

X20

X67 / XV



X20	Digital Input												Digital Output																		
	X20DI0371	X20DI0372	X20DI0377	X20DI04371	X20DI04372	X20DI06371	X20DI06372	X20DI08371	X20DI08372	X20DI0653	X20DI0653	X20DI0653	X20DO04760	X20DO0321	X20DO0322	X20DO04321	X20DO04322	X20DO04331	X20DO04332	X20DO06321	X20DO06322	X20DO06331	X20DO06332	X20DO06321	X20DO06322	X20DO0623	X20DO04623	X20DO02649	X20DO04529	X20DO06529	
Digital Inputs	2	2	2	4	4	6	6	12	12	2	4	6	4	2	2	4	4	4	4	4	6	6	8	8	12	12	2	4	2	4	6
Digital Outputs																															
Voltage [V]	24	24	24	24	24	24	24	24	24	100-240	100-240	100-120	8.05	24	24	24	24	24	24	24	24	24	24	24	24	100-240	100-240	24/230	24/115	24/115	
Current per Channel [A]														0.5	0.5	0.5	0.5	2	2	0.5	0.5	2	2	0.5	0.5	1	1	5/5	1/0.5	1/0.5	
I/O Circuit	Sink	Source	Sink	Sink	Source	Sink	Source	Sink	Source	Snk/Src	Snk/Src	Snk/Src		Sink	Source	Sink	Source	Sink	Source	Sink	Source	Sink	Source	Sink	Source	Snk/Src	Snk/Src				
SW Filter	✓	✓		✓	✓	✓	✓	✓	✓																						
Special Features				Event-Counter									Namur													Triac	Triac	Relay change over	Relay change over	Relay norm. open	

X67	Digital Input				Digital Output				Digital Mixed				Valve Control			
	X67DI1371	X67DI1371.L08	X67DI1371.L12	X67DI1332	X67DO0932	X67DO0932.L12	X67DM1321	X67DM09321	X67DM1321.L08	X67DM1321.L12	X67DM09331	X67DM1311.L08	X67DM1311.L12	X67DM1311.L12		
Digital Inputs	8 / M8	16 / M8	16 / M12		8 / M8	8 / M12	(8 / M8)	(8 / M8)	(16 / M8)	(16 / M12)	(8 / M12)	16 / M8	16 / M12			
Digital Outputs																
Voltage [V]	24	24	24	24	24	24	(8 / M8)	(8 / M8)	(16 / M8)	(16 / M12)	(8 / M12)	16 / M16	16 / M16			
Current per Channel [A]				2	2	2	0.5	0.5	0.5	0.5	2	0.1	0.1			
I/O Circuit	Sink	Sink	Sink	Source	Source											
SW Filter / Node No. Sw.	- / -	- / -	- / -	- / -	- / ✓		✓ / -	✓ / ✓	✓ / -	✓ / -	✓ / ✓	✓ / -	✓ / -			
Special Features							EventCounter	EventCounter	EventCounter	EventCounter	EventCounter	EventCounter	EventCounter			

X20	Analog Input				Analog Output				Temperature			
	X20AI0202	X20AI0202	X20AI0402	X20AI0402	X20AI0144	X20AO0202	X20AO0202	X20AO0402	X20AO1222	X20AO1422	X20AT2402	X20AT16402
Analog Inputs	2	2	4	4	1							
Analog Outputs						2	2	4	4			
Temperatur Inputs									2 R	4 R	2 TC	6 TC
± 10 V	✓	✓	✓	✓		✓	✓	✓				
0..20 mA	✓	✓	✓	✓		✓	✓	✓				
Resolution [Bit]	12	16	12	16	Strain Gauge	12	16	12	16	16	16	16
Special Features												

X20	Combination				Signal Processing / Motor Control							
	X20CM0324	X20CM0905	X20CM1201	X20CM1941	X20SM0201	X20SM0323	X20DS1319	X20MM0426	X20MM1436	X20SM1426	X20SM1436	
Digital Inputs	8		3		4		4/(8)	(4)	(4)	(4)	(4)	
Digital Outputs	4	6	3		2		(4)					
Analog Inputs		13			1							
Analog Outputs					1							
Stepper motor control										1 / 24V	1 / 18-48V	
Pulse/direction output							(1)					
PWM Output							8	1 / 24V	1 / 18-48V			
Event Counter							(8)					
AB Incremental Encoder			1				(4)	(2)	(2)	(2)	(2)	
ABR Emulat. / Up/Dwn Cnt					✓		(1)					
Resolver Input					✓							
Energy Measurement		✓										
Digital Control Logic			✓									
Multi-functional		✓	✓				✓					

