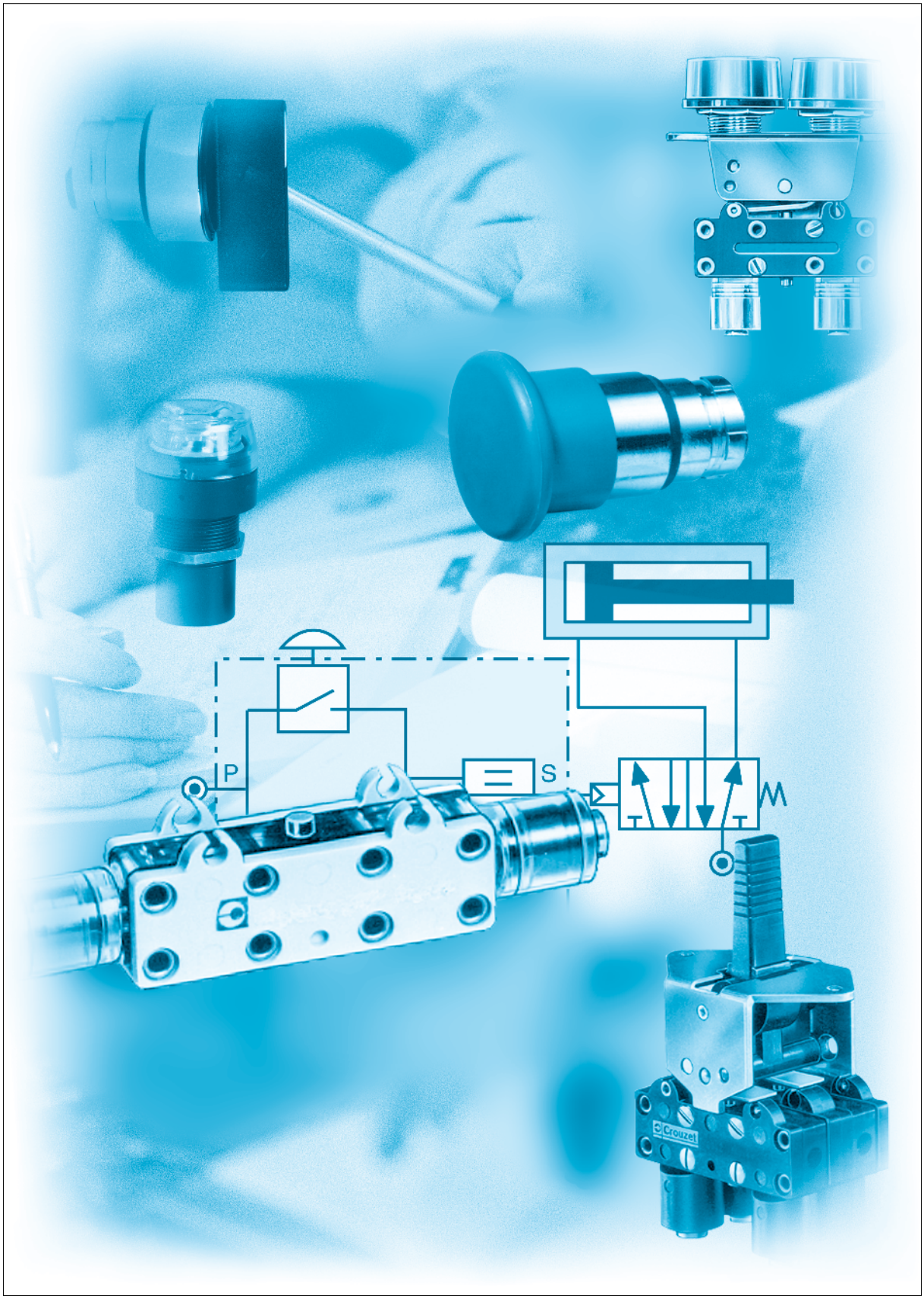
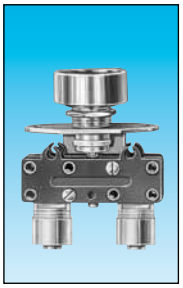
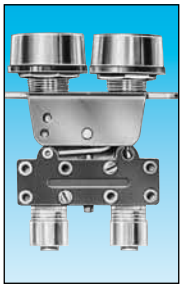
Manual actuated valves



