## **Excellent Integrated System Limited**

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

Crouzet Automation 88970001

For any questions, you can email us directly: <a href="mailto:sales@integrated-circuit.com">sales@integrated-circuit.com</a>



### **Distributor of Crouzet Automation: Excellent Integrated System Limited**

Datasheet of 88970001 - CONTROL LOGIC 8 IN 4 OUT 24V

Contact us: sales@integrated-circuit.com Website: www.integrated-circuit.com

www.crouzet.com



### Bare board version NB12 Part number 88970001



- Easy and discreet integration into your applications
- Mass-production applications
- Memory: up to 350 "typical" blocks in FBD language and 120 lines in LADDER language
- Compact dimensions
- Range of controllers for use with application specific functions

Part numbers Part numbers					
	Type	Inputs	Outputs	Supply	
88	970001 NB12	8 digital (of which 4 are analogue)	4 relays	24 V DC	

#### Specifications

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 61000-6-2, 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
Overvoltage category	IP20 on terminal block 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 x 7.5 mm and 35 x 15 mm, or on panel (2 x Ø 4 mm)
Screw terminals connection capacity	Flexible wire with ferrule =
	1 conductor : 0.25 to 2.5 mm <sup>2</sup> (AWG 24AWG 14)
	2 conductors 0.25 to 0.75 mm <sup>2</sup> (AWG 24AWG 18) Semi-rigid wire =
	1 conductor : 0.2 to 2.5 mm <sup>2</sup> (AWG 25AWG 14)
	Rigid wire = 1 conductor : 0.2 to 2.5 mm <sup>2</sup> (AWG 25AWG 14)
	1 conductor : 0.2 to 2.5 mm <sup>-</sup> (AWG 25AWG 14) 2 conductors 0.2 to 1.5 mm <sup>2</sup> (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)



# **Distributor of Crouzet Automation: Excellent Integrated System Limited**Datasheet of 88970001 - CONTROL LOGIC 8 IN 4 OUT 24V

