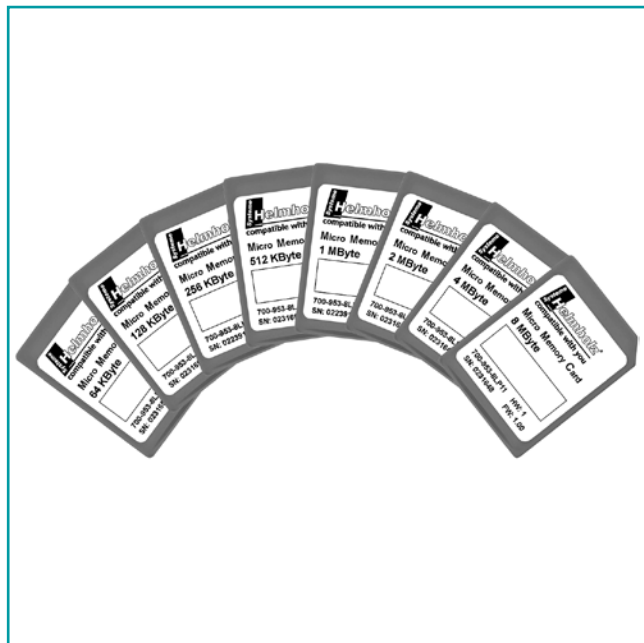




Components for S7

Micro Memory Cards
Memory Cards
Digital Modules
Analog Modules
Front Connectors

Micro Memory Cards



Micro Memory Cards



The Micro Memory Cards from the Systeme Helmholtz GmbH are suitable for use in S7 controllers.

Our product program includes a whole range of the most commonly required modules. The Micro Memory Cards are available with the following memory capacities:

64 kB, 128 kB, 256 kB, 512 kB, 1 MB, 2 MB, 4 MB, 8 MB.

We are able to offer you a very advantageous price-performance ratio due to our modern production methods.

Ordering Data	
	Order No.
Micro Memory Cards	
64 kByte	700-953-8LF11
128 kByte	700-953-8LG11
256 kByte	700-953-8LH11
512 kByte	700-953-8LJ11
1 MByte	700-953-8LK11
2 MByte	700-953-8LL11
4 MByte	700-953-8LM11
8 MByte	700-953-8LP11

Technical Data	
Micro Memory Cards	
Memory capacity	64 kByte 128 kByte 256 kByte 512 kByte 1 MByte 2 MByte 4 MByte 8 MByte
Applications	CPU 312C CPU 313C CPU 314C CPU 312 ... 317, new type IM 151, IM 153, IM 154 CPU C7

Memory Cards



Memory Card, long type



Memory Cards from the Systeme Helmholtz GmbH are designed for use in CPU modules CPU 412 to CPU 417.

We have been able to achieve top quality standards and a very advantageous price-performance ratio with the use of modern manufacturing methods.

Our product program covers the range of the most common submodules.

Ordering Data	
	Order No.
Flash EPROM Cards, long	
64 kByte	700-952-0KF00
256 kByte	700-952-0KH00
1 MByte	700-952-1KK00
2 MByte	700-952-1KL00
4 MByte	700-952-1KM00
8 MByte	700-952-1KP00
16 MByte	700-952-1KS00
RAM Cards, long	
64 kByte	700-952-0AF00
256 kByte	700-952-1AH00
1 MByte	700-952-1AK00
2 MByte	700-952-1AL00
4 MByte	700-952-1AM00
8 MByte	700-952-1AP00

Technical Data	
Flash EPROM Cards, long Memory capacity	64 kByte, 256 kByte, 1 MByte, 2 MByte, 4 MByte, 8 MByte, 16 MByte
Applications	CPU 412 to 417
RAM Cards, long Memory capacity	64 kByte, 256 kByte, 1 MByte, 2 MByte, 4 MByte, 8 MByte
Applications	CPU 412 to 417

DEA 300, Digital Input Modules



Digital input modules with 16 and 32 inputs

The digital inputs convert the external binary signals from the process into the internal signal level of the programmable controller.

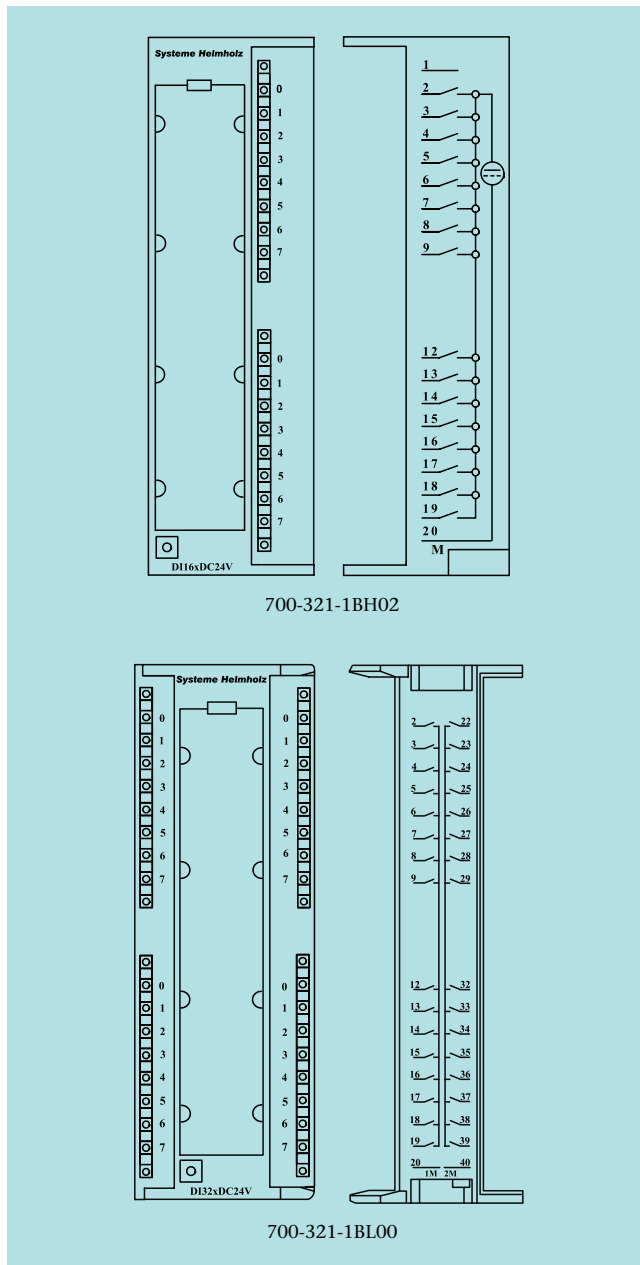
Green LEDs indicate the signal state of the inputs and outputs. The inputs of the modules from the Systeme Helmholtz GmbH are also suitable for connection of 2-wire proximity switches. Modules with modified specifications or special modules can be supplied on request.

Accessory-Note

The Systeme Helmholtz GmbH supplies front connectors and cable sets (see page 34–36).



Open type Programmable Controllers, for use in Hazardous Locations, Class I, Div. 2 Groups A, B, C, D T4 including Class I Zone 2 IIC.



700-321-1BH02

700-321-1BL00

Ordering Data

	Order No.
DEA 300 16snubb (DC 24 V) 32 inputs (DC 24 V)	700-321-1BH02 700-321-1BL00
Manual DEA 300, German/English	900-321-1DE11

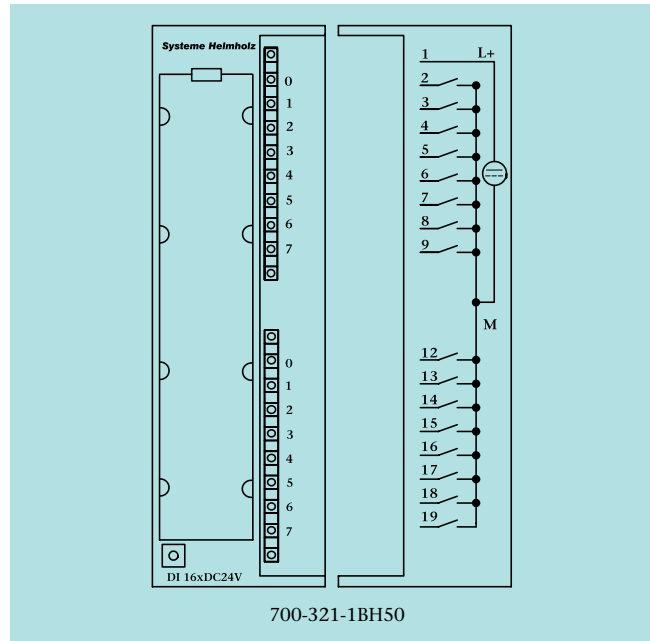
DEA 300, Digital Input Modules

Technical Data			700-321-1BH02	700-321-1BL00
Number of inputs			16	32
Isolation (from backplane bus) In groups of			Yes (optocoupler) 16	Yes (optocoupler) 16
Input voltage • nom. value • for "0" signal • for "1" signal			DC 24 V -3 ... +5 V +13 ... +30 V	DC 24 V -3 ... +5 V +13 ... +30 V
Input current • for "1" signal	typ.		7 mA	7 mA
Delay time	typ.		1.2 ... 4.8 ms	1.2 ... 4.8 ms
Connection of 2-wire initiator Perm. quiescent current for "0" signal	max.		Yes 1.5 mA	Yes 1.5 mA
Cable length • unshielded • shielded	max. max.		600 m 1000 m	600 m 1000 m
Current consumption • internal (backplane bus) • external (from +24 V)	typ. max.		20 mA 140 mA	30 mA 290 mA
Power loss (rated operation)	typ.		3.5 W	6.8 W
Front connector			20-way	40-way
Ambient temperature Transport and storage temperature			0 °C ... 60 °C -25 °C ... 75 °C	0 °C ... 60 °C -25 °C ... 75 °C

DEA 300, Digital Input Module, m-reading



DEA 300, m-reading



The digital inputs convert the external binary signals from the process into the internal signal level of the programmable controller.

Green LEDs indicate the signal state of the inputs and outputs. The inputs of the modules from the Systeme Helmholtz GmbH are also suitable for connection of 2-wire proximity switches. Modules with modified specifications or special modules can be supplied on request.

Accessory-Note

The Systeme Helmholtz GmbH supplies front connectors and cable sets (see page 34–36).

Ordering Data	
	Order No.
DEA 300 16 inputs, m-reading	700-321-1BH50
Manual DEA 300, German/English	900-321-1DE11

Technical Data	
Number of inputs	16
Isolation against backplane bus In groups of	Yes (optocoupler) 16
Input voltage, reference potential is L+ <ul style="list-style-type: none"> • nom. value • for Signal "0" • for Signal "1" 	DC 24 V +30 ... -5 V -13 ... -30 V
Input current <ul style="list-style-type: none"> • for Signal "1" 	7 mA
Delay time	1.2 ... 4.8 ms
Cable length <ul style="list-style-type: none"> • unshielded • shielded 	600 m 1000 m
Current consumption <ul style="list-style-type: none"> • internal (backplane bus) 	10 mA
Power loss (nominal operation)	3.5 W
Front connector	20-way
Ambient temperature Transport and storage temperature	0 °C ... 60 °C -25 °C ... 75 °C

DEA 300, Digital Input Module with Alerts



DEA 300, with Alerts

The digital inputs convert the external binary signals from the process into the internal signal level of the programmable controller.

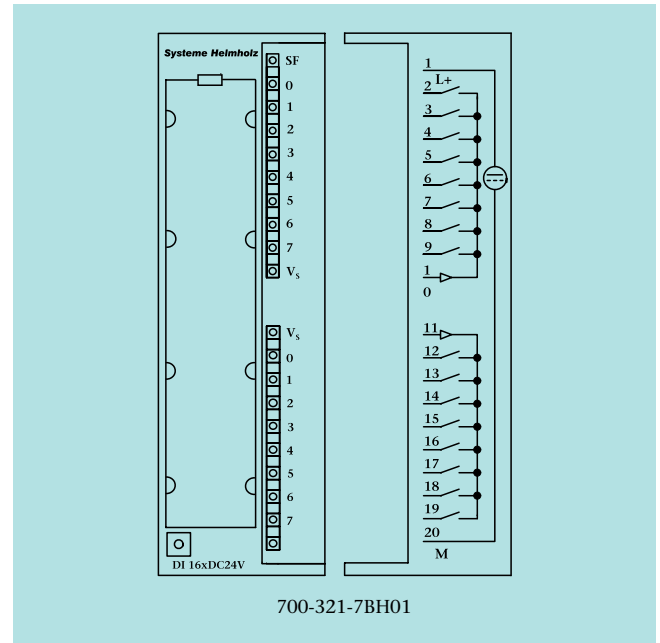
Green LEDs indicate the signal state of the inputs and outputs. The inputs of the modules from the Systeme Helmholz GmbH are also suitable for connection of 2-wire proximity switches.

