

### Selection guide PLC Front-Adaptors (FAD) and interface modules

The PLC Front-Adaptors (FAD-UNIV) offer an easy solution to wire input/output and supply signals from PLC to the field. Each signal goes 1:1 to flat connector RSF (digital signals) or Sub-D (analogue signals) interfaces with appropriate pre- assembled cables (PAC). (Table 1)

Additionally, we offer for main cards of several manufacturers a complete solution with a wide range of interfaces (active and passive) and allows the utilization of MICROSERIES relays and optocouples as well. (Table 2)

#### Selection Guide:

Choose in step 1 to step 3 the PLC Card you have. In step 4 you will find the PLC Front-Adaptors (FAD), the pre-assembled cable (PAC) and the group of interfaces which can be used (Field Interface module). In step 5, choose the most suitable interface for your application.

**Table 1: Universal FADs**

STEP 1: PLC Manufacturer	STEP 2: Identify which kind of connector your PLC I/O Card has	STEP 3: Choose between Analog and Digital I/O Card	STEP 4: Selected articles		
			PLC Front-Adaptors (FAD)	Pre-assembled cable (PAC) <sup>(1)</sup>	Select Interface Module
Siemens S7-300	Input/Output Cards with 20poles connector	Digital cards	1127840000 FAD S7/300 HE20 UNIV	PAC-UNIV-HE20-FD1-LLLM	RSF 20 GROUP
		Analog cards	1127840000 FAD S7/300 HE20 UNIV	PAC-UNIV-HE20-S25-LLLM	RSSD 25 GROUP
	Input/Output Cards with 40poles connector	Digital cards	1127870000 FAD S7/300 HE40 UNIV	PAC-UNIV-HE40-FD1-LLLM	RSF 40 GROUP
		Analog cards	1127870000 FAD S7/300 HE40 UNIV	PAC-UNIV-HE40-S50-LLLM	RSSD 50 GROUP
Rockwell Control-Logix	Input/Output Cards with 20poles connector	Digital cards	1127900000 FAD CTLX HE20 UNIV	PAC-UNIV-HE20-FD1-LLLM	RSF 20 GROUP
		Analog cards	1127900000 FAD CTLX HE20 UNIV	PAC-UNIV-HE20-S25-LLLM	RSSD 25 GROUP
	Input/Output Cards with 36poles connector	Digital cards	1127920000 FAD CTLX HE 40 UNIV	PAC-UNIV-HE40-FD1-LLLM	RSF 40 GROUP
		Analog cards	1127920000 FAD CTLX HE 40 UNIV	PAC-UNIV-HE40-S50-LLLM	RSSD 50 GROUP

(1) LLL means the length of the cable in dm. Example LLL = 100 means 10 meters from end to end of the cable, without measure the connectors.  
Universal solution for all cards with operating voltage ≤ 30 V AC 70 V DC

STEP 5: Selected Interface Module					
	Compact Version	Connection		Type	Order No.
		Screw	Tension clamp		
RSF 20 GROUP				RS F20 Z	8537110000
				RS F20 LPK 2H/22	8155600000
				RS F20 LP2N 5/20	0224261001
				RS F20 LP3R 3/21	8012910000
RSF 40 GROUP				RS F40 Z	8537140000
				RS F40 LPK 2H/42	8155580000
				RS F40 LP2N 5/40	0224461001
				RS F40 LP3R 3/42	8012940000
RSSD 25 GROUP				RS SD25 SZ	8537370000
				RS SD25S UNC LPK2	8155650000
				RS SD25S UNC 4.40 LP2N	8005181001
				RS SD25S LP3R	8019950000
RSSD 50 GROUP				RS SD50 SZ	8537350000
				RS SD50S UNC LPK2	8155670000
				RS SD50S UNC 4.40 LP2N	8005161001
				RS SD50S LP3R	8019970000

