

AS-Interface Overview..... 216



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# Automation & Sensing

# Communication & Networking

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### AS-Interface Overview (Actuator Sensor Interface)

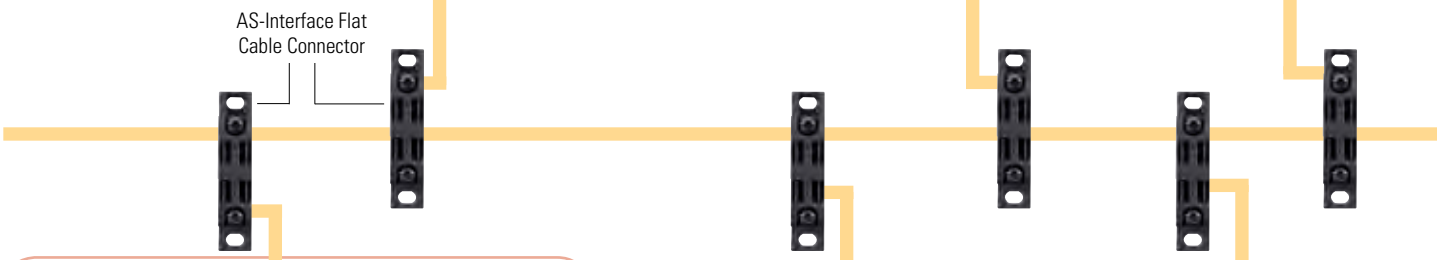
MicroSmart  
Pentra

See PLC section for more information.

73W                      145W

Visit [www.IDEC.com/powersupply](http://www.IDEC.com/powersupply)

SX5A AS-Interface Safety Contact  
Contact IDEC for more information.



SX5A AS-Interface I/O modules

4 inputs  
2 inputs/2 outputs      4 inputs/3 outputs      4 inputs  
4 inputs/3 outputs

Contact IDEC for more information

SX5A AS-Interface Safety Communication Terminal (Safety Slave)

Safety Interlock Switches  
Contact IDEC for more information

Emergency Stop Switch Box

IDEC SmartRelay  
(See PLC section for more information)

**Link to the world and reduce wiring at the same time!**

**SwitchNet Control Units directly connect to an AS-Interface network**

Panels can be built with substantially less wiring at a lower total cost.

- Signals and power are carried through two wires.
- A maximum of 62 switches and pilot lights can be connected. The wire length can be extended to 300m by using two repeaters.
- Spring clamp terminals save wiring time.

Each control switch or pilot light contains a communication chip (AS-Interface Ver. 2.1).



T-branch Connector

FB Enclosures

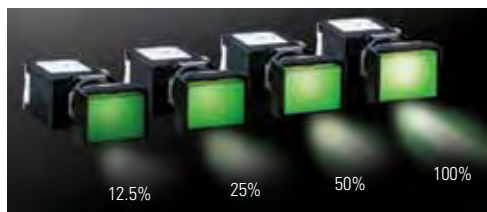
XA & XW E-Stops

Contact IDEC for more information.



**Pilot lights & Illuminated Pushbuttons Brightness Control**

Illumination can be controlled at four levels according to a command from the AS-Interface master. Dynamic displays and energy savings are possible.



L6 Pilot Lights  
See Switch & Pilot Light section.

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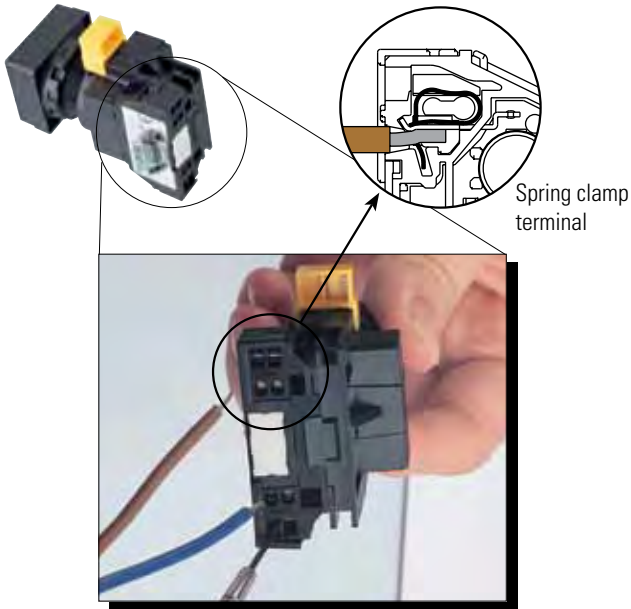
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Easy & Flexible

