

## MASI Bus Equipment

The product range is divided into 3 sectors.

### I/O modules with IP20 Protection

For mounting in control panels, distribution boxes or terminal boxes. Standard sensors and actuators can be directly connected by means of the module terminals. The units can be DIN-rail mounted (EN 50022).

### I/O modules with IP67 Protection

These units have a robust housing and can be mounted directly on the machine or installed on any even surface. The modules are available with base plates for screw fixing or DIN-rail mounting. Ease of maintenance is achieved through plug connections.

## System components

The available accessories:

- Master
- Gateways
- ASI Power supply unit
- Addressing device
- ASI round cable of various cross sections facilitate the optimum solution.

2 A outputs with electrical isolation and overload protection guarantee reliable and safe operation with large loads.

Integrated sensor supply and 3-wire connection make for ease of maintenance. Hand held programming unit.



### Bus Equipment MASI

AS-Interface system components with integrated interface, pluggable bus connection, DIN-rail mounting with IP20 protection

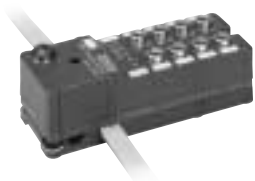
- 4 inputs Page 2.7.3
- 4 outputs Page 2.7.3
- 2 inputs and 2 outputs Page 2.7.3
- 4 inputs and 4 outputs Page 2.7.4 + 2.7.5



### Bus Equipment MASI

AS-Interface system components with plug-in connection, integrated addressing socket, DIN-rail mounting with IP40 protection

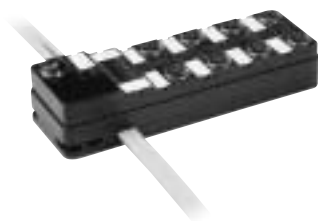
- 4 inputs Page 2.7.6
- 4 outputs Page 2.7.6
- 2 inputs and 2 outputs Page 2.7.7
- 4 inputs and 4 outputs Page 2.7.7



### Bus Equipment MVK8

AS-Interface system components with IP67 protection

- 4 inputs Page 2.8.1
- 8 inputs Page 2.8.1
- 4 outputs Page 2.8.2
- 4 inputs and 4 outputs Page 2.8.3



### Bus Equipment MVK12

AS-Interface system components with IP67 protection

- 4 inputs Page 2.8.4
- 8 inputs Page 2.8.4
- 4 outputs Page 2.8.5
- 8 outputs Page 2.8.5
- 2 inputs and 2 outputs Page 2.8.6
- 4 inputs and 4 outputs Page 2.8.6



### Bus Equipment MS-ASI

AS-Interface system components with IP67 protection

- 4 outputs Page 2.9.1
- 2 inputs and 2 outputs Page 2.9.1



## Power supply unit

AS-Interface system components with IP20/IP67 protection  
Power supply unit 2,8 A

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## Accessories

Addressing device

Distributor flat profile cable

Distributor flat profile/round cable

Converter flat profile → round cable

Converter flat profile cable → M12

AS-Interface adapter flat profile cable

Profile-/round cables

End caps for flat profile cables

Mounting bracket

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- integrated AS-Interface
- pluggable bus connection
- mountable on DIN-rail to EN 50022

**MASI 20**  
DI 4

**MASI 20**  
DO 4

**MASI 20**  
DI 2 DO 2



IP20 Protection

Ordering data	Art.-No.	Art.-No.	Art.-No.
4 digital inputs	55627		
4 digital outputs		55656	
2 digital inputs/outputs			55697
<b>Technical data</b>			
AS-Interface bus voltage	26,5...31,6 V DC		
AS-Interface current usage	max. 250 mA	max. 30 mA	
Supply voltage inputs/outputs	via AS-Interface bus	18...36 V DC	
Current usage inputs/outputs	–	min. 15 mA / max. 8 A	min. 15 mA / max. 4 A
Addressing	1...31, pre-adjusted to address 0		
Temperature range	0...60 °C		
Mounting method	DIN-rail mounting to EN50022		
Weight	approx. 130 g		
Dimensions (H x B x T)	86 x 45 x 70 mm		
Connection technology	bus: screw/plug terminals max. 2,5 mm <sup>2</sup> ; I/O: screw terminals max. 2,5 mm <sup>2</sup>		
<b>Inputs</b>			
Number of	4	–	2
Type	for 3-wire sensors, p-switching or for mechanical switches		
Primary voltage/current	IEC 1131 part 2	–	IEC 1131 part 2
Sensor supply (combined current)	max. 200 mA, short-circuit and overload protected	–	max. 400 mA, short-circuit and overload protected
Suppressor type	zener diode	–	zener diode
Short-circuit protection	electronic 200 mA	–	electronic 400 mA
Status indicator	LED yellow/input		
<b>Outputs</b>			
Number of	–	4	2
Current usage per output	–	max. 2 A, 100% ED	max. 2 A, 100% ED
Combined current	–	max. 8 A, short-circuit and overload protected	max. 4 A, short-circuit and overload protected
Switching frequency	–	max. 100 Hz at resistive load, max. 2 Hz at inductive load	
Switch off time by short-circuit	–	approx. 150 ms	
Suppressor type	–	suppressor diode	
Status indicator	–	LED yellow/output	
<b>Diagnostics</b>			
LED green/LED red	coded to AS-Interface, specification 2.11 (Watchdog, 0-address, sensor supply, short-circuit and overload protected)		
<b>Dimension drawing</b>			
<b>Accessories</b>			
Handbook Germ./Engl./French	Art.-No. 55646/55647/55653		
<b>Notes</b>			
chip version SAP 4			

