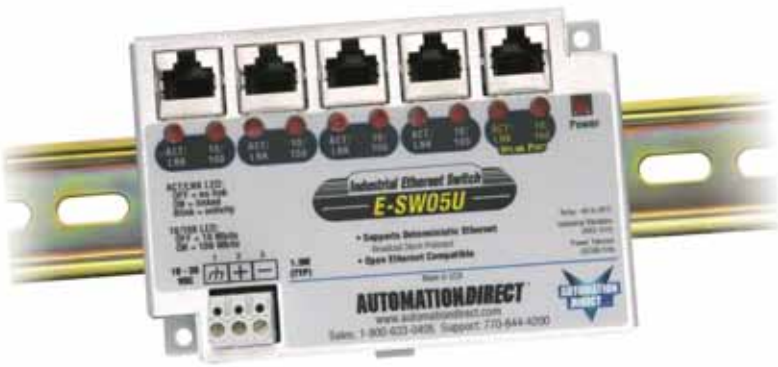


E-SW05U Industrial Ethernet Switch



Features

- Deterministic Ethernet supported, featuring:
 - Real-time 10Base-T/100 Base-T auto-negotiation
 - Broadcast storm protection
 - Auto-sensing for full duplex operation
- Open Ethernet compatibility (Supports ALL standard IEEE 802.3 Ethernet protocols)
- No set-up required – “plug-n-play”
- DIN-rail or panel mounting
- 24 VDC powered (no external transformer)
- UL 508, UL 1604 (Class I Div. 2), CSA, and CE- rated
- -40° C to +85° C rated
- Withstands power surges (IEEE-472)
- Vibration resistant (IEC68-2-6)

Deterministic control

Ethernet for deterministic control? You bet! With an E-SW05U switching an isolated control LAN, your PLC won't miss a beat. At 10 or 100 Mbps Ethernet, your data will spend minimal “time-on-the-wire” between your I/O and controller. The E-SW05U, an Ethernet switch, automatically determines and remembers the devices connected to each port and routes messages only through the appropriate port. When directly connected to a full duplex device, the E-SW05U port automatically adopts full duplex operation, potentially doubling the bandwidth to that device. The E-SW05U also provides broadcast storm protection with each node limited to no more than 25% of the available LAN bandwidth. Even a rogue node constantly broadcasting will not bring your network down. The E-SW05U eliminates message collisions, allowing for deterministic control for time-critical automation applications. Install E-SW05U switches and your Ethernet control network will maintain consistent cycle times even under heavy I/O and data exchange.

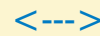
Open compatibility

The E-SW05U supports all standard IEEE 802.3 Ethernet protocols, so you won't need expensive protocol or media converters to connect with standard IT products (as with many other Ethernet and Fieldbus products).

Increased reliability

The E-SW05U Ethernet switch has been designed for the industrial environment. It will survive extreme temperatures, as well as dirty, unreliable industrial power. Meeting UL 1604 (Class I Div. 2) and the IEC68-2 standard for vibration resilience, the E-SW05U will provide years of reliable performance in applications too tough for commercial grade switches.

E-SW05U



Message in from a device

Message is sent out only from the port connected to destination device



Switches vs. hubs

Both Ethernet switches and hubs allow additional nodes and segments to be added to a network, but switches have many advantages over hubs for automation control. An Ethernet switch automatically determines and remembers the devices connected to each of its ports. When it receives a data packet, it verifies the packet integrity, identifies through which port the message should be transmitted, and sends the packet to the targeted device only. Non-valid packets are discarded, Network collisions are

eliminated as each device communicates one-to-one with the switch. In identifying the packet destination and verifying the packet integrity, switches introduce some delay (latency) to each packet transmission. This slight delay is the trade-off for eliminating packet collisions, further reducing network traffic. Another advantage of switches segmenting the network is they allow longer network distances than hubs.

Use a switch for:

- Deterministic real-time control
- Segmenting a LAN into smaller LANs
- Isolating I/O communication from data exchange communication.