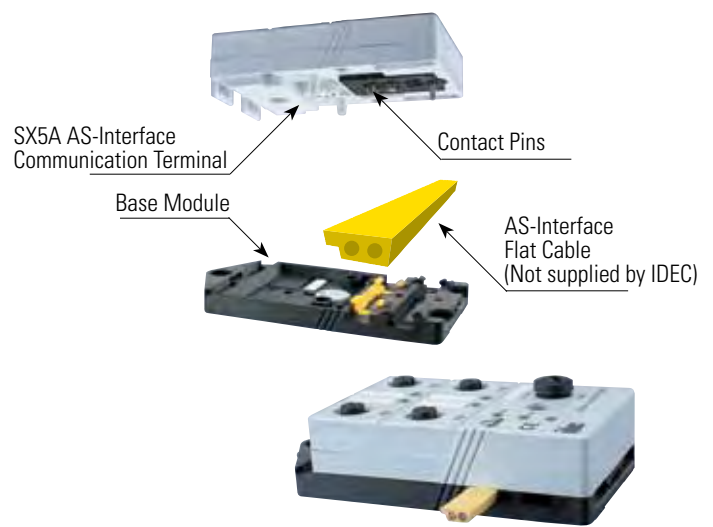
Quick & Secure Connection



Spring clamp reduces wiring time

SwitchNet control units feature spring clamp terminals, eliminating the need for tightening screws.

Easy Wiring

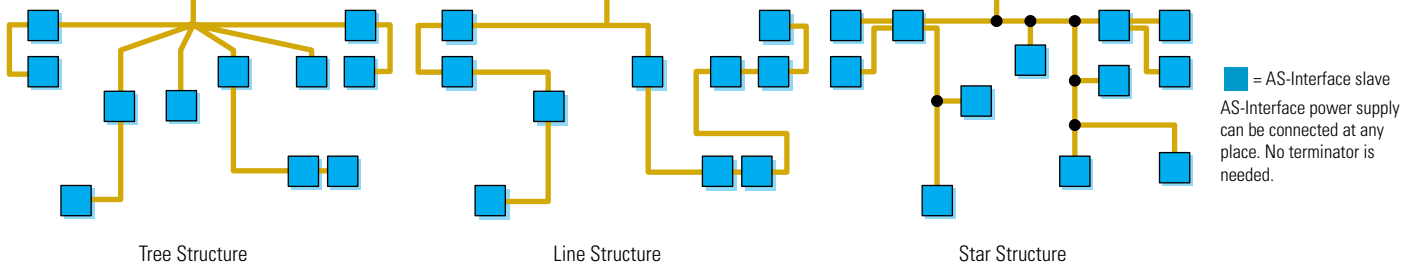


Contact pins pierce through the cable's insulation and make secure contact with the copper conductor. After disconnecting the AS-Interface communication terminal, the elasticity of the sheath closes the pierced holes and maintains insulation.

AS-Interface Master

AS-Interface Master

AS-Interface Master



Connectors

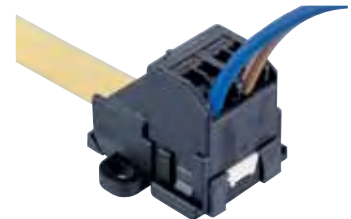
Three types of connectors are available for designing the panel layout.



AS-Interface Flat Cable Branch Connector (IP65)