Push buttons diameter 12 and actuators

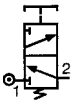


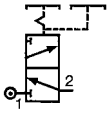


Features		Actuator color	Valve color	Push button round	Push button double round
Version	NC	black	black	81 735 511	—
		red	black	81 735 512	—
		black/red	black	—	81 733 511
	N0	black	grey	81 735 011	—
		red	grey	—	—
		black/red	grey	—	—

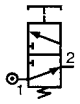
Symbol

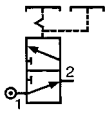
NC





NO



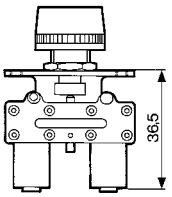


Characteristics

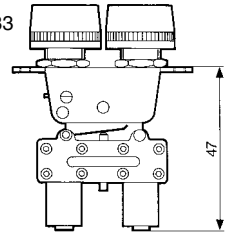
Operating pressure		bar	2 → 8	2 → 8
Orifice diameter		mm	2.7	2.7
Flow at 6 bars		Nl/mn.	200	200
Valves	NC : black		●	●
	NO : grey		●	
Operating forces (depending on actuator)		N	8 → 18	8 → 18
Effective travel		mm	1	1
Fluid: dry or lubricated air			●	●
Push-in connectors for semi-rigid tubing (NFE 49100)		mm	Ø 4	Ø 4
Operating temperature		°C	-5 → +50	-5 → +50
Mechanical life		operations	1.5 x 10^6	1.5 x 10^6
Weight		g	35	40

Dimensions

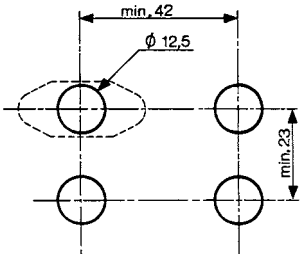
81 735



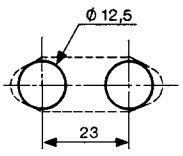
81 733

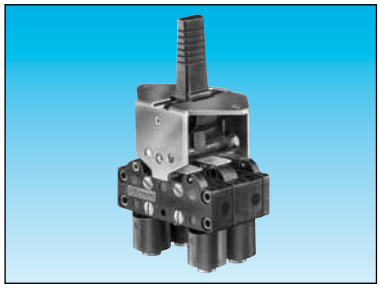


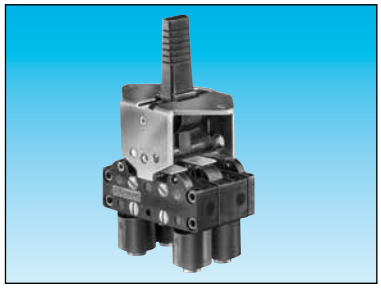
Threaded barrel

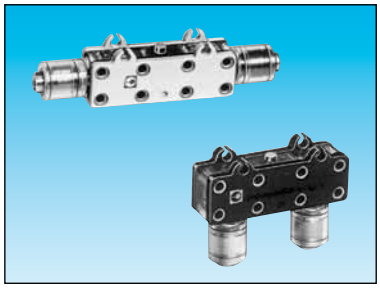


2 threaded barrels

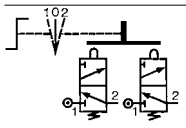


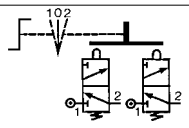






3-position lever manual return		3-position lever spring return		Horizontal outputs	Vertical outputs
81 716 511		81 715 511		81 280 510	81 281 510
81 716 512		81 715 512		—	—
—		—		—	—
—		—		81 280 010	81 281 010
—		—		—	—
—		—		—	—