This module offers as additional features parameterizable diagnostics, diagnostic- and processalerts, as well as a parameterizable input delay.

Modules with modified specifications or special modules can be supplied on request.

Accessory-Note

The Systeme Helmholz GmbH supplies front connectors and cable sets (see page 34–36).



700-321-7BH01

Features

- Parameterizable diagnostics
- Diagnostic- and processalerts
- Parameterizable input delay

Technical Data

Number of inputs	16
Isolation against backplane bus In groups of	Yes (optocoupler) 16
Input voltage, reference potential is L+	
• nom. value	DC 24 V
• for Signal "0"	-30 ... +5 V
• for Signal "1"	+13 ... +30 V
Input current	
• for Signal "1"	7 mA
Delay time parameterizable	Yes (0.1; 0.5; 3; 15; 20 ms)
Diagnostics	Parameterizable
Process alerts	Parameterizable
Diagnostic alerts	Parameterizable
Conduction length	
• unshielded	600 m
• shielded	1000 m
Current consumption	
• internal (backplane bus) typ.	130 mA
• extern L+, DC 24 V	90 mA
Encoder power supply outputs	
Output voltage	min L+ DC -2.5 V
Output current	0 ... 150 mA
Short-circuit protection	Electrical
Power loss (nominal operation)	4 W
Front connector	20-way
Ambient temperature	0 °C ... 60 °C
Transport and storage temperature	-25 °C ... 75 °C

Ordering Data

	Order No.
DEA 300 16 inputs, with Alerts	700-321-7BH01
Manual DEA 300, German/English	900-321-1DE11

DEA 300, Digital Output Modules



Digital output modules with 16 and 32 outputs

The digital outputs convert the internal signal level to the external signal level required for the process. Green LEDs indicate the signal state of the outputs.

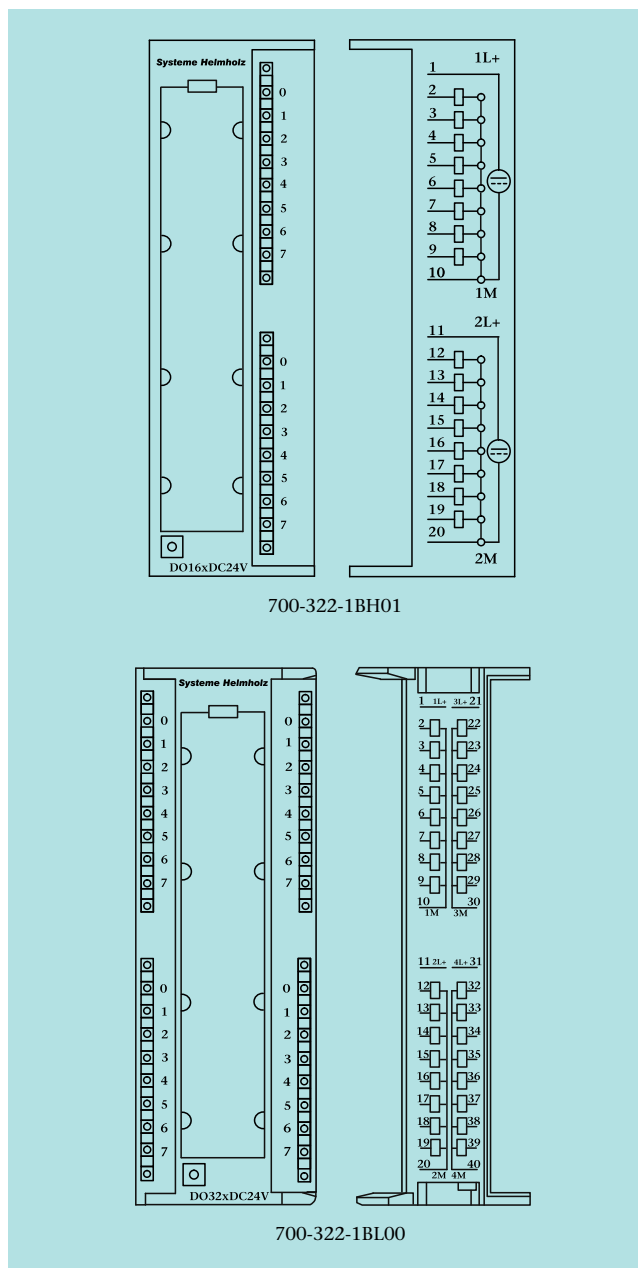
The outputs of the modules from the Systeme Helmholz GmbH are also suitable for connection of, for example, solenoid valves, contactors, and small-power motors within the permissible data. Modules with modified specifications or special modules can be supplied on request.

Accessory-Note

The Systeme Helmholz GmbH supplies front connectors and cable sets (see page 34–36).



Open type Programmable Controllers, for use in Hazardous Locations, Class I, Div. 2 Groups A, B, C, D T4 including Class I Zone 2 IIC.

**Ordering Data**

	Order No.
DEA 300	
16 outputs (DC 24 V; 0,5 A)	700-322-1BH01
32 outputs (DC 24 V; 0,5 A)	700-322-1BL00
Manual DEA 300, German/English	900-321-1DE11

DEA 300, Digital Output Modules

Technical Data		
	700-322-1BH01	700-322-1BL00
Number of outputs	16	32
Isolation against backplane bus In groups of	Yes (optocoupler) 8	Yes (optocoupler) 8
Supply voltage V_p, V_s • nom. value • ripple V_{pp} • permissible range (with ripple) • value at $t < 10$ ms	max. DC 24 V 3.6 V 20 ... 30 V max. 50 V	DC 24 V 3.6 V 20 ... 30 V 50 V
Output current • nom. value	0.5 A	0.5 A
Short-circuit protection	Electrical	Electrical
Voltage induced on circuit interruption limited to	-48 V	-48 V
Cable length • unshielded • shielded	max. 600 m max. 1000 m	600 m 1000 m
Current consumption • internal (backplane bus) • ext. w/o load (from +24 V)	max. 100 mA typ. 120 mA	125 mA 200 mA
Power loss (nominal operation)	typ. 5 W	6.8 W
Front connector	20-way	40-way
Ambient temperature Transport and storage temperature	0 °C ... 60 °C -25 °C ... 75 °C	0 °C ... 60 °C -25 °C ... 75 °C

DEA 300, Digital Input/Output Modules



Digital input/output modules

The digital inputs convert the external binary signals from the process into the internal signal level of the programmable controller.

The digital outputs convert the internal signal level of the programmable controllers into the external binary signal level required for the process. Green LEDs indicate the signal state of the inputs and outputs.

The inputs of the modules from the Systeme Helmholz GmbH are also suitable for connection of 2-wire proximity switches, the outputs for connection of, for example, solenoid valves, contactors, and small motors within the permissible data.

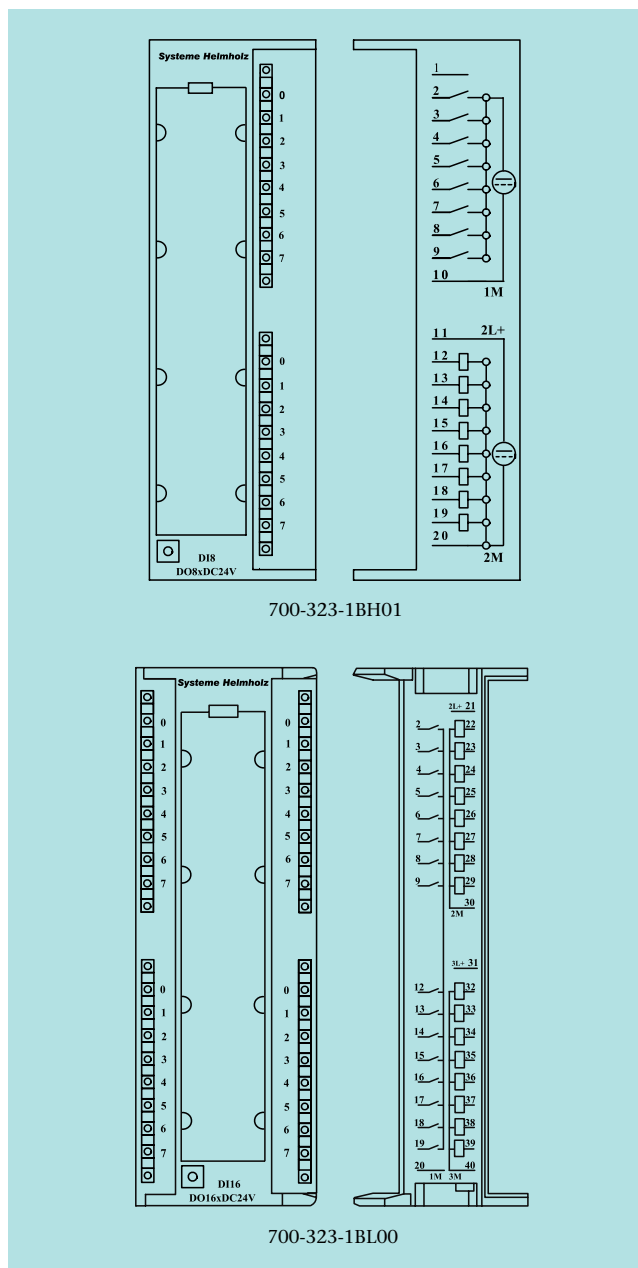
Modules with modified specifications or special modules can be supplied on request.

Accessory-Note

The Systeme Helmholz GmbH supplies front connectors and cable sets (see page 34–36).



Open type Programmable Controllers, for use in Hazardous Locations, Class I, Div. 2 Groups A, B, C, D T4 including Class I Zone 2 IIC.

**Ordering Data**

	Order No.
DEA 300	
8 inputs (DC 24 V)/ 8 outputs (DC 24 V; 0,5 A)	700-323-1BH01
16 inputs (DC 24 V)/ 16 outputs (DC 24 V; 0,5 A)	700-323-1BL00
Manual DEA 300, German/English	900-321-1DE11

DEA 300, Digital Input/Output Modules

Technical Data		
	700-323-1BH01	700-323-1BL00
Number of inputs	8	16
Isolation (from backplane bus) In groups of	Yes (optocoupler) 8	Yes (optocoupler) 16
Input voltage • nom. value • for Signal "0" • for Signal "1"	DC 24 V -3 ... +5 V +13 ... +30 V	DC 24 V -3 ... +5 V +13 ... +30 V
Input current • for "1" signal	typ. 7 mA	7 mA
Delay time	typ. 1.2 ... 4.8 ms	1.2 ... 4.8 ms
Connection of 2-wire initiator Perm. quiescent current for "0" signal	Yes max. 1.5 mA	Yes 1.5 mA
Cable length • unshielded • shielded	max. 600 m max. 1000 m	600 m 1000 m
Number of outputs	8	16
Isolation (from backplane bus) in groups of	Yes (optocoupler) 8	Yes (optocoupler) 8
Output current • nom. value	0.5 A	0.5 A
Short-circuit protection	Electronic	Electronic
Voltage induced on circuit interruption limited to	- 48 V	- 48 V
Cable length • unshielded • shielded	max. 600 m max. 1000 m	600 m 1000 m
Supply voltage V_p, V_s • nom. value • ripple V_{pp} • permissible range (with ripple) • value at $t < 10$ ms	max. DC 24 V 3.6 V 20 ... 30 V max. 50 V	DC 24 V 3.6 V 20 ... 30 V 50 V
Current consumption • internal (backplane bus) • external (without load, from +24 V)	max. 55 mA typ. 60 mA	90 mA 120 mA
Power loss (nominal operation)	typ. 3.5 W	6.8 W
Front connector	20-way	40-way
Ambient temperature Transport and storage temperature	0 °C ... 60 °C -25 °C ... 75 °C	0 °C ... 60 °C -25 °C ... 75 °C

DEA 300, Digital Output Module; 2 Amps



Digital output module; 8 outputs, 2 amps

The digital outputs convert the internal signal level to the external signal level required for the process. Green LEDs indicate the signal state of the outputs.

