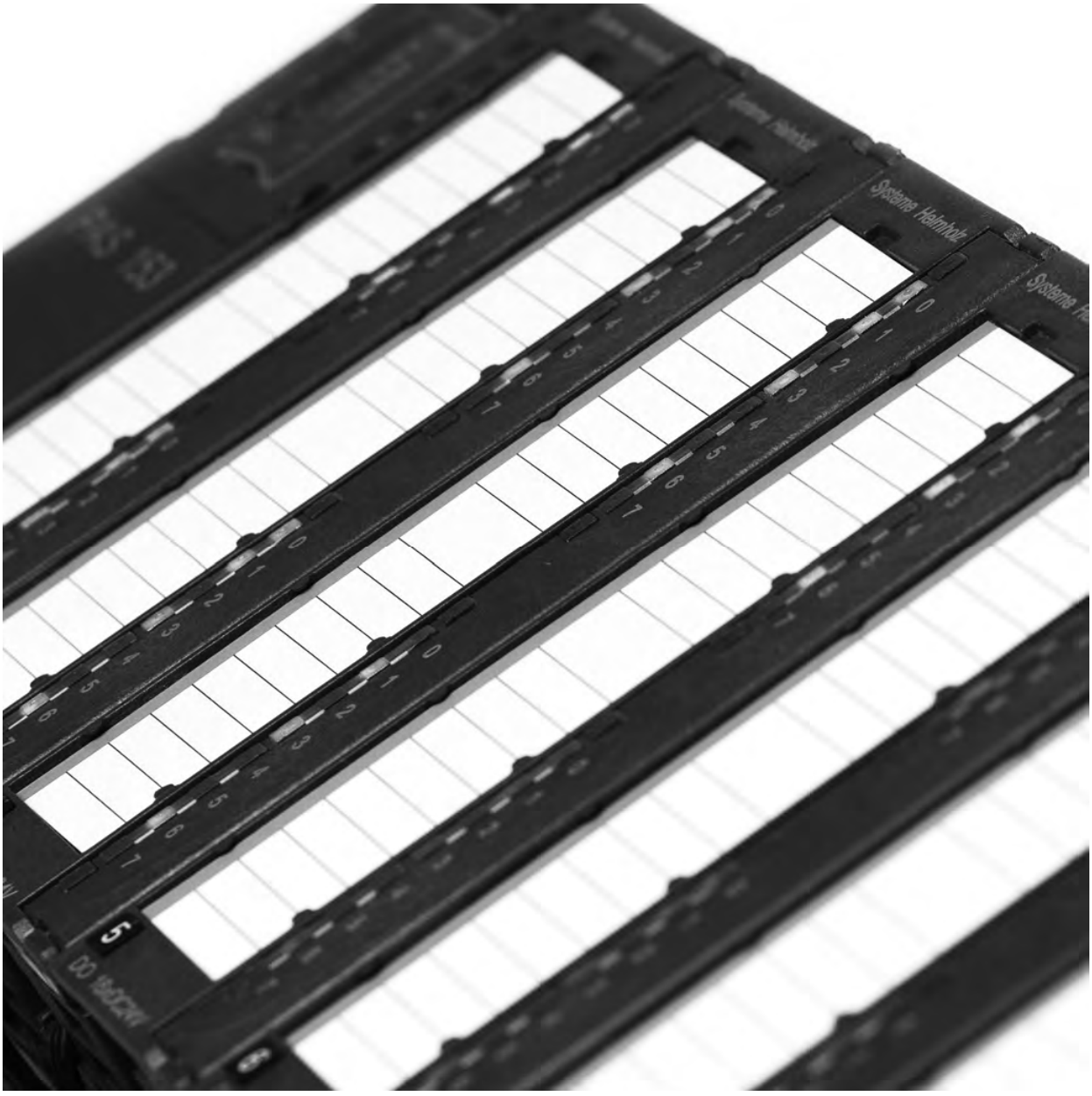
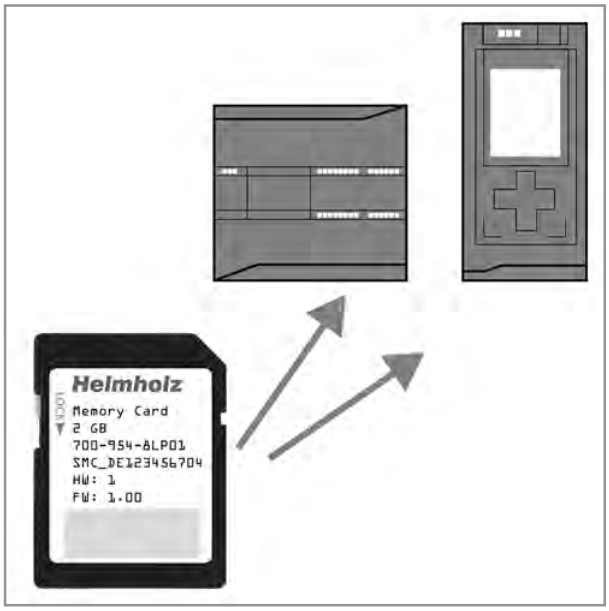
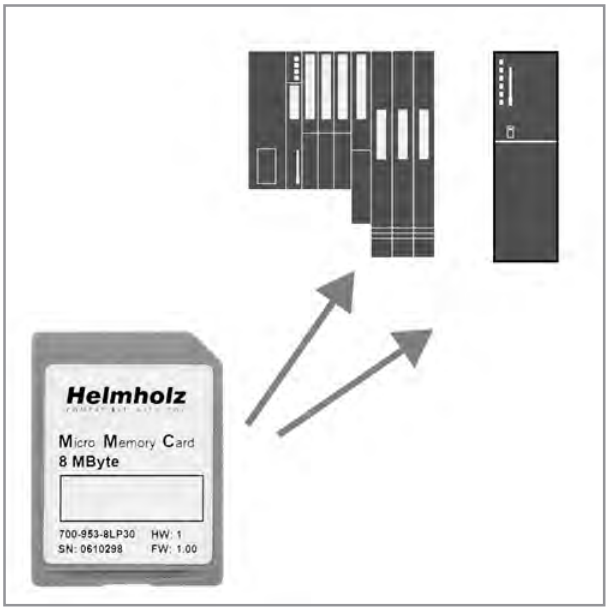


Components for S7

Memory cards
Micro memory cards
Digital modules
Analog modules
Front connector



Memory cards for the 1200/1500 series



Micro memory card for the 300 series

The memory cards are suitable for use in S7-1200[1]/S7-1500[1] controllers of Siemens AG.
They are available in the following memory sizes:
4 MB, 12 MB, 24 MB, 256 MB and 2 GB.

The Micro memory cards are suitable for use in the S7-300[1] and ET200[1]S CPU controllers of Siemens AG.
Our product range includes the entire range of the most popular modules plus the special variants 256 kB and 1 MB.
The Micro memory cards are available in the following memory sizes: 64 kB, 128 kB, 256 kB, 512 kB, 1 MB, 2 MB, 4 MB, and 8 MB.

TECHNICAL DATA 1200/1500 MEMORY CARDS

Storage volume	4 MByte 12 MByte 24 MByte 256 MByte 2 GByte
Application options	CPU 1200 CPU 1500

TECHNICAL DATA 300MICRO MEMORY CARDS

Storage volume	64 Kbyte 128 Kbyte 256 Kbyte 512 Kbyte 1 MByte 2 MByte 4 MByte 8 MByte
Application options	CPU 312C CPU 313C CPU 314C CPU 312 ... 317 IM 151, IM 153, IM 154 CPU C7

ORDERING DATA	ORDER NO.
Memory cards for the 1200/1500 series	
4 MByte	**700-954-8LC01**
12 MByte	**700-954-8LE01**
24 MByte	**700-954-8LF01**
256 MByte	**700-954-8LL02**
2 GByte	**700-954-8LP01**

ORDERING DATA	ORDER NO.
Micro memory cards for the 300 series	
64 Kbyte	**700-953-8LF30**
128 Kbyte	**700-953-8LG30**
256 Kbyte	**700-953-8LH30**
512 Kbyte	**700-953-8LJ30**
1 MByte	**700-953-8LK30**
2 MByte	**700-953-8LL30**
4 MByte	**700-953-8LM30**
8 MByte	**700-953-8LP30**

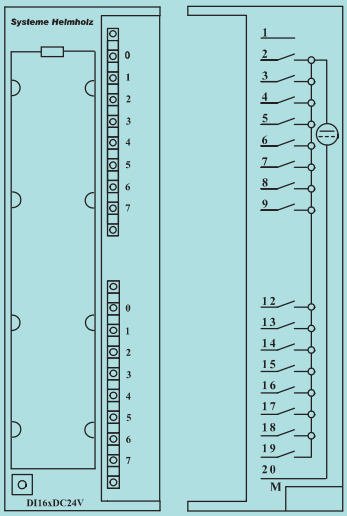
1) S7-300, S7-1200, and S7-1500, and ET 200 are registered trademarks of Siemens AG.

