



UNIVER JET pneumatic switches have been designed to meet the ever increasing need to save space without compromising on performance or reliability. Available in two port options, M5 threaded, or quick couplings Ø (4 x 2) for quick assembly purposes.

The limit-switches, mounted on sub-bases with threaded connections or with quick couplings, may be combined with different types of manual operators for panel mounting complying with the various needs of the plant. It can also be used as an operator on indirectly operated 3 and 5-port valves where a sensitive control is required.

TECHNICAL CHARACTERISTICS

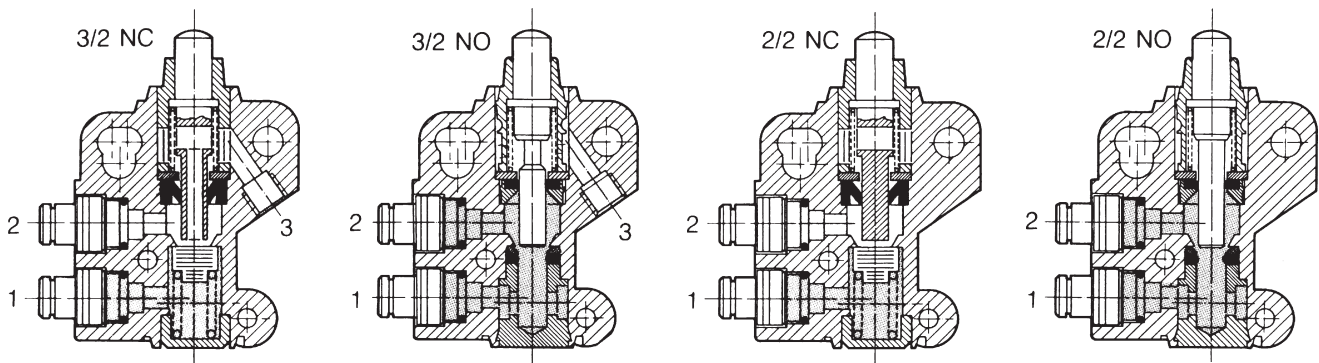
"JET" pneumatic switches

Ambient temperature: -10 ÷ 90°C
 Working pressure: max 10 bar
 Office: 2,5 mm
 Fluid temperature: max 50°C
 Flow capacity: 98 NI/min at 6 bar $\Delta p = 1$ bar
 Poppet system with oil-proof seals
 Threaded connections M5 or quick couplings Ø 4 x 2
 Conveyable exhausts (3): M5
 Fluid: air, with or without lubrication

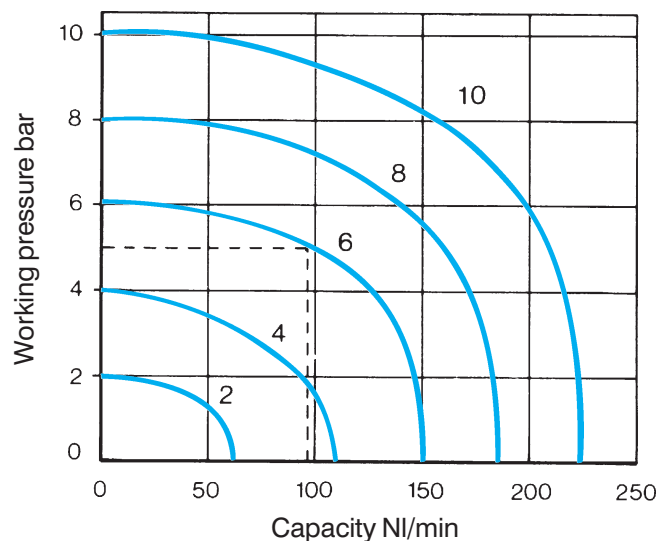
Miniature limit switches

Ambient temperature: -10 ÷ 90°C
 Working pressure: max 10 bar
 Office: 2,3 mm (1,5 sensitive version)
 Fluid temperature: max 50°C
 Flow capacity: 110 NI/min
 Fluid: air, with or without lubrication
 Poppet system with oil-proof seals
 Body material: Die-cast alloy
 Useful as operator for indirectly operated 3- and 5-port valves.