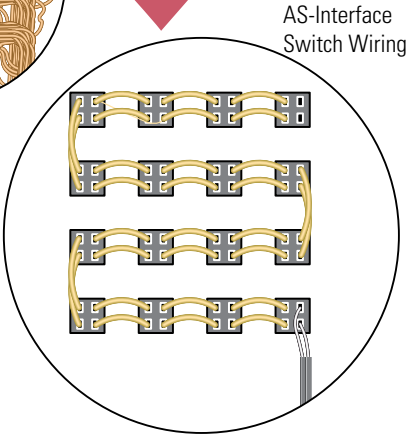
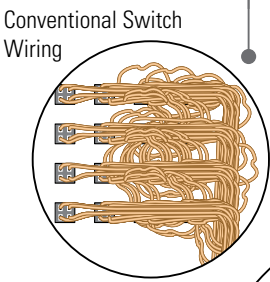
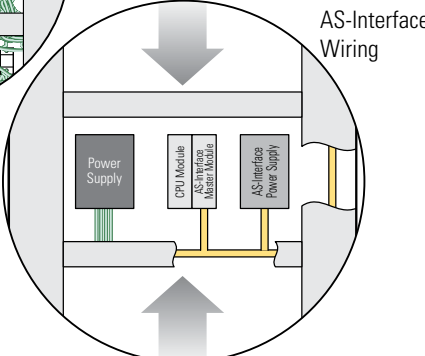
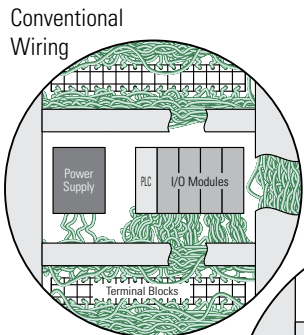
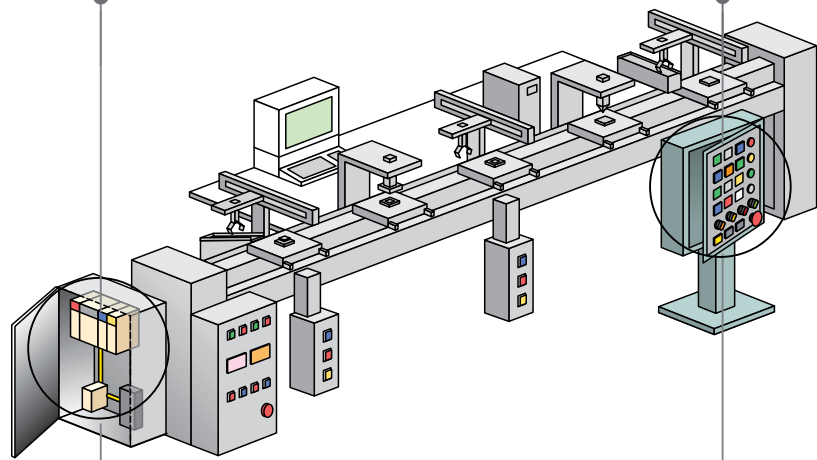
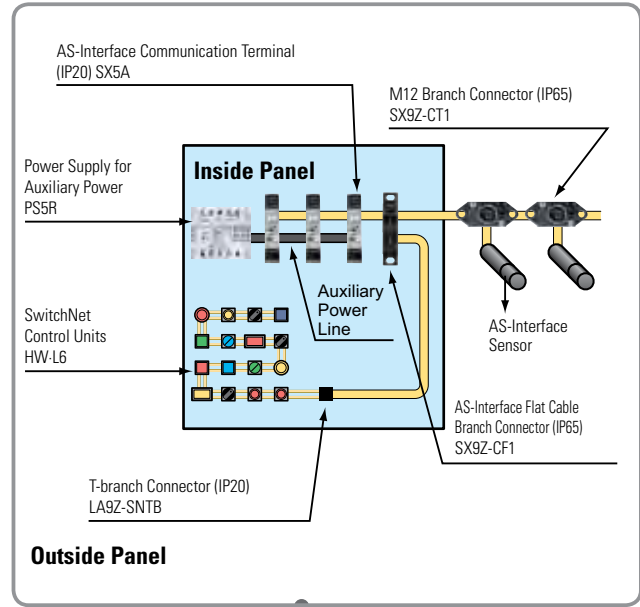
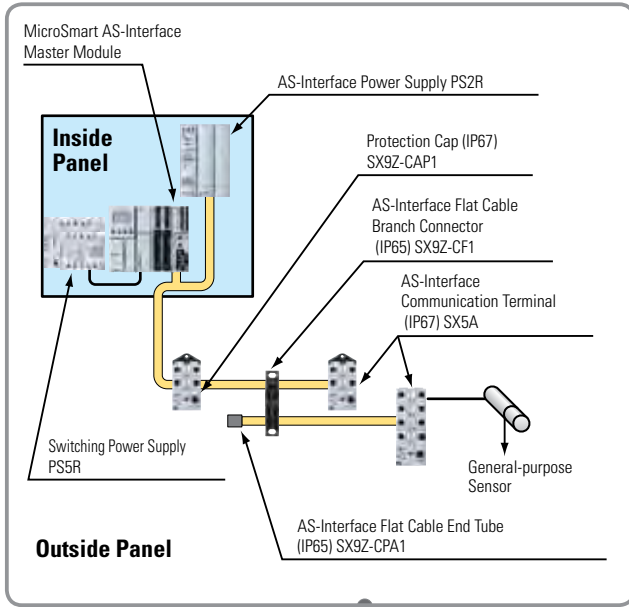


M12 Branch Connector (IP65)



T-branch Connector (IP20)

Space & Wire Savings

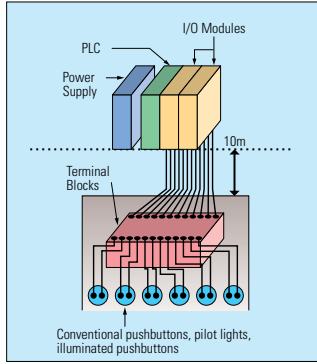


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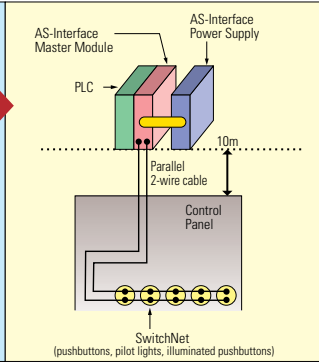
Cost Savings

