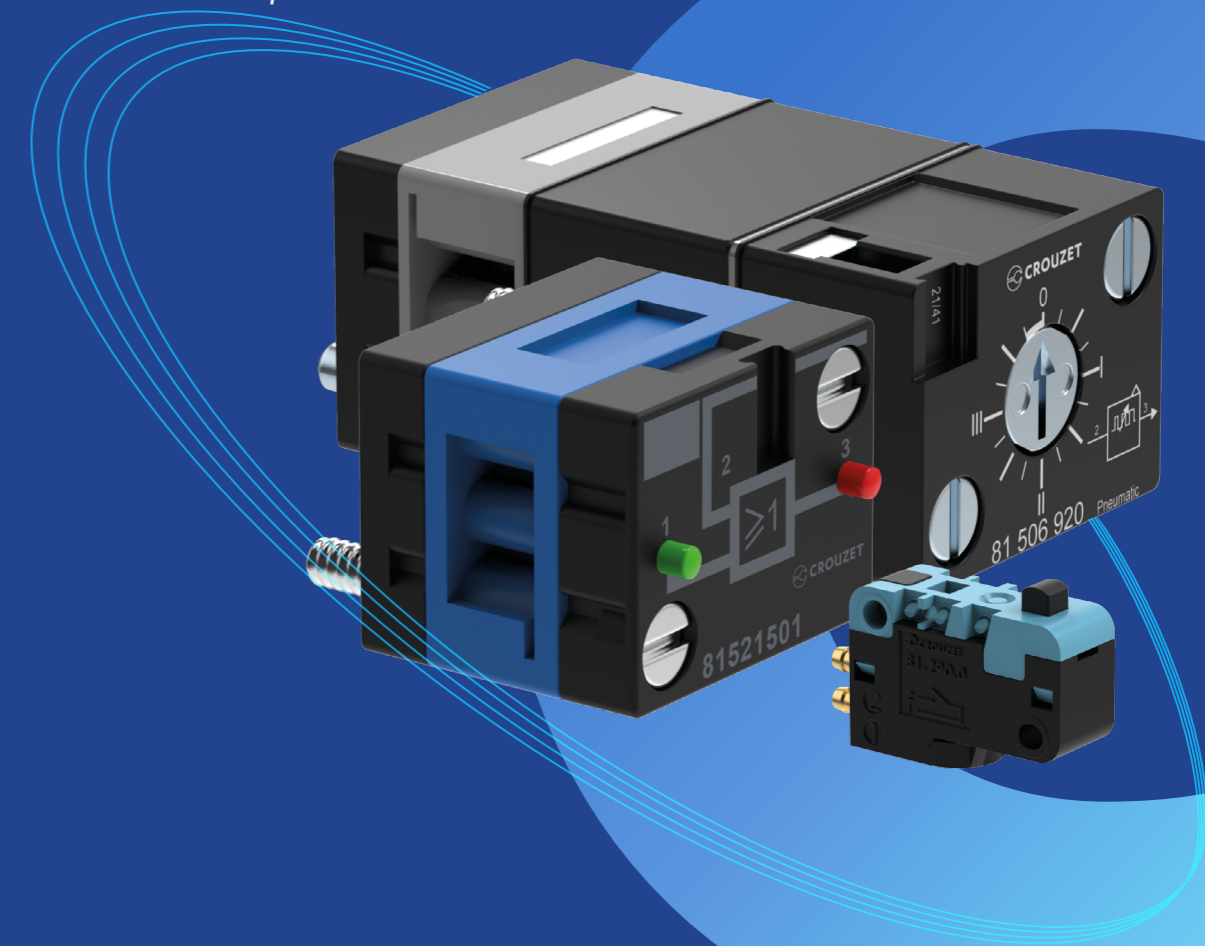


PNEUMATIC COMPONENTS

- *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, 90+ 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				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		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		Form C	81 513 510
 Pressure Detection (With manual override)		IP 54	1.4 +/- 0.5 bar	-	IP 54	Push-in connection Ø 4 mm for semi-rigid tubing	DIN Rail Mount	Form C	81 509 085
 Low Pressure Detection	5A @ 230 V	0.3 → 1.2 bar	Max. 200 mb	IP20	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	-

