

Accessories



VAPO

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TRADEMARKS

Following brand names are Dupont registered trademarks:

- Kalrez®
- Viton®
- Teflon®
- Hypalon®
- BUNA-N®
- Delrin®

DISCLAIMER

Vapo Techniek BV has done its utmost to ensure that all data in this documentation is correct. However, Vapo Techniek BV accepts no responsibility for possible problems caused by mistakes in this documentation.

VTB700 series Mini Monitor

The VTB 700 Series of industrial switchboxes comprise a small range of miniature models designed for direct mounting to pneumatic actuators conforming to VDE/VDI 3845. The IP 67 polyamid moulded enclosure is sealed and quickly mounted directly to the actuator using the four M5 tapped holes forming part of the interface. Control circuit termination can be at either a 6-pin free socket, 3-pin free socket or flying lead and positive adjustment of cam setting is provided from the external surface of the enclosure. Shaft position indication is available in various colour combinations. Control modes are identified by coloured cam adjusting knobs. Adaptor kits are available to accommodate different actuator shaft heights and diameters.

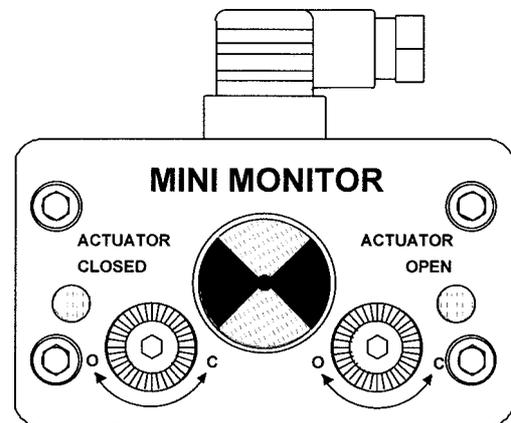


Benefits

- Easy adjustment
- Vibration-proof
- Optical indication Compact design

Adjustment

After mounting switchbox to actuator. Hold adjustment knob by left hand using small allen key undo locking screw by half a turn. Rotate cam until switch is set tighten locking screw. Do not overtighten.



Construction

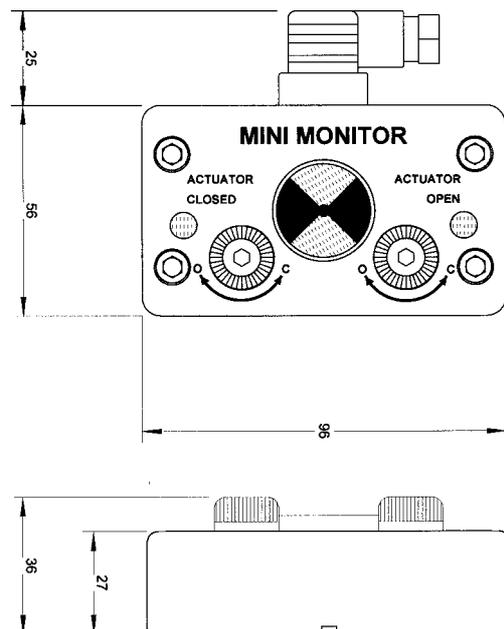
Enclosure: Glassfilled Polyamid
Internals: Glassfilled Polyamid

Limit switches

VTB 700: 2 micro switches make Crouzet 16A, 250 VAC
VTB 720: 2 off inductive switches P&F NJ2-V3-N Eex "ia"
VTB 730: 2 off inductive switches P&F NBB2-V3-E2

Options

- flying lead
- plug incl. x mtr cable
- IFM, Balluff, etc.



VTB800 series Limitswitchbox

The VTB800 series of industrial switchboxes are designed for direct mounting to VDE/VDI 3845 configured pneumatic actuators in general purpose applications. The housing cover is secured by a 5mm pitch male thread screwing into the base and an external tamperproof cover locking screw is provided. The cover can be either "Blank" or High visibility "Hi-Viz" which is available in various identifying colours to suit the process application, all in IP 67. A wide variety of control options are available all terminated at a numbered terminal strip for which a circuit diagram is permanently fixed to the inside of the cover. Cam positioning is effected using a spline lock assembly permitting simple and positive adjustment allowing the switchboxes to be mounted in any orientation without adverse effect. Two conduit entries are provided as standard and the enclosure design permits ready access for cable termination.



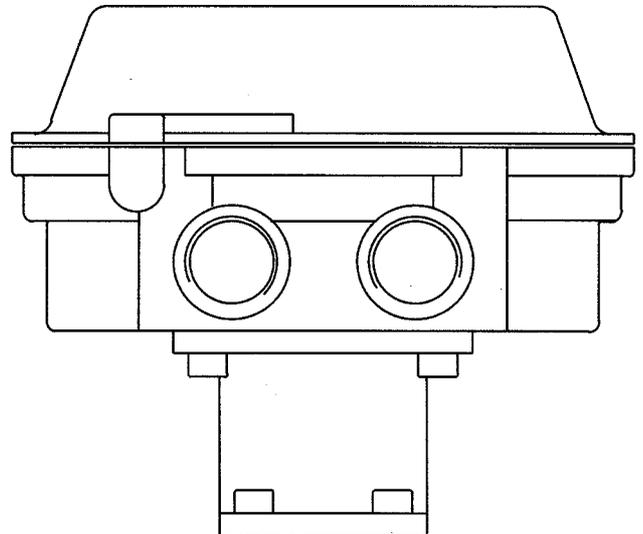
Spine-lock cams

Benefits:

