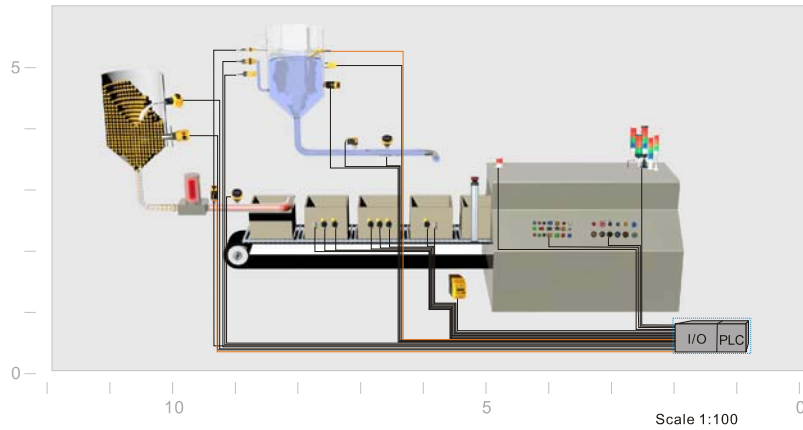


AS-interface

- AS-i Gateway
- AS-i Power Supply / 24VDC Power Supply
- AS-i I/O Modules
- AS-i Repeater

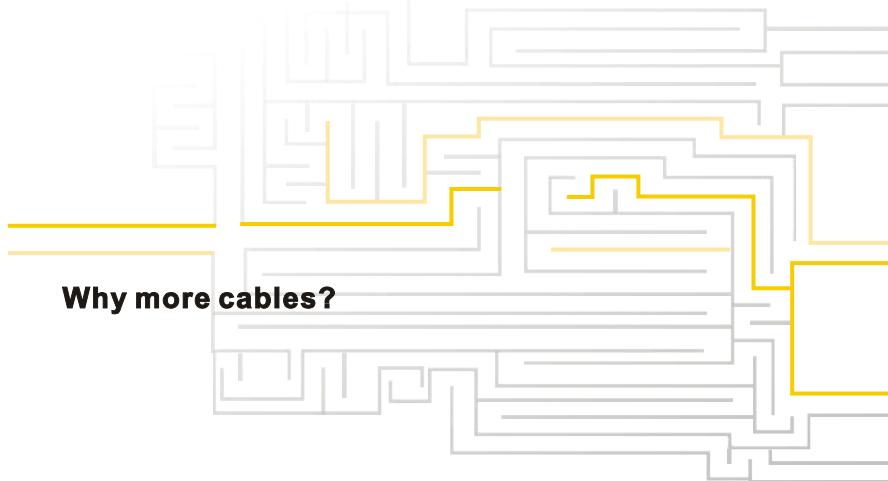


Complex Connection Parallel Wiring



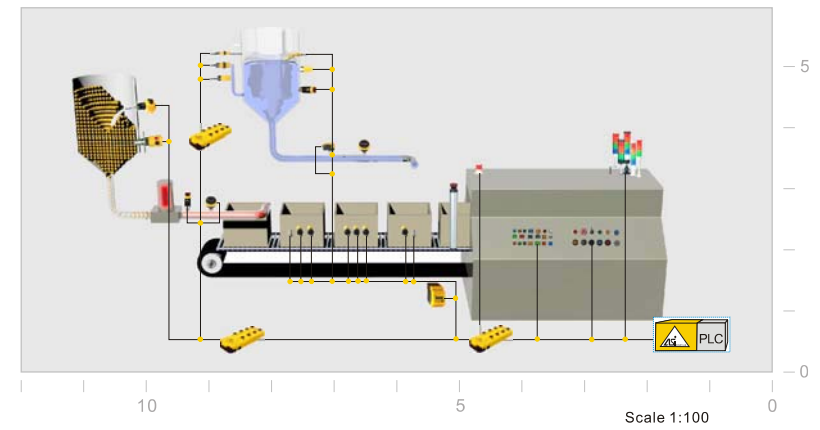
Do you want . . .

