



# ABOUT CROUZET

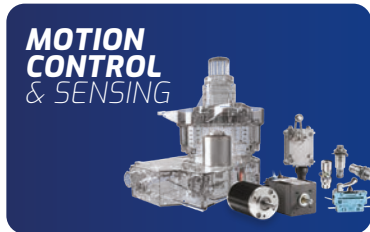
100+ YEARS MANUFACTURING THE FUTURE *Together*

We design and manufacture **Mechatronic Products** to turn engineering ideas into real world applications

## OUR MARKETS



## OUR PRODUCTS



## OUR SERVICES

MRO

SPARES

INSTRUMENTATION

## WE ARE GLOBAL

2000+ collaborators,  
10 Manufacturing Plants,  
9 Sales Offices & 4 R&D Labs



VALENCE, FRANCE



VALENCE NORD, FRANCE



PARIS, FRANCE



NANTES, FRANCE



ORLEANS, FRANCE



VOUVRY, SWITZERLAND



CASABLANCA 1, MOROCCO



CASABLANCA 2, MOROCCO



HUIZHOU, CHINA



BANGALORE, INDIA

📍 HEADQUARTERS ■ SALES OFFICES

# Our Services



DESIGN LAB

## 100+ years of customization, adaptation & co-design expertise at your service

When your innovation process needs more than high-quality standard products, we will answer your specific needs by offering you the best customized solution, a long-term partnership commitment and a multidisciplinary team dedicated to your project



*High-quality and efficient manufacturing*



*Uncompromising and highest standards*





# BECAUSE DATA IS AT THE CENTER

*Finding the technical specifications  
and marketing materials you need  
have never been that easy!*

TASTE OUR SODA AT: [SODA.CROUZET.COM](https://soda.crouzet.com)



# Catalog Index



## Timer Relays

- Recent Innovation: UDT P.10
- DIN Rail Mount: Syr-line, Chronos P.12
- Panel Mount: Syr-line, TMR48 P.14
- Plug-In: Syr-line P.15
- Timing Functions P.16



## Monitoring Relays

- Three-Phase Network P.20
- Single Phase Current P.20
- Single Phase Voltage P.20
- Level Control P.20



## Counters

- Electronic P.24
- Electromechanical P.26
- Pneumatic Counters P.26



## Solid State Relays

- Discover our full Offer P.30
- AC Voltage: Single Phase P.32
- AC Voltage: Multichannel P.36
- AC Voltage: Three Phase P.36
- DC Voltage P.38
- Load Diagnostic: Smart SSR P.40
- Accessories P.40



## Automation Controllers

- Selection guide P.44
- Recent Innovation: M Evo P.46
- Logic-Controller: Slim, Millenium P.48
- Logic Controller: Evo P.50
- Accessories P.50
- Nano PLC: em4 P.52
- Telecontroller: em4 Alert P.52
- Crouzet soft/Virtual Display P.54



## HMIs

- Selection guide P.58
- Crouzet Touch Soft P.59
- Performance P.60
- Essential P.60
- Cables and Expansions/Interfaces P.62



## Complementary Products

- Power Supplies P.66
- Temperature & Signal Converters P.66
- Faceplates P.66
- Temperature Sensors P.67



## Pneumatic Components

- 60 Years P.70
- Switches & Sensors P.72
- Logic Control P.80
- Indicators P.90
- Solenoid Valves P.72
- Circuit Components & Boards P.96

TIMERS

MONITORING RELAYS

COUNTERS

SSR

AUTOMATION CONTROLLERS

HMI'S

COMPLEMENTARY PRODUCTS

PNEUMATIC

# TIMER RELAYS

- Analog
- Digital
- DIN Rail Mount
- Panel Mount





PRESENTS

# THE NEXT INNOVATION INTO THE TIMERS MARKET



The New **YR-LINE** timer that **FITS ALL NEEDS**

## UNIVERSAL DIGITAL TIMER

IDEAL FOR:



HVAC



Motors



Pumps



Machinery



Lights



AND MANY MORE

## Get To Know The New « Universal Digital Timer »



### WHY A DIGITAL TIMER INSTEAD OF YOUR CLASSICAL ANALOG?

Now see your timing and get the highest precision ever. Monitor the status of the timer, see the current time, the function and timing configurations, as well as if you are receiving an input signal or if the relay output is activated. A digital timer that allows precise timing configuration, removing the guesswork from manual adjustments. Select the exact timing, as precise as you require, without the need of special tools like a screwdriver or a smartphone.

You set the limits, with 2 great optional features

- **Password setting:** lock user access by password
- **Time limit setting:** change time only between the limits you allow

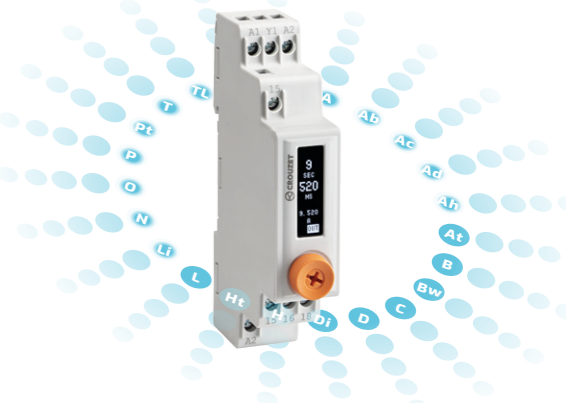
### IT'S UNIVERSAL

Get the only ultra-multifunction **Up to 138 real functions**

This digital timer includes ALL the functions you need to run your applications, from the classics like **on-delay «A»** or **off-delay «C»**, to special ones like **repeat cycle «L»**. It also allows you to adapt them and **get up to 138 real operating functions in one single product.**

One timer fits all

No matter the application, this timer gets the job done. A wide time range, universal mounting connection, and the ability to accept universal voltage input makes this timer ideal for new designs or replacement of existing timers.



### AS SIMPLE TO USE AS AN ANALOG TIMER

Program with or without power supply thanks to the integrated battery\*

Get it ready in just a few seconds, with only these 4 easy steps:



Or go as deep as you want customizing the **advanced mode**



Crouzet, the global leader in timers, has one for any of your needs




Take a look at our wide range of automation and control products at [www.crouzet.com](http://www.crouzet.com)

# Selection Guide - Timers

## Crouzet's Timers

Crouzet, specialist in Time Delay Relays, has been introducing new timer products and technologies for more than 50 years. Our timers continue to evolve with more features and functionality.

### DIN RAIL MOUNT

Type	Function	Time range	Output	Supply
 <b>Universal Digital</b> Syr-Line	Super Multifunction Z*	0,1 s → 100 days	1 x 8 A (Changeover)	12-240 VAC/DC
 <b>High-Power</b> Syr-Line	Multifunction M*+ Tt	0,1 s → 10 days	1 x 16 A (Changeover)	12-240 VAC/DC
	A: ON-Delay L/Li: Repeat Cycle			
 <b>Double Output</b> Syr-Line	Multifunction M* + Instantaneous	0,1 s → 10 days	2 x 8 A (Changeover)	12-240 VAC/DC
	A: ON-Delay L/Li: Repeat Cycle			
 <b>Classic</b> Chronos 2	Multifunction U*	0,1 s → 100 h	1 x 8 A (Changeover)	12-240 VAC/DC
	Multifunction U*			24 VDC / 24-240 VAC
	Multifunction X*			
	A-At: ON-Delay/Summation	0,1 s → 100 h	1 x 8 A (Changeover)	24 VDC / 24-240 VAC
	B: Single Shot			
	C: Off-Delay			
	H/Ht: Interval + Memory			
	L/Li: Repeat Cycle	0,1 s → 100 h	1 x 0,7 A (Static)	24-240 VAC
	Multifunction U*			
	H/Ht: Interval + Memory			
	L/Li: Repeat Cycle	0,1 s → 1 h	2 x 5 A (Open contact)	24 VDC / 24-240 VAC
	A: ON-Delay			
	Q: Star-Delta	0,1 s → 100 h	2 x 8 A (Changeover)	12-240 VAC/DC
Multifunction X*+W				
Multifunction U*	0,6 s → 160 s	2 x 8 A (Changeover)	24 VDC / 24-240 VAC	
K: True Off-Delay				

Super Multifunction Z\*: (A - Ab - Ac - Ad - Ah - At - B - Bw - C - D - Di - H - Ht - L - Li - O - N - P - Pt - T - TL - Tt - W) + options

Multifunction M\*: (A - Ac - At - B - C - D - Di - H - Ht - N - TL)

Multifunction U\*: (A - Ac - At - B - Bw - C - D - Di - H - Ht)

Multifunction X\*: (Ad - Ah - N - O - P - Pt - TL - Tt)




## Timer Features

- All the most popular functions: on-delay, off-delay, repeat cycle and many more
- Many Options: Analog, Digital, DIN Rail, Panel Mount, Plug-In
- DesignLab for custom adaptations, 100+ years of Engineering expertise at your service.

Special Characteristics	Width	Mounting	Designation	Part Number
Universal connections, Timing limits, Password protection, easy to use	17.5 mm	DIN Rail	DZ1R	DZ1R08MV1
Protective Cover	17.5 mm	DIN Rail	BM1R	BM1R16MV1
			BA1R	BA1R16MV1
			BL1R	BL1R16MV1
Protective Cover	17.5 mm	DIN Rail	BM2R	BM2R08MV1
			BA2R	BA2R08MV1
			BL2R	BL2R08MV1
-	17.5 mm	DIN Rail	MUR3	88 827 103
			MUR1	88 827 105
			MXR1	88 827 185
-	17.5 mm	DIN Rail	MAR1	88 827 115
			MBR1	88 827 125
			MCR1	88 827 135
			MHR1	88 827 145
			MLR1	88 827 155
Static Output	17.5 mm	DIN Rail	MU52	88 827 004
			MH52	88 827 044
			MLS2	88 827 054
			MA55	88 827 014
-	17.5 mm	DIN Rail	RQR1	88 827 175
			22.5 mm	
				RX2R1
		RU2R3	88 866 303 N	
		TK2R1	88 865 266	

# Selection Guide - Timers

## PANEL MOUNT

Type	Function	Time range	Output	Supply
 <b>Plug-in Syr-Line</b>	Multifunction U* + Ad, Instantaneous	0,5 s → 10 days	2 x 10 A (Changeover)	12-240 VAC/DC
	A: ON-Delay			
	C: Off-Delay			
	L: Repeat Cycle			
	Multifunction U* + Ad, N		1 x 10 A (Changeover)	
	A: ON-Delay		2 x 10 A (Changeover)	
	C: Off-Delay		1 x 10 A (Changeover)	
	L: Repeat Cycle			
 <b>TMR48D Digital Performance Syr-Line</b>	Multifunction S*	0,001 s → 9999 h	2 x 10 A (Changeover)	12-240 VAC/DC
	Multifunction F*		1 x 10 A (Changeover)	
	Multifunction F*		2 x 10 A (Changeover)	
	A: ON-Delay			
 <b>TMR48D Digital Essential Syr-Line</b>	Multifunction E*	0,001 s → 9999 h	1 x 5 A (Changeover)	24 VAC/DC
	Multifunction E*			100-240 VAC/DC


Multifunction S\*: (A - Ab - Ac - Ad - AMt - At - B - C - H - Ht - L - Li - T - W - D - Di)

Multifunction F\*: (A - Ac - Ad - B - C - H - L - Li - D - Di)

Multifunction E\*: (A - B - C - H - D - Di)


Multifunction U\*: (A - Ac - At - B - Bw - C - D - Di - H - Ht)

## PNEUMATIC & ATEX PNEUMATIC TIMERS

Type	Function	Information
 On Sub-base	Positive	See page 80
	Negative	
	Impulse Generator	
	Frequency Generator	

Special Characteristics	Width	Mounting	Designation	Part Number
Protective Cover	35 mm	11-Pin	PU2R	PU2R10MV1
			PA2R	PA2R10MV1
			PC2R	PC2R10MV1
			PL2R	PL2R10MV1
		8-Pin	OU1R	OU1R10MV1
			OA2R	OA2R10MV1
			OC1R	OC1R10MV1
			OL1R	OL1R10MV1
LED, IP66	48 mm	11-Pin	GDS2	GDS2R10MV2
			GDF1	GDF1R10MV2
		8-Pin	MDF1	MDF1R10MV2
			MDA2	MDA2R10MV2
LCD, IP66	48 mm	8-Pin	MDE1	MDE1R0524U
			MDE1	MDE1R05MVA

## TIMERS' ACCESSORIES

Type	Compatibility	Description	Part Number
 Socket	· TMR48D · Plug-In	8-Pin DIN Rail Base	25 622 130
		11-Pin DIN Rail Base	25 622 080
		8-Pin Screw Terminals	25 622 203
		11-Pin Screw Terminals	79 694 002
		8-Pin Solder Plug	25 622 301
		11-Pin Solder Plug	25 622 076
Adaptor	· Syr-Line · Chronos 2	DIN Rail to Panel Mount	79 237 806

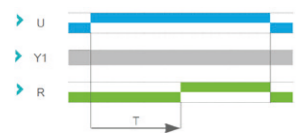
# Selection Guide - Timing Functions

## Diagrams

U: Power Supply R: Output Relay T: Timing ∞Infinity C (Y1): Command

### A Function

**ON-Delay**  
After power-up, timing starts, and relay turns ON at the end of timing



### Ab Function

**Delay Interval**  
After a signal, timing 1 starts and relay turns ON. Then timing 2 starts and relay turns off



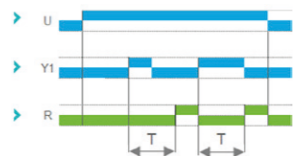
### Ac Function

**On/Off Delay**  
After a signal, timing 1 starts and relay turns ON. After signal is removed, timing 2 starts and relay turns OFF



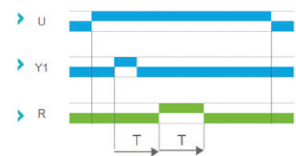
### Ad Function

**Delay on Start**  
After a signal, timing starts, and relay turns ON at the end of timing



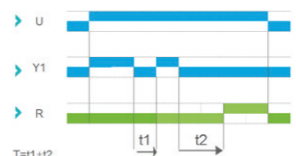
### Ah Function

**Triggered Flashing Cycle**  
After a signal, timing starts, and relay turns ON. Then timing starts again, and relay turns off



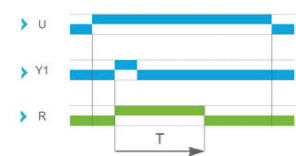
### At Function

**Summation time relay**  
After absence of an input signal equals the selected time, relay turns ON



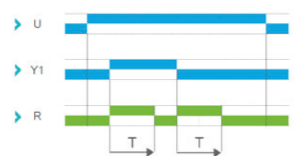
### B Function

**Single Shot**  
After a signal, relay turns ON and timing starts; At the end of the timing, relay turns OFF



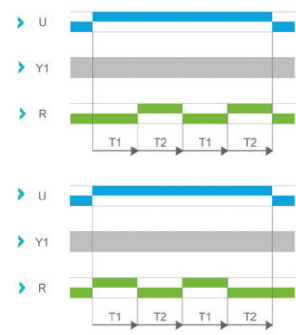
### Bw Function

**Pulse output**  
Each time a signal changes state; relay turns ON for the selected timing



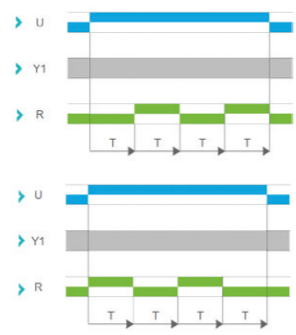
### L/Li Function

**Repeat Cycle**  
After power-up, a repetitive cycle of independent timing starts  
L: Start in OFF position  
Li: Start in ON position