Inside-Panel Wiring Example: Cost Savings Approximately 25%

Wiring Comparison  
Conventional Wiring



AS-Interface & SwitchNet Wiring



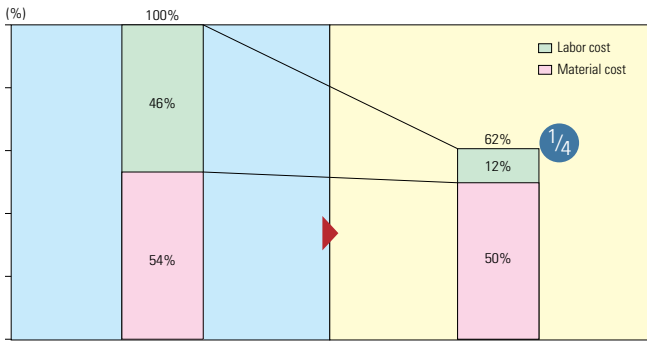
Conventional Wiring

When using conventional wiring that involves a PLC and terminal blocks, the inside of the control panel is filled with wires for switches, pilot lights and other devices. Approximately half of the total panel cost is attributable to labor costs for wiring.

AS-Interface & SwitchNet Wiring

All SwitchNet units are connected to the AS-Interface master module using 2-wire cables. Wiring time is reduced to approximately 1/4 of the time needed for the conventional method and the total cost can be reduced up to 40%. In addition, maintenance is much easier.

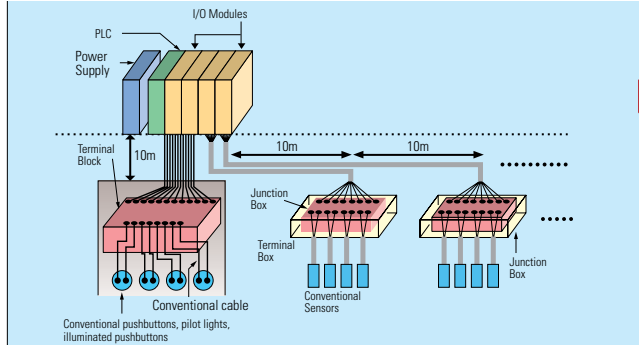
Cost Comparison  
Conventional Wiring



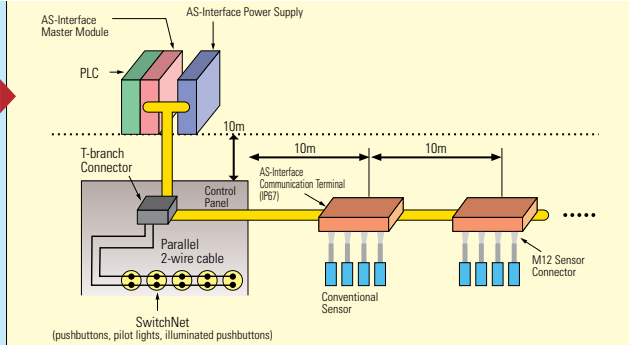
1. Comparisons were made using IDEC products.
2. Cost comparison is based on control panel configuration using 60 buttons and lights.

Inside & Outside-Panel Wiring Example: Cost Savings Approximately 25%

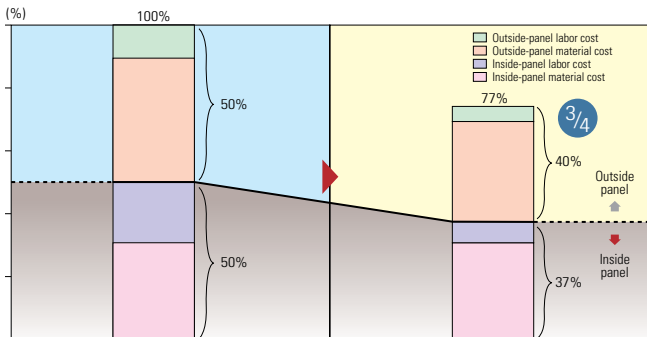
Wiring Comparison  
Conventional Wiring



AS-Interface & SwitchNet Wiring



Cost Comparison  
Conventional Wiring



Conventional Wiring

A large amount of space and cost is required by wiring to and inside junction boxes.

AS-Interface & SwitchNet Wiring

SwitchNet wiring reduces costs for inside-panel wiring resulting in a total cost reduction of approximately 25%.

1. Comparisons were made using IDEC products.
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