

AUTOMATION & CONTROL

Selection Guide



ABOUT CROUZET

100 YEARS MANUFACTURING THE FUTURE *Together*

Crouzet is an independent company **manufacturing mechatronic components for demanding applications in Aerospace & Transportation, Energy, Building & Machinery Industry.**

Crouzet provides **Switches & Sensors, Electromechanical Actuators, Electrical Control & Protection Equipment, Flight Control Equipment, Automation Controllers & Relays, and Instrumentation Services.**

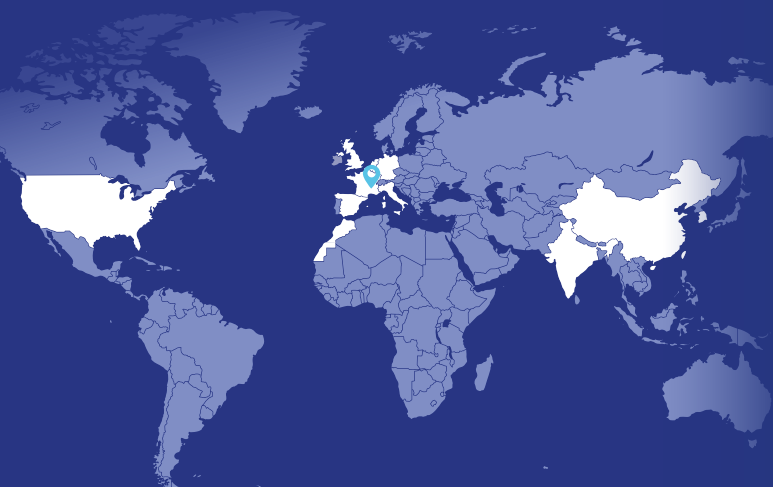
Since 1921, Crouzet has a heritage of close collaboration with customers in the development of products, from standard components to fully customized solutions.

Crouzet's customers and partners can rely on our teams worldwide to always meet and often exceed their expectations. Driven by innovation, our experts are focused on designing and delivering the right product for the right application.

Crouzet is your trusted partner of choice to face the industrial challenges of today and tomorrow.

WORLDWIDE PRESENCE

10 Manufacturing Plants
& 6 R&D Labs



📍 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)



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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

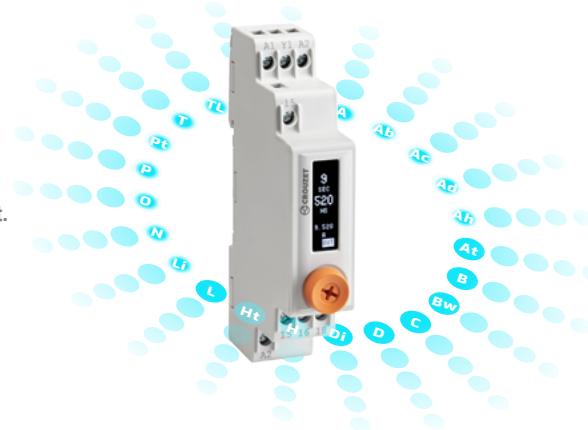
IT'S UNIVERSAL

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

YR-LINE



Universal Digital

Chronos 2



Classic

YR-LINE



High-Power

YR-LINE



Double Output

YR-LINE



Plug-In

TMR48



Front-Panel Analog

YR-LINE



Front-Panel Digital

Take a look at our wide range of automation and control products at 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	
 Syr-Line Universal Digital	Super Multifunction Z*	0,1 s → 100 days	1 x 8 A (Changeover)	12-240 VAC/DC	
 Syr-Line High-Power	Multifunction M*+ Tt	0,1 s → 10 days	1 x 16 A (Changeover)	12-240 VAC/DC	
	A: ON-Delay				
	L/Li: Repeat Cycle				
 Syr-Line Double Output	Multifunction M* + Instantaneous	0,1 s → 10 days	2 x 8 A (Changeover)	12-240 VAC/DC	
	A: ON-Delay				
	L/Li: Repeat Cycle				
 Chronos 2 Classic	Multifunction U*	0,1 s → 100 h	1 x 8 A (Changeover)	12-240 VAC/DC	
	Multifunction U*			24 VDC / 24-240 VAC	
	Multifunction U*			24 VDC / 24-240 VAC	
	Multifunction X*			24 VDC / 24-240 VAC	
	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/DC	
	Multifunction U*			24-240 VAC	
	H/Ht: Interval + Memory			24-240 VAC/DC	
	L/Li: Repeat Cycle			24-240 VAC/DC	
	A: ON-Delay	0,1 s → 100 h	2 x 8 A (Changeover)	24 VDC / 24-240 VAC	
	Q: Star-Delta			230-240 / 380-440 VAC	
	Q: Star-Delta			20-30 VDC / 20-264 VAC	
	K: True Off-Delay	0,6 s → 160 s			
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
	Spring terminal	17.5 mm	DIN Rail	MURc3	88 827 503
	-			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	MUS2	88 827 004
				MHS2	88 827 044
				MLS2	88 827 054
				MAS5	88 827 014
	-	22.5 mm	DIN Rail	RQR1	88 866 175
				RQR6	88 866 176
				TK2R1	88 865 265

Selection Guide - Timers

PANEL MOUNT

Type	Function	Time range	Output	Supply	
 Syr-Line Plug-in	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				
 Syr-Line TMR48D Digital Performance	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*				
	A: ON-Delay		2 x 10 A (Changeover)		
 Syr-Line TMR48D Digital Essential	Multifunction E*	0,001 s → 9999 h	1 x 5 A (Changeover)	24 VAC/DC	
	Multifunction E*			100-240 VAC/DC	
 TMR48 Analog	A, B, C, W, G, Ac, Bw	0,02 s → 300 h	2 x 5 A (Changeover)	12-240 VDC / 24-240 VAC	
	L/LI - G/Gi				
	A1, A2, H1, H2, Q1, Q2, D-Di				
	A: ON-Delay				
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	GD52	GDS2R10MV2
				GDF1	GDF1R10MV2
			8-Pin	MDF1	MDF1R10MV2
				MDA2	MDA2R10MV2
	LCD, IP66	48 mm	8-Pin	MDE1	MDE1R0524U
				MDE1	MDE1R05MVA
	-	48 mm	11-Pin	TMR 48 U	88 886 016
				TMR 48 L	88 886 516
			8-Pin	TMR 48 X	88 886 116
				TMR 48 A	88 886 106

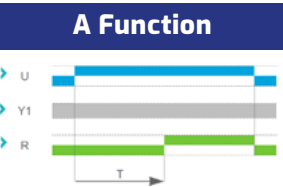
TIMERS' ACCESSORIES

Type	Compatibility	Description	
 Socket	• TMR48D • TM48 • 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
Adaptor	• Syr-Line • Chronos 2	11-Pin Solder Plug	25 622 076
		DIN Rail to Panel Mount	79 237 806

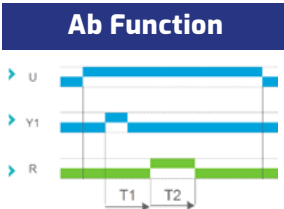
Selection Guide - Timing Functions

Diagrams

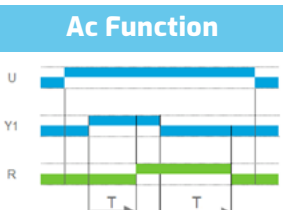
U: Power Supply R: Output Relay T: Timing ∞Infinity C (Y1): Command



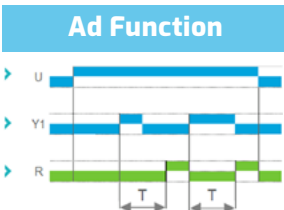
ON-Delay
After power-up, timing starts, and relay turns ON at the end of timing



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



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



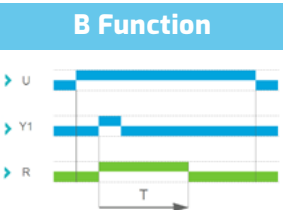
Delay on Start
After a signal, timing starts, and relay turns ON at the end of timing



