

PHASE ANGLE TRANSDUCERS

PHASE ANGLE TRANSDUCER

MODEL PF5

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

FEATURES

- The bipolar 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-			
		$\pm 1\text{mAdc}$	$\pm 10\text{Vdc}$	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
277Vac, 10A Input with
+/-10Vdc Output.
PF5-014C



THREE PHASE THREE WIRE OR THREE PHASE FOUR WIRE MODELS

INPUT AC VOLTS LINE-TO-LINE	INPUT AC AMPS	STANDARD OUTPUTS MODEL PF5-			
		$\pm 1\text{mAdc}$	$\pm 10\text{Vdc}$	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 50-60Hz
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 $\pm 0.5\%$ 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 (Ω)
 $\pm 1\text{mAdc}$ 0-10K
 $\pm 10\text{Vdc}$ 2K min.
4-20mA^{*}, 4-12-20mA^{*} 0-500
Response Time....(90%) 400ms
Field Adjustable Cal. $\pm 10\%$
Temperature Range -20°C to +60°C
Temperature Effect $\pm 0.5\%$ F.S.
Instrument Power..... 85-135Vac, 50-400Hz, 3.5VA
“-22” Option 230Vac, 50/60Hz, $\pm 15\%$

FLEX-CORE®

Div. Morlan & Associates, Inc.

4970 Scioto Darby Rd. Hilliard, Ohio 43026

WWW.FLEX-CORE.COM

sales@flex-core.com

PHONE (614) 889-6152

TECH. ASSISTANCE (614) 876-8308

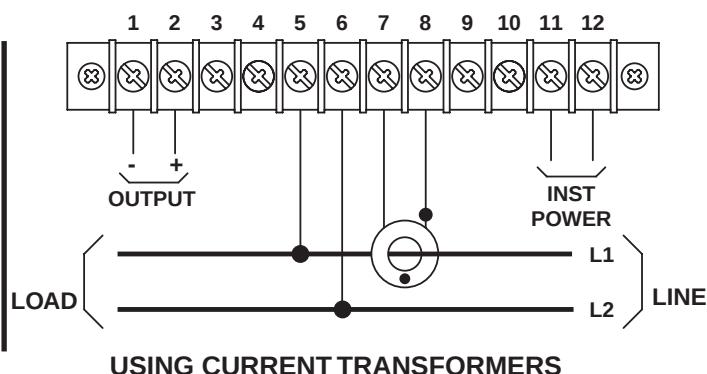
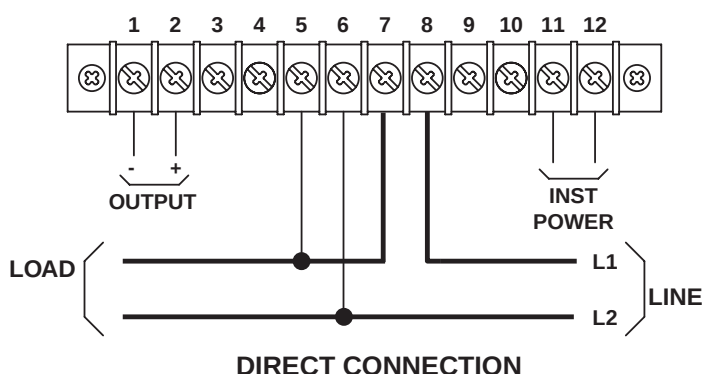
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PHASE ANGLE TRANSDUCERS

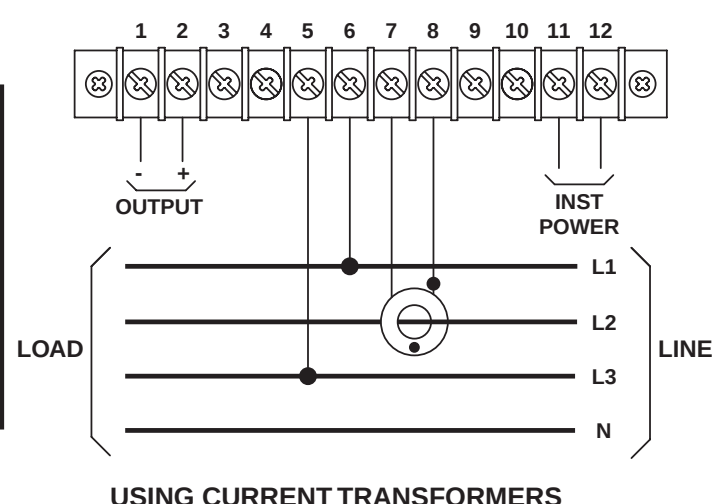
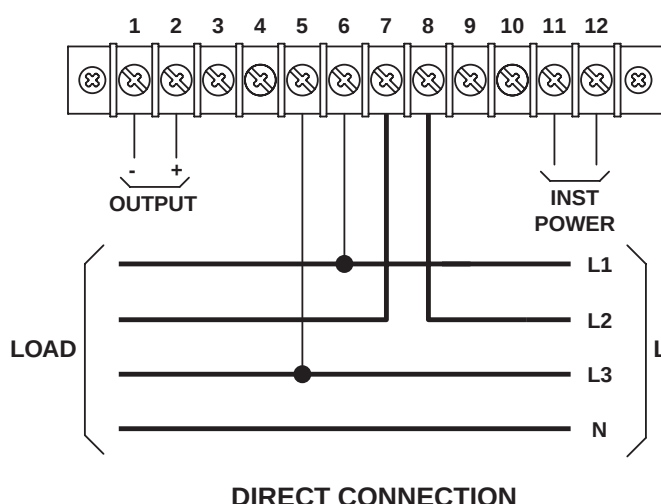
CONNECTION DIAGRAMS

MODEL PF5

SINGLE PHASE CONNECTIONS



THREE PHASE - THREE WIRE, THREE PHASE - FOUR WIRE CONNECTIONS



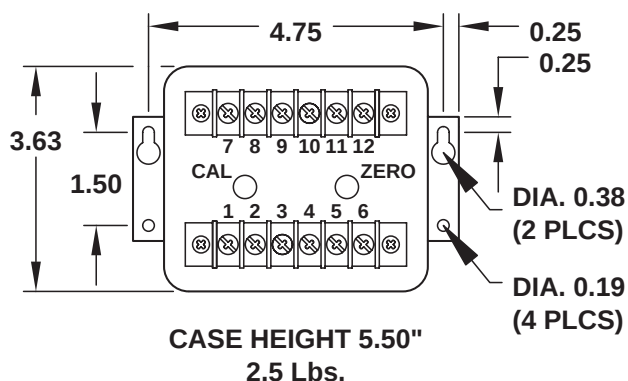
INSTALLATION NOTE

PROPER INSTALLATION OF THE MODEL PF PHASE ANGLE TRANSDUCER IS CRITICAL.

THE CONNECTION DIAGRAMS SHOWN ABOVE MUST BE FOLLOWED PRECISELY.

IF APPLICATION REQUIRES THE USE OF CURRENT TRANSFORMERS, INSURE THAT POLARITY IS CORRECT.
ANY DEVIATION FROM THE CONNECTIONS SHOWN WILL RESULT IN A LOCKED FULL SCALE OUTPUT SIGNAL.

CASE DIMENSIONS



All Dimensions In Inches

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