Use of Type 604 / 611 Plug & Socket

(Auxiliary equipment wiring modes)

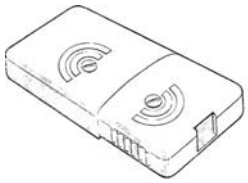
This document is based on the Australia Post Office specification 1222 Issue 1.

ACCESS COMMUNICATIONS PTY LTD

Telephone wiring modes refer to the wiring configurations used to connect auxiliary apparatus such as alarm panels, fax machines, data equipment, auto dialers, etc to an existing telephone service. Mode 3 is by far the most commonly used configuration with 611 sockets commonly (and erroneously) often referred to as a Mode 3 socket.

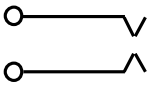
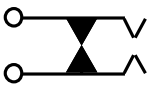
For the sake of completeness, this document shows the wiring configurations for all seventeen connection modes published in the original document even though some of the wiring modes are now obsolete (e.g. wiring modes 9, 10 and11).

The Type 604 plug and Type 611 socket are of the same basic design and of a similar appearance to the standard Type 603M plug and Type 610 socket used to connect standard telephones to the network. The two series have been made incompatible by modifications to the shape of the tongue of the Type 604 plug and the corresponding cavity in the Type 611 socket to ensure auxiliary equipment cannot be inadvertently connected to a Type 610 socket. For identification purposes a raised symbol has been incorporated in the Type 604/611 plug and socket as shown in the following line drawing.



A small cam capable of being manually rotated is inserted between each contact pair (1-2, 3-4 & 5-6) of the Type 611 socket. This allows each contact pair to be used for switching purposes. Turning any cam through 180˚ allows the associated contact pair to be either normally oped or normally closed when there is no plug inserted in the socket.

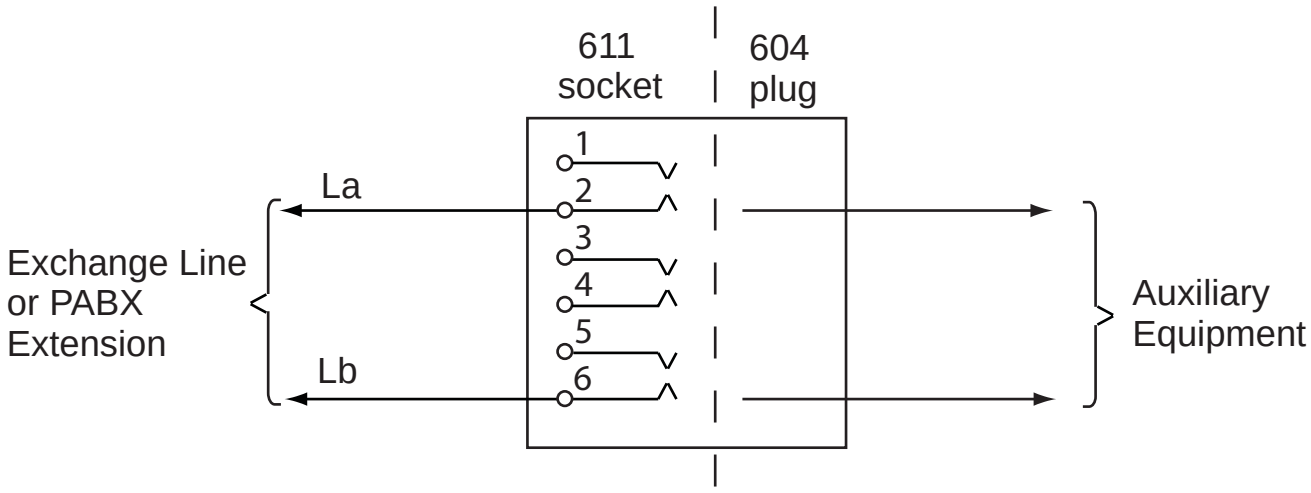
Where a wiring diagram shows a socket with a shorting symbol across a pair of contacts, the cam for those contacts shall be adjusted on installation to produce a short circuit condition when the plug is removed. All other contact pairs, where no shorting symbol is shown, will have their cam adjusted to maintain an open circuit when the plug is removed. The symbols used to indicate normally-closed and normally-open contacts are shown below.

Normally Open	
Normally Closed	

From the mid 1980s the rules for private supply of customer equipment were relaxed and it was deemed no longer necessary to use the Type 611 socket unless there was need for the socket to switch the line. The Type 605 plug was introduced to connect equipment to either a Type 610 or a Type 611 socket. The Type 604 plug which was compatible with only a Type 611 socket became obsolete.

Connection Mode 1

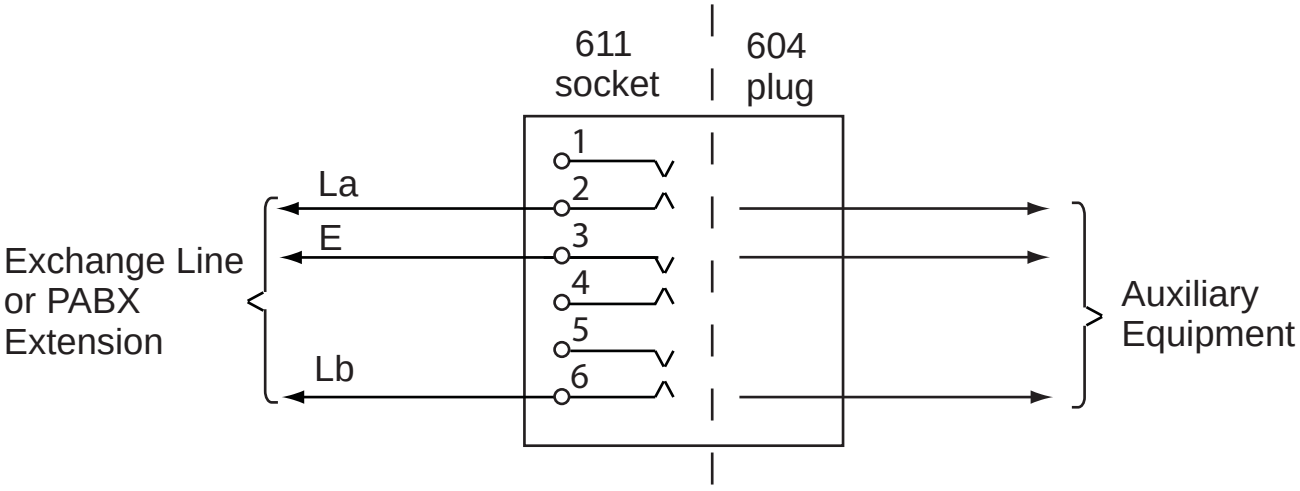
Exchange line or PABX extension.