**Table 2: Specific FADs**

STEP 1: PLC Manufacturer	STEP 2: Identify the PLC I/O Card	STEP 3: Choose the requested field system	STEP 4: Selected articles			
			PLC Front-Adaptors (FAD) (LLL)	Pre-assembled cable (PAC) <sup>(1)</sup>	Passive modules	Relays/optocouple modules
Siemens S7-300	6ES7 321-1BH01-0AA0	INTERFACE	1127850000 FAD S7/300 HE20 16 DIO	PAC-UNIV-HE20-FD1-LLLM	RS16 GROUP	
	6ES7 321-1BH81-0AA0	MICROSERIE	1127850000 FAD S7/300 HE20 16 DIO	PAC-UNIV-HE20-HE1-LLLM		MICRO 16I GROUP
	6ES7 321-1BH50-0AA0					
	6ES7 321-7RD00-0AB0					
	6ES7 321-1BL00-0AA0	INTERFACE	1127890000 FAD S7/300 HE40 32DIO	PAC-UNIV-HE40-FD1-LLLM	RS32 GROUP	
	6ES7 321-1BL80-0AA0	MICROSERIE	1127880000 FAD S7/300 2XHE20 32DIO	PAC-UNIV-HE20-HE1-LLLM (2uds)		MICRO 32I GROUP
	6ES7 322-1BH01-0AA0	INTERFACE	1127850000 FAD S7/300 HE20 16 DIO	PAC-UNIV-HE20-FD1-LLLM	RS16 GROUP	RSM-16 GROUP
	6ES7 322-1BH81-0AA0	MICROSERIE	1127850000 FAD S7/300 HE20 16 DIO	PAC-UNIV-HE20-HE1-LLLM		MICRO 16O GROUP
	6ES7 322-1BL00-0AA0	INTERFACE	1127890000 FAD S7/300 HE40 32DIO	PAC-UNIV-HE40-FD1-LLLM	RS32 GROUP	RSM-32 GROUP
		MICROSERIE	1127880000 FAD S7/300 2XHE20 32DIO	PAC-UNIV-HE20-HE1-LLLM (2uds)		MICRO 32O GROUP
Rockwell Control-Logix	1756-IB16	INTERFACE	1127910000 FAD CTLX HE20 16DI	PAC-UNIV-HE20-FD1-LLLM	RS16 GROUP	
	1756-IC16	MICROSERIE	1127910000 FAD CTLX HE20 16DI	PAC-UNIV-HE20-HE1-LLLM		MICRO 16I GROUP
	1756-IN16					
	1756-IB32	INTERFACE	1127940000 FAD CTLX HE40 32DI	PAC-UNIV-HE40-FD1-LLLM	RS32 GROUP	RSM-32 GROUP
		MICROSERIE	1127930000 FAD CTLX 2XHE20 32DI	PAC-UNIV-HE20-HE1-LLLM (2uds)		MICRO 32I GROUP
	1756-OB16E	INTERFACE	1127950000 FAD CTLX HE20 16DO	PAC-UNIV-HE20-FD1-LLLM	RS16 GROUP	RSM-16 GROUP
	1756-OV16E	MICROSERIE	1127950000 FAD CTLX HE20 16DO	PAC-UNIV-HE20-HE1-LLLM		MICRO 16O GROUP
	1756-OB32	INTERFACE	1127980000 FAD CTLX HE40 32DO	PAC-UNIV-HE40-FD1-LLLM	RS32 GROUP	RSM-32 GROUP
		MICROSERIE	1127990000 FAD CTLX 2XHE20 32DO	PAC-UNIV-HE20-HE1-LLLM (2uds)		MICRO 32O GROUP

(1) LLL means the length of the cable in dm. Example LLL = 100 means 10 meters from end to end of the cable, without measure the connectors.