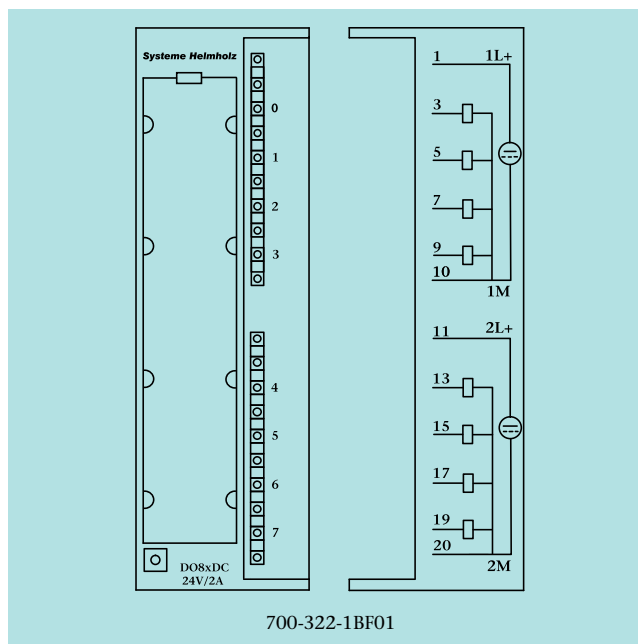
The outputs of the modules from the Systeme Helmholtz GmbH are also suitable for connection of, for example, solenoid valves, contactors, and small-power motors within the permissible data. The output power of 2 amps per channel is also suitable for larger loads.

Accessory-Note

The Systeme Helmholtz GmbH supplies front connectors and cable sets (see page 34–36).



Open type Programmable Controllers, for use in Hazardous Locations, Class I, Div. 2 Groups A, B, C, D T4 including Class I Zone 2 IIC.



Technical Data	
Number of outputs	8
Isolation (from backplane bus) In groups of	Yes (optocoupler) 4
Supply voltage V_p, V_s • nom. value • ripple V_{pp} max. • permissible range (with ripple) • value at $t < 10$ ms max.	DC 24 V 3.6 V 20 ... 30 V 40 V
Output current • nom. value	2 A
Aggregate current of the outputs (per group, horizontal mounting) • to 40 °C • to 55 °C	8 A 6 A
Short-circuit protection	Electronic
Short-circuit current typ.	12 A clocked
Voltage induced on circuit interruption limited to	- 23 V
Cable length • unshielded max. • shielded max.	600 m 1000 m
Current consumption • internal (backplane bus) max. • ext.(without load, from +24 V) typ.	40 mA 60 mA
Power loss (nominal operation) typ.	6.8 W
Front connector	20-way
Ambient temperature Transport and storage temperature	0 °C ... 60 °C -25 °C ... 75 °C

Ordering Data	
	Order No.
DEA 300 8 outputs (DC 24 V; 2 A)	700-322-1BF01
Manual DEA 300, German/English	900-321-1DE11

DEA 300, Digital Output Convert; Relays



Digital output convert; 8 relays

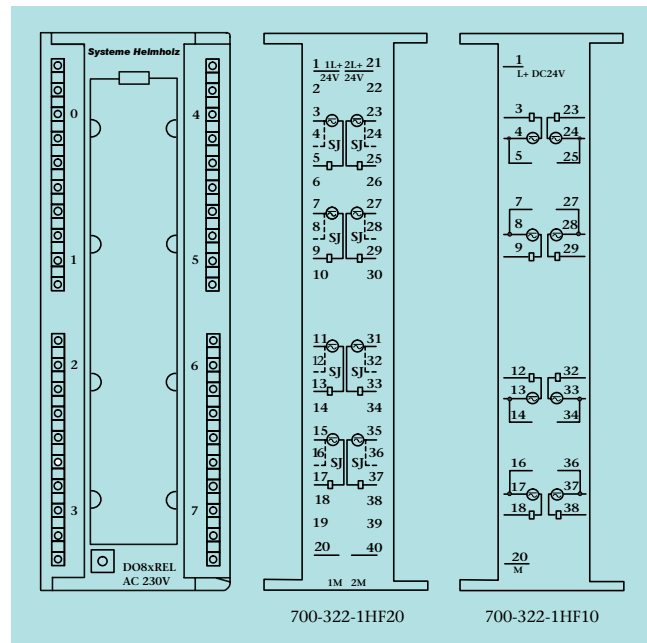
The digital outputs convert the internal signal level into the external signal levels required for the process. Green LEDs indicate the signal state of the outputs. The outputs of the modules from the Systeme Helmholtz GmbH are suitable for connection of solenoid valves, contactors, and small-power motors within the permissible range, etc. The output power of up to 5 amps per group is also suitable for larger loads.

Accessory-Note

The Systeme Helmholtz GmbH supplies front connectors and cable sets (see page 34–36).



Open type Programmable Controllers, for use in Hazardous Locations, Class I, Div. 2 Groups A, B, C, D T4 including Class I Zone 2 IIC.



Technical Data	
Number of outputs	8
Nom. load voltage L+/L-	DC 24 V
Switching voltage	AC to 230 V DC to 120 V
Output current Aggregate current of the output (per group)	max. 5 A
Isolation to • backplane bus • in groups	Optocoupler 1
Switching frequency • resistive load • inductive load • lamp load • mechanical	max. 2 Hz max. 0.5 Hz max. 2 Hz max. 10 Hz
Rated load • resistive load • inductive load	max. 8 A (AC 230 V) 8 A (DC 24 V) max. 3 A (AC 230 V) 2 A (DC 24 V)
Expected life • mechanical • resistive load	10 Mio. 5 A, 0.2 Mio.
Ambient temperature Transport and storage temperature	0 °C ... 60 °C -25 °C ... 75 °C

Ordering Data

	Order No.
DEA 300 8 outputs, relays, 5 A 8 outputs, relays, 5 A, snubber	700-322-1HF10 700-322-1HF20
Manual DEA 300, German/English	900-321-1DE11

DEA 300, Digital Output Convert; Relays



Digital output convert, 16 relays

The digital outputs convert the internal signal level into the external signal levels required for the process. Green LEDs indicate the signal state of the outputs. The outputs of the modules from the Systeme Helmholtz GmbH are suitable for connection of solenoid valves, contactors, and small-power motors within the permissible range, etc. The output power of up to 8 amps per group is also suitable for larger loads.

Accessory-Note

The Systeme Helmholtz GmbH supplies front connectors and cable sets (see page 34–36).

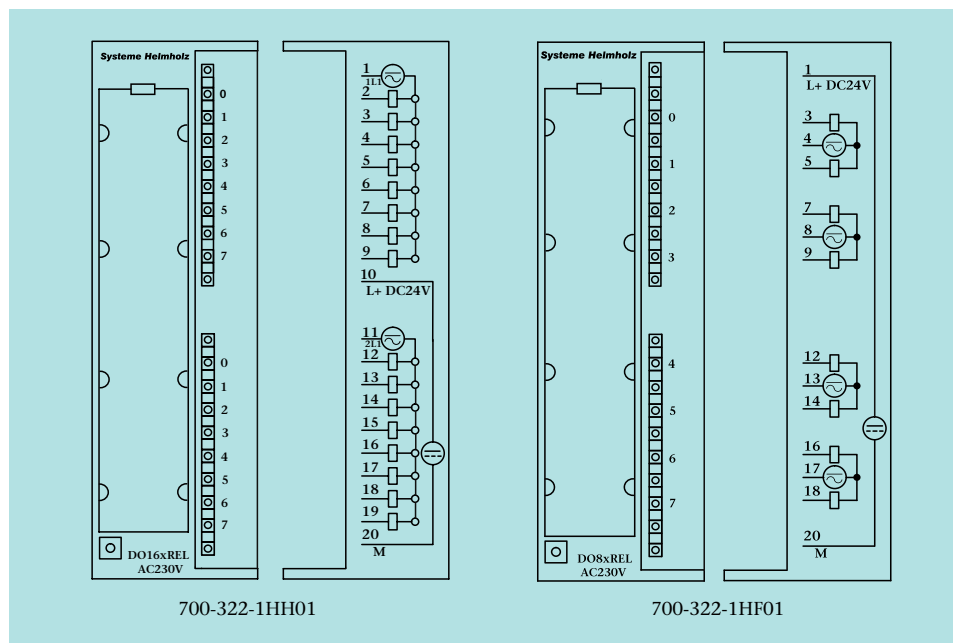


Order No. 700-322-1HH01:
Open type Programmable Controllers, for use in Hazardous Locations, Class I, Div. 2 Groups A, B, C, D T6 including Class I Zone 2, IIC.

Technical Data		
	700-322-1HH01	700-322-1HF01
Number of outputs	16	8
Nom. load voltage L+/L-	DC 24 V	DC 24 V
Switching voltage	AC to 230 V DC to 120 V	AC to 230 V DC to 120 V
Output current Aggregate current of the output (per group) max.	8 A	4 A
Isolation to backplane bus • in groups	Optocoupler 8	Optocoupler 2
Continuous thermal current	2 A	3 A
Switching frequency • resistive load max. • inductive load max. • lamp load max. • mechanical max.	1 Hz 0,5 Hz 1 Hz 10 Hz	2 Hz 0,5 Hz 2 Hz 10 Hz
Rated load • resistive load max. • inductive load max.	2 A (AC 230 V) 2 A (DC 24 V) 2 A (AC 120 V) 2 A (DC 24 V)	2 A (AC 230 V) 2 A (DC 24 V) 2 A (AC 120 V) 2 A (DC 24 V)
Expected life • mechanical • resistive load	10 Mio. 2 A, 1 Mio.	10 Mio. 2 A, 0,7 Mio.
Ambient temperature Transport and storage temperature	0 °C ... 60 °C -25 °C ... 75 °C	0 °C ... 60 °C -25 °C ... 75 °C

Ordering Data

	Order No.
DEA 300 16 outputs, relays, 2 A 8 outputs, relays, 2 A	700-322-1HH01 700-322-1HF01
Manual DEA 300, German/English	900-321-1DE11



DEA 300, Digital Input Modules; 120/230 V



Digital input convert, 120/230 V

The digital inputs convert the external binary signals from the process into the internal signal level of the programmable controller.

Green LEDs indicate the signal state of the inputs and outputs. The inputs of the modules from the Systeme Helmholz GmbH are also suitable for connection of 2-wire proximity switches. This module offers as additional features parameterizable diagnostic- and processalerts, as well as a parameterizable input delay. Modules with modified specifications or special modules can be supplied on request.

Accessory-Note

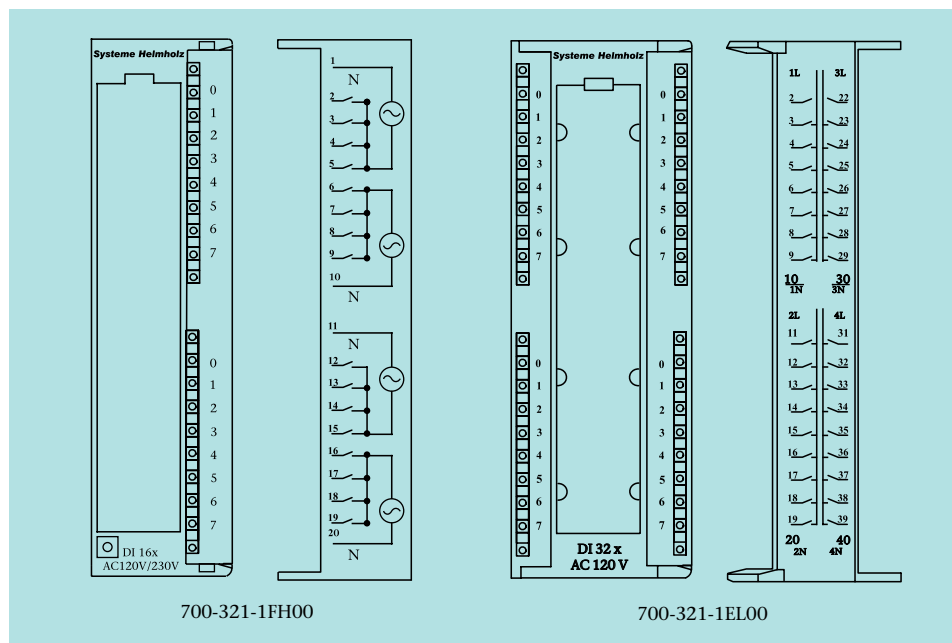
The Systeme Helmholz GmbH supplies front connectors and cable sets (see page 34-36).