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



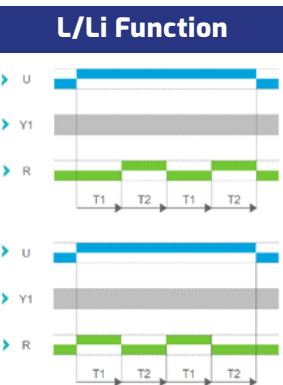
Summation time relay
After absence of an input signal equals the selected time, relay turns ON



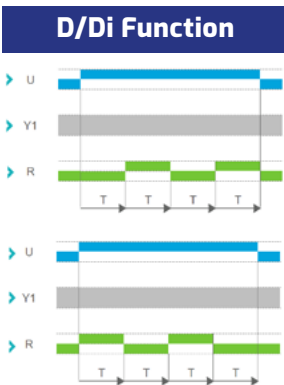
Single Shot
After a signal, relay turns ON and timing starts; At the end of the timing, relay turns OFF



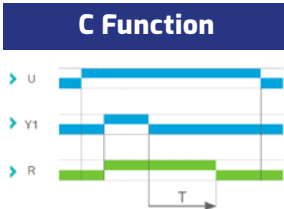
Pulse output
Each time a signal changes state; relay turns ON for the selected timing



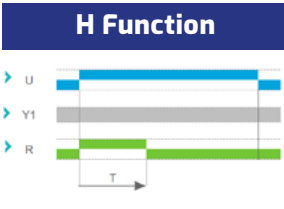
Repeat Cycle
After power-up, a repetitive cycle of independent timing starts
L: Start in OFF position
Li: Start in ON position



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



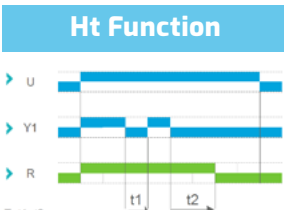
OFF-Delay
After a signal, relay turns ON. When signal is removed, timing starts, and relay turns OFF at the end of timing



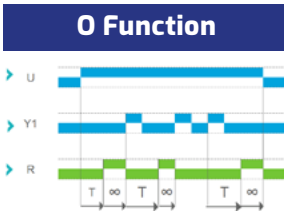
Interval
After power-up, relay turns ON and timing starts; At the end of the timing, relay turns OFF



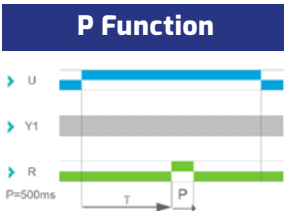
Watchdog
After a signal, relay turns ON. When signal is sent, timing resets. If timing is completed relay turns OFF



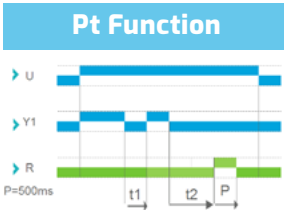
Interval with Memory
After absence of an input signal equals the selected time, relay turns OFF



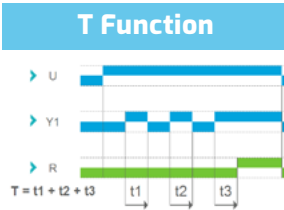
Delayed Watchdog
After power-up, timing starts, and relay turns ON at the end of timing. When signal is sent, timing and relay resets



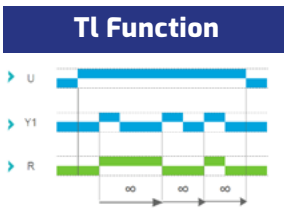
Pulse Delay Relay
After power-up, timing starts, and relay turns ON for 500ms at the end of timing



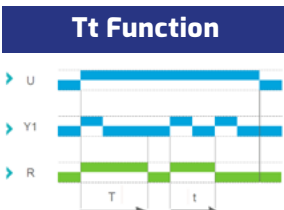
Impulse Counter
After absence of an input signal equals the selected time, relay turns ON for 500ms



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



Latching
Each time a signal is sent, relay changes state



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



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

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.

ELECTRICAL MONITORING

Type	Function	Measuring Range	Output	
 Three-Phase	Voltage	220-480 VAC	1 x 5 A (Changeover)	
	Voltage	208-480 VAC		
	Voltage Absence	120-277 VAC	2 x 5 A (Changeover)	
	Sequence Absence	208-440 VAC		
	Sequence Absence	208-480 VAC	1 x 5 A (Changeover)	
	Sequence Absence Undervoltage			
	Sequence Absence Imbalance			
	Sequence Absence Voltage Imbalance			
	Sequence Absence Voltage Imbalance	220-480 VAC		
 Single phase	Voltage	9-15 VDC	1 x 5 A (Changeover)	
	Voltage	0.2-60V AC/DC	2 x 5 A (Changeover)	
	Voltage	20-80V AC/DC	1 x 5 A (Changeover)	
	Voltage	65-260V AC/DC		
	Voltage	15-600V AC/DC	2 x 5 A (Changeover)	
	Current	2-500 mA	2 x 5 A (Changeover)	
	Current	0.1-10 A		
	Current	2-20 A		

LEVEL CONTROL

Type	Function	Measuring Range	Output	
 Level	Pump up or down	5 - 100 kΩ	1 x 8 A (Changeover)	
	Pump up or down	250 Ω - 1 MΩ		
	Pump up or down	250 Ω - 1 MΩ	2 x 5 A (Changeover)	

ACCESSORIES

Type	Description	Compatibility	Part Number
 Probes	Electrode Holder	ENR / ENRM / HNM	79 696 044
	Protected Suspension Sensor		79 696 043
	Electrode & Holder 200°C		79 696 014

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 and CE certified

	Power Supply	Width	Mounting	Designation	Part Number
	220-480 VAC	35 mm	DIN Rail	H3U5	84 873 220
	208-480 VAC			M3U5	84 873 222
	120-277 VAC	35 mm		H3USN	84 873 221
	208-440 VAC	17,5 mm		MW52	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
	220-480 VAC	35 mm		HWUA	84 873 026
		9-15 VDC		17.5 mm	DIN Rail
24-240 VAC/DC		35 mm	HUL	84 872 120	
20-80 VAC/DC		17.5 mm	MU5	84 872 141	
65-260 VAC/DC			MU5	84 872 142	
			MUSF	84 872 152	
24-240 VAC/DC		35 mm	HUH	84 872 130	
24-240V AC/DC		35 mm	DIN Rail	HIL	84 871 120
		17.5 mm		HIH	84 871 130
				MIC	84 871 122

	Power Supply	Width	Probe	Mounting	Designation	Part Number
	24-240 VAC/DC	22,5 mm	Resistive	DIN Rail	ENR	84 870 200
		35 mm			ENRM	84 870 210
					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.

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			
		Backlight LCD	Voltage		Battery	
	Multifunction 1* (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	
	Multifunction 2* (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	
		LED			24 VAC	
		LED			90-260 VAC	
	Multifunction 3* (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	
		LED			90-260 VAC	

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

	Size	Digits	Fixing	Designation	Part Number
	48 x 24 mm	7 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

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





SOLID STATE RELAYS SPECIALIST

DISCOVER OUR FULL OFFER [....▶](#)



