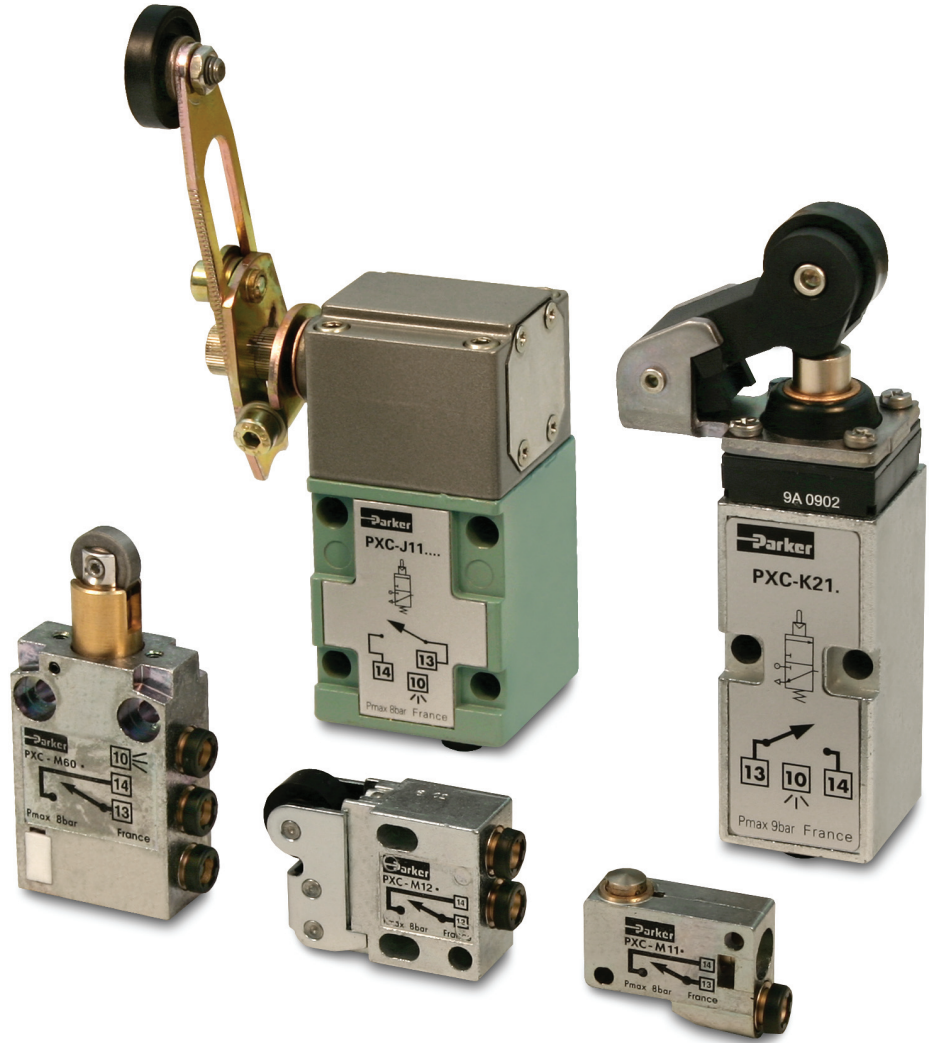
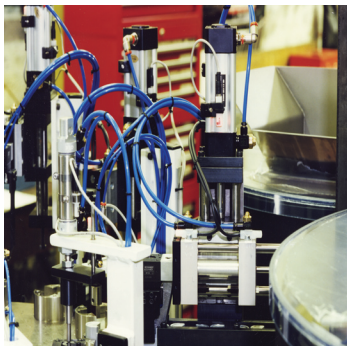


aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding




Limit Switches, Bleed sensors

PDE2629TCUK August 2009




ENGINEERING YOUR SUCCESS.


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Limit switches, Mini poppet valves M43303	15
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Important !
 Before carrying out any service work, ensure that the valve and manifold have been vented. Remove the primary supply air hose to ensure total disconnection of the air supply before dismantling valves or blank connection blocks.