### D/Di Function

**Flasher**  
After power-up, a repetitive cycle of equal timing starts  
D: Start in OFF position  
Di: Start in ON position



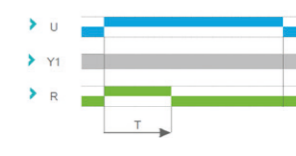
### C Function

**OFF-Delay**  
After a signal, relay turns ON. When signal is removed, timing starts, and relay turns OFF at the end of timing



### H Function

**Interval**  
After power-up, relay turns ON and timing starts; At the end of the timing, relay turns OFF



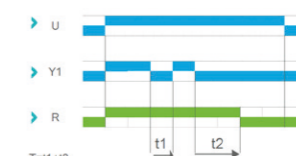
### N Function

**Watchdog**  
After a signal, relay turns ON. When signal is sent, timing resets. If timing is completed relay turns OFF



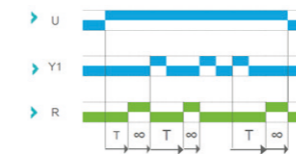
### Ht Function

**Interval with Memory**  
After absence of an input signal equals the selected time, relay turns OFF



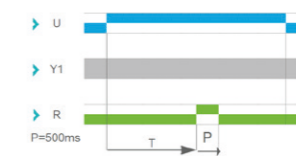
### O Function

**Delayed Watchdog**  
After power-up, timing starts, and relay turns ON at the end of timing. When signal is sent, timing and relay resets



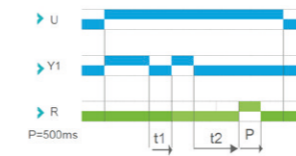
### P Function

**Pulse Delay Relay**  
After power-up, timing starts, and relay turns ON for 500ms at the end of timing



### Pt Function

**Impulse Counter**  
After absence of an input signal equals the selected time, relay turns ON for 500ms



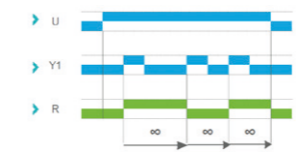
### T Function

**On-Delay: Sum of times**  
After summation of an input signal equals the selected time, relay turns ON



### Tl Function

**Latching**  
Each time a signal is sent, relay changes state



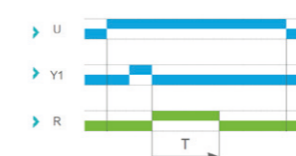
### Tt Function

**Delayed Latching**  
After a signal, relay turns ON and timing starts; At the end of the timing, relay turns OFF. Signal can stop timing



### W Function

**Timing after pulse of control contact**  
After a signal is removed, relay turns ON and timing starts; At the end of the timing, relay turns OFF



For more detailed diagrams or the diagrams of special functions, please visit [www.crouzet.com](http://www.crouzet.com)

# MONITORING RELAYS

- *Three-Phase*
- *Voltage*
- *Current*
- *Level Control*







# Selection Guide - Monitoring Relays


## Crouzet's Monitoring Relays

In industrial and commercial installations, every device should be monitored by a Crouzet Monitoring Relay to optimize continuity of service. The control relay enables the operator to initiate maintenance operations or corrective actions to avoid expensive production shutdowns.

### MONITORING RELAYS

Type	Function	Measuring Range	Output
 <b>Three-Phase</b>	Voltage (over and under voltage)	194-528 VAC	2 x 6 A (Changeover)
		183-528 VAC	1 x 8 A (Changeover)
	Voltage   Phase failure Detection	96-332 VAC	2 x 5 A (Changeover)
	Phase sequence   Phase failure detection	183-528 VAC	1 x 8 A (Changeover)
			2 x 6 A (Changeover)
	Phase sequence and failure detection   Undervoltage		1 x 8 A (Changeover)
	Phase sequence and failure detection   Asymmetry		
		194-528 VAC	
 <b>Voltage</b>	Over and Undervoltage   Selectable latching memory	9-15 VDC	1 x 5 A (Changeover)
		0.2-60 VAC/DC	2 x 5 A (Changeover)
	Voltage (over and under voltage)	20-80 VAC/DC	1 x 5 A (Changeover)
	Voltage   Selectable latching memory function	65-260 VAC/DC	
	Voltage (over and under voltage)		
	Voltage   Selectable latching memory function	15-600 VAC/DC	2 x 5 A (Changeover)
 <b>Current</b>	Current   Selectable latching memory function	2-500 mA	2 x 5 A (Changeover)
			1 x 5 A (Changeover)
		0.1-10 A	2 x 5 A (Changeover)
			1 x 5 A (Changeover)
Current (Over and Undercurrent )	2-20 A	1 x 10 A (Changeover)	
 <b>Liquid Level Control</b>	Pump up or down	5 - 100 kΩ	1 x 8 A (Changeover)
		250 Ω - 1 MΩ	

### ACCESSORIES

Type	Description	Compatibility	Part Number
 Probes	Resistive Stainless style probe	ENR / ENRM / HNM	79 696 015
	Resistive Stainless Steel Prob +165°C		79 696 016

## Monitoring Relay Features

- Protect AC motors, HVAC Systems, Pumps, Conveyors, Packaging Machines and other loads.
- Many Options: Three-phase and single phase, voltage, current, level monitoring
- UL, CCC and CE certified

Power Supply	Width	Mounting	Designation	Part Number
220-480 VAC	35 mm	DIN Rail	H3U5	84 873 220
			M3U5	84 873 222
120-277 VAC	H3USN		84 873 221	
208-480 VAC	MW5		84 873 029	
208-440 VAC	MWS2		84 873 021	
208-480 VAC	17.5 mm		MWG	84 873 022
			MWU	84 873 023
			MWA	84 873 024
			MWUA	84 873 025
	35 mm			
12 VDC	17.5 mm	DIN Rail	MUS12	84 872 140
	35 mm		HUL	84 872 120
24-240 VAC/DC	22.5 mm		EUL	84 872 025
	17.5 mm		MUS80	84 872 141
MUSF80			84 872 151	
MUS260			84 872 142	
MUSF260			84 872 152	
110-240 VAC/DC	35 mm		HUH	84 872 130
			22.5 mm	EUH
24-240 VAC/DC	35 mm		DIN Rail	HIL
	22.5 mm	EIL		84 871 025
	35 mm	HIH		84 871 130
	22.5 mm	EIH		84 871 035
	17.5 mm	MIC		84 871 122
24-240 VAC/DC	17.5 mm	DIN Rail	ENR	Coming soon
	17.5 mm		ENRM	Coming soon
	22.5 mm		HNM	84 870 700

# COUNTERS

- *Electrical*
- *Electromechanical*
- *Preset*
- *Multifunction*



# Selection Guide - Counters







## Crouzet's Counters







Count the number of parts, events, or actions or the running time of equipment, to inform or trigger an action or intervention. Very useful for scheduling preventive maintenance on machines or production lines.

## Counter Features

- Great visualization, either by LCD screen, LED screen or Mechanical Dials
- Hour Counters, Impulse Counters, Preselection, Chronometer, Ratemeter
- Many Options: Electronic and Electromechanical, Clip or Screw Mounting, different sizes and supply









### ELECTRONIC COUNTERS

Type	Visualization	Inputs	Output	Power Supply	
 Hour Counter	LCD	PNP	-	10-260 VAC/DC	
	LCD	NPN		Battery	
	LCD	Voltage		-	
	Backlight LCD				
 Impulse Counter	LCD	PNP	-	10-260 VAC/DC	
	LCD	NPN		Battery	
	LCD	Voltage		-	
	Backlight LCD	PNP			10-260 VAC/DC
	Backlight LCD	Voltage			Battery
 <b>Multifunction 1*</b> (Impulse Counter, Hour Counter, Ratemeter)	LED	NPN or PNP	-	10-30 VDC	
 Preset Chronometer	Backlight LCD	PNP/NPN/Voltage	1 · 1 x 3 A (Changeover)	10-30 VDC	
	Backlight LCD			230 VAC	
 <b>Multifunction 2*</b> (Preset, Multi-Totalizer, Chronometer, Ratemeter)	Backlight LCD	PNP/NPN/Voltage	2 · 1 x 5 A (Changeover) + · 1 x 30 mA (SSR)	10-30 VDC	
	Backlight LCD			24 VAC	
	Backlight LCD			90-260 VAC	
	LED	PNP/NPN/Voltage	2 · 1 x 5 A (Changeover) + · 1 x 30 mA (SSR)	10-30 VDC	
				24 VAC	
				90-260 VAC	
 <b>Multifunction 3*</b> (Double Preset, Multi-Totalizer, Chronometer, Ratemeter, Batch Counter)	Backlight LCD	PNP/NPN/Voltage	4 · 1 x 5 A (Changeover) + · 1 x 5 A (N/O) + · 2 x 30 mA (SSR)	10-30 VDC	
	Backlight LCD			24 VAC	
	Backlight LCD			90-260 VAC	
	LED	PNP/NPN/Voltage	4 · 1 x 5 A (Changeover) + · 1 x 5 A (N/O) + · 2 x 30 mA (SSR)	10-30 VDC	
				90-260 VAC	


	Size	Digits	Fixing	Designation	Part Number
	48 x 24 mm	8 Digits	Clip	CTR24	87 622 161
					87 622 162
					87 622 170
					87 622 190
	48 x 24 mm	8 Digits	Clip	CTR24	87 622 061
					87 622 062
					87 622 070
					87 622 081
					87 622 090
	48 x 24 mm	6 Digits	Clip	CTR24L	87 623 570
	48 x 48 mm	6 Digits	Clip	CTR48E	87 629 111
					87 629 114
	48 x 48 mm	6 Digits	Clip	CTR48	87 621 111
					87 621 112
					87 621 115
					87 621 211
					87 621 212
	48 x 48 mm	6 Digits	Clip	CTR48	87 621 215
					87 621 121
					87 621 122
					87 621 125
					87 621 221
					87 621 225

# Selection Guide - Counters

## ELECTROMECHANICAL COUNTERS


Type	Visualization	Input	Output	Power Supply
 Hour Counter	Mechanical Dial	-	-	90-264 VAC
 Hour Counter	Mechanical Dial	-	-	10-80 VDC 4-36 VAC/DC
 Hour Counter	Mechanical Dial	-	-	90-264 / 270-460 VAC 4-36 VAC/DC 10-80 VDC
 Impulse Counter	Mechanical Dial	-	-	230 VAC 24 VAC 24 VDC 48 VDC 110 VDC
 Impulse Counter	Mechanical Dial	-	-	230 VAC 24 VAC 24 VDC 48 VDC 110 VDC
 Impulse Counter + Reset	Mechanical Dial	-	-	230 VAC 24 VAC 24 VDC 48 VDC 110 VDC
 Impulse Counter + Reset	Mechanical Dial	-	-	230 VAC 24 VAC 24 VDC 48 VDC 110 VDC
 Impulse Counter + Reset	Mechanical Dial	-	-	230 VAC 24 VAC 24 VDC 110 VDC
 Impulse Counter + Reset	Mechanical Dial	-	-	230 VAC 24 VAC 24 VDC 48 VDC 110 VDC

## PNEUMATIC COUNTERS

Type	Function	Information
 Impulse Counter	Mechanical Dial	See page 26 - 92

Size	Digits	Fixing	Designation	Part Number
48 x 48 mm	6 Digits	Clip	CHM48	99 772 602
40 x 27 mm	6 Digits	Clip	CHM40x27	99 783 810 99 783 710
93 x 36 mm	6 Digits	DIN Rai	CHMDR	99 793 714N 99 793 710N 99 793 810N
56 x 29 mm	6 Digits	Clip	CIM56x29	99 774 608 99 774 603 99 774 602 99 774 604 99 774 606
56 x 46 mm	6 Digits	Screw	CIM56x46	99 775 609 99 775 604 99 775 603 99 775 606 99 775 608
56 x 29 mm	6 Digits	Clip	CIM56x29	99 774 618 99 774 613 99 774 612 99 774 614 99 774 616
56 x 46 mm	6 Digits	Screw	CIM56x46	99 775 619 99 775 613 99 775 612 99 775 615 99 775 617
46 x 46 mm	4 Digits	Screw	CIM46	99 775 418 99 775 413 99 775 412 99 775 416
42 x 29 mm	4 Digits	Clip	CIM42x29	99 774 418 99 774 413 99 774 412 99 774 414 99 774 416

## PNEUMATIC COUNTERS

Type	Function	Information
 Impulse Counter + Reset	Mechanical Dial	See page 26 - 92

# ***SOLID STATE RELAYS***

- AC Voltage: Single Phase & Three Phase
- AC Voltage Multichannel
- DC Voltage
- Smart SSR





# Selection Guide - SSR




## Crouzet's Solid State Relays

A series of multipurpose Solid State Relays, in both panel mount, DIN Rail mount and PCB mount.

To switch DC loads from 4 to 40 A / 5 to 200 VDC, and switch AC loads from


4 A to 125 A / 24 to 660 VAC.

### AC VOLTAGE SINGLE PHASE








Type	Output		Input	Certifications
	Current	Voltage	Voltage	
 <b>GNA</b> Essential Version	25 A	24-280 VAC	4-32 VDC	cRUus, CE
	40 A	48-660 VAC		
	50 A			
	90 A			
 <b>GN</b> Classic Version	10 A	24-280 VAC	4-32 VDC	cRUus, CE, VDE
	10 A		20-265 VAC	cRUus, CE
	25 A	24-280 VAC	4-32 VDC	cRUus, CE
	25 A		18-36V AC/DC	
	25 A	48-660 VAC	20-265 VAC	cRUus, CE, VDE
	25 A		4-32 VDC	
	25 A	48-660 VAC	20-265 VAC	cRUus, CE
	25 A		4-32 VDC	
	50 A	48-660 VAC	4-32 VDC	cRUus, CE, VDE
	50 A		18-36V AC/DC	
	50 A	48-660 VAC	20-265 VAC	cRUus, CE
	50 A		4-32 VDC	
	75 A	48-660 VAC	4-32 VDC	cRUus, CE, VDE
	75 A		20-265 VAC	
	100 A	48-660 VAC	4-32 VDC	cRUus, CE, VDE
	100 A		20-265 VAC	
125 A	48-660 VAC	4-32 VDC	cRUus, CE, VDE	
125 A		20-265 VAC		
 <b>GN+</b> Performance Version	25 A	12-270 VAC	4-32 VDC	cRUus, CE, VDE
	25 A		20-260 VAC/DC	
	50 A	24-500 VAC	4-32 VDC	cRUus, CE, VDE
	50 A		20-260 VAC/DC	
	90 A	24-500 VAC	4-32 VDC	cRUus, CE, VDE
	90 A		20-260 VAC/DC	
	125 A	24-500 VAC	4-32 VDC	cRUus, CE, VDE
	125 A		20-260 VAC/DC	

## Solid State Relays Features

- Removable covers and output protection included
- Smart load diagnostic versions
- Resistive, Inductive an Capacitive loads



