SELF-CONTAINED RELAYS (OUTDOOR) - SOLID STATE

CIR-44 CUSTOMER INTERFACE RELAY

FUNCTIONAL SUMMARY

	IN	OUT
#	4	4
TYPE	2 Wire	2 Wire
FORM	A	A

Originally manufactured by the Southern Companies as the Model 44, for their own use, it became part of the SSI family in March 2024. This “Super Relay” will do just about any task required in pulse metering from simple multi-channel pulse isolation to totalizing with positive or negative pulses. The CIR-44’s four isolated solid-state Form A contact outputs are independently programmed to follow one of the four Form A inputs. The typical application is the utility’s interface between the KWH meter and a customer-owned energy control system where two to four types of pulses are used. For example, one input channel might be for watt-hour pulses and the second input channel for var-hour pulses. The CIR-44 provides four independent isolation relay channels in one ready-to-use weather-resistant package.

Each of the four channels of the CIR-44 has three operating modes, Normal Pass-thru, Pass-Through with Value Conversion, or Positive or Negative Totalizing. In the Normal Pass-thru Mode, Form A inputs are passed to the assigned Form A output(s). In Pass-thru Value Conversion Mode, Form A inputs are assigned a pulse value. When the value of the input(s) reaches a corresponding output value a pulse is passed to the assigned output(s). In Totalizing mode, the inputs are assigned a positive or negative value. Once the corresponding total output value is reached, a pulse is passed to the assigned output. Each of the four outputs can be “mapped” to any of the four inputs.

The CIR-44 is internally divided into two compartments. Once installed, the upper compartment is normally locked and only accessible to utility metering personnel. It contains the Power Supply input terminals, all of the system electronics and programming accessibility. The lower compartment (customer compartment) contains an Output terminal strip and status LEDs. Using SSI’s CIR-44 Programmer software, the inputs and outputs can be configured, and each output mapped to an input. Form A pulse width output timing can also be set. Each output also contains a solid state automatic resettable fuse.

Red and green LEDs, one for each input and output, are located next to the terminal block in the customer compartment for good visibility and easy interpretation of the state of each input and output.

The CIR-44’ robust solid-state switching device is rated at 600V and 150mA giving maximum protection from lightning or transient voltage damage. The CIR-44 has built-in transient protection for the solid-state switching devices that eliminates the need for external or off-the-board transient suppressors.

CIR-44

SOLID STATE INSTRUMENTS A Product Family Owned by RADIAN RESEARCH
3852 Fortune Dr. ● Lafayette, IN ● Ph: 765-449-5500 ● Fax: 765-448-4614
www.radianresearch.com

SELF-CONTAINED RELAYS (OUTDOOR) - SOLID STATE

CIR-44 CUSTOMER INTERFACE RELAY

CIR-44

SPECIFICATIONS

ELECTRICAL

Power Input:	120-277 VAC. Burden: 10 mA at 120 VAC
Pulse Inputs:	Four Form A (2-Wire) inputs with +12VDC wetting voltage on the “Y” terminal
Pulse Outputs:	Four sets of dry-contact solid state outputs located in the customer’s compartment. The contacts are solid state “no bounce” relays rated at 250VACVDC at 1/10th Amp. The maximum rating of the contacts is 1500mW. Factory fused at 150 mA.
Contact On-State Resistance:	6 ohms maximum, 3.5 ohms typical
Insulation Resistance:	50 megohms typical
Operate and Release Time:	Turn On Time - 5 mS MAX, 2.2mS Typical Turn Off Time - 2 mS MAX, .15mS Typical
Input/Output Isolation Voltage:	4000Vrms

MECHANICAL

Mounting:	Any position
Size:	9.0” wide, 11.0” high, 4.50” deep
Weight:	9 pounds
Type/Material:	NEMA 4X Fiberglass Case

TEMPERATURE

Temperature Range:	38º C to +70º C, -38.4º F to +158º F
Humidity:	0 to 98% non-condensing

AVAILABLE OPTIONS

Input Voltages:	DCS-1: 125VDC DCS-2: 15-48VDC 24VAC 12 VAC/12VDC Other Voltage: Contact Factory

SOLID STATE INSTRUMENTS A Product Family Owned by RADIAN RESEARCH
3852 Fortune Dr. ● Lafayette, IN ● Ph: 765-449-5500 ● Fax: 765-448-4614
www.radianresearch.com