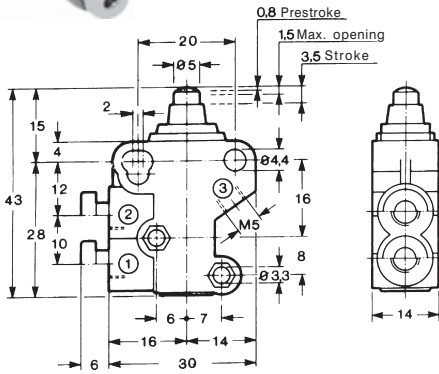
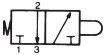
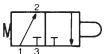
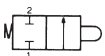

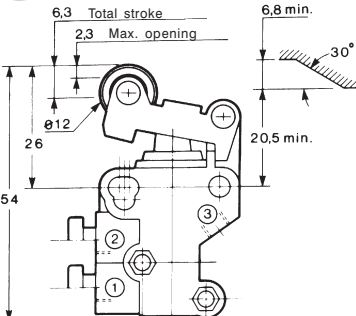
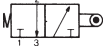
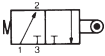
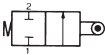

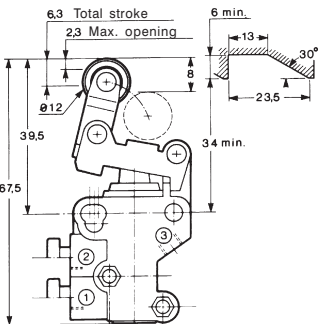
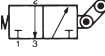
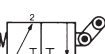
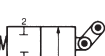
OPERATING PRINCIPLES AND FLOW CAPACITY CURVES



1 = Supply(P)
 2 = Consumption (A)
 3 = Exhaust (R)


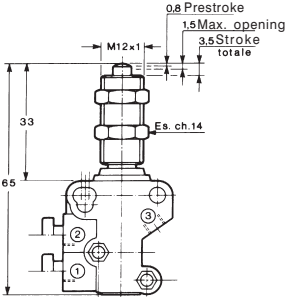
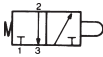
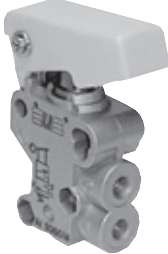
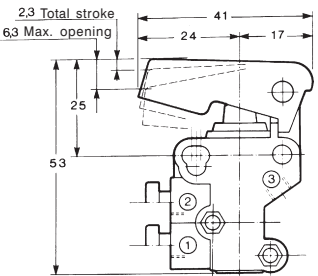
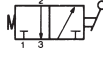

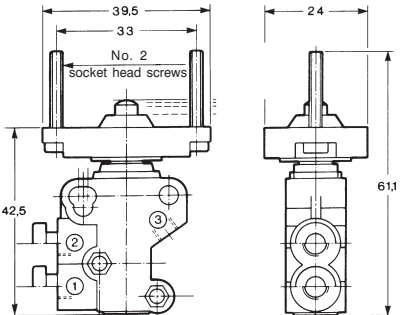
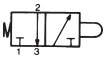




Type	Overall dimensions	Symbol	Ways	Control	Return	Connec- tion	Force N*	Mass kg	Part number	
			3/2 NC	mechanical button	pneu- mech. spring	pipe Ø 4x2	14	0,060	AI-9000	
			3/2 NC			M5			AI-9000M	
			3/2 NO			3/2 NO			pipe Ø 4x2	AI-9010
			3/2 NO						M5	AI-9010M
			2/2 NC			2/2 NC			pipe Ø 4x2	AI-9020
			2/2 NC						M5	AI-9020M
			3/2 NC	roller lever	pneu- mech. spring	pipe Ø 4x2	7	0,085	AI-9100	
			3/2 NC			M5			AI-9100M	
			3/2 NO			3/2 NO			pipe Ø 4x2	AI-9110
			3/2 NO						M5	AI-9110M
			2/2 NC			2/2 NC			pipe Ø 4x2	AI-9120
			2/2 NC						M5	AI-9120M
			3/2 NC	uni- directional roller lever	pneu- mech. spring	pipe Ø 4x2	4	0,085	AI-9200	
			3/2 NC			M5			AI-9200M	
			3/2 NO			3/2 NO			pipe Ø 4x2	AI-9210
			3/2 NO						M5	AI-9210M
			2/2 NC			2/2 NC			pipe Ø 4x2	AI-9220
			2/2 NC						M5	AI-9220M

* Force refers to a 6 bar pressure.