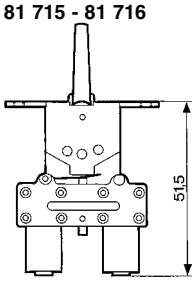




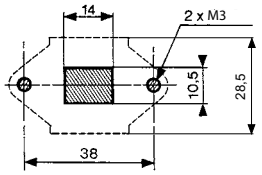


2 → 8		2 → 8		2 → 8	2 → 8
2.7		2.7		2.7	2.7
200		200		200	200
●		●		—	—
●		●		—	—
8 → 18		8 → 18		—	—
1		1		1	1
●		●		—	—
Ø 4		Ø 4		Ø 4	Ø 4
-5 → +50		-5 → +50		-5 → +50	-5 → +50
1.5 x 10^6		1.5 x 10^6		1.5 x 10^6	1.5 x 10^6
65		65		14	14

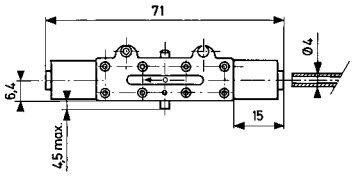
81 715 - 81 716



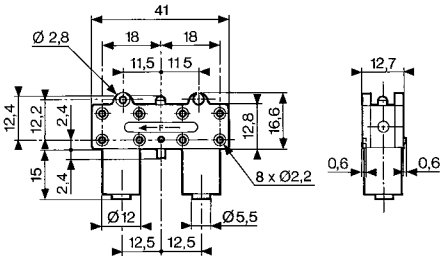
Square lever



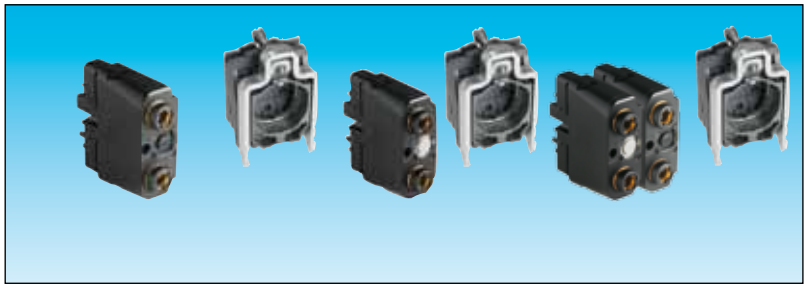
81 280 010 - 81 280 510



81 281 010 - 81 281 510

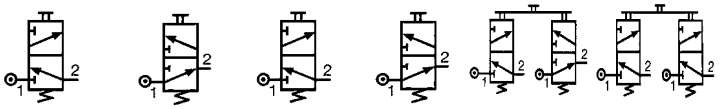


3/2 valves for manual actuators Ø 22 mm



3/2 valve supplied with screws	Connection	89 543 501	89 543 101	—	—	—	—	—
for fixing the adaptator	Ø 4	89 543 701	89 543 201	—	—	—	—	—
Valve(s) 3/2 fixed on adaptator (supplied with adaptator not assembled)	Gas 1/8 Connection Ø 4	—	—	89 543 105	89 543 005	89 543 305	89 543 205	—
Adaptator for 3/2 valve on actuators Ø 22		—	—	—	—	—	—	24 679 702
Version		NC	NO	NC	NO	NC + NO	NC + NC	

Symbol

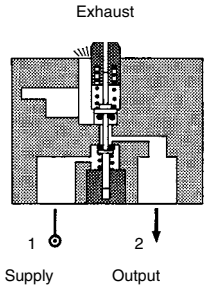


Characteristics

Operating pressure	bar	0 → 10	0 → 10	0 → 10	0 → 10	0 → 10	0 → 10	—
Orifice diameter	mm	2	2	2	2	2	2	—
Flow at 4 bars	Nl/min	90	90	90	90	90	90	—
Control force	N	12.6	12.6	12.6	12.6	12.6	12.6	—
Operating temperature in dry air	°C	-10 → +60	-10 → +60	-10 → +60	-10 → +60	-10 → +60	-10 → +60	—
Life	operations	1.5 x 10^6	1.5 x 10^6	1.5 x 10^6	1.5 x 10^6	1.5 x 10^6	1.5 x 10^6	—
Non-connectable exhaust		●	●	●	●	●	●	—
Weight	g	50	50	60	60	110	110	40