	Mounting	Switching	Usage (Load Type)	Comments	Designation	Part Number
	Panel Mount "Hockey Puck"	Zero Cross	<b>Resistive Loads:</b> • Heating	• To use in simple applications	GNA25DZL	84137910N
					GNA40DZH	84137450N
					GNA50DZH	84137460N
					GNA90DZH	84137480N
	Panel Mount "Hockey Puck"	Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting	• Output Protection Included (TVS)	GN10DZL	84137000N
					GN10AZL	84137001N
					GN25DZL	84137010N
					GN25CZL	84137012N
					GN25AZL	84137011N
					GN25DZH	84137110N
					GN25AZH	84137111N
					GN50DZH	84137120N
					GN50CZH	84137122N
					GN50AZH	84137121N
					GN75DZH	84137130N
					GN75AZH	84137131N
	Panel Mount "Hockey Puck"	Random (Instantaneous)	<b>Inductive Loads:</b> • Motion • Miscellaneous (high inductive loads, very strong magnetising currents, overvoltages)	• Output Protection Included (RC Snubber)	GN25DRL	84137210N
					GN25ARL	84137211N
					GN50DRL	84137320N
					GN50ARH	84137321N
	Panel Mount "Hockey Puck"	Special Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting <b>Inductive Loads:</b> • Motion • Miscellaneous (High inductive loads) <b>Capacitive Loads:</b> • Miscellaneous (Strong inrush current)	• Output Protection Included (VDR) • High Immunity (Level A) • Thermal Pad Included	GNP25DZL	84138010N
					GNP25UZL	84138013N
					GNP50DZM	84138120N
					GNP50UZM	84138123N
					GNP90DZM	84138150N
					GNP90UZM	84138153N
					GNP125DZM	84138180N
					GNP125UZM	84138183N

### AC VOLTAGE SINGLE PHASE

Type	Output		Input	Certifications
	Current	Voltage	Voltage	
 <b>GNR</b> Classic Version	20 A	24-280 VAC	4-32 VDC	cRUus, CE
	20 A	48-660 VAC	4-32 VDC	
	20 A		80-140 VAC	
	20 A		180-280 VAC	
	30 A		4-32 VDC	
	30 A	48-660 VAC	80-140 VAC	
	30 A		180-280 VAC	
	30 A	24-500 VAC	4-32 VDC	cRUus, CE, VDE
 <b>GNR+</b> Performance Version	30 A	24-500 VAC	4-32 VDC	cRUus, CE, VDE
	30 A		180-280 VAC	
	32 A		4-32 VDC	
	45 A		4-32 VDC	cRUus, CE
 <b>GNF</b> Specialized Version	25 A	24-280 VAC	4-30 VDC	cRUus, CE, UKCA
 <b>GN MINI</b> Specialized Version	20 A	24-280 VAC	4-30 VDC	cRUus, CE, UKCA
 <b>GNZ</b> Specialized Version	8 A	24-280 VAC	4-32 VDC	cRUus, CE, UKCA
			4-30 VDC	
 <b>GN Board</b> Classic Version	4 A	12-275 VAC	4-30 VDC	cRUus, CE, UKCA
		12-460 VAC		
	4 A	24-600 VAC	4-10 VDC	cRUus, CE, UKCA
 <b>GNR Mini</b> Classic Version	4 A	12-275 VAC	6-30 VDC	CE, UKCA
		12-460 VAC	12-30 VAC / 8,5-30 VDC	


	Mounting	Switching	Usage (Load Type)	Comments	Designation	Part Number					
 DIN Rail 22.5 mm	DIN Rail 22.5 mm	Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting	• Output Protection Included	GNR20DCZL	GNR20DCZL					
					GNR20DCZH	GNR20DCZH					
					GNR20BCZH	GNR20BCZH					
					GNR20ACZH	GNR20ACZH					
					GNR30DCZH	GNR30DCZH					
					GNR30BCZH	GNR30BCZH					
					GNR30ACZH	GNR30ACZH					
					 DIN Rail 22.5 mm	DIN Rail 22.5 mm	Random	<b>Inductive Loads:</b> • Motion • Miscellaneous	• Output Protection Included (RC Snubber)	GNR25DCRH	GNR25DCRH
GNR30DCZP	GNR30DCZP										
 DIN Rail 22.5 mm	DIN Rail 22.5 mm	Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting <b>Inductive Loads:</b> • Motion • Miscellaneous (High inductive loads) <b>Capacitive Loads:</b> • Miscellaneous (Strong inrush current)	• Output Protection Included (VDR) • High Immunity (Level A)	GNR30ACZP	GNR30ACZP					
					GNR32DCZP	GNR32DCZP					
					 DIN Rail 45 mm	DIN Rail 45 mm	Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting	• FAST-ON terminals	GN20DFZL	84134017N
										GNM20DFZL	84132010N
 Panel Mount "Hockey Puck"	Panel Mount "Hockey Puck"	Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting	• FAST-ON terminals	GN20DFZL	84134017N					
					GNM20DFZL	84132010N					
 Panel Mount "Mini Puck"	Panel Mount "Mini Puck"	Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting	• Output Protection Included (VDR) • FAST-ON terminals	GNM20DFZL	84132010N					
					GNZ8DFZL	84132210N					
 Panel Mount "Low profile"	Panel Mount "Low profile"	Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting <b>Inductive Loads:</b> • Motion • Miscellaneous	• Output Protection Included (VDR) • FAST-ON terminals	GNZ8DFZL	84132210N					
		Random			GNZ8DFRL	84132110N					
 PCB Mount	PCB Mount	Special Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting <b>Inductive Loads:</b> • Miscellaneous (High inductive loads) <b>Capacitive Loads:</b> • Miscellaneous (Strong inrush current)	• Output Protection Included (TVS)	GNB4D2A	GNB4D2A					
					GNB4D2B	GNB4D2B					
					 PCB Mount	PCB Mount	Zero Cross	<b>Resistive Loads:</b> • Heating	-	GNB4D1C	GNB4D1C
GNB4D1C	GNB4D1C										
 DIN Rail	DIN Rail	Special Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting <b>Inductive Loads:</b> • Miscellaneous (High inductive loads)	• Output Protection Included (VDR)	GNRM4D2A	GNRM4D2A					
					GNRM4B1B	GNRM4B1B					

### AC VOLTAGE MULTICHANNEL

Type	Output		Input	Certifications
	Current	Voltage	Voltage	
 <b>GN2/GN2F</b> 2-Channel	25 A	24-280 VAC	10-30 VDC	cRUus, CE, UKCA
	25 A		4-32 VDC	
	50 A	48-660 VAC	4-32 VDC	
	50 A	48-660 VAC	10-30 VDC	
	50 A	24-510 VAC	10-30 VDC	
 <b>GN4</b> 4-Channel	25 A	12-280 VAC	4-32 VDC	cRUus, CE, UKCA



	Mounting	Switching	Usage (Load Type)	Comments	Designation	Part Number
Panel Mount "Hockey Puck"		Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting	• Two SSRs in One package	GN225DZL	84140013N
				• Fast-ON terminals	GN225DFZL	84140800N
		Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting	• Two SSRs in One package	GN250DZL	84140603N
					GN250DZH	84140613N
		Random	<b>Inductive Loads:</b> • Motion • Miscellaneous	GN250DRH	84140631N	
Panel Mount "Hockey Puck"		Special Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting <b>Inductive Loads:</b> • Motion • Miscellaneous <b>Capacitive Loads:</b> • Miscellaneous	• Four SSRs in one package	GN425DFZL	84154010N

### AC VOLTAGE THREE PHASE






Type	Output		Input	Certifications
	Current	Voltage	Voltage	
 <b>GN3</b> Classic Version	25 A	24-510 VAC	4-32 VDC	cRUus, CE, UKCA
	25 A			
	25 A	24-510 VAC	24-255 V AC/DC	
	50 A	24-510 VAC	4-32 VDC	
	50 A			
	50 A	24-510 VAC	24-255 V AC/DC	

	Mounting	Switching	Usage (Load Type)	Comments	Designation	Part Number
Panel Mount "Hockey Puck"		Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting	• Output Protection Included (TVS)	GN325DSZH	GN325DSZH
					Random	<b>Inductive Loads:</b> • Motion • Miscellaneous
		Special Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting <b>Inductive Loads:</b> • Motion • Miscellaneous (High inductive loads) <b>Capacitive Loads:</b> • Miscellaneous (strong inrush current)	• Output Protection Included (TVS)	GN325ASZH	GN325ASZH
					Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting
		Random	<b>Inductive Loads:</b> • Motion • Miscellaneous	• Output Protection Included (RC, VDR)	GN350DSRH	GN350DSRH
		Special Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting <b>Inductive Loads:</b> • Motion • Miscellaneous (High inductive loads) <b>Capacitive Loads:</b> • Miscellaneous (Strong inrush current)	• Output Protection Included (TVS)	GN350ASZH	GN350ASZH

### AC VOLTAGE THREE PHASE

Type	Output		Input	Certifications
	Current	Voltage	Voltage	
 <b>GNR3</b> Classic Version	25 A	24-660 VAC	4-32 VDC	cRUus, CE, UKCA
	25 A	24-660 VAC	24-255 V AC/DC	
 <b>GNO</b> Reverse Version	25 A	24-510 VAC	12-30 VDC	cRUus, CE, UKCA
	50 A			



### DC VOLTAGE



Type	Output		Input	Certifications
	Current	Voltage	Voltage	
 <b>GNAD</b> Essential Version	10 A	5-200 VDC	4-32 VDC	cRUus, CE
	20 A	5-100 VDC		
	40 A	5-55 VDC		
 <b>GND</b> Classic Version	10 A	5-200 VDC	4-32 VDC	cRUus, CE
	40 A	5-60 VDC		
 <b>GND Board</b> Classic Version	4 A	2-60 VDC	4-30 VDC	CE, UKCA
	10 A	7-36 VDC	4-10 VDC	
			10-30 VDC	
 <b>GNRD MINI</b> Specialized Version	4 A	2-60 VDC	5-30 VDC	CE, UKCA
			90-240 VAC/DC	
 <b>GNRD-0</b> Specialized Version	6 A	7-36 VDC	7-30 VDC	CE, UKCA

	Mounting	Switching	Usage (Load Type)	Comments	Designation	Part Number
	DIN Rail 90 mm	Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting	• Output Protection Included (TVS)	GNR25DCZH	GNR25DCZH
		Special Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting <b>Inductive Loads:</b> • Motion • Miscellaneous (High inductive loads) <b>Capacitive Loads:</b> • Miscellaneous (strong inrush current)		GNR325ACZH	GNR325ACZH
	Panel Mount "Hockey Puck"	Special Zero Cross	<b>Resistive Loads:</b> • Heating • Lighting <b>Inductive Loads:</b> • Motion • Miscellaneous (High inductive loads) <b>Capacitive Loads:</b> • Miscellaneous (strong inrush current)	• Output Protection Included (RC, VDR) • Start/Stop/Reverse in the same product	GNO25DSRL	GNO25DSRL
					GNO50DSRL	GNO50DSRL




	Mounting	Switching	Usage (Load Type)	Comments	Designation	Part Number
	Panel Mount "Hockey Puck"	DC Switching	<b>DC Loads:</b> • Heating • Motion • Lighting • Miscellaneous	• To use in simple applications	GNAD10DH	84137650N
					GNAD20DM	84137660N
					GNAD40DL	84137670N
	Panel Mount "Hockey Puck"	DC Switching	<b>DC Loads:</b> • Heating • Motion • Lighting • Miscellaneous	• Output Protection Included (TVS*)	GND10DH	84137850N
					GND40DM	84137870N
	PCB Mount	DC Switching	<b>DC Loads:</b> • Heating • Motion • Lighting • Miscellaneous	-	GNDB4D2D	GNDB4D2D
					GNDB10D1E	GNDB10D1E
					GNDB10B1E	GNDB10B1E
	DIN Rail	DC Switching	<b>DC Loads:</b> • Lighting • Miscellaneous	• Output Protection Included (TVS)	GNRDM4D1C	GNRDM4D1C
					GNRDM4A1C	GNRDM4A1C
	DIN Rail	DC Switching	<b>DC Loads:</b> • Motion	• Output Protection Included (TVS)	GNRD06CDL	GNRD06CDL

### Load Diagnostic: Smart SSR





Type	Output		Input	Certifications
	Current	Voltage	Voltage	
 <b>GN Smart</b> Load Detection	50 A	24-600 VAC	4-32 VDC	cRUus, CE, VDE
	35 A	50-265 VAC	8-30 VDC	
	50 A	150-510 VAC		
	75 A			
 <b>GNR Smart Module</b> Load Detection	40 A	-	4-32 VDC	CE
	40 A		24-45 VDC	

	Mounting	Switching	Usage (Load Type)	Comments	Designation	Part Number
 Panel Mount "Hockey Puck"		Zero Cross	Current Detection	-	GNS50DAZH	84136120N
					GNS35DDZH	84139150N
		Zero Cross	Load Detection	-	GNS50DDZH	84139120N
					GNS75DDZH	84139130N
 Module On GNR/GNR+		-	Current Detection	-	GNS40DDDR	84050040N
			Current & Diagnostic		GNS40FDDR	84050043N

### ACCESSORIES

Type	Description	P/N
 <b>Heatsinks</b> For Panel Mount SSRs	0.9 °C/W Thermal Resistance	26532752N
	1.1 °C/W Thermal Resistance	26532753N
	1.2 °C/W Thermal Resistance	26532754N
	1.75 °C/W Thermal Resistance	26532755N
	2.2 °C/W Thermal Resistance	26532756N
	Heatsink screw mounting kit, for SSRs with Hockey Puck shape	26532001
	Heatsink screw mounting kit, for 3-phase SSRs	26532002
 <b>Adapters</b> For DIN Rail	DIN Rail Adaptor for SSRs with Hockey Puck shape	26532764N
 <b>Thermal Pads</b> For Heatsink Mounting	Pre-cut thermal pad	26532720N
	Self-adhesive thermal pad	26532722N

### ACCESSORIES

Type	Description	P/N
 <b>Screws</b> For Heatsink Mounting	Screw Mounting Kit for Single & Dual-Phase SSR	26532001
	Screw Mounting Kit for 3-Phase SSR	26532002
 <b>Thermal Grease</b> For Heatsink Mounting	Thermal Grease	26532003
 <b>Label</b> For SSR identification	Label for SSR Identification	26532004
 <b>Connectors</b>	GN2, 4-Pin, 4 pole 90° & 270° set-screw connector	26532005
	GN2, 4-Pin, 4 pole 270° set-screw connector	26532006

# ***AUTOMATION CONTROLLERS***

- *Logic Controllers*
- *Communicating Logic Controllers*
- *Nano-PLCs*
- *Telecontrollers*





# Automation Controllers Selection Guide

	Simple & small applications	Simple applications	Connectivity needed	High-end & niche applications	Remote applications	
	<p>Slim Logic Controller</p> <p><i>Millenium Slim</i></p>	<p>Logic Controller</p> <p><i>Millenium</i></p>	<p>Communicating Logic Controller</p> <p><i>Millenium EVO</i></p>	<p>Nano-PLC</p> <p><i>em4 NANOPLC</i></p>	<p>Telecontroller</p> <p><i>em4 ALERT</i></p>	
INPUTS & OUTPUTS	Memory Capacity	1000 FB	2000 FB	1000 FB	2000 FB	
	Number of I/Os	8	Up to 60	Up to 44	Up to 46	
	Analog Inputs (CPU)	4	6	8	12	12
	4-20mA Inputs (CPU)	N/A	N/A	N/A	4	4
	High-Speed Digital Inputs	15 KHz	5 KHz	15 KHz	60 KHz	60 KHz
COMMUNICATION	Ethernet Embedded	NO	YES	YES	YES	N/A
	Modbus Interface	N/A	CLIENT/SERVER	SERVER	CLIENT/SERVER	CLIENT/SERVER
	Bluetooth Communication	YES	N/A	YES	YES	YES
	Mobile Communication (3G)	N/A	N/A	N/A	N/A	YES
	Datalog Number of Values	8 VALUES	24 VALUES	16 VALUES	24 VALUES	24 VALUES
	Event Number of Values	N/A	N/A	12 VALUES	24 VALUES	24 VALUES
		CROUZET SOFT (FBD-SFC)	CROUZET SOFT (LD-FBD-SFC)	CROUZET SOFT (FBD-SFC)		

LD: Ladder  
 FBD: Function Block Diagram  
 SFC: Sequential Function Chart

CROUZET Virtual Display is compatible with Slim, Millenium EVO, em4 and em4 Alert. Web server available for Millenium.

