

3.5 Connect the AS-Interface bus and the load voltage

The sensor supply for the inputs is provided via the AS-Interface bus.



Warning

- Use only PELV (protective extra-low voltage) circuits as per EN 60204-1 for the electric power supply.
- Also observe the general requirements for PELV power circuits as per EN 60204-1.
- Only use power sources which guarantee reliable electrical isolation of the operating voltage as per EN 60204-1.

Through the use of PELV circuits, protection against electric shock (protection against direct and indirect contact) is guaranteed in accordance with EN 60204-1.



Note

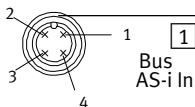
The sensor supply gained from the AS-interface power supply is protected against short circuits and overload. It must **not** be connected with other potentials (example, a common ground).

The valves (outputs) are always supplied with 24 V additional supply, separate via the load voltage connection.

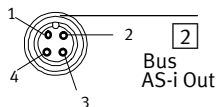
Please note with branch lines:

- the maximum total length of the AS-Interface bus (100 m without repeaters/extenders)
- the length of the load voltage connection cable (depends on the current consumption of the valve terminal and fluctuations in load voltage).

Connection to M12 plug (AS-i In / AS-i Out)



1 M12 plug, 4-pin,
“AS-i In”



2 M12 socket, 4-pin,
“AS-i Out”

- Pin 1: AS-Interface +
Pin 2: 0 V (additional supply)
Pin 3: AS-Interface -
Pin 4: +24 V (additional supply)

Seal unused connections with protective caps type ISK M12 or UIFB1-02-1/4.

3.6 Accessories



Note

The Festo accessories can be found under:

➔ www.festo.com/catalogue

4 Technical specifications

VTSA-...-ASI-8E8A-Z	
Temperature range – operation – storage	-5 ... +50 °C -20 ... +40 °C
Relative air humidity	90 % at 40 °C
Protection class as per Plug connector when fully pushed in or fitted with protective cover	– EN 60529 IP65 – NEMA type 4 ¹⁾
Protection against electric shock	Through use of PELV current circuits (protection against direct and indirect contact according to EN 60201-1)
Electromagnetic compatibility – EMC interference emission ²⁾ – EMC resistance to interference	see declaration of conformity ➔ www.festo.com
General technical data	see Pneumatics manual P.BE-VTSA-44-...
AS-Interface specifications – ID code – IO code – Profile	ID = F _H ; ID1 = F _H ; ID2 = E _H IO = 7 _H S-7.F.E
¹⁾ Type 4 (hosedown test, test no. 5.7) ²⁾ The device is intended for use in industrial environments. Measures may need to be implemented in residential areas for interference suppression.	

VTSA-...-ASI-8E8A-Z

AS-Interface bus connection <ul style="list-style-type: none"> – Voltage range (protected against incorrect polarity) – Residual ripple – Max. current consumption <ul style="list-style-type: none"> – Electronics (input circuitry at 0-status incl. LED) – Max. sum current for inputs 	26.5 ... 31.6 V DC ≤ 20 mVpp < 25 mA 350 mA		
Additional supply (load voltage) ¹⁾ <ul style="list-style-type: none"> – Rated value (protected against incorrect polarity) – Residual ripple – Current consumption 	21.6 ... 26.4 V DC (24 V DC ± 10 %) ≤ 4 Vpp see valves		
Valves (see Pneumatics manual P.BE-VTSA-...) <ul style="list-style-type: none"> – Current consumption per solenoid coil (with LED) at 24 V 	<table border="1"> <tr> <td data-bbox="616 806 774 1025"> Watchdog function active after approx. 40 ... 100 ms 3/2-way valves 60 mA </td><td data-bbox="774 806 968 1025"> 5/2- and 3/2-way valves 72 mA </td></tr> </table>	Watchdog function active after approx. 40 ... 100 ms 3/2-way valves 60 mA	5/2- and 3/2-way valves 72 mA
Watchdog function active after approx. 40 ... 100 ms 3/2-way valves 60 mA	5/2- and 3/2-way valves 72 mA		
¹⁾ Solenoid coils are always operated via the AS-Interface additional supply			

VTSA-...-ASI-8E8A-Z

Digital inputs ¹⁾

- Assignment of the inputs
- Design
- Logic level
- Sensor supply (US+/US-)
- Response delay

8 digital inputs based on IEC 1131-2 type 2
Slave 1: I0 ... I3
Slave 2: I4 ... I7
24 V DC, PNP,
status display (LED)
ON: 11 ... 30 V
OFF: -30 ... 5 V
≥ AS-interface bus
voltage – 2.5 V
typically 3 ms (at 24 V)

Diagnosis (see section 2)

- AS-Interface voltage and address, watchdog, I/O status
- Additional power supply not applied or undervoltage

LED display

LED display, Peripheral faults

- ¹⁾ The inputs are short-circuit resistant. In the event of a short circuit the slave will be switched off. The AS-Interface master then regards this slave as missing. The slave reports back as functioning once the short circuit has been eliminated.