GE GE □□□ Series Service Manual

IS420ESWBH3A

1. Description

Part Number: IS420ESWBH3A

2. Specifications

Specification	Value
Manufacturer	**General Electric**
Series	**Mark VIe & Mark VIeS Control Systems**
Part	**Number IS420ESWBH3A**
Cooling	**Method Convection Cooled**
Copper	**Cables Cat 5e UTP Cable with RJ45 Connectors**
Dimensions	**H 18.8 cm x W 8.6 cm x D 5.6 cm**
Functional	**Abbreviation ESWB**
Input	**Voltage 24/28 VDC**
Mounting	**Method DIN-Rail or Potential Panel Mounting**
Operating	**Temperature -40 to 70°C**
Quantity	**of Fiber Ports None**
Shipping	**Weight 2 lb**
About	**the IS420ESWBH3A**
Greater	**Product Series Information**
As	**with any General Electric printed circuit board product offering made available to our extended new and reconditioned inventory here, this IS420ESWBH3A IONET Switch Board belongs to a specific product series; the Mark VIe Turbine Control System Series in particular. This IS420ESWBH3A printed circuit board or PCB for short's greater Mark VIE Turbine Control System Series:**

3. Product Information

Part Number: IS420ESWBH3A

Model: Mark VIe IONet Switch

Manufacturer: GE

Condition: New & Original in Factory Packing

Factory Warranty: 12 Months

Description:

GE Industrial ESWB Ethernet Switch

Mark VIe IONet Switch

Copper Port: 16 ports 10/100Base-TX, copper, RJ-45

No fiber port

Install using DIN-rial mounting

Compatibility: 802.3, 802.3u, and 802.3x

10/100 base copper with auto-negotiation

Full/half-duplex auto-negotiation

100 Mbps FX uplink port

HP-MDIX auto-sensing

LEDs to indicate the status of Link Presence, Activity, and Duplex, and Speed per port

Power indicator LED

Minimum 256 KB buffer with 4 K MAC addresses

Dual power supply inputs for redundancy

SPECIFICATIONS:

Part Number: IS420ESWBH3A

Manufacturer: General Electric

Series: Mark VIe

Product Type: Ethernet IONet Switch

Software: ControlST V04.03.18C

Relative humidity: 5% to 95%, no-condensing

Power Requirements +32 V dc to 18 V dc

Memory: 256 MB DDR SDRAM

Operating System: QNX Neutrino

Weight: 2 lbs

Dimensions: 138 x 86 x 56 mm

Availability: In Stock

Country of Manufacturer: United States (USA)

FUNCTIONAL DESCRIPTION:

IS420ESWBH3A is an Ethernet IONet Switch manufactured and designed by General Electric as part of the Mark VIe Series used in GE Distributed Gas Turbine Control Systems. It is available in 8 ports, 10/100BASE-TX. The ESWB Ethernet 10/100 switches are specially designed to meet the needs of real-time industrial control solutions and are required for all IONet switches used in Mark VIe & VIeS safety control systems. It is a DIN - Rail mounting module. To meet the requirements for speed and functionality the following features are provided.

802.3, 802.3U, 802.x, compatibility

10/100 based copper with auto-negotiation

Full/half duplex auto-negotiation

100 Mbps FX - Uplink port

HP - MDIX auto-sensing

LEDs”s to indicate the status of link presents, activity, duplex, and speed port (each LED has two colors)

LED to indicate power status

Minimum 256kb buffer with 4k media access control (MAC) address.

Redundant power supply inputs

IS420ESWBH3A Technical Specifications

Manufacturer General Electric

Series Mark VIe & Mark VIeS Control Systems

Part Number IS420ESWBH3A

Cooling Method Convection Cooled

Copper Cables Cat 5e UTP Cable with RJ45 Connectors

Dimensions H 18.8 cm x W 8.6 cm x D 5.6 cm

Functional Abbreviation ESWB

Input Voltage 24/28 VDC

Mounting Method DIN-Rail or Potential Panel Mounting

Operating Temperature -40 to 70°C

Quantity of Fiber Ports None

Shipping Weight 2 lb

About the IS420ESWBH3A

Greater Product Series Information

As with any General Electric printed circuit board product offering made available to our extended new and reconditioned inventory here, this IS420ESWBH3A IONET Switch Board belongs to a specific product series; the Mark VIe Turbine Control System Series in particular. This IS420ESWBH3A printed circuit board or PCB for short's greater Mark VIE Turbine Control System Series:

possesses specific applications across a range of different products:

wind turbine assemblies

steam turbine assemblies

gas turbine automated drive assemblies

can additionally be identified as a desirable GE Mark Series

one of the lastly-developed GE product series to make use of the patented Speedtronic control system technology

IS420ESWBH3A Product Number Breakdown

Industrial Ethernet Switch IS420ESWBH3A is part of the Mark VIe Safety Control System designed by General Electric. This switch does not have any fiber ports but has sixteen copper ports, the copper ports are 10/100Base-TX RJ45 ports. The primary operation of the switch is to perform as a level one Ethernet switch which will center on the capability to buffer multi-cast and broadcast packets.

There should be enough space to allow for the buffer of one packet per port; if multiple incoming streams are being sent to the switch, it can only accept one incoming stream out of the multiple streams and will buffer the remaining streams for later transmission.

The IS420ESWBH3A functional product number begins with a dual-functioning initial naming segment in the IS420 series tag delegating this IS420ESWBH3A Mark VIe Series product's special modular Mark VIe Series assembly version as well as its domestic location of original GE manufacture. Some of the other relevant hardware details that can be discovered through analysis of functional product number include this IS420ESWBH3A PCB's:

ESWB product acronym

Conformal PCB coating style

Group three Mark VIe Series product grouping

A-rated primary functional product revision

Diagnostic Tips and Specifications

There are LED indicators on the IS420ESWBH3A switch. There also exists:

a power LED

activity and link LEDs

When the link LED is solid yellow it indicates that a 10 MB link is being used

when solid green a 100 MB link is being used

no LED light indicates that there is no link.

Installation Tips and Specifications

The IS420ESWBH3A switch can be mounted in a variety of ways:

the switch can be DIN-rail mounted in a parallel or perpendicular application

when the switch is DIN-rail mounted there are different clips needed which are the 259B2451BVP1 and 259B2451BVP4 clips

has the possibility to be panel mounted if needed.

This IS420ESWBH3A device's H3 Mark VIe Series product grouping indicates the fact that this IS420ESWBH3A board is actually the only Mark VIe ESWB Board group version to not make use of a single style of Mark VIe Series fiber port component in its special modular Mark VIe Series assembly.