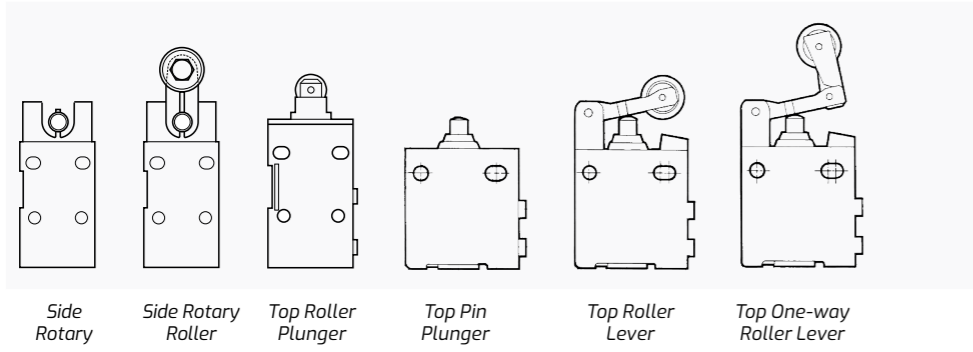
PNEUMATIC MICROSWITCHES

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			

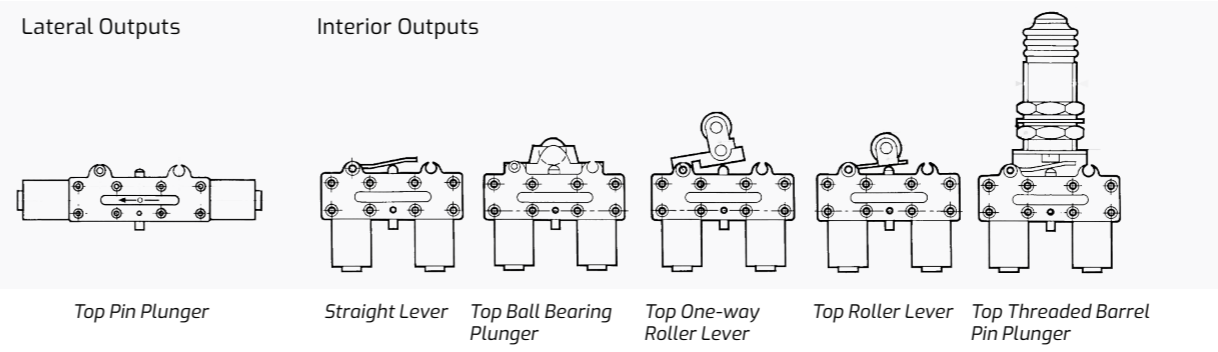
Flow at 4 bar	Orifice Diameter	Connection	Standard P/N	ATEX Compliant P/N
100 NL/min	2 mm	Push-in connection Ø 4 mm for barb connection Ø 2.7 x 4mm	81 290 501	81 290 506
			81 290 001	81 290 006