Open type Programmable Controllers, for use in Hazardous Locations, Class I, Div. 2 Groups A, B, C, D T4 including Class I Zone 2 IIC.

Technical Data		700-321-1FH00	700-321-1EL00
Number of inputs		16	32
Isolation to backplane bus		Yes (optocoupler)	Yes (optocoupler)
• in groups		4	8
Input voltage		120/230 V AC	120 V AC
• nom. value (input voltage must be equal on all phases)			
• for Signal "0"		0 ... 40 V	0 ... 20 V
• for Signal "1"		79 ... 264 V	74 ... 132 V
• frequency range		47 ... 63 Hz	47 ... 63 Hz
Input current for signal "1"			
• 120 V, 60 Hz	typ.	8 mA	22 mA
• 230 V, 50 Hz	typ.	13 mA	-
Delay time			
• from "0" to "1"	typ.	25 ms	15 ms
• from "1" to "0"	typ.	25 ms	25 ms
Cable length			
• unshielded	max.	600 m	600 m
• shielded	max.	1000 m	1000 m
Current consumption			
• internal	max	30 mA	16 mA
Power loss	typ.	4.5 W	5.8 W
Ambient temperature		0 °C ... +60 °C	0 °C ... +60 °C
Transport and storage temperature		-25 °C ... +75 °C	-25 °C ... +75 °C

Ordering Data	Order No.
DEA 300 16 inputs, AC 120 V/230 V 32 inputs, AC 120 V	700-321-1FH00 700-321-1EL00
Manual DEA 300, German/English	900-321-1DE11



AEA 300, Analog Input Module for Connecting Sensors with Current Signals



Analog input module

The analog input modules from the Systeme Helmholtz GmbH convert the analog signals from the process to the internal signal level of the programmable controllers.

This module is suitable for connection of sensors with current signals in the range up to ± 20 mA.

The signal lines are connected to the corresponding front connectors. You can identify them on the labeling strip.

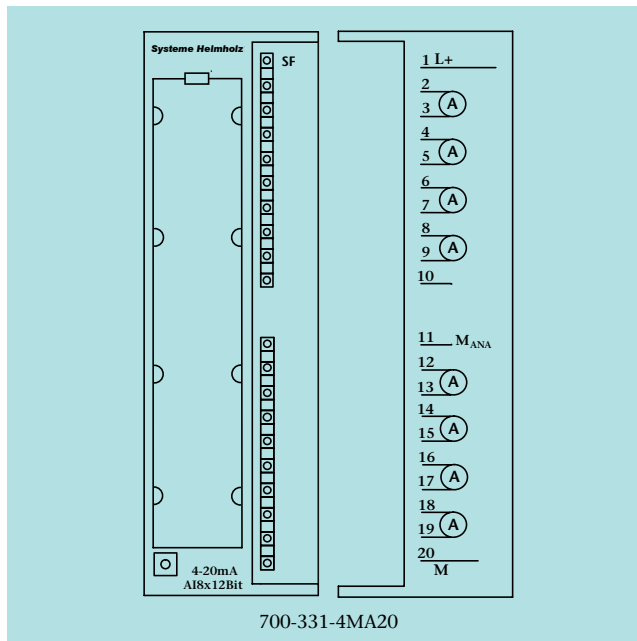
The modules can be fully parameterized with the hardware configurator of the programming software. Hardware configuration is not necessary (**no** range card).

Accessory-Note

The Systeme Helmholtz GmbH supplies front connectors and cable sets (see page 34–36).



Open type Programmable Controllers, for use in Hazardous Locations, Class I, Div. 2 Groups A, B, C, D T6 including Class I Zone 2, IIC.



Technical Data	
Number of inputs	8
Alarms	Parameterizable Parameterizable for channels 0 and 2
<ul style="list-style-type: none"> limit value alarm diagnostic alarm 	
Diagnostics	Red LED for group error display
Nom. load voltage L+/L-	DC 24 V
Polarity reversal protection	Yes
Input ranges	<ul style="list-style-type: none"> current, 4 DMU ± 3.2 mA/25 Ω ± 10 mA/25 Ω 0 ... 20 mA/25 Ω 4 ... 20 mA/25 Ω ± 20 mA/25 Ω 4 ... 20 mA/25 Ω current, 2 DMU
Permissible input current for current input max.	40 mA
Isolation against backplane bus	Yes
Conversion time/resolution (per chann.)	<ul style="list-style-type: none"> integration time 2.5/16.6/20/100 ms noise suppression for interference frequency 400/60/50/10 Hz resolution (SG = sign) (depends on integration time) 9 + VZ / 12 + VZ / 12 + VZ / 14 + VZ Bit
Operational limit	max. ± 0.6 %
Basic error limit at 25 °C	max. ± 0.5 %
Cable length (shielded)	200 m
Current consumption	<ul style="list-style-type: none"> internal (backplane bus) typ. 120 mA external (L+) max. 200 mA
Power loss	typ. 1.8 W
Front connector	20-way
Ambient temperature	0 °C ... +60 °C
Transport and storage temperature	-25 °C ... +75 °C

Ordering Data	
	Order No.
AEA 300 8 current inputs for connecting current sensors	700-331-4MA20
Manual AEA 300, German/English	900-331-0AA01

AEA 300, Analog Input Module for Connecting Sensors with Voltage Signals



Analog input module

The analog input modules from the Systeme Helmholtz GmbH convert the analog signals from the process to the internal signal level of the programmable controllers.

This module is suitable for connection of sensors with voltage signals in the range up to ± 10 V.

The signal lines are connected to the corresponding front connectors. You can identify them on the labeling strip.

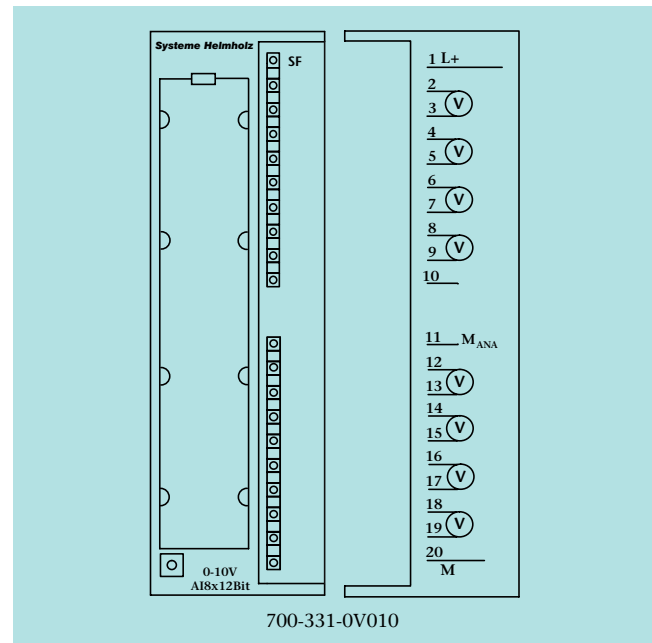
The modules can be fully parameterized with the hardware configurator of the programming software. Hardware configuration is not necessary (**no** name card).

Accessory-Note

The Systeme Helmholtz GmbH supplies front connectors and cable sets (see page 34–36).



Open type Programmable Controllers, for use in Hazardous Locations, Class I, Div. 2 Groups A, B, C, D T6 including Class I Zone 2, IIC.



700-331-0V010

Technical Data

Number of inputs	8
Alarms	Parameterizable Parameterizable for channels 0 and 2
<ul style="list-style-type: none"> diagnostic alarm limit value alarm 	
Diagnostics	Red LED for group error display
Nom. load voltage L+/L-	DC 24 V
Polarity reversal protection	Yes
Input ranges	
Voltage/input impedance	± 80 mV/10 M Ω ± 250 mV/10 M Ω ± 500 mV/10 M Ω ± 1 V/10 M Ω ± 2.5 V/100 k Ω ± 5 V/100 k Ω 1 ... 5 V/100 k Ω ± 10 V/100 k Ω
Permiss. input voltage for voltage input	max. 20 V
Isolation against backplane bus	Yes
Conversion time/resolution (per channel)	
<ul style="list-style-type: none"> integration time noise suppression for interference frequency resolution (SG = sign) (depends on integration time) 	2.5/16.6/20/100 ms 400/60/50/10 Hz 9 + VZ / 12 + VZ / 12 + VZ / 14 + VZ Bit
Operational limit	max. $\pm 0.6\%$
Basic error limit at 25 °C	max. $\pm 0.5\%$
Cable length (shielded)	max. 200 m (50 m at ± 80 mV)
Current consumption	
<ul style="list-style-type: none"> internal (backplane bus) external (L+) 	typ. 120 mA max. 200 mA
Power loss	typ. 1.8 W
Front connector	20-way
Ambient temperature	0 °C ... +60 °C
Transport and storage temperature	-25 °C ... +75 °C

Ordering Data

	Order No.
AEA 300 8 voltage inputs, for connection of voltage sensors	700-331-0V010
Manual AEA 300 , German/English	900-331-0AA01

AEA 300, Analog Input Module for Connecting Resistance Thermometers



Analog input module

The analog input modules from the Systeme Helmholtz GmbH convert the analog signals from the process to the internal signal level of the programmable controllers.

This module is suitable for connection of Pt100/Ni100 sensors and resistors.

The signal lines are connected to the corresponding front connectors. You can identify them on the labeling strip.

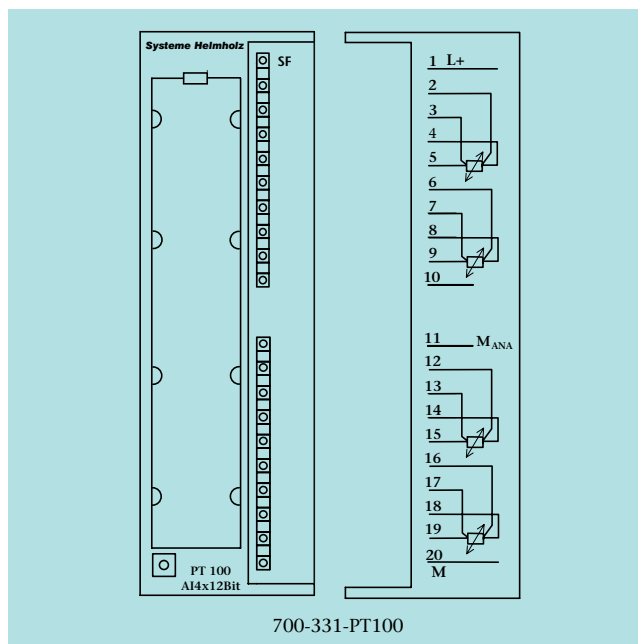
The modules can be fully parameterized with the hardware configurator of the programming software. Hardware configuration is not necessary (**no** range card).

Accessory-Note

The Systeme Helmholtz GmbH supplies front connectors and cable sets (see page 34–36).



Open type Programmable Controllers, for use in Hazardous Locations, Class I, Div. 2 Groups A, B, C, D T6 including Class I Zone 2, IIC.