Note 1. All cams are in the normally open position.

Connection Mode 2

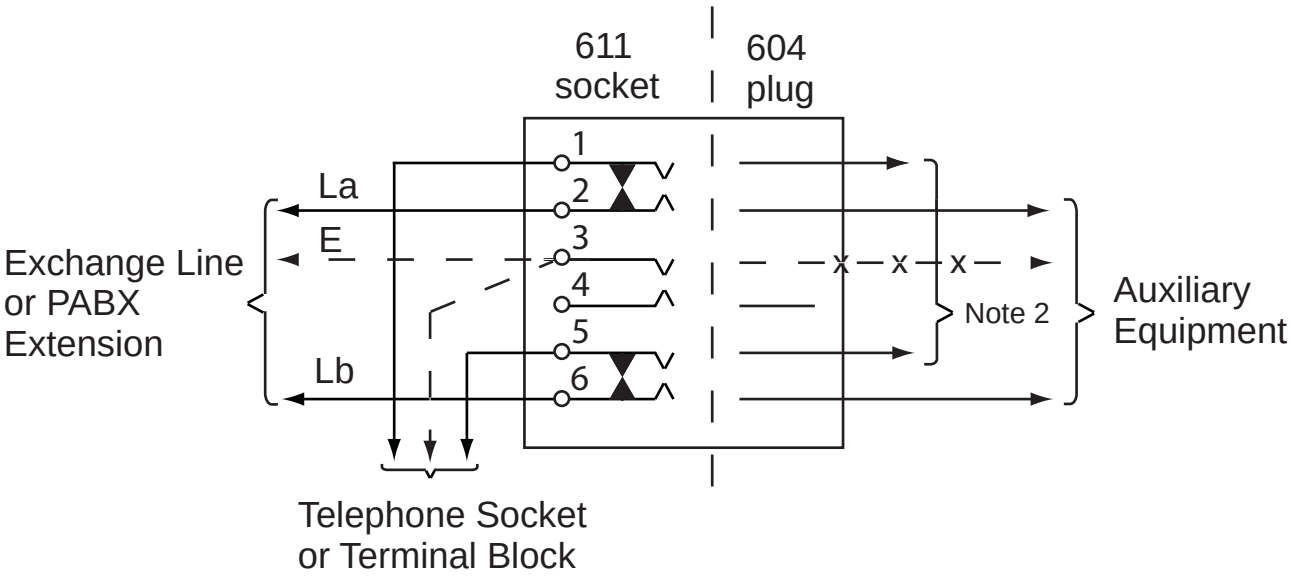
Exchange line or PABX extension requiring an earth.



Note 1. All cams are in the normally open position.

Connection Mode 3

For an exchange line or PABX extension where both speech leads need to be switched to the telephone on removal of the plug.



Note 1. If an earth is required for recall etc, connect it to the telephone as shown thus: — — — – . If an earth is required on the auxiliary equipment, it is connected as shown thus: –x–x–x–

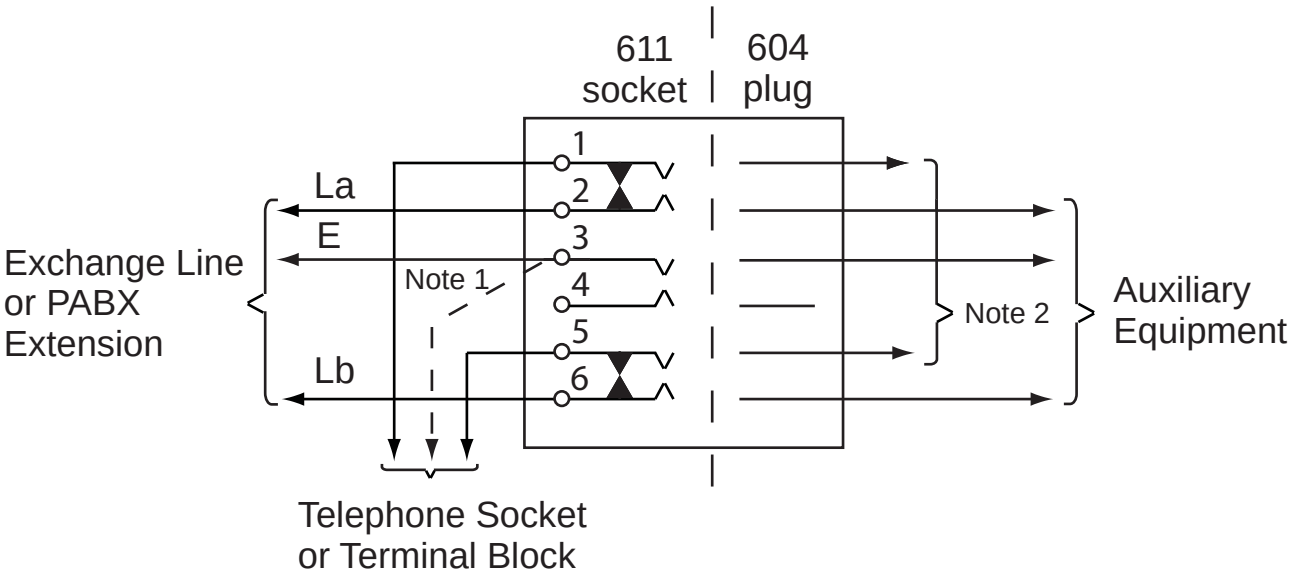
Note 2. Connection to these terminals is required only where the auxiliary equipment incorporates facilities for switching the line to the telephone.

Note 3. Where the telephone is connected to a 4 wire extension from a PABX, terminate the fourth wire on terminal 4 of the 611 socket.

Note 4. Cams 1-2 & 5-6 are in the normally closed position. Cam 3-4 is in the normally open position

Connection Mode 4

For an exchange line or PABX extension requiring an earth, where both speech leads need to be switched to the telephone on removal of the plug.



