

Analogue extension XA04 Part number 88970241



- Direct connection of analogue 0-10 V or 0-20 mA or Pt100 inputs (10 bit) can be configured using the M3 Soft software
- 2 analogue 0-10 V or PWM outputs (10 bit) can be configured using the M3 Soft software
 Ramp can be parameterised for outputs used as 0-10 V outputs
 Power supply via the controller

Part numb	

	Type	Inputs	Outputs	Supply
88970241	XA04	1 analogue (0-10 V / 0-20 mA),1 analogue (0-10 V / 0-20 mA / Pt100)	2 analogue (0-10 V / PWM)	Via the 24 V DC controller

Certifications	CE, UL, CSA, GL
Conformity to standards (with the low voltage directive and EMC directive)	IEC/EN 61131-2 (Open equipment) IEC/EN 61131-2 (Zone B) IEC/EN 6100-6-2, IEC/EN 61000-6-3 (*) IEC/EN 61000-6-4 (*) Except configuration (88 970 1.1 or 88 970 1.2) + (88 970 250 or 88 970 270) + 88 970 241 class A (class B in a metal enclosure)
Earthing	Not included
Protection rating	In accordance with IEC/EN 60529 : IP40 on front panel IP20 on terminal block
Overvoltage category	3 in accordance with IEC/EN 60664-1
Pollution	Degree : 2 in accordance with IEC/EN 61131-2
Max operating Altitude	Operation : 2000 m Transport : 3048 m
Mechanical resistance	Immunity to vibrations IEC/EN 60068-2-6, test Fc Immunity to shock IEC/EN 60068-2-27, test Ea
Resistance to electrostatic discharge	Immunity to ESD IEC/EN 61000-4-2, level 3
Resistance to HF interference	Immunity to radiated electrostatic fields IEC/EN 61000-4-3 Immunity to fast transients (burst immunity) IEC/EN 61000-4-4, level 3 Immunity to shock waves IEC/EN 61000-4-5 Radio frequency in common mode IEC/EN 61000-4-6, level 3 Voltage dips and breaks (AC) IEC/EN 61000-4-11 Immunity to damped oscillatory waves IEC/EN 61000-4-12
Conducted and radiated emissions	Class B (*) in accordance with EN 55022, EN 55011 (CISPR22, CISPR11) group 1 (*) Except configuration (88 970 1.1 or 88 970 1.2) + (88 970 250 or 88 970 270) + 88 970 241 class A (class B in a metal enclosure)
Operating temperature	-20 →+70 °C except CB and XB versions in VDC : -30 →+70 °C (+40 °C in a non-ventilated enclosure) in accordance with IEC/EN 60068-2-1 and IEC/EN 60068-22
Storage temperature	-40 →+80 °C in accordance with IEC/EN 60068-2-1 and IEC/EN 60068-2-2
Relative humidity	95 % max. (no condensation or dripping water) in accordance with IEC/EN 60068-2-30
Mounting	On symmetrical DIN rail, 35×7.5 mm and 35×15 mm, or on panel ($2 \times \emptyset$ 4 mm)
Screw terminals connection capacity	Flexible wire with ferrule = 1 conductor: 0.25 to 2.5 mm ² (AWG 24AWG 14) 2 conductors 0.25 to 0.75 mm ² (AWG 24AWG 18) Semi-rigid wire = 1 conductor: 0.2 to 2.5 mm ² (AWG 25AWG 14) Rigid wire = 1 conductor: 0.2 to 2.5 mm ² (AWG 25AWG 14) 2 conductors 0.2 to 1.5 mm ² (AWG 25AWG 16) Tightening torque = 0.5 N.m (4.5 lb-in) (tighten using screwdriver diam. 3.5 mm) Also valid for spring cage connectors (ref 88 970 313 and 88 970 317 for the RBT range)

Characteristics of analogue extension 88970241

27/04/2015 www.crouzet.com

General characteristics	IEC/EN 60754	IFA/FN ADZE			
Certifications	IEC/EN 60751 Yes, refer to the quick reference guide supplied with the product				
Earthing Analogue input	res, refer to the quick reference guide sup	blied with the product			
Analogue input					
nputs used as analogue inputs					
Inputs Inputs	IP and IQ	IP and IQ		IQ	
Input range	0 →10 V DC	0 →20 mA		-25 →125 °C	
Input impedance	≥ 18 kΩ	246 Ω		-	
Maximum non destructive current/voltage	30 V	30 mA		-	
Value of LSB	9,8 mV	20 μΑ		0.15 °C	
Input type	Common mode	Common mode		Pt100 probe - IEC 751 - 3-wire	
Resolution	10 bit	10 bit		10 bit	
Conversion time	Module cycle time	Module cycle time		Module cycle time	
Accuracy at 25 °C	± 2 %	± 2 %		±1.5 °C	
Accuracy at 55 °C	± 2 %	± 2 %		±1.5 °C	
Isolation between analogue channel and power supp	ly None	None		None	
Cable length	10 m maximum, with shielded cable (sensor	10 m maximum, with shiel	ded cable (sensor	10 m maximum, with shielded cable (sens	
	not isolated)	not isolated)		not isolated)	
Protection against polarity inversions	Command ignored	Command ignored		Command ignored	
Analogue outputs					
Range output	0 →10 V				
Input type	Resistive				
Max. load	10 mA				
Value of LSB	10 mV				
Resolution	10 bit				
Conversion time	Controller cycle time				
Accuracy at 25 °C	±1 % of full scale				
Accuracy at 55 °C	±1 % of full scale				
Repeat accuracy at 55 °C Isolation between analogue channel and power supp	± 1 % None				
•		oncor not icolated)			
Cable length Protection against polarity inversions	10 metres maximum, with shielded cable (see	ensor not isolated)			
	res				
PWM	V nower aupply				
Range output Max. load	V power supply ≥ 1.2 kΩ (I ≤ 20 mA)				
PWM cyclic ratio	1024 steps (0 - 100 %)				
Frequency	78 Hz, 312,5 Hz, 666,6 Hz, 1000 Hz, 1250 H	Iz 1428 Hz 1666 Hz 2000	H ₇		
Accuracy	1 % across the entire temperature range for				