- Adjustment in seconds
- Positive location
- Vibration proof

Adjustment:

- Slide top cam down
- rotate and release
- Slide bottom cam up
- rotate and release



Materials

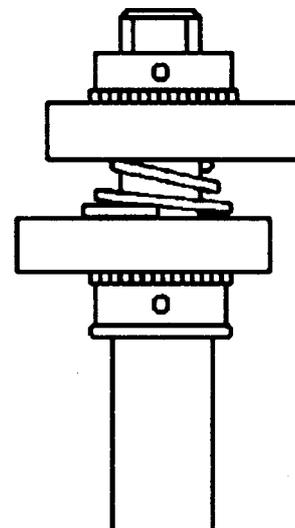
Enclosure:	GF Acetal Copolymer
Shaft:	SS 304
Cams:	GF Acetal Copolymer
Mounting kit:	GF Acetal Copolymer SS 304

Limit switches

VTB 800:	2 Micro switches make Crouzet 16A , 250 V
VTB 820:	2 off inductive switches P&F NJ2-V3-N Eex "ia"
VTB 830:	2 off inductive switches 3-wire P&F NBB2-V3-E2

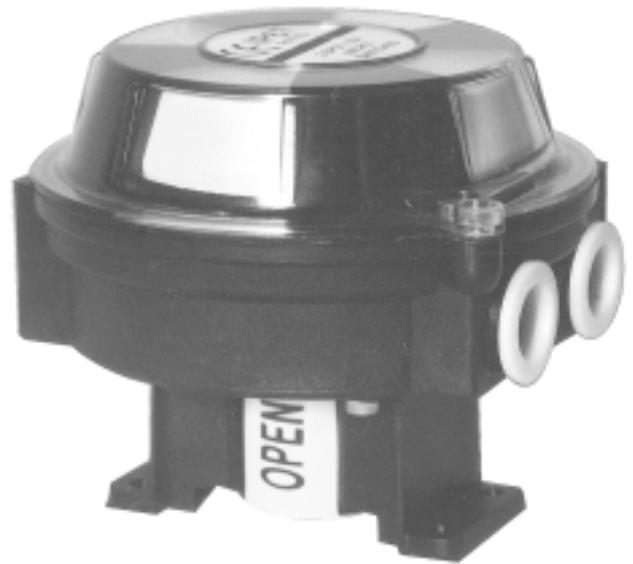
Options

- IFM, Balluff, etc
- Hi lid to accommodate 4 switches (single optical indication)
- backwiring provision



VTB815 Eex Limitswitchbox

The VTB800Eex (Certified acc. CENELEC Eex"ed"IICT6, Demko certificate No.98D.123610) series of industrial switchboxes are designed for direct mounting to VDE/VDI 3845 configured pneumatic actuators in general purpose applications. The housing cover is secured by a 5mm pitch male thread screwing into the base and an external tamperproof cover locking screw is provided. The cover can be either "Blank" or High visibility " Hi-Viz" which is available in various identifying colours to suit the process application, all in IP 67. A wide variety of control options are available all terminated at a numbered terminal strip for which a circuit diagram is permanently fixed to the inside of the cover. Cam positioning is effected using a spline lock assembly permitting simple and positive adjustment allowing the switchboxes to be mounted in any orientation without adverse effect. Two conduit entries are provided as standard and the enclosure design permits ready access for cable termination.



Spine-lock cams

Benefits:

- Adjustment in seconds
- Positive location
- Vibration proof

Adjustment:

- Slide top cam down
- rotate and release
- Slide bottom cam up
- rotate and release

Materialien

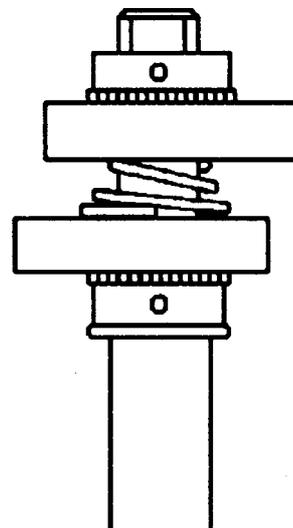
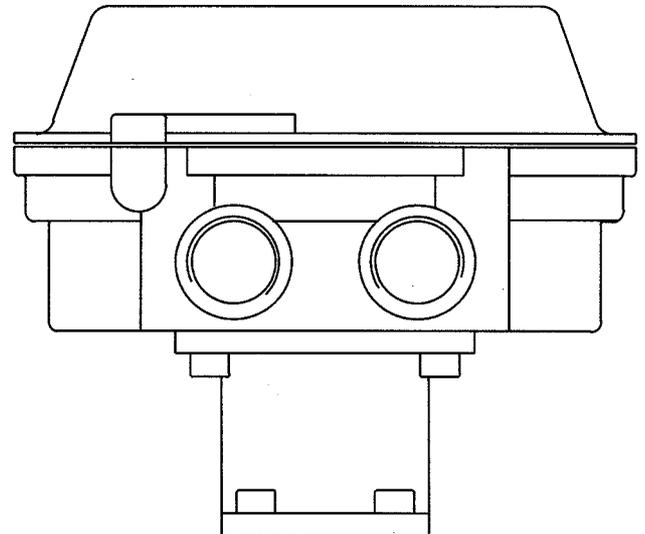
Enclosure: GF Acetal Copolymer
Shaft: SS 304
Cams: GF Acetal Copolymer
Mounting kit: GF Acetal Copolymer
SS 304