# THE SMALLEST LOGIC CONTROLLER EVER

Thousands of applications in your hand



## MILLENIMUM SLIM

*The smallest logic controller ever!*

### 01. SPACE REDUCTION



The smallest logic controller ever, in a **17.5mm body** that fits in any panel or machine

### 02. MULTIPURPOSE



Replace several products in your control panel with this **highly configurable, pocket-sized** logic controller

### 03. INTERCONNECTIVITY



Give wireless capabilities to your applications via **Bluetooth** communication

### 04. SIMPLICITY



Easiest-to-use software and **Virtual Display** on your smartphone or PC.  
+ Quick start with no cables  
+ Fast maintenance



## A MULTITUDE OF APPLICATIONS IN YOUR HAND

With our free **Virtual Display App** you get access to plenty of **pre-programmed applications** and the possibility to create and configure your own with **CrouzetSoft**, the easiest-to-use automation programming software available in the market.


# Selection Guide - Automation

## Crouzet's Automation Controllers

Automation for everyone! Easy to use and powerful Automation Controllers, adaptable for all kinds of projects - from the simplest to complex applications. Crouzet's Automation Controllers offer free software and are easy and intuitive to use, even for programming novices.







### SLIM LOGIC CONTROLLER – MILLENIUM SLIM

*MilleniumSlim*, The smallest logic controller ever! For all your standalone small-scale applications

Type	Total I/Os	Convertible Inputs				Output Types	
		Digital	Analog	PWM	High-Speed	Digital	PWM
 <b>Slim Controller Kit</b>	<b>8 I/Os</b> · 4 Inputs · 4 Outputs	<b>4</b> · Classical Digital	-	-	-	<b>4</b> · 6A Relay	-
			<b>4</b> · 0-10 VDC or 0-VCC	<b>2</b> · 10 Hz to 1 KHz	<b>2</b> · 5 KHz	<b>4</b> · 6A Relay	-
			-	-	-	<b>4</b> · 0.5A Static	-

### LOGIC CONTROLLER

Millenium, the logic controller of choice for 15+ years

Type	Total I/Os	Convertible Inputs		Output Types		
		To Digital	To Analog	Digital	PWM	Analog
 <b>Expandable Short - With Screen</b>	<b>12 I/Os</b> · 8 Inputs · 4 Outputs	8	4	4 Relay	-	-
				4 Static	1	-
				4 Relay	-	-
 <b>Expandable Short - No Screen</b>	8	8	4	4 Relay	-	-
			-	4 Relay	-	-
 <b>Expandable Long - With Screen</b>	<b>26 I/Os</b> · 16 Inputs · 10 Outputs	16	0/6	10 Relay/ 10 Static	0/4	-
			-	10 Static	4	-
			-	10 Relay	-	-
 <b>Expansion Short - Digital</b>	<b>8 I/Os</b> · 4 Inputs · 4 Outputs	4	-	4 Relay	-	-
				4 SSR	-	-
 <b>Expansion Long - Digital</b>	<b>16 I/Os</b> · 8 Inputs · 8 Outputs	8	-	4 Relay	-	-
				8 SSR	-	-
				-	-	-
 <b>Expansion Short - Analog</b>	<b>2 I/Os</b> 2 Inputs	-	-	2 Analog (V/mA)	-	-
				2 RTD	-	-
	<b>2 I/Os</b> 2 Outputs			-	-	2 Analog (V/mA)

\*Current Millenium 3 26 I/Os is available at [www.crouzet.com](http://www.crouzet.com)

## Automation Controller Features

- Graphic Programming language (FBD) and several ways of communication (3G, Ethernet, Modbus...)
- Many Options: 10-12 I/Os, 24-26 I/Os, Expandable. Digital/Analog Inputs. Relay/PWM outputs, etc.
- DesignLab for custom adaptations, 100+ years of Engineering expertise at your service

	Embedded Communication	Embedded Screen	Power Supply	Comments	Designation	Part Number
Bluetooth	Virtual only		110-240 VAC	· 17.5 mm body · DIN Rail & panel mount · Bluetooth programming	CB8R (AC)	88 983 903*
			24 VDC		CB8R (DC)	88 983 901*
			24 VDC		CB8S (DC)	88 983 902*







\* **88 983 903** (kit: 88 983 003 + connectors) - \* **88 983 901** (kit: 88 983 001 + connectors) - \* **88 983 902** (kit: 88 983 002+ connectors)

	Embedded Communication	Embedded Screen	Power Supply	Comments	Designation	Part Number
Ethernet TCP/IP	✓		12 VDC	-	MXD12	MXD12RD7ET
			24 VDC			MXD12SD1ET
			100-240 VAC			MXD12RU3ET
Ethernet TCP/IP	-		24 VDC	-	MXB12	MXB12RD7ET
			100-240 VAC			MXB12RU3ET
Ethernet TCP/IP	✓		12-24 VDC/ 100-240 VAC	More I/Os are possible by adding an expansion	MXD26	Coming soon*
			-			-
-	-	-	110-230V AC/DC	-	-	MXR08U3
			24 V AC/DC			MXR08U1
			12-24 VDC			MXR08D7
			24 VDC			MXS08D1
-	-	-	110-230V AC/DC	-	-	MXR16U3
			24 V AC/DC			MXR16U1
			12-24 VDC			MXR16D7
			24 VDC			MXS16D1
-	-	-	12-24 VDC	-	-	MXAI02D7
			24 VDC			MXAI02PD7
			24 VDC			MXA002D1

# Selection Guide - Automation




## COMMUNICATING LOGIC CONTROLLER - MILLENIUM EVO



Millenium EVO, the logic controller of choice for all your projects requiring communication

Type	Total I/Os	Convertible Inputs		Output Types		
		To Digital	To Analog	Digital	PWM	Analog
 <b>Screen Option</b> Local / Standalone	<b>24</b> · 16 Inputs · 8 Outputs	<b>16</b> · 12 to Classical Digital · 4 to Classical Digital or 15 KHz High-Speed	<b>8</b> · To 0-10 VDC or 0-VCC	<b>8</b> · 6 x 8 A · 2 x 6 A	-	-
 <b>Blind Option</b> Local / Standalone						
 <b>Screen Option</b> Ethernet Version	<b>24</b> · 16 Inputs · 8 Outputs	<b>16</b> · 12 to Classical Digital · 4 to Classical Digital or 15 KHz High-Speed	<b>8</b> · To 0-10 VDC or 0-VCC	<b>8</b> · 6 x 8 A · 2 x 6 A	-	-
 <b>Blind Option</b> Ethernet Version						
 <b>Expansion</b> Digital	<b>10</b> · 6 Inputs · 4 Outputs	<b>6</b> · Classical Digital	-	<b>4</b> · 2 x 8 A · 2 x 6 A	-	-
 <b>Expansion</b> Analog			<b>4</b> · 0-10 VDC or 4 to 20 mA	-	<b>2</b> · 0.5 A Static	<b>2</b> · 0-10 VDC

	Embedded Communication	Embedded Screen	Power Supply	Comments	Designation	Part Number
	-	✓	24 VDC	-	XDP24	88 975 101
	-	-		-	-	XBP24
	Ethernet TCP/IP	✓	24 VDC	Embedded Ethernet Communication	XDP24-E	88 975 111
		-		Embedded Ethernet Communication	XBP24-E	88 975 011
	-	-	24 VDC	To control power actuators (valves, pumps...)	XRP10	88 975 201
				To control analog actuators (controlled valve, controlled pump...)	XAP10	88 975 303

## ACCESSORIES







Type	Compatibility	Description	P/N
 <b>Memory Cartridge</b> Memory Storage	· Millenium: Logic Controller	Memory Cartridge	MIMEMSD
 <b>Connectors</b> Pluggable	· Millenium 3	For 12 I/Os version	88 970 310
		For 20 I/Os version	88 970 311
		For 26 I/Os version	88 970 312
 <b>Modbus Interfaces</b>	· Millenium: Logic Controller	Modbus - Polarization	MI485P
		Modbus - No Polarization	MI485

Type	Compatibility	Description	P/N
 <b>Interfaces</b> For USB, Modbus or Bluetooth Communication	· em4: Nano-PLC · em4 Alert: Telecontroller · Millenium EVO: Communicating Logic Controller	USB programming	88 980 110
		Modbus - Polarization	88 980 123
		Modbus - No Polarization	88 980 122
		Bluetooth	88 980 112
		Bluetooth + PC Dongle	88 980 116
 <b>Antenna</b> For Cellular Network Communication	· em4 Alert: Telecontroller	Antenna 3M	88 980 160

# Selection Guide - Automation





## NANO-PLC - EM4

The PLC made simple, PLC performance with logic controller simplicity, for high-end applications

Type	Total I/Os	Convertible Inputs		Output Types		
		To Digital	To Analog	Digital	PWM	Analog
 <b>Nano-PLC</b> Local / Standalone	26 · 16 Inputs · 10 Outputs	16 · 12 to Classical Digital · 4 to Classical Digital or 60 KHz High-Speed	12 · 8 to 0-10 VDC or 0-VCC · 4 to 20 mA or 0-10 VDC	8 · 6 x 8 A · 2 x 6 A	2 · 0.5 A Static	-
 <b>Starter Kit</b> Local / Standalone						
 <b>Nano-PLC</b> Ethernet Version	26 · 16 Inputs · 10 Outputs	16 · 12 to Classical Digital · 4 to Classical Digital or 60 KHz High-Speed	12 · 8 to 0-10 VDC or 0-VCC · 4 to 20 mA or 0-10 VDC	8 · 6 x 8 A · 2 x 6 A	2 · 0.5 A Static	-
 <b>Starter Kit</b> Ethernet Version						
 <b>Expansion</b> Digital	10 · 6 Inputs · 4 Outputs	6 · Classical Digital	6 · 0-10 VDC or 0 VCC	4 · 2 x 8 A · 2 x 6 A	-	-
 <b>Expansion</b> Analog			6 · 0-10 VDC or 4 to 20 mA	-	2 · 0.5 A Static	2 · 0-10 VDC

## TELECONTROLLER - EM4 ALERT

em4 Alert has a built-in GSM modem to connect to any cellular network to control and monitor

Type	Total I/Os	Convertible Inputs		Output Types		
		To Digital	To Analog	Digital	PWM	Analog
 <b>Telecontroller</b> 4G Version	26 · 16 Inputs · 10 Outputs	16 · 12 to Classical Digital · 4 to Classical Digital or 60 KHz High-Speed	12 · 8 to 0-10 VDC or 0-VCC · 4 to 20 mA or 0-10 VDC	8 · 6 x 8 A · 2 x 6 A	2 · 0.5 A Static	-
 <b>Starter Kit</b> 4G Version						
 <b>Expansion</b> Digital	10 · 6 Inputs · 4 Outputs	6 · Classical Digital	6 · 0-10 VDC or 0-VCC	4 · 2 x 8 A · 2 x 6 A	-	-
 <b>Expansion</b> Analog			6 · 0-10 VDC or 4 to 20 mA	-	2 · 0.5 A Static	2 · 0-10 VDC

\*Coming soon




	Embedded Communication	Embedded Screen	Power Supply	Comments	Designation	Part Number
	-	✓	24 VDC	To use in local applications	B26	88 981 103
	-	✓	24 VDC	em4 + Software + USB interface + USB cable	B26 Starter Kit	88 981 106
	Ethernet TCP/IP	✓	24 VDC	Embedded Ethernet Communication	B26 ET	88 981 133
	-	-	24 VDC	To control power actuators (valves, pumps...)	E10R	88 982 113
	-	-	24 VDC	To control analog actuators (controlled valve, controlled pump...)	E10A	88 982 213

	Embedded Communication	Embedded Screen	Power Supply	Comments	Designation	Part Number
	4G Cellular Network	✓	24 VDC	Embedded GSM Modem	B26-4GS	88 981 143*
	-	-	24 VDC	em4 Alert + Antenna + Software + USB interface + USB cable	B26-4GS Starter Kit	88 981 146*
	-	-	24 VDC	To control power actuators (valves, pumps...)	E10R	88 982 113
	-	-	24 VDC	To control analog actuators (controlled valve, controlled pump...)	E10A	88 982 213

# CROUZET SOFT

**The Easiest-To-Use Automation Software on the Market**

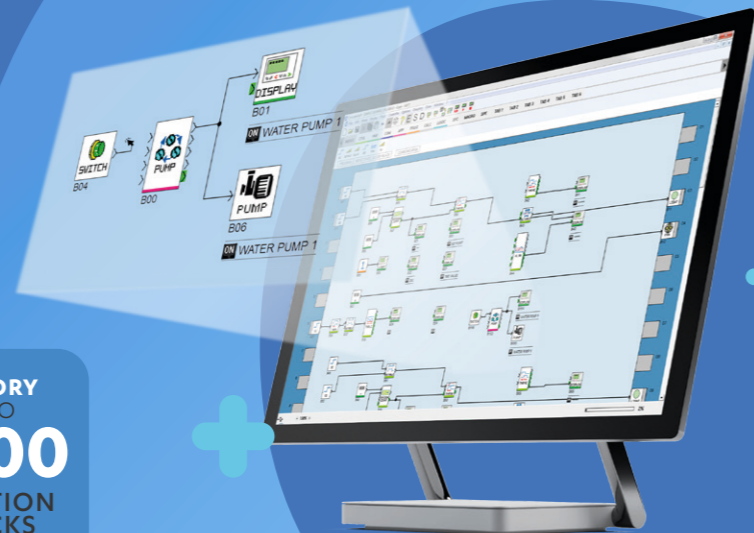
Powerful software for all kind of projects, from the simplest to very complex applications, designed to be easy even for non-programmers,

-  **Visual Programming**
-  **Learn while you play!**
-  **You are in control of your application**

**SIMPLY EASY**

MORE THAN  
**120**  
FUNCTION  
BLOCKS

MEMORY  
UP TO  
**2000**  
FUNCTION  
BLOCKS



# CROUZET VIRTUAL DISPLAY

Access your controller screen and control buttons at a distance in real-time and change parameters from any of your PC's or mobile devices, either by

