New Product Info

Product Group: Vishay Semiconductors, Optoelectronics

New CNY64ST and CNY65ST Series High-Voltage Isolation Optocouplers

The News:

Vishay Intertechnology Releases Industry's First CAT IV, High-Voltage Isolation Optocouplers in Surface-Mount Packages for Solar and Wind Turbine Installations; Devices Are VDE Certified for CAT IV Installations With Transient Overvoltage Protection of 12,000 V and Recurring Peak Voltage of 1,450 V_{PEAK}

Vishay Intertechnology, Inc. (VSH: NYSE) today broadens its optoelectronics portfolio with the introduction of the industry's first CAT IV, high-voltage isolation optocouplers available in surface-mount packages. Certified by the international safety regulatory agency VDE, the CNY64ST and CNY65ST series products offer long creepage distances and a high isolation test voltage to protect workers and equipment used in high-voltage environments like solar power and wind turbine grid connections.

Product Benefits:

- Certified for CAT IV installations per the VDE standard
- Available in surface-mount and through-hole packages
- Eco-Friendly "Green"
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC

The Key Specifications:

- Recurring peak voltage (V_{IORM}) of 1,450 V_{PEAK}
- Transient overvoltage (V_{IOTM}) of 12,000 V_{PEAK}
- Creepage distance of 9.5 mm and 14 mm
- Distance from emitter to detector through insulation ≥ 3 mm
- CTR from 50 % to 300 % at 5 mA
- Temperature range of – 55 °C to + 85 °C

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Market Applications:

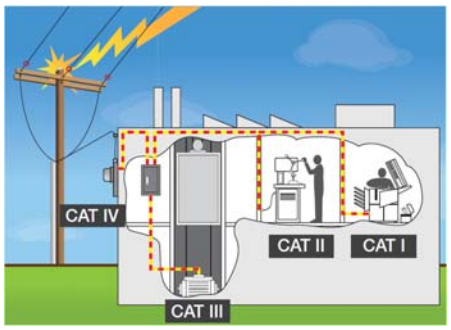
- Isolating high voltages from workers and low-voltage circuitry
  - Solar power
  - Wind turbines
  - Smart grid
  - Smart meters
  - High-voltage motors
- Isolating extremely noisy welding from control circuitry

The Perspective:

Customers wanting the manufacturing flexibility of using all surface-mount components in their products can use the CNY64ST and CNY65ST, which complement the CNY6x series of through-hole devices already available.

The International Electrotechnical Commission (IEC) has defined protection standards for four different installation categories, CAT I through IV, as shown in the photo. Category IV has the most stringent protection requirements because it typically involves electrical connections to the utility grid. The CNY6x series of CAT IV optocouplers protects equipment and people from being damaged or injured by a high-voltage spike or transient of up to 12,000 V and a recurring peak voltage of 1450 V_{PEAK}, while allowing data to pass from the high-voltage side to low-voltage monitoring equipment.

CNY6x Portfolio	CNY64x CNY64xST	CNY65x CNY65xST	CNY66x
Creepage	9.5 mm	14.0 mm	17.0 mm
Lead Pitch	10.16 mm	15.24 mm	17.8 mm
	400 mil	600 mil	700 mil



In addition to meeting the IEC requirements for overvoltage transients and recurring peak voltage, the CNY6x series of optocouplers features creepage distances — the shortest distance along any path on the outside surface of the package from input to output pin — of up to 17 mm and is certified to be used in CAT IV installations with working voltages up to 1,000 V.

For the surface-mount devices released today, the CNY64ST series offers a creepage distance of 9.5 mm while the CNY65ST series provides a creepage distance of 14 mm with CAT IV working voltages up to 600 V. Both feature an insulation distance — the internal distance between the infrared emitting diode and phototransistor through the insulation — greater than 3 mm.

The CAT IV optocouplers provide a broad range of CTR values from 50 % to 300 % at 5 mA, operate over a temperature range of – 55 °C to + 85 °C, and offer a forward current of 75 mA. The devices are Eco-Friendly “Green,” compliant to RoHS Directive 2002/95/EC, and in accordance to WEEE 2002/96/EC.

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To access the product datasheets on the Vishay Web site, go to
http://www.vishay.com/doc?82387 (CNY64AYST, CNY64ABST, CNY64AGRST, CNY65AYST, CNY65ABST, CNY65AGRST)
http://www.vishay.com/doc?83540 (CNY64, CNY65, CNY66)