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					
	GNA Essential Version	25 A	24-280 VAC	4-32 VDC	cRUus, CE				
		40 A	48-660 VAC		cRUus, CE, VDE				
		50 A							
		90 A							
	GN 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		20-265 VAC					
		25 A	48-660 VAC	4-32 VDC	cRUus, CE, VDE				
		25 A		20-265 VAC	cRUus, CE				
		50 A	48-660 VAC	4-32 VDC	cRUus, CE, VDE				
		50 A		18-36V AC/DC	cRUus, CE				
		50 A		20-265 VAC					
		75 A	48-660 VAC	4-32 VDC	cRUus, CE, VDE				
		75 A		20-265 VAC	cRUus, CE				
		100 A	48-660 VAC	4-32 VDC	cRUus, CE, VDE				
		100 A		20-265 VAC	cRUus, CE				
		125 A	48-660 VAC	4-32 VDC	cRUus, CE, VDE				
		125 A		20-265 VAC	cRUus, CE				
				25 A	24-280 VAC		4-32 VDC	cRUus, CE, VDE	
				25 A			90-260 VAC		
50 A	48-660 VAC			4-32 VDC	cRUus, CE, VDE				
50 A				90-260 VAC					
75 A	48-660 VAC			4-32 VDC	cRUus, CE, VDE				
	GN+ 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	Resistive Loads: • Heating	• To use in simple applications	GNA25DZL	84137910N
					GNA40DZH	84137450N
					GNA50DZH	84137460N
					GNA90DZH	84137480N
	Panel Mount "Hockey Puck"	Zero Cross	Resistive Loads: • 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
					GN100DZH	84137140N
					GN100AZH	84137141N
					GN125DZH	84137180N
					GN125AZH	84137181N
	Panel Mount "Hockey Puck"	Random (Instantaneous)	Inductive Loads: • Motion • Miscellaneous (high inductive loads, very strong magnetising currents, overvoltages)	• Output Protection Included (RC Snubber)	GN25DRL	84137210N
					GN25ARL	84137211N
					GN50DRL	84137320N
					GN50ARH	84137321N
					GN75DRH	84137330N
	Panel Mount "Hockey Puck"	Special Zero Cross	Resistive Loads: • Heating • Lighting Inductive Loads: • Motion • Miscellaneous (High inductive loads) Capacitive Loads: • 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		
 GNR 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		80-140 VAC		
	30 A		180-280 VAC		
	30 A	24-500 VAC	4-32 VDC	cRUus, CE, VDE	
 GNR+ 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	
 GNF Specialized Version	25 A	24-280 VAC	4-30 VDC	cRUus, CE, UKCA	
 GN MINI Specialized Version	20 A	24-280 VAC	4-30 VDC	cRUus, CE, UKCA	
 GNZ Specialized Version	8 A	24-280 VAC	4-32 VDC	cRUus, CE, UKCA	
 GN Board Classic Version NEW	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	
 GNR Mini Classic Version NEW	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	Zero Cross	Resistive Loads: ● Heating ● Lighting	● Output Protection Included	GNR20DCZL	GNR20DCZL	
					GNR20DCZH	GNR20DCZH	
					GNR20BCZH	GNR20BCZH	
					GNR20ACZH	GNR20ACZH	
					GNR30DCZH	GNR30DCZH	
					GNR30BCZH	GNR30BCZH	
					GNR30ACZH	GNR30ACZH	
	DIN Rail 22.5 mm	Random	Inductive Loads: ● Motion ● Miscellaneous	● Output Protection Included (RC Snubber)	GNR25DCRH	GNR25DCRH	
		DIN Rail 22.5 mm	Zero Cross	Resistive Loads: ● Heating ● Lighting Inductive Loads: ● Motion ● Miscellaneous (High inductive loads) Capacitive Loads: ● Miscellaneous (Strong inrush current)	● Output Protection Included (VDR) ● High Immunity (Level A)	GNR30DCZP	GNR30DCZP
						GNR30ACZP	GNR30ACZP
DIN Rail 45 mm		GNR32DCZP				GNR32DCZP	
		GNR45DCZP				GNR45DCZP	
	Panel Mount "Hockey Puck"	Zero Cross	Resistive Loads: ● Heating ● Lighting	● FAST-ON terminals	GN20DFZL	84134017N	
	Panel Mount "Mini Puck"	Zero Cross	Resistive Loads: ● Heating ● Lighting	● Output Protection Included (VDR) ● FAST-ON terminals	GNM20DFZL	84132010N	
	Panel Mount "Low profile"	Zero Cross	Resistive Loads: ● Heating ● Lighting	● Output Protection Included (VDR) ● FAST-ON terminals	GNZ8DFZL	84132210N	
		Random	Inductive Loads: ● Motion ● Miscellaneous		GNZ8DFRL	84132110N	
	PCB Mount	Special Zero Cross	Resistive Loads: ● Heating ● Lighting Inductive Loads: ● Miscellaneous (High inductive loads) Capacitive Loads: ● Miscellaneous (Strong inrush current)	● Output Protection Included (TVS)	GNB4D2A	GNB4D2A	
					GNB4D2B	GNB4D2B	
	PCB Mount	Zero Cross	Resistive Loads: ● Heating	-	GNB4D1C	GNB4D1C	
	DIN Rail	Special Zero Cross	Resistive Loads: ● Heating ● Lighting Inductive Loads: ● Miscellaneous (High inductive loads)	● Output Protection Included (VDR)	GNRM4D2A	GNRM4D2A	
					GNRM4B1B	GNRM4B1B	

AC VOLTAGE MULTICHANNEL

Type	Output		Input	Certifications	
	Current	Voltage	Voltage		
 GN2/GN2F 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		
 GN4 4-Channel	25 A	12-280 VAC	4-32 VDC	cRUus, CE, UKCA	

AC VOLTAGE THREE PHASE

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

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

	Mounting	Switching	Usage (Load Type)	Comments	Designation	Part Number
	Panel Mount "Hockey Puck"	Zero Cross	Resistive Loads: • Heating • Lighting	• Output Protection Included (TVS)	GN325DSZH	GN325DSZH
		Random	Inductive Loads: • Motion • Miscellaneous		GN325DSRH	GN325DSRH
		Special Zero Cross	Resistive Loads: • Heating • Lighting Inductive Loads: • Motion • Miscellaneous (High inductive loads) Capacitive Loads: • Miscellaneous (strong inrush current)	• Output Protection Included (TVS)	GN325ASZH	GN325ASZH
		Zero Cross	Resistive Loads: • Heating • Lighting	• Output Protection Included (TVS)	GN350DSZH	GN350DSZH
		Random	Inductive Loads: • Motion • Miscellaneous	• Output Protection Included (RC, VDR)	GN350DSRH	GN350DSRH
		Special Zero Cross	Resistive Loads: • Heating • Lighting Inductive Loads: • Motion • Miscellaneous (High inductive loads) Capacitive Loads: • Miscellaneous (Strong inrush current)	• Output Protection Included (TVS)	GN350ASZH	GN350ASZH

AC VOLTAGE THREE PHASE

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

DC VOLTAGE

Type	Output		Input	Certifications	
	Current	Voltage	Voltage		
 GNAD Essential Version	10 A	5-200 VDC	4-32 VDC	cRUus, CE	
	20 A	5-100 VDC			
	40 A	5-55 VDC			
 GND Classic Version	10 A	5-200 VDC	4-32 VDC	cRUus, CE	
	40 A	5-60 VDC			
 GND Board Classic Version	4 A	2-60 VDC	4-30 VDC	CE, UKCA	
	10 A	7-36 VDC	4-10 VDC		
			10-30 VDC		
 GNRD MINI Specialized Version	4 A	2-60 VDC	5-30 VDC	CE, UKCA	
			90-240 VAC/DC		
 GNRD-0 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	Resistive Loads: • Heating • Lighting	• Output Protection Included (TVS)	GNR325DCZH	GNR325DCZH
		Special Zero Cross	Resistive Loads: • Heating • Lighting Inductive Loads: • Motion • Miscellaneous (High inductive loads) Capacitive Loads: • Miscellaneous (strong inrush current)		GNR325ACZH	GNR325ACZH
	Panel Mount "Hockey Puck"	Special Zero Cross	Resistive Loads: • Heating • Lighting Inductive Loads: • Motion • Miscellaneous (High inductive loads) Capacitive Loads: • Miscellaneous (strong inrush current)	• Output Protection Included (RC, VDR) • Start/Stop/ Reverse in the same product	GN025DSRL	GN025DSRL
					GN050DSRL	GN050DSRL

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

Load Diagnostic: Smart SSR

Type	Output		Input	Certifications	
	Current	Voltage	Voltage		
 GN Smart 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				
 GNR Smart Module Load Detection	40 A	-	4-32 VDC	CE	
	40 A		24-45 VDC		