Table 2: Specific FADs

STEP 5: Selected Interface Module

RS16 GROUP

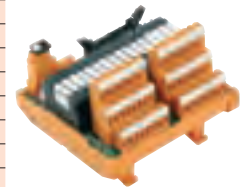
Type of wiring	Compact Version	Connection		1 LED per chan.	Discon-ectable	Fuse	Type	Order No.
		Screw	Tension c.					
1-wire	><	[Screw]	[Tension]	[LED]	[Discon]	[Fuse]	RS 16ES H/V	9445700000
							RS 16ES-L H/V	9445710000
	[LED]	[Discon]	[Fuse]	RS 16ES H/Z	9447700000 <sup>(1)</sup>			
				RS 16ES-L H/Z	9447710000			
2-wire	><	[Screw]	[Tension]	[LED]	[Discon]	[Fuse]	RS 16ES-S-I-L H/V	9445810000
							RS 16ES-D H/V	9445720000
	><	[Screw]	[Tension]	[LED]	[Discon]	[Fuse]	RS 16ES-D-L H/V	9445730000
							RS 16ES-D-L H/Z	9447730000
	[LED]	[Discon]	[Fuse]	RS 16ES-D-I-L H/V	9445750000			
				RS 16ES-D-I-L H/Z	9447750000 <sup>(1)</sup>			
3-wire	><	[Screw]	[Tension]	[LED]	[Discon]	[Fuse]	RS 16ES-D-F H/V	9445820000
							RS 16ES-T H/V	9445760000
							RS 16ES-T-L H/V	9445770000
							RS 16ES-T-L H/Z	9447770000



LED versions only for PLC Cards with 24 V DC nominal voltage

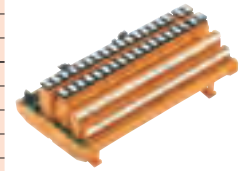
RSM-16 GROUP

Compact Version	Connection		Type of contact	Fuse	Force function	Solen. ctrl.	Input switch	Type	Order No.
	Screw	Tension c.							
	[Screw]	[Tension]	1CO					RSM16-NV/1CO 24V (-/+)	9444610000
	[Screw]	[Tension]	1CO					RSM16-NZ/1CO 24V (-/+)	9444660000
	[Screw]	[Tension]	1CO					RSM16C-1CO H/V	9445100000
><	[Screw]	[Tension]	1CO					RSM16C-1CO H/Z	9447100000
><	[Screw]	[Tension]	1CO					RSM16 SLIM-1CO H/V	1079390000
	[Screw]	[Tension]	1CO					RSM16 SLIM-1CO H/V SOCKET	1094970000
><	[Screw]	[Tension]	2CO					RSM16-2CO H/V	9445160000
	[Screw]	[Tension]	2CO					RSM16-2CO H/Z	9447160000
	[Screw]	[Tension]	1CO		[Force]			RSM16-1CO-Fo H/V	9445140000
	[Screw]	[Tension]	1CO	[Fuse]				RSM16-1CO-Fu H/V	9445120000
	[Screw]	[Tension]	1CO	[Fuse]				RSM16-1CO-Fu H/Z	9447120000
	[Screw]	[Tension]	1NO			[Solen]		RSM16 1T/Solen. ctrl 24V DC H/V	9445180000
><	[Screw]	[Tension]	1CO					RSM-16 PLC C 1CO S	NEW 1129010000
><	[Screw]	[Tension]	1CO				switch	RSM-16 PLC C SW 1CO S	NEW 1129030000
><	[Screw]	[Tension]	1CO					RSM-16 PLC C 1CO Z	NEW 1129020000
><	[Screw]	[Tension]	1CO				switch	RSM-16 PLC C SW 1CO Z	NEW 1129040000
	[Screw]	[Tension]	1CO					RSM-16 PLC 1CO S	NEW 1129100000
	[Screw]	[Tension]	1CO				switch	RSM-16 PLC SW 1CO S	NEW 1129120000
	[Screw]	[Tension]	1CO					RSM-16 PLC 1CO Z	NEW 1129110000
	[Screw]	[Tension]	1CO				switch	RSM-16 PLC SW 1CO Z	NEW 1129130000



