

# PHASE ANGLE TRANSDUCERS

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MODEL PF5

### SINGLE PHASE, THREE PHASE 50/60 HERTZ PHASE ANGLE TRANSDUCER

#### FEATURES

- The bi-polar output of the model PF is directly proportional to the 0 to 60° leading or lagging power factor of the input signal. A leading PF is represented by a negative output signal. A lagging PF is represented by a positive output signal.

#### APPLICATIONS

- Provides an accurate means for calculating power factor,  $PF = \cos(\text{Phase angle})$ .

#### SINGLE PHASE TWO WIRE MODELS

INPUT AC VOLTS LINE-TO-LINE	INPUT AC AMPS	STANDARD OUTPUTS MODEL PF5-			
		+/- 1mAdc	+/- 10Vdc	4-20mA*	4-12-20mA*
95 to 135	0.2 to 5.0	001A	001C	001E	001EM
	0.3 to 10.0	010A	010C	010E	010EM
	1.0 to 20.0	019A	019C	019E	019EM
200 to 300	0.2 to 5.0	002A	002C	002E	002EM
	0.3 to 10.0	011A	011C	011E	011EM
	1.0 to 20.0	020A	020C	020E	020EM
410 to 550	0.2 to 5.0	003A	003C	003E	003EM
	0.3 to 10.0	012A	012C	012E	012EM
	1.0 to 20.0	021A	021C	021E	021EM



Highlighted Models (5A) can be used with Current Transformers.  
 \*4-20mA, 4-12-20mA models require 85-135Vac instrument power.  
 All other models are self-powered from monitored line.  
 4-20mA models for use **only on lagging Power Factor**.  
 Higher current ranges available - Consult factory

#### ORDERING INFORMATION

Example: Three Phase - Four Wire  
 277 VAC, 10 Amp Input with  
 +/-10Vdc Output.  
**PF5-011C**

#### THREE PHASE THREE WIRE OR THREE PHASE FOUR WIRE MODELS

INPUT AC VOLTS LINE-TO-LINE	INPUT AC AMPS	STANDARD OUTPUTS MODEL PF5-			
		+/- 1mAdc	+/- 10Vdc	4-20mA*	4-12-20mA*
95 to 135	0.2 to 5.0	004A	004C	004E	004EM
	0.3 to 10.0	013A	013C	013E	013EM
	1.0 to 20.0	022A	022C	022E	022EM
200 to 300	0.2 to 5.0	005A	005C	005E	005EM
	0.3 to 10.0	014A	014C	014E	014EM
	1.0 to 20.0	023A	023C	023E	023EM
410 to 550	0.2 to 5.0	006A	006C	006E	006EM
	0.3 to 10.0	015A	015C	015E	015EM
	1.0 to 20.0	024A	024C	024E	024EM



#### SPECIFICATIONS

##### INPUT

Voltage ..... See Tables  
 Current ..... See Tables  
 Frequency Range ..... 50-60 Hz  
 Burden  
     Voltage ..... 2.0VA  
     Current ..... 0.4VA  
 Overload (cont.)  
     Voltage ..... 135Vac Range ..... 175Vac  
                     300Vac Range ..... 350Vac  
                     550Vac Range ..... 600Vac  
     Current ..... 5Aac Range ..... 10Aac  
                     10Aac Range ..... 20Aac  
                     20Aac Range ..... 30Aac  
 Dielectric Test....(Input/Output/Case) ..... 1500Vac

##### OUTPUT

**ACCURACY ..... + 0.5% of Span**  
 Includes combined effects of voltage, current and frequency.  
 Span .... (Current inp. ref. Voltage inp.) ..... +60° to 0 to -60°  
     Current leads Voltage ..... Negative Output  
     Current lags Voltage ..... Positive Output  
 Output Loading (Ohms)  
     +1mA ..... 0-10K  
     +10Vdc ..... 2K min.  
     4-20mA, 4-12-20mA ..... 0-500  
 Response Time....(90%) ..... 400 milliseconds  
 Field Adjustable Cal. .... + 10%  
 Temperature Range ..... -20°C to +60°C  
 Temperature Effect ..... +0.5% F.S.  
 Instrument Power ..... 85-135Vac, 50-400Hz, 3.5VA  
 “-22” Option ..... 230Vac, 50/60Hz, +15%

**FLEX-CORE®**

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