ACCESSORIES

Type	Description	P/N
 Heatsinks 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
 Adapters For DIN Rail	DIN Rail Adaptor for SSRs with Hockey Puck shape	26532764N
 Thermal Pads For Heatsink Mounting	Pre-cut thermal pad	26532720N
	Self-adhesive thermal pad	26532722N

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

ACCESSORIES

Type	Description	P/N
 Screws For Heatsink Mounting	Screw Mounting Kit for Single & Dual-Phase SSR	26532001
	Screw Mounting Kit for 3-Phase SSR	26532002
 Thermal Grease For Heatsink Mounting	Thermal Grease	26532003
 Label For SSR identification	Label for SSR Identification	26532004
 Connectors	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 standalone applications	Connectivity needed	High-end & niche applications	Remote applications
		 Slim Logic Controller	 Logic Controller	 Communicating Logic Controller	 Nano-PLC	 Telecontroller
INPUTS & OUTPUTS	Memory Capacity	1000 FB	500 FB	1000 FB	2000 FB	2000 FB
	Number of I/Os	8	Up to 50	Up to 44	Up to 46	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	6 KHz	15 KHz	60 KHz	60 KHz
COMMUNICATION	Ethernet Embedded	NO	NO	YES	YES	N/A
	Modbus Interface	N/A	N/A	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	N/A	16 VALUES	24 VALUES	24 VALUES
	Event Number of Values	N/A	N/A	12 VALUES	24 VALUES	24 VALUES
		CROUZET SOFT (FBD-SFC)	MILLENNIUM 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, Millennium EVO, em4 and em4 Alert

THE SMALLEST LOGIC CONTROLLER EVER

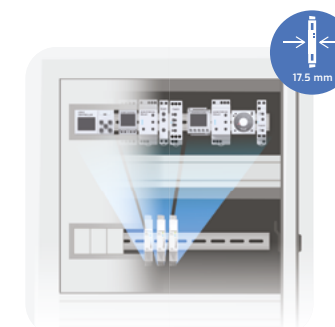
Thousands of applications
in your hand



MILLENIUM SLIM

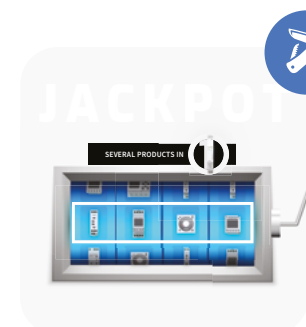
The smallest logic controller ever!

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	
 Slim Controller Kit	8 I/Os • 4 Inputs • 4 Outputs	4 • Classical Digital	-	-	-	4 • 6A Relay	-	
			4 • 0-10 VDC or 0-VCC	2 • 10 Hz to 1 KHz	2 • 5 KHz	4 • 6A Relay	-	
						-	4 • 0.5A Static	

LOGIC CONTROLLER - MILLENIUM 3

Millenium 3, the logic controller of choice for 10+ years

Type	Total I/Os	Convertible Inputs		Output Types			
		To Digital	To Analog	Digital	PWM	Analog	
 Non-Expandable Short - With Screen	12 I/Os · 8 Inputs · 4 Outputs	8	4	4 Relay	-	-	
				4 Static	1		
				4 Relay	-		
				4 Static	1		
			-	4 Relay	-		
 Non-Expandable Short - No Screen		8	4	4 Relay	-	-	
	-						
 Starter Kit Short - With Screen	8	4	4 Relay	-	-		
		-					
 Expandable Short - With Screen	10 I/Os · 6 Inputs · 4 Outputs	6	4	4 Relay	-	-	
				4 Static	1		
				-	4 Relay		
 Expandable Long - With Screen	26 I/Os · 16 Inputs · 10 Outputs	16	6	10 Relay	-	-	
				10 Static	4		
				-	10 Relay		
 Expansion Short - Digital	6 I/Os · 4 Inputs · 2 Outputs	4	-	2 Relay	-	-	
 Expansion Long - Digital	10 I/Os · 6 Inputs · 4 Outputs	6	-	4 Relay	-	-	

More versions available at 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

	Embeddded Communication	Embeddded 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 9839 02*

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

	Embeddded Communication	Embeddded Screen	Power Supply	Comments	Designation	Part Number
	-	✓	12 VDC	-	CD12	88 974 045
						88 974 046
			24 VDC			88 974 041
						88 974 042
			100-240 VAC			88 974 043
	-	-	24 VDC	-	CB12	88 974 021
			100-240 VAC			88 974 023
	-	✓	24 VDC	CD12, Programming Cable, CD with Software	CD12 Starter Kit	88 974 080
			100-240 VAC			88 974 081
	-	✓	24 VDC	More I/Os are possible by adding an expansion	XD10	88 974 141
			24 VDC			88 974 142
			100-240 VAC			88 974 143
	-	✓	12 VDC	More I/Os are possible by adding an expansion	XD26	88 974 165
			24 VDC			88 974 161
			24 VDC			88 974 162
			100-240 VAC			88 974 163
	-	-	24 VDC	-	XR06	88 970 211
			100-240 VAC			88 970 213
	-	-	24 VDC	-	XR10	88 970 221
			100-240 VAC			88 970 223

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	
 Screen Option Local / Standalone	24 · 16 Inputs · 8 Outputs	16 · 12 to Classical Digital · 4 to Classical Digital or 15 KHz High-Speed	8 · To 0-10 VDC or 0-VCC	8 · 6 x 8 A · 2 x 6 A	-	-	
 Blind Option Local / Standalone							
 Starter Kit Local / Standalone							
 Screen Option Ethernet Version	24 · 16 Inputs · 8 Outputs	16 · 12 to Classical Digital · 4 to Classical Digital or 15 KHz High-Speed	8 · To 0-10 VDC or 0-VCC	8 · 6 x 8 A · 2 x 6 A	-	-	
 Blind Option Ethernet Version							
 Starter Kit Ethernet Version							
 Expansion Digital	10 · 6 Inputs · 4 Outputs	6 · Classical Digital	-	4 · 2 x 8 A · 2 x 6 A			
 Expansion Analog			4 · 0-10 VDC or 4 to 20 mA	-	2 · 0.5 A Static	2 · 0-10 VDC	

	Embeddded Communication	Embeddded Screen	Power Supply	Comments	Designation	Part Number
		✓	24 VDC	-	XDP24	88 975 101
	-	-		-	XBP24	88 975 001
		✓		Millenium EVO + Bluetooth Interface + Bluetooth Receiver	XDP24 Starter Kit	88 975 901
	Ethernet TCP/IP	✓	24 VDC	Embedded Ethernet Communication	XDP24-E	88 975 111
		-		Embedded Ethernet Communication	XBP24-E	88 975 011
		✓		Millenium EVO + Bluetooth Interface + Bluetooth Receiver	XDP24-E Starter Kit	88 975 911
	-	-	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
 USB Dongle	· Slim · Millenium 3	Bluetooth, CE, FCC and IC certified	88 980 124
 Prog Cable Via USB	· Millenium 3: Logic Controller	USB Programming Cable	88 970 109
 Memory Cartridge Memory Storage	· Millenium 3: Logic Controller	Memory Cartridge	88 970 108
 Connectors Pluggable	· Millenium 3: Logic Controller	For 12 I/Os version	88 970 310
		For 20 I/Os version	88 970 311
		For 26 I/Os version	88 970 312