- **Bluetooth**
- **Ethernet network or**
- **USB**

 **USB**

 **ETHERNET**

 **BLUETOOTH**



# HMI's

- Performance
- Essential
- 4", 7", 10"
- Ethernet



# Selection Guide – HMI's

	Essential		Performance		
	CT104	CT107	CPT104N-E	CPT107-E	CPT110N-E
Size	4,3"	7"	4,3"	7"	10,1"
Resolution	480 x 272	800 x 480	480 x 272	800 x 480	1024 x 600
Brightness	400 cd/m <sup>2</sup>	300 cd/m <sup>2</sup>	400 cd/m <sup>2</sup>	400 cd/m <sup>2</sup>	350 cd/m <sup>2</sup>
Processor	A8 - 600 MHz	A8 - 600 MHz	A8 - 600 MHz	A8 - 600 MHz	A8 - GHz
Storage memory	128 MByte	128 MByte	128 MByte	128 MByte	4 GByte
RAM memory	128 MByte	128 MByte	128 MByte	128 MByte	1 GByte
USB	Host USB 2.0	Host USB 2.0	Host USB 2.0	Host USB 2.0	Host USB 2.0
Ethernet	1 RJ45,10/100Mbit/s	1 RJ45,10/100Mbit/s	1 RJ45,10/100Mbit/s	1 RJ45,10/100Mbit/s	2 RJ45,10/100Mbit/s
RS 232	COM 1	COM 1	COM 1	COM 1	COM 1 / COM 3
RS 485	COM 1 / COM 3	COM 2	COM 1	COM 1	COM 2 / COM 3
CAN	N/A	N/A	N/A	N/A	N/A

CROUZET Touch Soft

## CROUZET TOUCH SOFT NEW UPGRADE!

Get the newest version of **Crouzet Touch Soft** for free and play around with our most intuitive and well designed user interface yet



### IMAGINE AND CONCEIVE YOUR PROJECT IN AN EASY WAY

- Manage all your HMI project from Crouzet Touch Utility Manager
- A wide range of tools to help you develop the perfect project
- Dedicated communication drivers for em4 and Millenium 3 allowing simple addressing and label management
- Import existing MTP HMI programmes into the new Crouzet Touch Soft
- It's available in english, french, italian, german, spanish



### KEY FEATURES

**FUNCTION BAR**  
• With simple icons

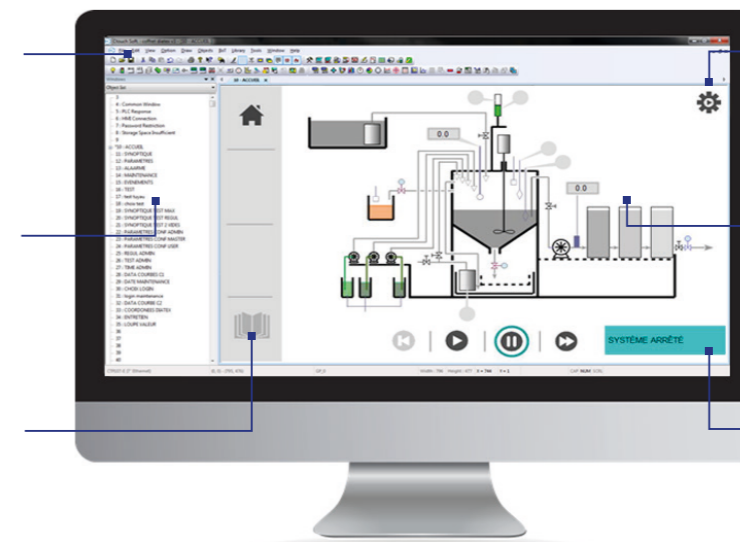
**ORGANISE YOUR PROJECT**  
• Tree and display all object names

**CUSTOMISE YOUR APPLICATION**  
• Create your own library and import pictures

**ENHANCED SECURITY**  
• By creating access levels for users

**CREATE AND DESIGN**  
• Main window makes it easy to create any functional object

**LABEL TAG**  
• Allows use of up to 8 different languages



### ASSOCIATED FEATURES

**EMAIL & CSV**  
Send e-mails with datalog files (csv) from a data sampling and when an event is triggered

**ENHANCED SECURITY**  
Enhanced security mode to manage users and classes easily with dedicated system pages

**EASY DIAGNOSER**  
Analysing and diagnosing communication between HMI and PLC

**PASS THROUGH**  
Allows connection of the PLC to the HMI allowing debugging of the system

**RECIPE IMPORT / EXPORT**  
Creating and managing recipes is much easier using the «recipe view» object and system registers available in Crouzet Touch software

**COMBO BUTTON**  
Execute multiple commands with one button

**EASY SIMULATOR**  
Allows online / offline simulation of your HMI application







**VNC**  
Allows network connection to the HMI via VNC client on PC or mobile phone

# Selection Guide – HMI's





## Crouzet's HMI's

Crouzet HMI's are perfectly suited to be used with the whole range of Crouzet's Automation Controllers, thanks to the several ways of communication, and the pre-configured communication drivers that simplify the configuration.

### PERFORMANCE

Size	Type	Supply	Resolution	ROM	RAM
 <b>4 inch</b> HMI	<b>Touch Screen</b> HMI only	24 VDC	480x272	128 Mbyte	128 Mbyte
 <b>4 inch</b> Kits	<b>Cable Kit</b> HMI + Cable for Controller Millenium3				
	<b>Starter Kit (+Logic Controller M3)</b> HMI + Controller Millenium3 XD10R + Cable				
	<b>Starter Kit (+Logic Controller MEVO)</b> HMI + Controller Millenium EVO XDP24-E + Cable				
 <b>7 inch</b> HMI	<b>Touch Screen</b> HMI Only	24 VDC	800x480	128 Mbyte	128 Mbyte
 <b>7 inch</b> Kits	<b>Cable Kit</b> HMI + Cable for Controller Millenium3				
	<b>Starter Kit (+Logic Controller M3)</b> HMI + Controller Millenium3 XD26R + Cable				
	<b>Starter Kit (+Logic Controller MEVO)</b> HMI + Controller Millenium EVO XDP24-E + Cable				
	<b>Starter Kit (+Nano-PLC em4)</b> HMI + Controller em4 Ethernet + Cable				
 <b>10.1 inch</b> HMI	<b>Touch Screen</b> HMI Only	24 VDC	1024x600	4 Gbyte	1 Gbyte
 <b>10.1 inch</b> Kits	<b>Cable Kit</b> HMI + Cable for Controller Millenium3				
	<b>Starter Kit (+Nano-PLC em4)</b> HMI + Controller em4 Ethernet + Cable				

### ESSENTIAL

Size	Type	Supply	Resolution	ROM	RAM
 <b>4 inch</b> HMI	<b>Touch Screen</b> HMI only	24 VDC	480x272	128 Mbyte	128 Mbyte
 <b>4 inch</b> Kit	<b>Cable Kit</b> HMI + Cable for Controller Millenium3				
 <b>7 inch</b> HMI	<b>Touch Screen</b> HMI only	24 VDC	800x480	128 Mbyte	128 Mbyte
 <b>7 inch</b> Kit	<b>Cable Kit</b> HMI + Cable for Controller Millenium3				

## HMI Features


- Easy to use graphic software pre-configured communication drivers
- Many Options: 4.3", 7" and 10", Essential and Performance versions
- Several ways of communication: Ethernet, Modbus, SLin/SLout

Communication	CAN Bus	Designation	Part Number
<ul style="list-style-type: none"> <li>• 1 x Port Ethernet</li> <li>• 1 x Port COM1 RS232</li> <li>• 1 x Port COM2 RS485</li> </ul>	-	CTP104N-E	88 970 554N
		CTP104N-E Cable Kit	88 970 553
		CTP104N-E Starter Kit	88 970 555
		CTP104N-E Starter Kit	88 970 558
<ul style="list-style-type: none"> <li>• 1 x Port Ethernet</li> <li>• 1 x Port COM1 RS232</li> <li>• 1 x Port COM2 RS485</li> </ul>	-	CTP107-E	88 970 564
		CTP107-E Cable Kit	88 970 563
		CTP107-E Starter Kit	88 970 566
		CTP107-E Kit	88 970 568
		CTP107-E Starter Kit	88 970 567
<ul style="list-style-type: none"> <li>• 2 x Ports Ethernet</li> <li>• 1 x Port COM1 RS232</li> <li>• 1 x Port COM2 RS485</li> <li>• 1 x Port COM3 RS232 or RS485</li> </ul>	-	CTP110N -E	88 970 584
		CTP110N-E Cable Kit	88 970 573
		CTP110N -E Kit	88 970 577

Communication	CAN Bus	Designation	Part Number
<ul style="list-style-type: none"> <li>• 1 x Port COM1 RS232 or RS485</li> <li>• 1 x Port COM3 RS485</li> <li>• 1 x Port Ethernet</li> </ul>	-	CT104	88 970 524
		CT104 Cable Kit	88 970 523
<ul style="list-style-type: none"> <li>• 1 x Port COM1 RS232 or RS485</li> <li>• 1 x Port COM3 RS485</li> </ul>	-	CT107	88 970 534
		CT107 Cable Kit	88 970 533

# Selection Guide – HMI's

## Connect an HMI with the controller: **Cables and Expansions/Interfaces Needed**

HMI's		ACCESSORIES FOR CONNECTION VIA <b>MODBUS (RTU)</b>		ACCESSORIES FOR CONNECTION VIA <b>ETHERNET (TCP/IP)</b>		CONTROLLERS		
		Cable	Controller Expansion/Interface	Cable	Controller Expansion/Interface			
4 inch HMI	PERFORMANCE	CTP104N-E	 <b>Modbus Cable</b> 88 980 171	 <b>Modbus Interface</b> 88 980 122 or 88 980 123	 <b>Ethernet cable</b> 88 970 508	 <b>Not Possible</b> (Telecontroller em4 Alert Without Ethernet Communication)	 <b>+ Telecontroller em4 Alert</b>	
		CTP104N-E						 <b>M3 Modbus Cable</b> 88 970 503
		CTP104N-E	 <b>Modbus Cable</b> 88 980 172	 <b>Modbus Interface</b> 88 980 122 or 88 980 123		 <b>No Interface needed</b> (Direct Connection to Controller)		
		CTP104N-E						 <b>M3 Modbus Cable</b> 88 970 504
7 inch & 10 inch HMI's	ESSENTIAL	CTP107-E CTP110N-E	 <b>Modbus Cable</b> 88 980 172	 <b>Modbus Interface</b> 88 980 122 or 88 980 123	 <b>Not Possible</b> (Telecontroller em4 Alert Without Ethernet Communication)	 <b>+ Telecontroller em4 Alert</b>		
		CTP107-E CTP110N-E					 <b>M3 Modbus Cable</b> 88 970 504	 <b>Modbus Expansion XN06</b> 88 972 250
		CTP107-E CTP110N-E	 <b>Modbus Cable</b> 88 980 171	 <b>Modbus Interface</b> 88 980 122 or 88 980 123				
		CTP107-E CTP110N-E					 <b>M3 Modbus Cable</b> 88 970 503	 <b>Modbus Expansion XN06</b> 88 972 250
4 inch & 7 inch HMI's	ESSENTIAL	CT104 CT107	 <b>Modbus Cable</b> 88 980 171	 <b>Modbus Interface</b> 88 980 122 or 88 980 123	 <b>Not Possible</b> (Telecontroller em4 Alert Without Ethernet Communication)	 <b>+ Telecontroller em4 Alert</b>		
		CT104 CT107					 <b>M3 Modbus Cable</b> 88 970 503	 <b>Modbus Expansion XN06</b> 88 972 250
		CT104 CT107	 <b>Modbus Cable</b> 88 980 171	 <b>Modbus Interface</b> 88 980 122 or 88 980 123				
		CT104 CT107					 <b>M3 Modbus Cable</b> 88 970 503	 <b>Modbus Expansion XN06</b> 88 972 250

# COMPLEMENTARY PRODUCTS

- *Power Supplies*
- *Temperature Sensors*
- *Signal Converters*
- *Faceplates*






# Selection Guide – Complementary Products

## Crouzet's Complementary Products

Crouzet offers complementary products such as a high-performance range of power supplies, signal converters, temperature sensors and probes, many adapted especially for use with Crouzet Automation Controllers and Timers

### POWER SUPPLIES

Compact offer of 12 and 24 VDC DIN-Rail Modular & Industrial Power Supplies with high efficiency (up to 90%)

Type	Output Power	Output Voltage	Output Current	Width
 Modular AC to DC	10 W	24 VDC	0.42 A	18 mm
	30 W		1.25 A	36 mm
	60 W		2.5 A	54 mm
	100 W		4.2 A	72 mm
<b>NEW</b>  Industrial AC to DC	60 W	12 VDC	5 A	43 mm
	96 W		8 A	
	216 W		18 A	50 mm
<b>NEW</b>  Industrial AC to DC	60 W	24 VDC	2.5 A	43 mm
	120W		5 A	
	240 W		10 A	50 mm
	480 W		20 A	60 mm



## Features

- Designed for a wide range of industrial and building applications
- Many Options: Power supplies, signal converters, temperature sensors, temperature probes
- Adapted to be used with other Crouzet products

Mounting	Input Voltage	Output	Adjustable Output	Part Number
DIN Rail	100-240 VAC	1	No	89 451 001
		1	Yes 24-28 VDC	89 451 003
		2		89 451 006
		2		89 451 010
DIN Rail	90 VAC → 264 VAC	1	12 – 14 VDC	89 452 061
				89 452 121
				89 452 241
DIN Rail	90 VAC → 264 VAC	1	24 – 28 VDC	89 452 062
				89 452 122
				89 452 242
				89 452 482



### TEMPERATURE & SIGNAL CONVERTERS

Temperature & Signal Converters designed for simple & direct connection to Crouzet's Automation Controllers

Type	Range	Input	Output	Part Number
 Temperature to Voltage	-20 → +150 °C	Pt1000 3-wire	0-10 VAC	88 950 150
	-40 → +40 °C			88 950 151
	0 → +100 °C	Pt100 3-wire		88 950 152
	0 → +250 °C			88 950 153
	0 → +300 °C	Thermocouple J		88 950 154
	0 → +600 °C	Thermocouple K		88 950 155
 Current to Voltage	4 x 0-20 mA		4 x 0-10 VAC	88 950 108









### FACEPLATES

ed for Crouzet's Automation Controllers

Type	Compatibility	Size	Part Number
 IP40 Protection	10-12 I/Os Controllers	110 x 108 mm	88 970 809
 IP67 Protection	10-12 I/Os Controllers	91 x 97.7 mm	89 750 160
	24-26 I/Os Controllers	162 x 97.7 mm	89 750 161
	24-26 I/Os Controllers + Expansions	257.4 x 97.7 mm	89 750 162

