

NEC

Safety Standard Certificate for Photocoupler

PS28xx, PS280xA



● UL Certificate

Standard
File No.

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D E S C R I P T I O NPRODUCT COVERED:

* Optical Isolators, Type PS 28XX-4 Series. May be followed by -F3 or -F4. XX may be numbers 01, 02, 05, 06, 11, 15, 31, 32, or 33. Type PS28XX-1 Series, may be followed by -F3 or -F4. XX may be 01, 02, 05, 06, 11, 15, 32, or 33. Type PS2801A-1, PS2801A-4, PS2805A-1, and PS2805A-4.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

These devices are optically coupled isolating switches with gallium arsenide light emitting diodes optically coupled to photo detectors. The solid state portion of these devices is encapsulated in a silicon or epoxy compound. The light emitting diode and detector are separated by an insulating window. Internal "chips" are provided with terminals molded into the enclosure.

Use - For use only in products where the acceptability of the combination is determined by Underwriters Laboratories Inc.

Conditions of Acceptability - Each device shall be reviewed with respect to the following conditions of acceptability:

1. The short circuit interrupting capacity or behavior under short circuit conditions has not been evaluated for these devices. Accordingly, the end-use circuit should contain suitable impedance to eliminate the need for such testing or appropriate tests should be conducted.
2. The device shall be installed in compliance with the enclosure, mounting, spacings, and segregation requirements of the ultimate application. No spacings are specified for the device.

3. The electrical and outer surface temperature ratings recorded below shall be acceptable in the ultimate application.
4. The suitability of use when exposed to oil, chemicals and the like has not been determined by this investigation.
5. If a particular end-use application requires evaluation of "as-received" case material properties not contemplated under the scope of this investigation, such properties will have to be separately investigated.
6. The suitability of the connections shall be determined in the end-use application.
7. The capability of the device to control a load has not been investigated.
8. The suitability of the device to be mounted over dead-metal or metal of opposite polarity has not been investigated.

RATINGS:

Type Designation	Current, mA		Power, mW		Isolation Voltage (ac)	Temperature °C (Operating)
	Diode	Detector	Diode	Detector		
PS 2801-4, PS 2811-4 PS2802-4, PS2806-4, PS2805-4, PS2815-4	50	50	80	120	2500	-50 to 100
PS2831-4	50	120	80	120	2500	-50 to 100
PS2832-4	50	40	80	120	2500	-50 to 100
PS2833-4	50	60	80	120	2500	-50 to 100
PS2801-1, PS2811-1	50	50	60	120	2500	-50 to 100
PS2802-1	50	50	60	120	2500	-50 to 100
PS2805-1, PS2815-1	50	50	60	120	2500	-50 to 100
PS2806-1	50	50	60	120	2500	-50 to 100
PS2832-1	50	40	60	120	2500	-50 to 100
PS2833-1	50	60	60	120	2500	-50 to 100
* PS2801A-1	50	50	60	120	2500	-50 to 100
* PS2801A-4	50	50	80	120	2500	-50 to 100
* PS2805A-1	50	50	60	120	2500	-50 to 100
* PS2805A-4	50	50	80	120	2500	-50 to 100

CONSTRUCTION DETAILS:

General - The general design, shape and arrangement shall be as illustrated in the following photograph and descriptive pages. All dimensions are approximate.

* Marking - Recognized company name or trademark, and type designation provided on each unit or on the smallest shipping container in which the device is shipped. See ILL. 3 for details.

Specification Sheet - Specification sheet is provided and contains the following information:

1. Maximum continuous power, a current and a voltage rating for both the photo-emitter and the photo-sensor.
2. A dielectric insulation-voltage rating between input and output terminals. This should be the same as the isolation V ac in ratings above.
3. Derating specifications related to ambient temperatures shall also be provided in graphic or tabular format.
4. The junction temperature for these devices is 125°C.

Model Differences - All models have identical insulation systems. The only difference is the leads or the size of the IC devices.

Abbreviation - R/C = Recognized Component.

Pin Connections - See ILL. 1 for details.

Lead Connections - See ILL. 2 for details.