



# MASI00/20 FOR THE CONTROL CABINET

- High signal density in a very small space
- Pluggable cutting clamp or spring clamp connections
- Sensor supply from AS Interface or 24 V DC

## AS-INTERFACE SYSTEM – MASI00/20

MASI00 and MASI20 modules are designed to correctly support the single strand wiring used in control cabinets and terminal boxes. This gives the user the advantage during installation, setup and maintenance. The modules have a slim design which makes them the perfect choice for applications in terminal boxes and cabinets. The coded, pluggable connections reduce time and errors during installation.

They are designed according to the latest 3.0 AS Interface specification and have the globally recognized AS Interface certification, which guarantees that they are interoperable and a secure investment. Furthermore, with the special K3 module you can create safety shutdowns according to EN 13849-1 up to PL d.



MASI00/20

## I/O Modules



MASI00 bus components

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MASI20 bus components

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## Installation Technology



Bus and power distributors

Page 4.7.5

## Digital inputs/outputs

### MASI00

DI4/DO4 - 0.2 A



### MASI00

DI4/DO4 - 0.2 A (AB)

### MASI20

DI4 - 0.17 A (AB)



Approvals:

Order Data	Art-No.	Art-No.	Art-No.
DI4/DO4 - 0.2 A	55700		
DI4/DO4 - 0.2 A (AB)		ASI	55701
DI4 - 0.17 A (AB)			ASI, UL-Listed, CSA
			55688
Technical Data			
Bus voltage (AS-Interface)	26.5...31.6 V DC		
Total current (AS-Interface)	max. 250 mA		
Addressing	1...31 via plug terminals	1...62 (1...31 A or B) via plug-in terminal	via built-in address port or master
Address range	1...31	1...62 (1...31 A or B)	
Current consumption	-	max. 200 mA	-
Profile (IO/ID/ID2 code)	S-7.F.F	S-7.A.7	S-0.A.0
Input			
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)		max. 170 mA from AS-Interface (short-circuit and overload protected)
Type	for standard switches		for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)
Input current	-	max. 10 mA	
Output			
Switching current per output	max. 0.2 A (short-circuit and overload protected)		-
Total current	max. 200 mA		-
Switch off time in case of short circuit	approx. 50 ms		-
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Monitoring - no voltage	yes		
General data			
Protection	IP00		IP20
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		-20...+60 °C
Mounting method	DIN-rail mountable (EN 60715)		
Connection AS-Interface	Screw plug-in terminal: 0.2...2.5 mm <sup>2</sup>		IDC terminals, 0.5...0.75 mm <sup>2</sup>
Connection sensor/actuator	-		Spring clamp plug-in terminals: 0.14...1.5 mm <sup>2</sup>
Dimension drawing			
Notes			
	For DIN-rail mounting use 1 x Art-No. 20900 adapter feet		

# MASI00/20

## Digital inputs

## – Semiconductor outputs



### MASI20

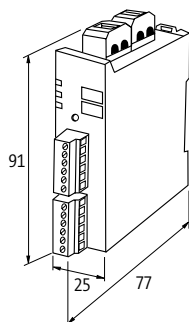
DI4 - 0.2 A DO3 - 0.5 A (AB)



### MASI20

DI4 - 0.2 A DO4 - 0.5 A

Order Data	Art-No.	Art-No.
DI4 - 0.2 A DO3 - 0.5 A (AB)	55687	
DI4 - 0.2 A DO4 - 0.5 A		55686
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
Total current (AS-Interface)	max. 50 mA	
Addressing	via built-in address port or master	
Address range	1...62 (1...31 A or B)	1...31
Profile (IO/ID/ID2 code)	S-7.A.0	S-7.0.E
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)	
Input current	max. 10 mA	
Output		
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Total current	max. 2 A	
Switch off time in case of short circuit	approx. 20 ms	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP20	
Connection AS-Interface/Power	IDC terminals, 0.5...0.75 mm <sup>2</sup>	
Connection sensor/actuator	Spring clamp plug-in terminals: 0.14...1.5 mm <sup>2</sup>	
Temperature range	-20...+60 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



## Notes

# MASI00/20

## Digital inputs

### – Relay outputs



## MASI20

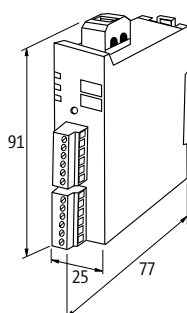
DI4 - 0.17 A DO3 - 2 A (AB)