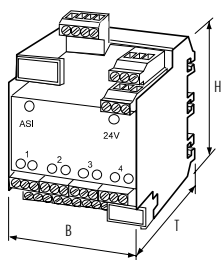
- integrated AS-Interface
- pluggable bus connection
- mountable on DIN-rail to EN 50022

**MASI 20**  
**DI 4 DO 4**



**IP20 Protection**



Ordering data	Art.-No.
4 digital inputs/outputs	55706
<b>Technical data</b>	
AS-Interface bus voltage	26,5...31,6 V DC
AS-Interface current usage	max. 30 mA
Supply voltage inputs/outputs	18...36 V DC
Current usage inputs/outputs	min. 15 mA / max. 8 A
Addressing	1...31, pre-adjusted to address 0
Temperature range	0...60 °C
Mounting method	DIN-rail mounting to EN50022
Weight	approx. 190 g
Dimensions (H x B x T)	86 x 67,5 x 70 mm
Connection technology	bus: screw/plug terminals max. 2,5 mm <sup>2</sup> ; I/O: screw terminals max. 2,5 mm <sup>2</sup> or flying leads with cable shoes
<b>Inputs</b>	
Number of	4
Type	for 3-wire sensors, p-switching or for mechanical switches
Primary voltage/current	IEC 1131 part 2
Sensor supply (combined current)	max. 400 mA, short-circuit and overload protected
Suppressor type	zener diode
Short-circuit protection	electronic 400 mA
Status indicator	LED yellow/input
<b>Outputs</b>	
Number of	4
Current usage per output	max. 2 A, 100% ED, short-circuit and overload protected
combined current	max. 8 A
Switching frequency	max. 100 Hz at resistive load, max. 2 Hz at inductive load
Switch off time by short-circuit	approx. 150 ms
Suppressor type	suppressor diode
Status indicator	LED yellow/output
<b>Diagnostics</b>	
LED green/LED red	coded to AS-Interface, specification 2.11 (Watchdog, 0-address, sensor supply, short-circuit and overload protected)
<b>Dimension drawing</b>	
	
<b>Accessories</b>	
Handbook Germ./Engl./French	55646/55647/55653
<b>Notes</b>	
chip version SAP 4	

- integrated AS-Interface
- pluggable bus connection
- mountable on DIN-rail to EN 50022

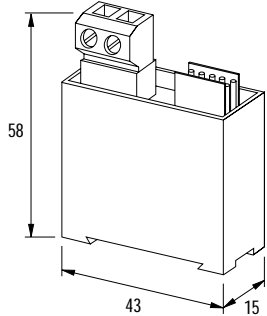
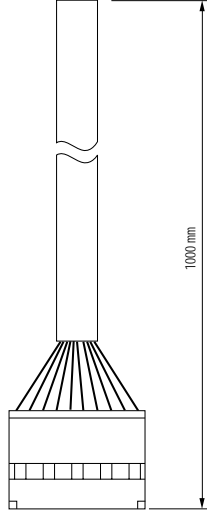
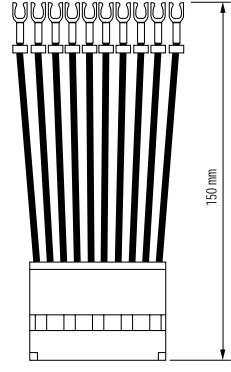
MASI 00  
DI 4 DO 4

Connection cable

Connection cable

IP20 Protection



Ordering data	Art.-No.	Art.-No.	Art.-No.
4 digital inputs/outputs	55700		
1 m cable		556510	
150 mm cable			556511
Technical data			
AS-Interface current usage	max. 250 mA		
Supply voltage inputs/outputs	via AS-Interface bus		
Current usage input + output	max. 200 mA		
Addressing	1...31 via plug terminals		
Temperature range	0...55 °C		
Mounting method	DIN-rail mounting to EN50022		
Weight	approx. 50 g		
Dimensions (H x W x D)	58 x 43 x 15 mm		
Connection technology	bus: screw/plug terminals max. 2,5 mm <sup>2</sup>		
Inputs			
Number of	4		
Type	for commercial switch		
Sensor supply	max. 200 mA		
Short-circuit protection	electronic 200 mA		
Status indicator	-		
Outputs			
Number of	4		
Current usage per output	max. 25 mA		
Combined current	max. 200 mA		
Switching frequency	max. 100 Hz at resistive load		
Switch off time by short-circuit	approx. 50 ms		
Dimension drawing			
			
Accessories			Art.-No.
Handbook Germ./Engl./French			55646/55647/55653
Notes			

- plug-in connection
- integrated addressing socket
- mountable on DIN-rail to EN 50022