Principle of operation

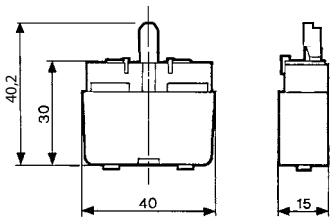
NC version



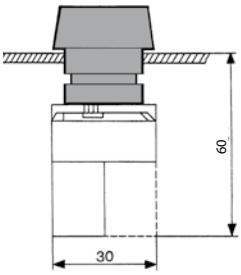
Dimensions

89 543 001 - 89 543 201

89 543 501 - 89 543 701

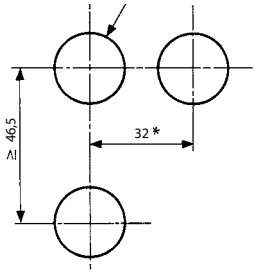


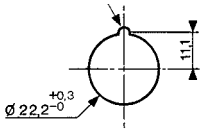
Ø 22 series



Holes drilled in panel for actuators Ø 22

EN 50007



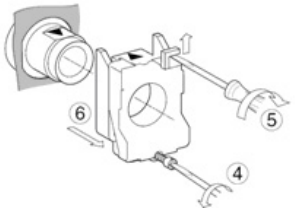


Holes drilled for the (optional) use of a round lug.

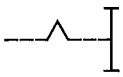
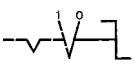
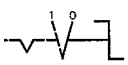
* > 40 Ø 40 push-buttons
* > 45 for lever type rotary switches

Installation



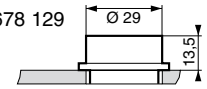


Actuators Ø 22 mm for manually operated valves

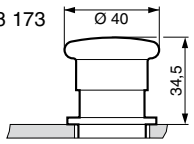
						
Push buttons	Red	24 678 129	24 678 173	24 678 171	—	—
	Green	24 678 128	—	—	—	—
	Black	24 678 127	24 678 172	—	—	—
2-positions rotary switches		—	—	—	24 678 174	24 678 175
3-positions rotary switches		—	—	—	—	—
Function		Flush push contact	Emergency stop plastic Ø 40	Emergency stop Ø 40 mm push-turn	Black symmetrical actuator	Long lever Black
Symbol						
Position					 45°	 45°
Weight	g	30	45	45	45	45

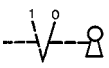
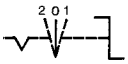
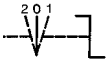
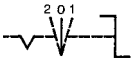
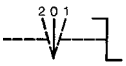
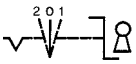
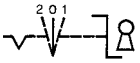
Dimensions

24 678 127 - 24 678 128
24 678 129



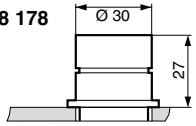
24 678 171 - 24 678 172
24 678 173



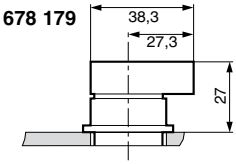
							
2-positions rotary switches	24 678 180	—	24 678 176	24 678 178	24 678 177	24 678 179	24 678 182	24 678 181
3-positions rotary switches	—							
Function	RONIS key 455 removable in position 0		Black symmetrical actuator	Black symmetrical actuator with return	Long lever Black	Black Long lever, spring to center	RONIS key 455 remov. in pos. 0 3 positions with spring to center	RONIS key 455 removable in position 0 3 fixed positions
Symbol								
Position								
	 45°	 2 x 45°	 2 x 45°	 2 x 45°	 2 x 45°	 2 x 45°	 2 x 90°	
Weight	70	45	45	16	45	70	70	