Built-in protections	Against overvoltages : Yes	7 7710 141100 110111 0 70 10 00	, ,0		
·	•				
Processing characteristics of CB, CD, XD & X	<u> </u>				
LCD display	CD, XD : Display with 4 lines of 18 characte	rs			
Programming method	Function blocks / SCF (Grafcet) or Ladder	m OFG blooks maximum no	r		
Program size	8 Kb : 350 typical blocks, 64 macros maximu or	m, 256 blocks maximum pei	rmacro		
	120 lines in Ladder				
Program memory	Flash EEPROM				
Removable memory	EEPROM				
Data memory	368 bit/200 words				
Back-up time in the event of power failure	Program and settings in the controller: 10 y	ears			
	Program and settings in the plug-in memory	: 10 years			
	Data memory : 10 years				
	FBD : 6 →90 ms (typically 20 ms)				
Cycle time	171				
	Ladder : typically 20 ms				
Response time	Ladder : typically 20 ms Input acquisition time : 1 to 2 cycle times				
Response time Clock data retention	Ladder : typically 20 ms Input acquisition time : 1 to 2 cycle times 10 years (lithium battery) at 25 °C				
Response time Clock data retention	Ladder : typically 20 ms Input acquisition time : 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C)	rection of drift)			
Response time Clock data retention Clock drift	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable con	rection of drift)			
Response time Clock data retention Clock drift Timer block accuracy	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord 1 % ± 2 cycle times	rection of drift)			
Response time Clock data retention Clock drift Timer block accuracy Start up time on power up	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord 1 % ± 2 cycle times < 1,2 s	rection of drift)			
Response time Clock data retention Clock drift Timer block accuracy Start up time on power up	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord 1 % ± 2 cycle times < 1,2 s	rection of drift)			
Response time Clock data retention Clock drift Timer block accuracy Start up time on power up Characteristics of products with AC power su	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord 1 % ± 2 cycle times < 1,2 s	rection of drift)			
Response time Clock data retention Clock drift Timer block accuracy Start up time on power up Characteristics of products with AC power su Supply	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord 1 % ± 2 cycle times < 1,2 s	rection of drift) 100 →240 V A	AC		
Response time Clock data retention Clock drift Timer block accuracy Start up time on power up Characteristics of products with AC power su Supply Nominal voltage	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord 1 % ± 2 cycle times < 1,2 s pplied	100 →240 V A -15 % / +10 %			
Response time Clock data retention Clock drift Timer block accuracy Start up time on power up Characteristics of products with AC power su Supply Nominal voltage Operating limits	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord 1 % ± 2 cycle times < 1,2 s pplied	100 →240 V A			
Response time Clock data retention Clock drift Timer block accuracy Start up time on power up Characteristics of products with AC power su Supply Nominal voltage Operating limits	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord) 1 % ± 2 cycle times < 1,2 s pplied 24 V AC -15 % / +20 % or 20.4 V AC→28.8 V AC 50/60 Hz (+4 % / -6 %)	100 →240 V A -15 % / +10 % or 85 V AC→2	264 V AC	53 Hz/57 →63 Hz	
Response time Clock data retention Clock drift Timer block accuracy Start up time on power up Characteristics of products with AC power su Supply Nominal voltage Operating limits Supply frequency range	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord) 1 % ± 2 cycle times < 1,2 s pplied 24 V AC -15 % / +20 % or 20.4 V AC—28.8 V AC 50/60 Hz (+4 % / -6 %) or 47 →53 Hz/57 →63 Hz	100 →240 V A -15 % / +10 % or 85 V AC→2 50/60 Hz (+ 4	, 264 V AC % / - 6 %) or 47 →	53 Hz/57 →63 Hz	
Response time Clock data retention Clock drift Timer block accuracy Start up time on power up Characteristics of products with AC power su Supply Nominal voltage Operating limits Supply frequency range Immunity from micro power cuts	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord) 1 % ± 2 cycle times < 1,2 s pplied 24 V AC -15 % / +20 % or 20.4 V AC—28.8 V AC 50/60 Hz (+4 % / -6 %) or 47 →53 Hz/57 →63 Hz 10 ms (repetition 20 times)	100 →240 V A -15 % / +10 % or 85 V AC→2 50/60 Hz (+ 4 10 ms (repetiti	264 V AC % / - 6 %) or 47 → on 20 times)	53 Hz/57 →63 Hz	
Response time Clock data retention Clock drift Timer block accuracy Start up time on power up Characteristics of products with AC power su Supply Nominal voltage Operating limits Supply frequency range Immunity from micro power cuts	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord 1 % ± 2 cycle times < 1,2 s pplied 24 V AC -15 % / +20 % or 20.4 V AC→28.8 V AC 50/60 Hz (+4 % / -6 %) or 47 →53 Hz/57 →63 Hz 10 ms (repetition 20 times) CB12-CD12-XD10-XB10: 4 VA	100 →240 V A -15 % / +10 % or 85 V AC→2 50/60 Hz (+ 4 10 ms (repetiti CB12-CD12-XI	264 V AC % / - 6 %) or 47 → on 20 times) D10-XB10 : 7 VA	53 Hz/57 →63 Hz	