DEA 300, digital input module

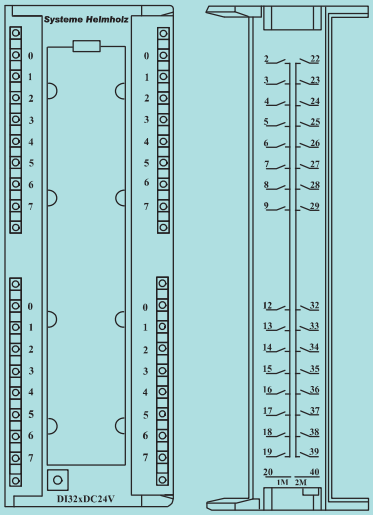
Digital input module, 16 and 32 inputs

Accessories note
Front connectors and preassembled cables are available as accessories (see pages 106-109).

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, digital input module	
16 inputs (DC 24 V)	**700-321-1BH02**
32 inputs (DC 24 V)	**700-321-1BL00**
DEA 300 Manual, German/English	**900-321-1DE11**

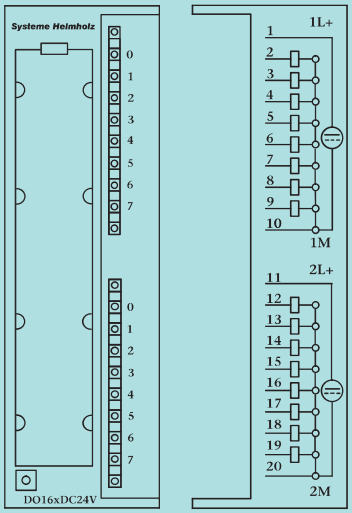
TECHNICAL DATA		700-321-1BH02	700-321-1BL00
Number of inputs		16	32
Electrically isolated (from backplane bus) in groups to		Yes (optocoupler) 16	Yes (optocoupler) 16
Input voltage · Rated value · For signal “0” · For signal “1”		 DC 24 V -3 ... +5 V +13 ... +30 V	 DC 24 V -3 ... +5 V +13 ... +30 V
Input current · For signal “1”	typ.	 7 mA	 7 mA
Delay time	typ.	1.2 ... 4.8 ms	1.2 ... 4.8 ms
Can accommodate 2-wire initiator Permitted bias current for signal “0”	max.	Yes 1.5 mA	Yes 1.5 mA
Cable length · Unshielded · Shielded	max. max.	 600 m 1000 m	 600 m 1000 m
Current draw · Internal (backplane bus) · External (from +24 V)	typ. max.	 20 mA 140 mA	 30 mA 290 mA
Power dissipation (nominal operation)	typ.	3.5 W	6.8 W
Front connector		20-pin	40-pin
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

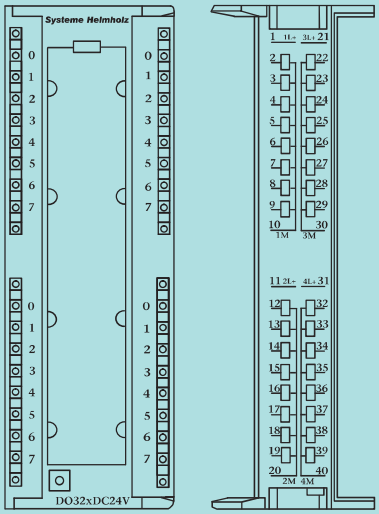
Digital output modules, 16 and 32 outputs

Accessories note
Front connectors and preassembled cables are available as accessories (see pages 106-109).

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.



700-322-1BH01



700-322-1BL00

ORDERING DATA	ORDER NO.
DEA 300, digital output module	
16 outputs (DC 24 V, 0.5 A)	**700-322-1BH01**
32 outputs (DC 24 V, 0.5 A)	**700-322-1BL00**
DEA 300 Manual, German/English	**900-321-1DE11**

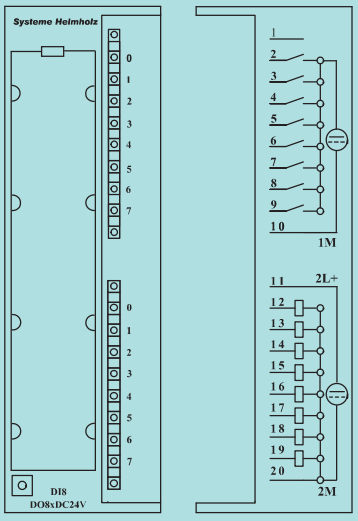
TECHNICAL DATA		700-322-1BH01	700-322-1BL00
Number of outputs		16	32
Electrically isolated (from backplane bus) in groups to		Yes (optocoupler) 8	Yes (optocoupler) 8
Supply voltage U_P, U_S · Rated value · Ripple U_{ss} · Permissible range (with ripple) · Value for t < 10 ms	 max. max.	 DC 24 V 3.6 V 20 ... 30 V 50 V	 DC 24 V 3.6 V 20 ... 30 V 50 V
Output current · Rated value		 0.5 A	 0.5 A
Short-circuit protection		Electronic	Electronic
Inductive cutoff voltage limited to		-48 V	-48 V
Cable length · Unshielded · Shielded	 max. max.	 600 m 1000 m	 600 m 1000 m
Current draw · Internal (backplane bus) · External without load (from +24 V)	 max. typ.	 100 mA 120 mA	 125 mA 200 mA
Power dissipation (nominal operation)	typ.	5 W	6.8 W
Front connector		20-pin	40-pin
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 module

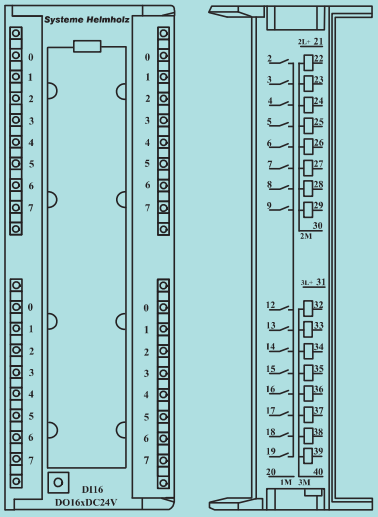
Digital input/output modules

Accessories note
Front connectors and preassembled cables are available as accessories (see pages 106-109).

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.



700-323-1BH01



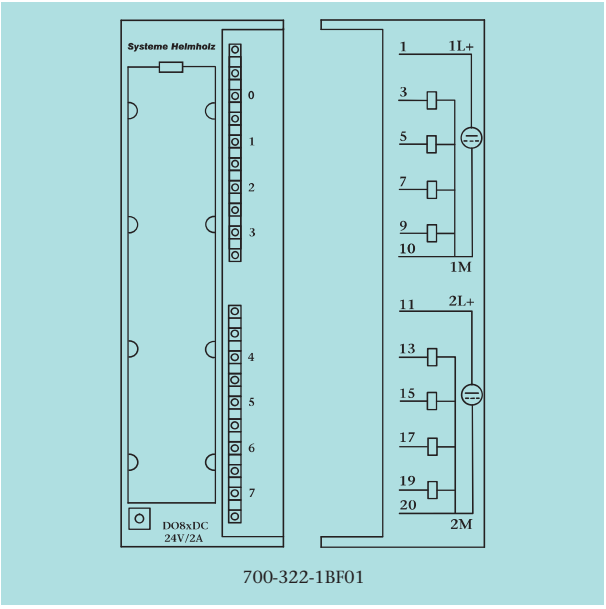
700-323-1BL00

ORDERING DATA	ORDER NO.
DEA 300, digital input/output module 8 inputs (DC 24 V)/ 8 outputs (DC 24 V, 0.5 A)	**700-323-1BH01**
DEA 300, digital input/output module 16 inputs (DC 24 V)/ 16 outputs (DC 24 V, 0.5 A)	**700-323-1BL00**
DEA 300 Manual, German/English	**900-321-1DE11**

TECHNICAL DATA		700-323-1BH01	700-323-1BL00
Number of inputs		**8**	**16**
Electrically isolated (from backplane bus) in groups to		Yes (optocoupler) 8	Yes (optocoupler) 16
Input voltage · Rated 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 signal “1”	typ.	 7 mA	 7 mA
D	elay time typ.	1.2 ... 4.8 ms	1.2 ... 4.8 ms
Can accommodate 2-wire initiator Permitted bias current for signal “0”	max.	Yes 1.5 mA	Yes 1.5 mA
Cable length · Unshielded · Shielded	max. max.	 600 m 1000 m	 600 m 1000 m
Number of outputs		**8**	**16**
Electrically isolated (from backplane bus) in groups to		Yes (optocoupler) 8	Yes (optocoupler) 8
Output current · Rated value		 0.5 A	 0.5 A
Short-circuit protection		Electronic	Electronic
Inductive cutoff voltage limited to		-48 V	-48 V
Cable length · Unshielded · Shielded	max. max.	 600 m 1000 m	 600 m 1000 m
Supply voltage U_P, U_S · Rated value · Ripple U_{ss} · Permissible range (with ripple) · Value for t < 10 ms	 max. max.	 DC 24 V 3.6 V 20 ... 30 V 50 V	 DC 24 V 3.6 V 20 ... 30 V 50 V
Current draw · Internal (backplane bus) · External without load (from +24 V)	 typ. max.	 55 mA 60 mA	 90 mA 120 mA
Power dissipation (nominal operation)	typ.	3.5 W	6.8 W
Front connector		20-pin	40-pin
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 amperes