Note 1. Where an earth to the telephone is used for recall etc., connect it as shown thus: – – –

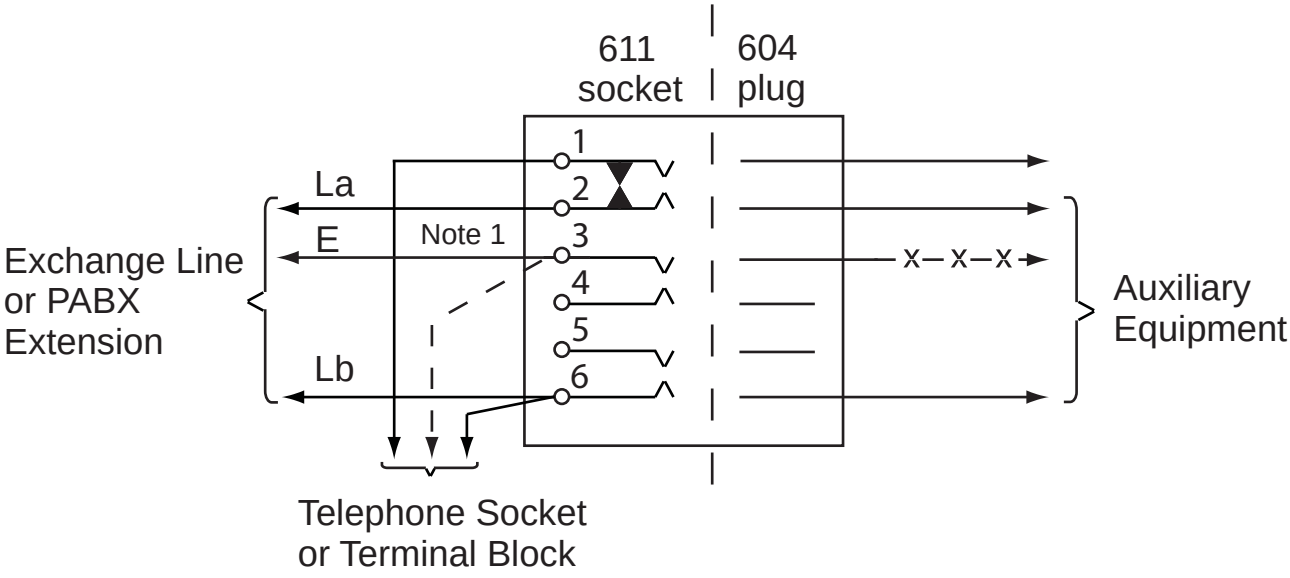
Note 2. Connection to these terminals is required only where the auxiliary equipment incorporates facilities for switching the line to the telephone.

Note 3. Where the telephone is connected to a 4 wire extension from a PABX, terminate the fourth wire on terminal 4 of the 611 socket.

Note 4. Cams 1-2 & 5-6 are in the normally closed position. Cam 3-4 is in the normally open position

Connection Mode 5

For an exchange line or PABX extension where one speech lead needs to be switched to the telephone on removal of the plug.



Note 1. If earth is used for recall etc. connect it to telephone as shown thus: – – – -

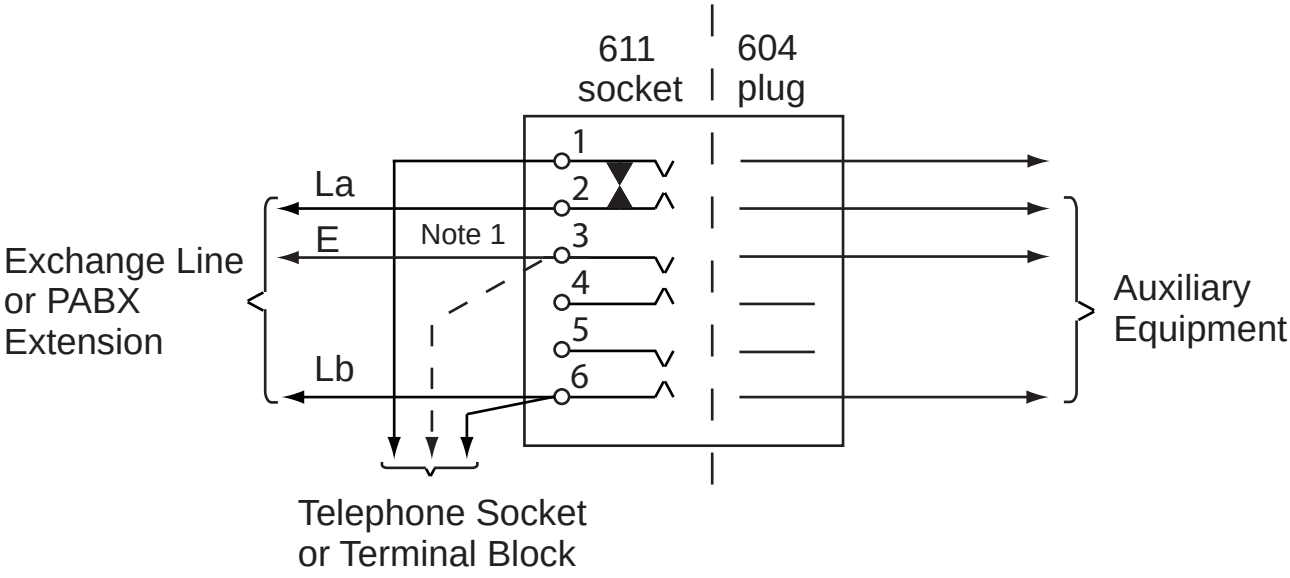
If an earth is required for auxiliary equipment, connect it as shown thus: –x–x–x–

Note 2. Where the telephone is connected to a 4 wire extension from a PABX, terminate the fourth wire on terminal 4 of the 611 socket.

Note 3. Cam 1-2 is in the normally closed position. Cams 3-4 & 5-6 are in the normally open position

Connection Mode 6

For an exchange line or PABX extension requiring an earth where one speech lead needs to be switched to the telephone on removal of the plug.