Response time Clock data retention Clock drift Timer block accuracy Start up time on power up Characteristics of products with AC power su Supply Nominal voltage Operating limits Supply frequency range Immunity from micro power cuts	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord) 1 % ± 2 cycle times < 1,2 s pplied 24 V AC -15 % / +20 % or 20.4 V AC—28.8 V AC 50/60 Hz (+4 % / -6 %) or 47 →53 Hz/57 →63 Hz 10 ms (repetition 20 times) CB12-CD12-XD10-XB10: 4 VA CB20-CD20: 6 VA	100 →240 V A -15 % / +10 % or 85 V AC→2 50/60 Hz (+ 4 10 ms (repetiti CB12-CD12-XI CB20-CD20:	264 V AC % / - 6 %) or 47 → on 20 times) D10-XB10 : 7 VA 11 VA		
Response time Clock data retention Clock drift Timer block accuracy Start up time on power up Characteristics of products with AC power su Supply Nominal voltage Operating limits Supply frequency range Immunity from micro power cuts Max. absorbed power	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord) 1 % ± 2 cycle times < 1,2 s pplied 24 V AC -15 % / +20 % or 20.4 V AC—28.8 V AC 50/60 Hz (+4 % / -6 %) or 47 →53 Hz/57 →63 Hz 10 ms (repetition 20 times) CB12-CD12-XD10-XB10: 4 VA CB20-CD20: 6 VA XD10-XB10 with extension: 7.5 VA	100 →240 V A -15 % / +10 % or 85 V AC→2 50/60 Hz (+ 4 10 ms (repetiti CB12-CD12-X CB20-CD20: XD10-XB10 w	264 V AC % / - 6 %) or 47 → on 20 times) D10-XB10 : 7 VA 11 VA ith extension : 12 \		
Response time Clock data retention Clock drift Timer block accuracy Start up time on power up Characteristics of products with AC power su Supply Nominal voltage Operating limits Supply frequency range Immunity from micro power cuts	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord) 1 % ± 2 cycle times < 1,2 s pplied 24 V AC -15 % / +20 % or 20.4 V AC—28.8 V AC 50/60 Hz (+4 % / -6 %) or 47 →53 Hz/57 →63 Hz 10 ms (repetition 20 times) CB12-CD12-XD10-XB10: 4 VA CB20-CD20: 6 VA	100 →240 V A -15 % / +10 % or 85 V AC→2 50/60 Hz (+ 4 10 ms (repetiti CB12-CD12-XI CB20-CD20: XD10-XB10 w XD26-XB26:	264 V AC % / - 6 %) or 47 → on 20 times) D10-XB10 : 7 VA 11 VA ith extension : 12 \	/A	
Response time Clock data retention Clock drift Timer block accuracy Start up time on power up Characteristics of products with AC power su Supply Nominal voltage Operating limits Supply frequency range Immunity from micro power cuts	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord) 1 % ± 2 cycle times < 1,2 s pplied 24 V AC -15 % / +20 % or 20.4 V AC→28.8 V AC 50/60 Hz (+4 % / -6 %) or 47 →53 Hz/57 →63 Hz 10 ms (repetition 20 times) CB12-CD12-XD10-XB10: 4 VA CB20-CD20: 6 VA XD10-XB10 with extension: 7.5 VA XD26-XB26: 7.5 VA	100 →240 V A -15 % / +10 % or 85 V AC→2 50/60 Hz (+ 4 10 ms (repetiti CB12-CD12-XI CB20-CD20: XD10-XB10 w XD26-XB26:	264 V AC % / - 6 %) or 47 → on 20 times) D10-XB10 : 7 VA 11 VA ith extension : 12 \ 12 VA	/A	
Response time Clock data retention Clock drift Timer block accuracy Start up time on power up Characteristics of products with AC power su Supply Nominal voltage Operating limits Supply frequency range Immunity from micro power cuts Max. absorbed power	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord) 1 % ± 2 cycle times < 1,2 s pplied 24 V AC -15 % / +20 % or 20.4 V AC—28.8 V AC 50/60 Hz (+4 % / -6 %) or 47 →53 Hz/57 →63 Hz 10 ms (repetition 20 times) CB12-CD12-XD10-XB10: 4 VA CB20-CD20: 6 VA XD10-XB10 with extension: 7.5 VA XD26-XB26: 7.5 VA XD26-XB26 with extension: 10 VA	100 →240 V A -15 % / +10 % or 85 V AC →2 50/60 Hz (+ 4 10 ms (repetiti CB12-CD12-XI CB20-CD20: XD10-XB10 w XD26-XB26: XD26-XB26 w	264 V AC % / - 6 %) or 47 → on 20 times) D10-XB10 : 7 VA 11 VA ith extension : 12 \ 12 VA	/A	
Response time Clock data retention Clock drift Timer block accuracy Start up time on power up Characteristics of products with AC power su Supply Nominal voltage Operating limits Supply frequency range Immunity from micro power cuts Max. absorbed power	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord) 1 % ± 2 cycle times < 1,2 s pplied 24 V AC -15 % / +20 % or 20.4 V AC—28.8 V AC 50/60 Hz (+4 % / -6 %) or 47 →53 Hz/57 →63 Hz 10 ms (repetition 20 times) CB12-CD12-XD10-XB10: 4 VA CB20-CD20: 6 VA XD10-XB10 with extension: 7.5 VA XD26-XB26: 7.5 VA XD26-XB26 with extension: 10 VA 1780 V AC	100 →240 V A -15 % / +10 % or 85 V AC →2 50/60 Hz (+ 4 10 ms (repetiti CB12-CD12-XI CB20-CD20: XD10-XB10 w XD26-XB26: XD26-XB26 w 1780 V AC	264 V AC % / - 6 %) or 47 → on 20 times) D10-XB10 : 7 VA 11 VA ith extension : 12 \ 12 VA ith extension : 17 \	/A /A	
