Communication
& Networking

IDEC

www.IDEC.com/communication

OI Touchscreens

PLCs

Automation Software

Power Supplies

Sensors

Communication

Barriers

AS-Interface Overview
(Actuator Sensor Interface)

MicroSmart Pentra

See PLC section for more information.
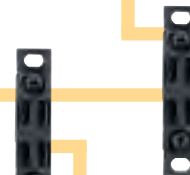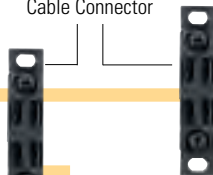
73W   145W

Visit www.IDEC.com/powersupply

SX5A AS-Interface Safety
Contact IDEC for more information.

AS-Interface Flat Cable Connector

SX5A AS-Interface I/O modules

4 inputs
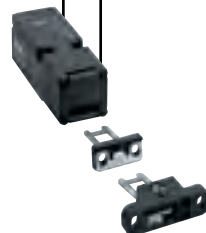2 inputs/2 outputs

4 inputs/3 outputs

4 inputs
4 inputs/3 outputs

Contact IDEC for more information

SX5A AS-Interface Safety Communication Terminal (Safety Slave)

Emergency Stop
Switch Box

Safety Interlock Switches
Contact IDEC for more information

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).

XA & XW E-Stops

FB Enclosures

T-branch Connector

Contact IDEC for more information.

ø16mm L6 Series

ø22mm HW Series

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.
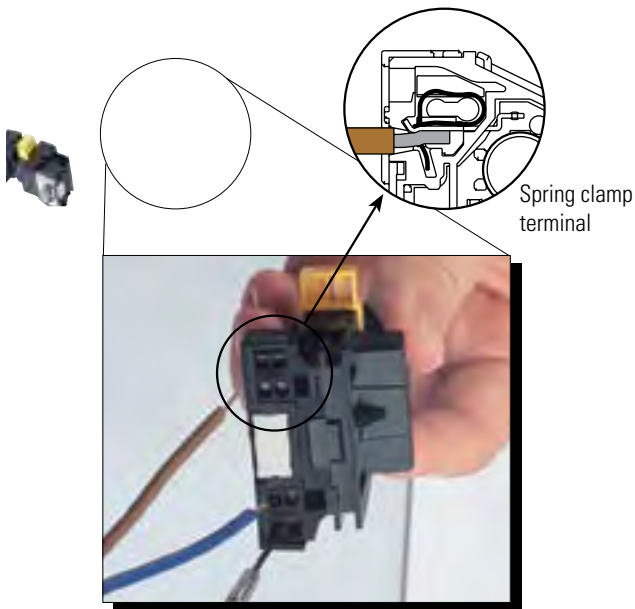
12.5%   25%   50%   100%

L6 Pilot Lights
See Switch & Pilot Light section.

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1902232147

800-262-IDEC (4332**) •** USA & Canada
Courtesy of Steven Engineering, Inc - (800) 258-9200 - sales@steveneng.com - www.stevenengineering.com

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Easy & Flexible

Quick & Secure Connection

Spring clamp terminal
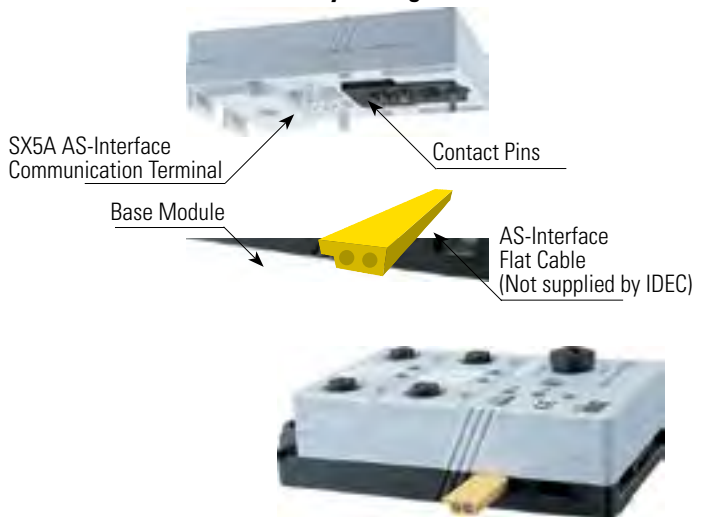
Spring clamp reduces wiring time

