

Isolator

VQ321

Features:

- Double galvanic isolation
- Modem Safe surge protection
- Specifications exceeding Cenelec requirements
- Excellent intermodulation performance
- Class A screening effectiveness
- Low leakage current

Description

Isolators are used to separate the in-home installation or subscriber equipment from the CATV network. These devices provide the necessary safety protection as described in IEC-60728-11 in which they are called system outlets. The safety provided is that no hazardous voltages can be present on the outer conductor(s) of these system outlets onto which the in-home cable network is connected. There are four types of system outlets in use providing varying degrees of protection against electric shocks. Technetix is supplying two major groups called the fully- and semi-isolated system outlets or as we call them isolators. The VQ-series consists of Fully isolated system outlets: This type of isolator incorporates isolating components (high voltage capacitors) in series with both the inner and the outer conductors of the coaxial connectors. The Technetix isolators series has been especially developed to meet the needs of the European market and distinguishes itself from any other isolator range in the business.

Within this portfolio of isolators Technetix has many models. Like one, two and three port isolators, included into the isolator designs are often additional circuits like splitters, taps, various filters, combinations of this, etc.. Even our inventions as Ingress Safe, Modem Safe are incorporated into some of the designs while a NiSn plated input connector is available at some TRIS-models. Also many accessories are available like ABS-housings in many shapes and sizes, adapting plates, push-on filters etc.. The metal housing of the VQ-321 is made of a one body zinc die-cast while the input connector is made of machined brass. The material of the inner spring has been designed specially for connecting coax cables with an inner core of 0.51 to 1.20 mm, even when varying thicknesses are connected after each other. The high frequency shielding exceeds Class A requirements (IEC-60728-2) over the specified frequency range.

Specifications

V1 nov 22, 2010

	Port	Range	Min	Typical	Max	Units	Remark	Margin
Frequency Range	In		5	F-female	1000	MHz		
Connectors	Out			F-female				
Equipment Approval				CE				
Material				Zinc die cast				
				Silver plating				

Ordering Information

VQ321	Isolator	Article number:	19000665
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Modem Safe



Modem Safe® is a highly effective surge protection solution. It blocks high level surge pulses and unwanted DC voltages, thus protecting sensitive equipment. In addition to the protection against these surges and voltages, ModemSafe technology® also prevents the internal ferrites becoming magnetized. When ferrite material is magnetized, the intermodulation behaviour deteriorates resulting in an increase of passive intermodulation products. Thanks to the ModemSafe® circuitry, the intermodulation behaviour of the models is excellent and will not deteriorate over time.

Specifications

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	Port	Range	Min	Typical	Max	Units	Remark	Margin	
Insertion Loss	In -> Data	5 MHz < F < 860 MHz		3,5	4,5	dB			
		860 MHz < F < 1000 MHz		4,0	5,0	dB			
	In -> TV	5 MHz < F < 65 MHz	30	35		dB			
		80 MHz < F < 860 MHz		3,0	4,5	dB			
Return Loss	In	860 MHz < F < 1000 MHz		4,0	5,0	dB			
		80 MHz < F < 860 MHz	18	22		dB			
	Data	5 MHz < F < 65 MHz	20	22		dB			
		65 MHz < F < 1000 MHz	18	22		dB			
TV	80 MHz < F < 470 MHz	16	20		dB				
	470 MHz < F < 1000 MHz	14	20		dB				
Isolation	Data ->TV	5 MHz < F < 65 MHz	55	60		dB			
Galvanic Isolation 2120 V DC	Inner conductor Input -> Inner/Outer conductor Output	65 MHz < F < 1000 MHz	20	25		dB			
					0,7	mA	1		
	Outer conductor Input -> Outer/Inner conductor Output					0,7	mA	1	
Galvanic Isolation 240 V AC	Inner conductor Input > Inner conductor Output				3,5	mA RMS	1		
	Outer conductor Input - Outer conductor Output				3,5	mA RMS	1		
Screening Effectiveness	-	8 MHz < F < 10 MHz	75	80		dB	2		
		10 MHz < F < 30 MHz	85	90		dB	2		
		30 MHz < F < 300 MHz	85	95		dB	2		
		300 MHz < F < 470 MHz	80	90		dB	2		
		470 MHz < F < 1000 MHz	75	85		dB	2		
Spurious signals Second Harmonic		5 MHz < F < 1000 MHz	110			dBc	3		
		5 MHz < F < 1000 MHz	105			dBc	3		

Remarks	
1	According applicable sections of EN 50083-1 and EN 650065 safety standards. Test performed after humidity treatment 91-95%, 30°C, 48 Hr (EN60065 section 10.2)
2	According EN 50083-2 section 4.2.2.2.
3	Measured with +60 dBmV return path input carrier