Contact us: sales@integrated-circuit.com Website: www.integrated-circuit.com

www.crouzet.com

the state of the s	General characteristics					
Protection rating	IP00					
Processing characteristics of CB, CD, XD & XB pr	Processing characteristics of CB, CD, XD & XB product types					
LCD display						
	ogramming method Function blocks / SCF (Grafcet) or Ladder					
Program size	8 Kb : 350 typical blocks, 64 macros maximum, 256 blocks maximum per macro or					
	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 years					
	Program and settings in the plug-in memory : 10 years					
Cycle time	Data memory : 10 years  FBD : 6 →90 ms (typically 20 ms)					
	Ladder: typically 20 ms					
Response time	Input acquisition time: 1 to 2 cycle times					
Clock data retention	10 years (lithium battery) at 25 °C					
Clock drift	Drift < 12 min/year (at 25 °C) 6 s/month (at 25 °C with user-definable correction of dr	ift)				
Timer block accuracy	1 % ± 2 cycle times	iit <i>)</i>				
Start up time on power up	< 1,2 s					
Characteristics of products with AC power suppl	,					
Supply Naminal valtage	24 V AC	100 044	NVAC			
Nominal voltage  Operating limits	24 V AC -15 % / +20 %	100 →240 -15 % / +1				
Operating littles	or 20.4 V AC→28.8 V AC		C→264 V AC			
Supply frequency range	50/60 Hz (+4 % / -6 %)					
	or 47 →53 Hz/57 →63 Hz	50/60 HZ	(+ 4 % / - 6 %) or 47 →53 Hz/57 →63 Hz			
Immunity from micro power cuts	10 ms (repetition 20 times)		petition 20 times)			
Max. absorbed power	CB12-CD12-XD10-XB10 : 4 VA		12-XD10-XB10 : 7 VA			
	CB20-CD20 : 6 VA XD10-XB10 with extension : 7.5 VA		20 : 11 VA 10 with extension : 12 VA			
	XD26-XB26 : 7.5 VA		26 : 12 VA			
	XD26-XB26 with extension : 10 VA	XD26-XB2	26 with extension: 17 VA			
Isolation voltage	1780 V AC	1780 V A				
Inputs						
Input voltage	24 V AC (-15 % / +20 %)		100 →240 V AC (-15 % / +10 %)			
Input current	4.4 mA @ 20.4 V AC		0.24 mA @ 85 V AC			
	5.2 mA @ 24.0 V AC 6.3 mA @ 28.8 V AC		0.75 mA @ 264 V AC			
Input impedance	4.6 kΩ		350 kΩ			
Logic 1 voltage threshold	≥ 14 V AC		≥ 79 V AC			
Making current at logic state 1	> 2 mA		> 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			
Despense time with function blocks programing	State 0 →1 (50/60 Hz)		State 0 →1 (50/60 Hz)			
Response time with function blocks programming	Configurable in increments of 10 ms 50 ms min. up to 255 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 (30/00 112)		State 0 →1 (50/60 Hz)			
Maximum counting frequency	In accordance with cycle time (Tc) and input response ti	me (Tr) :	In accordance with cycle time (Tc) and input response time (Tr):			
	In accordance with cycle time (Tc) and input response to 1/ ( (2 x Tc) + Tr)	me (Tr):	In accordance with cycle time (Tc) and input response time (Tr) : 1/ ( (2 x Tc) + Tr) $$			
Sensor type	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr) Contact or 3-wire PNP	me (Tr):	In accordance with cycle time (Tc) and input response time (Tr) : 1/ ( $(2 \times Tc) + Tr)$ Contact or 3-wire PNP			
Sensor type Input type	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr) Contact or 3-wire PNP Resistive	me (Tr) :	In accordance with cycle time (Tc) and input response time (Tr) : 1/ ( $(2 \times Tc) + Tr)$ Contact or 3-wire PNP Resistive			
Sensor type Input type Isolation between power supply and inputs	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr) Contact or 3-wire PNP Resistive None	ime (Tr) :	In accordance with cycle time (Tc) and input response time (Tr):  1/ ( (2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr) Contact or 3-wire PNP Resistive	me (Tr) :	In accordance with cycle time (Tc) and input response time (Tr) : 1/ ( $(2 \times Tc) + Tr)$ Contact or 3-wire PNP Resistive			
Sensor type Input type Isolation between power supply and inputs	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr) Contact or 3-wire PNP Resistive None None	me (Tr) :	In accordance with cycle time (Tc) and input response time (Tr) : 1/ ( (2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  None			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr) Contact or 3-wire PNP Resistive None None Yes On LCD screen for CD and XD	me (Tr) :	In accordance with cycle time (Tc) and input response time (Tr):  1/ ( (2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  None  Yes			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Characteristics of relay outputs common to the experiments of the sense of the s	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr) Contact or 3-wire PNP Resistive None None Yes On LCD screen for CD and XD entire range	me (Tr) :	In accordance with cycle time (Tc) and input response time (Tr):  1/ ( (2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  None  Yes			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr) Contact or 3-wire PNP Resistive None None Yes On LCD screen for CD and XD	me (Tr) :	In accordance with cycle time (Tc) and input response time (Tr):  1/ ( (2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  None  Yes			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Characteristics of relay outputs common to the experiments of the sense of the s	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr) Contact or 3-wire PNP Resistive None None Yes On LCD screen for CD and XD entire range 5 →30 V DC	me (Tr) :	In accordance with cycle time (Tc) and input response time (Tr):  1/ ( (2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  None  Yes			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Characteristics of relay outputs common to the edition with the selection of the	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr) Contact or 3-wire PNP Resistive None None Ves On LCD screen for CD and XD  **Title range** 5 → 30 V DC 24 → 250 V AC CB-CD-XD10-XB10-XR06-XR10 : 8 A XD26-XB26 : 8 x 8 A relays, 2 x 5 A relays	me (Tr) :	In accordance with cycle time (Tc) and input response time (Tr):  1/ ( (2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  None  Yes			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Characteristics of relay outputs common to the edition in the selection in the se	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr) Contact or 3-wire PNP Resistive None None None Yes On LCD screen for CD and XD  **Titre range** 5 → 30 V DC 24 → 250 V AC 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	me (Tr):	In accordance with cycle time (Tc) and input response time (Tr):  1/ ( (2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  None  Yes			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Characteristics of relay outputs common to the edition with the selection of the	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr) Contact or 3-wire PNP Resistive None None Ves On LCD screen for CD and XD  **Title range** 5 → 30 V DC 24 → 250 V AC CB-CD-XD10-XB10-XR06-XR10 : 8 A XD26-XB26 : 8 x 8 A relays, 2 x 5 A relays		In accordance with cycle time (Tc) and input response time (Tr):  1/ ((2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  None  Yes  On LCD screen for CD and XD			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Characteristics of relay outputs common to the edition with the selection of the	In accordance with cycle time (Tc) and