Response time Clock data retention Clock drift Timer block accuracy Start up time on power up Characteristics of products with AC power su Supply Nominal voltage Operating limits Supply frequency range Immunity from micro power cuts Max. absorbed power	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord of the state of	100 →240 V A -15 % / +10 % or 85 V AC →2 50/60 Hz (+ 4 10 ms (repetiti CB12-CD12-XI CB20-CD20: XD10-XB10 w XD26-XB26: XD26-XB26 w 1780 V AC	264 V AC % / - 6 %) or 47 → on 20 times) D10-XB10 : 7 VA 11 VA ith extension : 12 \ 12 VA ith extension : 17 \ 0 →240 V AC (-15	/A /A	
Response time Clock data retention Clock drift Timer block accuracy Start up time on power up Characteristics of products with AC power su Supply Nominal voltage Operating limits Supply frequency range Immunity from micro power cuts Max. absorbed power	Ladder: typically 20 ms Input acquisition time: 1 to 2 cycle times 10 years (lithium battery) at 25 °C Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable cord) 1 % ± 2 cycle times < 1,2 s pplied 24 V AC -15 % / +20 % or 20.4 V AC—28.8 V AC 50/60 Hz (+4 % / -6 %) or 47 →53 Hz/57 →63 Hz 10 ms (repetition 20 times) CB12-CD12-XD10-XB10: 4 VA CB20-CD20: 6 VA XD10-XB10 with extension: 7.5 VA XD26-XB26: 7.5 VA XD26-XB26 with extension: 10 VA 1780 V AC	100 →240 V A -15 % / +10 % or 85 V AC →2 50/60 Hz (+ 4 10 ms (repetiti CB12-CD12-XI CB20-CD20: XD10-XB10 w XD26-XB26: XD26-XB26 w 1780 V AC 100 0.2	264 V AC % / - 6 %) or 47 → on 20 times) D10-XB10 : 7 VA 11 VA ith extension : 12 \ 12 VA ith extension : 17 \	/A /A % / +10 %)	

27/04/2015 www.crouzet.com

Input impedance Logic 1 voltage threshold			www.crouzet.com
Logic 1 voltage threshold	4.6 kΩ		350 kΩ
			≥ 79 V AC
Making current at logic state 1			> 0.17 mA
Logic 0 voltage threshold	≤5 V AC		≤ 20 V AC (≤ 28 V AC : XE10, XR06, XR10, XR14)
Release current at logic state 0	< 0.5 mA		< 0.5 mA
Response time with LADDER programming	50 ms		50 ms
	State 0 →1 (50/60 Hz)		State 0 →1 (50/60 Hz)
Response time with function blocks programming	Configurable in increments of 10 ms		Configurable in increments of 10 ms
	50 ms min. up to 255 ms		50 ms min. up to 255 ms
	State 0 →1 (50/60 Hz)		State 0 →1 (50/60 Hz)
Maximum counting frequency	In accordance with cycle time (Tc) and input	t response time (Tr):	In accordance with cycle time (Tc) and input response time (Tr):
	1/ ((2 x Tc) + Tr)		1/ ((2 x Tc) + Tr)
Sensor type			Contact or 3-wire PNP
Input type	Resistive		Resistive
Isolation between power supply and inputs	None N		None
Isolation between inputs	None		None
Protection against polarity inversions	Yes		Yes
Status indicator	On LCD screen for CD and XD		On LCD screen for CD and XD
			0.1.2.2.2.3.1.3.1.2.2.3.2.2.2.2
Characteristics of relay outputs common to the			
Max. breaking voltage	5 →30 V DC		
	24 →250 V AC		
Breaking current	CB-CD-XD10-XB10-XR06-XR10 : 8 A		
	XD26-XB26 : 8 x 8 A relays, 2 x 5 A relays		
	XE10: 4 x 5 A relays		
	XR14: 4 x 8 A relays, 2 x 5 A relays	· verify the maximum of	current according to the type of connection used
Floatrical durability for 500 000 apprating evalue	•	. verily the maximum c	arront according to the type of confidential used
Electrical durability for 500 000 operating cycles	Utilization category DC-12 : 24 V, 1.5 A Utilization category DC-13 : 24 V (L/R = 10 n	ns) 0.6.A	
	Utilization category AC-13 : 24 V (L/R = 10 m Utilization category AC-12 : 230 V, 1.5 A	113), U.U A	
	Utilization category AC-12 : 230 V, 1.5 A Utilization category AC-15 : 230 V, 0.9 A		
Max. Output Common Current	12 A for O8, O9, OA		
Minimum switching capacity	10 mA (at minimum voltage of 12 V)		
Minimum load	12 V, 10 mA		
Maximum rate	Off load : 10 Hz		
Maximum rate	At operating current : 0.1 Hz		
Mechanical life	10,000,000 (operations)		
	In accordance with IEC/EN 60947-1 and IEC/	/EN 60664 4 + 4 IA/	
Voltage for withstanding shocks		EN 00004-1.4 KV	
Off-cycle response time	Make 10 ms Release 5 ms		
Built in protections			
Built-in protections	Against short-circuits : None Against overvoltages and overloads : None		
Charles in discrete	On LCD screen for CD and XD		
Status indicator	On LCD screen for CD and XD		
Characteristics of product with DC power suppli	ed		
Normalis.			
Supply	40 V DO	041// DO	
Nominal voltage	12 V DC 24 V DC		
Operating limits			
	-13 % / +20 %	-20 % / +25 %	200 (including single)
	or 10.4 V DC→14.4 V DC (including ripple)	-20 % / +25 % or 19.2 V DC→30 V [· · · · · · · · · · · · · · · · · · ·
Immunity from micro power cuts		-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20	times)
	or 10.4 V DC→14.4 V DC (including ripple)	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W
Immunity from micro power cuts	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times)	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela	times) ith solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W
Immunity from micro power cuts	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs : 1.5 W	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solid	times) ith solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W