700-331-PT100

Technical Data	
Number of inputs	4
Alarms	Parameterizable Parameterizable for channels 0 and 2
<ul style="list-style-type: none"> limit value alarm diagnostic alarm 	
Diagnostics	Red LED for group error display
Nom. load voltage L+/L-	DC 24 V
Polarity reversal protection	Yes
Input resistance	10 MΩ
Resistance thermometer	Pt100, Ni100 (standard and climatic range)
Resistance range	100, 150, 600 Ω
Sensor connection	2-, 3- or 4-wire connection
Isolation against backplane bus	Yes
Conversion time/resolution (per channel)	
<ul style="list-style-type: none"> integration time noise suppression for interference frequency resolution (SG = sign) (depends on integration time) 	2,5/16,6/20/100 ms 400/60/50/10 Hz 9 + VZ/12 + VZ/ 12 + VZ/14 + VZ Bit
Operational limit	max. ±0.6 %
Basic error limit at 25 °C	max. ±0.5 %
Cable length (shielded)	max. 200 m
Current consumption	
<ul style="list-style-type: none"> internal (backplane bus) external (L+) 	typ. 120 mA max. 200 mA
Power loss	typ. 1,8 W
Front connector	20-way
Ambient temperature	0 °C ... +60 °C
Transport and storage temperature	-25 °C ... +75 °C

Ordering Data	
	Order No.
AEA 300 4 inputs, Pt100/Ni100 resistance thermometers	700-331-PT100
Manual AEA 300, German/English	900-331-0AA01

AEA 300, Analog Input Module Current Signals, Voltage Signals, Resistance, Resistance Thermometer



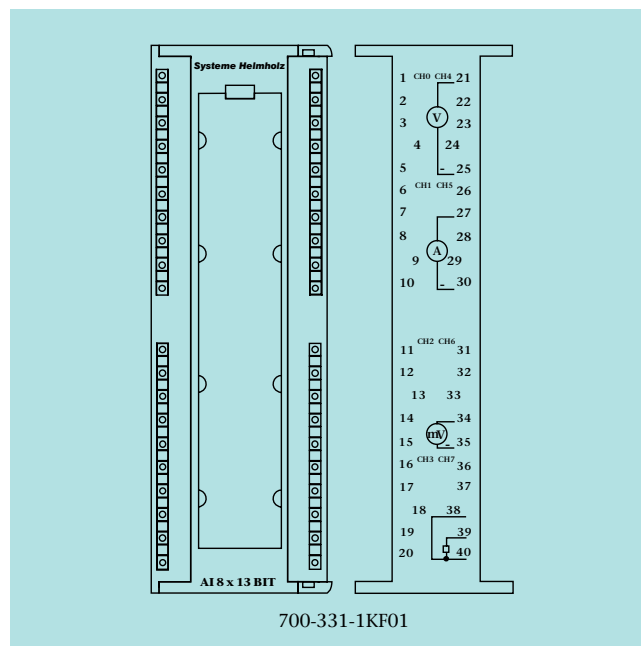
Analog input module, 8 channel, current signals, voltage signals, resistance, resistance thermometer

The analog input modules from the Systeme Helmholtz GmbH convert the analog signals from the process to the internal signal level of the programmable controllers.

This module is suitable for connection of sensors with current signals in the range up to ± 20 mA, of sensors with voltage signals in the range up to ± 10 V, of Pt100/Ni100 sensors and resistors. The signal lines are connected to the corresponding front connectors. You can identify them on the labeling strip. The modules can be fully parameterized with the hardware configurator of the programming software. Hardware configuration is not necessary (no range card).

Accessory-Note

The Systeme Helmholtz GmbH supplies front connectors and cable sets (see page 34–36).



Technical Data

Number of inputs	8
Measurement	
• voltage	± 50 mV, ± 500 mV, ± 1 V, ± 5 V, ± 10 V, 1 ... 5V, 0 ... 10 V
• current	± 20 mA, 0 ... 20 mA, 4 ... 20 mA
• resistance	0 ... 6 k Ω , 0 ... 600 Ω
• resistance thermometer (standard and climate)	Pt100, Ni100, Ni1000, LG-Ni1000
Resolution incl. overrange	13 Bit
Error limit	
Basic error limit	at 25 °C
• voltage input	$\pm 0.4\%$
• current input	$\pm 0.4\%$
• resistance	$\pm 0.4\%$
• resistance thermometer	± 0.8 K Pt100 standard, $\pm K$
Operator limit	
• current input	In the whole temperature range $\pm 0.6\%$
• resistance	$\pm 0.6\%$
• resistance thermometer	± 1 K; Pt100, Ni100 standard ± 1.2 K $\pm 0.6\%$
• voltage input	
Supply voltage	
Nominal voltage	DC 5 V by backplane bus
Current demand	Typ. 160 mA at 5 V (from backplane bus)
Power loss	Approx. 0.8 W
Front connector	32 Bit-DEA300 Front connector (40-way)
Ambient temperature	0 °C ... +60 °C
Transport and storage temperature	-25 °C ... +75 °C

Ordering Data

	Order No.
AEA 300 8 inputs, for connection of current signals, voltage signals, resistance thermometer	700-331-1KF01
Manual AEA 300, German/English	900-331-0AA01

AEA 300, Analog Output Module; 4-Channel



4-channel analog output module

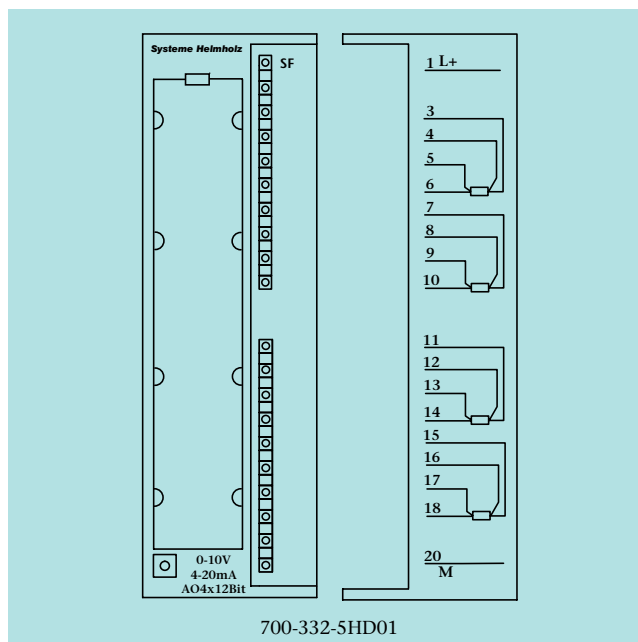
The analog output modules from the Systeme Helmholz GmbH convert the internal signal level of the programmable controllers to the analog signal level required for the process. This module is suitable for connection of analog actuators for voltage and current outputs in the range up to ± 10 V or ± 20 mA. The signal lines are connected to the corresponding front connectors. You can identify them on the labeling strip. The modules can be fully configured with the programming software. Hardware switchover is not necessary.

Accessory-Note

The Systeme Helmholz GmbH supplies front connectors and cable sets (see page 34–36).



Open type Programmable Controllers, for use in Hazardous Locations, Class I, Div. 2 Groups A, B, C, D T6 including Class I Zone 2, IIC.

**Technical Data**

Number of outputs	4
Diagnostics alarm	Yes, parameterizable
Diagnostics	Red LED for group error display
Nom. load voltage	DC 24 V
Output ranges	
• voltage outputs	0 ... 10 V; ± 10 V; 1 ... 5 V
• current outputs	4 ... 20 mA; ± 20 mA; 0 ... 20 mA
Load impedance	
• for voltage outputs	min. 1 k Ω
• for current outputs	max. 500 Ω
• at capacitive load	max. 1 μ F
• at inductive load	max. 10 mH
Voltage output	
• short-circuit protection	Yes
• short-circuit current	max. 25 mA
Current output	
• open-circuit voltage	max. 18 V
Isolation against backplane bus	Yes
Operational limit (0 to 60 °C, with reference to output range)	
• voltage	± 0.5 %
• current	± 0.6 %
Basic error limit (operational limit at 25 °C, with reference to output range)	
• voltage	± 0.4 %
• current	± 0.5 %
Cable length (shielded)	max. 200 m
Current consumption	
• internal (from backplane bus)	typ. 100 mA
• external, without load	max. 240 mA
Power loss	typ. 3 W
Front connector	20-way
Ambient temperature	0 °C ... +60 °C
Transport and storage temperature	-25 °C ... +75 °C

Ordering Data	
	Order No.
AEA 300, 4-channel 4 outputs for connecting analog actuators	700-332-5HD01
Manual AEA 300, German/English	900-331-0AA01

AEA 300, Analog Output Modules; 2-Channel



2-channel analog output module

The analog output modules from the Systeme Helmholtz GmbH convert the internal signal level of the programmable controllers to the analog signal level required for the process. This module is suitable for connection of analog actuators for voltage and current outputs in the range up to ± 10 V or ± 20 mA. The signal lines are connected to the corresponding front connectors. You can identify them on the labeling strip. The modules can be fully configured with the programming software. Hardware switchover is not necessary.

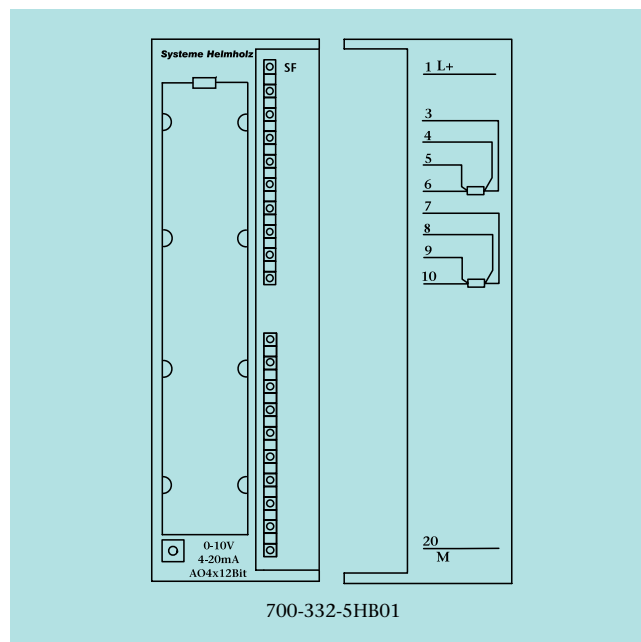
Accessory-Note

The Systeme Helmholtz GmbH supplies front connectors and cable sets (see page 34–36).



Open type Programmable Controllers, for use in Hazardous Locations, Class I, Div. 2 Groups A, B, C, D T6 including Class I Zone 2, IIC.

Ordering Data	
	Order No.
AEA 300, 2-channel 2 outputs for connecting analog actuators	700-332-5HB01
Manual AEA 300, German/English	900-331-0AA01

**Technical Data**

Number of outputs	2	
Diagnostics alarm	Yes, parameterizable	
Diagnostics	Red LED for group error display	
Nom. load voltage	DC 24 V	
Output ranges		
• voltage outputs	0 ... 10 V; ± 10 V; 1 ... 5 V	
• current outputs	4 ... 20 mA; ± 20 mA; 0 ... 20 mA	
Load impedance		
• for voltage outputs	min.	1 k Ω
• for current outputs	max.	500 Ω
• at capacitive load	max.	1 μ F
• at inductive load	max.	10 mH
Voltage output		
• short-circuit protection		Yes
• short-circuit current	max.	25 mA
Current output		
• open-circuit voltage	max.	18 V
Isolation against backplane bus	Yes	
Operational limit (0 to 60 °C, with reference to output range)		
• voltage		$\pm 0.5\%$
• current		$\pm 0.6\%$
Basic error limit (operational limit at 25 °C, with reference to output range)		
• voltage		$\pm 0.4\%$
• current		$\pm 0.5\%$
Cable length (shielded)	max.	200 m
Current consumption		
• internal (from backplane bus)	typ.	100 mA
• external, without load	max.	240 mA
Power loss	typ.	3 W
Front connector	20-way	
Ambient temperature	0 °C ... +60 °C	
Transport and storage temperature	-25 °C ... +75 °C	

Dummy module



Dummy module

The Dummy module from the Systeme Helmholz GmbH is for reserving slots for unparameterized signal modules. The structure and address assignment is retained when it is eventually replaced by a signal module. For 20-way or 40-way front connectors.

Meaning of the 8/9-Bit display of the placeholder module

There are two different methods of transmitting data on the backplane bus of the S7-300¹⁾:

- **without parity Bit**

Only the data bytes (8 Bits) are transmitted.

This method is obsolete because errors during transmission cannot be detected and the I/Os may be incorrectly switched.

- **with parity Bit**

The new safe method transmits a parity bit in addition to the useful data (9 Bits per byte). That way transmission errors can be detected and incorrect connections avoided.

The CPUs known to us are capable of both transmission methods. Due to reasons of downward compatibility all I/O modules that are capable of the 9-Bit method can also be switched back to the 8-Bit method. This occurs when at least one module is plugged into the system that is only capable of the 8-Bit method.

