AS-i Bus System

Series 79 Pneumatic Actuator

Specifications

Mounting:	ISO/NAMUR
Connection:	M12 SS
AS-i Current Draw:	.16 AMP
Electrical Design:	2-input/2-output
Voltage Range:	26.5-31.6 VDC
Sensor/relay supply:	AS-i
Air Connection:	1/4" FNPT
Solenoid coil:	Epoxy encapsulated
Solenoid protection:	Type 4x Reverse polarity protected

A group of European automation companies had a vision for a simple, cost effective networking system. These companies worked together for a common goal, and in 1993 the AS-i (actuator sensor interface) network was formed.

AS-i offers many of the benefits of more complex and costly bus systems, but does it at a substantially lower cost and with greater simplicity. The AS-i is ideally suited for controlling valves, actuators and many other field devices in your processing application.

This interface can be used for stand-alone process control, or it can be used together with a higher level bus control system.

AS-i does not compete with higher level bus systems; it should be seen as a complimentary system that offers low cost, reliable device control for binary and analog devices.

Reliability, simplicity and interoperability make AS-i a cost effective connection/control solution, particularly where low installation costs are imperative.

A single pair of wires, which handles power and communications, is used to control the network by means of "chaining" the actuators with the PLC. Each actuator (or device) will then have its own unique address within the system and only that device with the proper address will respond to system commands.

AS-i is best known for its yellow flat cable, which is pierced by insulation displacement connectors so that the expense of tees and complex connectors is avoided. Devices are simply clamped onto the cable.

Digital signals are encoded on this cable in a sinusoidal signal, which has a very narrow frequency bandwidth. Filtering, which is distributed through the network, rejects all extraneous frequencies, and in this way AS-i can be operated in electrically noisy environments without experiencing transmission errors.

The yellow flat cable carries low current (30 VDC) for input devices such as solenoids, relays, etc., as well as the AS-i signal. If power for outputs (such as electric actuators) is required, an additional black flat cable is available.