NB !
 All technical data in this catalogue is typical only.
 The air quality is decisive for the valve life: see ISO 8573.



WARNING

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.
 This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met. The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

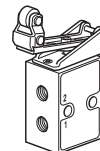
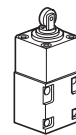
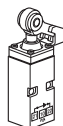
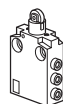
SALE CONDITIONS

The items described in this document are available for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. Any sale contract entered into by Parker will be governed by the provisions stated in Parker's standard terms and conditions of sale (copy available upon request).

Limit Switches and Bleed Sensors

Limit switches Control and process only

Bleed Sensors



Series	Miniature	Compact	K-series	J-series	M43	PXF
Connection, * Push-in	Ø4*	Ø4*	Ø4* or M5	Ø4*	M5	Ø4* or M5
Flow at 6 bar, Qn l/s Qmax l/s Cv	1	4,2	2	3,5	1 1,89 0,127	3
Pipeable exhaust		No	Yes	No	Yes	No
Working temperature	-15 to +60°C	-15 to +60°C	-15 to +60°C	-15 to +60°C	-10 to +80°C	-15 to +60°C
Pneumatic switching	3/2 NC	3/2 NC	3/2 NC 3/2 NO	3/2 NC 3/2 NO	3/2 NC	
Construction material	Zinc die cast	Zinc die cast	Zinc die cast	Turrethead Zinc die cast, brass	Zinc die cast	Brass
Interchangeable with electrical version		Yes	Yes	Yes		
Actuator type						
Air hydraulic oil, fresh water, brine						
Plunger	●	●	●	●	●	
Roller		●		●	●	
Roller plunger		●	●	●		
Roller lever	●		●		●	
Whisker			●	●		
Variable offset lever			●	●		
Ball operated						
Cam				●		
Refer to page	5	5	6	8	15	16

- High durability
- Very good repeat accuracy
- Design for process duty cycle
- Push-in or threaded connection
- Versatile and easily maintained
- Wide range of body size and actuator style



Operating information

Working pressure;
 PXC-M101, PXC-M111, PXC-M121,
 PXC-M521, PXC-M601,
 PXC-J: 3-8 bar
 PXC-K: 3-9 bar



Working temperature -15 °C to +60 °C

	PXC-M101	PXC-M111	PXC-M121	PXC-M521/ PXC-M601
Flow: (acc. to ISO 6358)	Qmax= 60	60	85	250 l/s
			PXC-K	PXC-J
Flow: (acc. to ISO 6358)	Qmax=		210	210 l/s


3/2 miniatures limit switches

With Ø4 mm Push-in connections (M5 on request)


Bore Ø1,5 mm, flow 60 NI/min

Symbol	Actuator	Return	Operating forces at 6 bar, N	Weight kg	Order code
	Steel plunger	Spring	11	0,030	PXC-M111
	Steel plunger	Spring	11	0,030	PXC-M101
	Plastic roller lever			0,008	PXC-Z11
	Plastic roller lever, one way trip			0,008	PXC-Z12

Bore Ø1,5 mm, flow 85 NI/min

Symbol	Actuator	Return	Operating forces at 6 bar, N	Weight kg	Order code
	Plastic roller	Spring	4,5	0,040	PXC-M121
	Steel roller	Spring	4,5	0,045	PXC-M131

Bore Ø2,5 mm, flow 250 NI/min


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	Plastic roller	Spring	7	0,060	PXC-M521





3/2 compact limit switches

With Ø4 mm Push-in connections
with pipeable exhaust port

Bore Ø2,5 mm, flow 250 NI/min

With plunger head

Symbol	Actuator	Return	Operating forces at 6 bar, N	Weight kg	Order code
	Steel plunger	Spring	24	0,150	PXC-M601A110

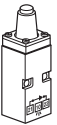



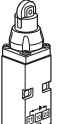



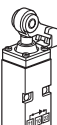



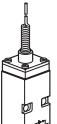



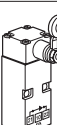







	Symbol	Actuator	Return	Operating forces at 6 bar, N	Weight kg	Order code
		Steel roller plunger	Spring	24	0,160	PXC-M601A102
		90° steel roller plunger	Spring	24	0,160	PXC-M601A103

