

CLEARPath™ CPM-4 Module

ClearPath



Description

Electroline's CLEARPath™ CPM-4 module is a return path field switch that helps pinpoint the source of ingress in a cable TV network.

By remotely controlling the CPM-4 to selectively attenuate segments of the return path in a subscriber node, the operator can quickly locate and control return path ingress in a specific area without leaving the headend. Field technicians can then be dispatched directly to that area to further troubleshoot and repair.

The CPM-4 fits in line with other network actives and passives, and can be installed in virtually any area of the coaxial plant, providing the granularity and flexibility that the operator requires. Designed as outside plant devices, these modules stand up to the harsh environmental and electrical conditions of the HFC plant.

Applications

The CPM-4 field module is best applied in situations where faster mean time to repair (MTTR) and less down time on the upstream are desired. Ensuring reliable service and realizing the full potential of the return path are the primary reasons why the CPM-4 is deployed.

The CPM-4 gives the operator deeper visibility into the plant, beyond a simple sweep of the node's return spectrum. It also give the operator control over the return path to help manage ingress events. Operators can throw a 6-dB pad into the return path to mitigate a problem, or in locations where ingress is severe, the CPM-4 can be set to switch off the entire upstream band until the maintenance staff can make the necessary repairs.

The CPM-4 is fully compatible with all components of Electroline's CLEARPath™ system for return path monitoring and troubleshooting. In its simplest expression, the CLEARPath™ system consists of CPM-4 modules and a centrally-located Control Unit that outputs a robust control carrier for the field modules. The complete CLEARPath™ solution includes additional headend test point selectors to monitor the nodes, and a third-party spectrum analyzer. The CPM-4 module can also be used with other ingress monitoring solutions as a highly flexible means of taking ingress locating beyond the node.



**Find and control ingress
beyond the node**

The Electroline Advantage

The CPM-4 is part of Electroline's unique and successful CLEARPath™ solution for network reliability that goes the extra mile – the last mile – to get to the source of ingress faster. Not only do operators know where the ingress is, but they can also act on it with the remote-controlled CPM-4 field module.

Electroline designs and manufactures its CPM-4 modules at its North American ISO 9001 certified facility.

Features

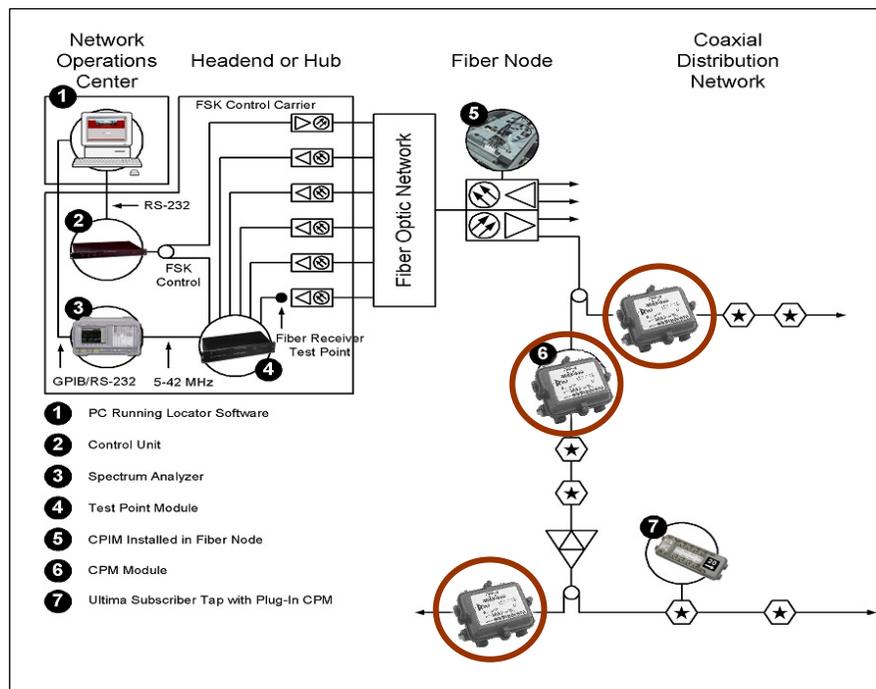
- Works with LOCATOR ingress locating software system – a unique Electroline solution
- Three positions: normal, attenuated and off
- Convenient plug-in diplexer module to facilitate future return path upgrades
- Highly flexible and scalable applications
- Installs virtually anywhere
- Aerial or pedestal installation
- Robust design for outside plant
- Surge protection as per IEEE
- Low power consumption

Specifications

Downstream (Receiver)	
Modulation Type	FSK
Channel Bandwidth	400 kHz
Frequency Ranges (agile in range)	53 to 78 MHz; 72 to 120 MHz; 85 to 120 MHz, 108 to 162 MHz
Step size for Actual Frequency	25 kHz
Dynamic Range	-7 dBmV to +30 dBmV
Ports and Connectors	
Surge Protection	IEEE C62.41-1991, cat B3 6KV 3KA
Impedance	75 ohms
Power	
Consumption 30 to 90V RMS (QSW)	
30V QSW	15 mA rms
60V QSW	20 mA rms
90V QSW	25 mA rms
Power Passing	15 A
RFI	
	100 dB
Typical Insertion Loss (Upstream)	
	1.7 dB ± 0.3 dB
Typical Insertion Loss (Downstream)	
	1.4 dB ± 0.3 dB
Operating Temperature Range	
	-40°C to +60°C
Mechanical Specifications	
Outside Dimensions	5.7" x 4.45" x 3.28" (14.5 cm x 11.3 cm x 8.4 cm)
Weight	1.4 lbs (0.64 kg)

Note: Specifications are subject to change without notice

Model	Return Bandwidth	Typical Forward Bandwidth
CPM-4 R5-42	5-42 MHz	53 MHz to 1 GHz
CPM-4 R5-65	5-65 MHz	85 MHz to 1 GHz
CPM-4 R5-85	5-85 MHz	105 MHz to 1 GHz



For more information on our products, please visit: www.electroline.com or call: 800-461-3344