A hub works for:

- HMI to controller(s) communication (when separate from the I/O network)
- Configuration and data-exchange LANs
- Demonstration systems
- Single controller (master/slave) systems on an isolated LAN

*Broadcast messages from any device will be transmitted to all networked devices via a switch or hub. Office LAN features, such as Microsoft Explorer's Network Neighborhood, automatically create some broadcast traffic to update connection maps.

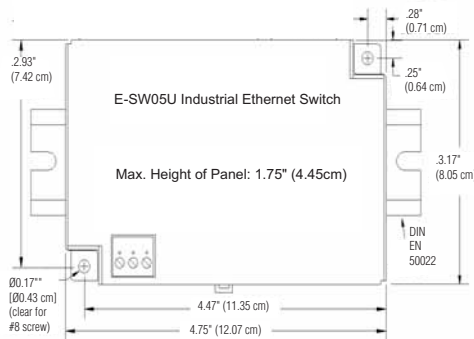
E-SW05U Specifications

Performance Specifications	
Ethernet switch type	Unmanaged, store and forward
RJ45 ports (shielded)	10 Base-T and 100 Base-T
RJ45 speed (auto-negotiating)	10 Mbps or 100 Mbps
Ethernet protocols supported	All standard IEEE 802.3
Broadcast storm protection	25% of bandwidth
Memory bandwidth	1.4 Gbps
Completely compliant	IEEE 802.3 & IEEE 802.3u
Full or half duplex operation	Auto-sensing
MAC addresses supported	1 K (automatic learning, aging, and migration)
Ethernet isolation	1200 VRMS 1 minute
Required supply voltage	10-30 VDC
Power consumption (typical)	1.9 W
Operating and storage temp	-40 to +85°C
Humidity (non-condensing)	5 to 95% RH
Flammability	UL 94V-0 materials
Electrical safety	UL 508, CSA C22/14; EN61010-1 (IEC1010), CE
EMI emissions	FCC part 15 ICES 003, EN55022, Class B, CE
EMC immunity	EN61326-1 (EN61000-4-2,3,4, and 6), CE
Surge withstand	IEEE-472 (ANSI C37.90)
Vibration	IEC68-2-6
Hazardous locations	UL 1604 (file #E200031), CSA C22.2/213 (Class 1, Div.2), Cenelec EN50021 (Zone 2)

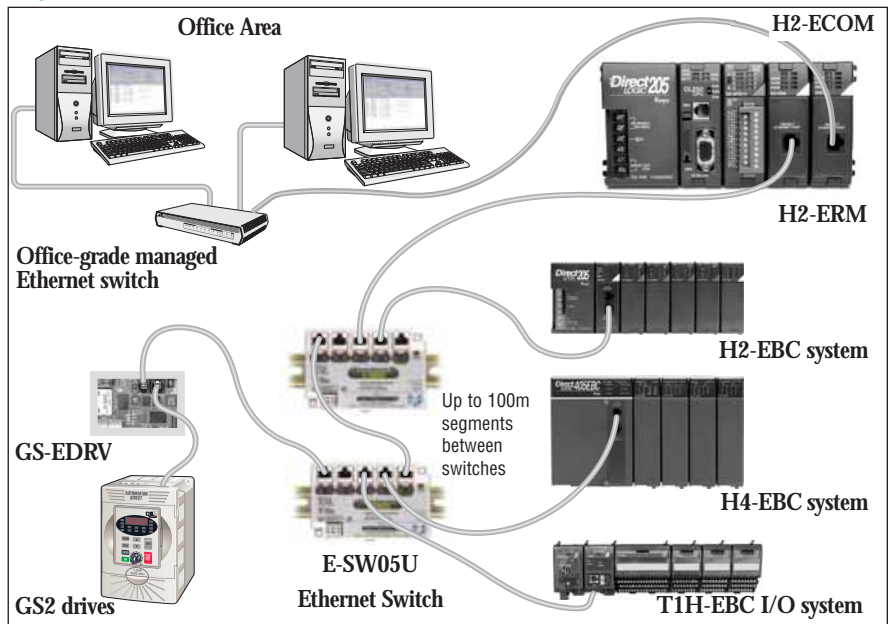
Complete documentation

Documentation can be downloaded from www.automationdirect.com.

Mounting dimensions



Typical Ethernet switch installations



Ethernet drive control network example