Digital output module, 8 outputs, 2 amperes



700-322-1BF01

Accessories note
Front connectors and preassembled cables are available as accessories (see pages 106-109).

c UL us LISTED

ORDERING DATA	ORDER NO.
DEA 300, digital output module 8 outputs (DC 24 V, 2 A)	**700-322-1BF01**
DEA 300 Manual, German/English	**900-321-1DE11**

TECHNICAL DATA

Number of outputs		8
Electrically isolated (from backplane bus) in groups to		Yes (optocoupler) 4
Supply voltage L+/L- · Rated value · Ripple U_{SS} · Permissible range (with ripple) · Value for t < 10 ms	 max. max.	 DC 24 V 3.6 V 20 ... 30 V 40 V
Output current · Rated value		 2 A
Total current of the outputs (per group, horizontal configuration) · Up to 40 °C · Up to 60 °C		 8 A 6 A
Short-circuit protection		Electronic
Short-circuit current	typ.	12 A clocked
Limitation of inductive cutoff voltage to		 -23 V
Cable length · Unshielded · Shielded	 max. max.	 600 m 1000 m
Current draw · Internal (backplane bus) · External without load (from +24 V)	 typ. max.	 40 mA 60 mA
Power dissipation (nominal operation)	typ.	6.8 W
Front connector		20-pin
Ambient temperature Transport and storage temperature		0 °C ... +60 °C -25 °C ... +75 °C

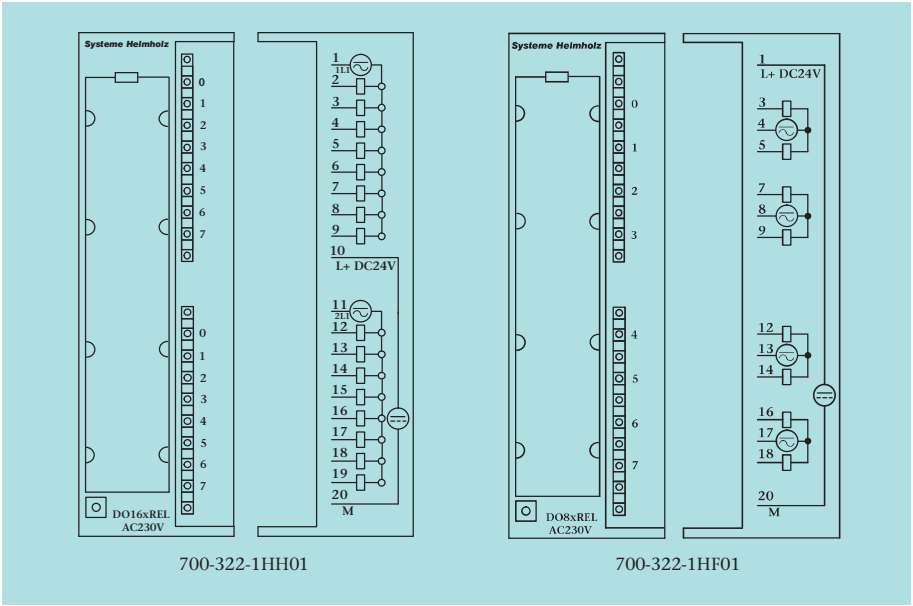
Digital output module, 16 relays

Accessories note
Front connectors and preassembled cables are available as accessories (see pages 106-109).

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**
Load voltage L+/L-	DC 24 V	DC 24 V
Output voltage	AC to 230 V DC to 120 V	AC to 230 V DC to 120 V
Output current Total current of the outputs (per group) max.	 8 A	 4 A
Electrically isolated (from backplane bus) in groups to	 Yes (optocoupler) 8	 Yes (optocoupler) 2
Thermal continuous current	2 A	3 A
Switching frequency of the outputs · Under resistive load max. · Under inductive load max. · Under lamp load max. · Mechanical max.	 1 Hz 0.5 Hz 1 Hz 10 Hz	 2 Hz 0.5 Hz 2 Hz 10 Hz
Switching capacity of the contacts · Under resistive load max. · Under 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)
Operations of the contacts · Under mechanical load · Under resistive load	 10 million 2 A, 1 million	 10 million 2 A, 0.7 million
Front connector	20-pin	20-pin
Ambient temperature Transport and storage temperature	0 °C ... + 60 °C -25 °C ... +75 °C	0 °C ... +60 °C -25 °C ... +75 °C

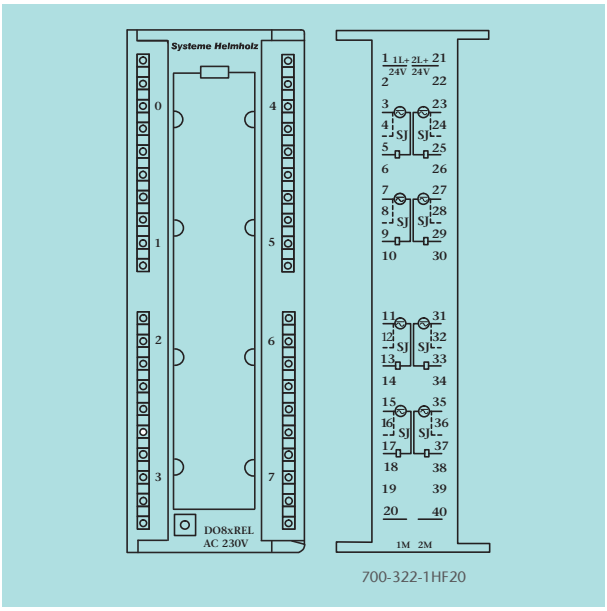
ORDERING DATA	ORDER NO.
DEA 300, digital output module 16 outputs, relay, 2 A 8 outputs, relay, 2 A	 **700-322-1HH01** **700-322-1HF01**
DEA 300 Manual, German/English	**900-321-1DE11**



700-322-1HH01 700-322-1HF01

DEA 300, digital output module; relay output, 5 amperes

Digital output module, 8 relays



700-322-1HF20

Accessories note
Front connectors and preassembled cables are available as accessories (see pages 106-109).

ORDERING DATA	ORDER NO.
DEA 300, digital output module 8 outputs, relay, 5 A, quenching circuit	**700-322-1HF20**
DEA 300 Manual, German/English	**900-321-1DE11**

TECHNICAL DATA

Number of outputs	8
Load voltage L+/L-	DC 24 V
Output voltage	AC to 230 V DC to 120 V
Output current Total current of the outputs (per group) max.	 5 A
Electrically isolated (from backplane bus)	 Yes (optocoupler)
Switching frequency of the outputs · Under resistive load max. · Under inductive load max. · Under lamp load max. · Mechanical max.	 2 Hz 0.5 Hz 2 Hz 10 Hz
Switching capacity of the contacts · Under resistive load max. · Under inductive load max.	 8 A (AC 230 V) 8 A (DC 24 V) 3 A (AC 230 V) 2 A (DC 24 V)
Switching cycles of the contacts · Under mechanical load · Under resistive load	 10 million 5 A, 0.2 million
Front connector	40-pin
Ambient temperature Transport and storage temperature	0 °C ... +60 °C -25 °C ... +75 °C

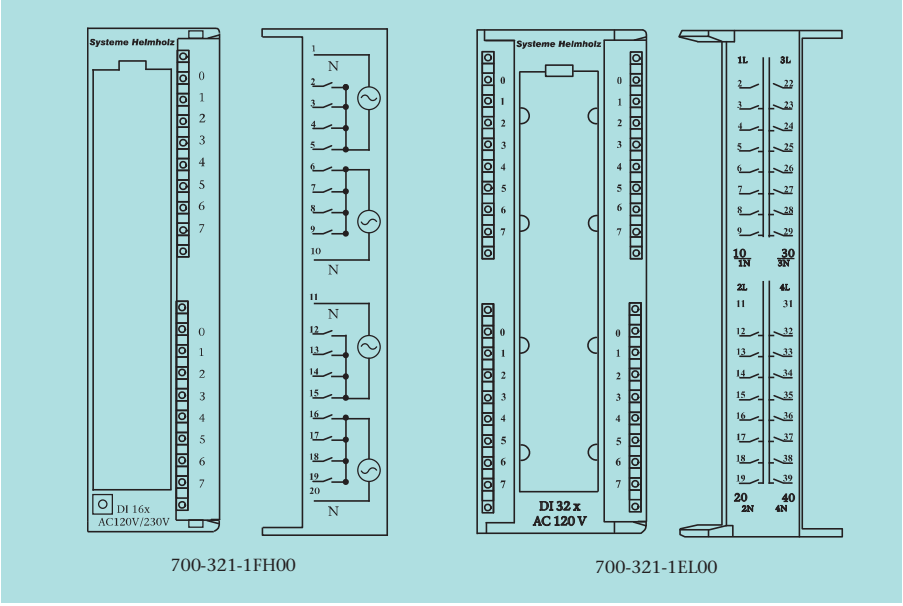
Digital input module, 120/230 V

Accessories note
Front connectors and preassembled cables are available as accessories (see pages 106-109).