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

Easy Wiring

SX5A AS-Interface Communication Terminal

Contact Pins

Base Module

AS-Interface Flat Cable (Not supplied by IDEC)

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
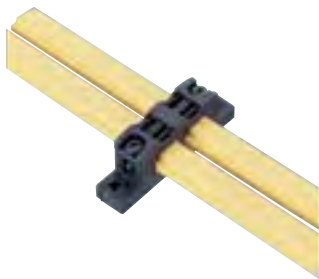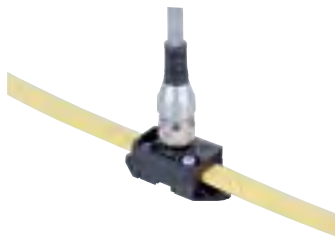
AS-Interface Master

AS-Interface Master

■ = AS-Interface slave

AS-Interface power supply can be connected at any place. No terminator is needed.
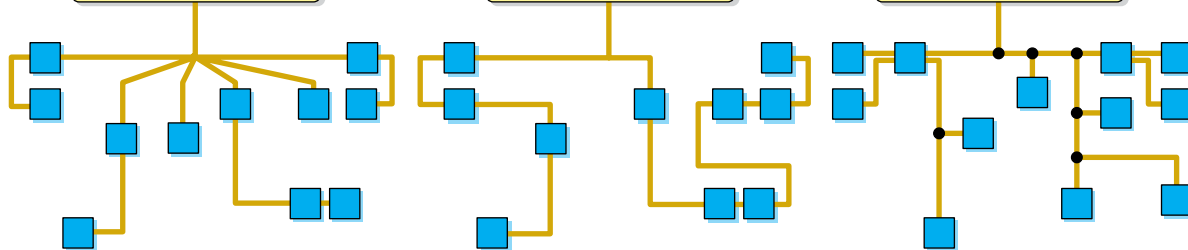
Tree Structure

Line Structure

Star Structure

Connectors

Three types of connectors are available for designing the panel layout.
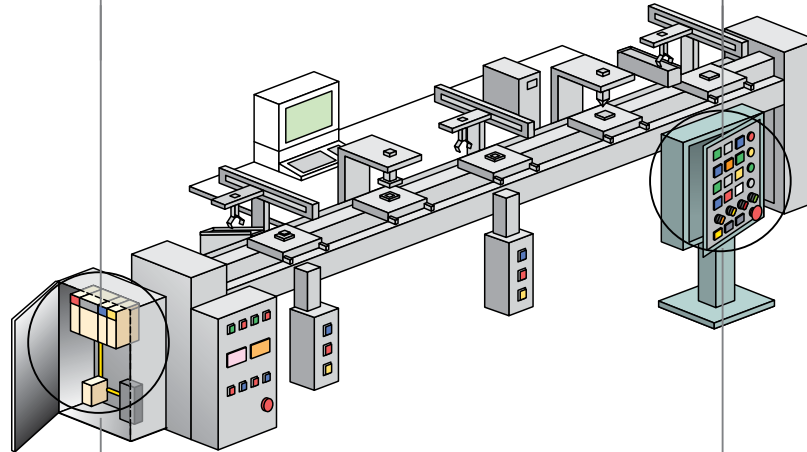
AS-Interface Flat Cable Branch Connector (IP65)

