Telecommunications Copper Cable Theft/Break Monitoring System Asset Protection Module Option

- **Provides centralised indication of Cable Theft/Break (to nearest section)**
- **Alarms generated on cable break**
- **Use of simple line powered devices fitted at cable pair intersection points (or points of particular vulnerability) assists the operator in quickly identifying the location of the cable theft**
- **Plug and Play operation – innovative Solution allows the operator to address new "hot Spots" as they occur, system learns as Bridging Units fitted**
- **No waste of valuable and scarce cable pair resource - Monitoring is achieved using a single pair in a multi-pair cable route**
- **Four channels per PIM set, suitable for all copper and aluminium cable types**
- **Compatible with existing D&IT NMS - widely used throughout UK Rail Networks**
- **Simple representation of problem on Centralised PC Graphics based Network Management system (PC-G8) – SNMP Option also available**
- **Second generation PIM set, enhances resilience for short circuit to earth or line feed voltage**
- **Asset Protection enhancement module for tracking local assets (Option)**

Introduction

The use of copper cable is still widespread in certain Telco, Rail and Road applications. Such cable is particularly vulnerable to cable break/theft.

D&ITs Cable monitoring system provides a cost effective solution to this problem by use of a specially developed Plug in Module (PIM) that can be fitted to D&ITs range of Remote Terminal Units (RTUs).

This special double width PIM can be fitted to D&ITs SP-35 RTU and SP-15 RTU – the type to be used will depend on the proposed networking arrangements.

The SP-35 RTU supports both Ethernet and dial in (via modem) connectivity.

The SP-15 RTU supports various networking implementations using serial RS422/RS232 interfaces. Please refer to individual RTU datasheets for details.

D&ITs cable monitoring system provides a solution to assist in the detection of cable faults, helps identify the location of the section in which the problem has occurred and forwards alarm information to D&ITs Network Management System (PC-G8). Protection for non-fixed assets can be supported by connecting a Smart Hub into the M/F Port of the RTU. The smart hub then communicates with the Asset Protection (AP) Sensors using secure radio communications.

Product Overview

The cable theft monitoring is achieved using a single spare pair of a multi-pair cable.

Each Cable theft monitoring PIM pair supports monitoring of up to:

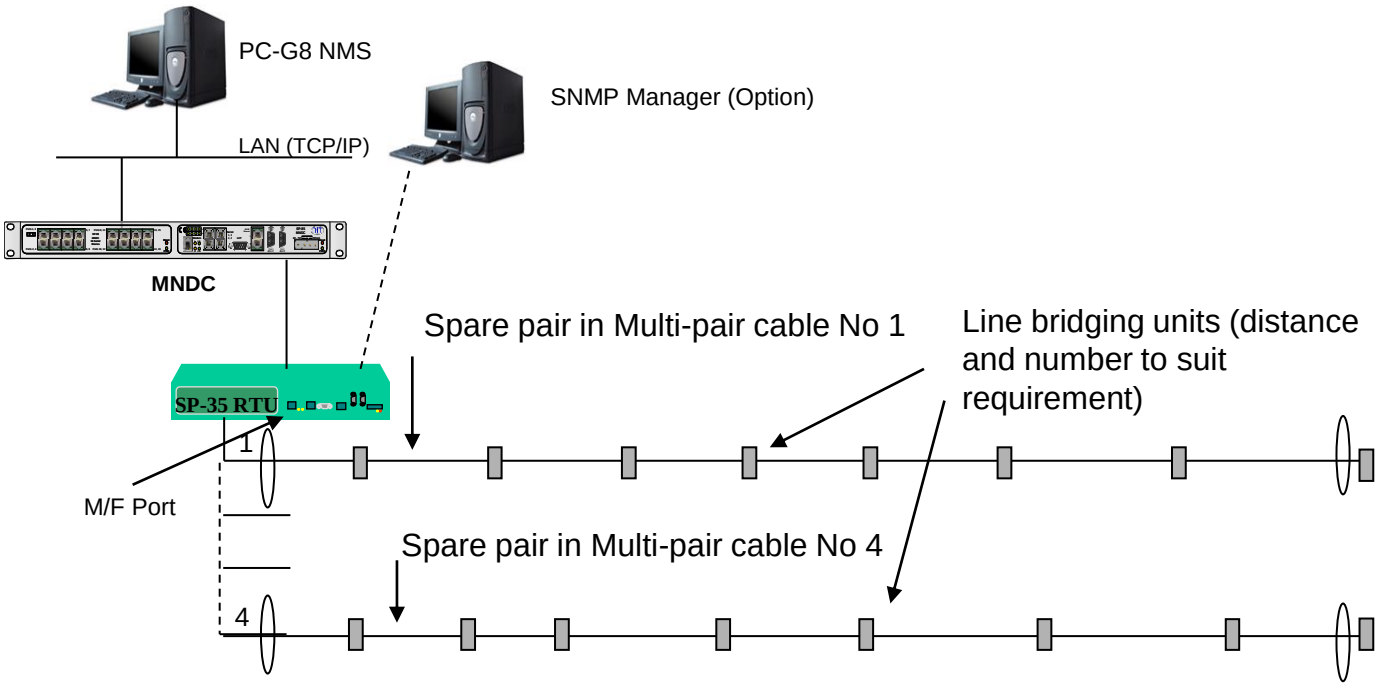
- 4 separate multi-pair cables each having up to
- 8 sections per cable with up to 8km per section

Each cable route requires only a single pair for cable theft monitoring.

A standard SP-35 RTU fitted with 2 of these cable monitoring units (occupying 4 x PIM slots) will be able to monitor up to 8 separate multi-pair cables

Associated Network Management System

Line Monitoring



SYSTEM SPECIFICATION – CABLE THEFT/BREAK MONITORING

Interface Modules (PIM Pair)	Fits in 2 x standard PIM wide slots on SP-35 and SP-15 RTU (see separate datasheets)
PIM Connectors	
4 x Monitoring cables	2 x 9-way 'D' Female per PIM
Line Bridging Units	30 x 20 x 15mm (2 wire cable with bare ends)
Network Management	MNDC + PC-G8 – see separate datasheets for details Displays details following alarm received from SP-35 or SP-15 RTU
	Or Option for 3rd Party SNMP Manager (e.g. Castlerock SNMPc)
Environmental	Meets the appropriate requirements of EN300-019
EMC	Meets the appropriate requirements of R&TTE under Directive 1999/5/EC and EMC Directive 89/336/EEC
WEEE	Producer registration number WEE/BH2828WV
Safety	Meets the requirements of LVD 73/23/ECC (EN 60950-1)

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