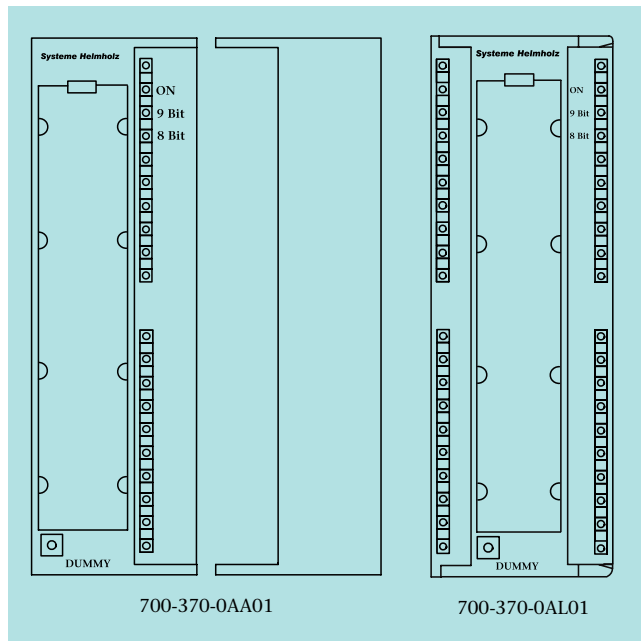
The 8/9-Bit LEDs indicate which method the complete system is using.

If an 8-Bit module is used, all 9-Bit modules on the backplane will only use 8-Bit transmission.

The 9-bit method was introduced shortly after the market launch of the S7-300¹⁾.

However, to ensure downward compatibility, new CPUs are still capable of the 8-Bit method.

Ordering Data	
	Order No.
Dummy module, 20-way	700-370-0AA01
Dummy module, 40-way	700-370-0AL01
Manual DEA 300, German/English	900-321-1DE11



Systeme Helmholz modules all use the reliable 9-Bit method when possible.

However, there are modules possessing just the 8-Bit method on the market. To ensure reliable data transmission on the backplane bus and avoid incorrect switching, we advise against using such modules. The presence of 8-Bit modules can be seen by the shining of the red 8-Bit LED of the placeholder module.

Technical Data	
Current consumption Internal	5 mA
Power loss (nominal operation)	0.03 W
Front connector	-
Ambient temperature Transport and storage temperature	0 °C ... 60 °C -25 °C ... 75 °C

1) S7-300 is a registered trademark of Siemens AG

PAS 153, distributed PROFIBUS Interface



PAS 153

The PAS 153 distributed PROFIBUS Interface from Systeme Helmholz GmbH is for linking digital and analog input and output modules to the PROFIBUS-DP. The module can be mounted on a sectional rail.

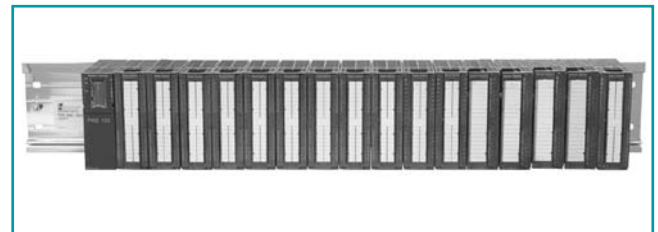
Up to 16 modules can be connected to the PAS 153. The PAS 153 is integrated into the hardware configurator of the programming system by a GSD file. The PAS 153 Interface performs all communication between the modular I/O device and the higher-level master unit on the PROFIBUS-DP. The inputs and outputs are assigned to the master in the configuration. Diagnostic information from the modules can be read out via the PAS 153 Interface in the usual way.

The PAS 153 Interface supports all input/output modules from Systeme Helmholz GmbH and numerous modules of the same type from other manufacturers.

The scope of modules supported can be extended at any time by a firmware update via the USB.

Features

- DIP switch for setting the PROFIBUS address
- Up to 16 modules can be plugged in
- Module diagnostics supported
- Can be used on standard sectional rail
- Any combination of modules is possible (analog/digital)
- PROFIBUS-DP up to 12 Mbps
- GSD file is supplied
- Firmware update for expanding functions possible via USB



Up to 16 modules can be plugged in



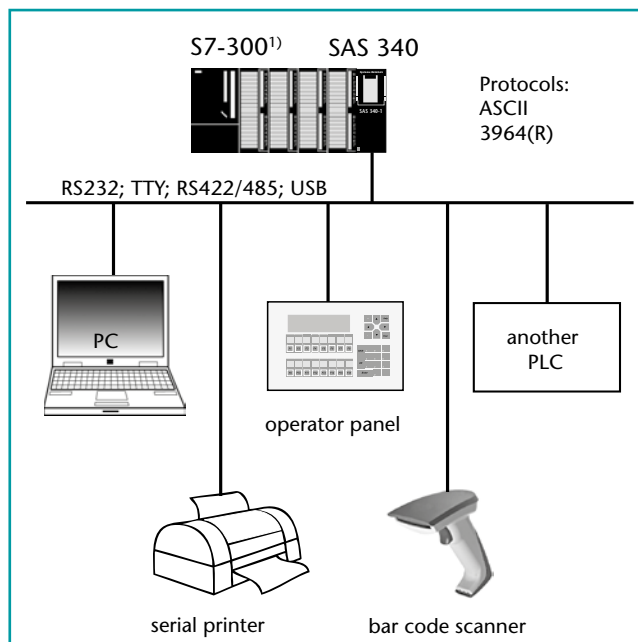
Ordering Data	
	Order No.
PAS 153, distributed PROFIBUS Interface (incl. CD with GSD file)	700-153-1AA03
Manual PAS 153, German/English	900-153-1AA03

Technical Data	
Dimensions (D x W x H mm)	116 x 40 x 125
Weight	Approx. 250 g
Power supply	
Voltage	DC 24 V
Current consumption	max. 625 mA
Output voltage	DC 5 V
Output current at DC 5 V	max. 1.5 A (to backplane)
PROFIBUS Interface	
Transmission rate	max. 12 Mbps, autodetection
Protocol	PROFIBUS-DP to EN 50 170
Addressrange	128 Bytes for inputs 128 Bytes for outputs
Module count	max. 16, 8 of these analog
Connection	Male, SUB-D, 9-way
Ambient temperature	0 °C ... +60 °C
Transport and storage temperature	-25 °C ... +60 °C

SAS 340, Communication Module



SAS 340



Application example for SAS 340

The SAS 340 is a serial communication module for use in Simatic¹⁾ S7-300¹⁾ systems. The SAS 340 permits the linking to the PLC of serial devices, such as barcode scanners, operator terminals, serial printers, PCs, PLCs of other manufacturers, and supports the ASCII and 3964R protocols.

The serial devices can be connected via RS232, TTY (20 mA), or RS422/RS485. The 9-way Sub-D socket (15-way in the case of RS422/485) with standard pin assignment is provided for connecting communicating devices.

The additional USB-device interface permits the connection of the PLC to PC systems, many of which no longer have a conventional physical port. A virtual COM port driver enables the use of software that still expects a COM port.

Extended functions, such as support for higher baud rates up to 115 kBaud make the SAS 340 all the more versatile without any loss of compatibility.

The data handling blocks supplied enable simple and flexible integration into the PLC. The module is parameterized in the Hardware Configurator of the PLC. Extended functions (e.g. higher baud rates) can be activated with the data handling blocks without any problem.

To permit a higher integration density in the cabinet, the SAS 340 is also available with 2 serial interfaces. Both interfaces can be parameterized independently and are used in the PLC.

Ordering Data	
	Order No.
SAS 340-1*, 1 x RS232, 1 x USB	700-340-1AH02
SAS 340-1*, 1 x TTY	700-340-1BH02
SAS 340-1*, 1 x RS422/RS485	700-340-1CH02
SAS 340-2*, 2 x RS232, 2 x USB	700-340-2AH02
SAS 340-2*, 2 x TTY	700-340-2BH02
SAS 340-2*, 2 x RS422/RS485	700-340-2CH02
*(incl. CD with data handling blocks and manual)	
Manual SAS 340, German/English	900-340-1XH02

1) Simatic and S7-300 are registered trademarks of Siemens AG.

Technical Data	
Dimensions (D x W x H mm)	116 x 40 x 125
Weight	Approx. 280 g
Power supply	
Voltage	+5 V DC via backplane bus
Current consumption	typ. 160 mA max. 190 mA
Interfaces	
Type	V.24 (RS232) TTY (20 mA) RS422/RS485 (X27) USB
Transmission rate	300 Baud ... 115 kBaud
Protocol	ASCII 3964(R)
Connection	Connector, SUB-D, 9-way; 15-way (RS422/485)
Status display	6 LEDs
Ambient temperature	0 °C ... 60 °C
Transport and storage temperature	-25 °C ... 75 °C

SAS 341, Communication Module



SAS 341

The SAS 341 is a serial communication module for use in Simatic¹⁾ S7-300¹⁾ systems. The SAS 341 permits the linking to the PLC of serial devices, such as barcode scanners, operator terminals, serial printers, PCs, PLCs of other manufacturers, and supports the ASCII, 3964R, and RK512 protocols.

The serial devices can be connected via RS232, TTY (20 mA), or RS422/RS485. The 9-way Sub-D socket (15-way in the case of RS422/485) with standard pin assignment is provided for connecting communicating devices.

The additional USB interface permits the connection of the PLC to PC systems, many of which no longer have a conventional physical port. A virtual COM port driver enables the use of software that still expects a COM port.

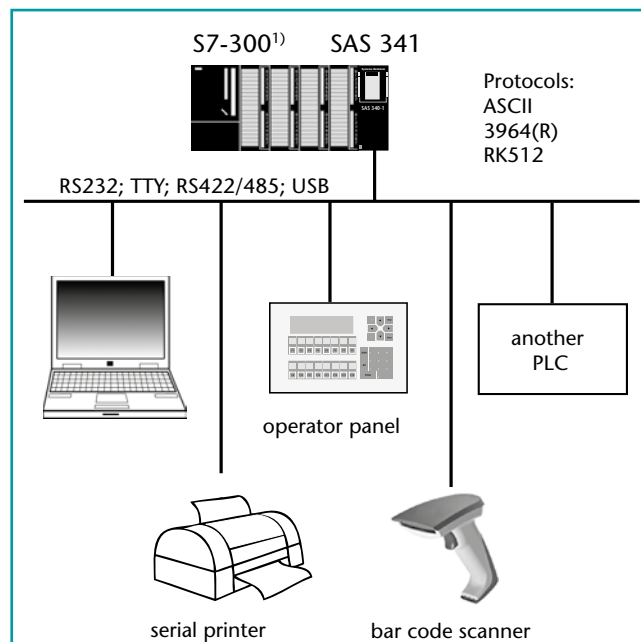
Extended functions, such as support for higher baud rates up to 115 kBaud make the SAS 341 all the more versatile without any loss of compatibility.

Using the standardized RK512 computer link protocol, the linking of different types of PLC to the S7-300¹⁾ can be flexibly implemented.

The data handling blocks supplied enable simple and flexible integration into the PLC. The module is parameterized in the Hardware Configurator of the PLC. To permit a higher integration density in the cabinet, the SAS 341 is also available with 2 serial interfaces. Both interfaces can be parameterized independently and are used in the PLC.

Ordering Data	
	Order No.
SAS 341-1*, 1 x RS232, 1 x USB	700-341-1AH02
SAS 341-1*, 1 x TTY	700-341-1BH02
SAS 341-1*, 1 x RS422/RS485	700-341-1CH02
SAS 341-2*, 2 x RS232, 2 x USB	700-341-2AH02
SAS 341-2*, 2 x TTY	700-341-2BH02
SAS 341-2*, 2 x RS422/RS485	700-341-2CH02
*(incl. CD with data handling blocks and manual)	
Modbus Master/Slave Driver for SAS 341 (on Micro Memory Card)	800-341-MOD01
Manual SAS 341, German/English	900-341-1XH02

1) Simatic and S7-300 are registered trademarks of Siemens AG.



Application example for SAS 341

Via an optionally obtainable Micro Memory Card, customer-specific protocol drivers can be loaded into the SAS 341. Special drivers, such as Modbus can be implemented in this way.

Do you require a special protocol for your device? Just ask us!

Technical Data	
Dimensions (D x W x H mm)	116 x 40 x 125
Weight	Approx. 280 g
Power supply	
Voltage	+5 V DC via backplane bus
Current consumption	typ. 160 mA max. 190 mA
Interfaces	
Type	V.24 (RS232) TTY (20 mA) RS422/RS485 (X27) USB
Transmission rate	300 Baud ... 115 kBaud
Protocol	ASCII 3964(R) RK512
Connection	Connector, SUB-D, 9-way; 15-way (RS422/485)
Status display	6 LEDs
Ambient temperature	0 °C ... 60 °C
Transport and storage temperature	-25 °C ... 75 °C

EIB 300, Communication Module for Twisted Pair EIB/KNX



EIB 300

The EIB 300 is a communication module for use in Simatic¹⁾ S7-300¹⁾ systems. It enables the connection of an EIB/KNX bus to the PLC whereby the bus is directly attached to the module. Due to the possibilities of PLC programming, complex control and monitoring functions can also be realised easily on the EIB/KNX bus.