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**
Electrically isolated (from backplane bus)	Yes (optocoupler)	Yes (optocoupler)
in groups to	4	8
Input voltage		
· Rated value (all input voltages must have the same phase)	120/230 V AC	120 V AC
· 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
Internal current draw typ.	30 mA	16 mA
Power dissipation of the module typ.	4.5 W	5.8 W
Front connector	20-pin	40-pin
Ambient temperature	0 °C ... +60 °C	0 °C ... +60 °C
Transport and storage temperature	-25 °C ... +75 °C	-25 °C ... +75 °C

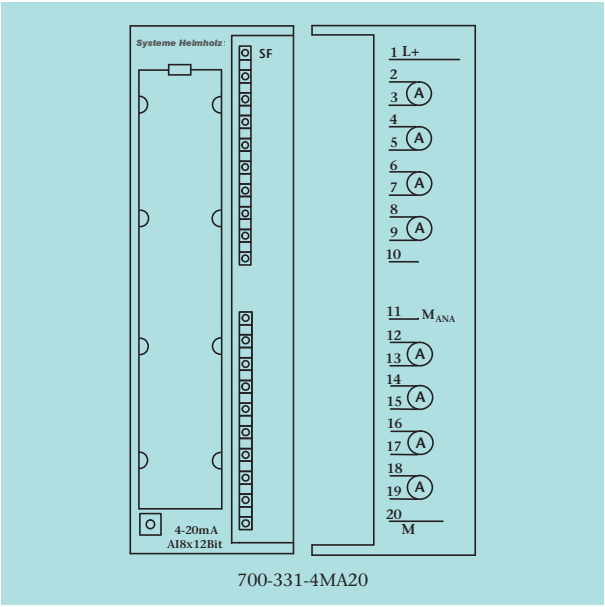
ORDERING DATA	ORDER NO.
DEA 300, digital input module	
16 inputs, AC 120 V/230 V	**700-321-1FH00**
32 inputs, AC 120 V	**700-321-1EL00**
DEA 300 Manual, German/English	**900-321-1DE11**



700-321-1FH00 700-321-1EL00

AEA 300, analog input module for connecting current transmitters

Analog input module, current transmitter



700-331-4MA20

The analog input module is suitable for connection of current transmitters in the range up to ±20 mA.
The signal lines are connected to the corresponding front connectors and can be marked in the label field.
The modules can be fully parameterized with the hardware configurator of the programming software. A hardware configuration is not necessary (no measuring range module).

Accessories note
Front connectors and preassembled cables are available as accessories (see pages 106-109).

c UL us LISTED

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.

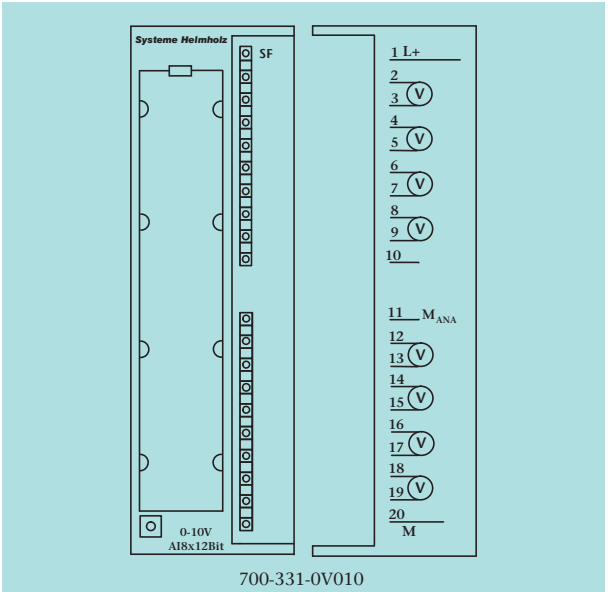
TECHNICAL DATA

Number of inputs	8
Alarms · Limit alarm · Diagnostic alarm	 Parameterizable Parameterizable for channels 0 and 2
Diagnostics	Red LED for group error indicator
Load voltage L+/L-	DC 24 V
Reverse polarity protection	Yes
Input ranges · Current, 4 DMU · Current, 2 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
Permissible input current for current input	Max. 40 mA
Electrically isolated from backplane bus	Yes
Conversion time/resolution (per channel) · Integration time · Noise suppression for interference frequency · Resolution (VZ = sign) (depending on the 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)	200 m
Current draw · Internal (from backplane bus) typ. · External (L+) max.	 120 mA 200 mA
Power dissipation typ.	1.8 W
Front connector	20-pin
Ambient temperature Transport and storage temperature	0 °C ... +60 °C -25 °C ... +75 °C

ORDERING DATA	ORDER NO.
AEA 300, analog input module 8 current inputs, for connection of current transmitters, 4–20 mA	**700-331-4MA20**
AEA 300 Manual, German/English	**900-331-0AA01**

AEA 300, analog input module for connecting voltage transmitters

Analog input module, voltage transmitter



700-331-0V010

The analog input module is suitable for connection of voltage transmitters in the range up to ±10 V.
The signal lines are connected to the corresponding front connectors and can be marked in the label field.
The modules can be fully parameterized with the hardware configurator of the programming software. A hardware configuration is not necessary (no measuring range module).

Accessories note
Front connectors and preassembled cables are available as accessories (see pages 106-109).

c UL us LISTED

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.

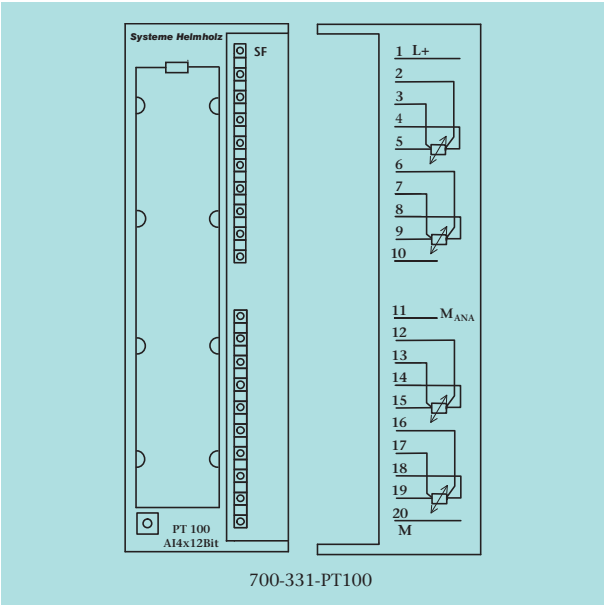
TECHNICAL DATA

Number of inputs		8
Alarms · Limit alarm · Diagnostic alarm		 Parameterizable Parameterizable for channels 0 and 2
Diagnostics		Red LED for group error indicator
Load voltage L+/L-		DC 24 V
Reverse polarity protection		Yes
Input ranges Voltage/input resistance		 ±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
Permissible input voltage for voltage input	max.	20 V
Electrically isolated from backplane bus		Yes
Conversion time / resolution (per channel) · Integration time · Noise suppression for interference frequency · Resolution (VZ = sign) (depending on the 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 (50 m at ±80 mV)
Current draw · Internal (from backplane bus) · External (L+)	 typ. max.	 120 mA 200 mA
Power dissipation	typ.	1.8 W
Front connector		20-pin
Ambient temperature Transport and storage temperature		0 °C ... +60 °C -25 °C ... +75 °C

ORDERING DATA	ORDER NO.
AEA 300, analog input module 8 voltage inputs, for connection voltage transmitters, 0–10 V	**700-331-0V010**
AEA 300 Manual, German/English	**900-331-0AA01**

AEA 300, analog input module for connecting resistance thermometers

Analog input module, resistance thermometer



700-331-PT100

The analog input module is suitable for connection of Pt100/ Ni100 sensors and resistors.
The signal lines are connected to the corresponding front connectors and can be marked in the label field.
The modules can be fully parameterized with the hardware configurator of the programming software. A hardware configuration is not necessary (no measuring range module).

Accessories note
Front connectors and preassembled cables are available as accessories (see pages 106-109).

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.