Limit switches

Standard: 2 Micro switches make Crouzet
Eex"ed"IICT6, 5A 250VAC or
Burgess

Options

- backwiring provision (VTB 810)
- different makes



VTB850 Limitswitchbox

Description

The VTB850 series limitswitchboxes are suitable for mounting on actuators with VDE/VDI 3845 interface. The bracket, which is delivered standard with the box, is of multi-size design. Therefore this box suits almost all actuators with the same bracket. The cover of the box is connected with the box through 4 stainless steel screws. All boxes are IP65. The box is made from aluminium with an epoxy coating. Shafts are of stainless steel. The bracket is carbon steel with an epoxy coating. High-viz through a red/green indicator.



Specifications

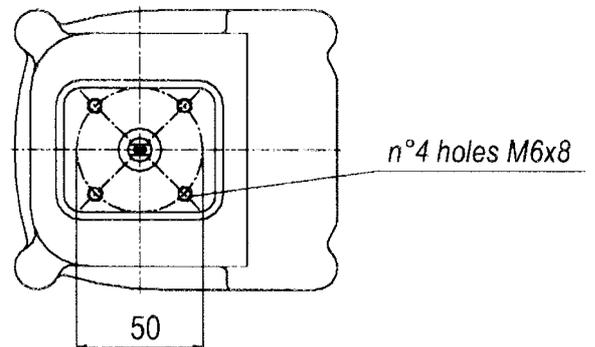
enclosure: IP65
terminal strip: 9 contacts
high-Viz: red/green
weight: 0.95 kgs

Materials

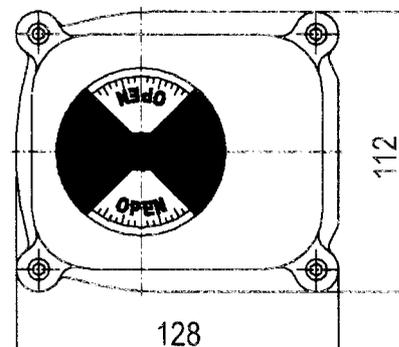
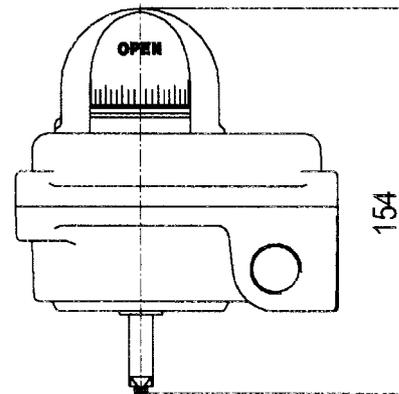
body: die cast aluminium black epoxy coated
cover: die cast aluminium black epoxy coated
outer indicator: polycarbonate
inner indicator: polycarbonate
shaft: stainless steel
bushings: Bronze
O-rings: Buna-N®
cams: Delrin®
spring: stainless steel 302
screws: stainless steel A2

Options

VTB850: 2 off mechanical switches, 16A, 250V/AC – 0,5A, 125V/DC
VTB860: 2 off proximity switches P&F NBB2-V3-E2
VTB870: 2 off proximity switches Eex"ia" P&F NJ2-V3-N
VTB880: 2 off proximity switches Eex"ia" P&F SJ-3,5-N
VTB890: 2 off proximity switches Eex"ia" P&F NCB2-12-GM-35NO



according to ISO5211 (F05)



VTB855 Switchbox Eex "d"

Description

The VTB855 series limit switchboxes are suitable for mounting on actuators with VDE/VDI 3845 interface. Brackets for all different variations within the norm are available. The cover of the box is connected with the box through 4 stainless steel screws. All boxes are IP67. The box is made from aluminium with an epoxy coating. High-viz through a red/green indicator. ATEX certified acc. Eex"d" IIB T4/T5/T6.



Specifications

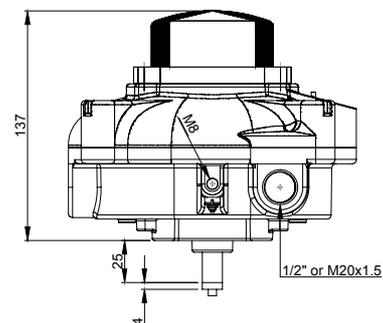
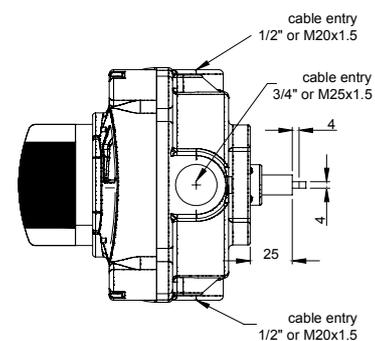
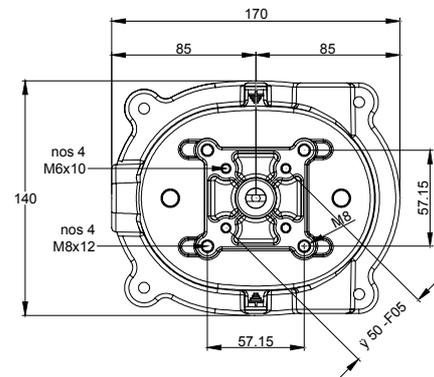
Enclosure : IP67
 Terminal strip : 9 contacts
 High-Viz : red/green
 Weight : 1.2 kg