X67	Analog Input		Analog Output		Analog Mixed		Temperature		Comb.	
	X67AI1223	X67AI1323	X67AO1244	X67AO1223	X67AM1223	X67AM1323	X67AT1322	X67AT1402	X67UM1352	
Analog Input	4 / M12	4 / M12	2 / M12		2 / M12	2 / M12			1 / M12	
Analog Output				4 / M12	4 / M12	2 / M12	2 / M12			
Temperatur Input							4 R / M12	4 TC / M12		
Digital Channels									6 / M12	
± 10 V	✓			✓		✓				
0..20 mA		✓			✓		✓			
Resolution [Bit]	12	12	Strain Gauge	12	12	12	12	16	16	
Special Features									Strain Gauge	

X67	Counting / Motor Control			
	X67DC1106	X67SM0436	X67SM0436	X67SM0320
Digital Input	(8)	(6)	(6)	
Digital Output				
SSI Absolut Encoder 5 V	(2)			
ABR Incr. Encoder 5 V	(2)			
ABR Incr. Encoder 24 V		(2)	(2)	
AB Incr. Encoder 24 V	(4)	(2)		
Stepper Motor Control			2 / 18-48V	4 / 24V
PWM Output	(2)	2 / 18-48V		

X20	Counting									
	X20DC1196	X20DC1198	X20DC1996	X20DC1998	X20DC2995	X20DC2996	X20DC2998	X20DC4995	X20DC2190	
ABR Incremental Encoder	1			1	(2)	2		(4)		
SSI Absolut Encoder		1			1	(1)		(2)		
Event Counter					(4)			(8)		
Ultrasonic Transducer									2	
Voltage [V]	5	5	24	24	24	24	24	24	24	

X20	Power Supply / Power Distribution										
	X20PS2100	X20PS2110	X20PS3300	X20PS3310	X20PS4951	X20PS9400	X20PS9600	X20PD0011	X20PD0012	X20PD0016	X20PD2113
X20 I/O Supply	✓	✓	✓	✓		✓	✓				✓
X2X Link Supply			✓	✓		✓	✓				
Supply for					Potentiometer	BC	CPU				
Power Distribution								✓	✓	✓	✓
Internal Micro Fuse		✓		✓				✓	✓	✓	✓

X20	Communication						
	X20BR0000	X20BT9100	X20BT9400	X20CS1020	X20CS1030	X20CS1070	X20CS2770
X2X Link	Receiver	Transmitter	Transmitter + X67 PS				
RS232				1 / 115.2 kbps			
RS422/485				1 / 115.2 kbps			
CAN					1 / 1 Mbps		2 / 500 kbps

X67	Miscellaneous	
	X67IE1121	X67PS1900
Digital Input	(4)	
Digital Output	(2)	
RS232 / RS485	1 / 115.2 kbps	
X2X Link Supply		✓

XV	IP20 Valve Control										IP67 Valve Control									
	XV1108.50-11	XV1108.50-12	XV1116.50-11	XV1116.50-12	XV1116.50-21	XV1124.50-11	XV1124.50-12	XV1108.50-62	XV1116.50-62	XV1124.50-62	XV1108.50-51	XV1116.50-51	XV1124.50-51							
Digital Output for Valve Control	8	8	16	16	16	24	24	8	16	16	8	16	24							
Voltage [V]	24	24	24	24	24	24	24	24	24	24	24	24	24							
GND Pins	22-25	13,22-25	22-25	13,22-25	22-25	25	13	13,22-25	13,22-25	13	22-25	22-25	25							
Protection	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP67	IP67	IP67	IP67	IP67	IP67							



X20 Bus Controller



X67 Bus Controller



X20 Interface Module

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System Overview I/O, Fieldbus, and Control Systems



