

Intelligent Feedback Unit

## SISTO-SK-i

For Valves with Linear Actuators  
Stroke: 5-46 mm

### Type Series Booklet



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Type Series Booklet SISTO-SK-i

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## Intelligent Actual-position Feedback Unit

### Intelligent Actual-position Feedback Unit for Linear Valves

## SISTO-SK-i



### Product description of SISTO-SK-i

SISTO-SK-i is a smart actual-position feedback unit for linear valves. Valve position is indicated visually and clearly by means of coloured LEDs. User-friendly setting of limit positions by automatic initialisation in situ or via the process control system.

SISTO-SK-i continuously records valve travel and comprises a microcontroller-based analysing unit. Valve position is signalled optically by the device LEDs and electrically via digital outputs.

SISTO-SK-i is connected via an M12 connector. It is ready for operation as soon as initialisation is complete.

### Main applications

- Biotechnology
- Chemical industry/Fine chemicals
- Food industry and beverages industry
- Pharmaceutical industry
- Process industry

### Operating data

Operating properties

Characteristic	Value
Stroke [mm]	5 - 46
Min. permissible temperature [°C]	≥ -30
Max. permissible temperature [°C]	≤ +60

### Materials

Overview of available materials

Description	Material	Material number
Housing	Plastic, black	PA66-GF30
Electrical connection M12	X2CrNiMo17-12-2	1.4404

### Design details

- Binary fault output
- Electrical connection via M12 plug
- Compact actual-position feedback unit for mounting on linear valves
- Continuous valve travel recording via microcontroller
- Open/closed position feedback
- 4 LEDs for status and position indication

### Directives

EMC Directive	2014/30/EU
RoHS Directive	2011/65/EU

### Standards

Enclosure to EN 60529	IP64
Safety class to EN 61140	Safety class III

### Variants

- Connection via AS interface
- Stainless steel housing (1.4404)
- Integrated 3/2-way solenoid valve (actuator types SF and OF)

### Product benefits

- Pushbuttons for easy in-situ operation
- Remote initialisation possible
- Optional AS-i field bus connection
- Smooth surfaces are easy to clean

### Related documents

Information/documents

Document	Reference number
SISTO-SK-i/ SK-i AS-i operating manual	8676.81

### Purchase order specifications

Please specify the following information in all enquiries or purchase orders:

Designs

Design	
S0	Actual-position feedback unit 24 V
S5	Actual-position feedback unit 24 V with solenoid valve
A0	Actual-position feedback unit AS-i
A5	Actual-position feedback unit AS-i with solenoid valve

Overview of available materials

Material	
K0	Plastic PA66-GF30
00	Stainless steel 1.4404

Mounting

For mounting on	Diaphragm diameter [MD]
00 SISTO-C LAP	-
01 SISTO-C LAP.520	30 - 65
02 SISTO-C LAP.520	92 - 115
03 SISTO-C LAP.520/ 530	168

### Ordering example: SK-i 50 K0 02

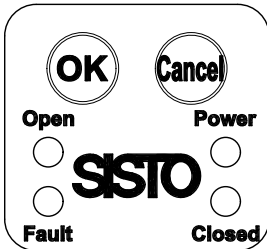
- 1. Design: actual-position feedback unit 24 V
- 2. Material: PA66-GF30
- 3. SISTO-C LAP.520 MD 92 - 115

### Technical data

Technical data of SISTO-SK-i 24 V

Electrical data	
Connection	8-pin M12 round plug connector
Supply voltage	24 V +/- 10 %
Current input [mA]	Approx. 80
Duty ratio	100 %
Digital outputs	24 V, max. 100 mA, short-circuit-proof
-	Open
-	Closed
-	Fault
Digital inputs	24 V, Low: 0 - 3 V, High: 18 - 24 V
-	Remote initialisation

### Indicator and operating elements



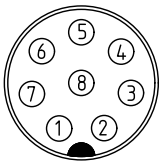
### Function

Power  
Open  
Closed  
Fault

### LED colour

Green  
Orange  
Yellow  
Red

### Pin assignment of SISTO-SK-i 24 V



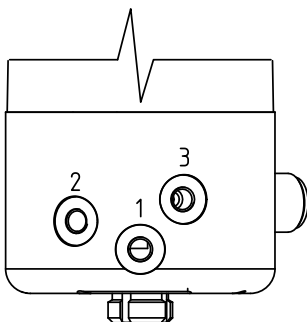
### PIN

1  
2  
3  
4  
5  
6  
7  
8

### Assignment

+24 V  
DO Open <sup>1)</sup>  
0 V  
DO Closed <sup>1)</sup>  
DI Teach-in <sup>2)</sup>  
DI Solenoid valve <sup>2)3)</sup>  
DO Fault <sup>1)</sup>  
Not used

### Pneumatic connection

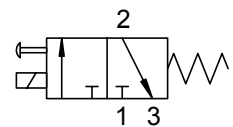


### Connection

1  
2  
3

### Assignment

Air supply  
Actuator  
Air outlet



1) Binary output  
2) Binary input  
3) With integrated solenoid valve only

**Supplementary technical data for SISTO-SK-i solenoid valve**

Electrical data

Electrical data	
Current input [mA]	Approx. 35

Pneumatic data

Pneumatic data	
Connection	Internal thread M5
Flow rate [l <sub>N</sub> /min.]	15
P max [bar]	10
Compressed air quality	ISO 8573-1 3/3/3

