CesCom

N400
ACA approved

CE0019Q
QUAD RS422 – RS422 REPEATER ISOLATOR
Isolates and extends RS422 buses

Features

- 🟢 3KV **optical isolation** barrier
- 🟢 Full duplex operation to 1Mbps
- 🟢 >1200 metres transmission capability
- 🟢 Wide supply range **single** DC power
- 🟢 Efficient **switch-mode** regulation
- 🟢 RS422 fast TVS **Transient protection**
- 🟢 Compact vertical DIN rail mounting
- 🟢 Pluggable **Combicon** terminal connections
- 🟢 LED indicators
- 🟢 4 Independent RS442 Modules
- 🟢 4 Independent SMPS Modules

Overview

RS422 lines can typically run hundreds of metres or more. One side effect of such long line lengths can be harmful transients and ground-loop currents which can introduce errors or disrupt communications or even damage the host.

The CE-0019Q electrically isolates RS422 buses from other RS422 buses through an optical isolation barrier rated at over 3,000 volts. Not only does this prevent harmful voltages being coupled through to the each side but it also isolates grounds from side which otherwise could affect the inherent common-mode voltage rejection, a problem on many balanced networks.

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Specifications

Supply Voltage	+12V to +30VDC
Current	70ma @24VDC
Physical	95mm x 32mm x 110mm (HWD)
Weight	380 grams (approx)
Case Material	1mm powder coated steel
Environment	-40 to +85'C operating
Standards	EIA/RS485; AS/NZS-3548 EMI/EMC; C Tick compliant

RS422 Speed	1Mbps maximum
Isolation	2,500 volts
Indicators	Input TxData, RxData,
	Output TxData, RxData
	Power On

OPERATION

RS422 to RS422

The CE-0019Q Quad RS422 Isolator provides Isolation between four independent Host and Remote RS422 networks.

Each RS422 Receiver input (x8) may be terminated into a 120 ohm resistor by inserting an internal link. This prevents reflections which can corrupt data when long RS442 lines are used.

Each RS422 Module is independently powered from its own Switched Mode Power Supply unit.

Front Panel TxData and RxData LED's monitor Data flow at each Input and Isolated Output of each of the four RS422 Modules.
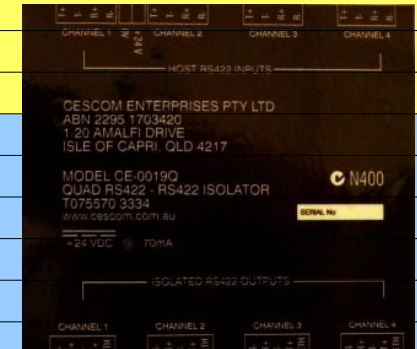
Connection from the Host is via connectors at the top of the unit while connection to all remote stations is via connectors at the bottom of the unit.

All Protective Ground connections from the CE-0019Q are to be made to a point at the local cabinet ground. This provides an earth return for the internal transient suppression circuitry.

Notes: [1] Ensure lines are terminated (usually 120ohms)

CONNECTIONS

		POWER
1	GND	Power supply ground
2	+VDC	Power-supply positive input
		ISOLATED OUTPUTS
1	EARTH	Isolation Protection ground
2	TX+	RS-422 Transmit A
3	TX-	RS-422 Transmit B
4	RX+	RS-422 Receive A
5	RX-	RS-422 Receive B

Please refer to the connection diagram label on the bottom of each unit for more detailed information.

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CE-0019Q QUAD RS422 ISOLATOR

ISOLATED RS422 OUTPUTS

TO HOST RS422 DEVICES

TO REMOTE RS422 DEVICES

TRANSIENT — RS485 STAGE — OPTICAL ISOLATORS — RS485 STAGE — TRANSIENT

ARRESTOR — DC//DC CONVERTER — ARRESTOR
TO PS MODULE — ISOLATED 5VDC

Rx(-) Rx(+) Tx(-) Tx(+)
ETH Tx(+) Tx(-) Rx(+) Rx(-)

NOTES
1. USE TWISTED PAIR CABLES CAT 5.0 OR EQUIVALENT.
2. EACH RS422 RX IS TERMINATED INTO A 120 OHM RESISTOR.
3. THE ETH CONNECTION IS MADE TO AN EXT. CHASSIS GROUND.
4. THE UNIT MAY BE POWERED FROM +12 TO +30VDC.

+12VDC TO +30VDC
0V
INTERNAL POWER MODULES X4

Title		
INSTALLATION DRAWING CE-0019Q QUAD RS422 ISOLATOR DIN MOUNT		
Size	Number	Revision
A4	CE-0019D/16	1.0
Date: 25-JUN 2009		Sheet 1 of 1
File: C:\SCHEMA\CE-0019D		Drawn By: E.CESLIS