input response ti 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Resistive None None Yes On LCD screen for CD and XD Intire range 5 →30 V DC 24 →250 V AC CB-CD-XD10-XB10-XR06-XR10: 8 A XD26-XB26: 8 x 8 A relays, 2 x 5 A relays XR10: 4 x 5 A relays XR14: 4 x 8 A relays, 2 x 5 A relays		In accordance with cycle time (Tc) and input response time (Tr):  1/ ((2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  None  Yes  On LCD screen for CD and XD			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Characteristics of relay outputs common to the editor. Max. breaking voltage Breaking current	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr) Contact or 3-wire PNP Resistive None None None Yes On LCD screen for CD and XD Interesting 5 → 30 V DC 24 → 250 V AC 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 RBT (Removable Terminal Blocks) versions: verify the I Utilization category DC-12: 24 V, 1.5 A Utilization category DC-13: 24 V (L/R = 10 ms), 0.6 A		In accordance with cycle time (Tc) and input response time (Tr):  1/ ((2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  None  Yes  On LCD screen for CD and XD			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Characteristics of relay outputs common to the editor. Max. breaking voltage Breaking current	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  None  None  Yes  On LCD screen for CD and XD  **Titre range**  5 → 30 V DC  24 → 250 V AC  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  RBT (Removable Terminal Blocks) versions: verify the I  Utilization category DC-12: 24 V, 1.5 A  Utilization category DC-13: 24 V (L/R = 10 ms), 0.6 A  Utilization category DC-12: 230 V, 1.5 A		In accordance with cycle time (Tc) and input response time (Tr):  1/ ((2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  Yes  On LCD screen for CD and XD			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Characteristics of relay outputs common to the end of the sense of	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr) Contact or 3-wire PNP Resistive None None Yes On LCD screen for CD and XD Intire range 5→30 V DC 24→250 V AC 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 RBT (Removable Terminal Blocks) versions: verify the to 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		In accordance with cycle time (Tc) and input response time (Tr):  1/ ((2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  None  Yes  On LCD screen for CD and XD			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Characteristics of relay outputs common to the end of the sense of	In accordance with cycle time (Tc) and input response ti 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Resistive None None Yes On LCD screen for CD and XD Intire range 5→30 V DC 24 →250 V AC 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 RBT (Removable Terminal Blocks) versions: verify the to Utilization category DC-12:24 V, 1.5 A Utilization category AC-15:230 V, 1.5 A Utilization category AC-15:230 V, 0.9 A 12 A for O8, O9, OA		In accordance with cycle time (Tc) and input response time (Tr):  1/ ((2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  None  Yes  On LCD screen for CD and XD			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Characteristics of relay outputs common to the editor of the selection of the sel	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr) Contact or 3-wire PNP Resistive None None Yes On LCD screen for CD and XD Intire range 5→30 V DC 24 →250 V AC 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 XE10:4 x 5 A relays RBT (Removable Terminal Blocks) versions: verify the ti 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 12 A for O8, O9, OA 10 mA (at minimum voltage of 12 V)		In accordance with cycle time (Tc) and input response time (Tr):  1/ ((2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  Yes  On LCD screen for CD and XD			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Characteristics of relay outputs common to the example of the sense	In accordance with cycle time (Tc) and input response ti 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Resistive None None Yes On LCD screen for CD and XD Intire range 5→30 V DC 24 →250 V AC 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 RBT (Removable Terminal Blocks) versions: verify the to Utilization category DC-12:24 V, 1.5 A Utilization category AC-15:230 V, 1.5 A Utilization category AC-15:230 V, 0.9 A 12 A for O8, O9, OA		In accordance with cycle time (Tc) and input response time (Tr):  1/ ((2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  Yes  On LCD screen for CD and XD			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Characteristics of relay outputs common to the office of the state	In accordance with cycle time (Tc) and input response ti 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Resistive None None Yes On LCD screen for CD and XD  Intire range 5→30 V DC 24→250 V AC 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 RBT (Removable Terminal Blocks) versions: verify the I Utilization category DC-12:24 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 12 A for O8, O9, OA 10 mA (at minimum voltage of 12 V) 12 V, 10 mA		In accordance with cycle time (Tc) and input response time (Tr):  1/ ((2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  None  Yes  On LCD screen for CD and XD			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Characteristics of relay outputs common to the editor of the selection of the sel	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr) Contact or 3-wire PNP Resistive None None None Yes On LCD screen for CD and XD Interest and XD I	maximum c	In accordance with cycle time (Tc) and input response time (Tr):  1/ ((2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  None  Yes  On LCD screen for CD and XD			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Characteristics of relay outputs common to the example of the sense	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr) Contact or 3-wire PNP Resistive None None None Yes On LCD screen for CD and XD Intire range 5→30 V DC 24→250 V AC 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 RBT (Removable Terminal Blocks) versions: verify the ti 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-15: 230 V, 1.5 A Utilization category AC-15: 230 V, 0.9 A 12 A for O8, O9, OA 10 mA (at minimum voltage of 12 V) 12 V, 10 mA Off load: 10 Hz At operating current: 0.1 Hz 10,000,000 (operations) In accordance with IEC/EN 60947-1 and IEC/EN 60664-1	maximum c	In accordance with cycle time (Tc) and input response time (Tr):  1/ ((2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  Yes  On LCD screen for CD and XD			
Sensor type Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Characteristics of relay outputs common to the editor of the selection of the sel	In accordance with cycle time (Tc) and input response ti 1/ ( (2 x Tc) + Tr) Contact or 3-wire PNP Resistive None None None Yes On LCD screen for CD and XD Interest and XD I	maximum c	In accordance with cycle time (Tc) and input response time (Tr) : 1/ ( (2 x Tc) + Tr)  Contact or 3-wire PNP  Resistive  None  None  Yes  On LCD screen for CD and XD			