Type	Compatibility	Description	P/N
 Interfaces 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
 Antenna 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	
 Nano-PLC Local / Standalone	26 · 16 Inputs · 10 Outputs	16 · 12 to Classical Digital	12 · 8 to 0-10 VDC or 0-VCC	8 · 6 x 8 A · 2 x 6 A	2 · 0.5 A Static	-	
 Starter Kit Local / Standalone		· 4 to Classical Digital or 60 KHz High-Speed	· 4 to 20 mA or 0-10 VDC				
 Nano-PLC Ethernet Version	26 · 16 Inputs · 10 Outputs	16 · 12 to Classical Digital	12 · 8 to 0-10 VDC or 0-VCC	8 · 6 x 8 A · 2 x 6 A	2 · 0.5 A Static	-	
 Starter Kit Ethernet Version		· 4 to Classical Digital or 60 KHz High-Speed	· 4 to 20 mA or 0-10 VDC				
 Expansion 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	-	-	
 Expansion 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	
 Telecontroller 3G Version	26 · 16 Inputs · 10 Outputs	16 · 12 to Classical Digital	12 · 8 to 0-10 VDC or 0-VCC	8 · 6 x 8 A · 2 x 6 A	2 · 0.5 A Static	-	
 Starter Kit 3G Version		· 4 to Classical Digital or 60 KHz High-Speed	· 4 to 20 mA or 0-10 VDC				
 Expansion 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	-	-	
 Expansion Analog			6 · 0-10 VDC or 4 to 20 mA	-	2 · 0.5 A Static	2 · 0-10 VDC	

	Embeddded Communication	Embeddded Screen	Power Supply	Comments	Designation	Part Number
	-	✓	24 VDC	To use in local applications	B26	88 981 103
				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
				em4 + Software + Ethernet RJ45 cable	B26 ET Starter Kit	88 981 136
	-	-	24 VDC	To control power actuators (valves, pumps...)	E10R	88 982 113
				To control analog actuators (controlled valve, controlled pump...)	E10A	88 982 213

	Embeddded Communication	Embeddded Screen	Power Supply	Comments	Designation	Part Number
	3G Cellular Network	✓	24 VDC	Embedded GSM Modem	B26-3GS	88 981 123
				em4 Alert + Antenna + Software + USB interface + USB cable	B26-3GS Starter Kit	88 981 126
	-	-	24 VDC	To control power actuators (valves, pumps...)	E10R	88 982 113
				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/m²	300 cd/m²	400 cd/m²	400 cd/m²	350 cd/m²
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

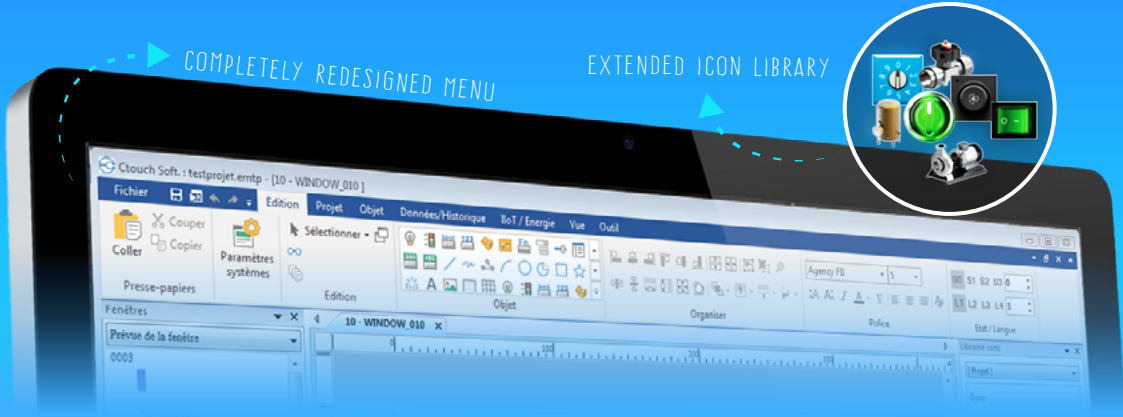
CROUZET TOUCH SOFT

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

COMPLETELY REDESIGNED MENU

EXTENDED ICON LIBRARY



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

ESSENTIAL

	Size	Type	Supply	Resolution	ROM	RAM	
	4 inch HMI	Touch Screen HMI only	24 VDC	480x272	128 Mbyte	128 Mbyte	
	4 inch Kit	Cable Kit HMI + Cable for Controller Millenium3					
	7 inch HMI	Touch Screen HMI only	24 VDC	800x480	128 Mbyte	128 Mbyte	
	7 inch Kit	Cable Kit 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
· 1 x Port Ethernet · 1 x Port COM1 RS232 · 1 x Port COM2 RS485	-		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
· 1 x Port Ethernet · 1 x Port COM1 RS232 · 1 x Port COM2 RS485	-		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
· 2 x Ports Ethernet · 1 x Port COM1 RS232 · 1 x Port COM2 RS485 · 1 x Port COM3 RS232 or RS485	-		CTP110N -E	88 970 584
			CTP110N-E Cable Kit	88 970 573
			CTP110N -E Kit	88 970 577

	Communication	CAN Bus	Designation	Part Number
· 1 x Port COM1 RS232 or RS485 · 1 x Port COM3 RS485 · 1 x Port Ethernet	-		CT104	88 970 524
			CT104 Cable Kit	88 970 523
· 1 x Port COM1 RS232 or RS485 · 1 x Port COM3 RS485	-		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 MODBUS (RTU)				ACCESSORIES FOR CONNECTION VIA ETHERNET (TCP/IP)				CONTROLLERS	
PERFORMANCE	4 inch HMI	CTP104N-E		Modbus Cable 88 980 171						+ Telecontroller em4 Alert		
		CTP104N-E									+ Nano-PLC em4	
		CTP104N-E									+ Communicating Logic Controller Millenium EVO	
		CTP104N-E									+ Logic Controller Millenium3	
	7 inch & 10 inch HMI's	CTP107-E CTP110N-E		Modbus Cable 88 980 172						+ Telecontroller em4 Alert		
		CTP107-E CTP110N-E									+ Nano-PLC em4	
		CTP107-E CTP110N-E									+ Communicating Logic Controller Millenium EVO	
		CTP107-E CTP110N-E								M3 Modbus Cable 88 970 504		Modbus Expansion XN06 88 972 250
ESSENTIAL	4 inch & 7 inch HMI's	CT104 CT107		Modbus Cable 88 980 171						+ Telecontroller em4 Alert		
		CT104 CT107									+ Nano-PLC em4	
		CT104 CT107									+ Communicating Logic Controller Millenium EVO	
		CT104 CT107								M3 Modbus Cable 88 970 503		Modbus Expansion XN06 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	
 Industrial AC to DC	60 W	12 VDC	5 A	43 mm	
	96 W		8 A		
	216 W		18 A	50 mm	
 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	Pt100 3-wire		88 950 151
	0 → +100 °C			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
 PWM to Voltage	1 x 24 VDC (120 Hz max)		1 x 0-10 VAC	88 950 112

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
	24-26 I/Os Controllers	155 x 108 mm	88 970 810
 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