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X20 Standard CPU



X20 Compact CPU



X20 Fieldbus CPU

X20 Standard CPU	X20CP1486	X20CP3486	X20CP1485	X20CP3485	X20CP1484	X20CP3484
Processor	Celeron 650 2x 16 KB L1 cache 256 KB L2 cache		Celeron 400 2x 16 KB L1 cache 256 KB L2 cache		Celeron 266 comp. 2x 16 KB L1 cache - L2 cache	
Standard Memory	64 MB SDRAM 1 MB SRAM		32 MB SDRAM 1 MB SRAM		32 MB SDRAM 1 MB SRAM	
Remanent Variables	256 KB		256 KB		64 KB	
RTC	yes		yes		yes	
Fastes Cycle Time	200 µs		400 µs		800 µs	
Integr. I/O Processor	yes		yes		yes	
CompactFlash Slot	1	1	1	1	1	1
Modular Interface Slot	1	3	1	3	1	3
Onboard Interfaces	Ethernet 10/100 Mbps, POWERLINK 100 Mbps, RS232, 2x USB 1.1		Ethernet 10/100 Mbps, POWERLINK 100 Mbps, RS232, 2x USB 1.1		Ethernet 10/100 Mbps, POWERLINK 100 Mbps, RS232, 2x USB 1.1	
Power Supply	24 VDC		24 VDC		24 VDC	
Battery	yes		yes		yes	
Cooling	Fan-free with derating, exchangeable fan for full temperature range		Fan-free		Fan-free	

X20 Compact CPU	X20CP0292	X20CP0291	X20CP0201	X20XC0202	X20XC0201	
Processor	Embedded µP25		Embedded µP16		Embedded µP25	
Standard Memory	750 KB SRAM 3 MB FlashPROM		100 KB SRAM 1 MB FlashPROM		750 KB SRAM 3 MB FlashPROM	
Remanent Variables	2,75 KB FRAM		2,75 KB FRAM		2,75 KB FRAM	
RTC	yes		yes		yes	
Fastes Cycle Time	1 ms (typ. 2 ms)		2 ms (typ. 5 ms)		1 ms (typ. 2 ms)	
Integr. I/O Processor	yes		yes		yes	
Fieldbus Interface Slot	-		-		Profibus DP Slave, CANopen, DeviceNet Slave	
Onboard Interfaces (depends on backplane)	RS232, CAN, Ethernet 100 Mbps		RS232, CAN, Ethernet 100 Mbps		RS232, CAN	
Power Supply	24 VDC		24 VDC		24 VDC	
Battery	no		no		no	
Cooling	Fan-free		Fan-free		Fan-free	

X20 Bus Controller	X20BC0043	X20BC0053	X20BC0063	X20BC0073	X20BC0083	X20BC0087	X20BC0088	X20BC0089	X20BC1083
Fieldbus	CANopen	DeviceNet	Profibus DP	CAN I/O	POWERLINK	Modbus/TCP	Ethernet/IP	Profinet RT	POWERLINK
Baudrate max.	1 Mbps	500 kbps	12 Mbps	1 Mbps	100 Mbps	100 Mbps	100 Mbps	100 Mbps	100 Mbps
Connector	5-pin multipoint connector	5-pin multipoint connector	9-pin DSUB	5-pin multipoint connector	2x RJ45 integrated hub	2x RJ45 integrated switch	2x RJ45 integrated switch	2x RJ45 integrated switch	2x RJ45 integrated hub
Modular Interface Slot	-	-	-	-	-	-	-	-	1
Node Number Switches	yes	yes	yes	yes	yes	yes	yes	yes	yes
Power Supply	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC

X67 Bus Controller	X67BC4321	X67BC5321	X67BC6321	X67BC6321.L08	X67BC6321.L12	X67BC7321-1	X67BC8321-1
Fieldbus	CANopen	DeviceNet	Profibus DP	Profibus DP	Profibus DP	CAN I/O	ETHERNET Powerlink
Baudrate max.	1 Mbps	500 kbps	12 Mbps	12 Mbps	12 Mbps	1 Mbps	100 Mbps
Connector	M12, A-coded	M12, A-coded	M12, B-coded	M12, B-coded	M12, B-coded	M12, A-coded	M12, D-coded
Onboard I/O	8 dig. Mix / M8		16 dig. Mix / M8		16 dig. Mix / M12		8 dig. Mix / M8
Node Number Switches	yes	yes	yes	yes	yes	yes	yes
Power Supply	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC

X20 Interface	X20IF1020	X20IF1030	X20IF1061	X20IF1063	X20IF1072	X20IF1082	X20IF1091	X20IF2772	X20IF2792
Interfaces	RS232	RS422/RS485	Profibus DP Master	Profibus DP Slave	CAN	POWERLINK	X2X Link	2x CAN	CAN, X2X Link
Baudrate max.	115.2 kbps	115.2 kbps	12 Mbps	12 Mbps	1 Mbps	100 Mbps	-	1 Mbps	1 Mbps
Electrical Isolation	yes	yes	yes	yes	yes	yes	yes	yes	yes
Connector	9-pin DSUB	9-pin DSUB	9-pin DSUB	9-pin DSUB	5-pin multipoint connector	2x RJ45 integrated hub	4-pin multipoint connector	2x 5-pin multipoint connectors	4 + 5-pin multipoint connector