3/2 limit switches “K series”

With Ø4 mm Push-in connections
with pipeable exhaust port
snap action and low operating force

Bore Ø3 mm

With plunger

	Symbol	Actuator	Return	Operating forces at 6 bar, N	Weight kg	Order code
		Steel plunger	Spring	16 N	0,270	PXC-K21101
		Steel plunger	Spring	16 N	0,270	PXC-K22101
		Steel roller plunger	Spring	16 N	0,310	PXC-K21102
		Steel roller plunger	Spring	16 N	0,310	PXC-K22102
		Plastic roller plunger	Spring	16 N	0,320	PXC-K21121
		Plastic roller plunger	Spring	16 N	0,320	PXC-K22121
		Whisker	Spring	0,05 Nm	0,270	PXC-K21106
		Whisker	Spring	0,05 Nm	0,270	PXC-K22106
		Plastic roller lever *	Spring	0,21 Nm	0,360	PXC-K2110531
		Plastic roller lever *	Spring	0,21 Nm	0,360	PXC-K2210531
		Adjustable lever with Delrin roller *	Spring	0,21 Nm	0,360	PXC-K2110541
		Adjustable lever with Delrin roller	Spring	0,21 Nm	0,360	PXC-K2210541




* Direction of actuation can be set as required

- from right and left
- from right
- from left




3/2 limit switches “K series”


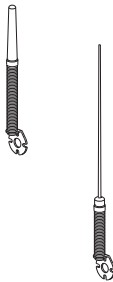
Bore Ø3 mm

Pneumatic switch bodies, for use in association with all **ZCK-D..** series operating heads

	Symbol	Actuator	Return	Operating forces at 6 bar, N	Weight kg	Order code
		-		16	0,320	PXC-K211
		-		16	0,320	PXC-K221

Pneumatic switch bodies with rotary heads
 Direction of actuation can be set as required:
 - From right and left
 - From right
 - From left

	Symbol	Actuator	Return	Operating forces at 6 bar, Nm	Weight kg	Order code
		Rotary head	Spring	0,21	0,340	PXC-K21105
		Rotary head	Spring	0,21	0,340	PXC-K22105

	Actuator	Weight kg	Order code
Rod 	Ø3 mm fibre glass	0,025	ZCK-Y55
	Square steel 3 mm	0,025	ZCK-Y54
Spring rod 	Plastic	0,010	ZCK-Y81
	Metal	0,030	ZCK-Y91

3/2 limit switches “J series”







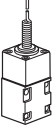


With **Ø4 mm Push-in connections** (M5 or G1/8 on request)

With pipeable exhaust port

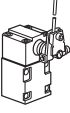




Snap action and low operating force

Bore Ø3 mm

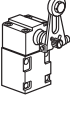




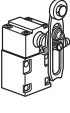




With plunger head

	Symbol	Actuator	Return	Operating forces at 6 bar, N	Weight kg	Order code
		Steel plunger	Spring	16	0,515	PXC-J11161
		Steel plunger	Spring	16	0,515	PXC-J12161
		Steel roller plunger	Spring	16	0,525	PXC-J11162
		Steel roller plunger	Spring	16	0,525	PXC-J12162
		Whisker	Spring	16	0,510	PXC-J11170
		Whisker	Spring	16	0,510	PXC-J12170

With rotary head and operating lever

	Symbol	Actuator	Direction of actuation	Return	Operating forces at 6 bar, N	Weight kg	Order code
		Rigid rod	Right AND left	Spring	0,05	0,570	PXC-J1110151
		Rigid rod	Right AND left	Spring	0,05	0,570	PXC-J1210151
		Rigid rod	Right OR left	Spring	0,05	0,570	PXC-J1110551
		Rigid rod	Right OR left	Spring	0,05	0,570	PXC-J1210551