Two different operating modes are supported for flexible use of the EIB 300.

In the “object mode”, the EIB 300 is an active participant on the EIB/KNX bus with up to 240 objects whereby all object types from 1 bit to 4 bytes data size are supported. The current object values are mapped in a data module in the PLC and exchanged with each PLC cycle. In this way, value changes on the EIB side are applied in the PLC and changed values in the PLC are transmitted on the EIB/KNX bus. This can also be influenced using event and control flags targeted to the communications behaviour.

In the “telegram mode”, all telegrams transmitted on the EIB/KNX bus are transparently forwarded to the PLC and any telegrams can be sent out on the EIB/KNX bus from the PLC. This operating mode enables maximum flexibility, also in the case of complex systems or communications processes.

The management of the EIB 300 is performed in the PLC as CP module. The handling modules contained in the standard delivery enable simple integration of the EIB 300 in the PLC program. The integration of the EIB 300 in the ETS software as a new device is performed using a supplied example project. In the object mode, the objects organised there in different profiles can be configured and thus adapted to the respective application. Six coloured LEDs provide information about the current operating status of the EIB 300 and the EIB/KNX bus. The installed USB port is provided for firmware updates and in-depth diagnostics.

Features

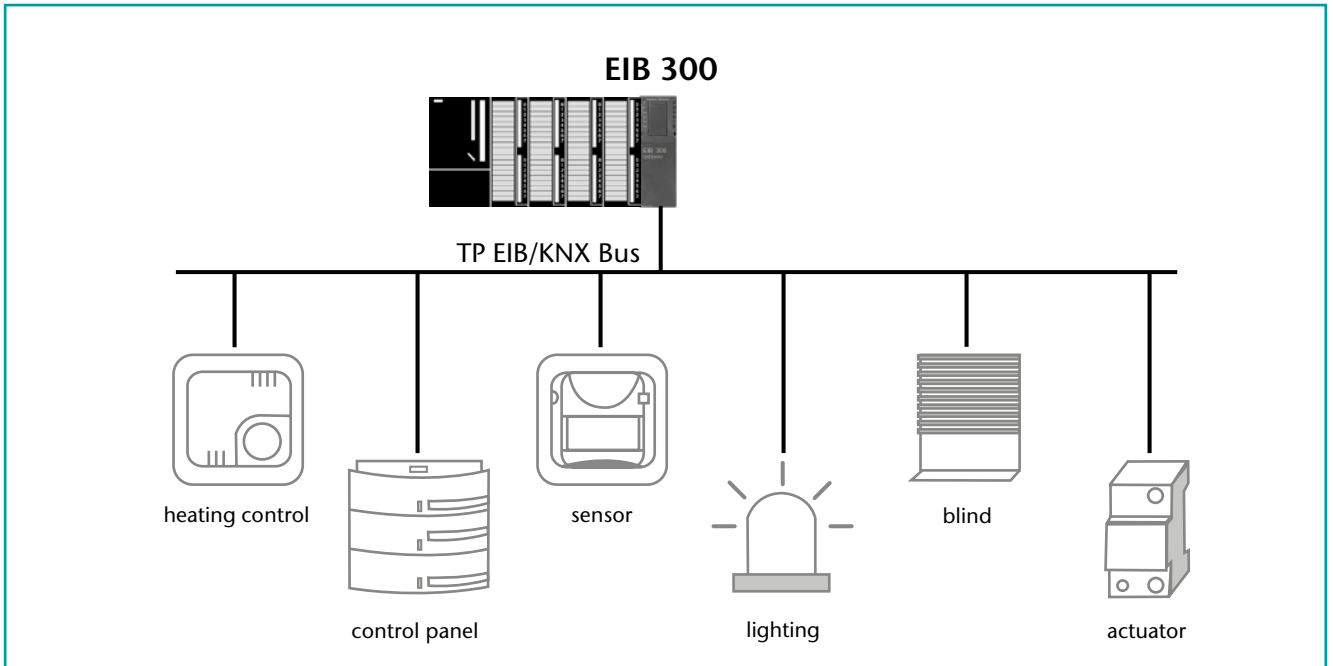
- Access to the EIB/KNX bus directly from the PLC
- Realisation of complex control and monitoring functions using PLC programming
- Configurable object operation with up to 240 objects
- Telegram mode for the transparent EIB/KNX communication
- Easy integration and handling

Ordering Data	
	Order No.
EIB 300, Communication Module for Twisted Pair EIB/KNX	700-820-EIB01
Manual EIB 300, German/English	900-820-EIB01

Technical Data	
Dimensions (D x W x H mm)	116 x 40 x 125
Weight	Approx. 280 g
Power supply	
Voltage	DC +5 V via backplane bus
Current consumption	typ. 160 mA max. 190 mA
Interface	
Type	Twisted Pair EIB/KNX
Transmission rate	9600 Baud
Protocol	EIB/KNX; up to 240 objects or telegram mode
Connection	2-pin
Status display	6 LEDs
Ambient temperature	0 °C ... 60 °C
Transport and storage temperature	-25 °C ... 75 °C

1) Simatic and S7-300 are registered trademarks of Siemens AG.

EIB 300, Communication Module for Twisted Pair EIB/KNX



Application Example EIB 300

Number	Name	Object Function	Description	Group Ad...	Length	C	R	W	T	U	Data Typ
209	0	Tx Object 209		13/0/36	2 Byte	C	-	W	T	-	
210	0	Tx Object 210		13/0/69	2 Byte	C	-	W	T	-	
211	0	Tx Object 211		13/1/0	2 Byte	C	-	W	T	-	
212	Rx	Object 212	2 Input Bytes @ D8B90-91	1/6/0	2 Byte	C	-	W	T	U	2 byte flo.
213	Rx	Object 213	2 Input Bytes @ D8B92-93	1/7/1	2 Byte	C	-	W	T	U	2 byte flo.
214	Rx	Object 214	2 Input Bytes @ D8B94-95	1/5/10	2 Byte	C	-	W	T	U	2 byte flo.
215	Rx	Object 215	2 Input Bytes @ D8B96-97	1/5/20	2 Byte	C	-	W	T	U	2 byte flo.
216	Rx	Object 216	2 Input Bytes @ D8B98-99	4/0/0	2 Byte	C	-	W	T	U	2 byte flo.
217	Rx	Object 217	2 Input Bytes @ D8B100-101	4/0/1	2 Byte	C	-	W	T	U	2 byte flo.
218	Rx	Object 218	2 Input Bytes @ D8B102-103	4/0/2	2 Byte	C	-	W	T	U	2 byte flo.
219	Rx	Object 219	2 Input Bytes @ D8B104-105	4/0/3	2 Byte	C	-	W	T	U	2 byte flo.
220	Rx	Object 220	2 Input Bytes @ D8B106-107	4/0/4	2 Byte	C	-	W	T	U	2 byte flo.
221	Rx	Object 221	2 Input Bytes @ D8B108-109	4/0/5	2 Byte	C	-	W	T	U	2 byte flo.
222	0	Tx Object 222		4/1/0	3 Byte	C	R	-	-	-	
223	0	Tx Object 223		4/1/1	3 Byte	C	R	-	-	-	
224	0	Tx Object 224		15/1/2	4 Byte	C	-	W	T	-	4 byte flo.
225	0	Tx Object 225		15/1/3	4 Byte	C	-	W	T	-	4 byte sig
226	Rx	Object 226	4 Input Bytes @ D8B124-127	15/1/3	4 Byte	C	-	W	T	U	

Object	Device	Sending	C	R	W	T	U	Product
153: Ausgang 12 - Schalten	1.1.27 Halle HV A1.1 Schalt-/Jalousieaktor 16-/8fach 16A REG		C	R	W	-	-	Schalt-/Jalousieakt
36: Ausgang 2 - Schalten	1.1.44 Halle HV A1.3 Schaltaktor 8fach 16A C-Last REG	5	C	-	W	-	-	Schaltaktor 8fach :
62: Ausgang 5 - Schalten	1.1.181 EG UV1 A2.2 Schalt-/Jalousieaktor 8-/4fach 16A REG	5	C	-	W	-	-	Schalt-/Jalousieakt
166: Ausgang 7 - Schalten	1.1.180 EG UV1 A2.1 Schaltaktor 8fach 16A C-Last REG	5	C	-	W	-	-	Schaltaktor 8fach :
192: Ausgang 8 - Schalten	1.1.180 EG UV1 A2.1 Schaltaktor 8fach 16A C-Last REG		C	-	W	-	-	Schaltaktor 8fach :
36: Ausgang 2 - Schalten	1.1.180 EG UV1 A2.1 Schaltaktor 8fach 16A C-Last REG		C	-	W	-	-	Schaltaktor 8fach :
10: Ausgang 1 - Schalten	1.1.174 UV IOG A3.3.1 Schalt-/Jalousieaktor 8-/4fach 16A REG	5	C	-	W	-	-	Schalt-/Jalousieakt
23: Ausgang 2 - Schalten	1.1.174 UV IOG A3.3.1 Schalt-/Jalousieaktor 8-/4fach 16A REG	5	C	-	W	-	-	Schalt-/Jalousieakt
88: Ausgang 7 - Schalten	1.1.174 UV IOG A3.3.1 Schalt-/Jalousieaktor 8-/4fach 16A REG	5	C	-	W	-	-	Schalt-/Jalousieakt
36: Ausgang 3 - Schalten	1.1.173 UV IOG A3.3 Schalt-/Jalousieaktor 8-/4fach 16A REG	5	C	-	W	-	-	Schalt-/Jalousieakt
88: Ausgang 7 - Schalten	1.1.173 UV IOG A3.3 Schalt-/Jalousieaktor 8-/4fach 16A REG	5	C	-	W	-	-	Schalt-/Jalousieakt
101: Ausgang 8 - Schalten	1.1.173 UV IOG A3.3 Schalt-/Jalousieaktor 8-/4fach 16A REG	5	C	-	W	-	-	Schalt-/Jalousieakt
114: Ausgang 9 - Schalten	1.1.170 UV IOG A3.1 Schalt-/Jalousieaktor 16-/8fach 16A REG	5	C	-	W	-	-	Schalt-/Jalousieakt
10: Ausgang 1 - Schalten	1.1.181 EG UV1 A2.2 Schalt-/Jalousieaktor 8-/4fach 16A REG		C	R	W	-	-	Schalt-/Jalousieakt
36: Ausgang 3 - Schalten	1.1.180 EG UV1 A2.1 Schaltaktor 8fach 16A C-Last REG		C	-	W	-	-	Schaltaktor 8fach :
49: Ausgang 4 - Schalten	1.1.174 UV IOG A3.3.1 Schalt-/Jalousieaktor 8-/4fach 16A REG		C	-	W	-	-	Schalt-/Jalousieakt
62: Ausgang 5 - Schalten	1.1.174 UV IOG A3.3.1 Schalt-/Jalousieaktor 8-/4fach 16A REG		C	-	W	-	-	Schalt-/Jalousieakt
75: Ausgang 6 - Schalten	1.1.174 UV IOG A3.3.1 Schalt-/Jalousieaktor 8-/4fach 16A REG		C	-	W	-	-	Schalt-/Jalousieakt

Configuration of EIB 300 at ETS3

FastPlug, Frontadapter for S7 modules



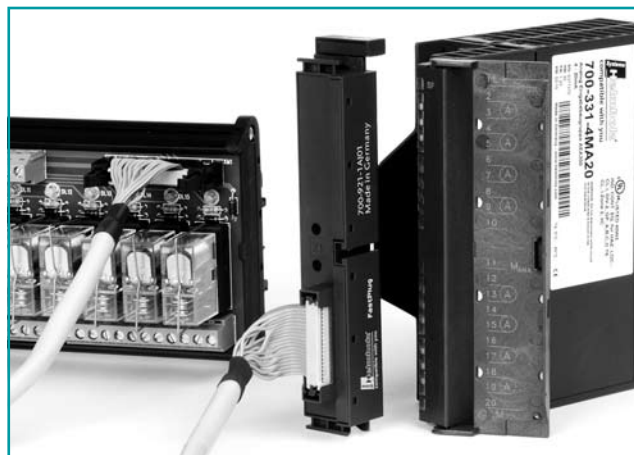
FastPlug – Frontadapter for S7 modules

The new professional **FastPlug** Frontadapter from the Systeme Helmholtz GmbH are intended for insertion or clipping on a 16 or 32 Bit S7 Input/Output module. They are reducing the wiring effort. Through the use of prefabricated system cables, connection errors are excluded. Therefore the interface modules/transfer modules can be connected fast & safe to the S7 PLC.