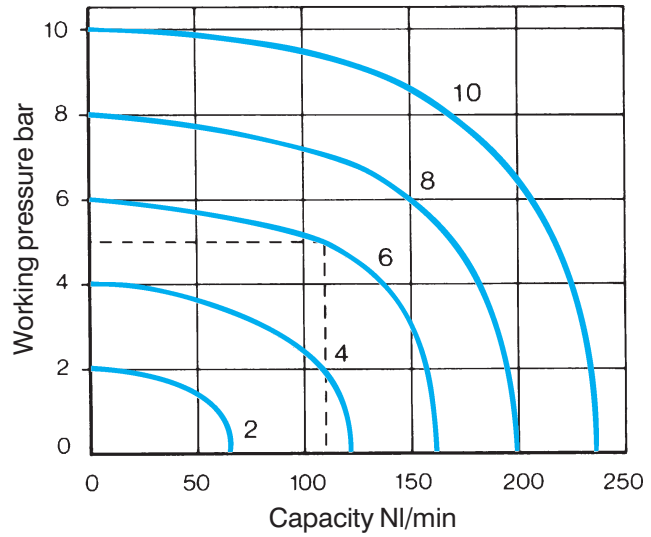
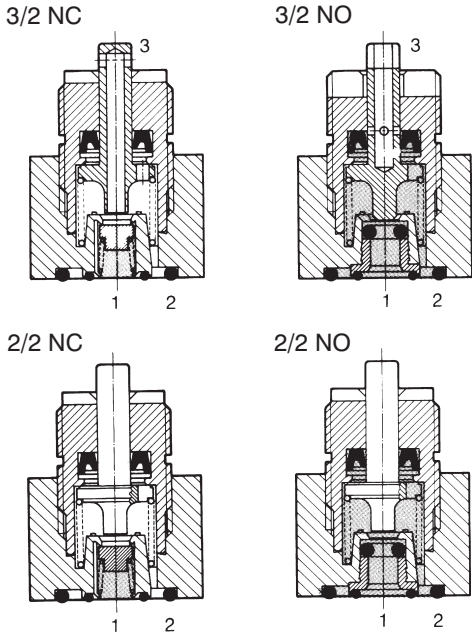


Type	Overall dimensions	Symbol	Ways	Control	Return	Connection	Force N*	Mass kg	Part number
			3/2 NC	Mechanical push button with screw mounting	pneu-mech. spring	pipe Ø 4x2	14	0,082	AI-9300
			3/2 NC			M5			AI-9300M
			3/2 NO			pipe Ø 4x2			AI-9310
			3/2 NO			M5			AI-9310M
			2/2 NC			pipe Ø 4x2			AI-9320
			2/2 NC			M5			AI-9320M
			3/2 NC	Manual lever	pneu-mech. spring	tubo Ø 4x2	7	0,065	AI-9350
			3/2 NC			M5			AI-9350M
			3/2 NO			pipe Ø 4x2			AI-9360
			3/2 NO			M5			AI-9360M
			2/2 NC			pipe Ø 4x2			AI-9370
			2/2 NC			M5			AI-9370M
			3/2 NC	Mechanical push button for panel mounting	pneu-mech. spring	pipe Ø 4x2	14	0,075	AI-9400
			3/2 NC			M5			AI-9400M
			3/2 NO			pipe Ø 4x2			AI-9410
			3/2 NO			M5			AI-9410M
			2/2 NC			pipe Ø 4x2			AI-9420
			2/2 NC			M5			AI-9420M

* Force refers to a 6 bar pressure.