With rotary head and operating lever

	Symbol	Actuator	Direction of actuation	Return	Operating forces at 6 bar, N	Weight kg	Order code
		Delrin roller lever	Right AND left	Spring	0,25	0,565	PXC-J1110111
				Spring	0,25	0,565	PXC-J1210111
		Delrin roller lever	Right OR left	Spring	0,25	0,565	PXC-J1110511
				Spring	0,25	0,565	PXC-J1210511
		Variable length lever with thermoplastic roller	Right AND left	Spring	0,25	0,580	PXC-J1110131
				Spring	0,25	0,580	PXC-J1210131
		Variable length lever with thermoplastic roller	Right OR left	Spring	0,25	0,580	PXC-J1110531
				Spring	0,25	0,580	PXC-J1210531

3/2 limit switches “J series”







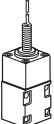


With G1/8 connection

With pipeable exhaust port

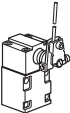




Snap action and low operating force

Bore Ø3 mm

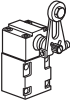




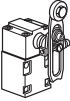




With plunger head

	Symbol	Actuator	Return	Operating forces at 6 bar, N	Weight kg	Order code
		Steel plunger	Spring	16	0,515	PXC-J11861
		Steel plunger	Spring	16	0,515	PXC-J12861
		Steel roller plunger	Spring	16	0,525	PXC-J11862
		Steel roller plunger	Spring	16	0,525	PXC-J12862
		Whisker	Spring	16	0,510	PXC-J11870
		Whisker	Spring	16	0,510	PXC-J12870

With rotary head and operating lever

	Symbol	Actuator	Direction of actuation	Return	Operating forces at 6 bar, Nm	Weight kg	Order code
		Rigid rod	Right AND left	Spring	0,05	0,570	PXC-J1180151
		Rigid rod	Right AND left	Spring	0,05	0,570	PXC-J1280151
		Rigid rod	Right OR left	Spring	0,05	0,570	PXC-J1180551
		Rigid rod	Right OR left	Spring	0,05	0,570	PXC-J1280551

With rotary head and operating lever

	Symbol	Actuator	Direction of actuation	Return	Operating forces at 6 bar, Nm	Weight kg	Order code
		Delrin roller lever	Right AND left	Spring	0,25	0,565	PXC-J1180111
				Spring	0,25	0,565	PXC-J1280111
		Delrin roller lever	Right OR left	Spring	0,25	0,565	PXC-J1180511
				Spring	0,25	0,565	PXC-J1280511
		Variable length lever with thermoplastic roller	Right AND left	Spring	0,25	0,580	PXC-J1180131
				Spring	0,25	0,580	PXC-J1280131
		Variable length lever with thermoplastic roller	Right OR left	Spring	0,25	0,580	PXC-J1180531
				Spring	0,25	0,580	PXC-J1280531




3/2 limit switches “J series”






With Ø4 mm Push-in connections





Bore Ø3 mm

Pneumatic switch bodies*

For use in association with all **ZC2-JC** operating heads

	Symbol	Actuator	Return	Operating forces at 6 bar, N	Weight kg	Order code
		-	Spring	16	0,320	PXC-J111
		-	Spring	16	0,320	PXC-J121

	Symbol	Actuator	Direction of actuation	Return	Operating forces at 6 bar, Nm	Weight kg	Order code
		-	Right AND left	Spring	0,05	0,535	PXC-J11101
		-	Right AND left	Spring	0,05	0,535	PXC-J12101
		-	Right OR left	Spring	0,05	0,535	PXC-J11105
		-	Right OR left	Spring	0,05	0,535	PXC-J12105

	Actuator	Weight kg	Order code
	Steel roller lever	0,040	ZC2-JY13
	Spring plastic rod	0,040	ZC2-JY81
	Spring metal rod	0,040	ZC2-JY91
	Variable length lever with delrin roller	0,050	ZC2-JY41

* The switch bodies are available with G1/8 threaded connection. Replace the 3rd digit in the reference by 8. Example PXC-J11861




3/2 limit switches “J series”