Dimensions

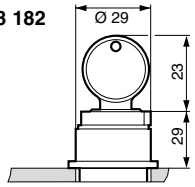
24 678 174 - 24 678 176
24 678 178



24 678 175 - 24 678 177
24 678 179



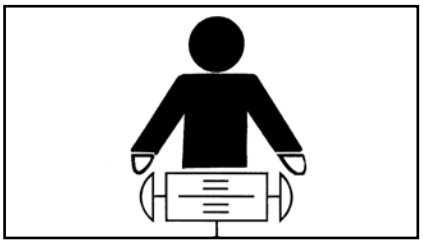
24 678 180 - 24 678 181
24 678 182



1

Pneumatic 2-hand control

Conforms to the Machinery Directive



Definition (conforming to EN 574 +A1)

A pneumatic 2-hand control device is used with dangerous machinery and requires the simultaneous use of both hands to trigger and maintain machine operation. Such a device must be located outside the dangerous zone, so that the operator cannot enter this zone before the machine has come to a complete standstill.

A pneumatic 2-hand control device is composed of 2 parts :

- 2 manual pushbuttons which require the simultaneous use of both hands.
- A pneumatic relay.

1

Types of 2-hand control devices

Requirements	Type				
	I	II	III		
			A	B	C
Use of both hands (simultaneous actuation)	●	●	●	●	●
Relationship between input signals and output signal	●	●	●	●	●
Cessation of the output signal	●	●	●	●	●
Prevention of accidental operation	●	●	●	●	●
Prevention of defeat	●	●	●	●	●
Reinitiation of the output signal		●	●	●	●
Synchronous actuation			●	●	●
Use of category 1 (EN 954-1)	●		●		
Use of category 3 (EN 954-1)		●		●	
Use of category 4 (EN 954-1)					●

Category 1 (EN ISO 13849) : the system should use well tried components and principles.

Category 3 (EN ISO 13849) : the system must be designed so that a single fault will not cause the loss of the safety function.

Category 4 (EN ISO 13849): the system must be designed so that an accumulation of faults must not lead to a loss of the safety function.

Synchronous action

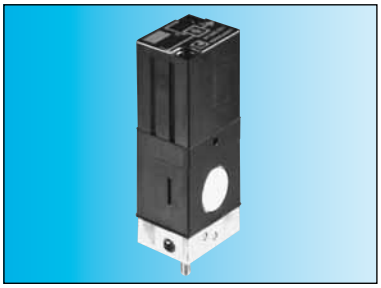
An output signal is only generated if both control actuating devices are actuated within 500 ms.

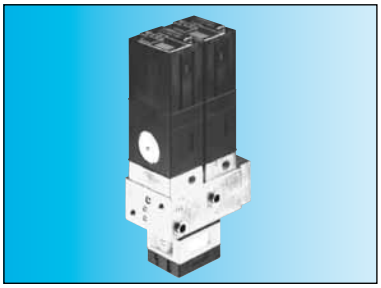
Resetting the output signal

The release of a single control device interrupts the output signal, but a reset is only possible once both control devices have been released.

Pneumatic relay for two-hand control

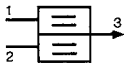
- **100% pneumatic**
- **Complies with Machinery Directive and the standard EN 574 +A1**
- **CE Certification type-IIIA and IIIB**

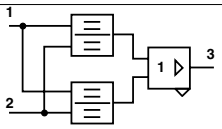




Pneumatic relay for two-hand control	**81 580 101**	**81 580 202**
EN 574 +A1 classification	III A	III B

Symbol



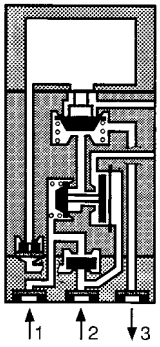


Characteristics

Operating pressure	bar	2 → 8	2 → 8
Orifice diameter	mm	2.5	2.5
Max. delay between input signals	s	0.2 max.	0.2 max.
Connection		Sub-base 81 532 001	Semi-rigid tubing Ø 4 (NFE 49100)
Operating temperature	°C	-5 → +50	-5 → +50
Mechanical life	operations	10^7	10^7
Weight	g	90	320