Materials

Body : Aluminium epoxy coated
 Cover : Aluminium epoxy coated
 Indicator : Polyamide
 Stem : SS
 Bolts : SS

Options

VTB855 : 2 off mechanical switches
 5A@250V/AC - 3A@24V/DC
 VTB865 : 2 off Inductive switches
 P&F NBB2-V3-E2
 VTB875 : 2 off Inductive switches
 Eex"ia" P&F NJ2-V3-N
 VTB885 : 2 off Inductive switches
 Eex"ia" P&F SJ3,5—N



VTB950/955 series Solenoid valve 5/2 or 3/2-way

Construction and function

Spool valve. A speed control can be used on the exhaust ports. Plugs are supplied together with the valves as standard.



Coil	Specifications
Dimensions	MA22
Power consumption	DC 2,5 W AC 4.4 VA
Voltage tolerance	+/- 10%
Duty rating	100%

Type nr	VTB950	VTB955
Medium	Filtered. lubricated or filtered non-lubricated	
Connections	G 1/4"	
Nominal size	7 mm	8 mm
Nominal flow	1250 l/min	1500 l/min
Working pressure	1,5...10 bar	
Response time at 6 bar	13/16 ms	
Temperature range	-20°C...+70°C	
Materials	brass anodized. Internal: brass and plastic, pinion stainless, Seals: NB	
Standard voltages	12V/24V DC, 24V/110V/220V 50/60Hz	
Coil data	See above	
Insulation	IP 65 acc. DIN 40050	
Weight	0.37 kg	0.45 kg

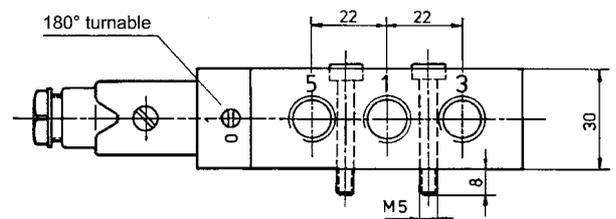
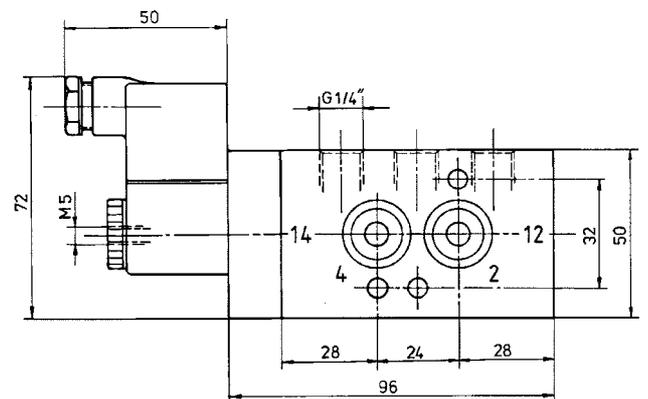
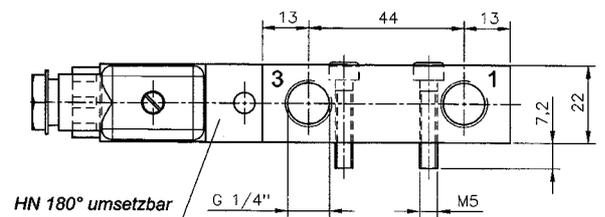
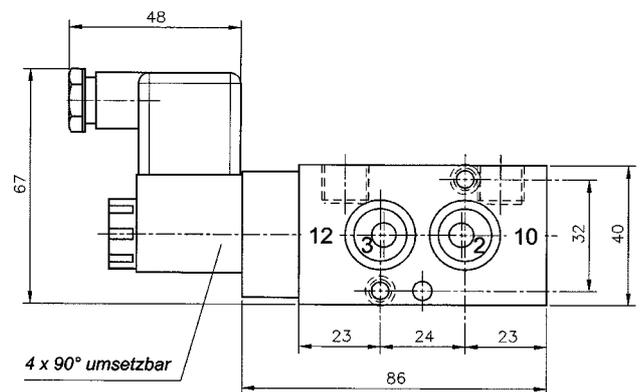
Article numbers

- VTB950 AI 24V/DC
- VTB950 AJ 24V/50-60Hz
- VTB950 AK 230V/50-60Hz
- VTB950 AM 24V/DC, Eex "m"
- VTB950 AQ 230V/50-60Hz, Eex "m"
- VTB950 BQ 115V/50Hz
- VTB950 BG 12V/60Hz