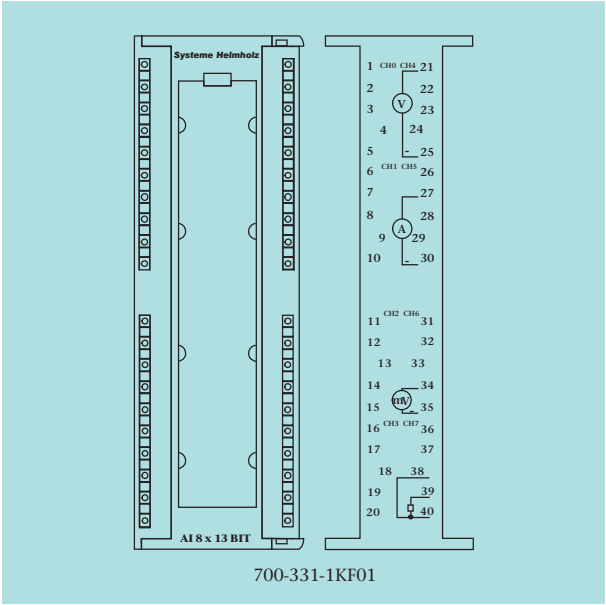
TECHNICAL DATA

Number of inputs		4
Alarms · Limit alarm · Diagnostic alarm		 Parameterizable Parameterizable for channels 0 and 2
Diagnostics		Red LED for group error indicator
Load voltage L+/L-		DC 24 V
Reverse polarity protection		Yes
Input resistance		10 MΩ
Resistance thermometer		Pt100, Ni100 (Standard and climate range)
Resistance measuring range		150, 300, 600 Ω
Connection of signal sensors		2-, 3-, or 4-wire Connector
Electrically isolated from backplane bus		Yes
Conversion time / resolution (per channel) · Integration time · Noise suppression for interference frequency · Resolution (VZ = sign) (depending on the 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 draw · Internal (from backplane bus) · External (L+)	 typ. max.	 120 mA 200 mA
Power dissipation	typ.	1.8 W
Front connector		20-pin
Ambient temperature Transport and storage temperature		0 °C ... +60 °C -25 °C ... +75 °C

ORDERING DATA

ORDERING DATA	ORDER NO.
AEA 300, analog input module 4 inputs, Pt100/Ni100 for connection of resistance thermometers	**700-331-PT100**
AEA 300 Manual, German/English	**900-331-0AA01**

Analog input module, 8-channel, current transmitter, voltage transmitter, resistors, and resistance thermometers



Example assignment

The analog input module is suitable for connection of current transmitters in the range up to ± 20 mA, voltage transmitters in the range up to ±10 V, Pt100/Ni100 sensors, and resistors.
All inputs can be programmed either as voltage or current inputs for Pt100/Ni100 sensors and resistors, freely selectable in their combination.
The signal lines are connected to the corresponding front connectors and can be marked in the label field.
The modules can be fully parameterized with the hardware configurator of the programming software. A hardware configuration is not necessary (no measuring range module).

Accessories note
Front connectors and preassembled cables are available as accessories (see pages 106-109).

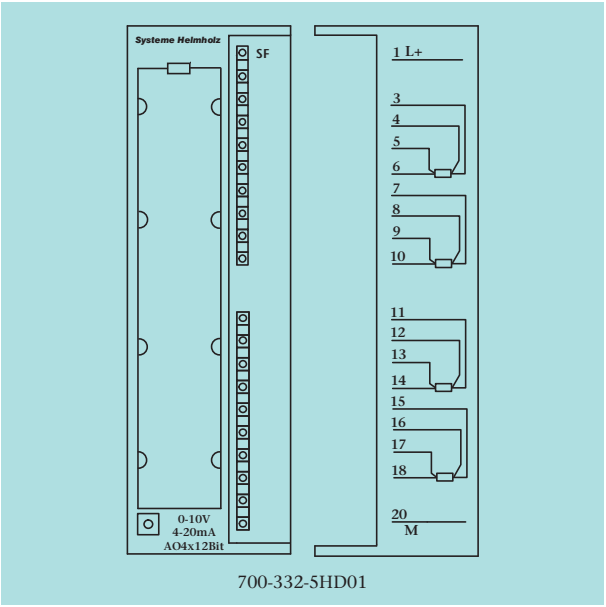
ORDERING DATA	ORDER NO.
AEA 300, analog input module 8 inputs, for connection of current, voltage transmitters, resistors	**700-331-1KF01**
AEA 300 Manual, German/English	**900-331-0AA01**

TECHNICAL DATA

Number of inputs	8
Measuring ranges · Voltage	 ±50 mV, ±500 mV, ±1 V, ±5 V, ±10V, 1 ... 5V, 0 ... 10 V
· Current	±20 mA, 0 ... 20 mA, 4 ... 20 mA
· Resistance	0 ... 6 kΩ, 0 ... 600 Ω
· Resistance thermometer (standard and climate)	Pt100, Ni100, Ni1000, LG-Ni1000
Resolution incl. override range	13 bits
Error limits Basic error limit · Voltage input · Current input · Resistance · Resistance thermometer	 at 25 °C ±0.4 % ±0.4 % ±0.4 % ±0.8 K Pt100 standard, ±1 K
Operational error limit · Current input · Resistance · Resistance thermometer · Voltage input	In the entire temperature range ±0.6 % ±0.6 % ±1 K; Pt100, Ni100 standard ±1.2 K ±0.6 %
Voltage supply Rated voltage	 DC 5 V via backplane bus
Current draw	Typ. 160 mA at 5 V (from backplane bus)
Power dissipation	Approx. 0.8 W
Front connector	40-pin
Ambient temperature Transport and storage temperature	0 °C ... +60 °C -25 °C ... +75 °C

AEA 300, analog output module; 4-channel

Analog output module, 4-channel



700-332-5HD01

The analog output 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 and can be marked in the label field.
The modules are fully configured with the programming software.

Accessories note
Front connectors and preassembled cables are available as accessories (see pages 106-109).

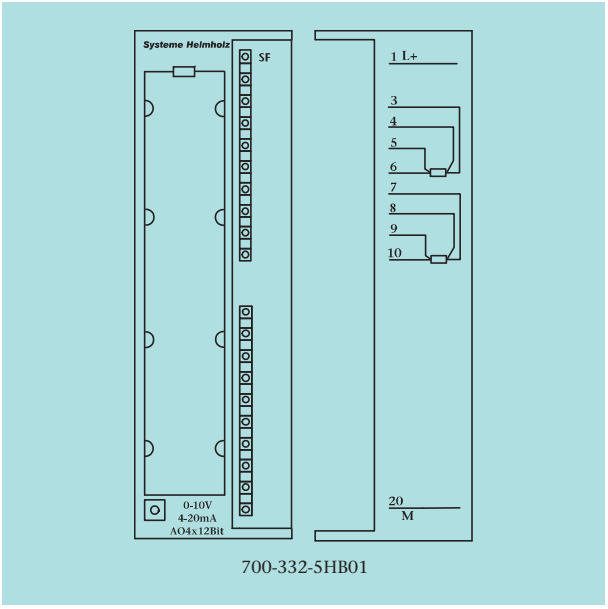
Open-type programmable controllers for use in hazardous locations, Class I, Div. 2 Groups A, B, C, D T6 including Class I Zone 2 IIC.

TECHNICAL DATA

Number of outputs		4
Diagnostic alarm		Yes, parameterizable
Diagnostics		Red LED for group error indicator
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 resistance		
· With voltage outputs	min.	1 kΩ
· With current outputs	max.	500 Ω
· Under capacitive load	max.	1 µF
· Under inductive load	max.	10 mH
Voltage output		
· Short-circuit protection		Yes
· Short-circuit current	max.	25 mA
Current output		
· No-load voltage	max.	18 V
Electrically isolated from backplane bus		Yes
Operational error limit (0...60 °C, relative to output range)		
· Voltage		±0.5 %
· Current		±0.6 %
Basic error limit (Operational limit at 25 °C, relative to output range)		
· Voltage		±0.4 %
· Current		±0.5 %
Cable length (shielded)	max.	200 m
Current draw		
· Internal (from backplane bus)	typ.	100 mA
· Externally, without load	max.	240 mA
Power dissipation	typ.	3 W
Front connector		20-pin
Ambient temperature		0 °C ... +60 °C
Transport and storage temperature		-25 °C ... +75 °C

ORDERING DATA	ORDER NO.
AEA 300, analog output module 4-channel, 4 outputs for connection of analog actuators, 0–10 V/4–20 mA	**700-332-5HD01**
AEA 300 Manual, German/English	**900-331-0AA01**

Analog output module, 2-channel



700-332-5HB01

The analog output 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 and can be marked in the label field.
The modules are fully configured with the programming software.

Accessories note
Front connectors and preassembled cables are available as accessories (see pages 106-109).

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.