Materials

Materials	
Pneumatic connection	1.4404

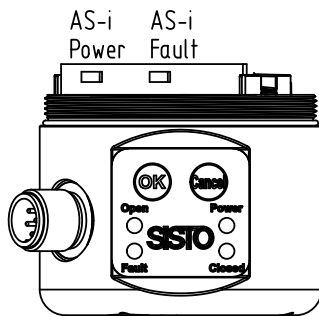
**Technical data**

Technical data of SISTO-SK-i AS-i

Electrical data	
Connection	5-pin M12 round plug connector
Supply voltage [V]	26,5 - 31,6
Current input [mA]	Approx. 110
Duty ratio	100 %
AS-i specification	V3.0

AS interface profile	
I/O configuration	7
ID code	A
ID1 code	*
ID2 code	E

Indicator and operating elements



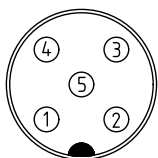
Function

Power  
Open  
Closed  
Fault  
AS-i-Power  
AS-i-Fault

LED colour

Green  
Orange  
Yellow  
Red  
Green  
Red

Pin assignment of SISTO-SK-i AS-i



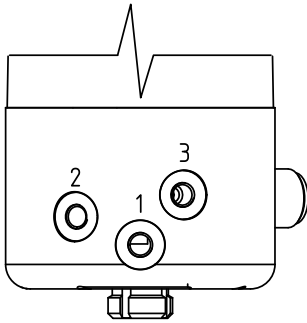
PIN

1  
2  
3  
4  
5

Assignment

AS-i +  
Not used  
AS-i -  
Not used  
Not used

**Pneumatic connection**

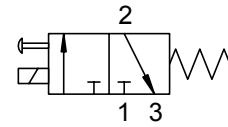


**Connection**

- 1
- 2
- 3

**Assignment**

- Air supply
- Actuator
- Air outlet



**Supplementary technical data for SISTO-SK-i AS-i solenoid valve**

**Electrical data**

Electrical data	
Current input [mA]	Max. 150

**Materials**

Materials	
Pneumatic connection	1.4404

**Pneumatic data**

Pneumatic data	
Connection	Internal thread M5
Flow rate [l <sub>v</sub> /min.]	15
P max [bar]	10
Compressed air quality	ISO 8573-1 3/3/3

**Inputs of SISTO SK-i AS-i (AS-i master perspective)**

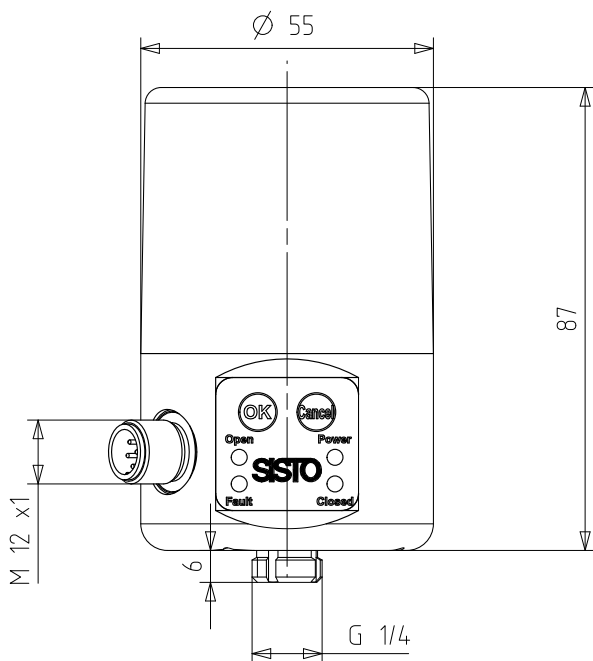
Inputs (AS-i master perspective)		
DI0	OPEN position	0 = "Not open" position 1 = "Open" position
DI1	CLOSED position	0 = "Not closed" position 1 = "Closed" position
DI2	Ready	0 = Normal operation 1 = Initialisation mode
DI3	Fault	0 = Normal operation 1 = Fault Alternating at 1 Hz = valve not initialised

**Outputs of SISTO SK-i AS-i (AS-i master perspective)**

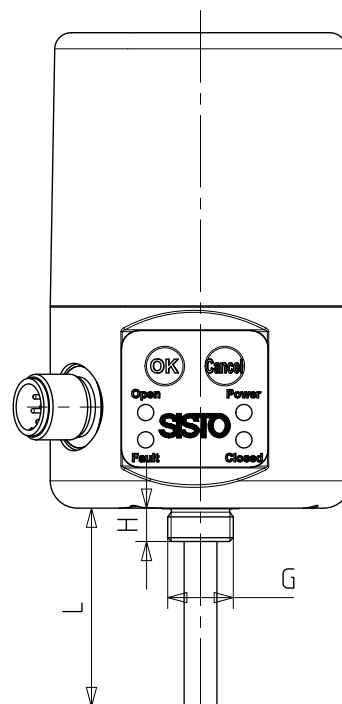
Outputs (AS-i master perspective)		
DO0	Operate valve	0 = Pilot valve not operated (if fitted) 1 = Pilot valve operated
DO1	Not connected	-
DO2	Activate teach-in	0 = Normal operation 1 = Initialisation mode
DO3	Not connected	-

## Dimensions and weights

Dimensions and weights



SISTO-C LAP



SISTO-C LAP.520

## Mechanical data

Mechanical data of SISTO-SK-i / SK-i AS-i

Dimensions	[mm]
Diameter	55
Height	87
Stroke	5 - 46

Mounting variants by linear actuator<sup>4)</sup>

Actuator	LAP	LAP.520/530		
Variant	00	01	02	03
L [mm]	-	38	38	59
G	G¼	M12 x 1	M18 x 1	M18 x 1
H [mm]	6	6	6	8

Weights

Weight [kg]	
PA66-GF30	0,170
1.4404	0,470

4) Further mounting variants available on request











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