- VTB955 DI 24V/DC
- VTB955 DJ 24V/50-60Hz
- VTB955 DK 230V/50-60Hz
- VTB955 DM 24V/DC, Eex "m"
- VTB955 DQ 230V/50-60Hz, Eex "m"
- VTB955 EQ 115V/50Hz
- VTB955 EG 12V/60Hz

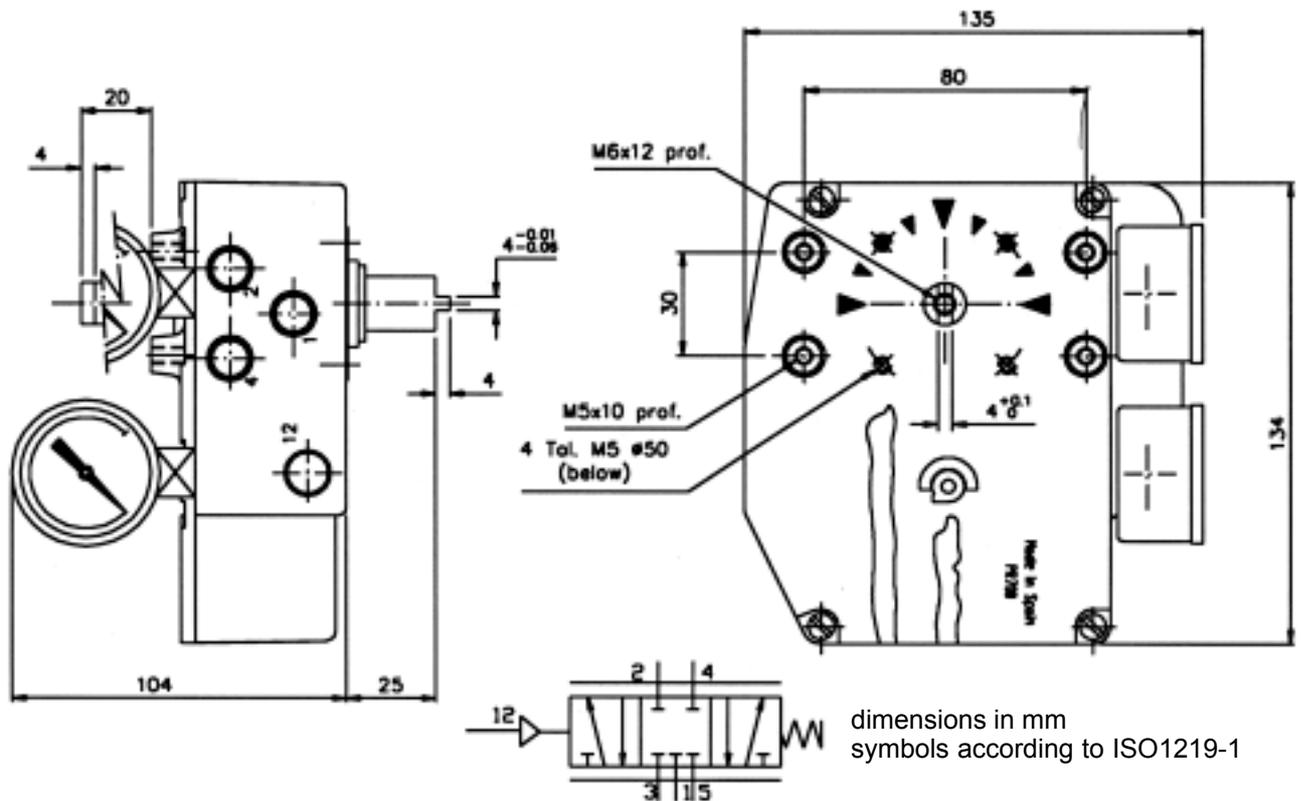
Options

- Eex "ia" coils
- Dual-coil execution
- Different voltages



PR720 series

Pneumatic positioner quarter-turn



Specifications

Repetivity: < 0,3% full range
 Hysteresis: < 0,5% full range
 Linearity: > 99% full range
 Sensitivity: < 0,005 barg (< 0,07 psig)
 Control signal: 0,2 barg – 1 barg (3 psig – 15 psig)
 Main air supply: 3 – 10 barg
 Nominal flow: 400 NI/min
 Consumed flow: 20 NI/min at 6 barg
 Working temp.: -10°C to +70°C
 Pneum. Conn.: ¼" BSP female
 Mounting: VDI/VDE 3854 bottom and top!
 Req. air quality: according ISO-8573.1 class 3.4.3.

