

D5674 DC/DC CP Converters for Current Distribution

The D5674 DC/DC Converter provides an way of precisely protecting a number of different structures with differing current requirements in an efficient way. The converter is powered by an external rectifier.

The D5674 DC/DC Converter is a switchmode down converter which provides a controllable, precisely regulated, output from an uncontrolled transformer rectifier input or solar supply. A series of the converters can be powered in parallel from the same transformer rectifier to protect separate structures which have differing protective current requirements. The switchmode converter has high efficiency and generates much less heat than do dropper resistors used for current balance. The D5674 is fully featured with 3 mode control and is available with either negative common or positive common return configurations for use with common anode or common cathode configurations. An interruptor relay, fitted at the output circuit, is a standard feature on each converter. The D5674 uses a high frequency power MOSFET switchmode converter and toroidal output choke and filter combination to chop and step down the voltage supplied from an external transformer rectifier, which can be a simple, fixed voltage, uncontrolled, rectifier with suitable smoothing fitted. Alternately the D5674 can be powered from a dc source such as solar battery sets.

The output voltage and current from the power conversion section is sensed by an analog pulse width modulator circuit which can also monitor a reference voltage using an inbuilt high input impedance amplifier. The controller circuit allows the user to select one of 3 modes using selectors on the control board.

- Constant voltage, where the voltage does not change with load up to a presettable maximum current.

- Constant current, where the current does not change with load up to a presettable maximum voltage. This feature allows constant protection current to be applied with varying soil or circuit resistance.

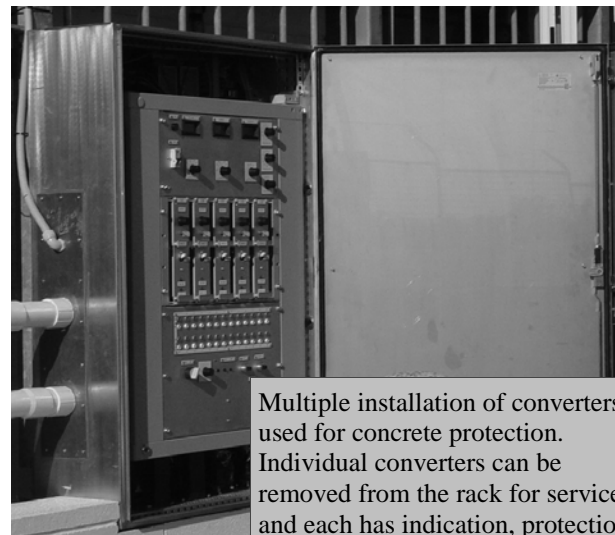
- Constant auto potential, where the controller holds the level of protection potential measured on an external reference circuit constant. This

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feature allows precise setting of potential and provides protection against stray interference currents.

Safety maximum current circuits allow the user to set the upper limit of output current, while the voltage is clamped at a preset maximum and an external 0—10V dc signal can be used to control the converter output remotely. The operating modes can also be remotely selected by dc signals.

The converter output is short circuit protected and surge and spike protected by voltage dependent resistors.



Multiple installation of converters used for concrete protection. Individual converters can be removed from the rack for service and each has indication, protection and output control.

The D5674 converter is designed to fit in a card rack of the standard Double Eurocard size of 234 x 160mm. The card rack can then be fitted in a wide number of enclosure types to suit specific applications.

MANUFACTURED BY

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