# **Distributor of Crouzet Automation: Excellent Integrated System Limited**Datasheet of 88970001 - CONTROL LOGIC 8 IN 4 OUT 24V

Contact us: sales@integrated-circuit.com Website: www.integrated-circuit.com

Status indicator  Characteristics of product with DC power supplied  Supply  Nominal voltage  Operating limits  -13 % / +2 or 10.4 ∨ D  Immunity from micro power cuts  Max. absorbed power  CB12 with CD12: 1.5 CD20: 2.5 XD26-XB22 XD26 with Protection against polarity inversions  Protection against polarity inversions  Protection against polarity inversions  Input voltage  Input current  3.9 mA @ 5.3 m	C→14.4 V DC (including ripple) etition 20 times) solid state outputs: 1.5 W W W S: 3 W Solid state outputs: 1.5 W Solid state outputs: 5 W Solid state outputs: 2.5 W  13 % / +20 %) 10.44 V DC 12.0 V DC 14.4 V DC 15 FBD (up to 6 k Hz) & Ladder 16 A & IH to IY: In accordance with the stime (Tr): 1/((2 x Tc) + Tr) 3-wire PNP  Teen for CD and XD  →IE →IG	24 V DC -20 % / +25 % or 19.2 V DC→30 \\ ≤ 1 ms (repetition 2 CB12-CD12-CD20 \\ XD10-XB10 with re XD26-XB26 with relay ou XD10-XB10 with ex XD26-XB26 with ex Yes  (1 k Hz) th cycle time (Tc) and	with solid state outputs - XD10-XB10 with solid state outputs : 3 W lay outputs : 4 W lid state outputs : 5 W lay outputs : 6 W puts : 6 W tension : 8 W
Characteristics of product with DC power supplied         Supply       12 V DC         Operating limits       -13 % / +20 or 10.4 V L         Immunity from micro power cuts       ≤ 1 ms (reg         Max. absorbed power       CB12 with CD12 : 1.5 CD20 : 2.5 XD26-XB22 XD26-XB22-XB22-XB22 XD26-XB22 XD26-XB22-XB22-XB22-XB22-XB22-XB22-XB22-XB	0 % C→14.4 V DC (including ripple) etition 20 times) solid state outputs: 1.5 W W W Si: 3 W So with extension: 5 W solid state outputs: 2.5 W  13 % / +20 %) 10.44 V DC 2.0 V DC 2.0 V DC 4.4 VDC  14.4 VDC  15 FBD (up to 6 k Hz) & Ladder IA & IH to IY: In accordance with inse time (Tr): 1/((2 x Tc) + Tr) 3-wire PNP  Treen for CD and XD  →IE →IG	-20 % / +25 % or 19.2 V DC→30 N ≤ 1 ms (repetition 2 CB12-CD12-CD20 · XD10-XB10 with re XD26-XB26 with sc CB20-CD20 with re XD26-XB26 with ex XD26-XB26 with ex Yes  (1 k Hz) th cycle time (Tc) and	O times)  with solid state outputs - XD10-XB10 with solid state outputs : 3 W aly outputs : 4 W lids state outputs : 5 W lay outputs : 6 W tension : 8 W tension : 8 W tension : 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  4 inputs IB →IE
Supply  Nominal voltage Operating limits -13 % / +20 or 10.4 ∨ L Immunity from micro power cuts  ≤ 1 ms (reg Max. absorbed power  CB12 with CD12: 1.5 CD20: 2.5 XD26-XB22 XD26-XB22 XD26 with Protection against polarity inversions  Yes  Digital inputs (I1 to IA and IH to IY) Input voltage Input current -1.4 m A @ 5.3 m A m A 6 m A m A m A m A 6 m A m A m A 6 m A m A m A 6 m A m A m A 6 m A m A m A 6 m A m A m A 6	C→14.4 V DC (including ripple) etition 20 times) solid state outputs: 1.5 W W W S: 3 W Solid state outputs: 1.5 W Solid state outputs: 5 W Solid state outputs: 2.5 W  13 % / +20 %) 10.44 V DC 12.0 V DC 14.4 V DC 15 FBD (up to 6 k Hz) & Ladder 16 A B IH to IY: In accordance with the stime (Tr): 1/((2 x Tc) + Tr) 3-wire PNP  Teen for CD and XD  TEE  TIMES THE STATE OF	-20 % / +25 % or 19.2 V DC→30 N ≤ 1 ms (repetition 2 CB12-CD12-CD20 · XD10-XB10 with re XD26-XB26 with sc CB20-CD20 with re XD26-XB26 with ex XD26-XB26 with ex Yes  (1 k Hz) th cycle time (Tc) and	O times)  with solid state outputs - XD10-XB10 with solid state outputs : 3 W aly outputs : 4 W lids state outputs : 5 W lay outputs : 6 W tension : 8 W tension : 8 W tension : 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  4 inputs IB →IE
Nominal voltage	C→14.4 V DC (including ripple) etition 20 times) solid state outputs: 1.5 W W W S: 3 W Solid state outputs: 1.5 W Solid state outputs: 5 W Solid state outputs: 2.5 W  13 % / +20 %) 10.44 V DC 12.0 V DC 14.4 V DC 15 FBD (up to 6 k Hz) & Ladder 16 A B IH to IY: In accordance with the stime (Tr): 1/((2 x Tc) + Tr) 3-wire PNP  Teen for CD and XD  TEE  TIMES THE STATE OF	-20 % / +25 % or 19.2 V DC→30 N ≤ 1 ms (repetition 2 CB12-CD12-CD20 · XD10-XB10 with re XD26-XB26 with sc CB20-CD20 with re XD26-XB26 with ex XD26-XB26 with ex Yes  (1 k Hz) th cycle time (Tc) and	O times)  with solid state outputs - XD10-XB10 with solid state outputs : 3 W aly outputs : 4 W lids state outputs : 5 W lay outputs : 6 W tension : 8 W tension : 8 W tension : 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  4 inputs IB →IE
Operating limits -13 % / +20 or 10.4 V E	C→14.4 V DC (including ripple) etition 20 times) solid state outputs: 1.5 W W W S: 3 W Solid state outputs: 1.5 W Solid state outputs: 5 W Solid state outputs: 2.5 W  13 % / +20 %) 10.44 V DC 12.0 V DC 14.4 V DC 15 FBD (up to 6 k Hz) & Ladder 16 A B IH to IY: In accordance with the stime (Tr): 1/((2 x Tc) + Tr) 3-wire PNP  Teen for CD and XD  TEE  TIMES THE STATE OF	-20 % / +25 % or 19.2 V DC→30 N ≤ 1 ms (repetition 2 CB12-CD12-CD20 · XD10-XB10 with re XD26-XB26 with sc CB20-CD20 with re XD26-XB26 with ex XD26-XB26 with ex Yes  (1 k Hz) th cycle time (Tc) and	O times)  with solid state outputs - XD10-XB10 with solid state outputs : 3 W aly outputs : 4 W lids state outputs : 5 W lay outputs : 6 W tension : 8 W tension : 8 W tension : 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  4 inputs IB →IE
Immunity from micro power cuts  Max. absorbed power  CB12 with CD12: 1.5. CD20: 2.5 XD26-XB20 Input ourrent  3.9 mA @ 4.4 mA @ 5.3 mA @ 4.5 mA @ 5.3 mA @ 4.6 mA @ 5.3 mA @ 4.6 mA @ 5.3 mA @ 6.5 mA M M 6.5 mA M 6.	C→14.4 V DC (including ripple) etition 20 times) solid state outputs: 1.5 W W W S: 3 W Solid state outputs: 1.5 W Solid state outputs: 5 W Solid state outputs: 2.5 W  13 % / +20 %) 10.44 V DC 12.0 V DC 14.4 V DC 15 FBD (up to 6 k Hz) & Ladder 16 A B IH to IY: In accordance with the stime (Tr): 1/((2 x Tc) + Tr) 3-wire PNP  Teen for CD and XD  TEE  TIMES THE STATE OF	or 19.2 V DC→30 \\ ≤ 1 ms (repetition 2 \\ CB12-CD12-CD20 \\ XD10-XB10 with re \\ XD26-XB26 with set \\ XD26-XB26 with relay ou \\ XD10-XB10 with ex \\ XD26-XB26 with ex \\ Yes align*	O times)  with solid state outputs - XD10-XB10 with solid state outputs : 3 W aly outputs : 4 W lids state outputs : 5 W lay outputs : 6 W tension : 8 W tension : 8 W tension : 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  4 inputs IB →IE