The new **FastPlug** Frontadapter are available to be connected to a 16 Bit Input/Output module with a 20pin ribbon connector and a 2 x 20pin ribbon connector for 32 Bit Input/Output module.

Features

- Frontadapter for ribbon connector
- 20-way and 40-way
- Fast, safe and cost-effective wiring
- Connection errors excluded



Ordering Data	
	Order No.
Front Connector for DEA 300	
FastPlug 20-way, S7 Frontadapter	700-921-1AJ01
FastPlug 40-way, S7 Frontadapter	700-921-1AM01
Twisted ribbon cable, unshielded, 20-way, 2 ID-connectors	
0.5 m	700-923-2BA50
1.0 m	700-923-2BB00
1.5 m	700-923-2BB50
2.0 m	700-923-2BC00
2.5 m	700-923-2BC50
3.0 m	700-923-2BD00
4.0 m	700-923-2BE00
5.0 m	700-923-2BF00

Technical Data	
Front Connector Connection 700-921-1AJ01 700-921-1AM01	FastPlug 1 x 20-way IDC 2 x 20-way IDC
Weight	Approx. 50 g
Dimensions (D x W x H mm) 700-921-1AJ01 700-921-1AM01	131 x 23 x 31 116 x 22 x 30
Voltage	Max. 48 V AC/DC between any terminals
Current consumption	Max. 600 mA per terminal
Ambient temperature Transport and storage temperature Relative humidity	0 °C ... +60 °C -25 °C ... +80 °C max. 75% at +25 °C

Front Connectors with screw contacts, Front Connectors **EasyConnect**[®]



Front Connectors, 20-way and 40-way with screw contacts

Front Connector with screw connections

The 20-way and 40-way front connector from the Systeme Helmholz GmbH uses time-tested screw connections. The front connector permits simple connection of sensors and actuators to input/output modules of Systeme Helmholz GmbH or other manufacturers.

The wiring can thus be retained even in the event of module replacement.



Front Connector, 40-way with **EasyConnect**[®] technology

Front Connector with **EasyConnect**[®] technology

The 40-way front connector from the Systeme Helmholz GmbH is supplied with **EasyConnect**[®] technology. The connector is quickly wired up simply by opening and closing the spring-loaded terminal by turning the screw head (180° counterclockwise to open, clockwise to close). That not only saves the user money but also installation time.

No wire end ferrule is needed!

The flat design permits optimum closing of the module front cover even with the connector fully wired.

Technical Data	
Front Connector 20-way	
Connection	Screw-type terminals
Connectable cables W/o wire end ferrule	Flexible, fixed 0.25 - 1.5 mm ²
Strip length	6 mm
Max. tightening torque	0.5 Nm
Weight	Approx. 60 g
Current at 60 °C	3 A
Voltage	230 V AC
Ambient temperature	0 °C ... +60 °C
Transport and storage temperature	-25 °C ... +80 °C
Relative humidity	max. 75% at +25 °C
Front Connector 40-way	
Connection	screw-type terminals
Connectable cables W/o wire end ferrule	Flexible, fixed 0.125 - 1.5 mm ²
Strip length	6 - 8 mm
Max. tightening torque	0.5 Nm
Weight	Approx. 120 g
Current at 60 °C	3 A
Voltage	230 V AC
Ambient temperature	0 °C ... +60 °C
Transport and storage temperature	-25 °C ... +80 °C
Relative humidity	max. 75% at +25 °C

Technical Data	
Front Connector 40-way	
Connection	EasyConnect [®]
Connectable cables W/o wire end ferrule	Flexible, fixed 0.34 - 1 mm ²
Strip length	8 - 10 mm
Weight	Approx. 70 g
Current at 60 °C	3 A
Voltage	230 V AC
Ambient temperature	0 °C ... +60 °C
Transport and storage temperature	-25 °C ... +80 °C
Relative humidity	max. 75% at +25 °C

Ordering Data	
	Order No.
Front Connector for DEA 300	
20-way with screw contacts	700-392-1AJ10
40-way with screw contacts	700-392-1AM01
40-way with EasyConnect [®] technology	700-392-1AM10

Front Connectors with spring contacts, Ready-wired Front Connectors



Front Connectors, 20-way and 40-way with spring contacts

Front Connector with spring contacts

The 20-way and 40-way front connector from the Systeme Helmholtz GmbH uses spring contacts. The front connector permits simple connection of sensors and actuators to input/output modules of Systeme Helmholtz GmbH or other manufacturers. The wiring can thus be retained even in the event of module replacement.



Ready-wired Front Connectors

Ready-wired Front Connector

The Ready-wired front connectors are available for easy connection of sensors and actuators to input/output modules of Systeme Helmholtz GmbH.

The cabling can be kept when modules are replaced.

Technical Data

Front Connector 20-way	
Connection type	Spring contacts
Connectable cables with/without wire end ferrules	Flexible, fixed 0.34 - 1.5 mm ²
Insulation stripping length	8 mm
Weight	Approx. 50 g
Current at 60 °C	3 A
Voltage	230 V AC
Ambient temperature	0 °C ... +60 °C
Transport and storage temperature	-25 °C ... +80 °C
Relative humidity max.	75 % at +25 °C
Front Connector 40-way	
Connection type	Spring contacts
Connectable cables with/without wire end ferrules	Flexible, fixed 0.34 - 1.5 mm ²
Insulation stripping length	8 mm
Weight	Approx. 70 g
Current at 60 °C	3 A
Voltage	230 V AC
Ambient temperature	0 °C ... +60 °C
Transport and storage temperature	-25 °C ... +80 °C
Relative humidity max.	75 % at +25 °C

Ordering Data

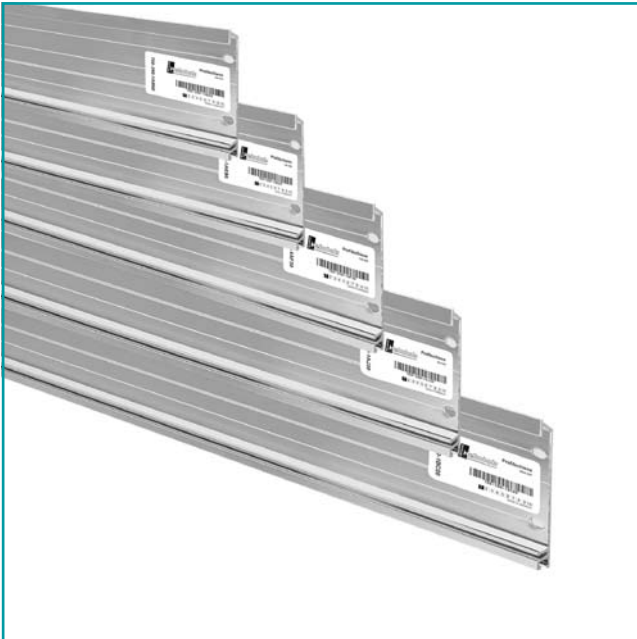
	Order No.
Front Connector for DEA 300	
20-way with spring contacts	700-392-1BJ01
40-way with spring contacts	700-392-1BM01

Ordering Data

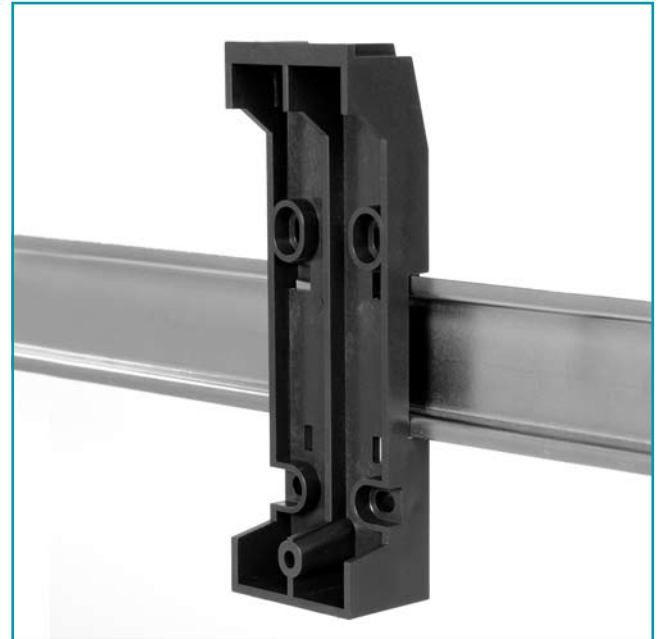
	Order No.
Ready-wired Front Connectors¹⁾	
DEA 300	
for screw connection, 20-way, 2 m	700-392-1AJ10A
for screw connection, 20-way, 3 m	700-392-1AJ10B
for screw connection, 20-way, 5 m	700-392-1AJ10C
for EasyConnect [®] connection, 40-way, 2 m	700-392-1AM10A
for EasyConnect [®] connection, 40-way, 3 m	700-392-1AM10B
for EasyConnect [®] connection, 40-way, 5 m	700-392-1AM10C
for spring contacts, 20-way, 2 m	700-392-1BJ01A
for spring contacts, 20-way, 3 m	700-392-1BJ01B
for spring contacts, 20-way, 5 m	700-392-1BJ01C
for spring contacts, 40-way, 2 m	700-392-1BM01A
for spring contacts, 40-way, 3 m	700-392-1BM01B
for spring contacts, 40-way, 5 m	700-392-1BM01C

1) Strands 0.5 mm² blue (RAL 5010); Labeling as on connector

Mounting rail, Mounting rail adapter for DIN rail



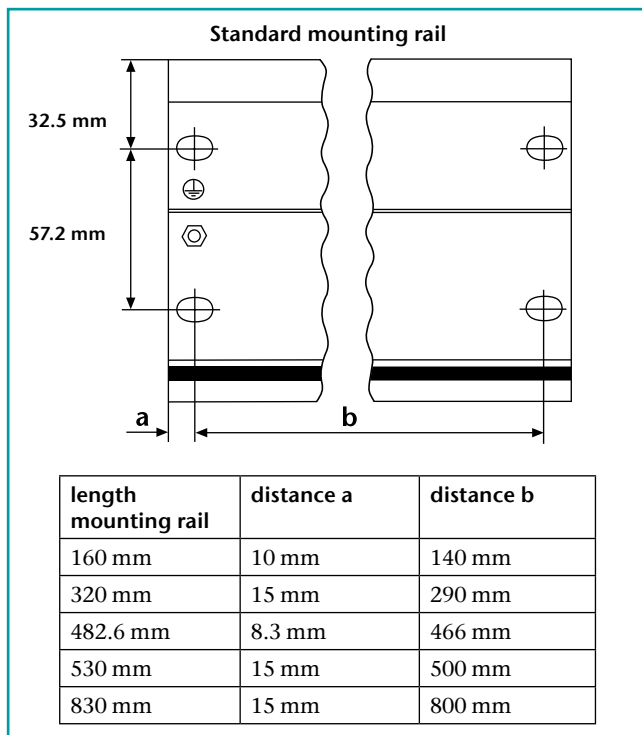
Mounting rail



Mounting rail adapter for DIN rail

For all DEA and AEA etc., we offer the mechanical module subrack for the S7-300¹⁾ as an accessory in various lengths.

We offer for all communication modules (e.g. REX 300, DP/DP-Koppler, TS 300, MDM 300) which are designed for assembling on mounting rail a mounting rail adapter for DIN rail as an accessory.



Ordering Data	
	Order No.
Mounting rail	
length 160 mm	700-390-1AB60
length 320 mm	700-390-1SO01
length 482 mm	700-390-1AE80
length 530 mm	700-390-1AF30
length 830 mm	700-390-1AJ30
length 2000 mm	700-390-1BC00

Ordering Data	
	Order No.
Mounting rail adapter for DIN rail	700-390-6BA01

1) S7-300 is a registered trademark of Siemens AG.