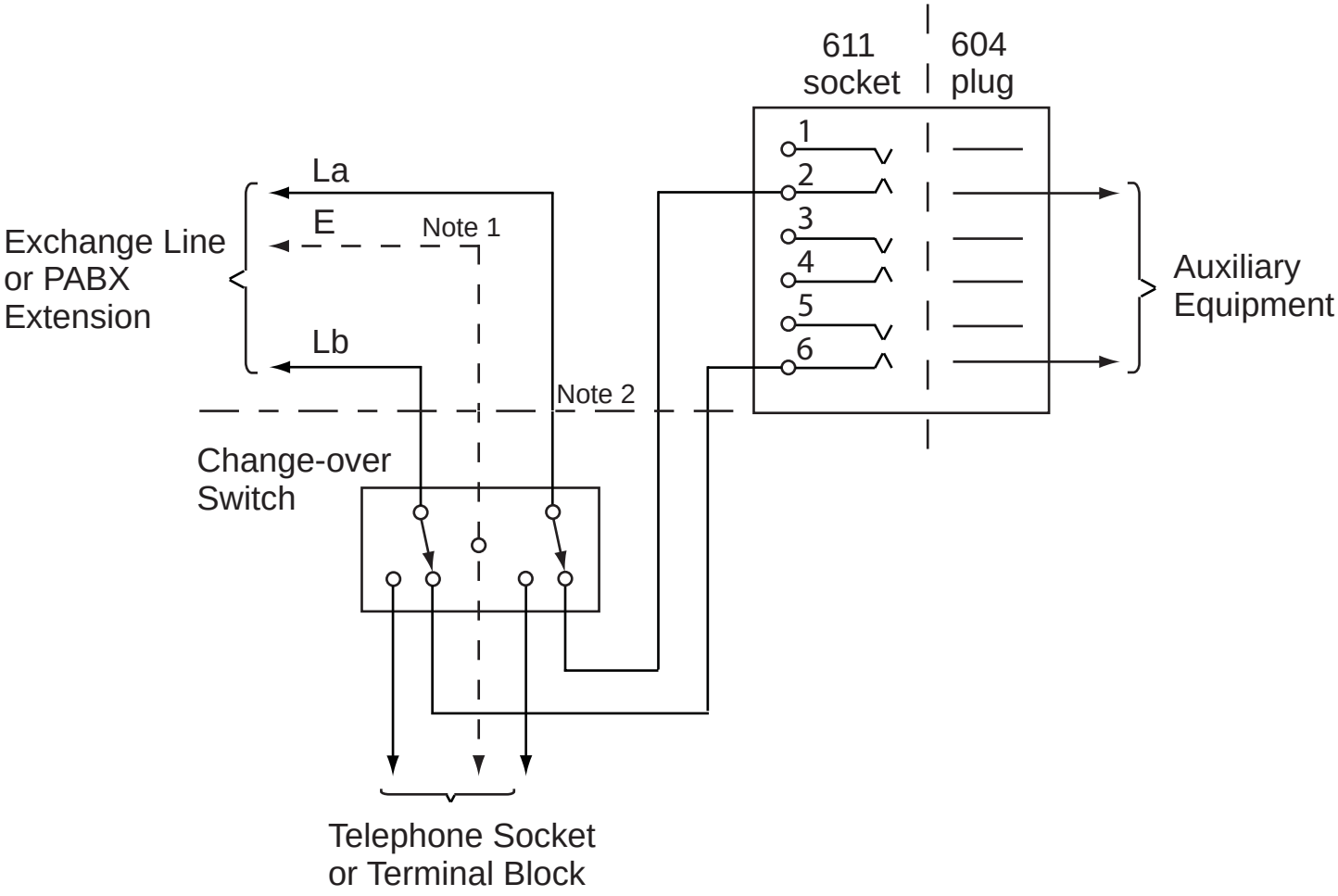
Note 1. If an earth is used for recall etc. connect it to telephone as shown thus: – – – -

Note 2. Where the telephone is connected to a 4 wire extension from a PABX, terminate the fourth wire on terminal 4 of the 611 socket.

Note 3. Cam 1-2 is in the normally closed position. Cams 3-4 & 5-6 are in the normally open position

Connection Mode 7

For an exchange line or PABX extension where both speech leads are switched to either the auxiliary equipment or a telephone by a change-over switch.



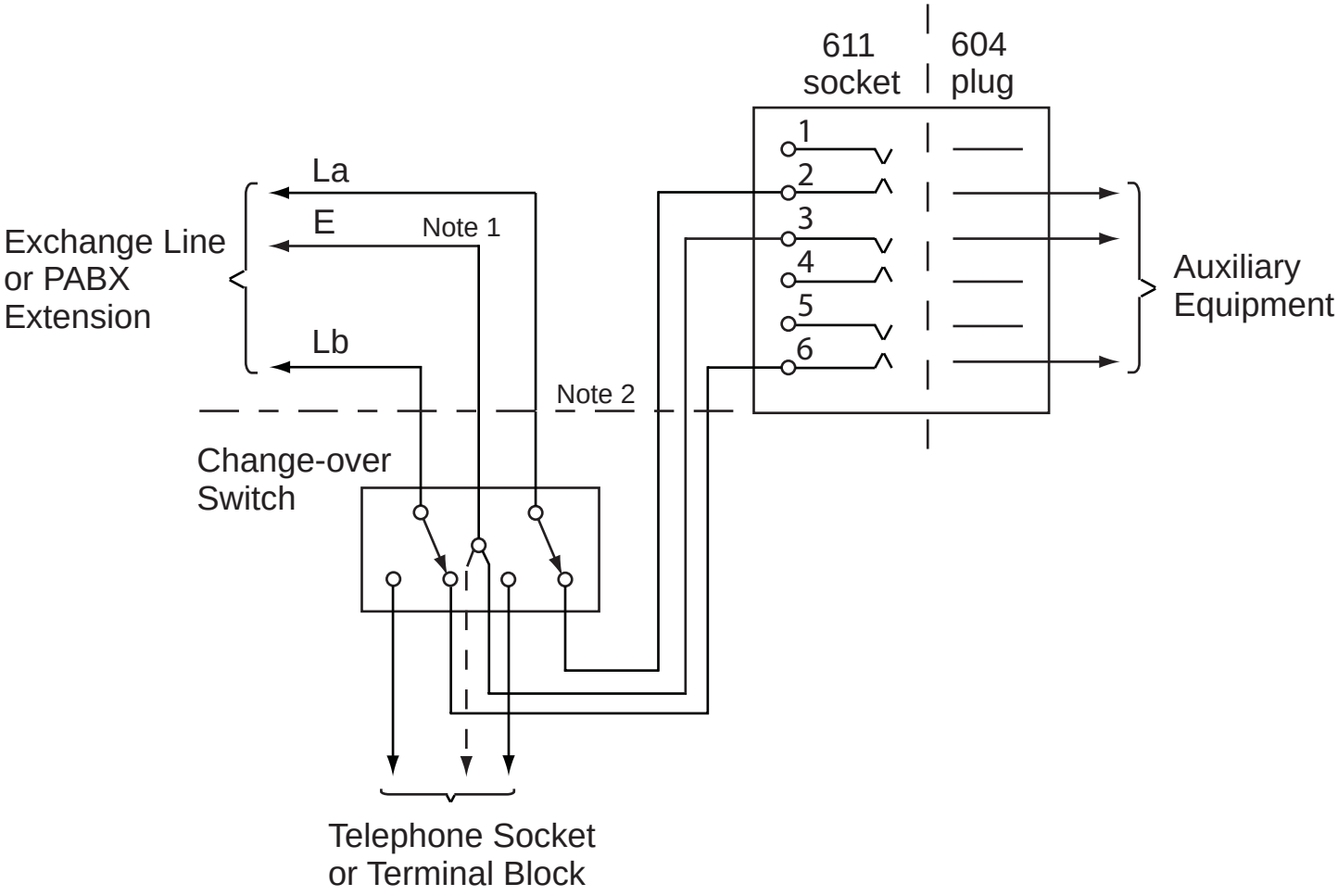
Note 1. If an earth is used for recall etc. connect it to telephone as shown thus: – – – -

