

Remote power-feeding on telecommunications circuits

Telecommunications cablers need to take extra precautions when working with telephone lines carrying broadband services. The lines may have an increased voltage, which is called remote powerfeeding, to power the carriage service provider (CSP) equipment within the customer's premises.

These voltages increase the risk of electric shock. In customer premises, network cables carrying power-feeding circuits may be installed on the main distributor frame or may bypass it to extend through to the CSP's equipment. The network cable will most likely be laid near other communications cabling in areas accessed by cablers.

With broadband services, carriers and CSPs may install terminal equipment that is remotely fed using a current limited circuit. This has an open circuit voltage which is high than the normal telecommunications network voltage (TNV) limit.

Cablers must not work on these network cables without appropriate authorisation from the relevant carrier or CSP, and should exercise care when working near any accessible termination.

The increased voltage also has the capacity to damage test equipment and cablers should take reasonable precautions to prevent this happening.

The ACMA wiring rules (currently technical standard AS/ACIF S009:2006) prevent the use of customer cabling for any service that exceeds TNV limits, such as remote feeding telecommunications current (RFT-C) circuits. Consequently, carriers and CSPs using RFT-C should cable directly to the terminal equipment, bypassing the existing customer cabling infrastructure. The power-fed terminal equipment must be network equipment, by agreement between the carrier or CSP and the customer.

To regulate the services and installation of network cabling into customer premises, the Communications Alliance Ltd has developed an industry code that specifies a maximum voltage of 300 Vdc and the current limitation parameters that carriers and CSPs should observe when power-feeding within their networks.

It also requires carriers and CSPs to provide separation, barriers and warning labels to alert cablers to potential hazards.

RFT-C cables and carrier terminations are all part of the carrier's network. Cabling provider registration and licensing arrangements do not authorise cablers to work on or interfere with any carrier equipment or cables on the carrier-side of the network boundary.

The industry code, *ACIF C559:2002 Unconditioned Local Loop Service (ULLS) Network Deployment Rules*, which sets out guidelines for carriers and CSPs to follow, is on the [ACMA website](#).

It is also on the Communications Alliance Ltd website at www.commsalliance.com.au.

More information

For more information about remote power-feeding and telecommunications circuits contact [ACMA](#) on telephone (03) 9963 6800, fax (03) 9963 6970 or email cabling@acma.gov.au.

ACMA has [fact sheets](#) on a range of topics.

Please note: this document is intended as a guide only and should not be relied on as legal advice or regarded as a substitute for legal advice in individual cases.

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