OPERATING PRINCIPLES AND FLOW CAPACITY CURVES


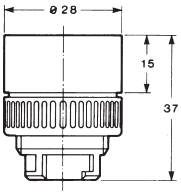


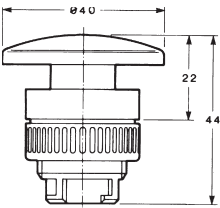





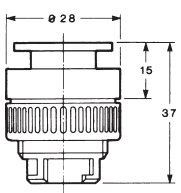


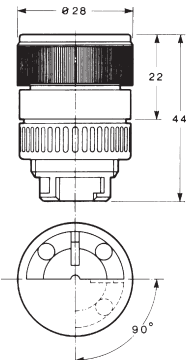


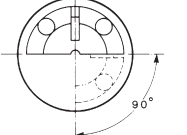

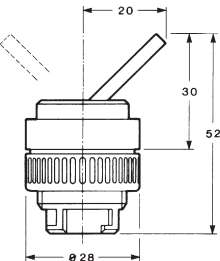



1 = Supply (P) 2 = Consumption (A) 3 = Exhaust (R)

Panel mounted limit switch can be coupled with AI-35..Q actuators only.

Type	Overall dimensions	Symbol	Ways	Control	Ø mm	Capacity NI/min	Force N	Mass kg	Part number
			3/2 NC	pneu-mech. push button	2,3	110	15	0,040	AI-3500
			3/2 NC sensit.		1,5	55	4		AI-3500S
			3/2 NO		2,3	110	15		AI-3501
			3/2 NO sensit.		1,3	45	4		AI-3501S
			2/2 NC		2,3	110	15		AI-3502
			2/2 NO		2,3	110	15		AI-3503
			3/2 NC	panel mounted mechanical push button	2,3	110	15	0,055	AI-3500Q
			3/2 NC sensit.		1,5	55	4		AI-3500SQ
			3/2 NO		2,3	110	15		AI-3501Q
			3/2 NO sensit.		1,3	45	4		AI-3501SQ
			2/2 NC		2,3	110	15		AI-3502Q
			2/2 NO		2,3	110	15		AI-3503Q



Type	Overall dimensions	Symbol	Description	Colour	Force N *	Mass kg	Part number				
			Recessed button 1 position	black	16	0,031	AI-3511				
				red			AI-3512				
				green			AI-3513				
			Recessed button for panel assembly 1 position	black			AI-3511Q				
				red			AI-3512Q				
				green			AI-3513Q				
			Head button 1 position	red	16	0,022	AI-3514				
				black			AI-3516				
			Head button for panel assembly 1 position	red			AI-3514Q				
		black		AI-3516Q							
							Head button 2 positions	red	16	0,022	AI-3514D
								black			AI-3516D
Head button for panel assembly 2 positions	red				AI-3514QD						
	black				AI-3516QD						
			Button 1 position	green	12,5	0,025	AI-3515				
				red			AI-3517				
				black			AI-3519				
			Button for panel assembly 1 position	green			AI-3515Q				
				red			AI-3517Q				
				black			AI-3519Q				
			Accident prevention rotating selector with indicator lamp 1 position	black	12,5	0,025	AI-3521				
				black			AI-3521Q				
				Accident prevention rotating selector with indicator lamp 2 positions			black	12,5	0,025	AI-3520	
							black			AI-3520Q	
				Accident prevention rotating selector with indicator lamp for panel assembly 2 positions			black			AI-3520Q	
							black			AI-3520Q	
			Lever operator 2 positions	black	6	0,022	AI-3524				
			Lever operator for panel assembly 2 positions	black			AI-3524Q				

* Force at 6 bar with actuators assembled on an AI-35.. standard limit switch.