Note 2. When the change-over switch is incorporated in the telephone, connect the telephone plug and socket (603M/610M) at this point.

Note 3. All cams are in the normally open position.

Connection Mode 8

For an exchange line or PABX extension requiring an earth where both speech leads are switched to either the auxiliary equipment or a telephone by a change-over switch.



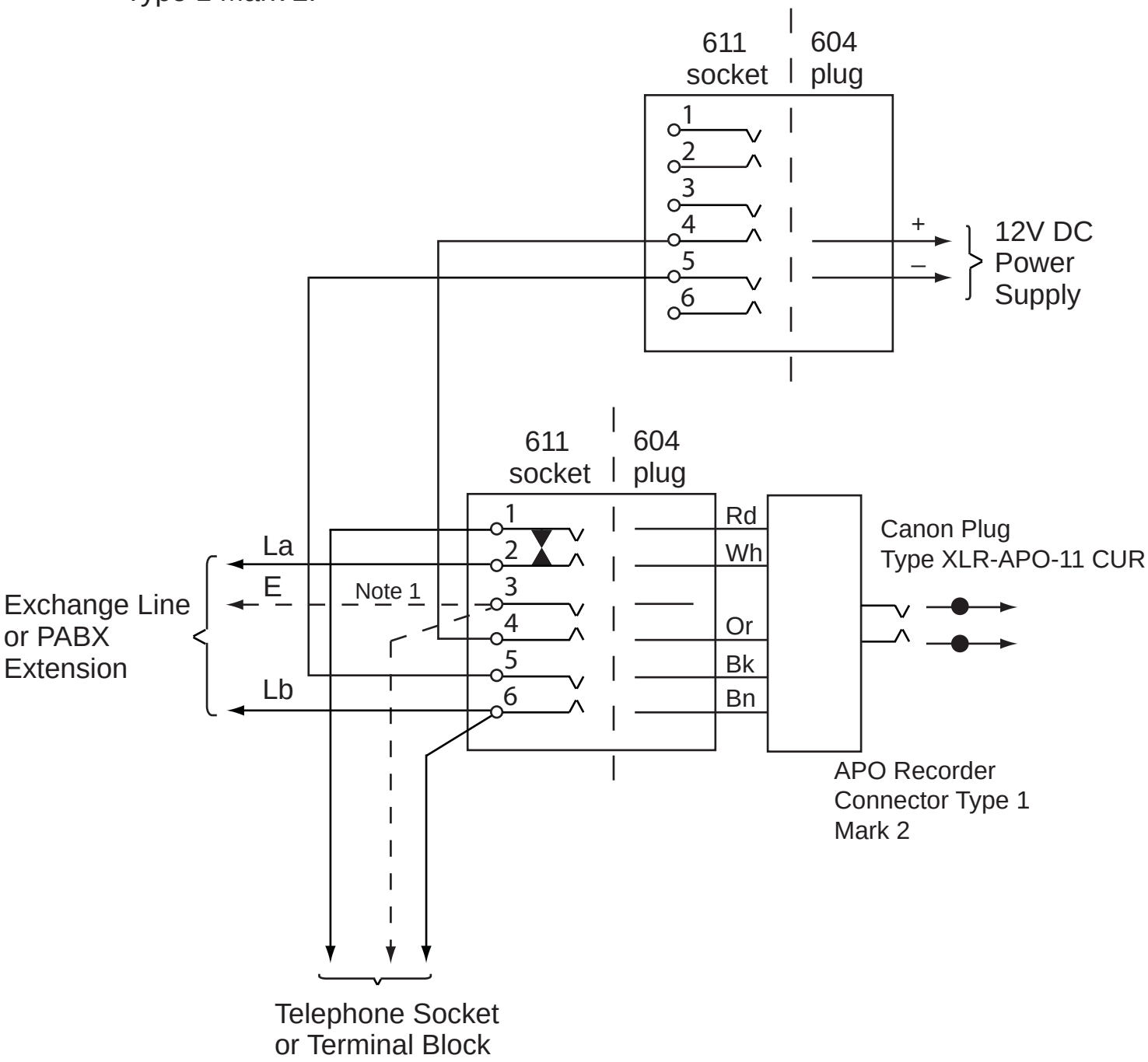
Note 1. If an earth is used for recall etc. connect it to telephone as shown thus: – – – -

Note 2. When the change-over switch is incorporated in the telephone, connect the telephone plug and socket (603M/610M) at this point.

Note 3. All cams are in the normally open position.

Connection Mode 9

For an exchange line or PABX extension to an APO Recorder Connector Type 1 Mark 2.