Immunity from micro power cuts	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs : 1.5 W CD12 : 1.5 W	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W
Immunity from micro power cuts	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs : 1.5 W CD12 : 1.5 W CD20 : 2.5 W	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solid CB20-CD20 with rela XD26 with relay outp	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W uts : 6 W
Immunity from micro power cuts	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs : 1.5 W CD12 : 1.5 W CD20 : 2.5 W XD26-XB26 : 3 W	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte	times) ith solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W uts : 6 W ension : 8 W
Immunity from micro power cuts Max. absorbed power	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte	times) ith solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W uts : 6 W ension : 8 W
Immunity from micro power cuts	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte	times) ith solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W uts : 6 W ension : 8 W
Immunity from micro power cuts Max. absorbed power	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte	times) ith solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W uts : 6 W ension : 8 W
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte	times) ith solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W uts : 6 W ension : 8 W
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY)	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W ension : 8 W ension : 10 W
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W tuts : 6 W ension : 8 W ension : 10 W
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte	times) ith solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W yy outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte	times) ith solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W yy outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 VDC 2.7 kΩ	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte	times) ith solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kΩ
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current Input impedance Logic 1 voltage threshold	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 VDC 2.7 kΩ ≥ 7 V DC	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kΩ ≥ 15 V DC
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current Input impedance Logic 1 voltage threshold Making current at logic state 1	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 VDC 2.7 kΩ ≥ 7 V DC ≥ 2 mA	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kΩ ≥ 15 V DC ≥ 2.2 mA
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current Input impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 VDC 2.7 kΩ ≥ 7 V DC ≥ 2 mA ≤ 3 V DC	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kΩ ≥ 15 V DC ≥ 2.2 mA ≤ 5 V DC
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current Input impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 VDC 2.7 kΩ ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kΩ ≥ 15 V DC ≥ 2.2 mA ≤ 5 V DC < 0.75 mA
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current Input impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 VDC 2.7 kΩ ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times + 6 ms	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte Yes	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W yy outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kQ ≥ 15 V DC ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times + 6 ms
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current Input impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs : 1.5 W CD12 : 1.5 W CD20 : 2.5 W XD26-XB26 : 3 W XD26-XB26 with extension : 5 W XD26 with solid state outputs : 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 VDC 2.7 kΩ ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times + 6 ms Inputs I1 & I2 : FBD (up to 6 k Hz) & Ladder (-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte Yes	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W yy outputs : 6 W outs : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kΩ ≥ 15 V DC ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times + 6 ms Inputs I1 & I2 : FBD (up to 6 k Hz) & Ladder (1 k Hz)
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current Input impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26-XB26 with extension: 5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 VDC 2.7 kΩ ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times + 6 ms Inputs I1 & I2: FBD (up to 6 k Hz) & Ladder (Inputs I3 to IA & IH to IY: In accordance with	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte Yes	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W yo outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kΩ ≥ 15 V DC ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times + 6 ms Inputs I1 & I2 : FBD (up to 6 k Hz) & Ladder (1 k Hz) Inputs I3 to IA & IH to IY : In accordance with cycle time (Tc) and