Principle of operation

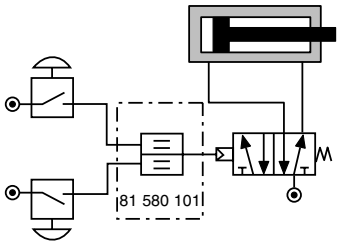
81 580 101



To obtain an output signal it is necessary to give simultaneous input signals 'a' and 'b' with a max. delay of 0.45. The output signal 's' is lost if one or both of the inputs are removed.

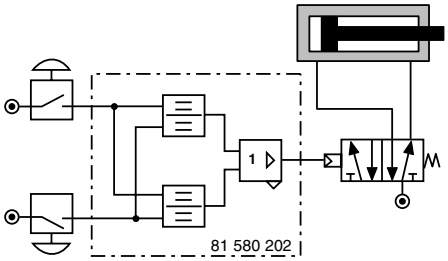
Connections (Typical application with double-acting cylinder)

81 580 101



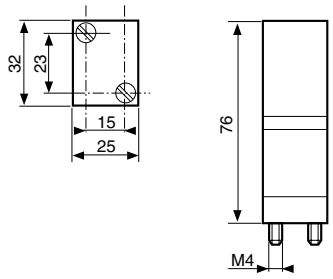
Components follow current standards

81 580 202



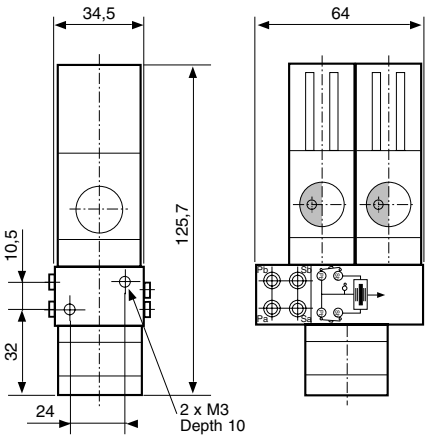
Dimensions

81 580 101



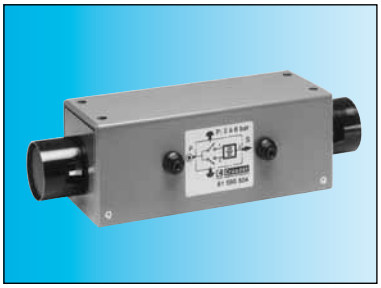
Mounted on sub-base 81 532 001
(See page 55 of Pneumatic catalogue)

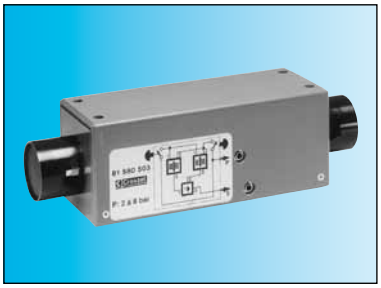
81 580 202



Two-hand pneumatic safety start module

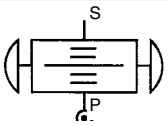
- **Conforms to the Machinery Directive and standard EN 574**
- **Including pneumatic relay to classification IIIA or IIIB depending on version**

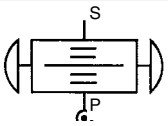




Two-hand pneumatic safety start module	**81 580 504**	**81 580 503**
Pneumatic relay (to EN 574)	Type III A	Type III B