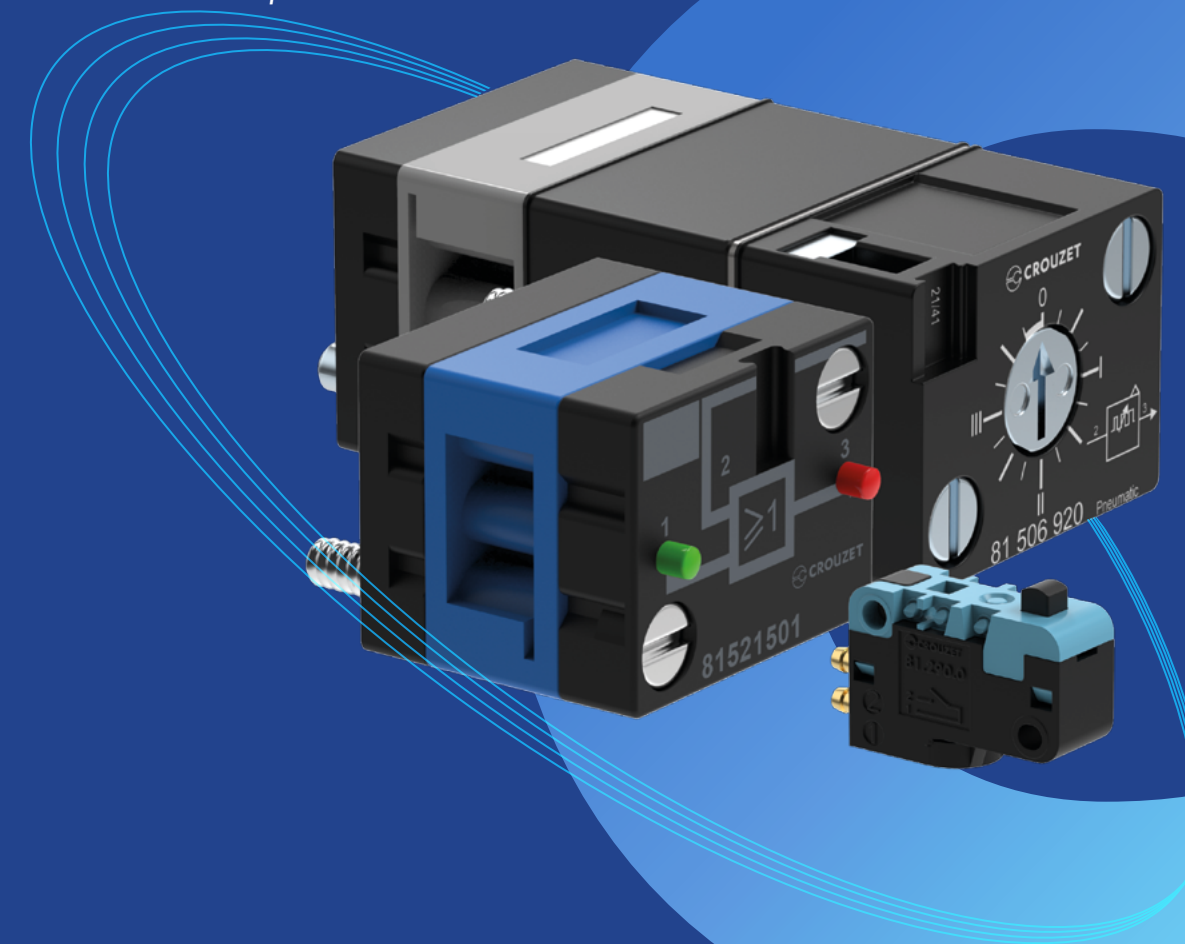
TEMPERATURE SENSORS

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			89 750 182
 NTC3 (Silicone Probe)	0 → +180 °C		100 k Ω @ 25 °C	89 750 186

PNEUMATIC COMPONENTS

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



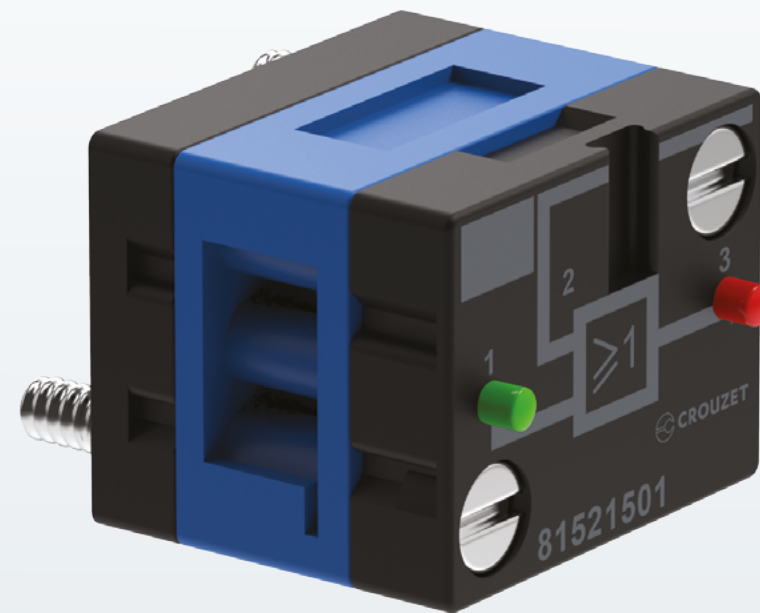
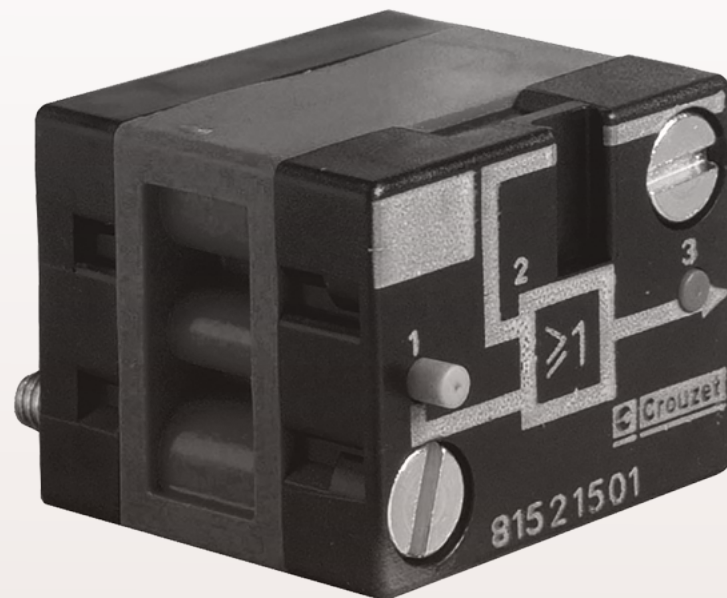
CROUZET PNEUMATICS

60 YEARS

OF OUTSTANDING DURABILITY

"Sometimes it's just a matter of getting the basics right"

1962



2022

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				
	Negative	50 → 500 mb	4% @ 2 → 8 b								81 502 140	81 502 141				
		0.1 → 2.5 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				IP 54				Sub-base Mount		81 513 516	-
	Pressure Detection				IP 54			1/8 Inch BSP (British Standard Pipe Thread Size)	Panel Mount (via 2 x M4 Screws)		81 513 533	-
	Pressure Detection		1.4 +/- 0.5 bar	-	IP 54			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)				IP 54				Sub-base Mount		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	
	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	
	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	
	Shaft Mount (Ø 8 mm) via clip	Rear Connection	Base for the use of up to two products	
	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	
	18 mm	0.5 → 2.5 bar	5 mbar	70 NL/h	
	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	-

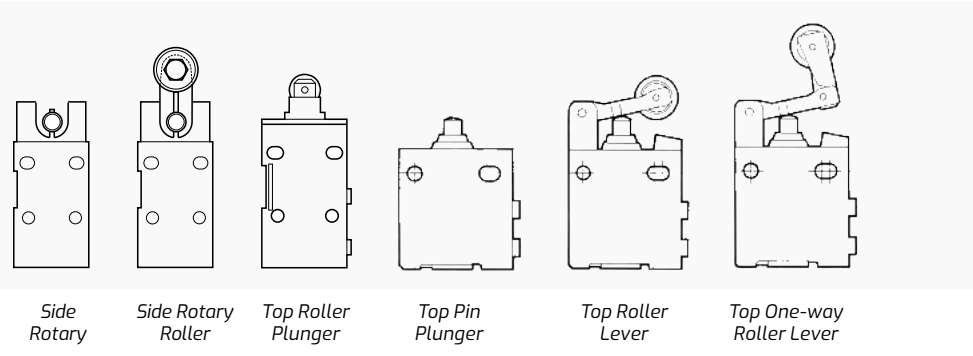
PNEUMATIC MICROSWITCHES

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

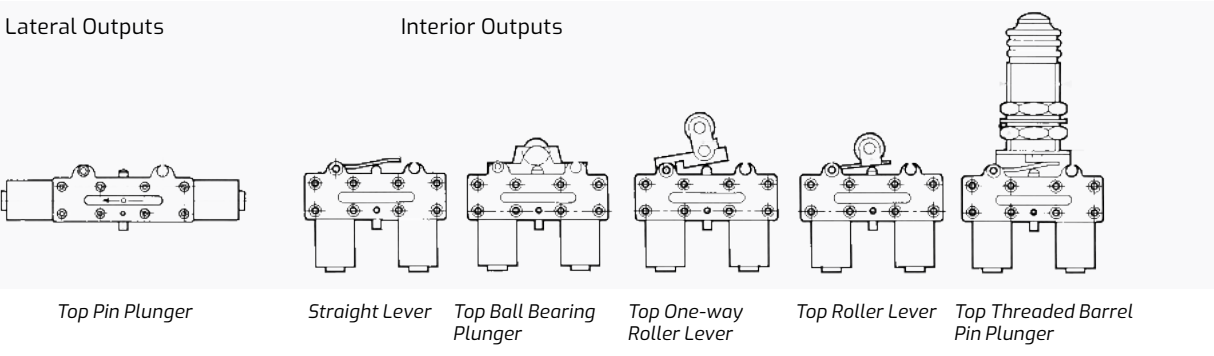
	Flow at 4 bar	Orifice Diameter	Connection	Standard P/N	ATEX Compliant P/N
	100 NL/min	2 mm	Push-in connection Ø 4 mm for barb connection Ø 2.7 x 4mm	81 290 501	81 290 506
				81 290 001	81 290 006