## MASI20

DI4 - 0.2 A DO4 - 2 A

Order Data	Art-No.	Art-No.
DI4 - 0.17 A DO3 - 2 A (AB)	55768	
DI4 - 0.2 A DO4 - 2 A		55685
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
Total current (AS-Interface)	max. 300 mA	
Addressing	via built-in address port or master	
Address range	1...62 (1...31 A or B)	1...31
Profile (IO/ID/ID2 code)	S-7.A.0	S-7.0.E
Input		
Sensor supply US	max. 170 mA from AS-Interface (short-circuit and overload protected)	max. 200 mA from AS-Interface (short-circuit and overload protected)
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Input current	max. 10 mA	
Output		
Switching current per output	max. 2 A	
Total current	max. 4.5 A	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP20	
Connection AS-Interface/Power	IDC terminals, 0.5...0.75 mm <sup>2</sup>	
Connection sensor/actuator	Spring clamp plug-in terminals: 0.14...1.5 mm <sup>2</sup>	
Temperature range	-20...+60 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



Notes

# MASI00/20

## Digital inputs

- output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays
- Opto decoupled inputs (only with additional supply voltage)

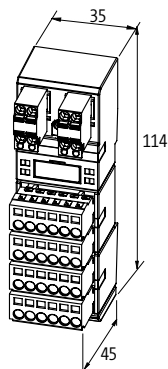
Approvals: 

## MASI20

DI4 - 0.2 A DO4 - 0.5 A (AB) K3



Order Data	Art-No.
DI4 - 0.2 A DO4 - 0.5 A (AB) K3	56440
Technical Data	
Bus voltage (AS-Interface)	26.5...31.6 V DC
Total current (AS-Interface)	max. 300 mA
Addressing	via built-in address port or master
Address range	1...62 (1...31 A or B)
Profile (IO/ID/ID2 code)	S-7.A.7
Input	
Supply voltage	alternatively (switchable) from AS-Interface or from 24 V DC (EN 61131-2) by additional supply
Sensor supply US	max. 200 mA external or from AS-Interface, (short-circuit and overload protected)
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)
Input current	max. 10 mA
Output	
Supply voltage	24 V DC (18...30.2 V DC) EN 61131-2 by additional supply, safely separated from input supply
Switching current per output	max. 0.5 A (short-circuit and overload protected)
Total current	max. 2 A
Switch off time in case of short circuit	approx. 20 ms
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module
Monitoring - no voltage	yes
General data	
Protection	IP20
Temperature range	0...+60 °C (storage temperature -20...+70 °C)
Connection	Spring clamp plug-in terminal: 0.2...2.5 mm <sup>2</sup>
Mounting method	DIN-rail mountable (EN 60715)
Dimension drawing	

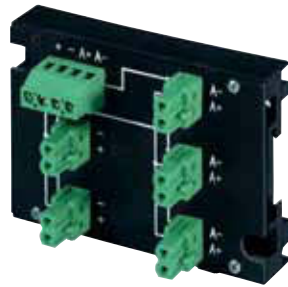


## Notes

# MASI00/20

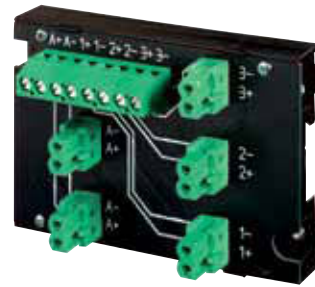
## Installation technology

### Bus or Power distributor



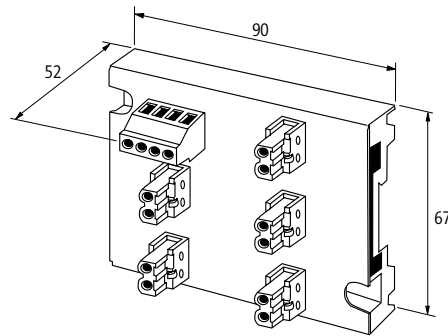
### Bus or Power distributor

potentially separated

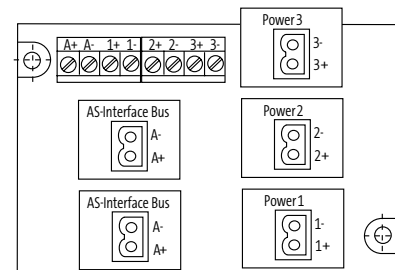
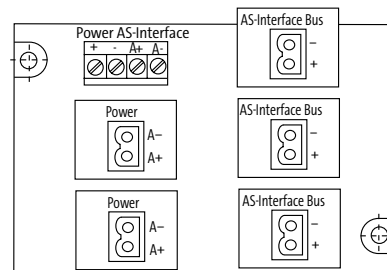


Approvals:

