



THIS EQUIPMENT MUST BE INSTALLED AND MAINTAINED BY A SUITABLY SKILLED AND TECHNICALLY COMPETENT PERSON. ENSURE ALL POWER IS REMOVED BEFORE INSTALLATION.

Compatibility with Quantec Systems

The QT603 Quantec Network Splitter is compatible with C-TEC's Quantec and Quantec PRO addressable call systems.

Product Description

The QT603 network splitter is an essential wiring aid for Quantec and is designed to protect Quantec systems from open and short circuit faults. The more that are fitted, the easier it is to install, commission and maintain the system.

By incorporating network splitters when installing the Quantec system, 'spine' network cabling (typically 1.5mm² - 2.5mm² T&E cable) can be connected to 'limb' device cabling (minimum 4-core security cable).

The splitter's spine connections include one network input and one network output (both unfused). The splitter's limb connections includes six fused (400mA) outputs for wiring individual circuits containing Quantec's field devices.

Splitter Location: As a general rule of thumb, install one splitter per corridor junction (located at the end of the corridor nearest to the Quantec Controller). However, if the corridor is longer than 50 metres, install the splitter in the centre of the corridor to reduce the wiring runs required for each limb.

The advantages of using network splitters include:

- 1) They ensure voltage drop problems are substantially avoided.
- 2) Each limb is fused, so short circuits will blow the fuse and leave the rest of the system working.
- 3) They allow cable and equipment faults to be easily found and isolated.
- 4) Security cable connects to field devices more easily than T&E cable.
- 5) They allow the system to be connected a section at a time.
- 6) The plug-on limb connectors supplied with splitters mean easier commissioning and fault finding.

Operation

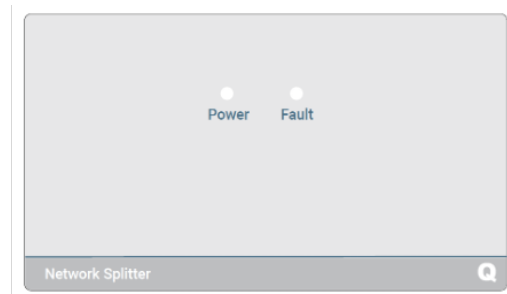
When power is applied to the network, the QT603's green Power LED illuminates, indicating that power is applied to that part of the network. A short circuit on any of the limbs will blow the respective fuse and illuminate the QT603's yellow Fault LED. Faulty limb circuits may be located by systematically checking the LEDs on the network splitters.

NOTE: This fault WILL NOT be reported back to the Quantec Controller as a short circuit, but as device failures, i.e. it will highlight the precise ID numbers of any isolated devices.

QT603 Technical Specification

Order Code:	QT603 Quantec Network Splitter (Surface Mounted)		
Operating Voltage:	Nominal 24V DC (from the Quantec Controller/Quantec network)		
Quiescent Current:	Less than 1.5mA		
Compatible Panels:	QT601-2 Quantec Controller and QP901 Quantec PRO Controller		
Indicators:	Green LED (Power); Yellow LED (Fault)		
Connections:	2 x NET+, 2 x NET-; 6 x Limb connections (+ and -)		
No. of Limbs per Splitter:	Six individual 400mA fused outputs		
Dimensions (mm):	146(W) x 87(H) x 35(D). Mounts on a standard 25mm UK double gang back box		
Body Material:	PVC	Operating Temperature:	-5°C to +40°C
Weight:	200g	Humidity:	Max. 95% RH (non-condensing)
IP Rating (EN 60529):	IP40 (indoor use only)	Fuse (IEC/EN 60127-2):	400mA 20mm (quick blow fuse)