With G1/8 connection





Bore Ø3 mm

Pneumatic switch bodies*

For use in association with all **ZC2-JC** operating heads

	Symbol	Actuator	Return	Operating forces at 6 bar, N	Weight kg	Order code
		-		16	0,320	PXC-J118
		-		16	0,320	PXC-J128

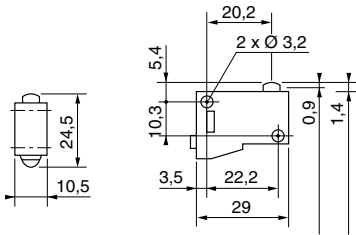
	Symbol	Actuator	Direction of actuation	Return	Operating forces at 6 bar, Nm	Weight kg	Order code
		-	Right AND left	Spring	0,05	0,535	PXC-J11801
		-	Right AND left	Spring	0,05	0,535	PXC-J12801
		-	Right OR left	Spring	0,05	0,535	PXC-J11805
		-	Right OR left	Spring	0,05	0,535	PXC-J12805

	Actuator	Weight kg	Order code
	Steel roller lever	0,040	ZC2-JY13
	Spring plastic rod	0,040	ZC2-JY81
	Spring metal rod	0,040	ZC2-JY91
	Variable length lever with delrin roller	0,050	ZC2-JY41