- To shorter the length of cable?
- To shorter the cycle time?
- To reduce terminals?
- To reduce operating and installation time?
- To reduce project costs?



Why more cables?

Simple Connection AS-interface



AS-i benefits to

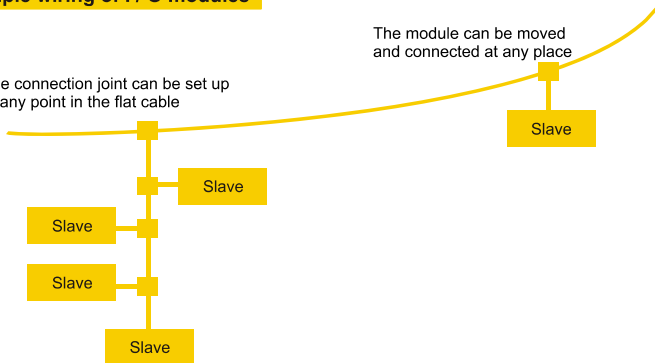
- No terminal strip
- No distance measurement for each I/O unit
- No additional software
- Reduce maintenance cost
- Enhanced logic functionality

. . . Simply AS-i

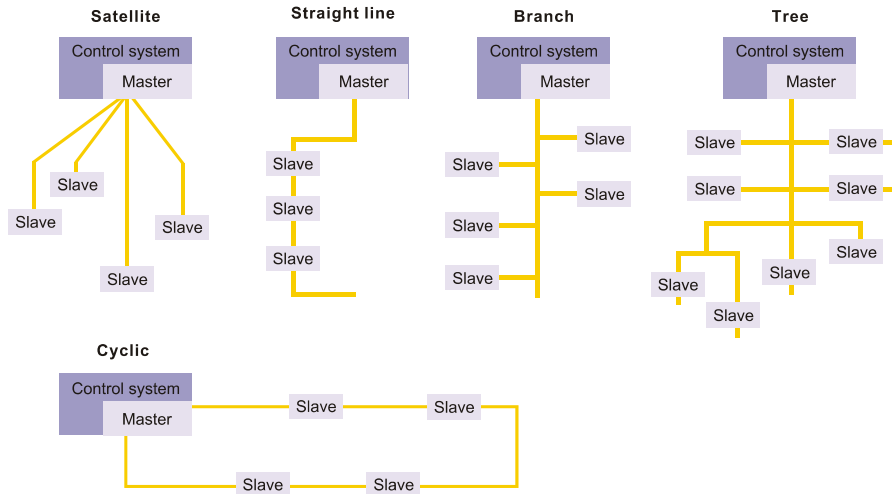
Flexible and simple wiring of I / O modules

The connection joint can be set up at any point in the flat cable

The module can be moved and connected at any place

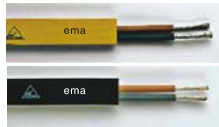


Variety of networking systems

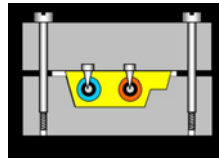


Installation of slave modules

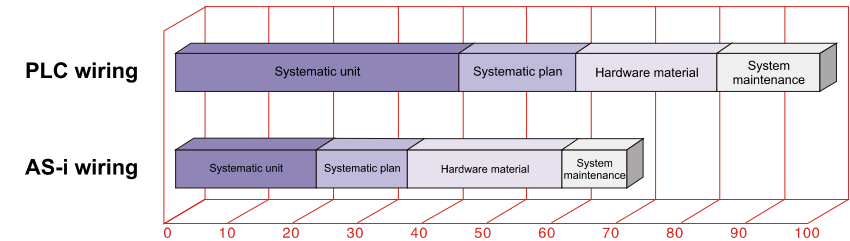
Special flat cable
IP67 water-proof



Connection to flat cable
Connection by needle piercing



Comparison of cost of traditional wiring and AS-i wiring



The cost of system wiring and of maintenance can be lower by 15~40% of original cost if adopt an AS-i system.

