

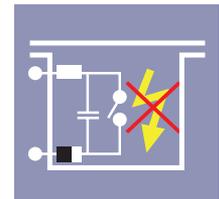
High-Voltage Isolation for Potentially Explosive Environments ATEX Certified



The CNY65Exi provides very high voltage isolation and is ATEX certified per 94/9/EC guidelines for use in potentially explosive environments. The CNY65Exi optocoupler protects equipment and people from being damaged or injured by using infrared light to transmit data and control signals from the typically low-voltage control side to high-voltage equipment.

FEATURES

- ATEX certified; Certificate PTB 03 ATEX 2033 U
- Suitable for intrinsic safe circuits for gas and dust
- Conforms to EN60079-11: 2012 and EN60079-0:2009, EN60079-26:2007
- Safety provision for gas: II (1) G [Ex ia] IIC
- Safety provision for dust: II (1) D [Ex ia] IIIC
- Qualified for continuously, long-term, or frequently dangerous explosive environments, Zone 0
- Isolation voltage, V_{ISO} , of 11 600 V_{PEAK}
- Distance from emitter to detector through insulation ≥ 3 mm
- Comparative tracking index, CTI, greater than 475 according to VDE 0303/DIN 53480
- CTR from 50 % to 300 % or from 100 % to 200 %



APPLICATIONS

- Electronics used in potentially explosive gas and dust environments
 - Safety related process automation and instrumentation
 - Natural gas metering and flow measurement
 - Power and motor switching
 - Power supplies, metering and data acquisition
 - Lighting and signaling

RESOURCES

- Datasheet: CNY65Exi - <http://www.vishay.com/doc?83541>
- ATEX Certificate PTB 03 ATEX 2033 U <http://www.vishay.com/doc?85361>
- For technical questions contact optocoupleranswers@vishay.com
- Sales contacts: <http://www.vishay.com/doc?99914>





OPTOCOUPLER

CNY65Exi

Optocoupler - ATEX Certified for Gas and Dust

Comparative tracking Index (CTI) ≥ 475

The **CNY65Exi** has the highest CTI of all comparable devices. CTI is a measure of the optocoupler mold material and its relative insulating capability. The higher the number, the better.

Isolation Test Voltage (V_{ISO}) = 11 600 V_{RMS}

The **CNY65Exi** has the highest isolation test voltage of all comparable devices. The isolation rating is the voltage level under specified conditions that the device will withstand without breakdown.

BENCHMARK	VISHAY	COMPETITOR A		COMPETITOR B		
Part Number	CNY65Exi	OPI-110 and OPI-1264	OPI-1000L	522-03-i	525-03-0-i	535-04-0-i
Package	Leaded	Leaded, axial	SMD	Leaded	Leaded	Leaded
V _{ISO}	11 600 V_{PEAK}	10 000 V _{DC}	10 000 V _{DC}	4000 V _{DC}	4000 V _{DC}	4000 V _{DC}
ATEX Directive 94/9/EC Provisions	II (1) G [Ex ia] IIC II (1) D [Ex ia] IIIC	II (1) GD [EX ia] IIC	II (1) GD [EX ia] IIC	II (1) G [EX ia] IIC	II (1) G [EX ia] IIC	II (1) G [EX ia] IIC
Creepage (mm)	14	14	13	12	14.5	14.5
Insulation through Thickness (mm)	≥ 3.0	(not published)	(not published)	2	5	5
Comparative Tracking Index, CTI	≥ 475, PLC=1	(not published)	(not published)	(not published)	(not published)	(not published)
Size (mm)	17.8 x 9.6 x 6.1	13.9 x 6.35	14 x 6.0 x 5.1	16.5 x 6.6 x 9.0	19 x 10 x 8	19 x 10 x 8
CTR	50 % to 300 % 100 % to 200 %	25 %, 50 %, 100 %	25 %, 40 %, 50 %, 100 %	80 % typ.	80 % typ.	700 % min.

Group II - Comprised of equipment intended for use in locations other than mining that are liable to be endangered by explosive atmospheres.

Ex is the distinctive European Community mark designating explosion protection.

G - explosive atmosphere comprising a mixture of gas, vapor or mist with air.

D - explosive atmosphere comprising a mixture of flammable dust with air.

Category 1 - Equipment in this category is intended for use in areas in which explosive atmospheres caused by mixtures of air and gases, vapors or mists or by air/dust mixtures are present continuously or frequently for long periods. A very high degree of safety is required; safe even when two failures occur independently.

 **CNY65 Exi**
V818 J69
II (1) G [Ex ia] II C
II (1) D [Ex ia] III C
PTB 03 ATEX 2033 / U

ia signifies compliance with EN 60079-11 and that CNY65Exi provides intrinsic safety for measurement and control technology. An electric circuit is intrinsically safe if any spark or thermal effect produced is not capable of causing ignition of a given explosive atmosphere for Zones 0 and 20.

ATEX certificate number
ATEX (ATmospheres EXplosibles)
Directive 94/9/EC

IIIC = For use with equipment intended for use in places with an explosive, combustible dust.

IIC = For use with a small number of gasses which require very little spark energy to ignite them, for example, hydrogen, carbondisulphide, and acetylene.