Materials

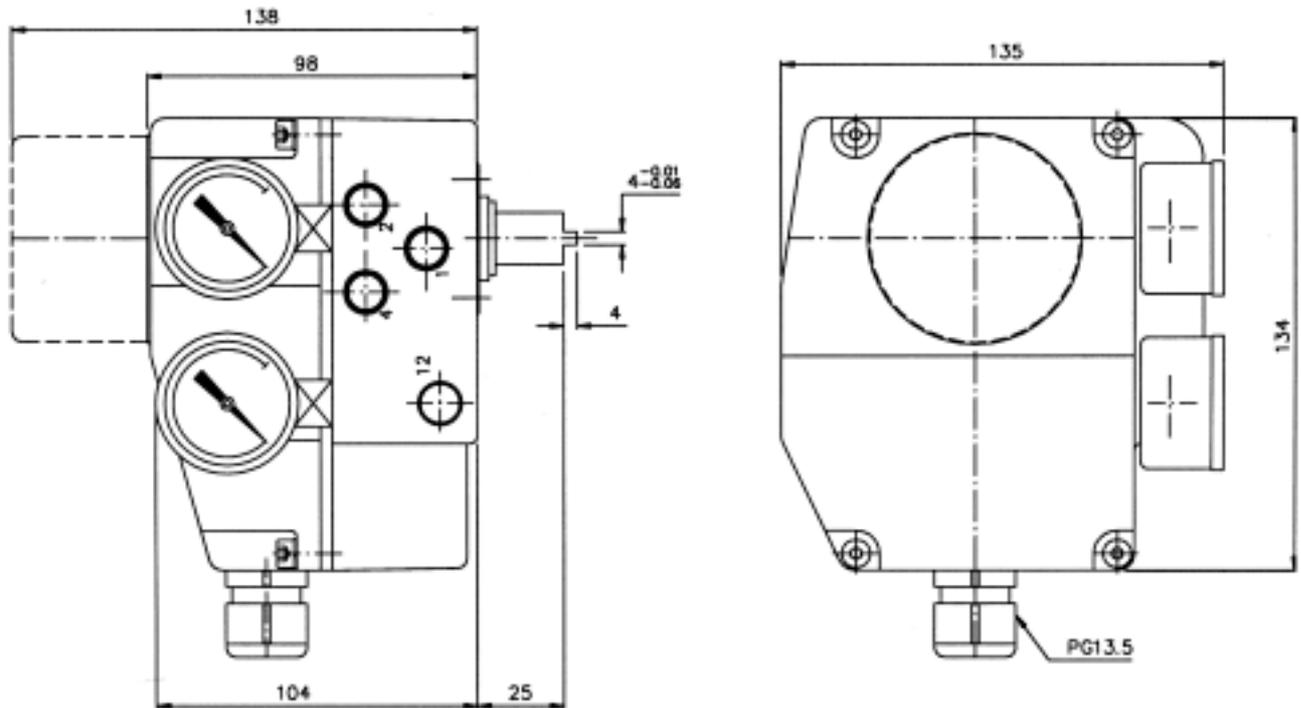
Body: Aluminium, epoxy coated
 Cover: Aluminium, epoxy coated
 Screws: Stainless steel
 Bushing: Bronze
 Gauges: Plastic, 2 pcs
 Internals: Stainless steel, treated aluminium, bakelite and brass
 Springs: Stainless steel
 Seals: Buna-N®

Options

- Position indicator
- Stainless steel gauges
- Switchbox

PR721 series

Electro-pneumatic positioner quarter-turn



dimensions in mm

Specifications

Repetivity: < 0,3% full range
 Hysteresis: < 0,5% full range
 Linearity: > 99% full range
 Sensitivity: change of the control signal
 < 0.5% of the full range
 Control signal: 4-20mA (option 0-10V)
 Main air supply: max. 10 barg
 Nominal flow: 400 NI/min
 Consumed flow: 20 NI/min at 6 barg
 Working temp.: -10°C to +50°C
 Circuit impenda.: 300 Ohm
 Protection class: IP65
 Pneum. Conn.: ¼" BSP female
 Mounting: VDI/VDE 3854 bottom and top!
 Req.air quality: according ISO-8573.1 class 3.4.3.