RS32 GROUP

Type of wiring	Compact Version	Connection		1 LED per channel	Fuse per channel	Type	Order No.	
		Screw	Tension c.					
1-wire	><	[Screw]	[Tension]	[LED]	[Fuse]	RSF PLC 1W 32IO S	NEW 1128140000	
						RSF PLC 1W 32IO LEDS S	NEW 1128160000	
	[LED]	[Discon]	[Fuse]	RSF PLC 1W 32IO Z	NEW 1128150000			
				RSF PLC 1W 32IO LEDS Z	NEW 1128170000			
2-wire	><	[Screw]	[Tension]	[LED]	[Fuse]	RSF PLC 2W 32IO S	NEW 1128180000	
						RSF PLC 2W 32IO LEDS S	NEW 1128200000	
	[LED]	[Discon]	[Fuse]	RSF PLC 2W 32IO Z	NEW 1128190000			
				RSF PLC 2W 32IO LEDS Z	NEW 1128210000			
	><	[Screw]	[Tension]	[LED]	[Discon]	[Fuse]	RSF PLC 2W 32IO FUS S	NEW 1128240000
							RSF PLC 2W 32IO FUS Z	NEW 1128250000











RSM-32 GROUP

Compact Version	Connection		Type of contact	Fuse	Force function	Solen. ctrl.	Input switch	Type	Order No.
	Screw	Tension c.							
><	[Screw]	[Tension]	1CO					RSM-32 PLC C 1CO S	NEW 1129050000
><	[Screw]	[Tension]	1CO				switch	RSM-32 PLC C SW 1CO S	NEW 1129080000
><	[Screw]	[Tension]	1CO					RSM-32 PLC C 1CO Z	NEW 1129070000
><	[Screw]	[Tension]	1CO				switch	RSM-32 PLC C SW 1CO Z	NEW 1129090000
	[Screw]	[Tension]	1CO					RSM-32 PLC 1CO S	NEW 1129140000
	[Screw]	[Tension]	1CO				switch	RSM-32 PLC SW 1CO S	NEW 1129170000
	[Screw]	[Tension]	1CO					RSM-32 PLC 1CO Z	NEW 1129150000
	[Screw]	[Tension]	1CO				switch	RSM-32 PLC SW 1CO Z	NEW 1129180000



LED versions only for PLC Cards with 24 V DC nominal voltage

Table 2: Specific FADs

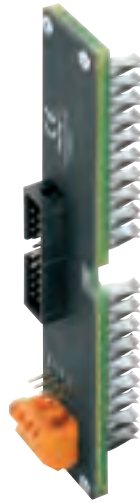
STEP 5: Selected Field Interface Module				
MICROSERIES GROUP				
MICROSERIES (RELAYS)	Connection		Order No.	Order No.
	Screw	Tension c.	Adaptor	Input or output with relay
MICRO 160 GROUP			8773600000 (x2uds)	8533640000 (x16uds)
			8773620000 (x2uds)	8533660000 (x16uds)
MICRO 320 GROUP			8773600000 (x4uds)	8533640000 (x32uds)
			8773620000 (x4uds)	8533660000 (x32uds)
MICRO 16I GROUP			8773510000 (x2uds)	8596060000 (x16uds)
			8773530000 (x2uds)	8596080000 (x16uds)
MICRO 32I GROUP			8773510000 (x4uds)	8596060000 (x32uds)
			8773530000 (x4uds)	8596080000 (x32uds)