AS-i system benefits to...

Manufacturer

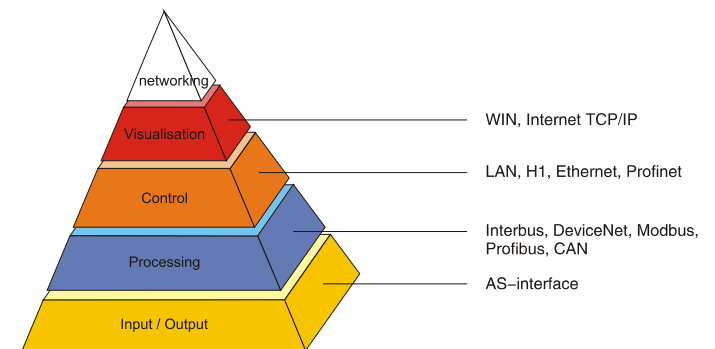
- Reduce cost of whole materials
- Quick detection for errors
- Extra software free

End-user

- Reduce cost of maintenance
- Quick detection for errors
- Simple expansion on system

Gateway

AS-i Gateways, also called couplers, connect the AS-interface to a higher-level bus system. Thus, the advantages of both systems can be combined. The advantages of AS-i as the bus of the first automation level are its easy handling, fast data transmission, low costs and quick mounting technology. Via fieldbus is most of the time considerably slower, decentralised data preprocessing in the gateway is often required. Here ema electronic offers the AS-i controller family as gateway with integrated PLC.





- Concise design; High C/P value
- No need to change system by adopting AS-i system for original field control system can lower cost
- Electric design: AS-i to Modbus / TCP IP
- Rated voltage: 24VDC
- Current consumption: <80mA



Drawing

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Order information

| Order No. | Digital input | Interface | Input voltage (V) | Current (mA) | Material | Ambient temperature | Protection | Drawing No. |
|-----------|---------------|----------------------|-------------------|--------------|----------------|---------------------|------------|-------------|
| AS3001 | Gateway | AS-i to Modbus / TCP | 24 DC | < 80 | Aluminum Alloy | -20 ~ +70 | IP20 | E2001 |

- Inductive Proximity Sensors
- Capacitive Proximity Sensors
- Valve Proximity Switches
- Photoelectric Sensors
- area light curtains
- Speed Monitor
- AS-i Gateway
- AS-i power supply
- O/I Slave module
- AS-i Repeater



AS-i Power Supply

- Integrated decoupling of signal
- Combine power and signal into one line to connect the control unit with excellent resistance against interference
- DIN track installation; LCD panel shows output voltage, current, and inner operating temperature
- Operating temperature detection
- Delicate appearance; High C/P value

24VDC Power Supply

- 85~265VAC high power transfer(> 84%)
- Electric protection: Short-circuit; reverse polarity
- DIN track installation; LCD panel shows output voltage, current, and inner operating temperature.

Drawing

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AS-i Power Supply Order information

| Order No. | Rated voltage (V) | Input voltage (V) | AS-i output current (A) | AS-i output voltage (V) | Rated frequency (Hz) | Efficiency (%) | Ambient temperature (°C) | Protection | Drawing No. |
|-----------|-------------------|-------------------|-------------------------|-------------------------|----------------------|----------------|--------------------------|------------|-------------|
| AS2001 | 110 / 220 AC | 85~265 AC | 4 | 29.5~31.6 DC | 47~ 63 | > 84 | -20 ~ +70 | IP20 | E2002 |

24VDC Power Supply Order information

| Order No. | Rated voltage (V) | Input voltage (V) | Output current (A) | Input voltage (V) | Rated frequency (Hz) | Efficiency (%) | Ambient temperature (°C) | Protection | Drawing No. |
|-----------|-------------------|-------------------|--------------------|-------------------|----------------------|----------------|--------------------------|------------|-------------|
| PS0001 | 110 / 220 AC | 85~265 AC | 5 | 24 DC (± 1%) | 47~ 63 | > 84 | -20 ~ +70 | IP20 | E2003 |