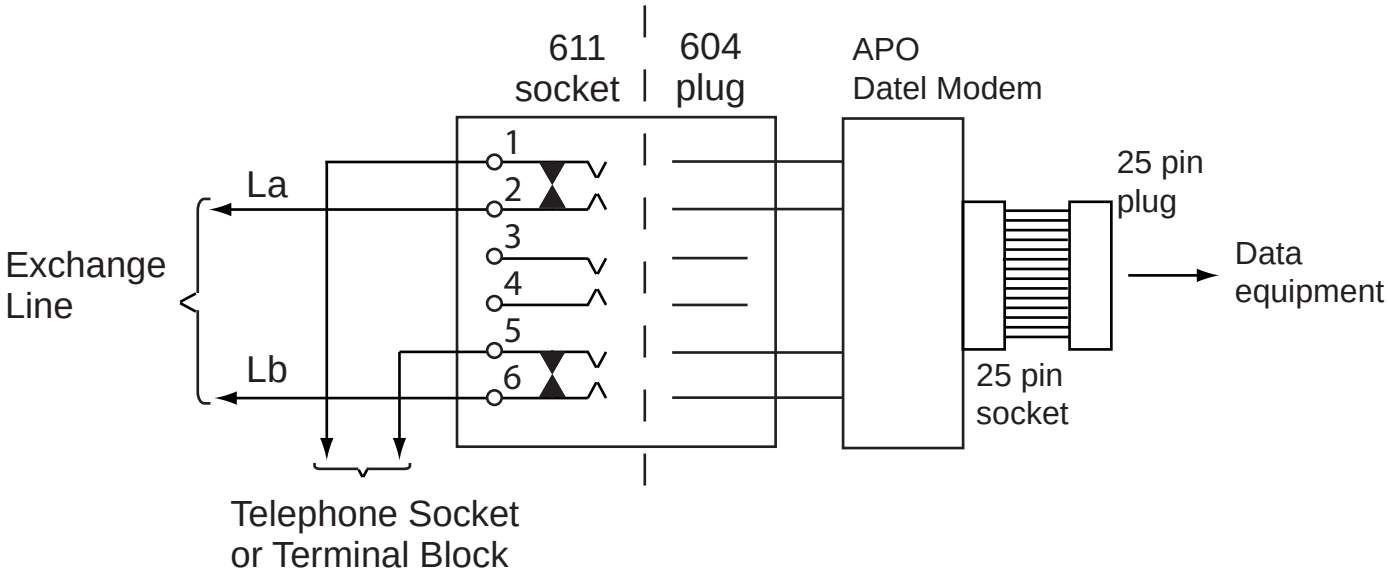
Note 1. If earth is used for recall etc. connect to telephone as shown thus: – – – -

Note 2. When the APO recorder connector is fitted with a brown plug, this must be removed and a type 604 plug connected as shown.

Note 3. Cam 1-2 is in the normally closed position. Cams 3-4 & 5-6 are in the normally open position. All cams in the power-supply socket are in the normally open position.

Connection Mode 10

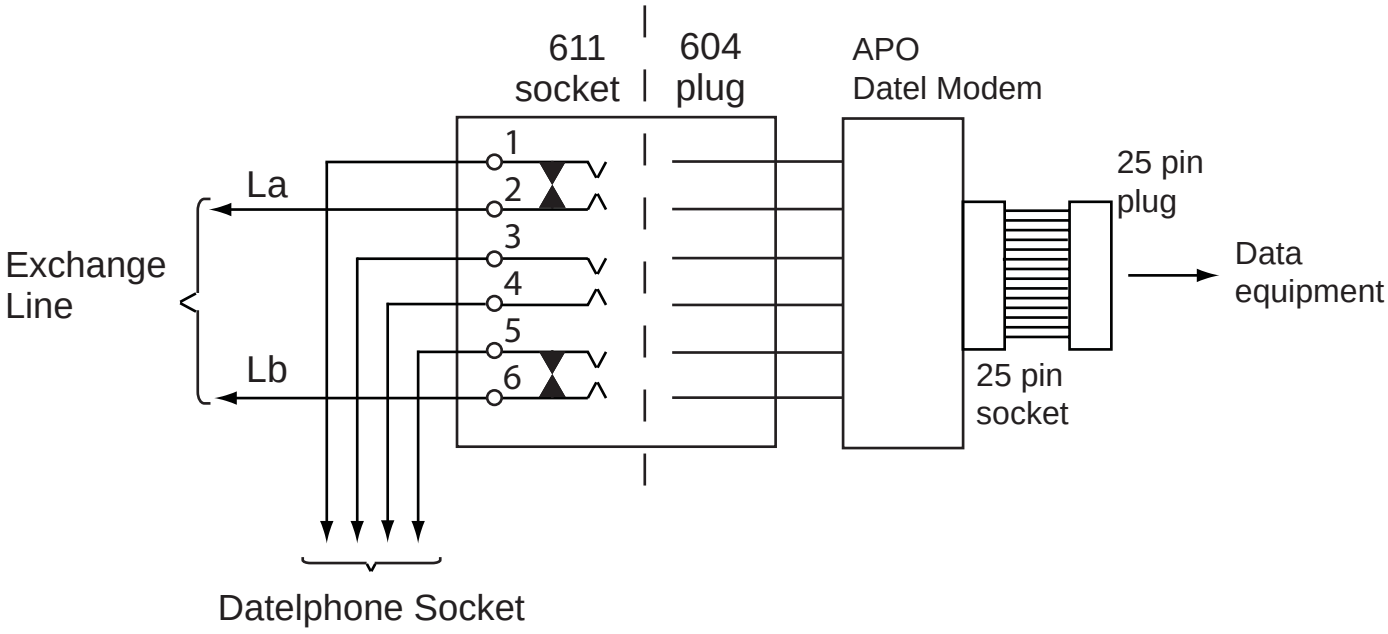
For an exchange line to a Datel modem with manual switching.



Note 1. Cams 1-2 & 5-6 are in the normally closed position. Cam 3-4 is in the normally open position