Materials

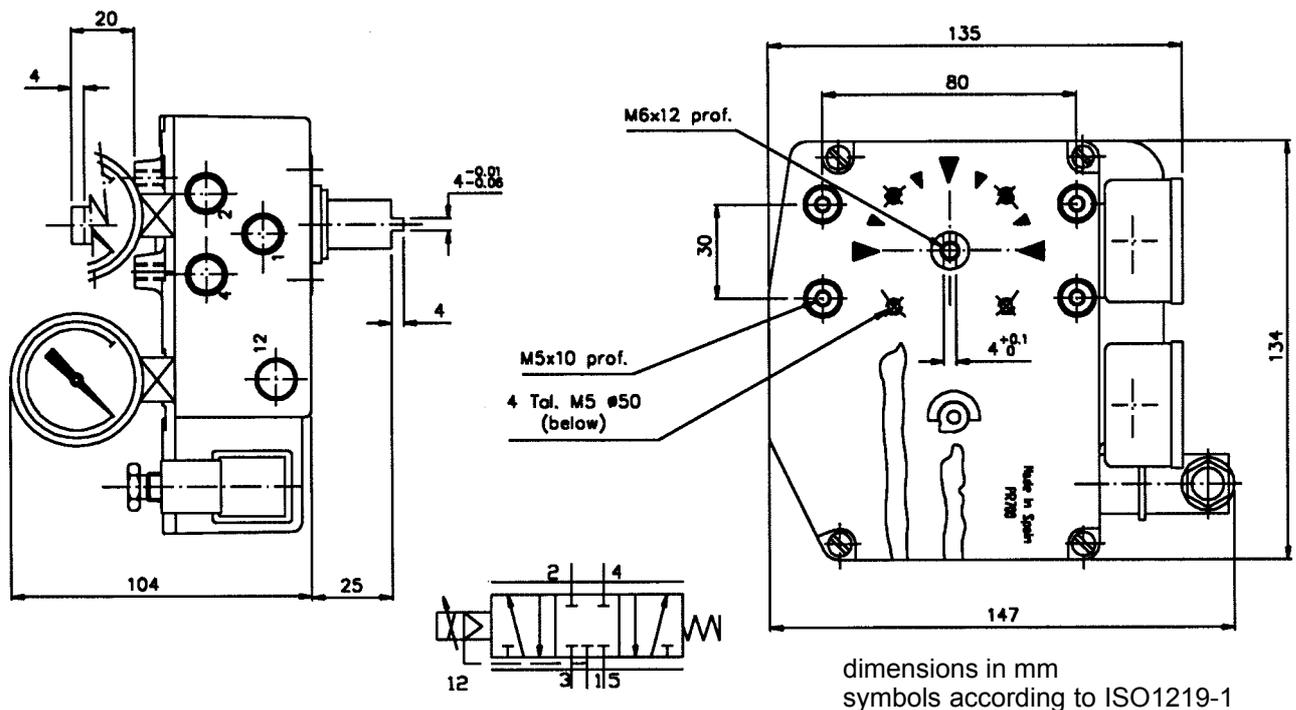
Body: Aluminium, epoxy coated
 Cover: Aluminium, epoxy coated
 Screws: Stainless steel
 Bushing: Bronze
 Gauges: Plastic, 2 pcs
 Internals: Stainless steel, treated aluminium, bakelite and brass
 Springs: Stainless steel
 Seals: Buna-N®

Options

- Electrical connections PG, NPT, M, etc.
- Optical indication
- Stainless steel gauges
- Switchbox

PR723 series

Electro-pneumatic positioner quarter-turn Eex"ia" IICT6/T5



Specifications

Repetivity: < 0,3% full range
 Hysteresis: < 0,5% full range
 Linearity: > 99% full range
 Sensitivity: change of the control signal
 < 0.5% of the full range
 Control signal: 4-20mA
 Main air supply: max. 10 barg
 Nominal flow: 400 NI/min
 Consumed flow: 20 NI/min at 6 barg
 Working temp.: -10°C to +50°C
 Circuit imped.: 200 Ohm
 Protection class: IP65
 Eex protection: Eex"ia" IICT6 (Ii<85mA for
 Ta<45°C; Ii<100mA for Ta<40°C;
 Vi<28V)
 Eex"ia" IICT5 (Ii<200mA for
 Ta<70°C; Vi<28V)
 Pneum. Conn.: 1/4" BSP female
 Mounting: VDI/VDE 3854 bottom and top!
 Req. air quality: according ISO-8573.1 class 3.4.3.

Materials

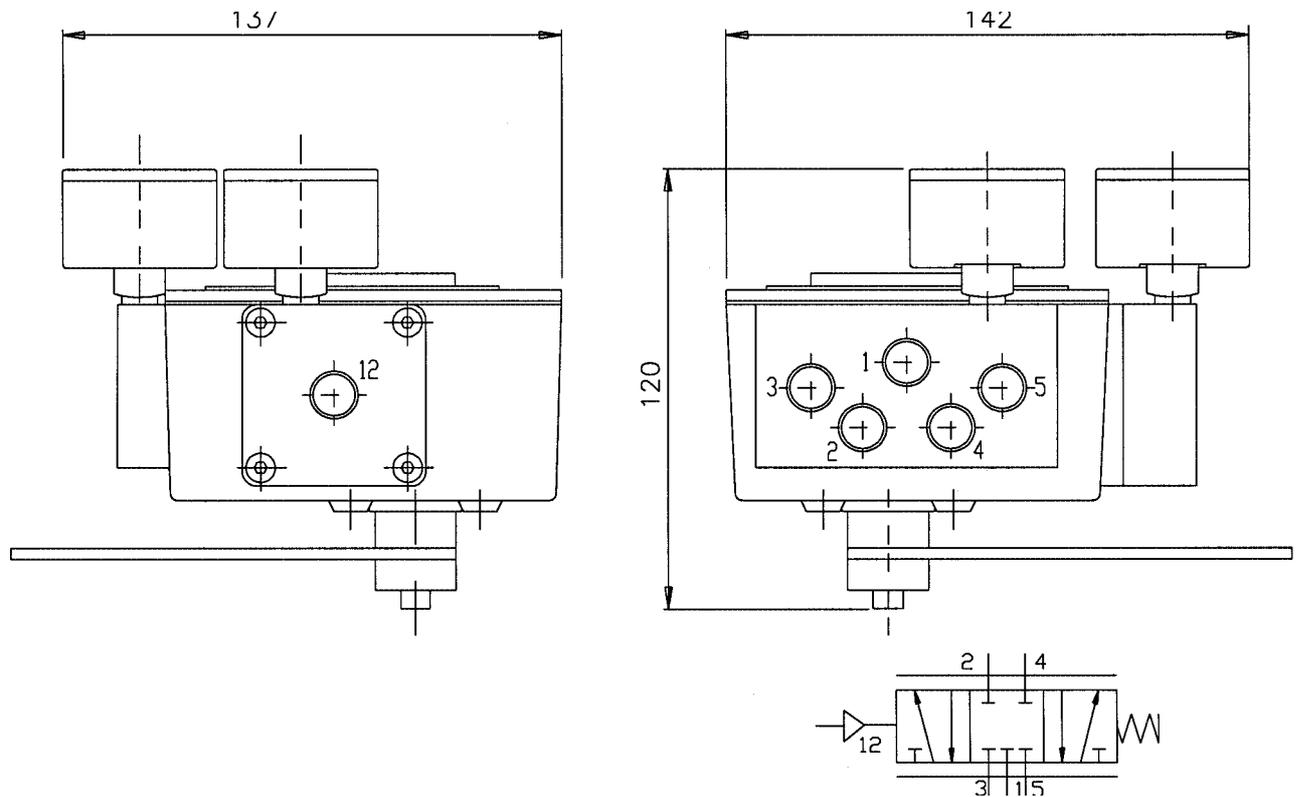
Body: Aluminium, epoxy coated
 Cover: Aluminium, epoxy coated
 Screws: Stainless steel
 Bushing: Bronze
 Gauges: Plastic, 2 pcs
 Internals: Stainless steel, treated aluminium,
 bakelite and brass
 Springs: Stainless steel
 Seals: Buna-N®