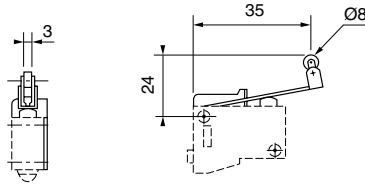
Dimensions, Limit switches, Series PXC

3/2 miniature limit switches

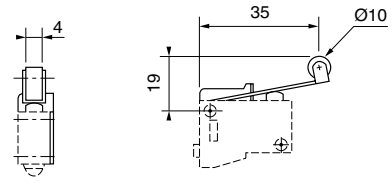
PXC-M111



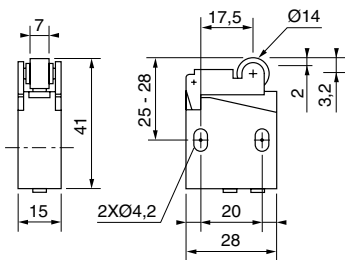
PXC-Z12



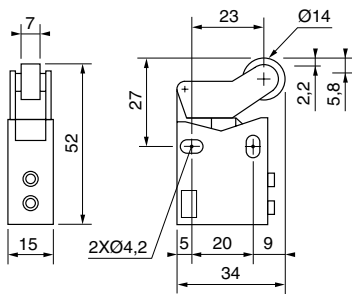
PXC-Z11



PXC-M121 - PXC-M131

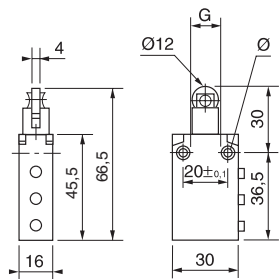


PXC-M521

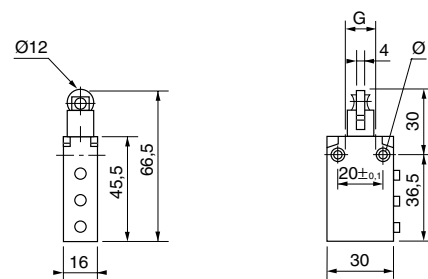


3/2 compact limit switches

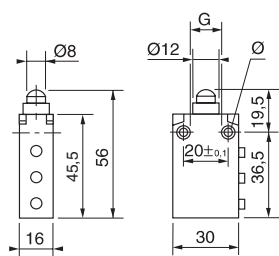
PXC-M601A102



PXC-M601A103

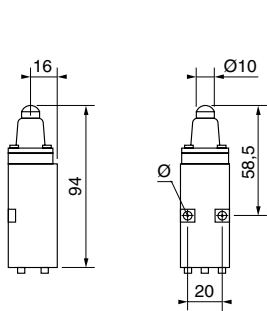


PXC-M601A110

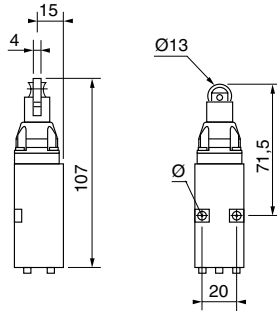


With plunger heads

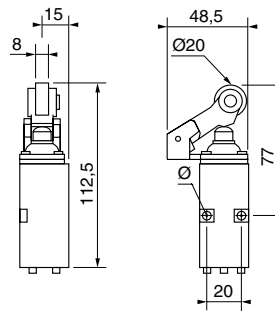
PXC-K21101, PXC-K22101



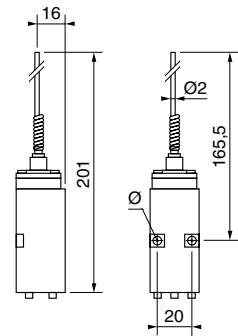
PXC-K21102, PXC-K22102



PXC-K21121, PXC-K22121

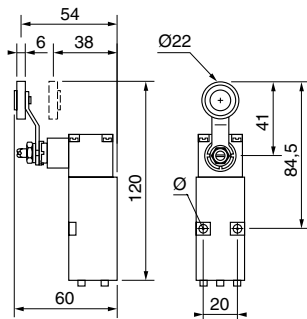


PXC-K21106, PXC-K22106