Symbol



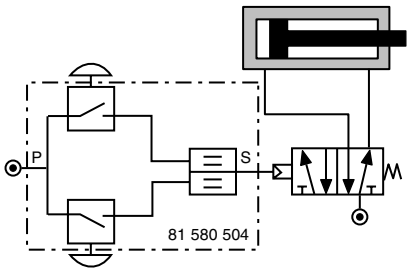


Characteristics

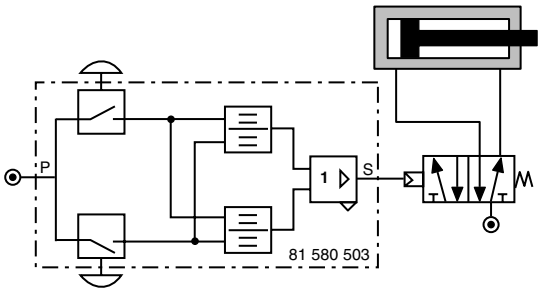
Operating pressure	bar	2 → 8	2 → 8
Orifice diameter	mm	2.5	2.5
Max. delay between input signals	s	0.2 max.	0.2 max.
Connection		Semi-rigid tubing Ø 4 (NFE 49100)	Semi-rigid tubing Ø 4 (NFE 49100)
Operating temperature	°C	-5 → +50	-5 → +50
Mechanical life	operations	1.5 x 10^6	1.5 x 10^6
Weight	g	1000	1410

Connections (Typical application with double-acting cylinder)

81 580 504



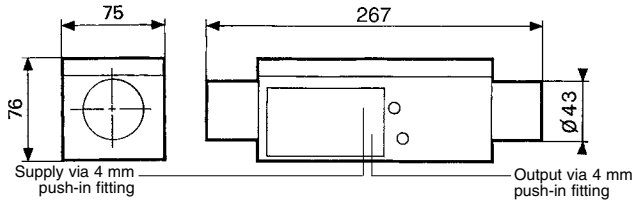
81 580 503



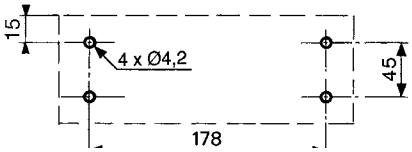
Components follow current standards

Dimensions

81 580 503 - 81 580 504

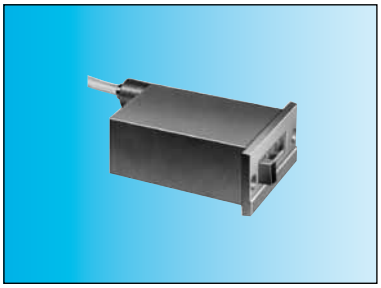


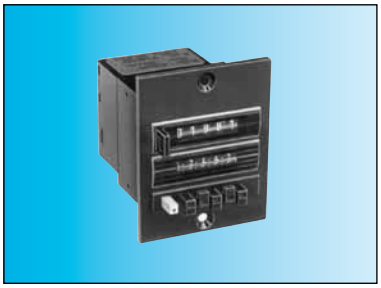
Fixing viewed from below



Pneumatic impulse counters

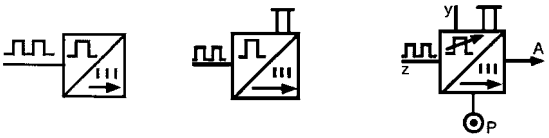
- **4, 5, 6 digits with or without reset**
- **With or without pre-selection**





Totalizer	**99 766 001**	**99 766 002**	—
Preselection counter	—	—	**89 538 201**
Version	6 digits no reset to zero	4 digits with manual zero reset	5 digits with manual or pneumatic zero reset

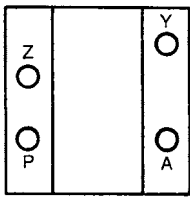
Symbol



Characteristics

Supply pressure		bar	2 → 8	2 → 8	2 → 8
Pressure to break		bar	> 0.3	> 0.3	> 0.15
Pressure to make		bar	> 1.4	> 1.4	> 0.8
Reset :	Minimum pressure	bar	—	—	2
	Reset time	ms	—	—	150
Circuit pressure			—	—	2 → 8
bar			—	—	●
Signal emitted when preset is reached			0 → +60	0 → +60	0 → +60
Operating temperature		°C	150	150	136
Weight	-	g			

Connection



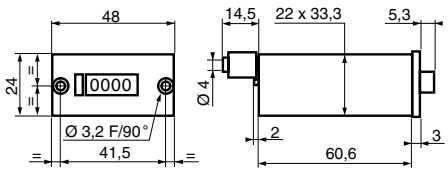
A - Output signal
P - Supply
Y - 'Reset to zero' signal
Z - Input signal

Note : the count pulse must be removed before the reset pulse is applied. The preset value can be changed during operation without the counter resetting to zero.