Connection Mode 11

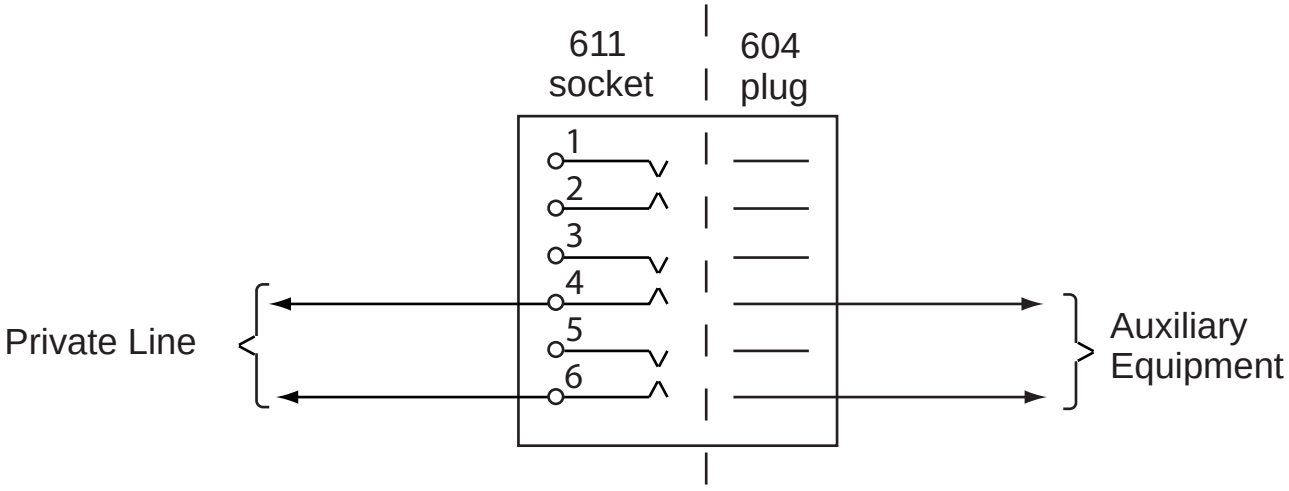
For an exchange line to a Datel modem with automatic switching.



Note 1. Cams 1-2 & 5-6 are in the normally closed position. Cam 3-4 is in the normally open position

Connection Mode 12

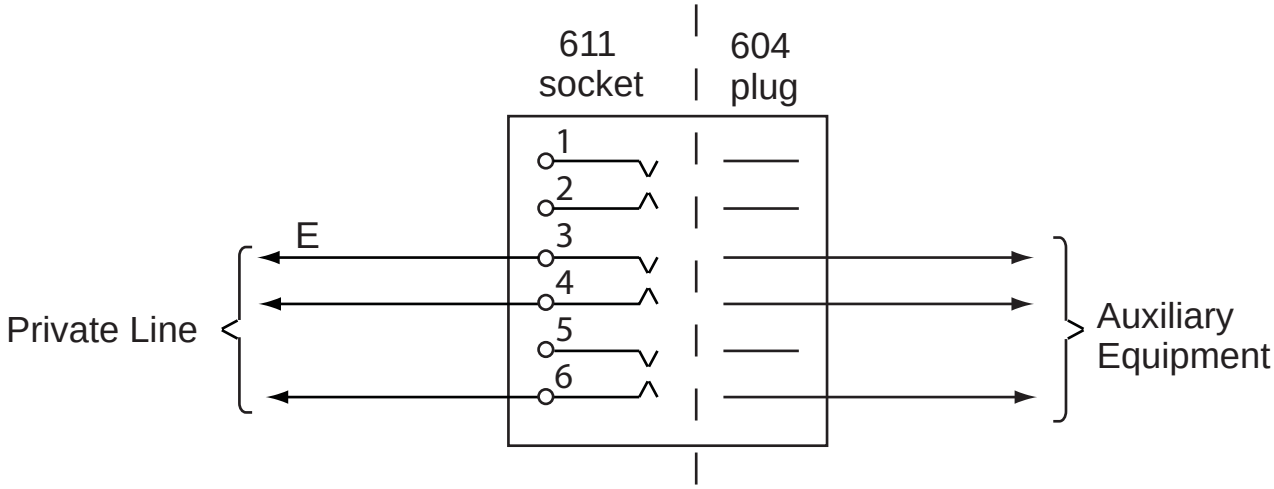
Private line (2 wire).



Note 1. All cams are in the normally open position.

Connection Mode 13

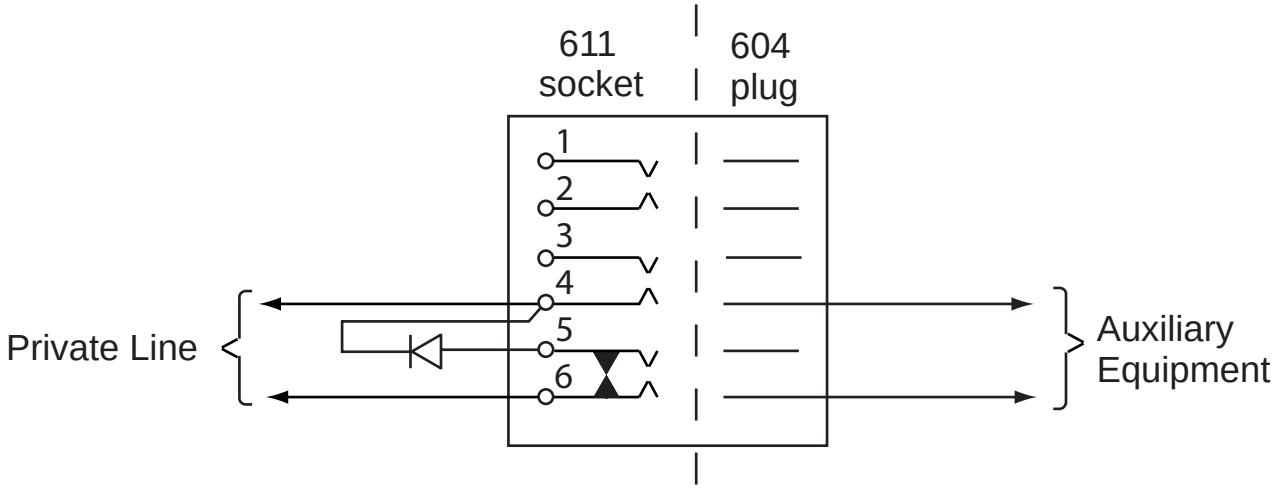
Private line (2 wire) requiring an earth.



Note 1. All cams are in the normally open position.

