Building Automation Switch

Reliable Ethernet Communication in Smart Buildings

New unmanaged switches offer electricians a reliable, cost-effective solution to meet the specific electrical installation requirements for commercial and non-residential smart buildings, as well as smart homes.

➕ Saves time and space during installation by fitting directly into standard electrical distribution enclosures

➕ Eliminates the need and cost for a separate power supply by embedding Power over Ethernet (PoE) functionality

➕ Provides fast, reliable Ethernet communication through up to 8 Gigabit speed ports

Key Features

- Special form factor for easy installation
- Up to 8 ports (Fast Ethernet/ Gigabit Ethernet variants)
- PoE enabled, with a total power budget of up to 110 W
- Ethernet speeds up to 1 Gigabit
- Integrated 110/230V power supply, with optional 24V for use in industrial automation applications
- Operating temperature range of -5°C to +60°C
- Meets electrical installation requirements in commercial/non-residential buildings and smart homes

Unmanaged switch with embedded power supply and optimized housing for use in electrical installation environments.

Be certain.
Belden.

Your Benefits

Designed specifically for use in smart building automation, the Building Automation Switch fits directly into the electrical distribution board, making it easier and more efficient to install. And with its own power supply, the switch is cost effective and saves more space than any other unmanaged switches on the market. Equipped with 8 ports, including PoE options, the Building Automation Switch offers various configurations and can support Ethernet speeds of up to 1 Gigabit.

Applications

As smart buildings enable more automation, there is a trend towards PoE-powered controllers instead of separate power cables, introducing a need for a reliable and cost-effective switch. The Building Automation Switch provides reliable connection to end devices and can be installed directly in the electrical distribution board.

The switch is also an ideal solution for door-entry systems and video surveillance where reliable Gigabit speeds are needed to transmit high-resolution video streams.

Markets

The Building Automation Switch is ideal for smart building applications where IP-enabled controllers and sensors are being powered by PoE. This includes smart homes and buildings, casinos, hotels, and hospital systems.

Additionally, the switch is suited for factory automation environments in which standard modular DIN-rail form factor is required.

Technical Information

Product Description

Type	Building Automation Switch (BAS)
Description	Unmanaged Ethernet Switch Range for Building Automation Applications, MDRC form factor
Port Type and Quantity	- Fast Ethernet, 8x 10/100BASE TX / RJ45 AC HV Non-POE - Fast Ethernet, 8x 10/100BASE TX / RJ45 with PoE, 55W Power Budget ,AC HV - Fast Ethernet, 8x 10/100BASE TX / RJ45 with PoE, 110W Power Budget , AC HV - Giga Ethernet, 8x 10/100/1000 BASE TX / RJ45 AC HV Non-POE - Giga Ethernet, 8x 10/100/1000 BASE TX / RJ45 with PoE, 55W Power Budget, AC HV - Giga Ethernet, 8x 10/100/1000 BASE TX / RJ45 with PoE, 110W Power Budget, AC HV

Interfaces

Power Supply/Signaling Contact	6 poles, Nominal cross section max. 1.5 mm²

Power Requirements

Operating Voltage	12 V DC.. 24 V DC..48VDC/24VAC 100VAC..230VAC, 50/60 Hz		
Current Consumption	BAS20-8TX-HV	1,4W	4,8 BTU/h
	BAS22-8TX-HV-55	2.5W	8,6 BTU/h (without PoE)
		66W	226 BTU/h (inc. 55 W PoE)
	BAS22-8TX-HV-110	2.5W	8,6 BTU/h (without PoE)
		126W	430 BTU/h (inc. 110 W PoE)
	BAS40-8TX-HV	5,0 W	17,1 BTU/h (estimated)
	BAS42-8TX-HV-55	6.1W	20,9 BTU/h (without PoE) (estimated)
		70W	239 BTU/h (inc. 55 W PoE) (estimated)
	BAS42-8TX-HV-110	6.1W	20,9 BTU/h (without PoE) (estimated)
		130W	444 BTU/h (inc. 110 W PoE) (estimated)
Power Consumption	without PoE: FE 2W; GE 6,0W; GE FX 8,0W --- PoE add 1W + 10% of PoE Load		

Service

Diagnostics	LEDs (power, link/activity status,POE)

Ambient Conditions

Operating Temperature	-5°C - + 60°C derating at PoE total power > 90W for 110W Variant, 48W for 55W variant
Storage/Transport Temperature	-40°C to +85°C
Relative Humidity (non-condensing)	working humidity 20 - 90%; storage humidity 10 - 95%

Mechanical Construction

Dimensions (W x H x D)	140mm x 90mm x 64mm non PoE 210mm x 90mm x 64mm PoE
Mounting	DIN Rail
Weight	Non PoE Variants: 250g; PoE Variants: 410g
Protection Class	IP20

Mechanical Stability

IEC 60068-2-27 shock	15 g peak, 11 ms, half-sine
IEC 60068-2-6 vibration	3.5 mm, 5 Hz to 8.4 Hz, 10 cycles, 1 octave/min. 1 g, 8.4 Hz to 150 Hz, 10 cycles, 1 octave/min.

EMC Interference Immunity

EN 61000-4-2 electrostatic discharge (ESD)	4 kV contact discharge, 8 kV air discharge, ±4 kV Horizontal and Vertical Coupling Planes
EN 61000-4-3 electromagnetic field	10 V/m (80 MHz - 1 GHz), 3 V/m (1,4 GHz – 6GHz)
EN 61000-4-4 fast transients (burst)	2 kV power line, Data line: 2 kV (SF/UTP CAT5), 1 kV (U/UTP CAT5) As per HAC Quality requirement 4KV STP(B) , 2KV UTP(B)
EN 61000-4-5 surge voltage	Power Line: 2KV (Line/earth) 1KV (Line/Line); Data line: 1 kV (SF/UTP CAT5), 1 kV (U/UTP CAT5)
EN 61000-4-6 conducted immunity	10 V (150 kHz - 80 MHz)power line + data line (SF/UTP CAT5, U/UTP CAT5)
EN 61000-6-2 industrial environments	Class A

EMC Emitted Immunity

EN 55032	Class A
FCC CFR47 Part 15	Class A
EN 61000-6-4	Class A
EN 61000-3-2	Class A

Approvals

Basis Standard	CE, FCC
Safety of industrial control equipment	UL61010-2