PNEUMATIC LIMIT SWITCHES

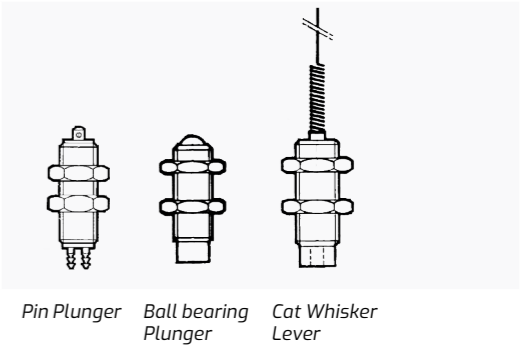
Vertical Style



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
 Standard Size Limit Switch	Top Roller Plunger	Normally Closed	Push-in connection Ø 4 mm for semi-rigid tubing	0.1 → 8 bar	200 Nm ³ /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	-
 Compact Size Limit Switch	Top Roller Lever (Metal)	Normally Closed	Push-in connection Ø 6 mm for barb connection Ø 2.7 x 4 mm	0.1 → 8 bar	200 NL/min	2.7 mm	18 N	81 921 719	-
		Normally Closed	Push-in connection Ø 6 mm for semi-rigid tubing - M5 Pneumatic Silencer					81 921 806	-
			Normally Open					Push-in connection Ø 4 mm for semi-rigid tubing	81 921 912
		Normally Closed	Push-in connection Ø 4 mm for semi-rigid tubing					81 921 702	-
			Normally Open					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	-						
 Compact Size Limit Switch	Top One-way Roller Lever	Normally Closed	Push-in connection Ø 6 mm for barb connection Ø 2.7 x 4 mm	0.1 → 8 bar	200 NL/min	2.7 mm	18 N	81 921 717	-
	Top Threaded Barrel Pin Plunger							81 921 707	-
								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	-

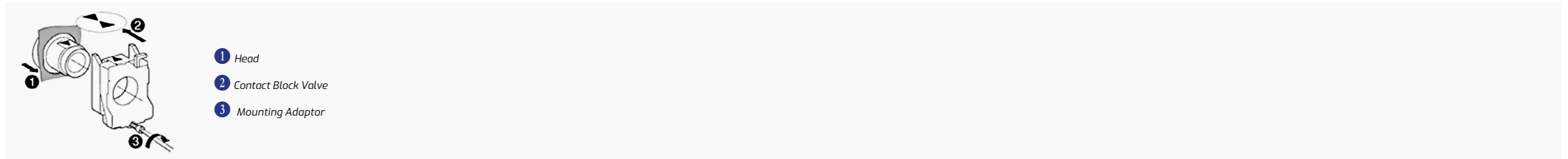
OUTPUT MODULES FOR THREADED BARREL STYLE LIMIT SWITCHES

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	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 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					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
 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 NI/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
 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)

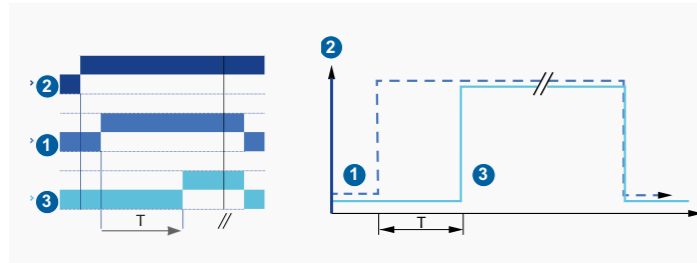
Type	Timing	Flow at 6 bar	Orifice Diameter	Operating Pressure	Mounting	Optional Set-up Knob	Standard P/N	ATEX Compliant P/N
 Positive Output (ON-delay)	Fixed: 0.4 s	170 NL/min	2.7 mm	2 → 8 bar	Sub-base Mount	-	81 503 540	81 503 543
	Adjustable: 0.1 → 15 s					79 451 698	81 503 710	81 503 728
	Adjustable: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

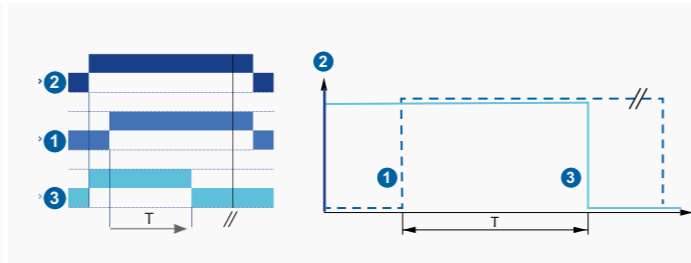
TIMING FUNCTIONS

Positive Output (ON-delay)