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current Input impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 VDC 2.7 kΩ ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 → 2 cycle times + 6 ms Inputs I1 & I2: FBD (up to 6 k Hz) & Ladder (Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr)	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte Yes	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kΩ ≥ 15 V DC ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times + 6 ms Inputs I1 & I2 : FBD (up to 6 k Hz) & Ladder (1 k Hz) Inputs I3 to IA & IH to IY : In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr)
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current Input impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 VDC 2.7 kΩ ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 → 2 cycle times + 6 ms Inputs I1 & I2: FBD (up to 6 k Hz) & Ladder (Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte Yes	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kΩ ≥ 15 V DC ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times + 6 ms Inputs I1 & I2 : FBD (up to 6 k Hz) & Ladder (1 k Hz) Inputs I3 to IA & IH to IY : In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current Input impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 VDC 2.7 kΩ ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 → 2 cycle times + 6 ms Inputs I1 & I2: FBD (up to 6 k Hz) & Ladder (Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte Yes	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kΩ ≥ 15 V DC ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times + 6 ms Inputs 11 & 12 : FBD (up to 6 k Hz) & Ladder (1 k Hz) Inputs 13 to IA & IH to IY : In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current Input impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 VDC 2.7 kΩ ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 → 2 cycle times + 6 ms Inputs I1 & I2: FBD (up to 6 k Hz) & Ladder (Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte Yes	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kΩ ≥ 15 V DC ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times + 6 ms Inputs I1 & I2 : FBD (up to 6 k Hz) & Ladder (1 k Hz) Inputs I3 to IA & IH to IY : In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current Input impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 VDC 2.7 kΩ ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 → 2 cycle times + 6 ms Inputs I1 & I2: FBD (up to 6 k Hz) & Ladder (Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte Yes	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kΩ ≥ 15 V DC ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times + 6 ms Inputs I1 & I2 : FBD (up to 6 k Hz) & Ladder (1 k Hz) Inputs I3 to IA & IH to IY : In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current Input impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 VDC 2.7 kΩ ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 → 2 cycle times + 6 ms Inputs I1 & I2: FBD (up to 6 k Hz) & Ladder (Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte Yes	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kΩ ≥ 15 V DC ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times + 6 ms Inputs I1 & I2 : FBD (up to 6 k Hz) & Ladder (1 k Hz) Inputs I3 to IA & IH to IY : In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current Input impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 VDC 2.7 kΩ ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times + 6 ms Inputs I1 & I2: FBD (up to 6 k Hz) & Ladder (Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte Yes	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W y outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kΩ ≥ 15 V DC ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times + 6 ms Inputs I1 & I2 : FBD (up to 6 k Hz) & Ladder (1 k Hz) Inputs I3 to IA & IH to IY : In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current Input impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 V DC 2.7 kΩ ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times + 6 ms Inputs I1 & I2: FBD (up to 6 k Hz) & Ladder (Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte Yes	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W yy outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kΩ ≥ 15 V DC ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times + 6 ms Inputs I1 & I2 : FBD (up to 6 k Hz) & Ladder (1 k Hz) Inputs I3 to IA & IH to IY : In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current Input impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 VDC 2.7 kΩ ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times + 6 ms Inputs I1 & I2 : FBD (up to 6 k Hz) & Ladder (Inputs I3 to I & IH to IY: In accordance with input response time (Tr): 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None None	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte Yes	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W yy outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kΩ ≥ 15 V DC ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times + 6 ms Inputs I1 & I2 : FBD (up to 6 k Hz) & Ladder (1 k Hz) Inputs I3 to IA & IH to IY : In accordance with cycle time (Tc) and input response time (Tr) : 1 / ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None None