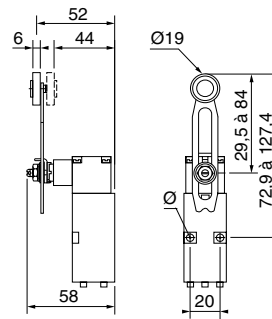


With rotary heads and operating levers

PXC-K21110531, PXC-K2210531



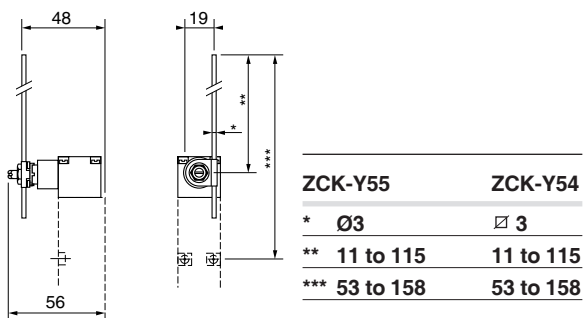
PXC-K21110541, PXC-K2210541



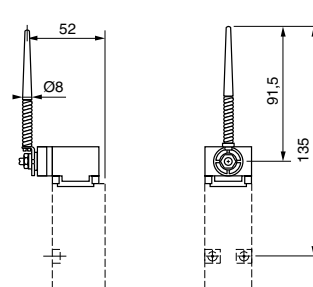
Ø=2 holes Ø5,2 mm

With rotary heads and operating levers

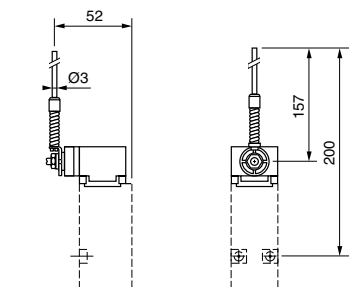
ZCK-Y54, ZCK-Y55



ZCK-Y81

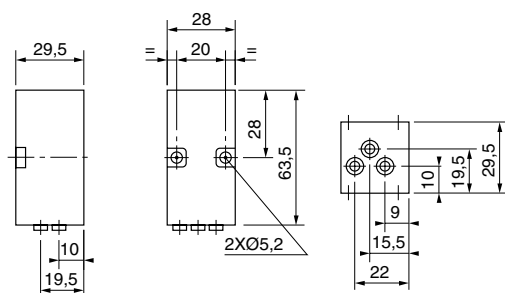


ZCK-Y91



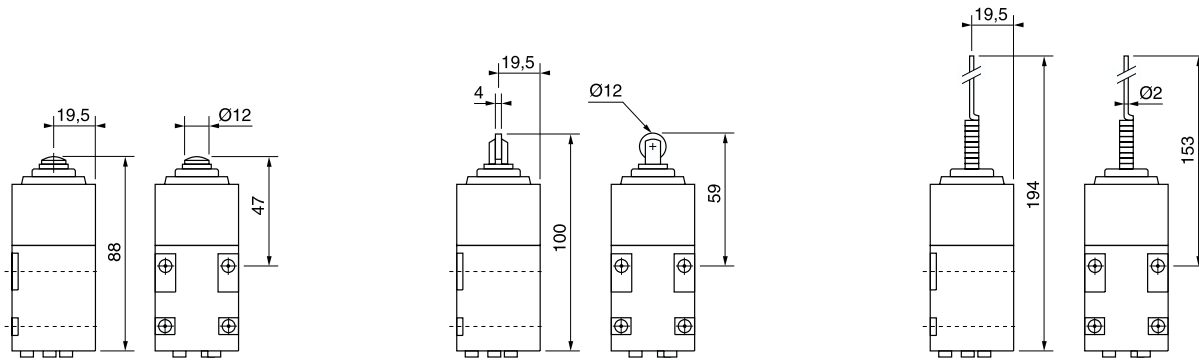
Pneumatic switch bodies

PXC-K211, PXC-K221



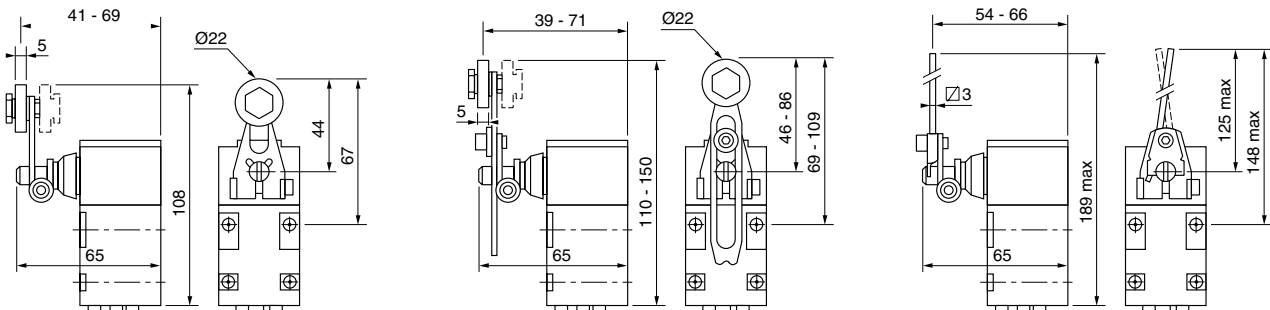
With plunger heads

PXC-J11161, PXC-J12161 PXC-J11162, PXC-J12162 PXC-J11170, PXC-J12170



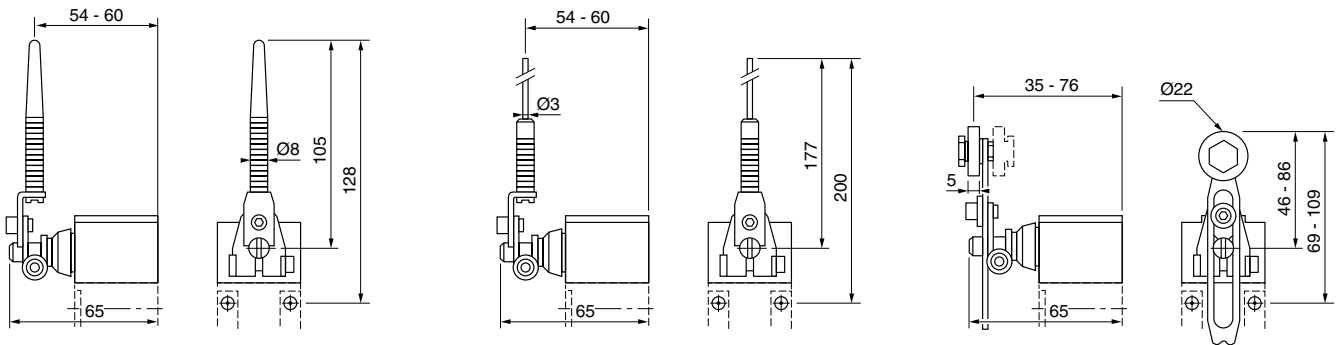
With rotary heads and operating levers

PXC-J1110111, J1210111, J1110511, J1210511 PXC-J1110131, J1210131, J1110531, J1210531 PXC-J1110151, J1210151, J1110551, J1210551