- Inductive Proximity Sensors
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- area light curtains
- Speed Monitor
- AS-i Gateway
- AS-i power supply
- O/I Slave module
- AS-i Repeater



- Signals processed by special coding can be transmitted by power cable, and it can reduce the time spent on wiring in field and on detection
- Lower cost of wiring, design, and maintenance
- Apply to stellate, tree, and cyclic wiring system
- Protection classification: IP67
- Operating voltage: 26.5...31.6VDC
- Voltage range: 18...30VDC



Order information

| Order No. | Digital input | Input voltage | loading output | Output voltage [V] | Input output connection | AS-i location | AS-i connection | Drawing No. |
|-----------|---------------|---------------|----------------|---------------------|-------------------------|----------------|-----------------|-------------|
| AS4104 | 4 x DC PNP | Through AS-i | -- | -- | M12 Socket | Single address | Flat cable | E2004 |
| AS4122 | 2 x DC PNP | Through AS-i | 2 x DC PNP | External 24VDC(AUX) | M12 Socket | Single address | Flat cable | E2004 |
| AS4140 | -- | Through AS-i | 4 x DC PNP | External 24VDC(AUX) | M12 Socket | Single address | Flat cable | E2004 |
| AS4144 | 4 x DC PNP | Through AS-i | 4 x DC PNP | External 24VDC(AUX) | M12 Socket | Single address | Flat cable | E2005 |
| AS4001 | 4 x DC PNP | Through AS-i | -- | External 24VDC(AUX) | M12 Socket | A / B | Flat cable | E2004 |
| AS4002 | 2 x DC PNP | Through AS-i | 2 x DC PNP | External 24VDC(AUX) | M12 Socket | A / B | Flat cable | E2004 |
| AS4003 | -- | Through AS-i | 3 x DC PNP | External 24VDC(AUX) | M12 Socket | A / B | Flat cable | E2006 |
| AS4004 | 4 x DC PNP | Through AS-i | 3 x DC PNP | External 24VDC(AUX) | M12 Socket | A / B | Flat cable | E2007 |

Drawing

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Accessories

| Order No. | AS9001 | AS9002 |
|------------|--------|--------|
| Flat cable | | |

Cable Order No.

| Order No. | Color | Function | Cardinal length (M) | Material | Input voltage (V) | Connection (mm ²) | Ambient temperature (°C) | Protection |
|-----------|--------|---|---------------------|----------|-------------------|-------------------------------|--------------------------|------------|
| AS9001 | Black | Auxiliary power for power supply | 1 | EPDM | 24 DC | 2 x 1.5 | -30 ~ +90 | IP67 |
| AS9002 | Yellow | Power and transmit signal for AS-i system | 1 | EPDM | 26.5...31.6 DC | 2 x 1.5 | -30 ~ +90 | IP67 |

Accessories

| Order No. | AS9003 | AS9004 | AS9005 |
|-----------|--------|--------|--------|
| Socket | | | |

Cable Order No.

| Order No. | Type | Connector I | Connector II | Cardinal length (M) | Head type | Core | Material | Socket size | Protection |
|-----------|----------------|-------------|--------------|---------------------|---------------------|------|----------|-------------|------------|
| AS9003 | AS-i Connector | male | -- | 1 | Straight / NA | 4 | PVC | M12 | IP67 |
| AS9004 | AS-i Connector | male | female | 1 | Straight / Straight | 4 | PVC | M12 | IP67 |
| AS9005 | AS-i Connector | male | female | 1 | Straight / Straight | 4 | PUR | M12 | IP67 |

Inductive Proximity Sensors
 Capacitive Proximity Sensors
 Valve Proximity Switches
 Photoelectric Sensors
 area light curtains
 Speed Monitor
 AS-i Gateway
 AS-i power supply
 O/I Slave module
 AS-i Repeater