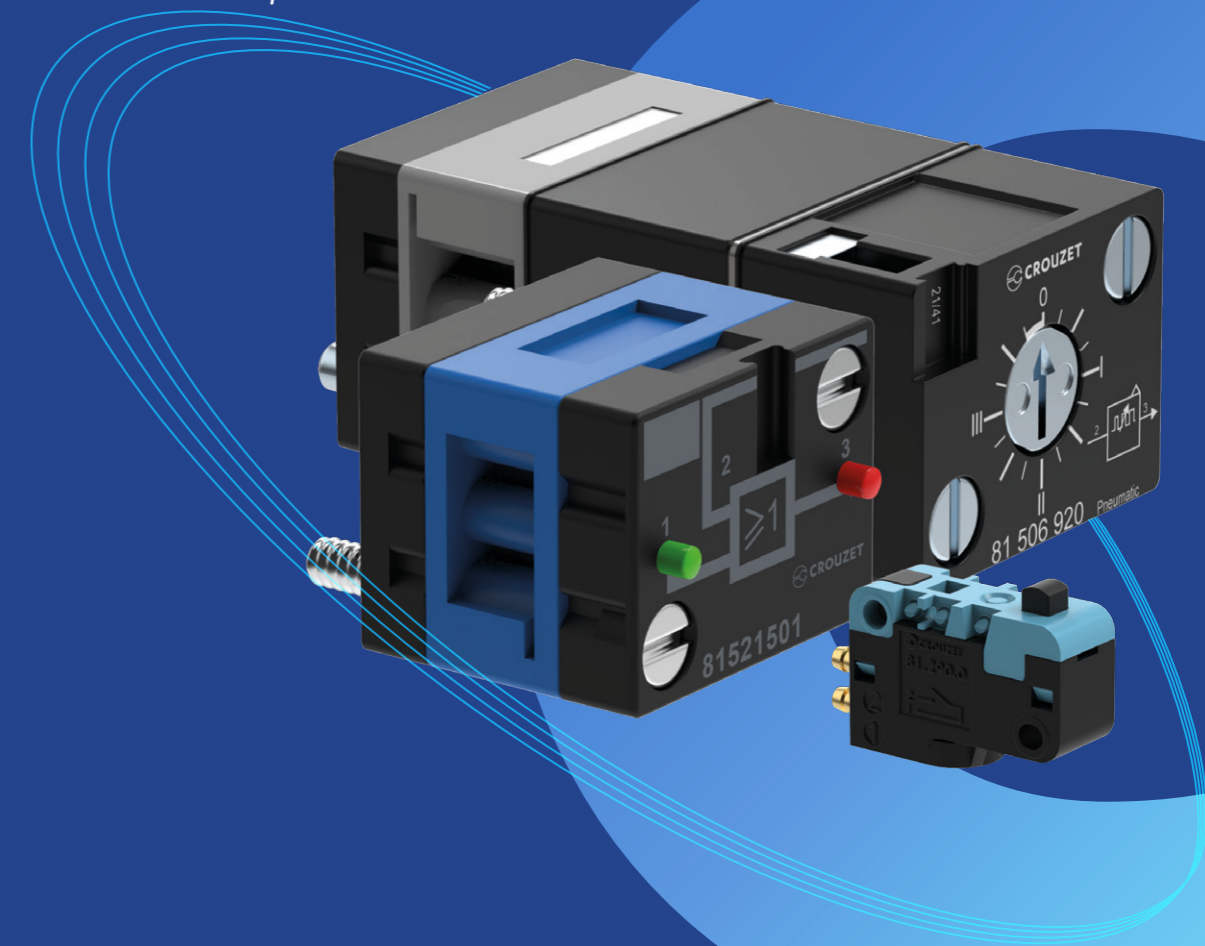
### TEMPERATURE SENSORS

Probes designed for simple & direct connection to Crouzet's Automation Controllers

Type	Range	Power Supply	Output	Part Number
 Air Sensor	-10°C +40°C	24 VDC	0 → 10 V / 4-20mA	89 750 190
 Duct Probe	- 10°C +60°C			89 750 191
 External Probe	-10°C + 40°C			89 750 192
 Remote/ Submersible	-10°C + 110°C			89 750 193
 NTC1 (AS Probe)	-25 → +85 °C	-	10 k Ω @ 25 °C	89 750 180
 NTC2 (PVC Probe)	-25 → +85 °C			89 750 174
 NTC2 (POM Probe)	-20 → +105 °C			89 750 185
 NTC2 (Stainless Steel Probe)	-35 → +120 °C	-	100 k Ω @ 25 °C	89 750 182
 NTC3 (Silicone Probe)	0 → +180 °C			89 750 186

# ***PNEUMATIC COMPONENTS***

- *Switches & Sensors*
- *Logic Control*
- *Indicators*
- *Solenoid Valves*
- *Circuit Components & Boards*



# Selection Guide – Pneumatic Switches & Sensors



## Crouzet's Pneumatic Components

For more than 60 years now, Crouzet has offered a wide range of pneumatic products for simple automation systems using compressed air, without a source of electricity. Suitable for numerous applications, especially in explosive environments (ATEX).









## Pneumatic Components Features


- Suitable for medical equipment, railway applications, packaging machines, industrial machines, etc.
- Many Options: Manually operated switches, logic components, solenoid valves, air pressure sensors...
- DesignLab for tailor-made pneumatic boards, 60+ years of Engineering expertise at your service

### AIR PRESSURE/VACUUM SENSORS (WITH PNEUMATIC OUTPUT)

Type	Output	Adjustment Range	Hysteresis	Accuracy	Flow at 4 bar	Orifice Diameter	Mounting	Standard P/N	ATEX Compliant P/N			
 Pressure Detection	Positive	50 → 500 mb	320 mb @ 2 → 8 b	4% @ 2 → 8 b	170 NL/min	2.5 mm	Sub-base Mount	81 505 140	81 505 141			
		0.1 → 2.5 b						81 505 150	-			
	2 → 8 b	81 505 160		81 505 164								
	50 → 500 mb	81 502 140		81 502 141								
Negative	0.1 → 2.5 b	4% @ 2 → 8 b	81 502 150	-								
	2 → 8 b	81 502 160	-									
 Vacuum Detection	Positive	-0.1 → -0.9 b	80 mb	-				170 NL/min	-		81 505 110	81 505 111
	Negative										81 502 110	-




### AIR PRESSURE/VACUUM SENSORS (WITH ELECTRICAL OUTPUT)

Type	Output	Adjustment Range	Hysteresis	Protection	Connection	Mounting	Contact Form	Standard P/N	ATEX Compliant P/N	
 Pressure Detection	5A @ 230 V	2 → 8 bar	1 bar @ 6 bar	IP20	Push-in connection Ø 4 mm for semi-rigid tubing	DIN Rail Mount	Form C	81 513 502	-	
 Pressure Detection						Sub-base Mount		81 513 516	-	
 Pressure Detection					1/8 Inch BSP (British Standard Pipe Thread Size)	Panel Mount (via 2 x M4 Screws)	81 513 533	-		
 Pressure Detection		Push-in connection Ø 4 mm for semi-rigid tubing	Sub-base Mount	Form Z			81 509 080	-		
 Pressure Detection (With manual override)	5A @ 230 V	2 → 8 bar	1 bar @ 6 bar	IP20	Push-in connection Ø 4 mm for semi-rigid tubing	DIN Rail Mount	Form C	81 513 552	81 513 530	
 Pressure Detection (With manual override)						Sub-base Mount		Form C	81 513 510	-
 Pressure Detection (With manual override)		1.4 ± 0.5 bar	-	IP 54		Form Z	81 509 085	-		
 Low Pressure Detection	5A @ 230 V	0.3 → 1.2 bar	Max. 200 mb	IP20		Push-in connection Ø 4 mm for semi-rigid tubing	DIN Rail Mount	Form C	81 513 501	-

Type	Output	Adjustment Range	Hysteresis	Protection
 Vacuum Detection	5A @ 230 V	-0.3 → -0.8 bar	Max. 250 mb	IP20
		-0.3 → -0.9 bar	Max. 250 mb	IP 54
		-0.3 → -0.8 bar	Max. 250 mb	IP 54



Connection	Mounting	Contact Form	Standard P/N	ATEX Compliant P/N
Push-in connection Ø 4 mm for semi-rigid tubing	DIN Rail Mount	Form C	81 513 522	-
	Sub-base Mount		81 513 527	-
1/8 Inch BSP (British Standard Pipe Thread Size)	Panel Mount (via 2 x M4 Screws)		81 513 523	-

**MOUNTING BASES FOR AIR PRESSURE/VACUUM SENSORS**

Type	Mounting	Connection	Note
 Sub-base	DIN Rail Mount	Rotable Push-in Connection	Base that allows to connect several products next to each other
	DIN Rail Mount		Base for standalone use of one product only
 Sub-base	Shaft Mount (Ø 8 mm) via clip	Rear Connection	Base for the use of up to two products
 Sub-base	Panel Mount via 2 x M4 screw	Rear Connection	Base for standalone use of one product only


Standard P/N	ATEX Compliant P/N
81 532 102	81 532 109
81 532 104	81 532 111
81 531 001	81 531 008
81 532 001	81 532 009

**PNEUMATIC PROXIMITY SENSORS**

Type	Proximity Detection Distance	Operating Pressure	Output Pressure	Consumption at operating pressure 0.5 b
 Passage Sensor	18 mm	0.5 → 2.5 bar	5 mbar	70 NL/h
 Passage Sensor	100 mm	0.5 → 2.5 bar	5 mbar	100 NL/h

Consumption at operating pressure 2.5 b	Connection	Standard P/N	ATEX Compliant P/N
2200 NL/h	Push-in connection Ø 4 mm for barb connection Ø 2.7 x 4 mm	81 372 201	-
700 NL/h		81 372 401	-

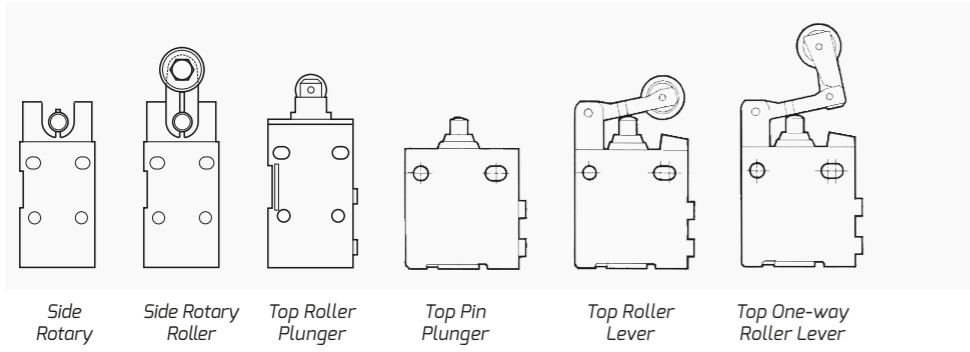
**PNEUMATIC MICROSWITCHES**

Type	Contact	Actuator	Activation Force at 4 bar	Operating Pressure
 V3 Type Pneumatic Switch	Normally Open	Pin Plunger	< 0,5 N	3 → 8 bar
	Normally Closed			

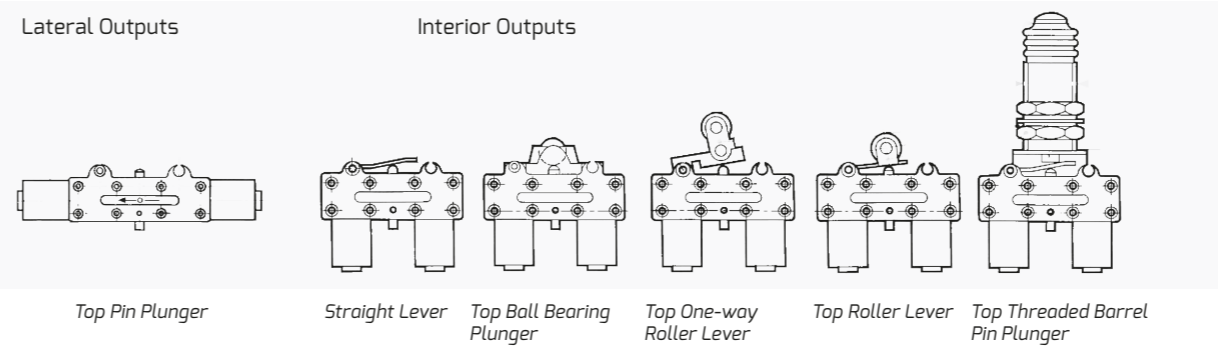
Flow at 4 bar	Orifice Diameter	Connection	Standard P/N	ATEX Compliant P/N
100 NL/min	2 mm	Push-in connection Ø 4 mm for barb connection Ø 2.7 x 4mm	81 290 501	81 290 506
			81 290 001	81 290 006

## PNEUMATIC LIMIT SWITCHES

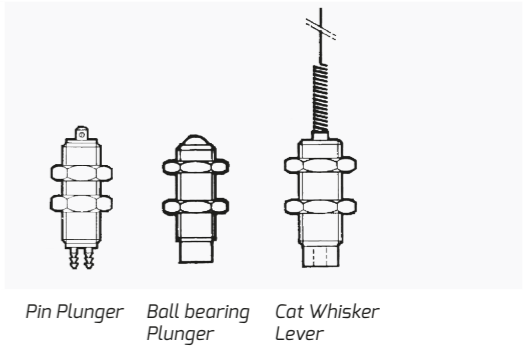
### Vertical Style



### Horizontal Style



### Threaded Barrel-Style





## PNEUMATIC LIMIT SWITCHES - VERTICAL STYLE

Type	Actuator	Contact	Connection	Operating Pressure	Flow at 6 bar	Orifice Diameter	Activation Force at 6 bar	Standard P/N	ATEX Compliant P/N
 <b>Standard Size</b> Limit Switch	Top Roller Plunger	Normally Closed	Push-in connection Ø 4 mm for semi-rigid tubing	0.1 → 8 bar	200 Nm <sup>3</sup> /h	3 mm	2.5 daN	81 922 401	-
	Side Rotary		81 922 010					-	
	Side Rotary		81 922 210					-	
	Side Rotary Roller		81 922 205					-	
 <b>Compact Size</b> Limit Switch	Top Pin Plunger	Normally Closed	Push-in connection Ø 4 mm for semi-rigid tubing	0.1 → 8 bar	200 NL/min	2.7 mm	18 N	81 921 501	-
 <b>Compact Size</b> Limit Switch	Top Roller Lever (Plastic)	Normally Open	Push-in connection Ø 6 mm for semi-rigid tubing					81 921 901	-
		Normally Closed						81 921 701	-
		Normally Open						81 921 911	-
 <b>Compact Size</b> Limit Switch	Top Roller Lever (Metal)	Normally Closed	Push-in connection Ø 6 mm for barb connection Ø 2.7 x 4 mm					81 921 719	-
		Normally Open	Push-in connection Ø 6 mm for semi-rigid tubing - M5 Pneumatic Silencer					81 921 806	-
			Push-in connection Ø 4 mm for semi-rigid tubing					81 921 912	-
			Push-in connection Ø 4 mm for semi-rigid tubing					81 921 702	-
			Push-in connection Ø 4 mm for barb connection Ø 2.7 x 4 mm					81 921 714	-
 <b>Compact Size</b> Limit Switch	Top One-way Roller Lever	Normally Closed	Push-in connection Ø 6 mm for semi-rigid tubing					81 921 902	-
				Top Threaded Barrel Pin Plunger	Push-in connection Ø 6 mm for barb connection Ø 2.7 x 4 mm	81 921 717	-		
					Push-in connection Ø 4 mm for semi-rigid tubing	81 921 707	-		
					200 NL/min	2.7 mm	18 N	81 921 505	-


**PNEUMATIC LIMIT SWITCHES - HORIZONTAL STYLE**

Type	Actuator	Contact	Connection	Operating Pressure	Flow at 6 bar	Orifice Diameter	Activation Force at 6 bar	Standard P/N	ATEX Compliant P/N
 <b>Miniature Limit Switch</b> Lateral Outputs	Top Pin Plunger	Normally Open	Push-in connection Ø 4 mm for semi-rigid tubing	2 → 8 bar	200 NL/min	2.7 mm	15 N	81 280 010	-
		Normally Closed						81 280 510	-
 <b>Miniature Limit Switch</b> Interior Outputs	Top Pin Plunger	Normally Open	Push-in connection Ø 4 mm for semi-rigid tubing	2 → 8 bar	200 NL/min	2.7 mm	15 N	81 281 010	-
		Normally Closed						81 281 510	-
	Top Ball Bearing Plunger	Normally Closed						81 281 504	-
	Top Threaded Barrel Pin Plunger	Normally Closed						81 737 501	-
	Top Short Lever	Normally Closed						81 281 502	-
	Top Roller Lever	Normally Closed						81 281 509	-
Top One-way Roller Lever	Normally Closed	81 281 508	-						