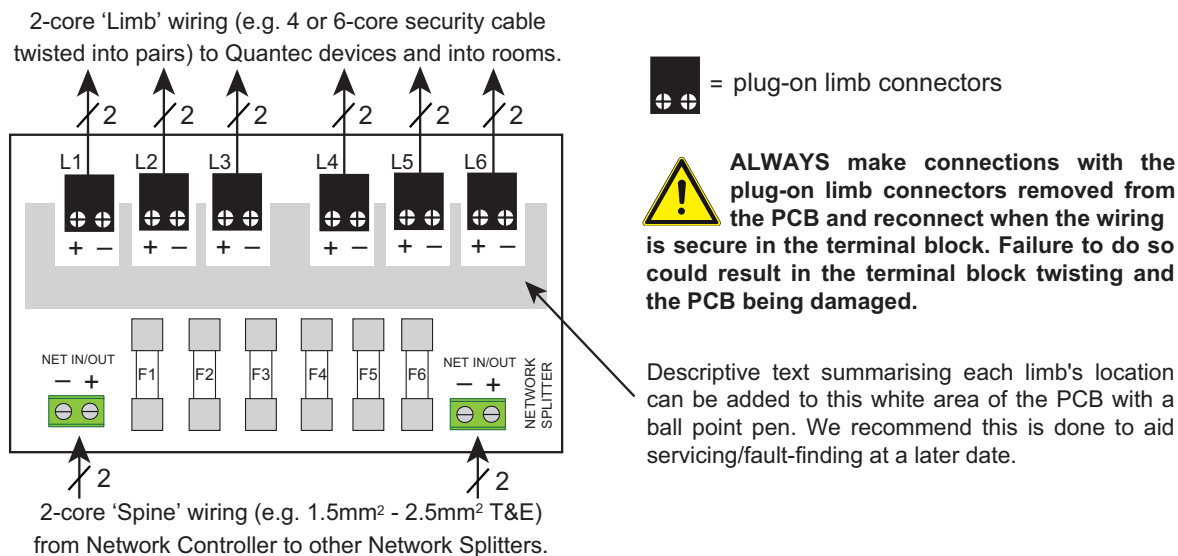
QT603



Wiring and Connections (see Fig.1)

All wiring must be installed in accordance with all applicable national, regional or local standards. In the UK, this is BS 7671 (IET Wiring Regulations).

Fig.1 - QT603 Wiring and Connections



Commissioning

A typical commissioning sequence would be:

- 1) Terminate all limb connections from the splitters to the Quantec field devices, but DO NOT connect the plug-on limb connectors.
- 2) With the Quantec Controller powered up, connect all the spine connectors at the splitters and ensure that all the green Power LED's on the splitters are lit. If not, locate and rectify the wiring fault.
- 3) Connect each plug-on limb connector one at a time and program the relevant devices. If the QT603's yellow Fault LED illuminates when a limb is connected, then it indicates a short circuit wiring fault. **Note:** Open circuit wiring faults result in device failures indicated at the controller. These faults are not indicated on the network splitter.
- 4) In the white area on the QT603's PCB, write which devices are connected to each limb, making fault finding easier.

Important Guidelines

- 1) The ONLY recommended method of wiring Quantec involves using network splitters. DO NOT wire any devices to the spine other than splitters. Spines are not fused and any shorts on the spine will shut down the entire network.
- 2) Spine wiring: 1.5mm² or 2.5mm² 2-core T&E cable.
- 3) Limb wiring: 4 or 6-core security cable (7/0.2mm² stranded), twisted into pairs to reduce voltage drop.
- 4) Maximum cable length per limb = 60 metres; Maximum cable length of all spines and limbs = 750 metres.
- 5) Maximum number of addressable devices per limb = 15; Maximum number of addressable devices per splitter = 60.

Fault-Finding

Symptom	Probable Cause	Solution
Device failures are displayed on the Quantec Controller. All splitters checked, all green Power LEDs lit and all yellow Fault LEDs not lit.	Open circuit fault on the limb where reported devices are located.	Unplug the limb from the splitter. Locate and repair the fault.
The complete network is dead. No LEDs lit on any splitter.	Short circuit fault on spine wiring.	Repair the fault by systematically disconnecting parts of the spine at the network splitters.
Device failures are displayed on the Quantec Controller. All splitters checked, all green Power LEDs lit, one yellow Fault LED lit.	Short circuit fault on a limb wired to the splitter showing the fault, resulting in blown fuse.	Locate the blown fuse on splitter. Repair the fault and replace fuse.
Device failures are displayed on the Quantec Controller. All splitters checked, some green Power LEDs are not lit.	Open circuit fault on spine wiring.	Test spine wiring between relevant splitters and repair the fault.



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E&OE. No responsibility can be accepted by the manufacturer or distributors of these devices for any misinterpretation of this instruction, or for the compliance of the system as a whole. The manufacturers' policy is one of continuous improvement and we reserve the right to make changes to product specifications at our discretion and without prior notice.