Connection Mode 14

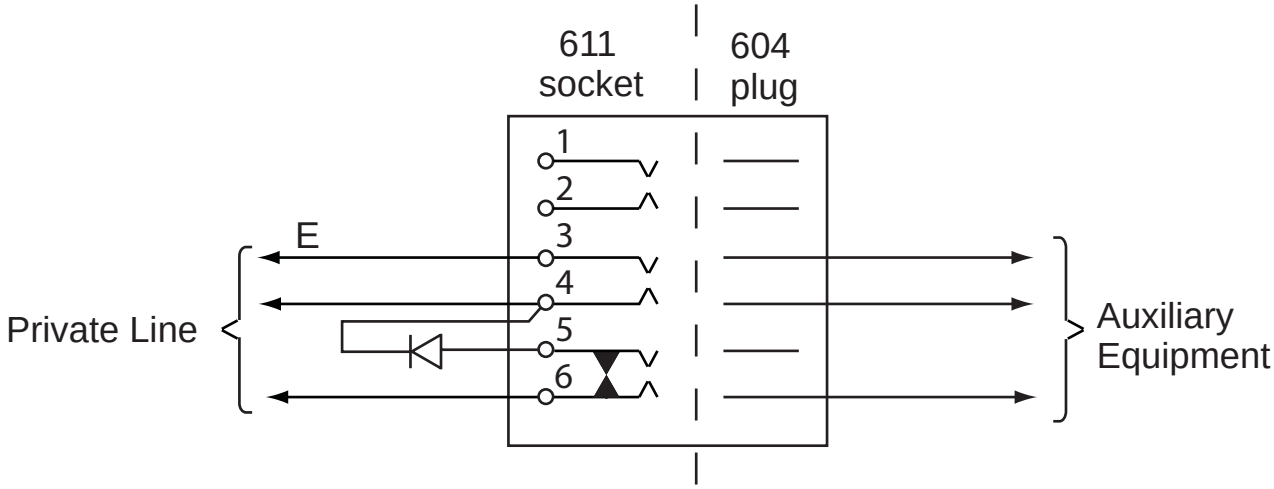
Private line (2 wire) having the line terminated with a diode when the plug is removed.



Note 1. Cams 1-2 & 3-4 are in the normally open position. Cam 5-6 is in the normally closed position.

Connection Mode 15

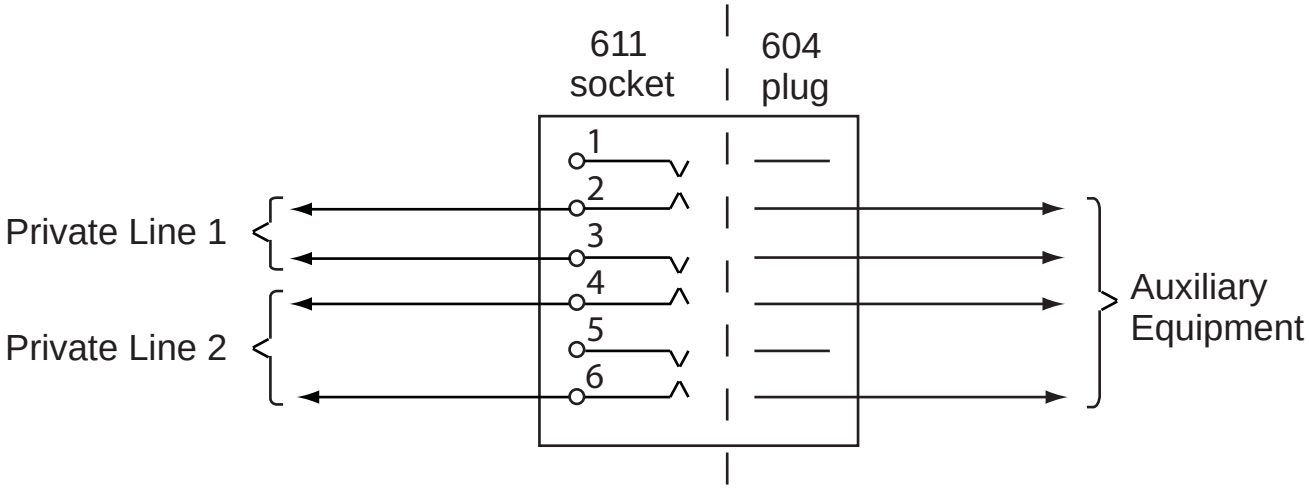
Private line (2 wire) requiring an earth and having the line terminated with a diode when the plug is removed.



Note 1. Cams 1-2 & 3-4 are in the normally open position. Cam 5-6 is in the normally closed position.

Connection Mode 16

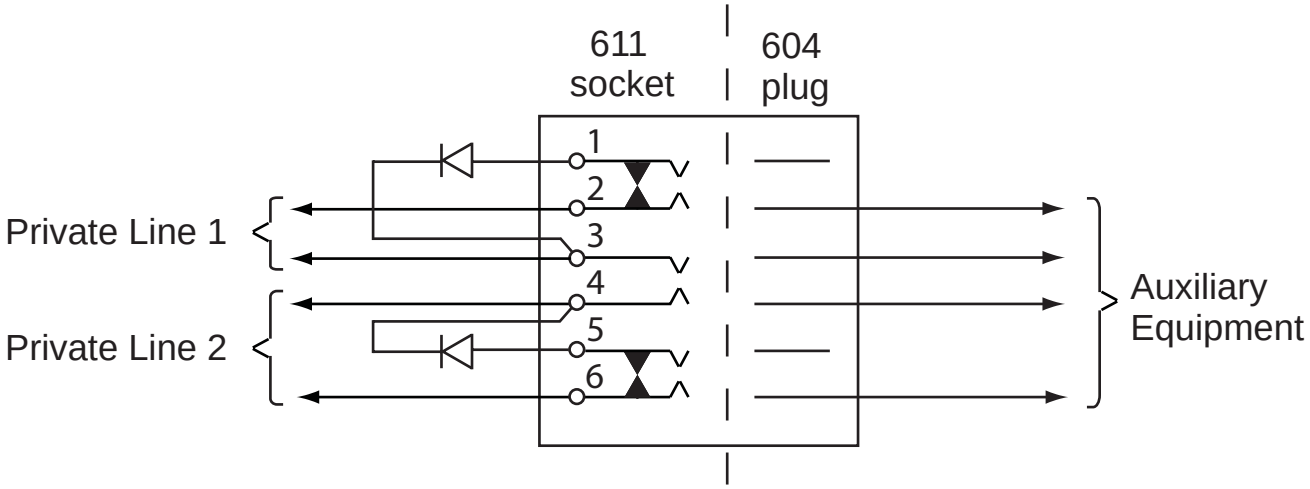
Private line (4 wire).



Note 1. All cams are in the normally open position.

Connection Mode 17

Private line (4 wire) having the line terminated with diodes when the plug is removed.



Note 1. Cams 1-2 & 5-6 are in the normally closed position. Cam 3-4 is in the normally open position