8937-HN

01 / Identify the installed arrangement

MTL 8937-HN is the two-kilometre multimode fiber optic extender module identified in Honeywell's Series C I/O spare-parts table. It transfers a C300 I/O link to remote Series C or PM I/O through a matched FOE arrangement.

System and supply context

Use the module with the specified FOE IOTA or its documented DIN-rail/external-power arrangement.

Application scope

Extend the C300 I/O link to remote Series C or PM I/O over a planned multimode fiber path.

Pre-work record

Isolate the carrier

Remove the module only after the affected controller and I/O link are in a safe maintenance state.

Record optical routing

Label link A and B, FO1/FO2 and transmit/receive fibers before unplugging.

Protect fiber interfaces

Keep unused optical connectors covered and clean; inspect the ST faces and bend radius.

Electrical and interface reference

Manufacturer FOE part number	8937-HN
Honeywell model reference	CC-PFE221
Optical port sets	2 Rx/Tx pairs
Optical fiber	Multimode 62.5/125 µm
Connector type	ST

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02 / Fit, reconnect and commission

Match the IOTA

Check the six-inch 8939-HN / CC-TFE021 IOTA and interface-cable variant against the installed cabinet.

Verify supply

Check 20–30 VDC at the module under load when using external power.

Commission both links

Measure optical margin and prove remote I/O communication after reconnection of each redundant path.

System behavior

Honeywell lists 8937-HN as a two-kilometre fiber optic extender, with CC-PFE221 as its Honeywell model reference. The FOE assembly comprises the module, a six-inch IOTA and the corresponding interface cable. A module cannot serve Series C and PM I/O on the same installation simultaneously.

The multimode FOE design has two optical port sets, each with a transmit and receive connection. The documented fiber is 62.5/125 µm with ST connectors. A standard-cable span is rated to 1.5 km and a premium-cable span to 2.0 km; actual acceptance still depends on connectors, optical loss and topology.

The original guide permits IOTA mounting or DIN-rail mounting with user-supplied power. Its specified external supply is 20–30 VDC at 85–74 mA maximum, operating ambient -20 to +70°C and minimum optical budget 8 dB. Honeywell requires separate A and B fiber runs for a redundant I/O link.

Applicability

The optical and electrical figures are from Honeywell’s multimode FOE section, mapped to 8937-HN by its exact spare-parts table. Cable grade and loss determine achievable distance.

How should the A and B optical links of 8937-HN be kept distinct?

Honeywell specifies separate fiber paths for the redundant I/O links. Record the controller-side and remote-side FO1/FO2 transmit and receive routing before exchange, then prove each path independently.

What limits the usable fiber distance of 8937-HN?

The guide gives 1.5 km for standard cable and 2.0 km for premium cable between FOEs. Connector loss, splices, cable grade and the minimum 8 dB optical budget govern the actual link margin.

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03 / Troubleshoot and hand over

Can 8937-HN serve Series C and PM I/O together?

No. Honeywell's FOE section states that one FOE module cannot be used for both I/O families concurrently. Select the correct interface cable and remote equipment for one path type.

Which supply arrangement is valid for 8937-HN on a DIN rail?

DIN-rail mounting requires a user-supplied 20–30 VDC source within the module current limit. The normal Series C carrier/IOTA arrangement supplies the module through the assembly.

Why might 8937-HN show power but no remote I/O communication?

Inspect the copper IOLINK interface, Tx-to-Rx fiber routing, connector cleanliness and optical loss. Then check the paired remote FOE and the configured I/O topology rather than assuming a powered module proves the link.

What is the role of 8939-HN beside 8937-HN?

8939-HN is the six-inch FOE IOTA, referenced by Honeywell as CC-TFE021. Confirm its carrier connection and the correct gray or violet I/O-link interface cable for the installed link.

How does a daisy chain change the limits for 8937-HN?

Honeywell gives a total daisy-chain limit of 4 km for Series C and 8 km for PM I/O. Each hop must still meet its own optical-span and loss budget.

What acceptance test should follow replacement of 8937-HN?

Verify supply, optical loss and module LEDs, then prove each redundant A/B link and the remote I/O status through the C300 diagnostic view. Record both link paths and measured margins.

Technical basis: Honeywell Experion PKS Series C I/O User's Guide, FOE sections 13.1 and 16.4; Honeywell System HINTS, November 2019, p. 9

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