

# MA SI68

## ROUND CABLES TAKE SYSTEMS INTO THE FIELD

- Small and compact with high signal density
- Sealed to meet industrial requirements
- Easy to install with integrated bus distributor

### AS INTERFACE SYSTEM – MASI68

The I/O modules of the MASI68 series, with bus connections and M12 standard cables, are designed for applications in exposed areas that require sealed components. They offer a complete solution with IP68/69K protection.

Accessories and special round cables complete the MASI68 range offering the user a total installation concept for decentralized installations. Pluggable round cables make installation and service much easier.

With MASI68 K3 modules, you can shutdown safely according to EN 13849-1 up to PL d. They are designed according to the latest 3.0 AS Interface specifications and have AS Interface certification, which guarantees that they are compatible.



### Digital inputs

MA SI68



**With M8 connections**  
• IP68 protection

Page 4.9.1



**With M12 connections**  
• IP68/69K protection

Page 4.9.4

### Digital inputs/outputs



**With M8 connections**  
• IP68 protection

Page 4.9.6



**With M12 connections**  
• IP68/69K protection  
• Models with safe outputs (safety)

Page 4.9.7

### Installation technology



**Converters/Accessories**

Accessories for round cables  
see page 3.6.24

Page 4.9.9

## Digital inputs

### – M8 Round Plug Connectors

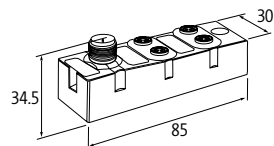
## MASI68

Compact module



Approvals: 45 PCBT

Order Data	Art-No.	Art-No.
DI4 - 0.2 A (C) 4×M8	56435	
DI4 - 0.2 A (C) 4×M8 (AB)		56434
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
Addressing	via master or M12 connection and programming device	
Address range	1...31	1...62 (1...31 A or B)
Profile (IO/ID/ID2 code)	S-0.0	S-0.A.0
Total current	max. 250 mA	
Input		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP68	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	screw fixing	
Dimension drawing		




Notes

# MASI68

## Digital inputs

### – M8 Round Plug Connectors

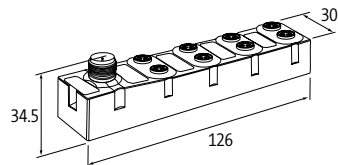
Approvals: 

## MASI68

Compact module



Order Data		Art-No.
DI8 - 0.2 A (C) 8×M8 (AB)		56420
	pre-programmed – ASI	564201
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
ASI-Power 24	yes	
Total current	max. 250 mA	
Addressing	via master or M12 connection and programming device, presetting 2 × address 0	
Address range	2 × 1...62 (2 × 1...31 A or B)	
Profile (IO/ID/ID2 code)	2 × S-0.A.0	
Input		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP68	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	screw fixing	
Dimension drawing		



## Notes

## Digital inputs

### – M8 Round Plug Connectors

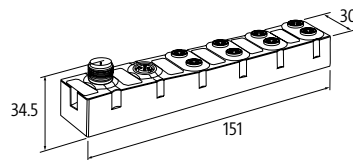
## MASI68

Expansion module



Approvals:  

Order Data	Art-No.
D/8 - 0.2 A (E) 8xM8 (AB)	56436
Technical Data	
Bus voltage (AS-Interface)	26.5...31.6 V DC
ASI-Power 24	yes
Addressing	via master or M12 connection and programming device, presetting 1 × address 31 A, 1 × address 31 B
Address range	2 × 1...62 (2 × 1...31 A or B)
Profile (IO/ID/ID2 code)	2 × S-0.A.E
Total current	max. 300 mA
Input	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)
Sensor supply US	max. 240 mA from AS-Interface (short-circuit and overload protected)
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module
Monitoring - no voltage	yes
General data	
Protection	IP68
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)
Mounting method	screw fixing
Dimension drawing	



Notes

# MASI68

## Digital inputs

### – M12 Round Plug Connectors



## MASI68

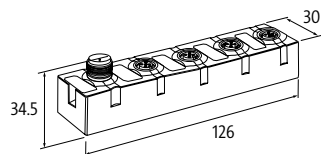
Compact module  
Y-wiring



## MASI68

Compact module

Order Data	Art-No.	Art-No.
DI4 - 0.2 A (C) 4×M12 (AB) Y	56421	
DI8 - 0.2 A (C) 4×M12 (AB)		56424
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
ASI-Power 24	yes	
Total current	max. 250 mA	
Addressing	via master or M12 connection and programming device	
Address range	1...62 (1...31 A or B)	2 × 1...62 (2 × 1...31 A or B)
Profile (IO/ID/ID2 code)	S-0.A.2	2 × S-0.A.2
Address presetting	–	Slave 1: address 31 A; Slave 2: address 31 B
Input		
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
M12 configuration	Y-wiring	–
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP68	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	screw fixing	
Dimension drawing		