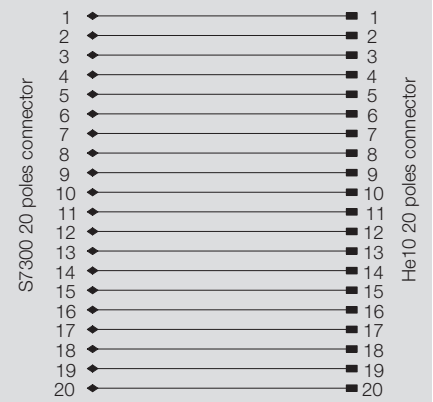
**Siemens S7-300 PLC Front Adaptor**

- PLC-Front adaptors to be connected to Siemens S7-300 20 poles PLC
- Supply voltage byte independant or common for all signals (selectable with jumper)

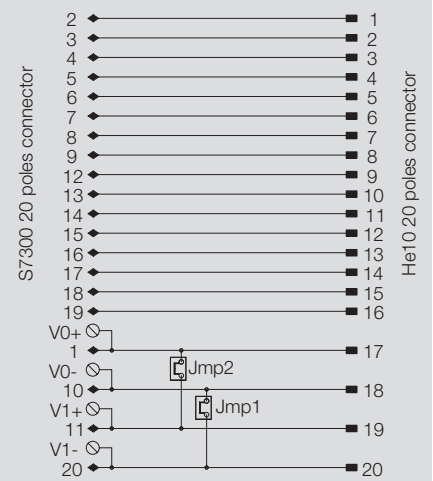
**Siemens S7-300 FAD**



**Schematic Diagram**



FAD S7/300 HE20 UNIV



FAD S7/300 HE20 16 DIO

**Technical data**

**Input-Output Data**

Operating voltage  
Max. current per channel  
Max. current per byte

≤ 30 V AC 60 V DC  
1A  
2A

**Insulation coordination (EN50178)**

Rated voltage  
Overvoltage category  
Pollution degree  
Insulation test voltage  
Ambient temperature  
Storage temperature

< 50 V AC  
II  
2  
0.5 kV DC  
-25...50 °C  
-40...60 °C

**Dimensions**

Length x width mm

124 x 23

**Approvals**

Standards

In accordance to EN50178 /IEC 60664

**Note**

Factory settings

Common power supplier for all signals

**Ordering data**

Connection to pre-assembled cable	Supply connection (type)	Height mm
HE 10 connector - 20 pole	-	21
HE 10 connector - 20 pole	LM 3.5/135	25

Type	Order No.
FAD S7/300 HE20 UNIV	1127840000
FAD S7/300 HE20 16 DIO	1127850000

**Note**

**Accessories**

**Note**

**Siemens S7-300 PLC Front Adaptor**

- PLC-Front adaptors to be connected to Siemens S7-300 40 poles PLC
- Supply voltage byte independant or common for all signals (selectable with jumper)

**Siemens S7-300 FAD**



**Technical data**

Input-Output Data	
Operating voltage	≤ 30 V AC 60 V DC
Max. current per channel	1A
Max. current per byte	2A
Insulation coordination (EN50178)	
Rated voltage	< 50 V AC
Overvoltage category	II
Pollution degree	2
Insulation test voltage	0.5 KV DC
Ambient temperature	-25...50 °C
Storage temperature	-40...60 °C
Dimensions	
Length x width mm	115x 21.5
Approvals	
Standards	In accordance to EN50178 /IEC 60664