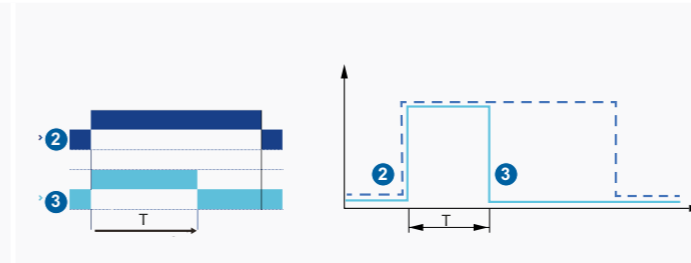
T: Timing
// Supply off

Negative Output

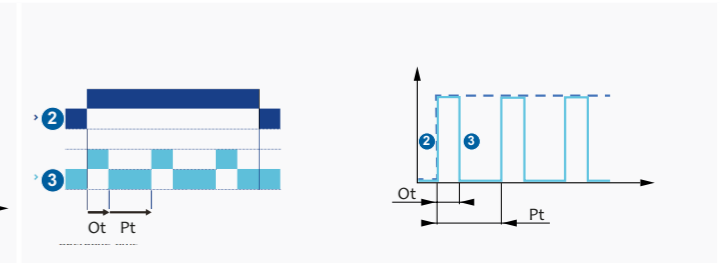


T: Timing
// Supply off

Impulse Generator



Frequency Generator



TOt: Operating time
P Pt: Period time





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

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

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




- 2 Air supply
- 3 Air Output

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	200 NL/min
		Push-in connection Ø 6 mm for semi-rigid tubing	200 NL/min
 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
				81 541 001	81 541 015
				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

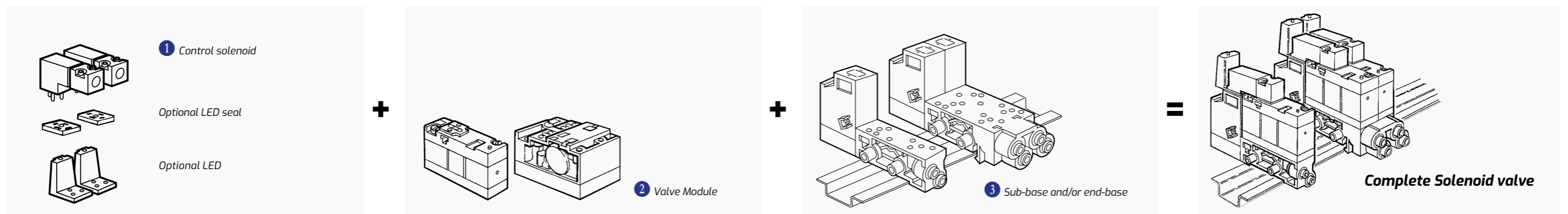
Type	Contact	Flow at 6 bar	Orifice Diameter	Operating Pressure	Switching time	Size	Supply Voltage	Mounting	Standard P/N	ATEX Compliant P/N
 3 Outputs / 2 Positions (3/2) 4 Outputs / 2 Positions (4/2 Monostable)	NC	200 NL/min	3 mm	3 → 8 b	20 ms	17.5 mm	24 VDC	DIN Rail Mount	81 513 103	-
	-								81 513 203	-
 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

	Conne- ction	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
	Wire		By impulse		81 519 340	81 519 037
	Plug-in		Manual (maintained)		81 519 632	81 519 635
	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 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	-							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 Nm ³ /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 Nm ³ /h	Ø 0.4mm				81 529 004	81 529 014
	Flow at 4 bar 0.58 → 0.77 Nm ³ /h	Ø 0.5mm				81 529 005	-
	Flow at 4 bar 0.80 → 1.06 Nm ³ /h	Ø 0.6mm				81 529 006	-
	Flow at 4 bar 1.10 → 1.39 Nm ³ /h	Ø 0.7mm				81 529 007	81 529 017
	Flow at 4 bar 1.45 → 1.65 Nm ³ /h	Ø 0.8mm				81 529 008	81 529 018
	Flow at 4 bar 2.30 → 2.80 Nm ³ /h	Ø 1mm				81 529 010	-
	Flow at 4 bar 0.08 → 0.12 Nm ³ /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)	Sub-base Mount	-	81 527 001	-
 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 Outputs	Shaft Mount (Ø 8 mm) via clip	Rear Connection						81 536 801	-

PNEUMATIC BOARDS

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