Immunity from micro power cuts  Max. absorbed power  CB12 with CD12: 1.5 CD20: 2.5 XD26-XB2 XD26-XB2 XD26 with  Protection against polarity inversions  Protection a	etition 20 times)  solid state outputs: 1.5 W  W  W  S: 3 W  Solid state outputs: 1.5 W  solid state outputs: 5 W  solid state outputs: 2.5 W  13 % / +20 %)  10.44 V DC  2.0 V DC  2.0 V DC  4.4 VDC  Itimes + 6 ms  12: FBD (up to 6 k Hz) & Ladder  IA & IH to IY: In accordance with the state outputs is 1/( (2 x Tc) + Tr)  3-wire PNP  Teen for CD and XD  →IE  →IG	\$ 1 ms (repetition 2 CB12-CD12-CD20 XD10-XB10 with re XD26-XB26 with re XD26 with relay ou XD10-XB10 with ex XD26-XB26 with ex Yes  (1 k Hz) th cycle time (Tc) and	O times)  with solid state outputs - XD10-XB10 with solid state outputs : 3 W aly outputs : 4 W lids state outputs : 5 W lay outputs : 6 W tension : 8 W tension : 8 W tension : 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  4 inputs IB →IE
Max. absorbed power  CB12 with CD12 : 1.5 CD20 : 2.5 XD26-XB22 XD26 with CD12 input Voltage Input current  Analogue or digital inputs (I to IA and IH to IY)  Input voltage 12 V DC (-  3.9 mA @ 4.4 mA @ 5.3 mA	solid state outputs: 1.5 W W W S: 3 W S with extension: 5 W solid state outputs: 2.5 W  13 % / +20 %) 10.44 V DC 2.0 V DC 14.4 VDC  14.4 VDC  15 FBD (up to 6 k Hz) & Ladder 16 A & IH to IY: In accordance with the setting (Tr): 1/((2 x Tc) + Tr)  3-wire PNP  Teen for CD and XD  →IE →IG	CB12-CD12-CD20 XD10-XB10 with re XD26-XB26 with sc CB20-CD20 with re XD26 with relay ou XD10-XB10 with ex XD26-XB26 with ex Yes  (1 k Hz) th cycle time (Tc) and	with solid state outputs - XD10-XB10 with solid state outputs : 3 W lay outputs : 4 W lid state outputs : 5 W lay outputs : 6 W lension : 8 W tension : 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
CB12 with CD12: 1.5 CD20: 2.5 XD26-XB21 XD26-XB21 XD26 with  Protection against polarity inversions  Protection against pola	W W S is 3 W S with extension: 5 W solid state outputs: 2.5 W  13 % / +20 %) 10.44 V DC 12.0 V DC 14.4 VDC  14.4 VDC  15 FBD (up to 6 k Hz) & Ladder 16 A lH to IY: In accordance with the limit of the	XD10-XB10 with re XD26-XB26 with sc CB20-CD20 with re XD26 with relay ou XD10-XB10 with ex XD26-XB26 with ex Yes  (1 k Hz) th cycle time (Tc) and	lay outputs : 4 W ilid state outputs : 5 W lay outputs : 6 W puts : 6 W tension : 8 W tension : 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 Yes On LCD screen for CD and XD
Digital inputs (I1 to IA and IH to IY) Input voltage Input current 3.9 mA @ 4.4 mA @ 5.3 mA @ 1.7 V DC Input impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold S 3 V DC Release current at logic state 0 Response time Input impedance Input input inputs (IB to IG) Maximum counting frequency Input is 1 & Inputs I3 & Input i	times + 6 ms 12 : FBD (up to 6 k Hz) & Ladder IA & IH to IY : In accordance wit nse time (Tr) : 1/ ((2 x Tc) + Tr) 3-wire PNP	(1 k Hz) th cycle time (Tc) and	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
nput voltage  nput current  3.9 mA @ 4.4 mA @ 5.3 mA @ 2.7 kΩ  logic 1 voltage threshold  Accepted 1 voltage threshold  Accepted 2 mA  logic 0 voltage threshold  Accepted 3 V DC  logic 0 voltage threshold  Accepted 4 meshold  Accepted 4 meshold  Accepted 5 meshold  Accepted 6 meshold  Accepted 6 meshold  Accepted 6 meshold  Accepted 7 meshold  Accepted 7 meshold  Accepted 7 meshold  Accepted 8 meshold  Accepted 8 meshold  Accepted 8 meshold  Accepted 9 mesho	times + 6 ms 12 : FBD (up to 6 k Hz) & Ladder IA & IH to IY : In accordance wit nse time (Tr) : 1/ ((2 x Tc) + Tr) 3-wire PNP	th cycle time (Tc) and	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
any current 3.9 mA @ 4.4 mA @ 5.3 mA @ 2.7 kΩ \	times + 6 ms 12 : FBD (up to 6 k Hz) & Ladder IA & IH to IY : In accordance wit nse time (Tr) : 1/ ((2 x Tc) + Tr) 3-wire PNP	th cycle time (Tc) and	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
4.4 mA @ 5.3 mA @ 2.7 kΩ  logic 1 voltage threshold  Alaking current at logic state 1  logic 0 voltage threshold  Selease current at logic state 0  Release current at logic state 0  Response time  1 →2 cycle  Maximum counting frequency  Inputs 11 & Inputs 11 & Inputs 13 to input response time  Conforming to IEC/EN 61131-2  Input type  Resistive  Rolation between power supply and inputs  None  Protection against polarity inversions  Status indicator  Inalogue or digital inputs (IB to IG)  B12-CD12-XD10-XB10  B12-CD12-XD10-XB10  CB20-CD20-XB26-XD26  Inputs used as analogue inputsonly in FBD  Measurement range  Input impedance  Input voltage  Input voltage  Input voltage  Input voltage  Input voltage  Input voltage  Input impedance  Input impedance  Input impedance  Input impedance  Input impedance  Input impedance  Input voltage  Input voltage  Input voltage  Input voltage  Input voltage  Input impedance  Input	times + 6 ms  12 : FBD (up to 6 k Hz) & Ladder  IA & IH to IY : In accordance wit  nse time (Tr) : 1/ ( (2 x Tc) + Tr)  3-wire PNP	th cycle time (Tc) and	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
5.3 mA @ 2.7 kΩ  logic 1 voltage threshold  ≥ 7 V DC  laking current at logic state 1  logic 0 voltage threshold  ≥ 2 mA  logic 0 voltage threshold  ≥ 3 V DC  Release current at logic state 0  Response time  linputs 11 state  linputs 11 state  linputs 13 tot  input response time  linput state 1  logic 0 voltage threshold  ≥ 3 V DC  < 0.9 mA  linputs 13 tot  inputs 13 tot  input state  linputs 13 tot  input response time  linput state  linput solation between power supply and inputs  None  Protection against polarity inversions  Perotection against polarity inversions  linputs undicator  line line linputs (IB to IG)  linputs used as analogue inputsonly in FBD  linput voltage  linput voltage  linput impedance  linput impedance  linput state  linput	times + 6 ms 12 : FBD (up to 6 k Hz) & Ladder 1A & IH to IY : In accordance with use time (Tr) : 1/((2 x Tc) + Tr) 3-wire PNP  reen for CD and XD  →IE  →IG	th cycle time (Tc) and	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 Yes On LCD screen for CD and XD