Note	
Factory settings	Common power supplier for all signals

**Ordering data**

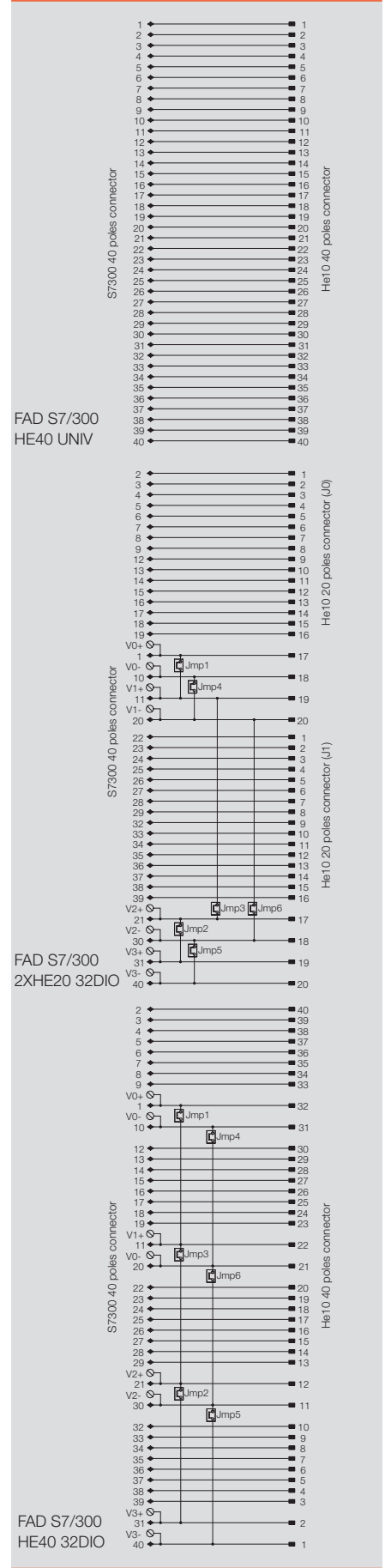
Connection to pre-assembled cable	Supply connection (type)	Height mm	Type	Order No.
HE 10 connector - 40 pole	-	27	FAD S7/300 HE40 UNIV	1127870000
2x HE 10 connector - 20 pole	LM 3.5/135	32	FAD S7/300 2XHE20 32DIO	1127880000
HE 10 connector - 40 pole	LM 3.5/135	32	FAD S7/300 HE40 32DIO	1127890000

Note	

**Accessories**

Note	

**Schematic Diagram**



**Rockwell Control-Logix**

**PLC Front-Adaptor**

- PLC-Front adaptors to be connected to Rockwell Control-Logix 20 poles PLC
- Supply voltage byte independant or common for all signals (selectable with jumper)

**Rockwell Control-Logix FAD**



**Technical data**

Input-Output Data	
Operating voltage	≤ 30 V AC 60 V DC
Max. current per channel	1A
Max. current per byte	2A
Insulation coordination (EN50178)	
Rated voltage	< 50 V AC
Overvoltage category	II
Pollution degree	2
Insulation test voltage	0.5 KV DC
Ambient temperature	-25...50 °C
Storage temperature	-40...60 °C
Dimensions	
Length x width mm	34.5 x 110
Aprovals	
Standards	In accordance to EN50178 /IEC 60664

<b>Note</b> Factory settings	Common power supplier for all signals
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**Ordering data**

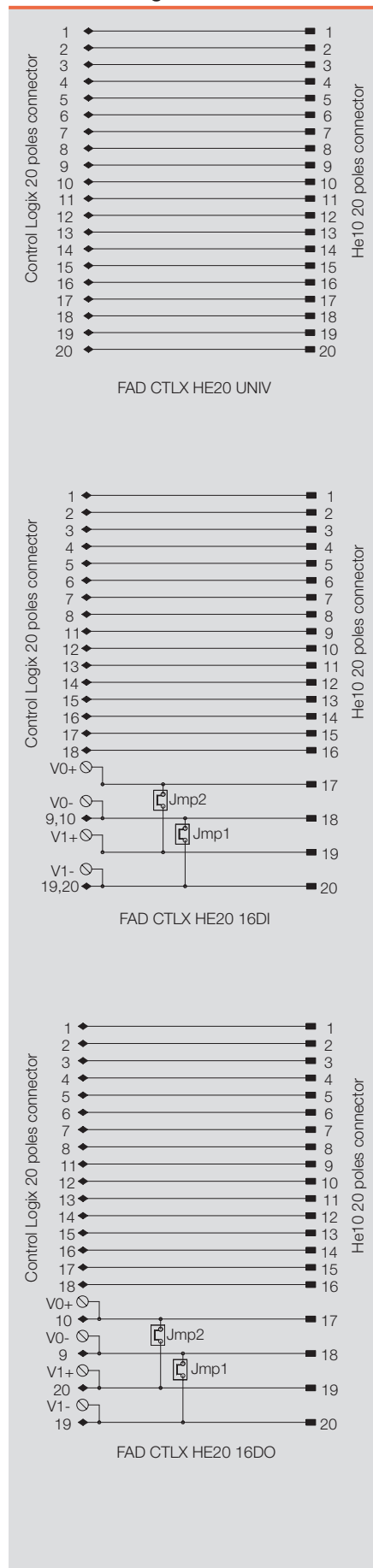
Connection to pre-assembled cable	Supply connection (type)	Height mm	Type	Order No.
HE 10 connector - 20 pole	-	38	FAD CTLX HE20 UNIV	1127900000
HE 10 connector - 20 pole	BL 180	38	FAD CTLX HE20 16DI	1127910000
HE 10 connector - 20 pole	BL 180	38	FAD CTLX HE20 16DO	1127950000

