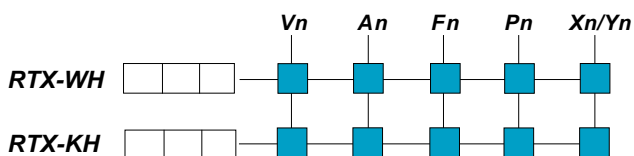
Wattour & Varhour Transducer



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 (2.5KV - 0.25ms/1 MHz)

Order Form



Example: RTX-WH-201-V1-A2-F2-P1-O3-X1

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	RTX-WH-101	V1 = 120V V2 = 240V V3 = 415V	100 200 400	500 1K 1.5K	
3 Phase 3 Wire Balance	RTX-WH-200 RTX-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	RTX-WH-201 RTX-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	RTX-WH-301 RTX-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

Input/Output	Rating	V0	V1	V2	V3	Notes
Vn: Voltage input	Vn rating range	69.3V AC 45~86V AC	V1 120V AC 85~150V AC	V2 240V AC 180~300V AC	V3 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 wattour of forward power, for varhour of lagging power
2. For internal powered type.... zero based outputs and Vn operation range 85%~115%

RUDOLF™ Transducer

Watthour & Varhour 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).

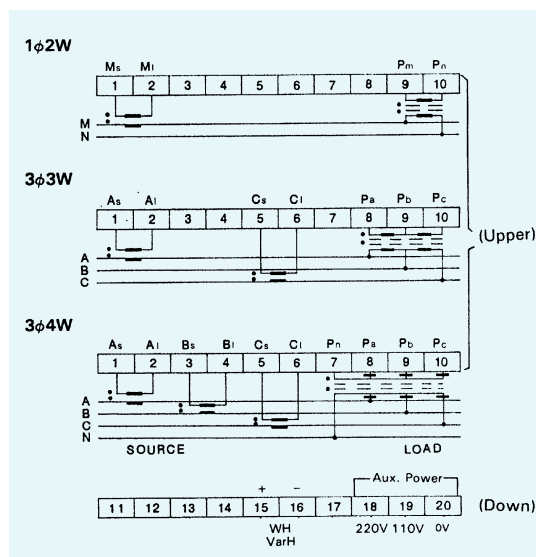
Insulation

- 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)

