UR9UH

01 / Identify the installed arrangement

General Electric UR9UH is an offered UR-family relay CPU module. GE identifies UR9U as a version 7 loose CPU module and type U as the mixed fiber/copper Ethernet and RS485 communication option; the terminal H is retained as part of the offered complete code.

System and supply context

Use with a compatible GE Multilin UR relay chassis and version-matched firmware.

Application scope

Provide relay processing and serial/fiber/copper network interfaces for supported protection and station-automation functions.

Pre-work record

Back up relay settings

Export the complete approved relay configuration, firmware and event record before a CPU change.

Confirm version boundary

A version 7 CPU replacement may require other module or firmware changes; check the GE upgrade path.

Record SFP population

Identify the actual transceivers and LC/RJ45 media rather than assuming a port description proves an installed SFP.

Electrical and interface reference

CPU family	UR version 7
CPU type	U
RS485 channels	1
100Base-FX Ethernet ports	2, multimode SFP/LC
100Base-T Ethernet ports	1, SFP/RJ45

UR9UH

02 / Fit, reconnect and commission

Isolate and protect

Follow the relay maintenance procedure and ESD control when removing the CPU module.

Restore network identity

Recheck independent MAC/IP assignments, fiber pair mapping and RS485 polarity after startup.

Prove protection

Run a controlled site acceptance plan for communication and the functions affected by CPU exchange.

System behavior

GE release notes define CPU type U with one RS485 channel, two 100Base-FX multimode SFP/LC Ethernet ports and one 100Base-T SFP/RJ45 port. The three Ethernet ports have independent MAC and IP addresses. These are type-U capabilities, not a claim that every field-fitted SFP is present in a quoted loose module.

GE lists UR9U as a version 7 loose CPU option in its version 6 end-of-manufacturing notice. The older version 6 CPU types E, J, K and N reached the stated last-order date of 31 December 2022; replacing one with a version 7 CPU involves relay and firmware compatibility checks. The final H in UR9UH is part of the offered marking and should be matched to the installed unit.

Before an exchange, save the relay settings and communications configuration, identify all installed SFP media, and verify the relay firmware and other modules against the manufacturer’s upgrade guidance. After fitting, check CPU start-up, port link states, IP/MAC records, RS485 communication and every protection function affected by the outage.

Applicability

GE documents UR9U and the type-U interface mix. The complete UR9UH suffix and installed SFP population must be checked against the offered unit and relay configuration; no relay-wide power rating is assigned to this loose CPU.

Why does replacing a version 6 CPU with UR9UH need a firmware review?

GE identifies UR9U as a version 7 CPU option and warns that upgrading earlier CPUs can require additional hardware and compatible firmware. Record the complete relay order code and approved firmware before scheduling the change.

How are the three Ethernet paths on UR9UH distinguished?

Type U has two multimode 100Base-FX SFP/LC paths and one 100Base-T SFP/RJ45 path, each with its own MAC and IP address. Document the actual fitted SFPs and network assignments.

UR9UH

03 / Troubleshoot and hand over

Can UR9UH be accepted only because the fiber links illuminate?

No. Link light proves only a physical connection. Verify relay CPU health, IP configuration, protocol traffic, time synchronization and the protection application after restoration.

What should be recorded before removing UR9UH from a UR relay?

Capture the exact CPU and chassis markings, firmware, settings file, SFP types, Ethernet addresses, RS485 wiring, event records and pre-change alarm state.

How should RS485 be commissioned after fitting UR9UH?

Verify polarity, common and shield arrangement, serial settings and end-of-line termination against the relay system drawing, then test communication with the actual host.

Does the type-U description guarantee that UR9UH includes SFP transceivers?

No. The GE interface description identifies the supported port mix. The quotation should separately confirm the transceivers and any patch leads supplied with the physical module.

What can prevent network communication after replacing UR9UH?

Check that each Ethernet port retains its assigned MAC/IP record, that the fitted SFP matches the fiber path, and that the relay firmware and station switch settings support the restored configuration.

What is an appropriate post-change test for UR9UH?

Confirm startup diagnostics, each Ethernet and RS485 path, settings checksum, event time and representative protection input/output tests under the site-approved outage plan.

Technical basis: GE Multilin UR revision 7.01 release notes GER-4459; GE Vernova UR Version 6 CPU end-of-manufacturing notice GER-4900B

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