

NEC

Safety Standard Certificate for Photocoupler

PS28XX, PS280XA, PS280XC



● **UL Certificate**

Standard UL 1577

File No. E72422 Vol. 1 Sec. 17

A handwritten signature in black ink, appearing to read 'H. Takahashi', written over a horizontal line.

H.TAKAHASHI

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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 -V, 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 -V, may be followed by -F3 or -F4. XX may be 01, 02, 05, 06, 11, 15, 32, or 33. Type PS2801A-1, PS2801B-1, PS2801C-1, PS2801A-4, PS2801C-4, PS2805A-1, PS2805C-1, PS2805A-4, and PS2805C-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 capability of the device to control a load has not been investigated.
2. These devices should be installed in a suitable end product enclosure.
3. The maximum temperature on the case should not exceed the maximum operating temperature rating specified in the ratings table.
4. For single protection devices, the insulation to the case has not been evaluated. For double protection devices, the insulation to the case has been evaluated to the isolation voltage specified in the ratings table.
5. In addition to meeting single protection requirements, double protection optical isolators have also been investigated for use in up to 250 V, 50/60 Hz circuits in audio, video, and similar equipment in applications in which breakdown of the optical isolator may result in a risk of fire, electrical shock, or injury to persons.

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RATINGS:

Type Designation	Current, mA		Power, mW		Isolation Voltage (ac)	Temperature °C (Operating)
	Diode	Detector	Diode	Detector		
PS 2801-4,	50	50	80	120	2500	-55 to 100
PS 2811-4	50	40	70	120	2500	-55 to 100
PS2802-4,	50	100	80	120	2500	-55 to 100
PS2806-4,	±50	100	80	120	2500	-55 to 100
PS2805-4,	±50	50	80	120	2500	-55 to 100
PS2815-4	±50	40	70	120	2500	-55 to 100
PS2831-4	50	120	80	120	2500	-55 to 100
PS2832-4	50	60	80	120	2500	-55 to 100
PS2833-4	50	60	80	120	2500	-55 to 100
PS2801-1,	50	50	60	120	2500	-55 to 100
PS2811-1	50	40	60	120	2500	-55 to 100
PS2802-1	50	90	60	120	2500	-55 to 100
PS2805-1,	±50	50	60	120	2500	-55 to 100
PS2815-1	±50	40	60	120	2500	-55 to 100
PS2806-1	±50	90	60	120	2500	-55 to 100
PS2832-1	50	60	60	120	2500	-55 to 100
PS2833-1	50	60	60	120	2500	-55 to 100
PS2801A-1	30	30	60	120	2500	-55 to 100
PS2801C-1	50	50	60	120	2500	-55 to 100
PS2801A-4	30	30	80	120	2500	-55 to 100
PS2801C-4	50	50	80	120	2500	-55 to 100
PS2805A-1	±30	30	60	120	2500	-55 to 100
PS2805C-1	50	50	60	120	2500	-55 to 100
PS2805A-4	±30	30	80	120	2500	-55 to 100
PS2805C-4	50	50	80	120	2500	-55 to 100

The maximum rated junction temperature for these devices is 125°C.

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.