<b>Note</b>	
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**Accessories**

<b>Note</b>	
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**Schematic Diagram**



**Rockwell Control-Logix  
PLC Front-Adaptor**

- PLC-Front adaptors to be connected to Rockwell Control-Logix 36poles
- Supply voltage byte independant or common for all signals (selectable with jumper)

**Rockwell Control-Logix FAD**



**Technical data**

Input-Output Data	
Operating voltage	≤ 30 V AC 60 V DC
Max. current per channel	1A
Max. current per byte	2A
Insulation coordination (EN50178)	
Rated voltage	< 50 V AC
Overvoltage category	II
Pollution degree	2
Insulation test voltage	0.5 KV DC
Ambient temperature	-25...50 °C
Storage temperature	-40...60 °C
Dimensions	
Length x width mm	34.5 x 110
Approvals	
Standards	In accordance to EN50178 /IEC 60664

<b>Note</b>	Factory settings	Common power supplier for all signals
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**Ordering data**

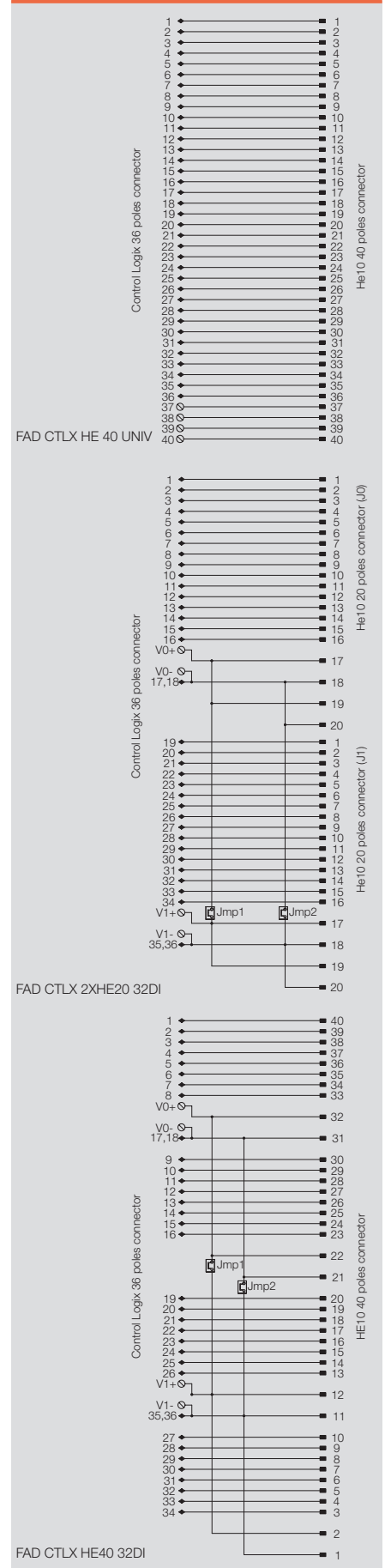
Connection to pre-assembled cable	Supply connection (type)	Height mm	Type	Order No.
HE 10 connector - 40 pole	-	38	FAD CTLX HE 40 UNIV	1127920000
2x HE 10 connector - 20 pole	BL 180	38	FAD CTLX 2XHE20 32DI	1127930000
HE 10 connector - 40 pole	BL 180	38	FAD CTLX HE40 32DI	1127940000