M12 Branch Connector (IP65)
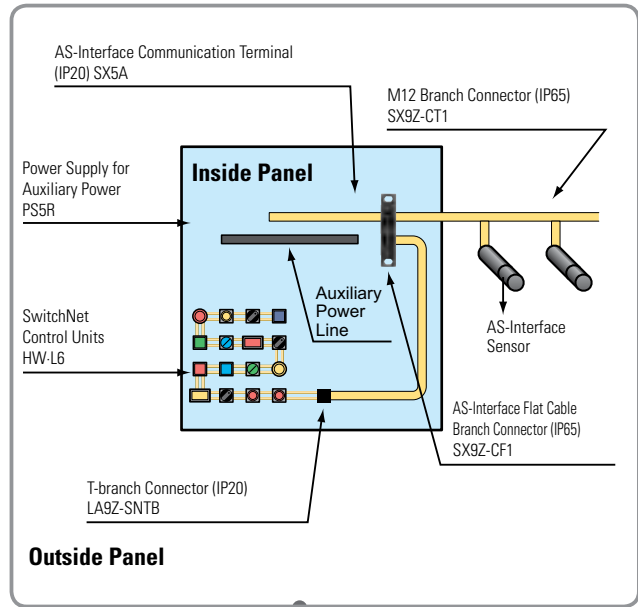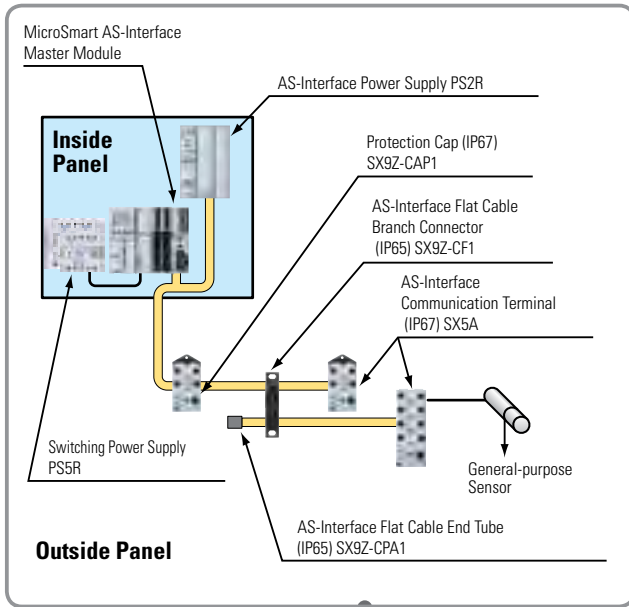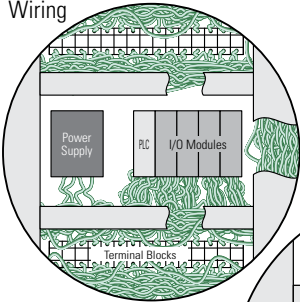
T-branch Connector (IP20)

Side tabs: OI Touchscreens | PLCs | Automation Software | Power Supplies | Sensors | Communication | Barriers

Space & Wire Savings

Inside Panel

MicroSmart AS-Interface Master Module

AS-Interface Power Supply PS2R

Protection Cap (IP67) SX9Z-CAP1

AS-Interface Flat Cable Branch Connector (IP65) SX9Z-CF1

AS-Interface Communication Terminal (IP67) SX5A

Switching Power Supply PS5R

General-purpose Sensor

AS-Interface Flat Cable End Tube (IP65) SX9Z-CPA1

Outside Panel

Inside Panel

AS-Interface Communication Terminal (IP20) SX5A

M12 Branch Connector (IP65) SX9Z-CT1

Power Supply for Auxiliary Power PS5R

SwitchNet Control Units HW-L6

Auxiliary Power Line

AS-Interface Sensor

AS-Interface Flat Cable Branch Connector (IP65) SX9Z-CF1

T-branch Connector (IP20) LA9Z-SNTB

Outside Panel

Conventional Wiring

Power Supply

PLC

I/O Modules

Terminal Blocks

AS-Interface Wiring

Power Supply

CPU Module

AS-Interface Master Module

AS-Interface Power Supply

Conventional Switch Wiring
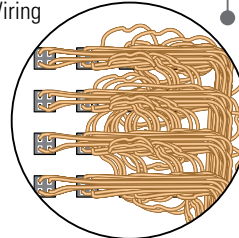
AS-Interface Switch Wiring

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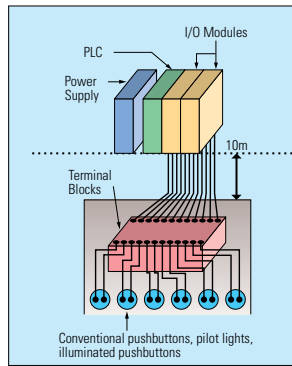
Power Supplies