Order Data	Art-No.	Art-No.
3 AS-Interface + 2 power ports	55606	
2 AS-Interface + 3 power ports		55575
<b>Technical Data</b>		
Operating voltage	max. 36 V DC	
Current per connection	max. 8 A	
Total current	max. 24 A	
Isolation voltage	AS-Interface/Power 200 V, (EN 60664-1)	
<b>General data</b>		
Protection	IP20	
Temperature range	-20...+70 °C	
Connection	Screw terminal: single wire (0.25...4 mm <sup>2</sup> ), stranded wire (0.5...2.5 mm <sup>2</sup> )	
Mounting method	DIN-rail mountable (EN 60715)	
<b>Dimension drawing</b>		



## Connection diagram



## Notes

# MASI00/20

## Installation technology

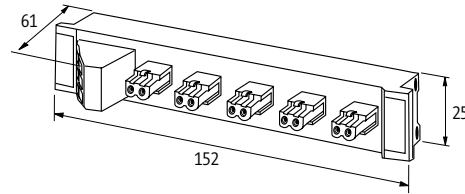
## Bus or Power distributor



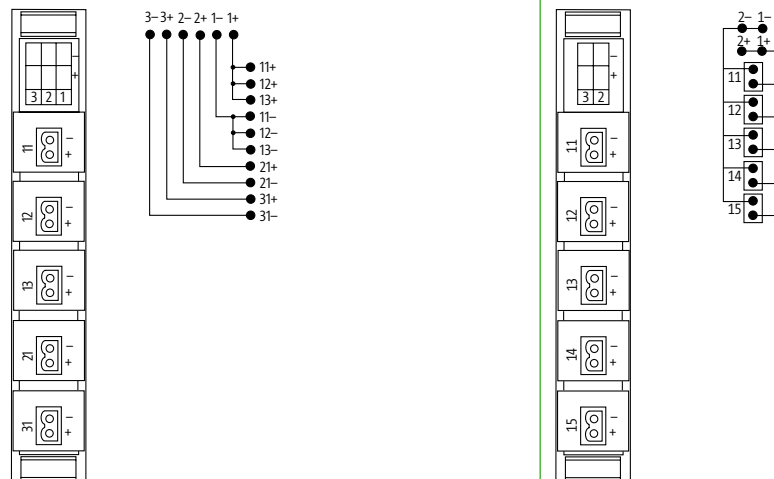
Approvals:

Order Data	Art-No.	Art-No.
3 potentials	5 ports, universal without plug terminals	
1 potential		5 plug terminals included
<b>Technical Data</b>		
Operating voltage	max. 36 V DC	
Current per connection	max. 8 A	
Total current	max. 12 A	
Isolation voltage	AS-Interface / Power 200 V, Power / Power 50 V (EN 60664-1)	
<b>General data</b>		
Protection	IP20	
Temperature range	-20...+70 °C	
Connection	Screw terminal: single wire (0.2...2.5 mm <sup>2</sup> ), stranded wire (0.2...1.5 mm <sup>2</sup> )	
Mounting method	DIN-rail mountable (EN 60715)	

## Dimension drawing



## Connection diagram



## Notes

Accessories			Art-No.
	<b>I/O cable for MASI00</b> 1.0 m		556510
	<b>I/O cable for MASI00</b> with cable fork 150 mm		556511
	<b>MASI Z-Plug</b> Passive bus terminator	AS-Interface	55779
	<b>Programming device</b>		
		AS-Interface	55696
	<b>Spare cable</b>		
		AS-Interface programming device	55727
Labeling accessories			Art-No.
	<b>Label plate</b>		
	Quantity: 22 pieces		55218
	Quantity: 20 pieces	Bus and external voltage supply	55219
Connection accessories			Art-No.
	<b>Plug terminal (AS-Interface profile cable)</b>		
		for bus or power distributor	55604
	<b>AS-Interface Distributor</b> from profile to profile cable	AS-Interface	55749
	<b>Mounting bracket</b>		
	Quantity: 50 pcs.	AS-Interface profile cable	55742



## MASI00/20

Connection accessories			Art-No.
	<b>Adapter</b> from profile cable to M12 2-pole	AS-Interface	55741
	<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	
	<b>Spring clamp plug-in terminal</b> Quantity: 5 pcs.	MASI20 I/O-level	55213
	<b>Screw plug-in terminal</b>  Quantity: 5 pcs.	MASI20 I/O-level	55210
	<b>Screw plug-in terminal</b>  Quantity: 5 pcs.	MASI20 Bus connection (AS-Interface)	55211
	<b>Screw plug-in terminal</b>  Quantity: 5 pcs.	MASI20 external voltage supply	55212
	<b>IDC terminal</b>  Quantity: 5 pcs.	MASI20 Bus connection (AS-Interface)	55214
	<b>IDC terminal</b>  Quantity: 5 pcs.	MASI20 external voltage supply	55215