



GE Vernova

UR Series

Redesigned UR-TH High-Voltage Power Supply Module

Product Notification

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19 August 2023, November 1st 2023 for production

Summary

UR devices support power supply modules for a high voltage range (HI) and a low voltage range (LO). The high voltage range module has been redesigned to address global component shortage issues, enable dual sourcing of critical component, and to optimize the design.

The power supply modules were last redesigned in 2014. Modules SH and SL were equivalent to RH and RL respectively. When purchasing a UR device with a redundant power supply, the order code remained as RH or RL, so that customers could continue to use the same order codes when buying complete relays. The order code of the redundant power supply module can be RH or RL, while the module inside the unit is SH or SL.

The same philosophy is used for the new high voltage power supply module TH. The order code of a complete relay will not change. Thus, the order code of the redundant power supply module can be RH, while the module inside the unit is TH.

The latest design of the Power Supply includes:

- **New:** Super capacitor replacing a battery, reducing maintenance
- **New:** Conformally coated printed circuit board to allow use in harsh environments
- **New:** Improved design with 40% fewer components than previous SH model
- 200ms ride-through capability
- Dedicated electrolytic capacitors for ride-through capability, therefore relay nominal power is independent of electrolytic capacitors.
- **Backwards compatible:** Direct replacement of some previous and existing power supply modules (UR-RH and existing UR-SH) *(see Note 1)
- **Voltage rail monitoring:** All rails

Note 1: The 48V control output is removed from the new TH power supply module. This voltage output was used to wet contact inputs where DC voltage was unavailable. A new MOD (MOD030) has been created for

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customers that need the 48V DC control output. UR-TH will not work with UR products with firmware versions 1.00 to 3.50.

The order code for the new high voltage power supply module is “TH” which will replace the existing “SH” order code. The details of order code are specified in the order code section.

We have updated the UR documentation and ordering tools to add the new revision of the high voltage power supply module.

Background

UR Power supply modules (HI voltage range):

- 2nd generation UR-RH
- 3rd generation UR-SH (June 2014). This redesigned version of the power supply module was a direct replacement of previous modules.
- **New** UR-TH (August 2023). This redesigned version of the power supply module is a direct replacement of previous modules.

Units Affected

All UR devices, UR replacement kits and individual power supply modules.

The SH power supply module will remain available: when ordering modules, use UR-SH* order code or use MOD030 when ordering UR relays or UR replacement kits.

UR devices and replacement kits shipped since November 1st 2023 will be equipped with the new TH power supply module or the existing SH module. If existing SH module with a capability of auxiliary output voltage is required, then MOD030 option must be ordered.

Recommendation

The redesigned UR-TH power supply module is compatible with existing and previous UR hardware. Other than the features described, functionality of UR devices is not affected by the TH power supply module. The TH power supply module can be ordered as a direct replacement of some previous power supply module.

For UR devices with a redundant power supply configuration, ensure that both power supply modules match the module type, for example TH and TH, SH and SH, RH and RH. Mixing the TH power supply module with a previous version (RH or SH) in a redundant configuration can lead to undetermined hardware and system behaviors and is not recommended.

UR Power Supply Module Order Code

The order code of a UR device and UR replacement kits are not affected by the TH power supply module; the TH order code applies to replacement modules.

	UR	-	**	*	Description	Notes
Type and Voltage range						
			SH		125/250V AC/DC module with auxiliary voltage output	Since 2014
			SL		24/48V DC-only module with auxiliary voltage output	Since 2014
			TH		125/250V AC/DC module with NO voltage output	New November 2023
Mounting				A	Horizontal mounting - Harsh environment coating	
				B	Vertical mounting - Harsh environment coating	

All TH power supply modules are conformally coated.

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