

# Ground Fault Monitor

# Model 601-CS-D-P1

*monitors a zero-sequence CT for high accuracy ground fault protection*



## The 601-CS-D-P1

3-phase power monitor is a fully programmable electronic power monitor designed to monitor 3-phase systems. The 601-CS-D-P1 has a single relay that can be configured as a general purpose network output or to trip on ground faults. The 601-CS-D-P1 monitors ground fault current, phase currents, phase voltages, power factor and frequency. The RS485MS-2W communications module allows the 601-CS-D-P1 to communicate using the Modbus RTU protocol. The Modbus connection can be used to monitor power parameters, setup the device or control the fault relay. A DeviceNet™ communications I/O module (CIO-601CS-DN-P1) is available as well. This CIO module only works with the 601-CS-D-P1 unit. It is used for sending the information from the 601-CS-D-P1 over a DeviceNet™ network. It also provides I/O capabilities and the ability to set the parameters of the 601-CS-D-P1.

**\*\*Note:** This product must be used with an external Zero-Sequence CT for proper operation (not included).


For more information see:

See Appendix A, page 66, Figure 1 for dimensional drawing.

See Appendix B, page 73, Figure 7 for typical wiring diagrams.

## Features:

- Ground fault warning (enable/delay)
- Ground fault trip (enable/trip delay)
- Ground fault motor acceleration (enable/trip delay)
- Modbus communications watchdog

Approvals:  

## Auxiliary Products:

- CIO-601CS-DN-P1

## Available Models:

601-CS-D-P1

## Specifications

<b>Input Characteristics</b>			
Line Voltage .....	200-480VAC	Pollution Degree .....	3
Frequency .....	50/60Hz	Class of Protection .....	IP20
Motor Full Load Amp Range .....	0.5-175A (direct) 176-800A (CTs required)	Relative Humidity .....	10-95%, non-condensing per IEC 68-2-3
Input Ground Fault Current .....	0.5-10A	Terminal Torque .....	7in.-lbs.
<b>Output Characteristics</b>		Standards Passed	
Output Contact Rating (SPDT) .....	480VA @ 240VAC	Electrostatic Discharge (ESD) .....	IEC 61000-4-2, Level 3, 6kV contact, 8kV air
Pilot Duty .....	10A @ 240VAC	Radio Frequency Immunity, Conducted .....	IEC 61000-4-6, Level 3 10V
General Purpose .....	10A @ 240VAC	Radio Frequency Immunity, Radiated .....	IEC 61000-4-3, Level 3, 10 V/m
Expected Life .....	1 x 10 <sup>6</sup> operations	Fast Transient Burst .....	IEC 61000-4-4, Level 3, 3.5kV input power
Mechanical .....	1 x 10 <sup>6</sup> operations at rated load	Short Circuit Rating .....	100kA RMS, SYM, 600VAC max.
Electrical .....		Surge Immunity	
<b>General Characteristics</b>		IEC .....	IEC 61000-4-5, Level 3, 2kV line-to-line; Level 4, 4kV line-to-ground
Ambient Temperature Range .....	-20° to 70°C (-4° to 158°F)	ANSI/IEEE .....	C62.41 Surge and Ring Wave Compliance to a level of 6kV line-to-line
Operating .....	-40° to 80°C (-40° to 176°F)	High Potential Test .....	Meets UL508 (2 x rated V +1000V for 1 minute)
Storage .....		Safety Marks	
Accuracy at 25° C (77° F)		UL .....	UL508 (File #E68520)
Voltage .....	±1%	CE .....	IEC 60947-1, IEC 60947-5-1
Current .....	±3% (<175A direct)	Max Conductor Size (with insulation) .....	0.65"
GF Current .....	±3%	Dimensions .....	3.05 H x 3.85 W x 5.05 D in. (77.47 x 97.79 x 128.27 mm)
Repeatability		Weight .....	1.2 lbs. (19.2 oz., 544.31 g)
Voltage .....	±0.5% of nominal voltage	Mounting Method .....	Surface mount (4 - #8 screws) or DIN rail mount
Current .....	±1% (<175A direct)		
Maximum Input Power .....	10 W		