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current Input impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Analogue or digital inputs (IB to IG)	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 VDC 2.7 kΩ ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times + 6 ms Inputs I1 & I2: FBD (up to 6 k Hz) & Ladder (Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte Yes	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W yy outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kΩ ≥ 15 V DC ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times + 6 ms Inputs I1 & I2 : FBD (up to 6 k Hz) & Ladder (1 k Hz) Inputs I3 to IA & IH to IY : In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD
Immunity from micro power cuts Max. absorbed power Protection against polarity inversions Digital inputs (I1 to IA and IH to IY) Input voltage Input current Input impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator	or 10.4 V DC→14.4 V DC (including ripple) ≤ 1 ms (repetition 20 times) CB12 with solid state outputs: 1.5 W CD12: 1.5 W CD20: 2.5 W XD26-XB26: 3 W XD26-XB26 with extension: 5 W XD26 with solid state outputs: 2.5 W Yes 12 V DC (-13 % / +20 %) 3.9 mA @ 10.44 V DC 4.4 mA @ 12.0 V DC 5.3 mA @ 14.4 VDC 2.7 kΩ ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times + 6 ms Inputs I1 & I2 : FBD (up to 6 k Hz) & Ladder (Inputs I3 to I & IH to IY: In accordance with input response time (Tr): 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None None	-20 % / +25 % or 19.2 V DC→30 V I ≤ 1 ms (repetition 20 CB12-CD12-CD20 wi XD10-XB10 with rela XD26-XB26 with solic CB20-CD20 with rela XD26 with relay outp XD10-XB10 with exte XD26-XB26 with exte Yes	times) th solid state outputs - XD10-XB10 with solid state outputs : 3 W y outputs : 4 W d state outputs : 5 W yy outputs : 6 W uts : 6 W ension : 8 W ension : 10 W 24 V DC (-20 % / +25 %) 2.6 mA @ 19.2 V DC 3.2 mA @ 24 V DC 4.0 mA @ 30.0 VDC 7.4 kΩ ≥ 15 V DC ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times + 6 ms Inputs I1 & I2 : FBD (up to 6 k Hz) & Ladder (1 k Hz) Inputs I3 to IA & IH to IY : In accordance with cycle time (Tc) and input response time (Tr) : 1 / ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None None

27/04/2015 www.crouzet.com

27/04/2015		www.crouzet.com	
Inputs used as analogue inputsonly in FBD	(0(0.))	(0(0.))	
Measurement range Input impedance	$(0 \rightarrow 10 \text{ V})$ or $(0 \rightarrow \text{V})$ power supply) 14 k Ω	$(0 \rightarrow 10 \text{ V}) \text{ or } (0 \rightarrow \text{V power supply})$ 12 k Ω	
Input voltage	14.4 V DC max.	30 V DC max.	
Value of LSB	14.4 V 56 max.	29 mV	
Input type	Common mode	Common mode	
Resolution	10 bit at max. input voltage	10 bit at max. input voltage	
Conversion time	Controller cycle time	Controller cycle time	
Accuracy at 25 °C	± 5 %	± 5 %	
Accuracy at 55 °C	± 6.2 %	± 6.2 %	
Repeat accuracy at 55 °C	± 2 %	± 2 %	
Isolation between analogue channel and power supply	None	None	
Cable length Protection against polarity inversions	10 m maximum, with shielded cable (sensor not isolated) Yes	10 m maximum, with shielded cable (sensor not isolated) Yes	
Potentiometer control	2.2 kΩ/0.5 W (recommended)	2.2 kΩ/0.5 W (recommended)	
1 definion etci connoi	10 kΩ max.	10 k Ω max.	
Inputs used as digital inputs			
Input voltage	12 V DC (-13 % / +20 %)	24 V DC (-20 % / +25 %)	
Input current	0.7 mA @ 10.44 VDC	1.6 mA @ 19.2 VDC	
	0.9 mA @ 12.0 VDC	2.0 mA @ 24.0 V DC	
	1.0 mA @ 14.4VDC	2.5 mA @ 30.0 VDC	
Input impedance	14 kΩ	12 kΩ	
Logic 1 voltage threshold	≥7 V DC	≥ 15 VDC	
Making current at logic state 1 Logic 0 voltage threshold	≥ 0.5 mA ≤ 3 V DC	≥ 1.2 mA ≤ 5 V DC	
Release current at logic state 0	≤ 0.2 mA	≤ 0.5 mA	
Response time	1 →2 cycle times	1 →2 cycle times	
Maximum counting frequency in FBD	In accordance with cycle time (Tc) and input response time (Tr):	In accordance with cycle time (Tc) and input response time (Tr):	
	1/ ((2 x Tc) + Tr)	1/ ((2 x Tc) + Tr)	
Sensor type	Contact or 3-wire PNP	Contact or 3-wire PNP	
Conforming to IEC/EN 61131-2	Type 1	Type 1	
Input type	Resistive	Resistive	
Isolation between power supply and inputs	None	None	
Isolation between inputs	None	None	
Protection against polarity inversions Status indicator	Yes	Yes	