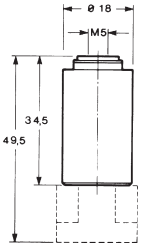

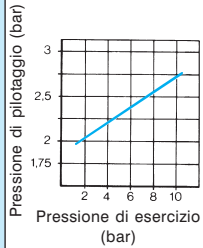

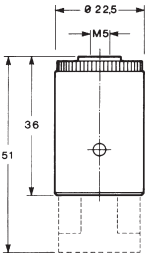

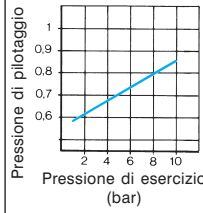

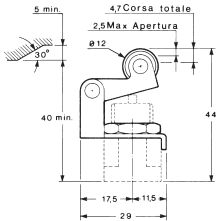


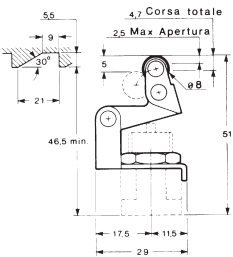


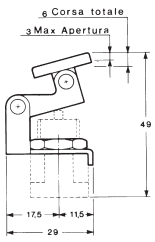

◆ Can be used with valves preset with flange for panel mounting .

Type	Overall dimensions	Symbol	Description	Colour	Force N *	Mass kg	Part number
			Rotating lever selector with indicator lamp 1 position	black	12,5	0,025	AI-3523
			Rotating lever selector with indicator lamp for panel assembly 1 position ✦				AI-3523Q
			Rotating lever selector with indicator lamp 2 positions	black	12,5	0,025	AI-3522
			Rotating lever selector with indicator lamp for panel assembly 2 position ✦				AI-3522Q
			Omni-directional operator with centre return 1 position	black	7	0,029	AI-3525
			Omni-directional operator with centre return for panel mounting 1 position ✦				AI-3525Q
			Push-pull operator 2 positions	black	16	0,029	AI-3526
			Push-pull operator for panel mounting 2 positions ✦				AI-3526Q

* Force at 6 bar with actuators assembled on an AI-35.. standard limit switch.

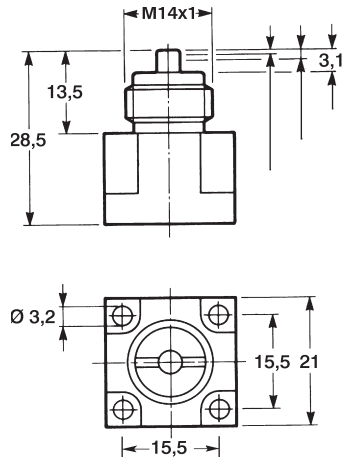
✦ Can be used with valves preset with flange for panel mounting .



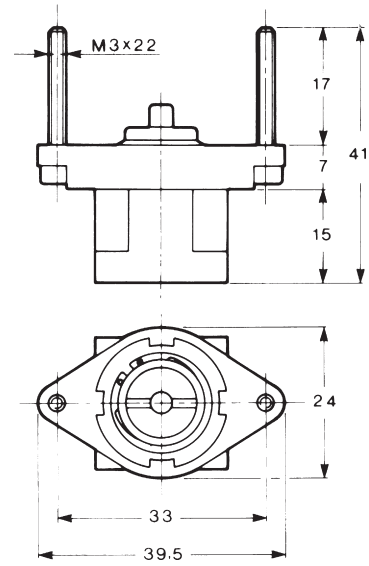
Type	Overall dimensions	Symbol	Description	Basic control pressure	Operating pressure bar	Work diagram	Mass kg	Part number
			Pneumatic actuators	1,9 ÷ 2,7	1 ÷ 9		0,020	AI-3550
			Pneumatic actuators amplified	0,6 ÷ 0,9	1 ÷ 9		0,030	AI-3551
Type	Overall dimensions	Symbol	Description	Force N*	Mass kg	Part number		
			Roller operator 1 position	10	0,021	AI-3570		
			Articulated roller operator 1 position complete operation with stroke 2,5 mm Max stroke 4,7 mm	10	0,021	AI-3571		
			Key operator 1 position	10	0,021	AI-3572		

* Force at 6 bar with actuators assembled on an AI-35.. standard limit switch.

