General Electric IS420UCSBH4A

Certified Installation Reference

This Apter Power reference organizes the exact H4A ratings and the installation conditions stated in the official IECEx Issue 7 document. It is an engineering planning reference, not a substitute for GEH-6721 wiring, replacement or commissioning instructions.

Equipment identity

Confirm the IS420UCSBH4A controller and its equipment marking. The IECEx annex includes this controller in the Ex ec IIC T4 Gc group.

Electrical identity

The controller input is 28 V DC, 1.1 A maximum. Keep this equipment rating separate from the SMPS output-current condition.

Application boundary

The DNV approval describes Mark VIe system configurations. Match the actual installed application, software and I/O to the approved system documentation.

DNV Type Approval Certificate TAA000001E, Revision 1, issued 19 April 2024; Tables 1 and 3 and application limitations. Official manufacturer document.

IECEx Certificate IECEx UL 21.0073X, Issue 7, 16 February 2026; certificate pages 1 and 3; Annex pages 2 and 4. Official manufacturer document.

Related Mark VIe portfolio

Separate portfolio references. These links do not assert compatibility or replacement equivalence.

General Electric IS220PRTDH1A

View General Electric IS220PRTDH1A

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Mark VIe Controller

02 / Certified installation conditions

Enclosure

Use an enclosure appropriately certified for the applicable classified location, providing at least IP54. This is an installation enclosure requirement, not a sealed-enclosure rating of the bare controller.

Environment

The certificate specifies Pollution Degree 2 maximum. The applicable certified ambient range for H4A is -30 to +65 degrees C.

Transient protection

Provide protection preventing transient disturbances from exceeding 140 percent of rated voltage.

Power supply

Use an SMPS certified for the location, with output current limited to 20 A maximum and the required features specified by GEH-6721 Volume II. The 20 A figure is not controller current consumption.

Power distribution

The power distribution board must be certified for the applicable classified location.

Related Mark VIe portfolio

Separate portfolio references. These links do not assert compatibility or replacement equivalence.

General Electric IS200SHRAH2A

View General Electric IS200SHRAH2A

General Electric IS400JPDHG1A

View General Electric IS400JPDHG1A

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03 / System configuration and document handoff

Architecture selection

The documented system choices are Simplex (one CPU and one I/O processing network), Dual (two CPUs with primary/backup I/O processing network) and TMR (three CPUs and three I/O processing networks). A single H4A controller does not establish a complete redundant system.

Application review

For a DNV-classed application, the system manufacturer must submit the actual application documentation. The approval requires software changes to be recorded and major changes approved before installation.

Detailed installation work

Use the applicable GEH-6721 system instructions and the approved installed configuration for connector assignments, wiring, replacement and startup. Those detailed procedures have not been reproduced or inferred in this reference.

Reference boundary

The IECEx document establishes a certified-installation boundary. DNV approval establishes documented hardware and application conditions. Neither certificate alone supplies a complete controller commissioning procedure.

Related Mark VIe portfolio

Separate portfolio references. These links do not assert compatibility or replacement equivalence.

General Electric IS200STCIH2AED

View General Electric IS200STCIH2AED

General Electric IS200TRPGH2B

View General Electric IS200TRPGH2B

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04 / Model-specific FAQ (1-4)

1. Which processor is documented for General Electric IS420UCSBH4A?

The manufacturer-hosted DNV type-approval table identifies IS420UCSBH4A with a 1066 MHz Intel EP80579 processor. Processor ratings for other UCSB suffixes are not substituted.

2. How does the input rating of General Electric IS420UCSBH4A differ from the certificate 20 A SMPS condition?

The IECEx annex lists IS420UCSBH4A input as 28 V DC, 1.1 A maximum. The separate 20 A limit concerns the certified SMPS output in the installation conditions; it is not the controller's current consumption.

3. Which certified ambient range applies to General Electric IS420UCSBH4A?

IECEx Issue 7 specifies -30 to +65 degrees C for models other than the separately identified H3A/UCSA exceptions. H4A is included in that general range, subject to all applicable installation conditions.

4. What hazardous-area marking is listed for the controller group containing General Electric IS420UCSBH4A?

The IECEx annex includes IS420UCSBH4A in the Ex ec IIC T4 Gc controller group. Use that marking only within the certificate's scope and specified conditions; it does not authorize an arbitrary installation.

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05 / Model-specific FAQ (5-8)

5. Does the IP54 installation condition describe a sealed bare General Electric IS420UCSBH4A controller?

No. The certificate requires installation in an appropriately certified enclosure providing at least IP54. The enclosure requirement must not be represented as a standalone enclosure rating of the bare controller.

6. Which environmental and transient conditions apply to certified installation of General Electric IS420UCSBH4A?

The certificate specifies Pollution Degree 2 maximum and protection preventing transient disturbances from exceeding 140 percent of rated voltage. These are installation conditions, alongside the required enclosure and power-supply provisions.

7. Does one General Electric IS420UCSBH4A controller establish a complete TMR turbine-control system?

No. DNV describes Simplex, Dual and TMR as system architectures involving the required controllers and I/O networks. The installed software, I/O and approved application determine the system configuration.

8. Can the installation reference for General Electric IS420UCSBH4A replace GEH-6721 commissioning instructions?

No. The Apter Power installation reference summarizes the certified ratings and installation conditions supported by official manufacturer documents. Detailed wiring, replacement and startup require the applicable GEH-6721 system instructions.

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