Overview

The Protec Monitored Output Clean Contact Interface (MICCO) is a loop powered input/output device providing a monitored input and a set of volt free changeover contacts. The contacts may be used to connect Protec addressable loops to ancillary equipment.

Technical Specification

Loop protocol	6000/6000PLUS
Loop isolator fitted	Yes, on board (Refer to DEL2110 for details)
Loop voltage range	16 to 28 V dc peak loop
Environmental operational limits	-10 to 50 °C (maximum 95% RH no condensation or icing)
Loop quiescent current (24 V peak loop)	0.55 mA average, 2 mA peak
Loop alarm current (average)	2.2 mA average, 5 mA peak
Clean contact output details	Single pole changeover rated for 8 A at maximum 30 V dc non inductive
Monitored input details	Input monitored for short/open circuit fault and alarm End of line resistor value 47 kΩ ¼ W ±5% Alarm resistor value 330 Ω ¼ W ±5%
Set-up options	Remove LK1 to enable the 13 second sprinkler delay Remove LK2 to enable non-latching alarm mode Remove LK3 to enable door closer operation
Indications	On-board red indicating LED

Installation

1. This interface **must not** be used to trigger gas release extinguishant systems.

2. Any equipment connected to the clean contact relay output connections of this device **must not** respond to a momentary change of the relay contacts when exposed to mechanical shock or impact conditions. A 3 second de-bounce time for the monitoring equipment is recommended.

3. The clean contact output may not be in the expected state until the interface has been connected to a powered 6000 loop.

4. Ensure tests are carried out on the cabling using a 500 V dc insulation tester (Megger®). The readings between each cable core, and each core and earth (screen) should be greater than 10 MΩ. **Ensure that all cabling is completely discharged before connecting to the 6000/MICCO**.

5. The incoming series 6000 loop must be connected to the terminals marked LOOP+ and LOOP-.
   The outgoing series 6000 loop must be connected to the remaining LOOP+ and LOOP- terminals.
   All screen wiring must be securely terminated to a local earth point within the back-box.
   Ensure wiring connected to the clean contact outputs is kept segregated from loop wiring.

Commissioning

1. Each 6000/MICCO has a unique serial number which will be used as part of the commissioning of the fire alarm system. It is necessary to remove one of the 'peelable' bar code labels present on the product and place it in the commissioning booklet supplied with each addressable control panel. The bar code sticker should be placed at the relevant loop and address position intended for the 6000/MICCO. It is important that serial numbers are not mixed otherwise the addressing of the 6000/MICCO will be incorrect when commissioned.

2. Commission the device onto the system as detailed in the installation and commissioning manual for the fire alarm panel being used.

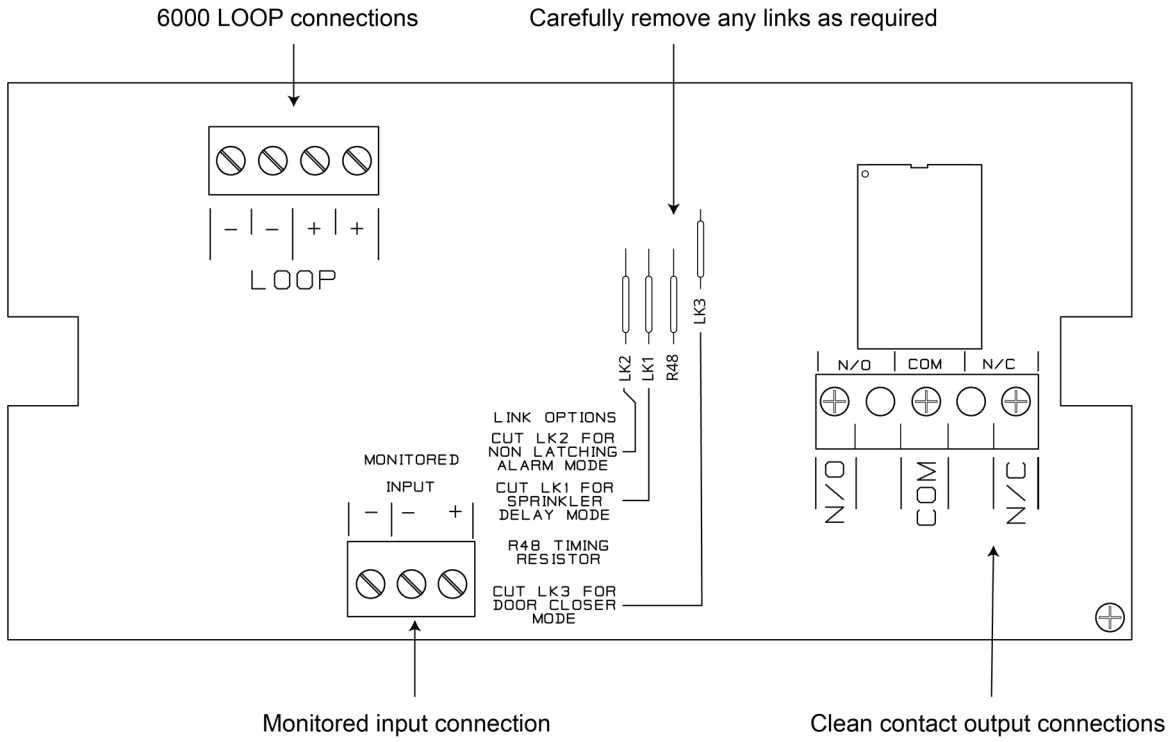
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6000/MICCO Certification Details

CE 2797	UKCA 0086
19	**21**
Protec Fire Detection PLC, Protec House, Churchill Way, Nelson, Lancashire, BB9 6RT, United Kingdom	
PFD-CPR-0022	PFD-UKCA-0022
EN 54-17:2005 **Short Circuit Isolator** EN 54-18:2005 **Input/Output Devices** **6000/MICCO Monitored input/changeover contact output interface** Fire detection and fire alarm systems installed in and around buildings Performance under fire conditions: Pass Operational reliability: Pass Durability of operational reliability, temperature resistance: Pass Durability of operational reliability, vibration resistance: Pass Durability of operational reliability, humidity resistance: Pass Durability of operational reliability, corrosion resistance: Pass Durability of operational reliability, electrical stability: Pass	

6000/MICCO PCB Details

Figure 1. 6000/MICCO PCB details



Sprinkler delay resistor values (R48)

Time (s)	R48 (kΩ)
5	3.3
13	10 (factory fitted)
20	18
30	33

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