## Notes

# MASI68

## Digital inputs

### – M12 Round Plug Connectors

#### MASI68

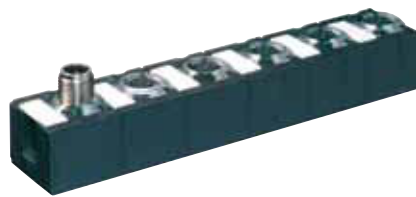
Expansion module

#### MASI68

Expansion module  
Y-wiring

#### MASI68

Expansion module



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI4 - 0.2 A (E) 4xM12 (AB)	56425			
DI8 - 0.2 A (E) 4xM12 (AB)		56426		
DI4 - 0.2 A (E) 4xM12 (AB) AUX-Y			56443	
DI8 - 0.2 A (E) 4xM12 (AB) AUX				56444

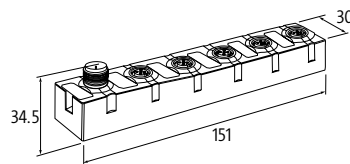
Technical Data				
Bus voltage (AS-Interface)	26.5...31.6 V DC			
Addressing	via master or M12 connection and programming device			
Address range	1...62 (1...31 A or B)	2 × 1...62 (2 × 1...31 A or B)	1...62 (1...31 A or B)	2 × 1...62 (2 × 1...31 A or B)
Profile (IO/ID/ID2 code)	S-0.A.2	2 × S-0.A.2	S-0.A.2	2 × S-0.A.2
Total current	max. 250 mA			
Address presetting	–	Slave 1: address 31 A; Slave 2: address 31 B	–	–

Input				
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)			
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)		max. 200 mA from AUX Power, (short-circuit and overload protected)	
M12 configuration	–		Y-wiring	–

Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module			
Monitoring - no voltage	yes			

General data				
Protection	IP68			
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)			
Mounting method	screw fixing			

#### Dimension drawing



#### Notes

# MASI68

## Digital inputs/outputs

### – M8 Round Plug Connectors

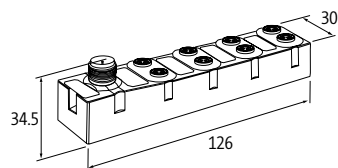


## MASI68

Compact module



Order Data	Art-No.	Art-No.
DI4 - 0.2 A DO3 - 0.5 A (C) 7×M8 (AB)	56418	
DI4 - 0.2 A DO4 - 0.5 A (C) 8×M8		56419
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
Addressing	via master or M12 connection and programming device	
Profile (IO/ID/ID2 code)	S-7.A.0	S-7.0.0
Address range	1...62 (1...31 A or B)	1...31
Total current	max. 250 mA	
Input		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	
Output		
Supply voltage	24 V DC external (18...30.2 V DC) EN 61131-2, connection via black AS-Interface profile cable, 2 safely separated supplies possible	24 V DC external (18...30.2 V DC) EN 61131-2
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Total current	max. 1.5 A	max. 2 A
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP68	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	screw fixing	
Dimension drawing		



## Notes

# MASI68

## Digital inputs/outputs

### – M12 Round Plug Connectors

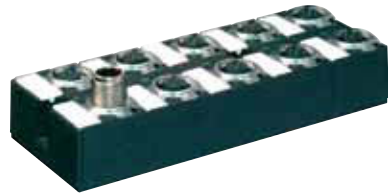
#### MASI68

Compact module  
Y-wiring



#### MASI68

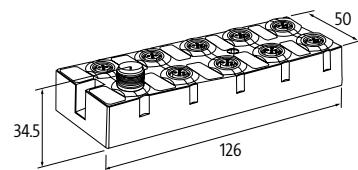
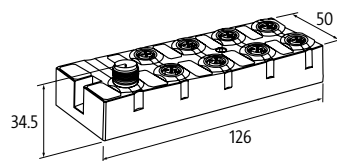
Expansion module



Approvals:  

Order Data	Art-No.	Art-No.
DI4 - 0.2 A DO4 - 2 A (C) 8xM12 (Y)	56422	
DI4 - 0.2 A DO4 - 2 A (E) 8xM12 (Y)		56427
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
ASI-Power 24	yes	
Total current	max. 250 mA	
Addressing	via master or M12 connection and programming device	
Address range	1...31	
Profile (IO/ID/ID2 code)	S-7.FE	
Input		
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
M12 configuration	Y-wiring	–
Output		
Switching current per output	max. 2 A (short-circuit and overload protected)	
Total current	max. 4 A	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP68	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	screw fixing	