- Precise detection with analogical outputs
- Simple installation; user-friendly operation
- Protection classification: IP67
- Operating voltage: 26.5...31.6DC
- Voltage range: 18...30DC
- ID 【HEX】 : 3.D
- E/A setting: 7
- Slave Profile: S-7.3.D



Order information

| Order No. | Type | Analogic input (mA) | Input voltage | loading output | Output voltage [V] | Input output connection | AS-i location | AS-i connection | Drawing No. |
|-----------|------------|---------------------|---------------|----------------|---------------------|-------------------------|---------------|-----------------|-------------|
| AS4201 | AS-i Slave | 2x4...20 | Through AS-i | 26.5...31.6 DC | External 24VDC(AUX) | M12 Socket | S-7.3.D | Flat cable | E2008 |
| AS4202 | AS-i Slave | 2x0...10 | Through AS-i | 26.5...31.6 DC | External 24VDC(AUX) | M12 Socket | S-7.3.D | Flat cable | E2008 |

Drawing

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Accessories

| Order No. | AS9001 | AS9002 |
|------------|--------|--------|
| Flat cable | | |

Cable Order No.

| Order No. | Color | Function | Cardinal length (M) | Material | Input voltage (V) | Connection (mm ²) | Ambient temperature (°C) | Protection |
|-----------|--------|---|---------------------|----------|-------------------|-------------------------------|--------------------------|------------|
| AS9001 | Black | Auxiliary power for power supply | 1 | EPDM | 24 DC | 2 x 1.5 | -30~+90 | IP67 |
| AS9002 | Yellow | Power and transmit signal for AS-i system | 1 | EPDM | 26.5...31.6 DC | 2 x 1.5 | -30~+90 | IP67 |

Accessories

| Order No. | AS9003 | AS9004 | AS9005 |
|-----------|--------|--------|--------|
| Socket | | | |

Cable Order No.

| Order No. | Type | Connector I | Connector II | Cardinal length (M) | Head type | Core | Material | Socket size | Protection |
|-----------|----------------|-------------|--------------|---------------------|---------------------|------|----------|-------------|------------|
| AS9003 | AS-i Connector | male | — | 1 | Straight / NA | 4 | PVC | M12 | IP67 |
| AS9004 | AS-i Connector | male | female | 1 | Straight / Straight | 4 | PVC | M12 | IP67 |
| AS9005 | AS-i Connector | male | female | 1 | Straight / Straight | 4 | PUR | M12 | IP67 |

Inductive Proximity Sensors
 Capacitive Proximity Sensors
 Valve Proximity Switches
 Photoelectric Sensors
 area light curtains
 Speed Monitor
 AS-i Gateway
 AS-i power supply
 O/I Slave module
 AS-i Repeater



- Extend AS-i cable to 100M for a increase in wiring by deforming AS-i connection signals
- Protection classification: IP67
- Voltage range: 26.5...31.6VDC



Order information

| Order No. | Type | Digital input | Input voltage | Loading output | output voltage (V) | Input / output connection | AS-i location | AS-i connection | Drawing No. |
|-----------|---------------|---------------|---------------|----------------|--------------------|---------------------------|---------------|-----------------|-------------|
| AS1001 | AS-i Repeater | — | Through AS-i | — | — | — | — | Flat cable | E2009 |

Drawing

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Accessories

| Order No. | AS9001 | AS9002 |
|------------|--------|--------|
| Flat cable | | |

Cable Order No.

| Order No. | Color | Function | Cardinal length (M) | Material | Input voltage (V) | Connection (mm ²) | Ambient temperature (°C) | Protection |
|-----------|--------|---|---------------------|----------|-------------------|-------------------------------|--------------------------|------------|
| AS9001 | Black | Auxiliary power for power supply | 1 | EPDM | 24 DC | 2 x 1.5 | -30~+90 | IP67 |
| AS9002 | Yellow | Power and transmit signal for AS-i system | 1 | EPDM | 26.5...31.6 DC | 2 x 1.5 | -30~+90 | IP67 |

Inductive Proximity Sensors
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 AS-i power supply
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