PNEUMATIC LIMIT SWITCHES

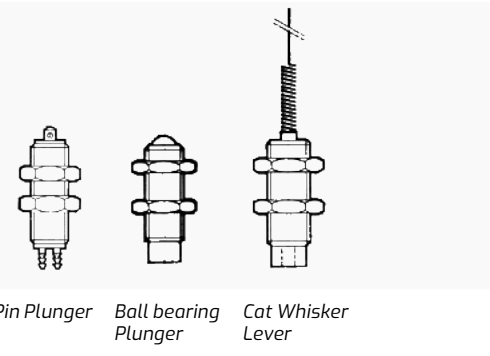
Vertical Style



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						
 Standard Size Limit Switch		Top Roller Plunger	Normally Closed	Push-in connection Ø 4 mm for semi-rigid tubing	0.1 → 8 bar				200 Nm³/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								-							
 Compact Size 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	-						
 Compact Size 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	-						
			Normally Closed	Push-in connection Ø 6 mm for barb connection Ø 2.7 x 4 mm								81 921 719	-						
				Push-in connection for semi- rigid tubing - M5 Pneumatic Silencer								81 921 806	-						
			 Compact Size Limit Switch									Top Roller Lever (Metal)	Normally Open	Push-in connection Ø 4 mm for semi-rigid tubing	0.1 → 8 bar			200 NL/min	2.7 mm
Normally Closed	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											-						
Normally Open	Push-in connection Ø 6 mm for semi-rigid tubing	81 921 902											-						
Normally Closed	Push-in connection Ø 6 mm for barb connection Ø 2.7 x 4 mm	81 921 717			-														
 Compact Size Limit Switch		Top One-way Roller Lever	Normally Closed	Push-in connection Ø 4 mm for semi-rigid tubing	0.1 → 8 bar			200 NL/min	2.7 mm	18 N	81 921 707	-							
		Top Threaded Barrel Pin Plunger									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
 Miniature Limit Switch 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	-
 Miniature Limit Switch 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
 Standard Version	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	-
 Low-force Version (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
 Positive 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	-
Negative Output Module		Normally Closed								81 505 435	-

MANUALLY OPERATED PNEUMATIC SWITCHES

Type		Actuator	Contact	Connection	Color						Standard P/N	ATEX Compliant P/N	
 Toggle Switch	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	-	
 Push Button	Single Push Button	Normally Open	Push-in connection Ø 4 mm for semi-rigid tubing	Black							81 735 011	-	
		Normally Closed		Black								81 735 511	-
				Red								81 735 512	-
				Black/Red									81 733 511
	Double Push Button												

MANUALLY OPERATED PNEUMATIC SWITCHES - TO BE ASSEMBLED



1 Head

2 Contact Block Valve

3 Mounting Adaptor

1 HEADS

Type	Actuator	Size	Color						Standard P/N	ATEX Compliant P/N
 Flush Push Button Head	Single Push Button	Ø 22 mm	Black						24 678 127	-
			Green						24 678 128	-
			Red						24 678 129	-
 Emergency Stop Push Button Head	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	-
 Selector Switch Head	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
 Contact block valve - 3 Outputs / 2 Positions (3/2)	-	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 (British Standard Pipe Thread Size)						89 543 701	
		Normally Open							89 543 201	

Type	Actuator	Contact	Connection	Operating Pressure			Flow at 4 bar	Orifice Diameter	Control Force	Standard P/N	ATEX Compliant P/N
 Kit - Contact block valve + mounting adaptor - 3 Outputs / 2 Positions (3/2)	-	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										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
 Safety Start (Logic Block)	-	Type III A	Sub-base Mount	-			2 → 8 bar	0.2 s	2.5 N	81 580 101		-
 Safety Start (Logic Block)		Type III B	-	Push-in connection Ø 4 mm for semi-rigid tubing						81 580 202		-
 Safety Start (Complete Two-Hand Module)	Double button	Type III A	-	Push-in connection Ø 4 mm for semi-rigid tubing						81 580 504		-
 Safety Start (Complete Two-Hand Module)		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)

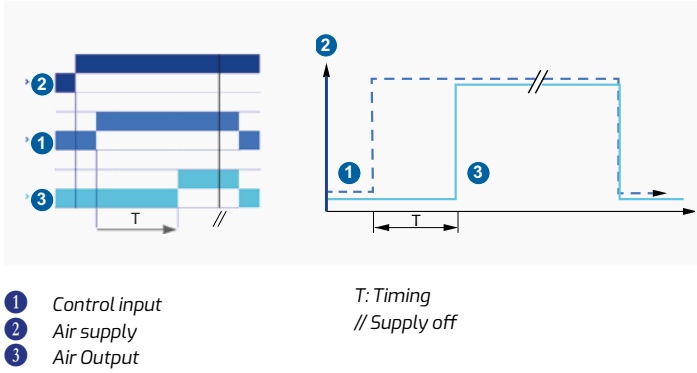
Type	Timing	Flow at 6 bar	Orifice Diameter			Operating Pressure	Mounting	Optional Set-up Knob	Standard P/N	ATEX Compliant P/N
 Positive Output (ON-delay)	Fixed: 0.4 s	170 NL/min	2.7 mm			2 → 8 bar	Sub-base Mount	-	81 503 540	81 503 543
	Adjustable: 0.1 → 15 s							79 451 698	81 503 710	81 503 728
	Adjustable: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

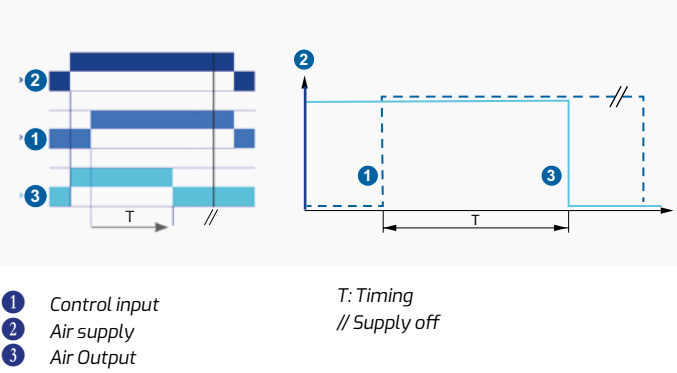
Type	Mounting	Connection	Note						Standard P/N	ATEX Compliant P/N
 Sub-base	DIN Rail Mount	Rotable Push-in Connection	Base that allows to connect several products next to each other						81 532 102	81 532 109
	DIN Rail Mount		Base for standalone use of one product only						81 532 104	81 532 111
 Sub-base	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