Aput impedance $2.7 \text{ k}\Omega$ Logic 1 voltage threshold $\geq 7 \text{ V DC}$ Making current at logic state 1 $\geq 2 \text{ mA}$ Logic 0 voltage threshold $\leq 3 \text{ V DC}$ Release current at logic state 0 $< 0.9 \text{ mA}$ Response time $1 \rightarrow 2 \text{ cycle}$ Maximum counting frequency       Inputs 11 & Inputs 13 to inputs 13 to input response         Sensor type       Contact or Contact or Type 1         Conforming to IEC/EN 61131-2       Type 1         Resistive       None         solation between power supply and inputs       None         Protection against polarity inversions       Yes         Status indicator       On LCD so         Inputs used as analogue inputs (IB to IG)         Inputs used as analogue inputs only in FBD         Measurement range       (0 $\rightarrow$ 10 V)         Input impedance       14 kΩ         Input voltage       14.4 V DC         Value of LSB       14 mV         Conversion time       Controller of the controller of the course o	times + 6 ms  12 : FBD (up to 6 k Hz) & Ladder  13 & IH to IY : In accordance wit  nse time (Tr) : 1/ ( (2 x Tc) + Tr)  3-wire PNP  reen for CD and XD  →IE  →IG	th cycle time (Tc) and	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 Yes On LCD screen for CD and XD
Logic 1 voltage threshold       ≥ 7 V DC         Making current at logic state 1       ≥ 2 mA         Logic 0 voltage threshold       ≤ 3 V DC         Release current at logic state 0       < 0.9 mA	I2: FBD (up to 6 k Hz) & Ladder IA & IH to IY: In accordance wit nse time (Tr): 1/((2 x Tc) + Tr) 3-wire PNP  reen for CD and XD  →IE  →IG	th cycle time (Tc) and	≥ 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  Yes  On LCD screen for CD and XD
Making current at logic state 1 ≥ 2 mA logic 0 voltage threshold  Release current at logic state 0  Release current at logic state 0  Response time  1 →2 cycle Inputs 11 & Inputs 11 & Inputs 11 & Inputs 12 & Inputs 13 & Input 12 & Input 13	I2: FBD (up to 6 k Hz) & Ladder IA & IH to IY: In accordance wit nse time (Tr): 1/((2 x Tc) + Tr) 3-wire PNP  reen for CD and XD  →IE  →IG	th cycle time (Tc) and	≥ 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 Yes On LCD screen for CD and XD
Selease current at logic state 0  Release current at logic state 0  Response time  1 →2 cycle Maximum counting frequency  Inputs I3 & Input I4 & Input I3 & Input I4 & Input I3 & Input I4 & I	I2: FBD (up to 6 k Hz) & Ladder IA & IH to IY: In accordance wit nse time (Tr): 1/((2 x Tc) + Tr) 3-wire PNP  reen for CD and XD  →IE  →IG	th cycle time (Tc) and	≤ 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
Release current at logic state 0  Response time  1 →2 cycle Inputs 11 & Inputs 13 to input response time  Conforming to IEC/EN 61131-2 Input type Resistive Rolation between power supply and inputs Rolation between inputs Rolation digital inputs (IB to IG) Rolation between rolation digital inputs (IB to IG) Rolation between inputs Rolation	I2: FBD (up to 6 k Hz) & Ladder IA & IH to IY: In accordance wit nse time (Tr): 1/((2 x Tc) + Tr) 3-wire PNP  reen for CD and XD  →IE  →IG	th cycle time (Tc) and	< 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
Response time $1 \rightarrow 2$ cycle Maximum counting frequency Inputs 11 & Inputs 13 to input response time Censor type Contact or Conforming to IEC/EN 61131-2 Type 1  Input type Resistive Resi	I2: FBD (up to 6 k Hz) & Ladder IA & IH to IY: In accordance wit nse time (Tr): 1/((2 x Tc) + Tr) 3-wire PNP  reen for CD and XD  →IE  →IG	th cycle time (Tc) and	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
Maximum counting frequency  Inputs I1 & Inputs I3 to input responsible to the content of the county of the count	I2: FBD (up to 6 k Hz) & Ladder IA & IH to IY: In accordance wit nse time (Tr): 1/((2 x Tc) + Tr) 3-wire PNP  reen for CD and XD  →IE  →IG	th cycle time (Tc) and	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
Inputs 13 to input response to input type. Contact or Type 1 Type 1 Resistive solation between power supply and inputs None Protection against polarity inversions Yes Status indicator On LCD solation between inputs Protection against polarity inversions Yes Status indicator On LCD solation between inputs (IB to IG)  CB12-CD12-XD10-XB10 4 inputs IB CB20-CD20-XB26-XD26 6 inputs IB Protection against polarity inversions Inputs used as analogue inputsonly in FBD  Measurement range (0 $\rightarrow$ 10 V) Measurement range Input voltage Inpu	IA & IH to IY: In accordance witnese time (Tr): 1/((2 x Tc) + Tr) 3-wire PNP  reen for CD and XD  →IE  →IG	th cycle time (Tc) and	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
Conforming to IEC/EN 61131-2  Input type  Resistive  Resistive  Resistive  Rone  Ro	reen for CD and XD →IE →IG		Type 1 Resistive None None Yes On LCD screen for CD and XD  4 inputs IB →IE
Propertype  Resistive  Resistive  Rolation between power supply and inputs  None  Protection against polarity inversions  Residutes indicator  On LCD so  Residutes indicator  A inputs IB  Residutes IB  A inputs IB  A inputs IB  Residutes IN  A inputs IB  A inpu	→IE →IG		Resistive None None Yes On LCD screen for CD and XD  4 inputs IB →IE
Solation between power supply and inputs Solation between inputs (IB to IG) Solation between analogue inputs only in FBD Solation between analogue channel and power supply Solation between analogue channel and power supply Solation between analogue channel and power supply Solation between analogue channel and solation in Solation S	→IE →IG		None None Yes On LCD screen for CD and XD  4 inputs IB →IE
Solation between inputs  Protection against polarity inversions  Protection against polarity inversions  Status indicator  On LCD solation  CB12-CD12-XD10-XB10  CB20-CD20-XB26-XD26  A inputs IB  CB20-CD20-XB26-XD26  A inputs IB  A input Inpedance  A input Inpedance  A input Inpedance  A input Inputs Inputs Inputs Inputs II  A input Inputs IB  A input Inputs IB  A input Inputs IB  A inputs	→IE →IG		None Yes On LCD screen for CD and XD  4 inputs IB →IE
Protection against polarity inversions Protection against polarity inversions Part of the protection against polarity inversions Protection against polarity inversions Protection against polarity inversions Protection against polarity inversions Part of the pr	→IE →IG		Yes On LCD screen for CD and XD  4 inputs IB →IE
