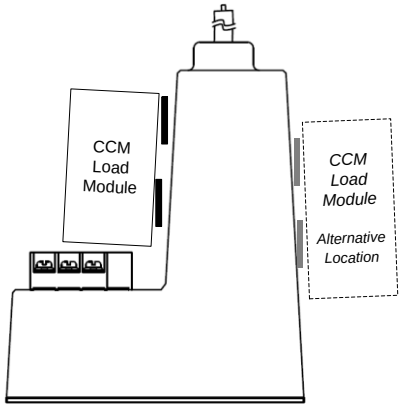
TECHNICAL DATA SHEET

CCM LOAD MODULE

Integrated Protection Range

Applications

The Ampcontrol IPC and IPD Integrated Protection relays, installed in 3.3kV systems, have previously experienced spurious Main Contactor Fail (MCF) trips due to induced and electrostatic noise pick-up. An MCF trip requires a physical reset on the front of the relay, which can only be achieved by opening enclosure compartments, resulting in potentially significant operational delays.



The CCM Load Module is designed to reduce spurious MCF trips which may occur in 3.3kV systems by adding a parallel resistance to the CCMC or CCMD, reducing total impedance and improving noise immunity. The Module forms part of the overall integrated protection system, working with existing outlet protection.

Features

- Easily retrofitted into existing distribution systems
- Reduces spurious MCF tripping
- Robust construction for reliable operation

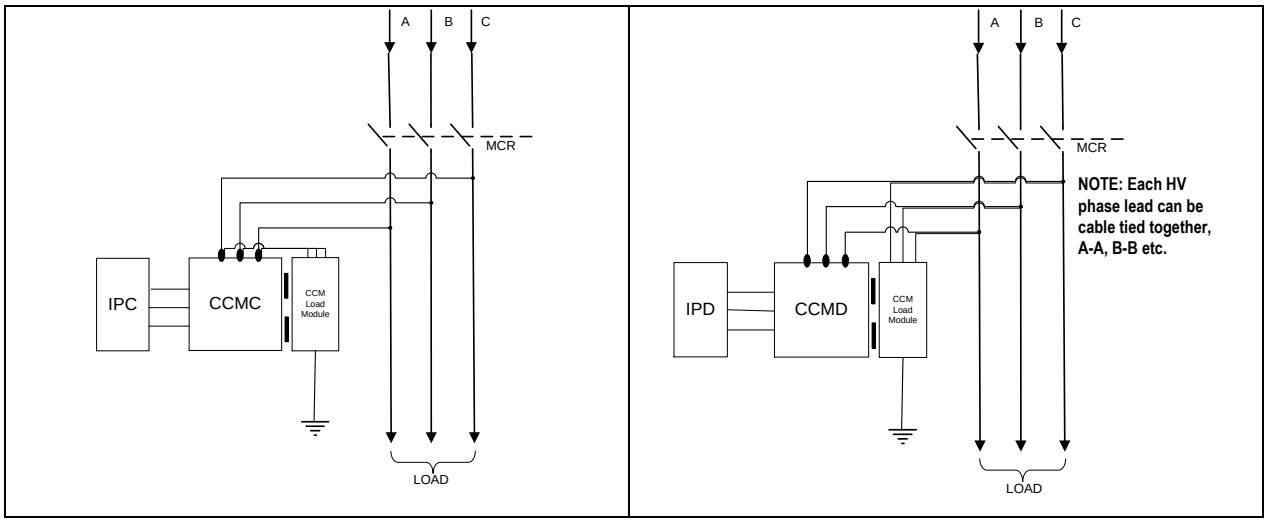
Product description

The CCM Load Module comprises of a bank of resistors. These resistors provide a load (to earth) on each phase of the 3.3kV line. 3.3kV systems use high impedances to limit quiescent current, but this makes them susceptible to induced and electrostatic noise pick-up. The added parallel resistances reduce the total impedance and provide greater immunity to this noise, improving system reliability.

The CCM Load Module can be retrofitted into existing distribution systems, connecting between the Cable Connecting Module (CCM) and the phase conductors. The module is secured to the front or back of the CCM using industrial strength double sided tape.

The CCM Load Module includes insulated 3.3kV leads which can either be connected to the top of a CCMC unit, or bundled with the HV phase leads of a CCMD and connected at the same phase connection point. An additional lead allows for a secure connection to earth.

Connection Diagram



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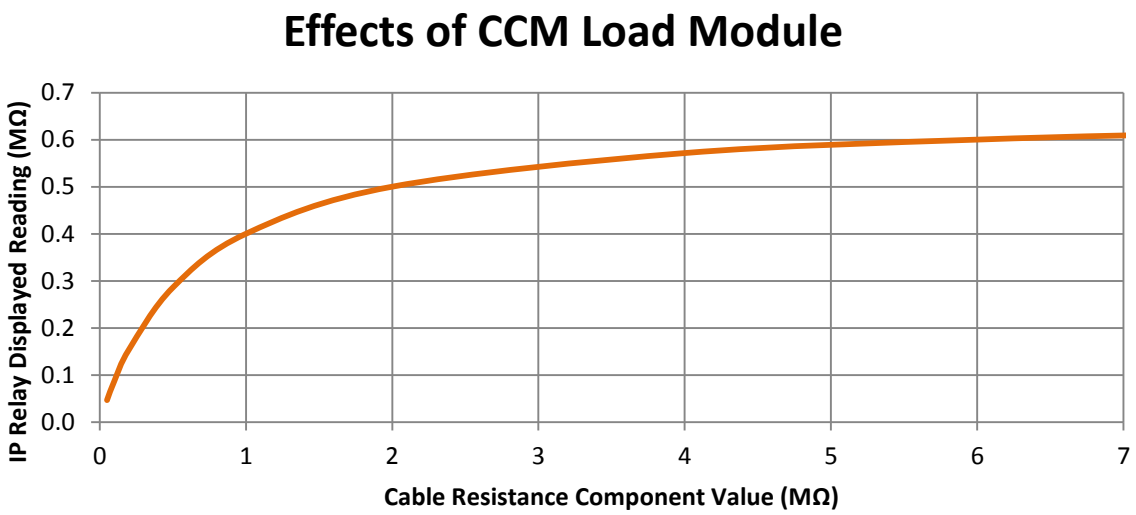
NOTE: When the CCM is fitted the IP relay will measure a parallel combination of the cable resistance and the CCM load module resistance. The "Insulation Test" levels will need to be reduced to the 0.5MΩ setting (or below) to ensure correct operation. This trip does not correspond to a 0.5MΩ for the cable insulation.

Integrated Protection Relay Equivalent Values

With a CCM Load Module installed, the result of the "Insulation Test" performed by the Integrated Protection Relay does not directly correspond to the insulation resistance of the cable, but also includes the contribution from the parallel Load Module. The equivalent values for the displayed readings are as follows:

Effects of CCM Load Module	
IP Relay Displayed Reading (MΩ)	**Cable Resistance Component Value (MΩ)**
≥ 0.6	> 6
0.5	2
0.4	1
0.3	0.5
0.2	0.2



SPECIFICATIONS	
Mechanical	
Dimensions (HxWxD)	65x36x120mm
Part Number	
166282	CCM Load Module

DISCLAIMER

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