#### Dimension drawing



#### Notes



# MASI68

## Passive

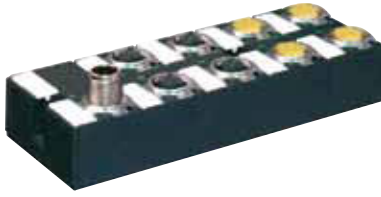
– output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

– M12 Round Plug Connectors



## MASI68

Compact module  
Y-wiring



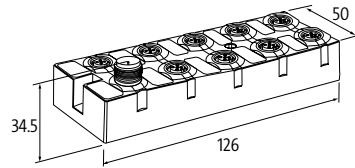
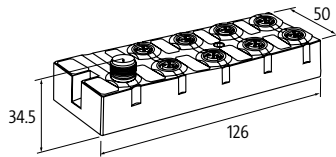
## MASI68

Expansion module  
Y-wiring



Order Data	Art-No.	Art-No.
DI4 - 0.2 A DO4 - 1.6 A (AB) 8×M12 (Y) K3	56423	
DI4 - 0.2 A DO4 - 1.6 A (E) 8×M12 (AB) Y (K3)		56428



Technical Data	
Bus voltage (AS-Interface)	26.5...31.6 V DC
Addressing	via master or M12 connection and programming device
ASI-Power 24	–
Profile (IO/ID/ID2 code)	S-7.A.7
Address range	1...62 (1...31 A or B)
Total current	max. 250 mA
Input	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)
Output	
Supply voltage	24 V DC external (18...30.2 V DC) EN 61131-2
Switching current per output	max. 2 A (short-circuit and overload protected)
Total current	max. 4 A
M12 configuration	Y-wiring
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module
Monitoring - no voltage	yes
General data	
Protection	IP68
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)
Mounting method	screw fixing
Dimension drawing	



Notes

Accessories			Art-No.
	<b>MASI Z-Plug</b> Passive bus terminator	AS-Interface	55779
	<b>Programming device</b>	AS-Interface	55696
Blind Plug/caps			Art-No.
	<b>Screw plug M8 x 1 mm (for female)</b> Plastic, hex	Quantity: 10 pcs.	3858627
	<b>Screw plug M12 x 1 mm</b> Plastic, hex	Quantity: 4 pcs.	55468
Connection accessories			Art-No.
	<b>AS-Interface Distributor</b> from profile to profile cable	AS-Interface	55749
	<b>Distribution box</b> from profile to round cable	AS-Interface	55745
	<b>T-coupler M12/M12, female/male</b> straight, A-coded, 4-pole	MASI68 additional actuator power supply	7060-42701-0000000
	<b>T-coupler (Slimline) M12 - M12</b> 5-pole Parallel circuit		7000-41151-0000000

# MASI68

Connection accessories			Art-No.
	<b>Adapter</b> from profile cable to PG11	AS-Interface	55732
	<b>Mounting bracket</b> Quantity: 50 pcs.	AS-Interface profile cable	55742
	<b>Adapter</b> from profile cable to M12 2-pole	AS-Interface	55741
	<b>Spare cable</b>	AS-Interface programming device	55727
	<b>Profile cable yellow, 2 × 1.5 mm<sup>2</sup></b> By the meter	AS-Interface	55743
	<b>Profile cable black, 2 × 1.5 mm<sup>2</sup></b> By the meter	AS-Interface	55744
System components			Art-No.
	<b>Gateway-Singlemaster</b> via screw terminals on the front	AS-Interface/PROFIBUS DP	55707
	<b>Gateway-Singlemaster</b> via pluggable spring clamp terminals on the front 0.2...2.5 mm <sup>2</sup> Specification 2.1	AS-Interface/PROFIBUS DP cULus	556612

System components			Art-No.
	<p><b>Gateway-Singlemaster</b> via pluggable spring clamp terminals on the front 0.2...2.5 mm<sup>2</sup> Specification 3.0</p>	<p>AS-Interface/PROFIBUS DP cULus</p>	<p><b>56451</b></p>
	<p><b>Gateway-Doublemaster</b> via pluggable spring clamp terminals on the front 0.2...2.5 mm<sup>2</sup> Specification 3.0</p>	<p>AS-Interface/PROFIBUS DP cULus</p>	<p><b>556616</b></p>
	<p><b>Switch mode power supplies</b> INPUT: 95...265 V AC Current: 4 A</p>	<p>AS-Interface cULus</p>	<p><b>85381</b></p>
	<p><b>Switch mode power supplies</b> INPUT: 95...265 V AC Current: 4 A with EFD (earth fault detection)</p>	<p>AS-Interface cULus</p>	<p><b>85382</b></p>