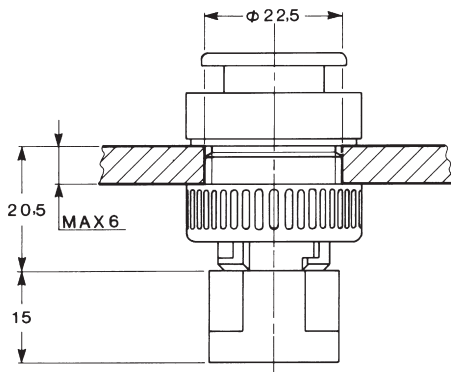
Pneumatic limit switch for ring assembly



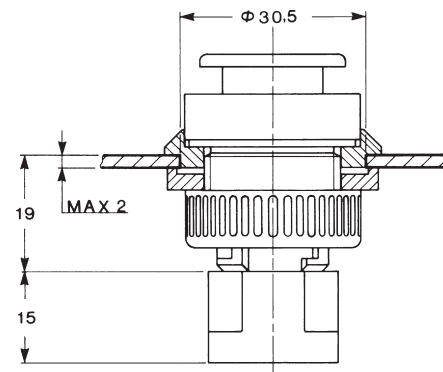
Pneumatic limit switch for panel assembly



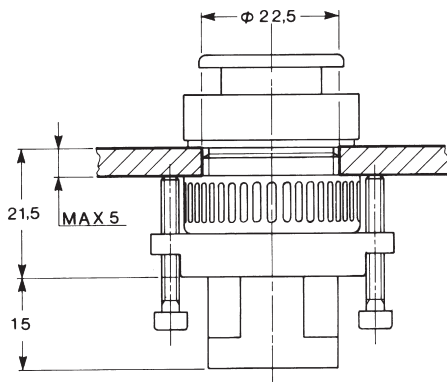
Manual ring actuator for Ø 22,5 bore size with reducer (to be used with AI-35...limit switches)



Manual ring actuator for Ø 30,5 bore size with reducer (to be used with AI-35...limit switches) (reducer part number AI-3529)

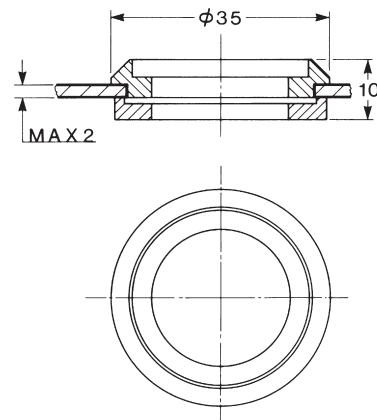


Manual ring actuator for panel assembly for Ø 22,5 bore size (to be used with AI-35...limit switches)



Reducer for Ø 30,5 bore size (to be used with AI-35...limit switches)

AI-3529



Type	Overall dimensions	Mass kg	Part number
<p>Back port sub-base with M5 threaded connections</p>			
	<p>Order part number includes No. 4 M3x12 fixing screws.</p>	0,020	AI-3610
<p>Sub-base with side or dorsal consumptions and threaded connections M5</p>			
	<p>M5x5 grub-screws must be fixed with loctite 242, preventing this from closing the holes or enter the valve. Grub-screws must be screwed in without touching the bottom. Order part number includes No. 4 M3x12 fixing screws.</p>	0,020	AI-3612
<p>Solenoid valve 5/2 according to NAMUR specification Solenoid valve suitable for the control of pneumatic actuators, rotating single-acting and double-acting, used in industrial plants for the distribution of fluids.</p>			
	<p>Body: in die-cast zamak Working pressure: 2 ÷ 10 bar Ambient temperature: -10 ÷ 45 °C Fluid: filtered air 50 µm Fluid temperature: -10 ÷ 50 °C Nominal diameter: 8 mm G$\frac{1}{4}$ Nominal flow capacity: 1200 Nl/min Switching system: mixed or poppet Response time: 5 ÷ 30 m/s Coil: DA series (U1) DC series (U3) Possible use: 3/2</p>	0,620	<p>AC-N8500 = 5/2 E/M</p> <p>AC-N8520 = 5/2 E/E</p>
<p>Legend: E= electrical M= pneumatic spring P= pneumatic</p>			