IP40 Protection

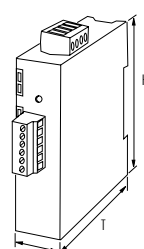
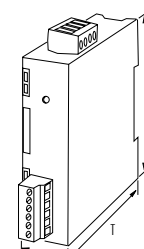


**MASI 40  
DI 4**



**MASI 40  
DO 4**



Ordering data	Art.-No.	Art.-No.
4 inputs	55690	
4 relay outputs		55691
2 inputs / 2 solid state outputs		
2 inputs / 2 relay outputs		
4 inputs / 4 solid state outputs		
4 inputs / 4 relay outputs		
<b>Technical data</b>		
AS-Interface supply voltage	26,5...31,6 V DC	
AS-Interface current usage	165 mA	50 mA
Supply voltage inputs/outputs	24 V	
Addressing	1...31 via address port, pre-adjusted to address 0	
Temperature range	0...+55°C	
Mounting method	DIN-rail mounting to EN50022	
Weight	105 g	
Dimensions	78,5 x 22,5 x 83 mm	
Connection technology AS-Interface	screw/plug terminals max. 2,5 mm <sup>2</sup>	
Connection technology sensor/actuator	screw/plug terminals max. 1,5 mm <sup>2</sup>	
<b>Inputs</b>		
Number of	4	–
Switching voltage	0-5 V: '0'; 11-30 V: '1'	–
Primary voltage/current	24 V/17 mA	–
Sensor supply (combined current)	≤ 125 mA from the AS-Interface	–
Short-circuit protection	electronic	–
Status indicator	LED green	–
<b>Outputs</b>		
	<b>Relay</b>	
Number of	–	4
Current usage per output	–	max. 2 A
Combined current	–	max. 4,5 A
Switching frequency	–	50 Hz
Status indicator	–	LED red
<b>Diagnostics</b>		
LED green/LED red	coded to AS-Interface, specification 2.11 (Watchdog, 0-address, sensor supply, short-circuit and overload protected)	
<b>Dimension drawing</b>		
		
<b>Accessories</b>		<b>Art.-No.</b>
Handbook Germ./Engl./French		55646/55647/55653
<b>Notes</b>		

- plug-in connection
- integrated addressing socket
- mountable on DIN-rail to EN 50022

IP40 Protection



**MASI 40**  
DI 2 DO 2



**MASI 40**  
DI 4 DO 4

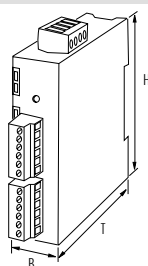
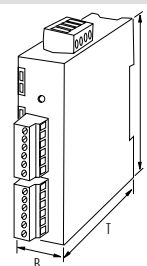


Ordering data	Art.-No.	Art.-No.	Art.-No.	Art.-No.
2 inputs / 2 solid state outputs	55692			
2 inputs / 2 relay outputs		55693		
4 inputs / 4 solid state outputs			55694	
4 inputs / 4 relay outputs				55695

Technical data				
AS-Interface supply voltage	26,5...31,6 V DC			
AS-Interface current usage	50 mA	165 mA	50 mA	165 mA
Supply voltage inputs/outputs	24 V	via AS-Interface bus	24 V	via AS-Interface bus
Addressing	1...31 via address port, pre-adjusted to address 0			
Temperature range	0...55°C			
Mounting method	DIN-rail mounting to EN50022			
Weight	105 g			
Dimensions HxBxT	78,5 x 22,5 x 83 mm			
Connection technology AS-Interface	screw/plug terminals max. 2,5 mm <sup>2</sup>			
Connection technology sensor/actuator	screw/plug terminals max. 1,5 mm <sup>2</sup>			

Inputs				
Number of	2		4	
Switching voltage	'0': 0...5 V; '1': 11...30 V			
Primary voltage/current	24 V/17 mA			
Sensor supply (combined current)	external	≤ 125 mA from the AS-Interface-Bus	external	≤ 125 mA from the AS-Interface-Bus
Short-circuit protection	–	electronic	–	electronic
Status indicator	LED green	LED green	LED green	LED green
Outputs				
	<b>Relay</b>			
Number of	–	2	–	4
Current usage per output	–	max. 2 A	–	max. 2 A
Combined current	–	max. 4,5 A	–	max. 4,5 A
Switching frequency	–	50 Hz	–	50 Hz
Status indicator	–	LED red	–	LED red
	<b>Solid state</b>			
Number of	2	–	4	–
Current usage per output (short-circuit protected)	0,5 A	–	0,5 A	–
Combined current	max. 1 A	–	max. 2 A	–
Switching frequency	500 Hz	–	500 Hz	–
Switch off time by short-circuit	approx. 20 ms	–	approx. 20 ms	–
Status indicator	LED red	–	LED red	–

Diagnostics	
LED green/LED red	coded to AS-Interface, specification 2.11 (Watchdog, 0-address, sensor supply, short-circuit and overload protected)

Dimension drawing
 

Accessories	Art.-No.
Handbook Germ./Engl./French	55646/55647/55653