GE IC697MDL250

01 Function and selected configuration

Product function

GE IC697MDL250 allows separate AC input groups to share one rack slot, with per-point PLC-side indication and input characteristics suitable for evaluated contact and proximity-switch circuits.

Selected configuration

32-point 120 VAC input module, four isolated groups of eight. The reactive input circuit is designed for 120 VAC sinusoidal signals at 47 to 63 Hz. Compatibility with a two-wire proximity switch depends on both its on-state load-line relationship and off-state leakage below 2.2 mA. A switch that conducts enough current when on may still fail to produce a valid off state if leakage is excessive.

Functional path

120 VAC field switch

Reactive input / isolation

20 ms input filter

PLC input reference

Input grouping	32 points in four isolated groups of eight
Signal levels	75–132 VAC on; 0–25 VAC off, at 47–63 Hz
Input processing	20 ms typical filter; 10 mA typical at rated voltage

Point indicators show the logic-side input state, while software configuration assigns the I/O references without module DIP switches or jumpers. Mechanical keying helps preserve the correct module type in its rack slot. The detachable terminal board retains the field wiring during a module exchange and must remain associated with the correct slot.

IC697MDL250 / Technical operating envelope

02 Technical operating envelope

Rated input	120 VAC sinusoidal
Frequency range	47 to 63 Hz
Input count	32, four groups of eight
On-state voltage	75 to 132 VAC
Off-state voltage	0 to 25 VAC
On-state current	6 to 15 mA
Typical input current	10 mA at rated voltage
Typical filter delay	20 ms
Input-to-backplane isolation	1500 V RMS
Group-to-group isolation	500 V RMS
5 V bus current	0.35 A
Terminal conductors	22 to 14 AWG

The input threshold ranges apply to sinusoidal AC at 47–63 Hz. The 20 ms delay is typical, not a high-speed counter rating. Verify the proximity-switch load line and off-state leakage rather than judging compatibility only by a nominal 120 VAC label.

IC697MDL250 / System integration and applications

03 System integration and applications

Contact monitoring

Acquire pushbutton, selector and limit-switch states from evaluated 120 VAC circuits.

Two-wire proximity sensing

Use switches whose on-state load line and off-state leakage satisfy the module input requirements.

Grouped phase circuits

Keep four isolated eight-point groups assigned to their approved AC phases and returns.

Rack input replacement

Retain the existing keyed position and terminal board while restoring the programmed input mapping.

System and supply context

The module receives AC field signals and transfers their states to an IC697 CPU through the backplane. Field supply circuits and the PLC logic supply are separate.

Application boundary

Applications below require suitable voltage, frequency, leakage and timing. They do not imply suitability as a dedicated safety or high-speed counting input.

What voltage makes an IC697MDL250 point reliably on?

The specified on-state range is 75 to 132 VAC at 47 to 63 Hz with a sinusoidal waveform. The off-state range is 0 to 25 VAC; do not treat the intervening region as a guaranteed state.

IC697MDL250 / Engineering selection decisions

04 Engineering selection decisions

Can the four IC697MDL250 input groups use different AC phases?

Yes. Each group of eight inputs is isolated from the others. Maintain a separate power connection for each group and follow the intended phase and neutral arrangement.

Why might a two-wire proximity switch keep IC697MDL250 on after release?

Excessive off-state leakage can prevent a valid off condition. The switch compatibility check requires off-state current below 2.2 mA as well as a suitable on-state operating point.

Which backplane load should be allowed for IC697MDL250?

Allow 0.35 A from the 5 V backplane bus. This is distinct from the 120 VAC field input circuits and their reactive input current.

Can two wires share an IC697MDL250 terminal?

The detachable terminal board accepts 22 to 14 AWG conductors. Two conductors may share a terminal only when they are the same size; retain correct grouping and secure the wire bundle.

Respect input timing	Account for the typical 20 ms filter and the application scan.
Retain terminal identity	Keep the wired board and its identification strap associated with the correct slot.

IC697MDL250 / Configuration boundary and references

05 Configuration boundary and references

Lifecycle and support

The current manufacturing and OEM support stages for IC697MDL250 require confirmation from GE. Apter Power availability is confirmed separately.

Replacement assessment

Match the AC voltage class, four-group wiring and input reference allocation. Do not substitute a DC input module or bridge isolated group connections.

Document roles

Use the original manufacturer excerpt for its preserved technical tables and drawings. This product brief explains configuration and selection boundaries. The independent installation guide organizes preparation, connection, testing and handover. It does not replace the applicable manufacturer installation instructions.

Technical basis

GE Fanuc 120 VAC Input Module, GFK-0084J, in GFK-0600F.

Related product navigation

- GE IC697PWR710
- GE IC697ALG230
- GE IC697ALG321

These are related references, not confirmed substitutes or an automatically approved assembly.

Product enquiries