Status indicator  On LCD so chalogue or digital inputs (IB to IG)  2B12-CD12-XD10-XB10 4 inputs IB  2B20-CD20-XB26-XD26 6 inputs IB  2B20-CD20-XB26-XD26 6 inputs IB  2B20-CD20-XB26-XD26 14 inputs IB  2B20-CD20-XB26-XD26 14 k $\Omega$ 2B20-CD20-XB26 14 k $\Omega$ 2B20-C	→IE →IG		On LCD screen for CD and XD  4 inputs IB →IE
chalogue or digital inputs (IB to IG)  CB12-CD12-XD10-XB10  4 inputs IB  CB20-CD20-XB26-XD26 6 inputs IB  6 inputs IB  6 inputs IB  6 inputs IB  Measurement range $(0 \rightarrow 10 \text{ V})$ Measurement range $14 \text{ k}\Omega$ Input voltage $14.4 \text{ V DC}$ Value of LSB Input type Common m  Conversion time Conversion time Conversion time Controller of the Court of the Co	→IE →IG		4 inputs IB →IE
$^{\circ}$ CB12-CD12-XD10-XB10 4 inputs IB CB20-CD20-XB26-XD26 6 inputs IB nuts used as analogue inputsonly in FBD Measurement range (0 →10 V) put impedance 14 kΩ 14 kΩ nut voltage 14.4 V DC Value of LSB 14 mV Common m 10 bit at m Conversion time Accuracy at 25 °C ± 5.2 % Accuracy at 25 °C ± 6.2 % Solation between analogue channel and power supply None Cable length 10 m maxing Protection against polarity inversions 70 kΩ nuts IB muts IB	→IG		·
CB20-CD20-XB26-XD26  Inputs used as analogue inputsonly in FBD  Measurement range  Input impedance  Input voltage  Value of LSB  Input type  Resolution  Conversion time  Accuracy at 25 °C  Accuracy at 25 °C  Accuracy at 25 °C  Repeat accuracy at 55 °C  Solation between analogue channel and power supply  Cable length  Protection against polarity inversions  Potentiometer control  6 inputs IB  6 inputs II	→IG		·
nputs used as analogue inputsonly in FBD  Measurement range (0 →10 V) Input impedance 14 kΩ Input voltage 14.4 V DC Value of LSB 14 mV Input type Common m Resolution 10 bit at m Conversion time Controller ( $^{4}$ Accuracy at 25 °C $^{4}$ ± 5 % Accuracy at 25 °C $^{4}$ ± 6.2 %  Repeat accuracy at 55 °C $^{4}$ ± 2 % Isolation between analogue channel and power supply None Cable length 10 m maxis Protection against polarity inversions Yes Potentiometer control 2.2 kΩ/0.5 10 kΩ max			
Measurement range $(0 \rightarrow 10 \text{ V})$ Input impedance $14 \text{ k}\Omega$ Input voltage $14.4 \text{ V DC}$ Value of LSB $14 \text{ mV}$ Input type $14.4 \text{ Common m}$ Common measurement in $14.4 \text{ V DC}$ Conversion time $14.4 \text{ Common m}$ Controller $14.4 \text{ Conversion time}$ Conversion time $14.4 \text{ Conversion time}$ Controller $14.4 \text{ Conversion time}$ Conversion time $14.4  Conversion tim$			o inputo ib —io
Protection against polarity inversions   14 kΩ   15 kΩ   14 kΩ   15 kΩ   14 kΩ   15	(0.1)		(0. (0.1) (0. ()
14.4 V DC	or $(0 \rightarrow V \text{ power supply})$		$(0 \rightarrow 10 \text{ V}) \text{ or } (0 \rightarrow \text{V power supply})$
Accuracy at 25 °C  Repeat accuracy at 55 °C  Solation between analogue channel and power supply Cable length Protection against polarity inversions  2.2 kΩ/0.5 10 kΩ max			12 kΩ
Input type       Common m         Resolution       10 bit at m         Conversion time       Controller of the course of the cou	nax.		30 V DC max. 29 mV
Accuracy at 25 °C $\pm$ 5 %         Accuracy at 55 °C $\pm$ 6.2 %         Repeat accuracy at 55 °C $\pm$ 2 %         solation between analogue channel and power supply       None         Cable length       10 m maximum         Protection against polarity inversions       Yes         Potentiometer control       2.2 kΩ/0.5         10 kΩ max       10 kΩ max	ode		Common mode
Conversion time  Controller of Accuracy at 25 °C $\pm$ 5 % Accuracy at 55 °C $\pm$ 6.2 % Repeat accuracy at 55 °C $\pm$ 2 % Solation between analogue channel and power supply Cable length  Protection against polarity inversions  Potentiometer control  Controller of $\pm$ 5 % $\pm$ 2 % None  2.2 k $\Omega$ /0.5 10 k $\Omega$ max			10 bit at max. input voltage
Accuracy at 25 °C $\pm$ 5 % Accuracy at 55 °C $\pm$ 6.2 % Repeat accuracy at 55 °C $\pm$ 2 % Solation between analogue channel and power supply Cable length 10 m maxis Protection against polarity inversions Yes Potentiometer control 2.2 k $\Omega$ /0.5 10 k $\Omega$ max			Controller cycle time
Accuracy at 55 °C $\pm$ 6.2 % Repeat accuracy at 55 °C $\pm$ 2 % solation between analogue channel and power supply None Cable length 10 m maximum retrotection against polarity inversions Yes Potentiometer control 2.2 k $\Omega$ /0.5 10 k $\Omega$ max	ycie unie		± 5 %
Repeat accuracy at 55 °C $\pm 2$ % solation between analogue channel and power supply None Cable length 10 m maxis Yes Potentiometer control 2.2 k $\Omega$ /0.5 10 k $\Omega$ max			± 6.2 %
Solation between analogue channel and power supply  None  10 m maxis  Protection against polarity inversions  2.2 kΩ/0.5 10 kΩ max			± 2 %
$ \begin{array}{lll} \text{Cable length} & \text{10 m maxi} \\ \text{Protection against polarity inversions} & \text{Yes} \\ \text{Potentiometer control} & \text{2.2 k}\Omega/0.5 \\ \text{10 k}\Omega \text{ max} \\ \end{array} $			None
Protection against polarity inversions Yes  Potentiometer control 2.2 k $\Omega$ /0.5 10 k $\Omega$ max	num, with shielded cable (sensor	r not isolated)	10 m maximum, with shielded cable (sensor not isolated)
Potentiometer control 2.2 k $\Omega$ /0.5 10 k $\Omega$ max	iain, mar emeraea cable (censes	. Hot lookatou)	Yes
10 kΩ max	N (recommended)		2.2 kΩ/0.5 W (recommended)
nouts used as digital inputs			10 kΩ max.
appear and an engineer of IMMAN			
	13 % / +20 %)		24 V DC (-20 % / +25 %)
nput current 0.7 mA @	0.44 VDC		1.6 mA @ 19.2 VDC
0.9 mA @			2.0 mA @ 24.0 V DC
1.0 mA @	4.4VDC		2.5 mA @ 30.0 VDC
nput impedance 14 kΩ			12 kΩ
ogic 1 voltage threshold ≥ 7 V DC			≥ 15 VDC
Making current at logic state 1 ≥ 0.5 mA			≥ 1.2 mA
ogic 0 voltage threshold ≤ 3 V DC			≤5 V DC
Release current at logic state 0 ≤ 0.2 mA	timaa		≤ 0.5 mA
Response time 1 →2 cycle  Assimum counting frequency in ERD		it roopones tire - (T.)	1 →2 cycle times
Maximum counting frequency in FBD In accorda 1/((2 x Tc	nce with cycle time (Tc) and inpu	at response time (1r):	In accordance with cycle time (Tc) and input response time (Tr) 1/ ((2 x Tc) + Tr)
Sensor type Contact or	· · · · · · · · · · · · · · · · · · ·		Contact or 3-wire PNP
Conforming to IEC/EN 61131-2 Type 1	/ WILCO I WI		Type 1
nput type Resistive			Resistive
solation between power supply and inputs  None			None
solation between inputs  None			
Protection against polarity inversions  Yes			None
Status indicator On LCD so			None Yes