Sensors

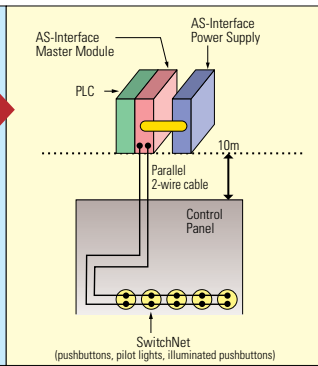**Communication**

Barriers
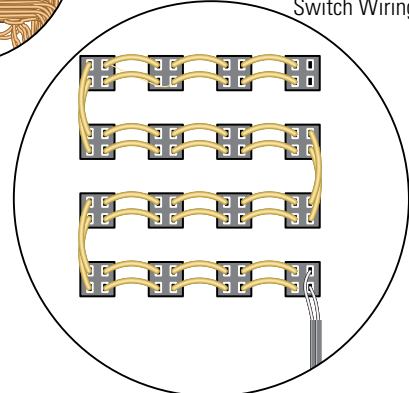
Cost Savings

Inside-Panel Wiring Example: Cost Savings Approximately 25%

Wiring Comparison

Conventional Wiring

AS-Interface & SwitchNet Wiring

Cost Comparison

Conventional Wiring

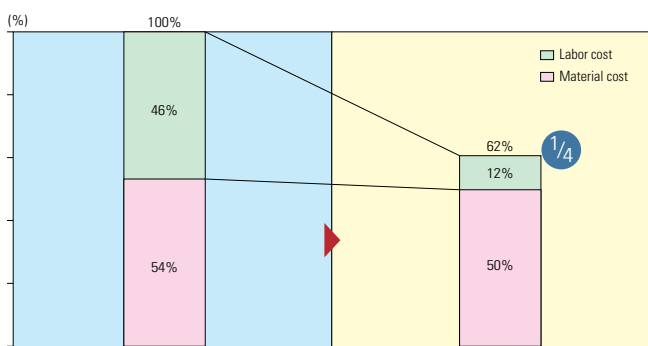**AS-Interface & SwitchNet Wiring**

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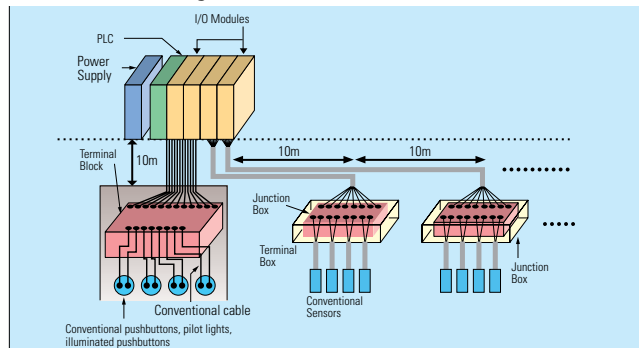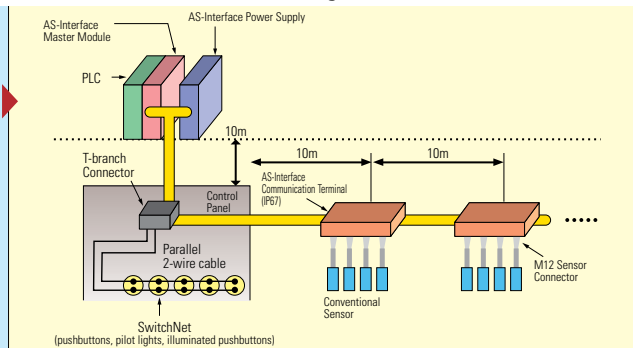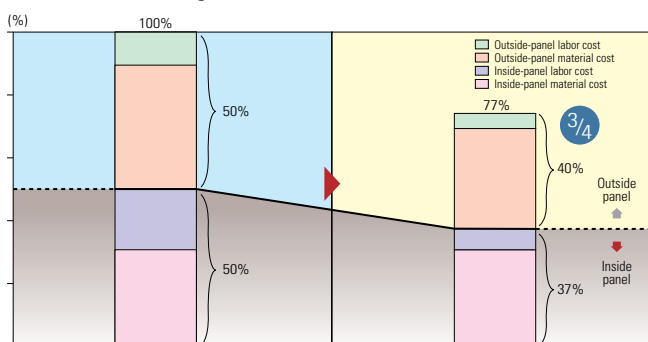
1. Comparisons were made using IDEC products.
2. Cost comparison is based on control panel configuration using 60 buttons and lights.

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

Wiring Comparison

Conventional Wiring

AS-Interface & SwitchNet Wiring

Cost Comparison

Conventional Wiring

AS-Interface & SwitchNet 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.
2. Cost comparison is based on control panel configuration using 60 buttons and lights.