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AS-Interface Overview
(Actuator Sensor Interface)

AS-Interface Flat Cable Connector

MicroSmart Pentra
See PLC section for more information.

73W 145W
Visit www.IDEC.com/powersupply

SX5A AS-Interface Safety Communication Terminal (Safety Slave)
IDEC SmartRelay
(See PLC section for more information)

Emergency Stop Switch Box
Safety Interlock Switches
Contact IDEC for more information

SX5A AS-Interface I/O modules
4 inputs 2 inputs/2 outputs
4 inputs/3 outputs
Contact IDEC for more information

SX5A AS-Interface Safety
Contact IDEC 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).

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.
Spring clamp reduces wiring time

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

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.

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

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

Inside Panel

Outside Panel

AS-Interface Communication Terminal (IP20) SX5A

M12 Branch Connector (IP65) SX9Z-CF1

Power Supply for Auxiliary Power PS5R

SwitchNet Control Units HW·LB

Auxiliary Power Line

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

T-branch Connector (IP20) LA9Z-SNTB

Power Supply for Auxiliary Power PS5R

AS-Interface Communication Terminal (IP20) SX5A

AS-Interface Sensor

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

Inside Panel

Outside Panel

Conventional Wiring

Conventional Switch Wiring

AS-Interface Wiring

AS-Interface Switch Wiring
Cost Savings

Inside-Panel Wiring Example: Cost Savings Approximately 25%

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.

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

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.