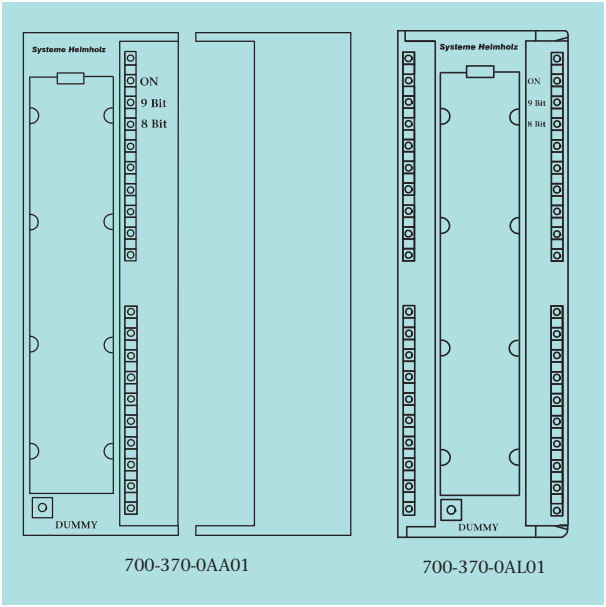
ORDERING DATA	ORDER NO.
AEA 300, analog output module 2-channel, 2 outputs for connection of analog actuators, 0–10 V/4–20 mA	**700-332-5HB01**
AEA 300 Manual, German/English	**900-331-0AA01**

TECHNICAL DATA

Number of outputs		2
Diagnostic alarm		Yes, parameterizable
Diagnostics		Red LED for group error indicator
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 resistance		
· With voltage outputs	min.	1 kΩ
· With current outputs	max.	500 Ω
· Under capacitive load	max.	1 µF
· Under inductive load	max.	10 mH
Voltage output		
· Short-circuit protection		Yes
· Short-circuit current	max.	25 mA
Current output		
· No-load voltage	max.	18 V
Electrically isolated from backplane bus		Yes
Operational error limit (0...60° C, relative to output range)		
· Voltage		±0.5 %
· Current		±0.6 %
Basic error limit (Operational limit at 25 °C, relative to output range)		
· Voltage		±0.4 %
· Current		±0.5 %
Cable length (shielded)	max.	200 m
Current draw		
· Internal (from backplane bus)	typ.	100 mA
· Externally, without load	max.	240 mA
Power dissipation	typ.	3 W
Front connector		20-pin
Ambient temperature		0 °C ... +60 °C
Transport and storage temperature		-25 °C ... +75 °C

Dummymodule

Dummymodule



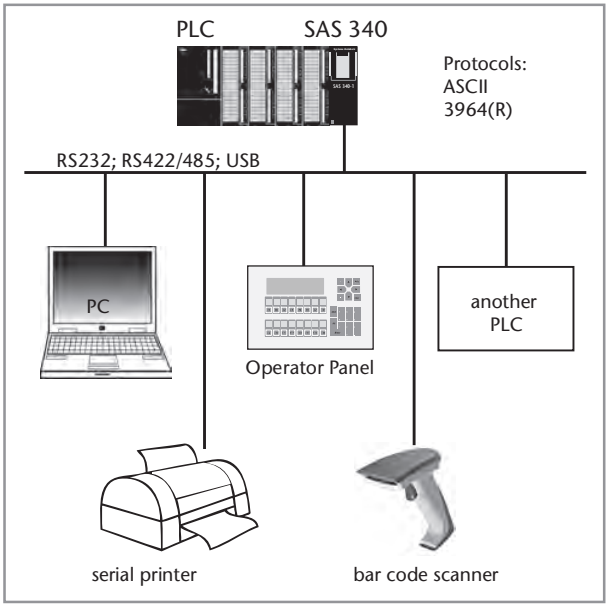
The dummymodule is suitable for reserving slots for non-parameterized signal modules.
It maintains structure and address assignments for when signal modules are changed out. The dummymodule is available for 20-pin or 40-pin front connectors.

ORDERING DATA	ORDER NO.
Dummymodule, 20-pin	700-370-0AA01
Dummymodule, 40-pin	700-370-0AL01
DEA 300 Manual, German/English	900-321-1DE11

TECHNICAL DATA

Current draw Internal	5 mA
Power dissipation (nominal operation) typ.	0.03 W
Front connector	–
Ambient temperature Transport and storage temperature	0 °C ... +60 °C -25 °C ... +75 °C

SAS 340, communication module



Application example for SAS 340

The SAS 340 is a serial communication module for use in S7-300[1] systems. It allows the connection to the PLC of serial devices such as barcode scanners, operator terminals, serial printers, PCs, PLCs of other manufacturers and supports the protocols ASCII and 3964R.
Serial devices can be connected with RS232 or RS422/RS485. The 9-pin Sub-D socket (15-pin with RS422/485) with standard pin assignment is provided for connecting the partner devices.
The additional USB device interface enables the connection of the PLC to PC systems, many of which have no conventional physical port. A virtual COM port driver enables the use of software that expects a COM interface.
The SAS 340 features advanced functions such as support for higher baud rates up to 115 kBaud, making it flexible without any loss of compatibility.
The handling blocks supplied enable simple and flexible integration into the PLC. The module is parameterized in the hardware configurator of the PLC. Advanced functionalities (such as higher baud rates) can be activated easily with the handling blocks.

Note
To enable high integration density in the control cabinet, the SAS 340 is also available with 2 serial interfaces. Both interfaces can be configured independently and used in the PLC.

ORDERING DATA	ORDER NO.
SAS 340-1, 1 x RS232, 1 x USB incl. CD with handling blocks and manual; protocols: ASCII, 3964R	**700-340-1AH02**
SAS 340-1, 1 x RS422/RS485 incl. CD with handling blocks and manual; protocols: ASCII, 3964R	**700-340-1CH02**
SAS 340-2, 2 x RS232, 2 x USB incl. CD with handling blocks and manual; protocols: ASCII, 3964R	**700-340-2AH02**
SAS 340-2, 2 x RS422/RS485 incl. CD with handling blocks and manual; protocols: ASCII, 3964R	**700-340-2CH02**
SAS 340 Manual, German/English	**900-340-1XH02**

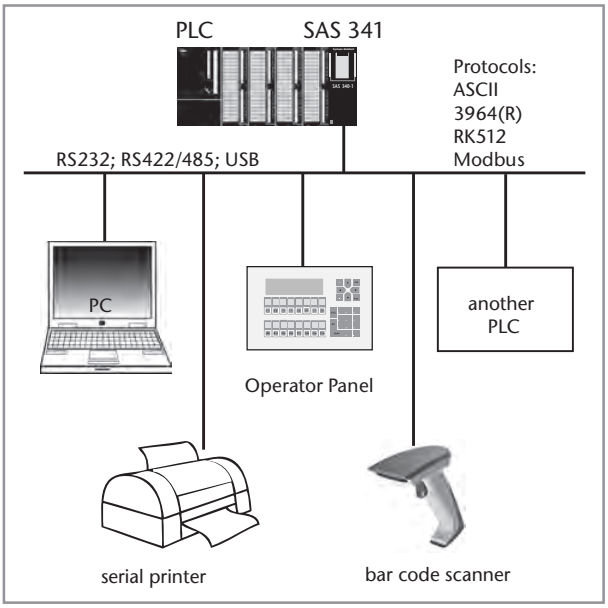
TECHNICAL DATA

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

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

SAS 341, serial communication module

SAS 341, communication module



Application example for SAS 341

The SAS 341 is a serial communication module for use in S7-300[1] systems. It allows the connection to the PLC of serial devices such as barcode scanners, operator terminals, serial printers, PCs, PLCs of other manufacturers and supports the protocols ASCII, 3964R, and RK512.
Serial devices can be connected with RS232 or RS422/RS485. The 9-pin Sub-D socket (15-pin with RS422/485) with standard pin assignment is provided for connecting the partner devices.
The additional USB device interface enables the connection of the PLC to PC systems, many of which have no conventional physical port. A virtual COM port driver enables the use of software that expects a COM interface.
The SAS 341 features advanced functions such as support for higher baud rates up to 115 kBaud, making it flexible without any loss of compatibility.
The coupling of different PLC types to the S7-300[1] can be flexibly implemented using the standardized RK512 computer coupling protocol.
The handling blocks supplied enable simple and flexible integration into the PLC. The module is parameterized in the hardware configurator of the PLC.

Note
To enable high integration density in the control cabinet, the SAS 341 is also available with 2 serial interfaces.
Both interfaces can be configured independently and used in the PLC.

Do you need a specific protocol for your device? Ask us!

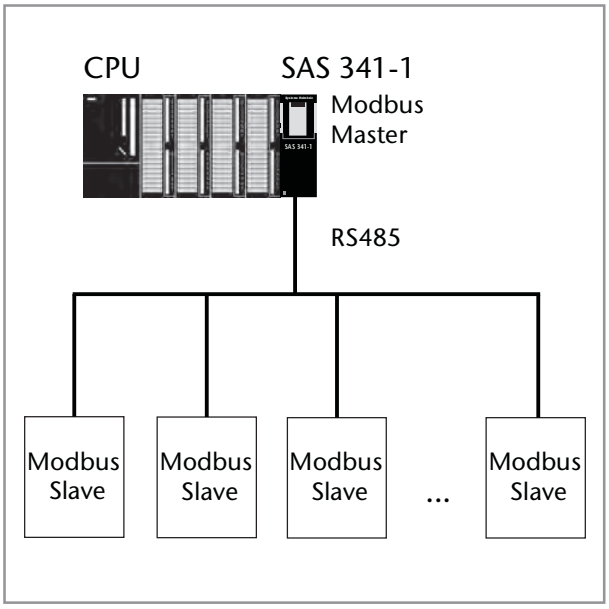
ORDERING DATA	ORDER NO.
SAS 341-1, 1 x RS232, 1 x USB incl. CD with handling blocks and manual; protocols: ASCII, 3964R, RK512, and loadable drivers (MMC)	**700-341-1AH02**
SAS 341-1, 1 x RS422/RS485 incl. CD with handling blocks and manual; protocols: ASCII, 3964R, RK512, and loadable drivers (MMC)	**700-341-1CH02**
SAS 341-2, 2 x RS232, 2 x USB incl. CD with handling blocks and manual; protocols: ASCII, 3964R, RK512, and loadable drivers (MMC)	**700-341-2AH02**
SAS 341-2, 2 x RS422/RS485 incl. CD with handling blocks and manual; protocols: ASCII, 3964R, RK512, and loadable drivers (MMC)	**700-341-2CH02**
SAS 341 Manual, German/English	**900-341-1XH02**