## **Distributor of Crouzet Automation: Excellent Integrated System Limited**

Datasheet of 88970001 - CONTROL LOGIC 8 IN 4 OUT 24V

Contact us: sales@integrated-circuit.com Website: www.integrated-circuit.com

www.crouzet.com

02/11/2015		www.crouzet.com
Max. breaking voltage	5 →30 V DC 24 →250 V AC	
Mary Outrat Comment		
Max. Output Common Current	12A (10A UL) for O8, O9, OA	
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	
Electrical durability for 500 000 operating cycles	Utilization category DC-12 : 24 V, 1.5 A	
Electrical durability for 500 000 operating cycles	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	
	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	
Off-cycle response time	Make 10 ms	
	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
	XD26 : O4 →O7	CD20-XD26-XB26 : O4 →O7
* Only available with "FBD" programming language	* Only available with "FBD" programming language	
Breaking voltage	10.4 →30 V DC	19.2 →30 V DC
Nominal voltage	12-24 VDC	24 V DC

	XD26 : U4 →U7	CD20-XD26-XB26 : O4 →O7
* Only available with "FBD" programming language	* Only available with "FBD" programming language	
Breaking voltage	10.4 →30 V DC	19.2 →30 V DC
Nominal voltage	12-24 VDC	24 V DC
Nominal current	0.5 A	0.5 A
Max. breaking current	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)
Response time	Make ≤ 1 ms Release ≤ 1 ms	Make ≤ 1 ms Release ≤ 1 ms
Operating frequency	1 Maximum on inductive load	1 Maximum on inductive load
Built-in protections	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	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
Min. load	1 mA	1 mA
Maximum incandescent load	0,2 A / 12 V DC 0,1 A / 24 V DC	0,1 A / 24 V DC
Galvanic isolation	No	No
PWM frequency	14.11 Hz 56.45 Hz 112.90 Hz 225.80 Hz 451.59 Hz 1806.37 Hz	14.11 Hz 56.45 Hz 112.90 Hz 225.80 Hz 451.59 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

### Accessories

Туре	Description	Code		
M3 Soft	Multilingual programming software containing specific library functions (CD-ROM)	88970111		
PA	EEPROM memory cartridge	88970108		
PA	3 m serial link cable : PC →Millenium 3	88970102		
PA	USB cable 3 m : PC →Millenium 3	88970109		
PA	Millenium 3 interface →Bluetooth® (class A 10 m)	88970104		

#### Dimensions (mm)

DIM

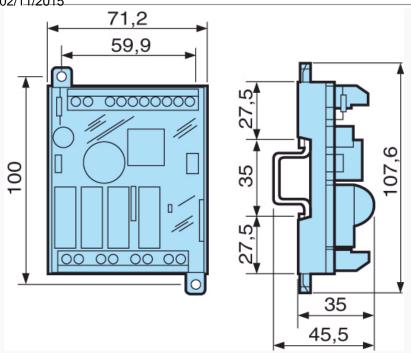


## **Distributor of Crouzet Automation: Excellent Integrated System Limited**

Datasheet of 88970001 - CONTROL LOGIC 8 IN 4 OUT 24V

Contact us: sales@integrated-circuit.com Website: www.integrated-circuit.com

www.crouzet.com



mm



- Tropicalisation
  Spring connectors or removable connectors
  Changing the number of I/O
  Updating power supply