	On LCD screen for CD and XD	On LCD screen for CD and XD	
Characteristics of relay outputs common to the e			
Max. breaking voltage	5 →30 V DC 24 →250 V AC		
Max. Output Common Current	12A (10A UL) for O8, O9, OA		
Breaking current	CB-CD-XD10-XB10-XR06-XR10 : 8 A		
Distance of the second of the	CB-CD-XD10-XB10-XR10 : 8 A XD26-XB26 : 8 x 8 A relays, 2 x 5 A relays		
	XE10 : 4 x 5 A relays		
	XR14 : 4 x 8 A relays, 2 x 5 A relays		
Electrical durability for 500 000 operating cycles	Utilization category DC-12 : 24 V, 1.5 A Utilization category DC-13 : 24 V (L/R = 10 ms), 0.6 A		
	Utilization category AC-12 : 230 V, 1.5 A		
	Utilization category AC-15 : 230 V, 0.9 A		
Minimum switching capacity	10 mA (at minimum voltage of 12 V)		
Minimum load	12 V, 10 mA		
Maximum rate	Off load : 10 Hz		
MANAGE AND ALLEGO	At operating current : 0.1 Hz		
Mechanical life	10,000,000 (operations)		
Voltage for withstanding shocks	In accordance with IEC/EN 60947-1 and IEC/EN 60664-1 : 4 kV Make 10 ms		
Off-cycle response time	Release 5 ms		
Built-in protections	Against short-circuits : None		
	Against overvoltages and overloads : None		
Status indicator	On LCD screen for CD and XD		
Digital / PWM solid state output			
PWM solid state output*	CB12: O4	CD12-XD10-XB10 : O4	
10.1	XD26 : O4 →O7	CD20-XD26-XB26 : O4 →O7	
* Only available with "FBD" programming language	* Only available with "FBD" programming language	40.0 001/100	
Breaking voltage	10.4 →30 V DC	19.2 →30 V DC	
Nominal voltage Nominal current	12-24 VDC 0.5 A	24 V DC 0.5 A	
Max. breaking current	0.5 A 0,625 A	0.625 A	
Voltage drop	≤ 2 V for I = 0.5 A (at state 1)	≤ 2 V for I = 0.5 A (at state 1)	
	Make ≤ 1 ms	Make ≤ 1 ms	
Response time			
Response time	Release ≤ 1 ms	Release ≤ 1 ms	
Operating frequency	Release ≤ 1 ms 1 Maximum on inductive load	1 Maximum on inductive load	
	Release ≤ 1 ms 1 Maximum on inductive load Against overloads and short-circuits : Yes	1 Maximum on inductive load Against overloads and short-circuits : Yes	
Operating frequency	Release ≤ 1 ms 1 Maximum on inductive load Against overloads and short-circuits : Yes Against overvoltages (*) : Yes	Maximum on inductive load Against overloads and short-circuits: Yes Against overvoltages (*): Yes	
Operating frequency	Release ≤ 1 ms 1 Maximum on inductive load Against overloads and short-circuits : Yes Against overvoltages (*) : Yes Against inversions of power supply : Yes	Maximum on inductive load Against overloads and short-circuits: Yes Against overvoltages (*): Yes Against inversions of power supply: Yes	
Operating frequency	Release ≤ 1 ms 1 Maximum on inductive load Against overloads and short-circuits : Yes Against overvoltages (*) : Yes	Maximum on inductive load Against overloads and short-circuits: Yes Against overvoltages (*): Yes	
Operating frequency	Release ≤ 1 ms 1 Maximum on inductive load Against overloads and short-circuits: Yes Against overvoltages (*): Yes Against inversions of power supply: Yes (*) In the absence of a volt-free contact between the logic	Maximum on inductive load Against overloads and short-circuits: Yes Against overvoltages (*): Yes Against inversions of power supply: Yes (*) In the absence of a volt-free contact between the logic	
Operating frequency Built-in protections	Release ≤ 1 ms 1 Maximum on inductive load Against overloads and short-circuits: Yes Against overvoltages (*): Yes Against inversions of power supply: Yes (*) In the absence of a volt-free contact between the logic controller output and the load 1 mA 0,2 A / 12 V DC	Maximum on inductive load Against overloads and short-circuits: Yes Against overvoltages (*): Yes Against inversions of power supply: Yes (*) In the absence of a volt-free contact between the logic controller output and the load 1 mA	
Operating frequency Built-in protections Min. load	Release ≤ 1 ms 1 Maximum on inductive load Against overloads and short-circuits: Yes Against overvoltages (*): Yes Against inversions of power supply: Yes (*) In the absence of a volt-free contact between the logic controller output and the load 1 mA	Maximum on inductive load Against overloads and short-circuits: Yes Against overvoltages (*): Yes Against inversions of power supply: Yes (*) In the absence of a volt-free contact between the logic controller output and the load	

27/04/2015 www.crouzet.com

PWM frequency	14.11 Hz	14.11 Hz
	56.45 Hz	56.45 Hz
	112.90 Hz	112.90 Hz
	225.80 Hz	225.80 Hz
	451.59 Hz	451.59 Hz
	1806.37 Hz	1806.37 Hz
PWM cyclic ratio	0 →100 % (256 steps for CD, XD and 1024 steps for XA)	$0 \rightarrow 100 \%$ (256 steps for CD, XD and 1024 steps for XA)
Max. Breaking current PWM	50 mA	50 mA
Max. cable length PWM	20 m	20 m
PWM accuracy at 120 Hz	< 5 % (20 % →80 %) load at 10 mA	< 5 % (20 % →80 %) load at 10 mA
PWM accuracy at 500 Hz	< 10 % (20 % →80 %) load at 10 mA	< 10 % (20 % →80 %) load at 10 mA
Status indicator	On LCD screen for XD	On LCD screen for CD and XD