TECHNICAL DATA

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

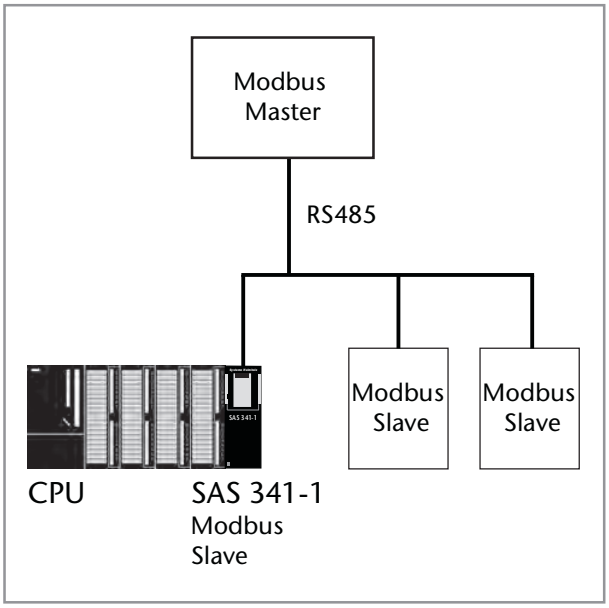
1) S7-300 is a registered trademark of Siemens AG.

SAS 341-1 with Modbus RTU driver



SAS 341-1 as Modbus master

The driver add-on “Modbus Master/Slave” enables communication with Modbus RTU-compatible devices. With this driver, the SAS 341 can operate either as a Modbus RTU master or Modbus RTU slave.
The driver is used for the SAS 341-1 with RS232 interface (700-341-1AH02) or for the SAS 341-1 with RS485 interface (700-341-1CH02).
With the RS232 interface, a point-to-point operation is possible, and with the RS485 interface, up to 32 participants can be addressed using the 2-wire half-duplex method.
In the communication with other systems, the Modbus RTU function codes 01, 02, 03, 04, 05, 06, 07, 08, 11, 12, 15, and 16 are supported.
The data exchange with the S7-CPU is in blocks in the supplied function blocks.



SAS 341-1 as Modbus slave

ORDERING DATA	ORDER NO.
Modbus master/slave driver for SAS 341-1 (on Micro Memory Card, can only be used in SAS 341-1 modules)	**800-341-MOD01**
SAS 341 Manual, Modbus driver German/English	**900-341-MOD01**

EIB 300, communication module for twisted-pair EIB/KNX

EIB 300, communication module for twisted-pair EIB/KNX

FEATURES

- Access to the EIB / KNX bus directly from the PLC
- Implementation of complex control and monitoring functions through PLC programming
- Configurable object operation with up to 240 objects
- Easy integration and handling
- ETS²3 and ETS²4 are supported

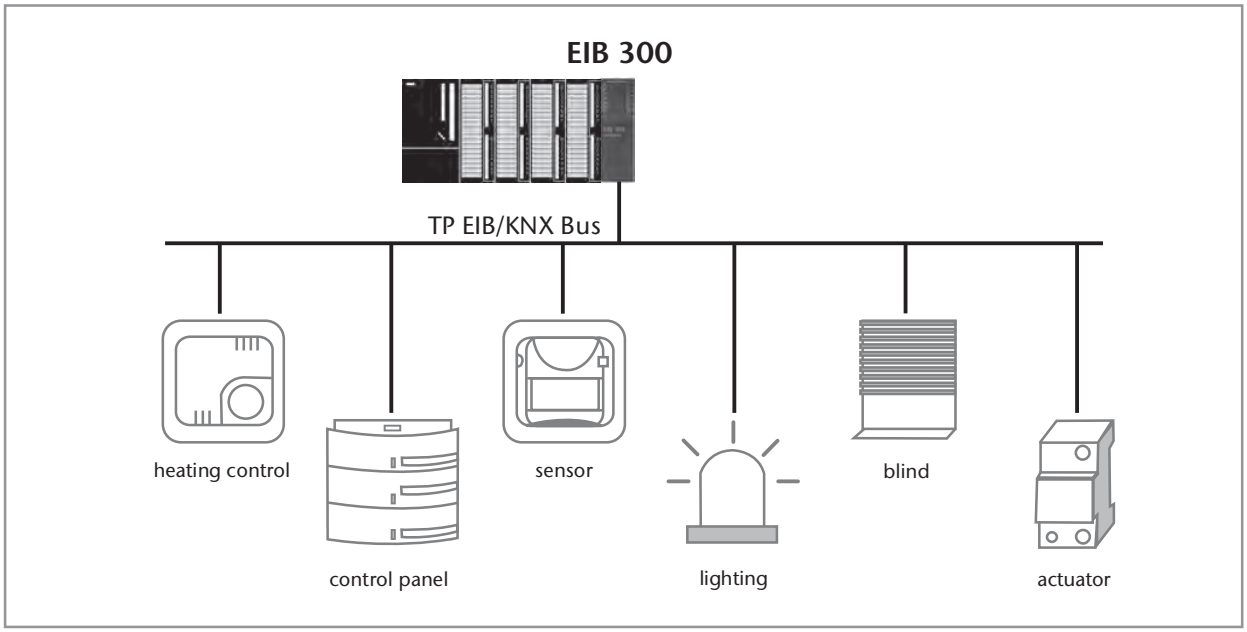
The EIB 300 is a communication module for use in S7-300[1] systems. It enables the connection of an EIB / KNX bus to the PLC, with the bus being placed directly on the module.
Through the possibilities of PLC programming, complex control and monitoring functions can be easily implemented on the EIB/KNX bus.
In "object mode," the EIB 300 is an active participant on the EIB/KNX bus with up to 240 objects, with all object types from 1 bit to 4-byte data size being supported.
The current object values in the PLC are mapped in a data block and exchanged with each PLC cycle. In this way the changes on the EIB side are transferred to the PLC, and values changed in the PLC are transferred to the EIB/KNX bus. In addition, "event" and "control flags" allow influence to be taken on the communication behavior in a targeted manner.
The configuration of the EIB 300 is in the PLC as a CP module. The handling blocks included in the scope of delivery enable easy integration of the EIB 300 into the PLC program. The EIB 300 is integrated as a new device in the ETS[2] software with a supplied sample project. In object mode, objects organized in various profiles can be configured and adapted to the respective application. Six colored LEDs indicate the current operating status of the EIB 300 and the EIB/KNX bus. The built-in USB interface is provided for firmware updates and more in-depth diagnosis.

TECHNICAL DATA

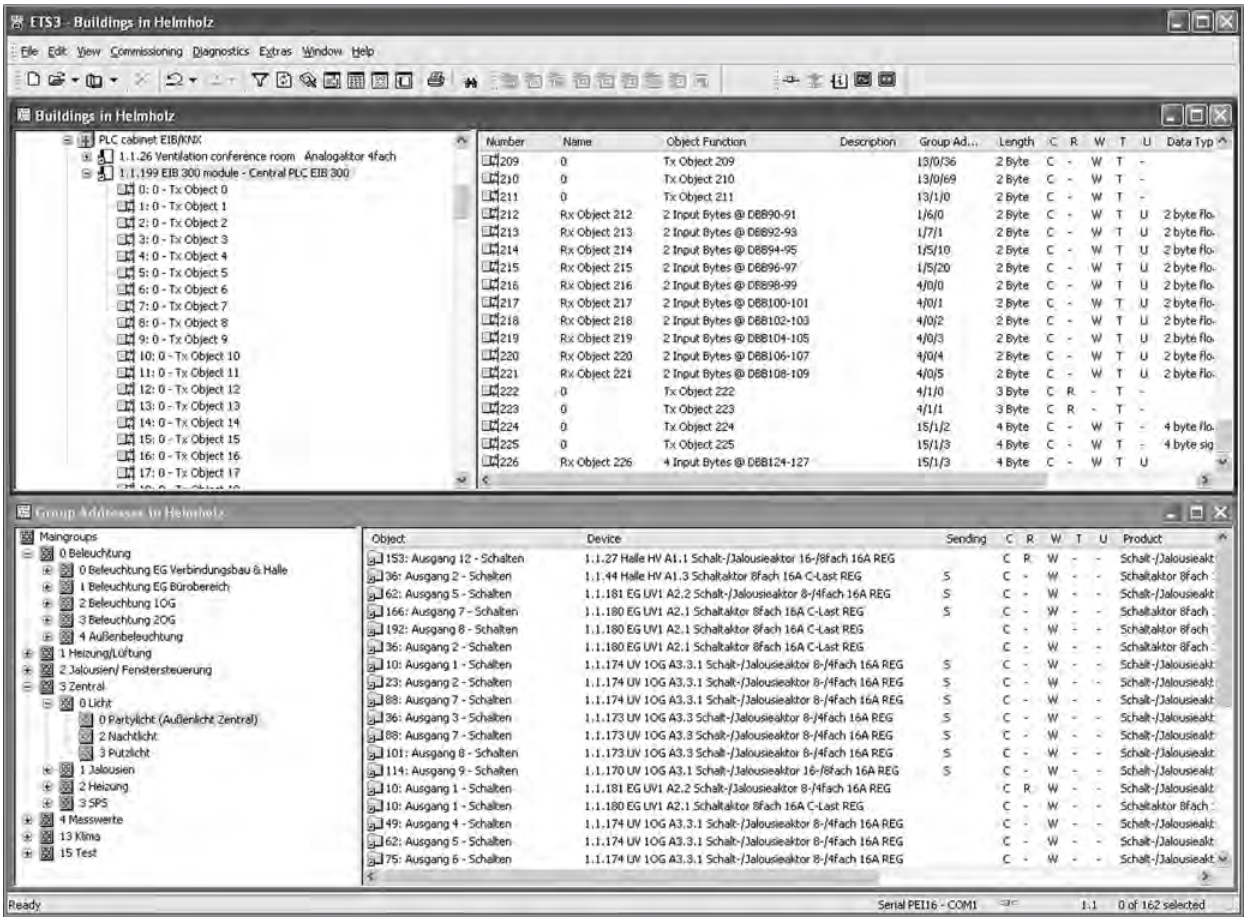
Dimensions in mm (D x W x H)		116 x 40 x 125
Weight		Approx. 280 g
Power supply Voltage		DC +5 V via backplane bus
Current draw	typ. max.	160 mA 190 mA
Interface Type		Twisted-pair EIB/KNX
Transmission rate		9600 Baud
Protocol		EIB/KNX; up to 240 objects
Connector		2-pin
Status indicator		6 LEDs
Ambient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