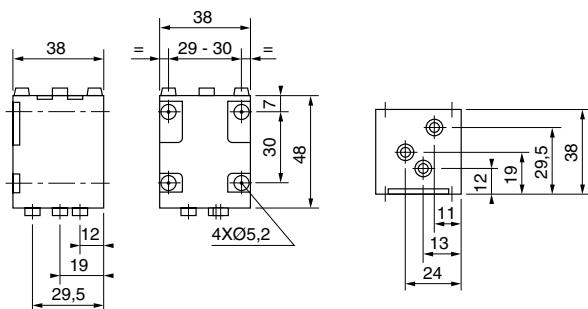
With rotary heads and operating levers

ZC2-JY81 ZC2-JY91 ZC2-JY41



Pneumatic switch bodies

PXC-J111, PXC-J121



- Ultra small size
- Light actuation forces
- Spring return as standard
- 3/2 NC as standard
- M5 body ported
- Lever adjustment on roller options



Operating information

Working temperature	-10 °C to +80 °C	Flow;	C=0,27
Working pressure	0-7 bar	(acc. to ISO 6358)	b=0,26
Port size	M5		Qn=1 l/s
			Qmax=1,89 l/s
			Cv=0,127

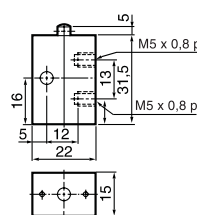
Main data for Mechanically operated valves, M43303 Series

Symbol	Actuator	Return	Operating force at 6 bar, N	Weight kg	Order code
	Plunger	Spring	18	0,054	M43303C
	Roller-Lever	Spring	10	0,058	M43303R
	Roller, one way trip	Spring	10	0,060	M43303T
	Ball	Spring	18	0,062	M43303B

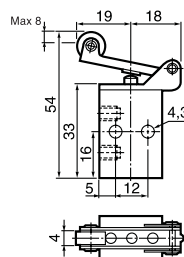
Normally closed only

Mechanically operated valves

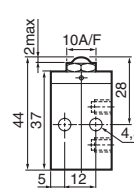
Plunger operated (basic valve) M43303C



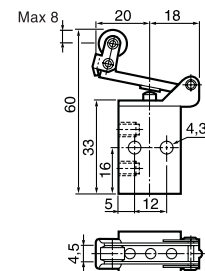
Roller lever operated M43303R



Ball operated M43303B









One way roller trip operated M43303T

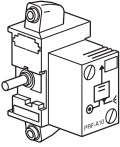



Bleed sensors

For use with PRF-A12 relay

	Symbol	Connection	Actuator	Return	Operating forces at 6 bar, N	Weight kg	Order code
		Ø4 mm Push-in	Direct	-	3 N	0,030	PXF-A111
		M5	Direct	-	3 N	0,030	PXF-A115
		Ø4 mm Push-in	Ball roller	Spring	3 N	0,035	PXF-A121
		M5	Ball roller	Spring	3 N	0,035	PXF-A125
		Ø4 mm Push-in	Whisker	Spring	0,125 Nm	0,035	PXF-A131
		M5	Whisker	Spring	0,125 Nm	0,035	PXF-A135

Bleed sensor relay

	Symbol	Connection	Function	Weight kg	Order code
		Ø4 mm Push-in	Provides a supply to a bleed sensor and generates a pneumatic signal equal to its supply pressure when the bleed sensor operates	0,070	PRF-A12

Application

Bleed sensors make it possible to sense very low actuating forces or small movements and are very compact. They are easy to install and connect as they only require a single tube. However, the length of the interconnecting tube must remain short if quick response times are required.