TIMING FUNCTIONS

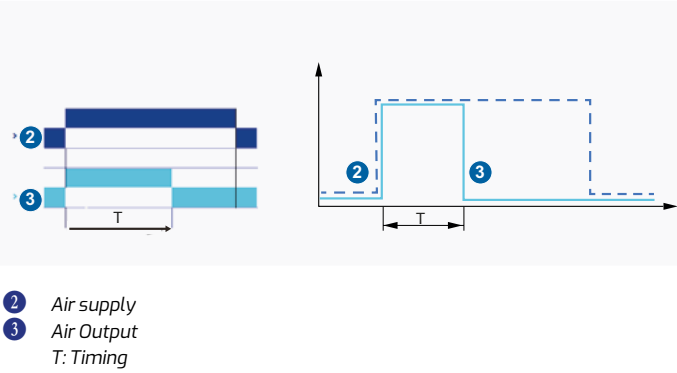
Positive Output (ON-delay)



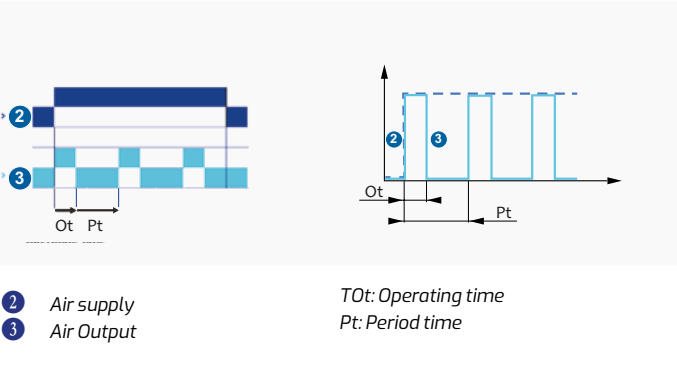
Negative Output



Impulse Generator



Frequency Generator



LOGIC GATES (LOGIC ELEMENTS)

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

	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
	2.7 mm			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
	2.7 mm		Orange	81 503 025	81 503 028
	2.7 mm		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

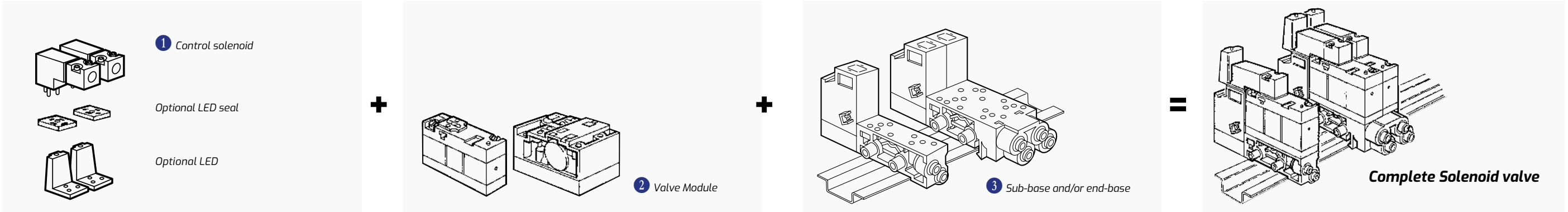
SOLENOID VALVES

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					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

SOLENOID VALVES - TO BE ASSEMBLED



1 CONTROL SOLENOID

Type	Contact	Flow at 6 bar	Orifice Diameter	Mounting			Conne- ction	Switching time	Override	Supply Voltage	Standard P/N	ATEX Compliant P/N
 3 Outputs / 2 Positions (3/2)	Normally Closed	25 NL/min	0.8 mm	Valve Module Mount			Plug-In	5 - 15 ms	-	24 VDC	81 519 032	81 519 035
							By impulse		81 519 332		81 519 335	
							Wire		By impulse		81 519 340	81 519 037
							Plug-In		Manual (maintained)		81 519 632	81 519 635
 3 Outputs / 2 Positions (3/2)	Normally Closed	12 NL/min	0.5 mm	Valve Module Mount			Plug-in	5 - 15 ms	-	24 VAC - 50/60 Hz	81 519 080	-
									By impulse		81 519 380	-
									Manual (latching 1/4 turn)		81 519 680	-
									By impulse	48 VAC - 50/60 Hz	81 519 381	-
									By impulse	110 VAC - 50/60 Hz	81 519 378	-
									Manual (latching 1/4 turn)		81 519 678	-
									By impulse		220/230 VAC - 50/60 Hz	81 519 379
									Manual (latching 1/4 turn)	81 519 679	-	

OPTIONAL LEADS & 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			50 ms	35 mm	3 → 8 b	Sub-base Mount	81 513 200	81 513 234
 4 outputs / 2 Positions - (4/2)	Monostable	-									81 516 100	-
	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
 Air Flow Regulator	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	-
 Air Flow Regulator	Flow at 4 bar 0.18 → 0.30 Nm3/h	Ø 0.3mm	1 → 8 bar			-	Push-in connection Ø 4 mm for semi-rigid tubing		81 529 003	81 529 013
	Flow at 4 bar 0.35 → 0.5 Nm3/h	Ø 0.4mm							81 529 004	81 529 014
	Flow at 4 bar 0.58 → 0.77 Nm3/h	Ø 0.5mm							81 529 005	-
	Flow at 4 bar 0.80 → 1.06 Nm3/h	Ø 0.6mm							81 529 006	-
	Flow at 4 bar 1.10 → 1.39 Nm3/h	Ø 0.7mm							81 529 007	81 529 017
	Flow at 4 bar 1.45 → 1.65 Nm3/h	Ø 0.8mm							81 529 008	81 529 018
	Flow at 4 bar 2.30 → 2.80 Nm3/h	Ø 1mm							81 529 010	-
	Flow at 4 bar 0.08 → 0.12 Nm3/h	Ø 0.25mm							81 529 025	-
	 Air Pressure Regulator	Flow at 6 bar 200 NL/min							-	2 → 8 bar (Adjustable output pressure 0.1 → 8 bar)
 Non-return valve (Check-Valve)	Flow at 6 bar 200 NL/min	-	2 → 8 bar			-	Push-in connection Ø 4 mm for semi-rigid tubing		81 529 901	-

AIR CAPACITOR

Type	Timing	Connection						Standard P/N	ATEX Compliant P/N
 Air Capacitor	10 → 60s	Push-in connection Ø 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
 Simple Amplifiers	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

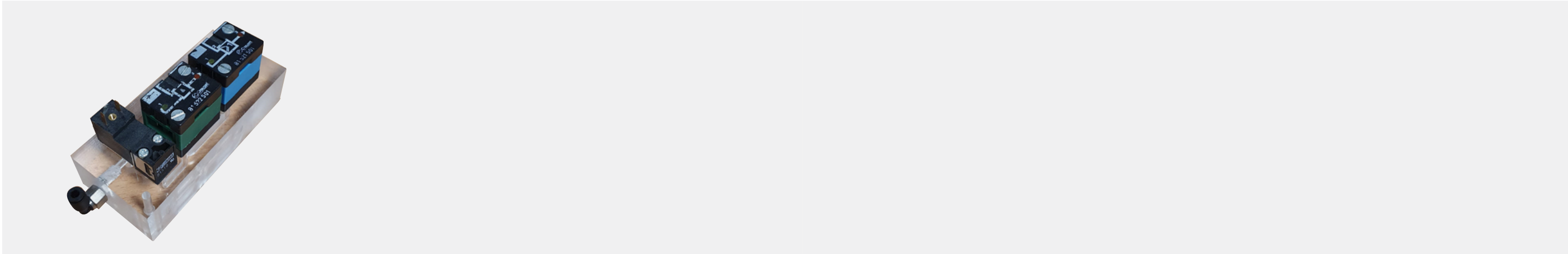
Type	Mounting	Connection	Note						Standard P/N	ATEX Compliant P/N
 Sub-base	DIN Rail Mount	Rotable Push-in Connection	Base that allows to connect several products next to each other						81 532 102	81 532 109
	DIN Rail Mount		Base for standalone use of one product only						81 532 104	81 532 111
 Sub-base	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 Ouputs	Shaft Mount (Ø 8 mm) via clip	Rear Connection							81 536 801	-

PNEUMATIC BOARDS

Contact our DesignLAB for tailor-made pneumatic boards



Notes

Notes

Notes

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