**PNEUMATIC LIMIT SWITCHES - THREADED BARREL STYLE**

Type	Actuator	Contact	Connection	Operating Pressure	Flow at 6 bar	Orifice Diameter	Activation Force at 6 bar	Standard P/N	ATEX Compliant P/N
 <b>Standard Version</b>	Pin Plunger	Normally Closed	Push-in connection Ø 4 mm for barb connection Ø 2.7 x 4mm	0.1 → 8 bar	130 Nm³/h	2 mm	16 N	81 923 001	-
 <b>Low-force Version</b> (To be used with output modules)	Ball Bearing Plunger	Via Output Module	Push-in connection Ø 4 mm for semi-rigid tubing	Via Output Module	Via Output Module	Via Output Module	0.8 N	81 512 201	-
	Cat Whisker Lever						0.025 N	81 512 401	-

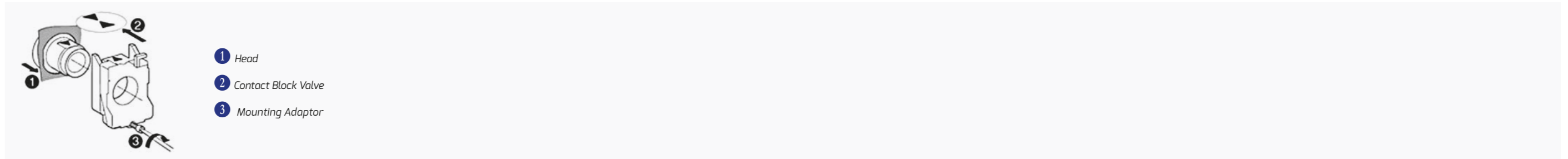
**OUTPUT MODULES FOR THREADED BARREL STYLE LIMIT SWITCHES**

Type	Actuator	Contact	Mounting	Operating Pressure	Flow at 6 bar	Orifice Diameter	Activation Force at 6 bar	Standard P/N	ATEX Compliant P/N
 <b>Positive</b> Output Module	Low-force threaded barrel style limit switches	Normally Open	Sub-base Mount	2 → 8 bar	170 NL/min	2.7 mm	-	81 502 435	-
<b>Negative</b> Output Module		Normally Closed						81 505 435	-




### MANUALLY OPERATED PNEUMATIC SWITCHES

Type	Actuator	Contact	Connection	Color	Standard P/N	ATEX Compliant P/N
 <b>Toggle Switch</b>	Toggle with automatic return (3 Positions)	Normally Closed	Push-in connection Ø 4 mm for semi-rigid tubing	Black	81 715 511	-
				Red	81 715 512	-
	Toggle with manual return (3 Positions)			Black	81 716 511	-
				Red	81 716 512	-
 <b>Push Button</b>	Single Push Button	Normally Open	Push-in connection Ø 4 mm for semi-rigid tubing	Black	81 735 011	-
		Black		81 735 511	-	
	Double Push Button	Normally Closed		Red	81 735 512	-
				Black/Red	81 733 511	-


### MANUALLY OPERATED PNEUMATIC SWITCHES - TO BE ASSEMBLED




#### 1 HEADS


Type	Actuator	Size	Color	Standard P/N	ATEX Compliant P/N
 <b>Flush Push Button Head</b>	Single Push Button	Ø 22 mm	Black	24 678 127	-
			Green	24 678 128	-
			Red	24 678 129	-
 <b>Emergency Stop Push Button Head</b>	Single Push Button	Ø 22 mm	Red	24 678 173	-
	Single Push Button		Black	24 678 172	-
	Single Push & Turn Button		Red	24 678 171	-
 <b>Selector Switch Head</b>	Short Handle (2 Positions)	Ø 22 mm	Black	24 678 174	-
	Long Handle (2 Positions)			24 678 175	-
	Short Handle (3 Positions)		Black	24 678 176	-
	Short Handle with spring return (3 Positions)			24 678 178	-

#### 2 CONTACT BLOCK VALVES


Type	Actuator	Contact	Connection	Operating Pressure	Flow at 4 bar	Orifice Diameter	Control Force	Standard P/N	ATEX Compliant P/N
 <b>Contact block valve - 3 Outputs / 2 Positions (3/2)</b>	-	Normally Closed	Push-in connection Ø 4 mm for semi-rigid tubing	0 → 10 bar	90 Nl/min	2 mm	12.6 N	89 543 501	-
		Normally Open						89 543 101	-
	-	Normally Closed	1/8 Inch BSP					89 543 701	-
		Normally Open	(British Standard Pipe Thread Size)					89 543 201	-

Type	Actuator	Contact	Connection	Operating Pressure	Flow at 4 bar	Orifice Diameter	Control Force	Standard P/N	ATEX Compliant P/N
 <b>Kit - Contact block valve + mounting adaptor - 3 Outputs / 2 Positions (3/2)</b>	-	Normally Closed	Push-in connection Ø 4 mm for semi-rigid tubing	0 → 10 bar	90 Nl/min	2 mm	12.6 N	89 543 105	-
		Normally Open						89 543 005	-
		Normally Closed + Normally Open						89 543 305	-
		Normally Closed + Normally Closed						89 543 205	-


### 3 MOUNTING ADAPTORS

Type	Actuator	Contact	Connection	Operating Pressure	Flow at 4 bar	Orifice Diameter	Control Force	Standard P/N	ATEX Compliant P/N
 Mounting adaptor	-	-	-	-	-	-	-	24 679 702	-

### SAFETY-START MODULES

Type	Actuator	Standard	Mounting	Connection	Flow at 4 bar	Orifice Diameter	Control Force	Standard P/N	ATEX Compliant P/N
 <b>Safety Start (Logic Block)</b>	-	Type III A	Sub-base Mount	-	2 → 8 bar	0.2 s	2.5 N	81 580 101	-
 <b>Safety Start (Logic Block)</b>		Type III B	-	Push-in connection Ø 4 mm for semi-rigid tubing				81 580 202	-
 <b>Safety Start (Complete Two-Hand Module)</b>	Double button	Type III A	-	Push-in connection Ø 4 mm for semi-rigid tubing				81 580 504	-
 <b>Safety Start (Complete Two-Hand Module)</b>		Type III B	-					81 580 503	-

### MOUNTING BASE FOR SAFETY START MODULES (LOGIC BLOCK)




Type	Mounting	Connection	Note	Standard P/N	ATEX Compliant P/N
 Sub-base	Panel Mount (via 2 x M4 Screws)	Rear Connection	Base for standalone use of one product only	81 532 001	81 532 009

# Selection Guide – Pneumatic Logic Control

## TIMERS (TIMING ELEMENTS)

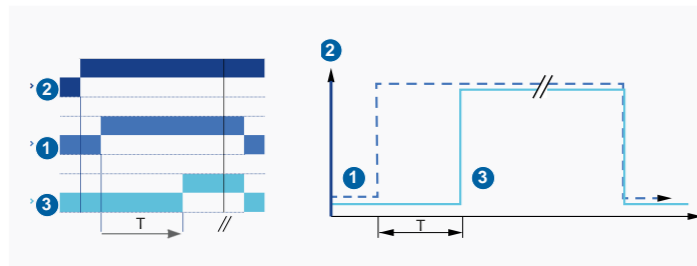
Type	Timing	Flow at 6 bar	Orifice Diameter	Operating Pressure	Mounting	Optional Set-up Knob	Standard P/N	ATEX Compliant P/N
 <b>Positive Output (ON-delay)</b>	Fixed: 0.4 s	170 NL/min	2.7 mm	2 → 8 bar	Sub-base Mount	-	81 503 540	81 503 543
	Adjustable: 0.1 → 15 s					79 451 698	81 503 710	81 503 728
	Adjustable: 0.1 → 30 s					79 451 903	81 503 720	81 503 729
	Adjustable: 0.1 → 60 s					-	81 503 725	81 503 731
 <b>Negative Output</b>	Adjustable: 0.1 → 15 s	170 NL/min	2.7 mm	2 → 8 bar	Sub-base Mount	79 451 698	81 506 710	-
	Adjustable: 0.1 → 30 s					79 451 903	81 506 720	-
	Adjustable: 0.1 → 60 s					-	81 506 725	-
 <b>Impulse Generator</b>	Fixed: 0.4 s	170 NL/min	2.7 mm	2 → 8 bar	Sub-base Mount	-	81 507 540	81 507 543
	Adjustable: 0.1 → 30 s					79 451 904	81 507 720	81 507 724
 <b>Frequency Generator</b>	Adjustable: 0.02 → 8 Hz	170 NL/min	2.7 mm	2 → 8 bar	Sub-base Mount	79 451 905	81 506 940	81 506 945
	Adjustable: 0.02 → 14 Hz					-	81 506 920	-

## MOUNTING BASES FOR TIMERS

Type	Mounting	Connection	Note	Standard P/N	ATEX Compliant P/N
 Sub-base	DIN Rail Mount	Rotable Push-in Connection	Base that allows to connect several products next to each other	81 532 102	81 532 109
	DIN Rail Mount			81 532 104	81 532 111
 Sub-base	Shaft Mount (Ø 8 mm) via clip	Rear Connection	Base for the use of up to two products	81 531 001	81 531 008
 Sub-base	Panel Mount via 2 x M4 screw	Rear Connection	Base for standalone use of one product only	81 532 001	81 532 009

## TIMING FUNCTIONS

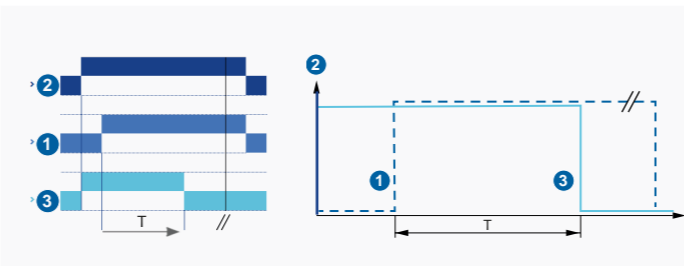
Positive Output (ON-delay)



- 1 Control input
- 2 Air supply
- 3 Air Output

T: Timing  
// Supply off

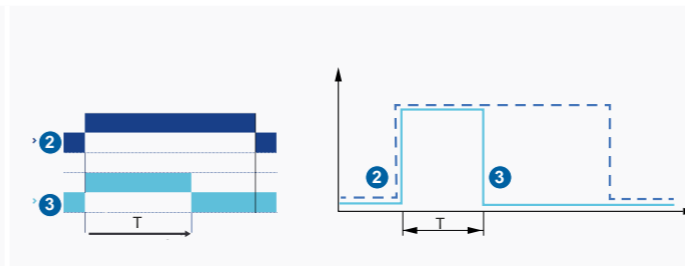
Negative Output



- 1 Control input
- 2 Air supply
- 3 Air Output

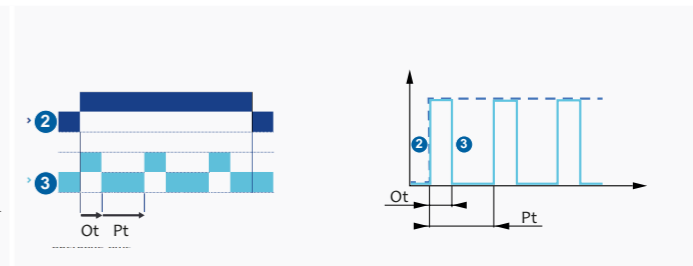
T: Timing  
// Supply off

Impulse Generator



- 2 Air supply
- 3 Air Output
- T: Timing





Frequency Generator



- 2 Air supply
- 3 Air Output




TOt: Operating time  
Pt: Period time

## LOGIC GATES (LOGIC ELEMENTS)


Logic Function	Logic Expression	Mounting	Flow at 6 bar
 <b>OR</b>	$S = a + b$	Sub-base Mount	170 NL/min
		Push-in connection Ø 4 mm for semi-rigid tubing	170 NL/min
		Push-in connection Ø 6 mm for semi-rigid tubing	200 NL/min
 <b>AND</b>	$S = a \cdot b$	Sub-base Mount	170 NL/min
		Push-in connection Ø 4 mm for semi-rigid tubing	150 NL/min
		Push-in connection Ø 6 mm for semi-rigid tubing	200 NL/min
 <b>YES (Buffer)</b>	$S = a$	Sub-base Mount	170 NL/min
<b>YES (Buffer) with threshold</b>	$S = a$		
 <b>NOT (Inverter)</b>	$S = \bar{a}$	Sub-base Mount	170 NL/min
	<b>NOT (Inverter) with threshold</b>		

	Orifice Diameter	Operating Pressure	Color	Standard P/N	ATEX Compliant P/N
	2.7 mm	2 → 8 bar	Blue	81 521 501	81 521 508
	2.7 mm			81 540 001	81 540 015
	4 mm			81 540 005	-
	2.7 mm	2 → 8 bar	Green	81 522 501	81 522 505
				81 541 001	81 541 015
	4 mm			81 541 005	81 541 017
	2.7 mm	2 → 8 bar	Yellow	81 501 025	81 501 031
			Orange	81 503 025	81 503 028
	2.7 mm	2 → 8 bar	Light Gray	81 504 025	81 504 035
			Dark Gray	81 506 025	81 506 027


### MOUNTING BASES FOR LOGIC GATES

Type	Mounting	Connection	Note	Standard P/N	ATEX Compliant P/N
 Sub-base	DIN Rail Mount	Rotable Push-in Connection	Base that allows to connect several products next to each other	81 532 102	81 532 109
	DIN Rail Mount		Base for standalone use of one product only	81 532 104	81 532 111
 Sub-base	Shaft Mount (Ø 8 mm) via clip	Rear Connection	Base for the use of up to two products	81 531 001	81 531 008
 Sub-base	Panel Mount via 2 x M4 screw	Rear Connection	Base for standalone use of one product only	81 532 001	81 532 009



### MEMORY MODULES (MEMORY ELEMENTS)

Type	Flow at 6 bar	Orifice Diameter	Min. Pilot Pressure	Operating Pressure	Mounting	Color	Standard P/N	ATEX Compliant P/N
 Bistable Bistable with Manual Override	200 NL/min	2.7 mm	2.5 bar	2 → 8 bar	Sub-base Mount	Black	81 523 201	81 523 205
							81 523 601	81 523 608




### MOUNTING BASES FOR MEMORY MODULES

Type	Mounting	Connection	Note	Standard P/N	ATEX Compliant P/N
 Sub-base	DIN Rail Mount	Rotable Push-in Connection	Base for standalone use of one product only	81 542 002	81 542 004

### SEQUENCERS (SEQUENTIAL ELEMENTS)


Type	Version	Flow at 6 bar	Orifice Diameter	Operating Pressure	Mounting	Mechanical life	Standard P/N	ATEX Compliant P/N
 Basic Sequencer Modules	Maintained reset	150 NL/min	2.7 mm	2 → 8 bar	Sub-base Mount	5 x 10*6 at 6 bar	81 550 001	81 550 013
	Auto reset						81 550 201	81 550 213
 Shift Register Sequencer Module	Maintained reset						81 550 401	81 550 403
	Auto reset						81 550 601	81 550 603

### MOUNTING BASES FOR SEQUENCERS


Type	Mounting	Notes	Standard P/N	ATEX Compliant P/N
 Sub-base	DIN Rail Mount	Pressure Indicators & Rotable Push-in Connection	81 551 101	81 551 104
	Shaft Mount (Ø 8 mm) via clip	-	81 551 001	-
 End-base	DIN Rail Mount	Pressure Indicators & Rotable Push-in Connection	81 552 101	81 552 105
	Shaft Mount (Ø 8 mm) via clip	Pressure Indicators	81 552 001	-
 Diversion Base Module	DIN Rail Mount	Pressure Indicators & Rotable Push-in Connection	81 552 601	81 552 605