<b>Note</b>	
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**Accessories**

<b>Note</b>	
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**Schematic Diagram**



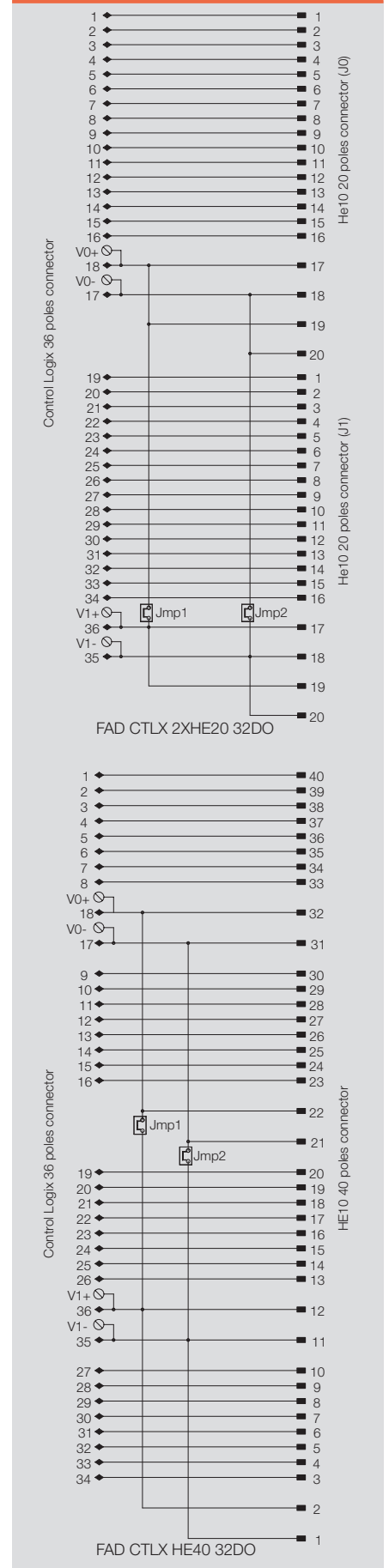
**Rockwell Control-Logix  
PLC Front-Adaptor**

- PLC-Front adaptors to be connected to Rockwell Control-Logix 36 poles PLC
- Supply voltage byte independent or common for all signals (selectable with jumper)

**Rockwell Control-Logix FAD**



**Schematic Diagram**



**Technical data**

Input-Output Data	
Operating voltage	≤ 30 V AC 60 V DC
Max. current per channel	1A
Max. current per byte	2A
Insulation coordination (EN50178)	
Rated voltage	< 50 V AC
Overtoltage category	II
Pollution degree	2
Insulation test voltage	0,5 KV DC
Ambient temperature	-25...50 °C
Storage temperature	-40...60 °C
Dimensions	
Length x width mm	34,5 x 110
Approvals	
Standards	In accordance to EN50178 /IEC 60664

<b>Note</b> Factory settings	Common power supplier for all signals
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**Ordering data**

Connection to pre-assembled cable	Supply connection (type)	Height mm	Type	Order No.
2xHE 10 connector - 20 pole	BL 180	38	FAD CTLX 2XHE20 32DO	1127990000
HE 10 connector - 40 pole	BL 180	38	FAD CTLX HE40 32DO	1127980000

<b>Note</b>	
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**Accessories**

<b>Note</b>	
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