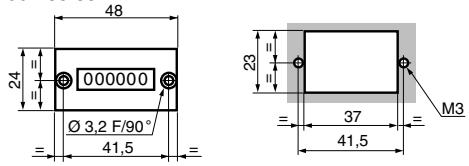
Dimensions

Connectors for semi-rigid tubing Ø 4 (NFE 49100)

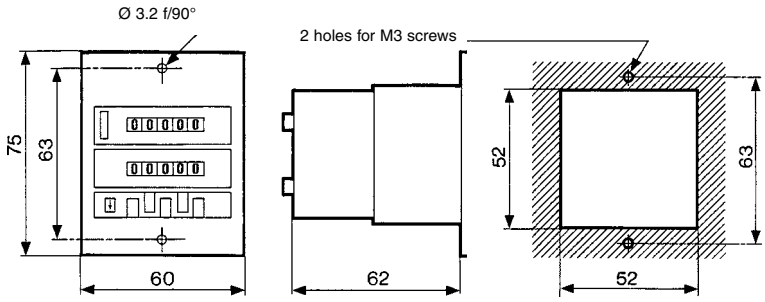
99 766 002



99 766 001



89 538 201

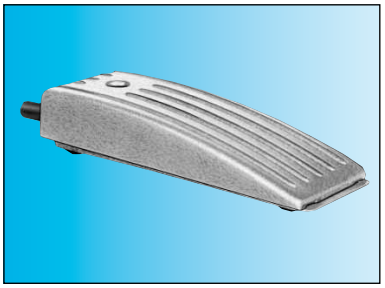


Indicators and pedal valves

■ Ergonomics

Also available in **ATEX** version for use in potentially explosive atmospheres in accordance with 94/9/EC Directive

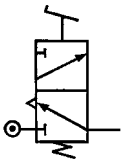




Pneumatic indicators Ø 22	Red	**84 150 201**	—
	Green	**84 150 202**	—
	Yellow	**84 150 203**	—
	Blue	**84 150 204**	—
Pedal valve - Version NC		—	**81 999 501**

Symbol



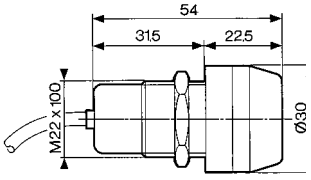


Characteristics

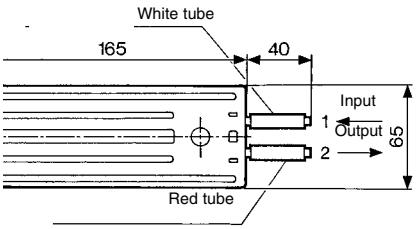
Operating pressure	bar	2 → 8	—
Push-in connection for semi-rigid tubing (NFE 49100)	mm	Ø4	Ø4
Operating temperature	°C	-5 → +50	-5 → +50
Mechanical life	operations	10^7	1.5 x 10^6
Weight	g	34	290

Dimensions

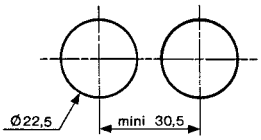
84 150 201 - 84 150 202
84 150 203 - 84 150 204



81 999 501



Holes drilled for indicators





ATEX version products are available in the following catologues: **Pneumatic products for explosive atmospheres** or on our website **www.crouzet.com**

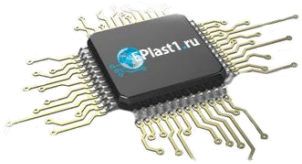
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)
Факс: 8 (812) 320-02-42
Электронная почта: org@eplast1.ru
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.