# Selection Guide – Pneumatic Indicators

## PNEUMATIC PILOT LIGHTS



Type	Color	Connection	Panel Cut	Size	Operating Pressure	Standard P/N	ATEX Compliant P/N
 Pilot Lights	Red	Push-in connection Ø 4 mm for semi-rigid tubing	22.5 mm	Ø 30 mm	2 → 8 bar	84 150 201	84 150 214
	Green					84 150 202	84 150 215
	Yellow					84 150 203	84 150 216
	Blue					84 150 204	-

## PNEUMATIC COUNTERS




Type	Digits	Size	Pressure to break	Pressure to make	Supply Pressure	Mounting	Standard P/N	ATEX Compliant P/N
 Totalizer (+ Reset)	4 Digits	24 x 48 mm	< 0.3 bar	> 1.4 bar	2 → 8 bar	Screw Mount	99 766 002	-

# Selection Guide – Solenoid Valves

## SOLENOID VALVES

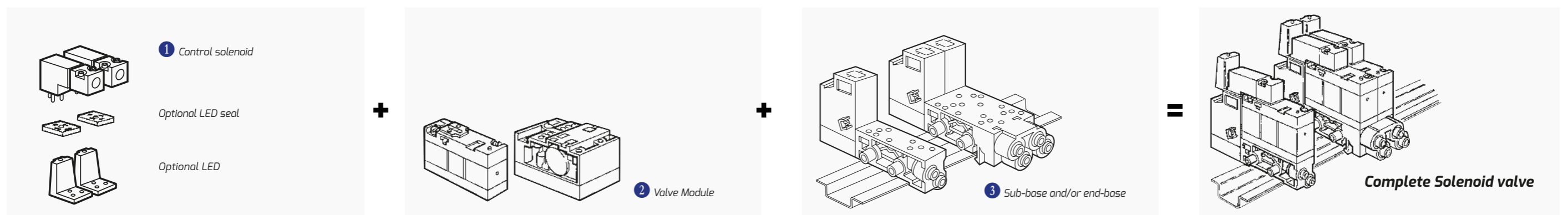
Type	Contact	Flow at 6 bar	Orifice Diameter	Operating Pressure	Switching time	Size	Supply Voltage	Mounting	Standard P/N	ATEX Compliant P/N
 3 Outputs / 2 Positions (3/2)	NC	200 NL/min	3 mm	3 → 8 b	20 ms	17.5 mm	24 VDC	DIN Rail Mount	81 513 103	-
	-								35 mm	81 513 203
 3 Outputs / 2 Positions (3/2)	NC	170 NL/min	2.7 mm	2 → 8 b	-	With manual override by impulse	24 VDC	Sub-base Mount	81 519 732	-
							24 VAC		81 519 774	-
							110 VAC		81 519 776	-
							220-230 VAC		81 519 777	-

**MOUNTING BASES FOR SOLENOID VALVES**



Type	Mounting	Connection	Note
 Sub-base	DIN Rail Mount	Rotable Push-in Connection	Base that allows to connect several products next to each other
	DIN Rail Mount		Base for standalone use of one product only
 Sub-base	Shaft Mount (Ø 8 mm) via clip	Rear Connection	Base for the use of up to two products
 Sub-base	Panel Mount via 2 x M4 screw	Rear Connection	Base for standalone use of one product only

				Standard P/N	ATEX Compliant P/N
				81 532 102	81 532 109
				81 532 104	81 532 111
				81 531 001	81 531 008
				81 532 001	81 532 009

**SOLENOID VALVES - TO BE ASSEMBLED**




**1 CONTROL SOLENOID**



Type	Contact	Flow at 6 bar	Orifice Diameter	Mounting
 3 Outputs / 2 Positions (3/2)	Normally Closed	25 NI/min	0.8 mm	Valve Module Mount
 3 Outputs / 2 Positions (3/2)	Normally Closed	12 NI/min	0.5 mm	Valve Module Mount

Connec-tion	Switching time	Override	Supply Voltage	Standard P/N	ATEX Compliant P/N
Plug-In	5 - 15 ms	-	24 VDC	81 519 032	81 519 035
		By impulse		81 519 332	81 519 335
		Manual (maintained)		81 519 340	81 519 037
Plug-In	5 - 15 ms	-	24 VAC - 50/60 Hz	81 519 632	81 519 635
		By impulse		81 519 080	-
		Manual (latching 1/4 turn)	81 519 380	-	
		By impulse	81 519 680	-	
		By impulse	48 VAC - 50/60 Hz	81 519 381	-
		Manual (latching 1/4 turn)	110 VAC - 50/60 Hz	81 519 378	-
		Manual (latching 1/4 turn)	81 519 678	-	
Plug-In	5 - 15 ms	By impulse	220/230 VAC - 50/60 Hz	81 519 379	-
		Manual (latching 1/4 turn)		81 519 679	-




### OPTIONAL LEDES & SEAL

Type	Supply Voltage	Mounting	Standard P/N	ATEX Compliant P/N
 LEDs (Visual indicators with anti-surge)	24 V - 50/60 Hz	Between control solenoid & valve module	81 513 052	-
	110 V - 50/60 Hz		81 513 058	-
	230 V - 50/60 Hz		81 513 059	-
LED Seal	12 → 24 V AC/DC		81 513 064	-




### 2 VALVE MODULES

Type	Operation	Contact	Flow at 6 bar	Orifice Diameter	Switching time	Size	Operating Pressure	Mounting	Standard P/N	ATEX Compliant P/N
 3 outputs / 2 Positions - (3/2)	Monostable	NC	200 NL/min	3 mm	15 ms	17.5 mm	3 → 8 b	Sub-base Mount	81 513 100	81 513 196
		NO							81 513 600	-
4 outputs / 2 Positions - (4/2)	Monostable	-	300 NL/min	4 mm					81 513 200	81 513 234
 4 outputs / 2 Positions - (4/2)	Monostable	-							50 ms	35 mm
	Bistable	-	81 516 200	81 516 208						

### 3 SUB-BASES & END-BASES





Type	Mounting	Connection	Size	Standard P/N	ATEX Compliant P/N
 Sub-base	DIN Rail Mount	Push-in connection Ø 4mm for semi-rigid tubing	17.5 mm	81 513 060	81 513 075
			35 mm	81 517 101	-
		Push-in connection Ø 6mm for semi-rigid tubing	17.5 mm	81 513 065	81 513 076
			35 mm	81 517 201	81 517 206
 End-Bases		Push-in connection Ø 6mm for semi-rigid tubing	2 x 17.5 mm	81 513 011	81 513 040
 Intermediary supply module			17.5 mm	81 513 001	81 513 039

### GENERAL ACCESSORIES


Type	Note	Mounting	Standard P/N	ATEX Compliant P/N
 Pneumatic Silencer	Filter to avoid dust	Push-in connection Ø 6 mm for semi-rigid tubing	81 537 001	-
 Connector	For control solenoid		81 516 082	-
 Pneumatic Pilot	Without manual override	Push-in connection Ø 4 mm for semi-rigid tubing	81 516 081	81 516 093
 Blanking Plate	For spare positions		81 516 085	-

# Selection Guide – Pneumatic Circuit Components & Boards


## AIR FLOW CONTROL COMPONENTS

Type	Flow	Orifice Diameter	Operating Pressure	Mounting	Connection	Standard P/N	ATEX Compliant P/N
 <b>Air Flow Regulator</b>	Free flow 30 NL/min	0 → 0.5mm	1 → 8 bar	Sub-base Mount	-	81 525 101	-
	Free flow 200 NL/min	0 → 1.7mm				81 526 001	-
 <b>Air Flow Regulator</b>	Flow at 4 bar 0.18 → 0.30 Nm <sup>3</sup> /h	∅ 0.3mm	1 → 8 bar	-	Push-in connection ∅ 4 mm for semi-rigid tubing	81 529 003	81 529 013
	Flow at 4 bar 0.35 → 0.5 Nm <sup>3</sup> /h	∅ 0.4mm				81 529 004	81 529 014
	Flow at 4 bar 0.58 → 0.77 Nm <sup>3</sup> /h	∅ 0.5mm				81 529 005	-
	Flow at 4 bar 0.80 → 1.06 Nm <sup>3</sup> /h	∅ 0.6mm				81 529 006	-
	Flow at 4 bar 1.10 → 1.39 Nm <sup>3</sup> /h	∅ 0.7mm				81 529 007	81 529 017
	Flow at 4 bar 1.45 → 1.65 Nm <sup>3</sup> /h	∅ 0.8mm				81 529 008	81 529 018
	Flow at 4 bar 2.30 → 2.80 Nm <sup>3</sup> /h	∅ 1mm				81 529 010	-
	Flow at 4 bar 0.08 → 0.12 Nm <sup>3</sup> /h	∅ 0.25mm				81 529 025	-
 <b>Air Pressure Regulator</b>	Flow at 6 bar 200 NL/min	-	2 → 8 bar (Adjustable output pressure 0.1 → 8 bar)	Sub-base Mount	-	81 527 001	-
 <b>Non-return valve (Check-Valve)</b>	Flow at 6 bar 200 NL/min	-	2 → 8 bar	-	Push-in connection ∅ 4 mm for semi-rigid tubing	81 529 901	-



## AIR CAPACITOR

Type	Timing	Connection	Standard P/N	ATEX Compliant P/N
 <b>Air Capacitor</b>	10 → 60s	Push-in connection ∅ 4 mm for semi-rigid tubing	79 452 808	-




## AIR SIGNAL AMPLIFIERS

Type	Function	Engaging Pressure	Orifice Diameter	Consumption at 4bar	Acceptable Overload for 1h	Mounting	Standard P/N	ATEX Compliant P/N
 <b>Simple Amplifiers</b>	Positive	10 → 20 mb	2.5 mm	5 NL/min	800 mb	Sub-base Mount	81 502 230	81 502 238
	Negative						81 505 230	81 505 231


### VACUUM GENERATORS

Type	Mounting	Connection	Operating Pressure					Standard P/N	ATEX Compliant P/N
 Vacuum Generators	Sub-base Mount	-	2 → 8 bar					81 535 301	-
 Vacuum Generators	-	Push-in connection Ø 4 mm for semi-rigid tubing						81 545 001	81 545 012
	-	Push-in connection Ø 6 mm for semi-rigid tubing						81 545 005	-

### MOUNTING BASES FOR PNEUMATIC CIRCUIT COMPONENTS

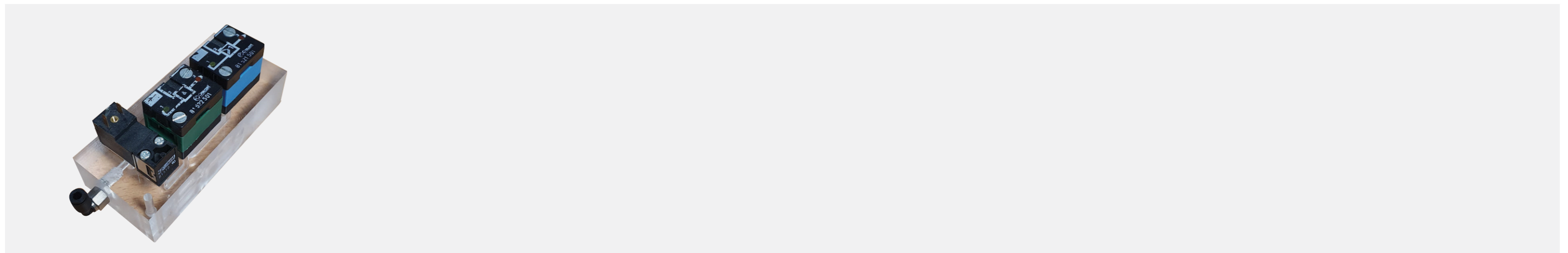
Type	Mounting	Connection	Note					Standard P/N	ATEX Compliant P/N
 Sub-base	DIN Rail Mount	Rotable Push-in Connection	Base that allows to connect several products next to each other					81 532 102	81 532 109
	DIN Rail Mount		Base for standalone use of one product only					81 532 104	81 532 111
 Sub-base	Shaft Mount (Ø 8 mm) via clip	Rear Connection	Base for the use of up to two products					81 531 001	81 531 008
 Sub-base	Panel Mount via 2 x M4 screw	Rear Connection	Base for standalone use of one product only					81 532 001	81 532 009

### SUPPLY BLOCK

Type	Mounting	Connection						Standard P/N	ATEX Compliant P/N
 Supply Block 13 Outputs	Shaft Mount (Ø 8 mm) via clip	Rear Connection						81 536 801	-

### PNEUMATIC BOARDS

Contact our DesignLAB for tailor-made pneumatic boards







**AMERICAS****CANADA**

Tel.: +1 (855) 929-5465  
americas.custserv@crouzet.com

**MEXICO**

Tel.: +1 (855) 929-5465  
americas.custserv@crouzet.com

**USA**

+1 (855) 929-5465  
americas.custserv@crouzet.com

**EUROPE / MIDDLE EAST / AFRICA****BELGIUM**

Tel.: +32 (0) 2 620 06 05  
Fax: +32 (0) 2 461 00 23  
klantenservice@crouzet.com

**FRANCE**

Tel.: +33 (0) 475 802 101  
Fax: +33 (0) 475 828 900  
relationclient@crouzet.com

**GERMANY / AUSTRIA**

Tel.: +49 (0) 2103/9385930  
Fax: +49 (0) 2103/980-222  
kundenservice@crouzet.com

**ITALY**

Tel.: +39 (02) 38 594 099  
Fax: +39 (02) 82 952 104  
assistenzaclienti@crouzet.com

**MOROCCO**

Tel.: +212 5 20 48 03 40  
sales.mena@crouzet.com

**SPAIN / PORTUGAL**

Tel.: +34 (91) 215 80 95  
Fax: +34 (93) 2 20 02 05  
atencionalcliente@crouzet.com

**SWITZERLAND**

Tel.: +41 (0) 225 67 57 90  
Fax: +41 (0) 565 88 02 75  
kundenservice@crouzet.com

**THE NETHERLANDS**

Tel.: +31 (0) 20-654 52 20  
klantenservice@crouzet.com

**UNITED KINGDOM**

Tel.: +44 (0) 2076 600 025  
customer.relation@crouzet.com

**ASIA / PACIFIC****CHINA**

Tel.: +86 (752) 5303 200  
china@crouzet.com

**INDIA**

Tel.: +91 (80) 6966 3600  
india@crouzet.com

**SOUTH KOREA**

Tel.: +82 (2) 2679 8312  
korea@crouzet.com

**SOUTH ASIA PACIFIC**

Tel.: +86 (752) 5303 200  
eap@crouzet.com

**Warning:**

The product information contained in this catalogue is given purely as information and does not constitute a representation, warranty or any form of contractual commitment. Crouzet and its subsidiaries reserve the right to modify their products without notice. It is imperative that we should be consulted over any particular use or application of our products and it is the responsibility of the buyer to establish, particularly through all the appropriate tests, that the product is suitable for the use or application. Under no circumstances will our warranty apply, nor shall we be held responsible for any application (such as any modification, addition, deletion, use in conjunction with other electrical or electronic components, circuits or assemblies, or any other unsuitable material or substance) which has not been expressly agreed by us prior to the sale of our products.