ORDERING DATA	ORDER NO.
EIB 300, communication module for Twisted Pair-EIB/KNX	**700-820-EIB01**
EIB 300 Manual, German/English	**900-820-EIB01**

1) S7-300 is a registered trademark of Siemens AG.
2) ETS is a registered trademark of the KNX Association.



Application example EIB 300



Configuration of the EIB 300 in the ETS²3

FastPlug, front adapter for S7 modules

FastPlug, front adapter for S7 modules

The FastPlug front adapters are used for screwing and snapping onto 16 or 32-bit S7 input/output modules. The effort required for wiring is very low.
Through the use of pre-assembled system cables, connection errors are excluded. In this way interface modules / transfer modules can be quickly and safely connected to the S7 controller.
The FastPlug front adapters are available in a version for connection to a 16-bit input/output module with a 20-pin ribbon connector, as well as in the version for connection to 32-bit input/output modules with 2 x 20-pin ribbon connectors.

FEATURES

- Front adapter for flat ribbon connector (IDC)
- 20-pin and 40-pin
- Fast, safe, and cost-effective wiring
- Connection errors excluded

ORDERING DATA	ORDER NO.
Front adapter for DEA/AEA 300	
FastPlug 20-way	**700-921-1AJ01**
FastPlug 40-way	**700-921-1AM01**
Flat round cable, unshielded, 20-pin, 2 ribbon 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

Connector type		FastPlug
700-921-1AJ01		1 x 20-pin ribbon connector
700-921-1AM01		2 x 20-pin ribbon connector
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 connections
Current	max.	600 mA per connection
Ambient temperature Transport and storage temperature Relative humidity	 max.	0 °C ... +60 °C -25 °C ... +80 °C 75% at +25 °C

Front connector, 20-pin and 40-pin with screw contacts

Front connector with screw contacts
The 20-pin and 40-pin front connector is designed with proven screw contacts.
They enable simple connection of sensors and actuators to input/output modules. In this way the wiring can be kept when replacing modules.

TECHNICAL DATA

20-terminal front connector Connector type	 screw contacts
Connectable cables With/without ferrules	Flexible, solid 0.25 – 1.5 mm²
Stripping 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 Transport and storage temperature Relative humidity max.	0 °C ... +60 °C -25 °C ... +80 °C 75% at +25 °C
40-terminal front connector Connector type	 screw contacts
Connectable cables With/without ferrules	Flexible, solid 0.125 – 1.5 mm²
Stripping 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 Transport and storage temperature Relative humidity max.	0 °C ... +60 °C -25 °C ... +80 °C 75% at +25 °C

ORDERING DATA	ORDER NO.
Front connector for DEA/AEA 300 20-pin with screw contacts 40-pin with screw contacts	 **700-392-1AJ10** **700-392-1AM01**

Front connector, 40-pin with **EasyConnect®** technology

Front connector with EasyConnect® technology
The 40-pin front connector is manufactured with the patented **EasyConnect®** technology.
Fast wiring of the plug is ensured through opening and closing of the spring-loaded terminal by turning the screw (180° counterclockwise to open, clockwise to close), saving the user both money and installation time. Ferrules are not necessary.
Due to the lower design, the front cover of the module can be optimally closed even in the fully wired state.

TECHNICAL DATA

40-terminal front connector Connector type	 **EasyConnect®**
Connectable cables	Flexible cables 0.34 – 1 mm²
Stripping length	8–10 mm
Weight	Approx. 70 g
Current at 60 °C	3 A
Voltage	230 V AC
Ambient temperature Transport and storage temperature Relative humidity max.	0 °C ... +60 °C -25 °C ... +80 °C 75% at +25 °C

ORDERING DATA	ORDER NO.
Front connector for DEA/AEA 300 40-pin with **EasyConnect®** technology	 **700-392-1AM10**

Front connector with spring-type terminal, front connector with cables

Front connector, 20-pin and 40-pin with spring-type terminal

Front connector with cables

Front connector with spring-type terminal
The 20-pin and 40-pin front connectors are designed with installation-friendly spring-type terminal.
The front connectors enable simple connection of sensors and actuators to input/output modules.
In this way the wiring can be kept when replacing modules.

Front connector with cables
The front connectors with cables enable simple connection of sensors and actuators to input/output modules.
In this way the wiring can be kept when replacing modules.

TECHNICAL DATA

20-terminal front connector	
Connector type	Spring-type terminal
Connectable cables	Flexible, solid 0.34–1.5 mm²
Stripping length	8 mm
Weight	Approx. 50 g
Current at 60 °C	3 A
Voltage	230 V AC
Ambient temperature Transport and storage temperature Relative humidity max.	0 °C ... +60 °C -25 °C ... +80 °C 75% at +25 °C
40-terminal front connector	
Connector type	Spring-type terminal
Connectable cables	Flexible, solid 0.34 – 1.5 mm²
Stripping length	8 mm
Weight	Approx. 70 g
Current at 60 °C	3 A
Voltage	230 V AC
Ambient temperature Transport and storage temperature Relative humidity max.	0 °C ... +60 °C -25 °C ... +80 °C 75% at +25 °C

ORDERING DATA	ORDER NO.
Front connector for DEA/AEA 300	
20-pin with spring-type terminal	**700-392-1BJ01**
40-pin with spring-type terminal	**700-392-1BM01**

ORDERING DATA	ORDER NO.
Front connector with cables¹ DEA/AEA 300	
with screw contacts, 20-pin, 2 m	**700-392-1AJ10A**
with screw contacts, 20-pin, 3 m	**700-392-1AJ10B**
with screw contacts, 20-pin, 5 m	**700-392-1AJ10C**
Front connector with cables¹ DEA/AEA 300	
for **EasyConnect**® connection, 40-pin, 2 m	**700-392-1AM10A**
for **EasyConnect**® connection, 40-pin, 3 m	**700-392-1AM10B**
for **EasyConnect**® connection, 40-pin, 5 m	**700-392-1AM10C**
Front connector with cables¹ DEA/AEA 300	
for spring-type terminal, 20-pin, 2 m	**700-392-1BJ01A**
for spring-type terminal, 20-pin, 3 m	**700-392-1BJ01B**
for spring-type terminal, 20-pin, 5 m	**700-392-1BJ01C**
Front connector with cables¹ DEA/AEA 300	
for spring-type terminal, 40-pin, 2 m	**700-392-1BM01A**
for spring-type terminal, 40-pin, 3 m	**700-392-1BM01B**
for spring-type terminal, 40-pin, 5 m	**700-392-1BM01C**

1) Wires 0.5 mm², blue (RAL 5010); numbers printed as on connector

Mounting rails

For all modules in the 300 and 1500 series, we offer the mechanical module rack in various prefabricated lengths.

Mounting rail adapter for DIN rail

For all communication modules (such as REX 300, DP/DP coupler, TS 300) designed for mounting on the mounting rail, we offer our mounting rail adapter for DIN rail.

ORDERING DATA	ORDER NO.
Mounting rail 300 series	
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**
Mounting rail 1500 series	
Length 160 mm	**700-590-1AB60**
Length 245 mm	**700-590-1AC40**
Length 482 mm	**700-590-1AE80**
Length 530 mm	**700-590-1AF30**
Length 830 mm	**700-590-1AJ30**
Length 2000 mm	**700-590-1BC00**

ORDERING DATA	ORDER NO.
Mounting rail adapter for DIN rail	**700-390-6BA01**