GE GE □□□ Series Service Manual

IS420ESWBH3AE

1. Description

SPECIFICATIONS:

3. Product Information

SPECIFICATIONS:

Part Number: IS420ESWBH3AE

Manufacturer: General Electric

Series: Mark VIe

Product Type: 16-Port 10/100 Base 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

Mounting: DIN Rail

Weight: 2 lbs

Dimensions: 138 x 86 x 56 mm

Availability: In Stock

Country of Manufacturer: United States (USA)

Manual: GEH-6855

FUNCTIONAL DESCRIPTION:

IS420ESWBH3AE is a 16-Port 10/100 Base Ethernet IONet Switch manufactured and designed by General Electric as part of the Mark VIe Series used in GE Distributed Gas Turbine Control Systems. The ESWx Industrial Ethernet Switch is designed for industrial applications, ensuring reliable and high-speed Ethernet communication in harsh environments. It plays a crucial role in turbine control systems by enabling seamless data exchange between control, monitoring, and safety devices. Featuring 8 ports with 10/100BASE-TX, the ESWB Ethernet switches are optimized for real-time industrial control and are essential for all IONet switches in Mark VIe & VIeS safety control systems. This DIN-Rail mounting module is engineered for speed and functionality, offering key features to meet industrial networking demands.

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 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

ETHERNET SWITCH FLOW CONTROL:

The switch supports flow control between devices, utilizing IEEE-defined pause packets to manage data transmission. It only sends pause packets when necessary for flow regulation on a port. Designed for high reliability, it exceeds 4 million hours of Mean Time Between Failures (MTBF) at 35°C (95°F) in a ground-fixed, controlled environment.

CONFORMANCE CRITERIA FOR ETHERNET SWITCH:

The packet traffic can be synchronized by IEEE 1588 timing and triggered to initiate within a 1-microsecond packet start window. The switch’s capability and conformance are tested to meet the following four criteria:

Multicast packet load initiated on one port without IEEE 802.3x flow control.

Multicast packet load initiated on one port with IEEE 802.3x flow control.

Multicast packet load distributed across all ports, with the packet count per port averaging the required amount based on the total number of switch ports, without IEEE 802.3x flow control.

Multicast packet load distributed across all ports, with the packet count per port averaging 200, and IEEE 802.3x flow control negotiated on half the ports.

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