

# RUDOLF™ Transducer

## Power Factor (cos $\theta$ ) 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 $\mu$ 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