Options

- Electrical connections PG, NPT, M, etc.
- Optical indication
- Stainless steel gauges
- Switchbox

PR640 series

Pneumatic positioner for control valves



dimensions in mm
symbols according to ISO1219-1

Specifications

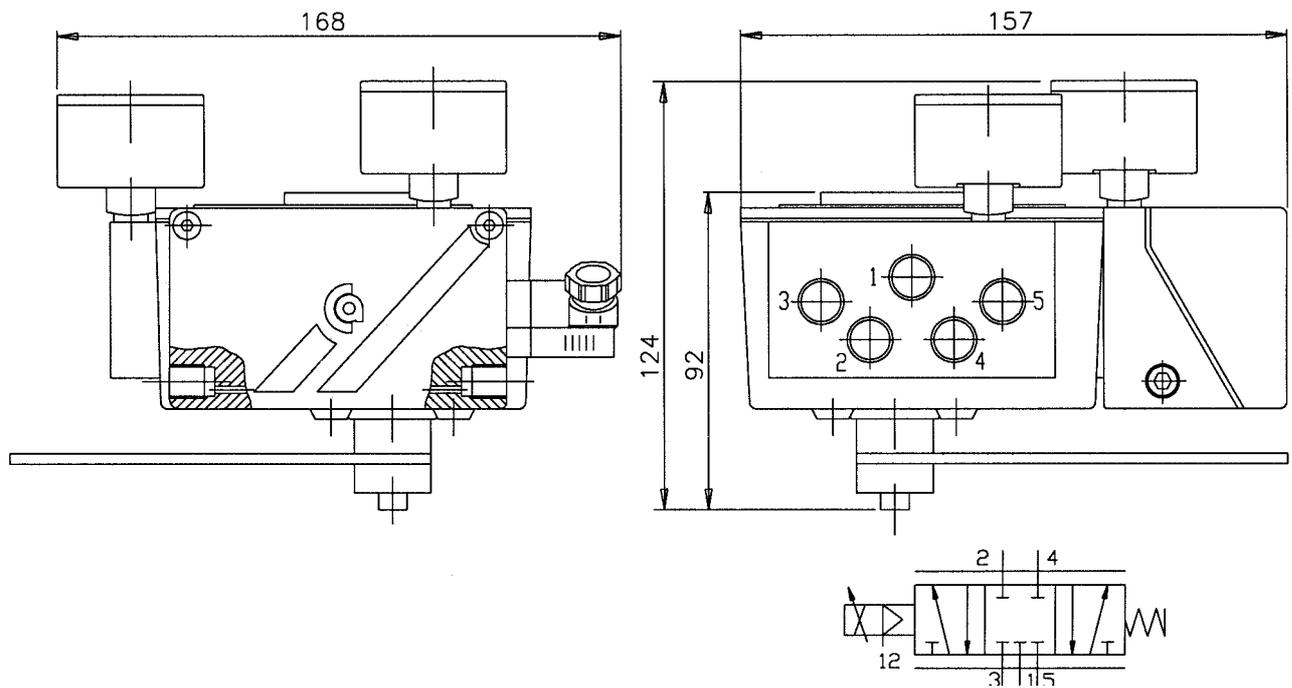
Repetivity: < 0,3% full range
 Hysteresis: < 0,5% full range
 Linearity: > 99% full range
 Sensitivity: < 0,005 barg (< 0,07 psig)
 Control signal: 0,2 barg – 1 barg (3 psig – 15 psig)
 Main air supply: max. 10 barg
 Nominal flow: 800 NI/min
 Consumed flow: 20 NI/min at 6 barg
 Working temp.: -10°C to +70°C
 Pneum. conn.: ¼" BSP female
 Mounting: VDI/VDE 3854 bottom and top!
 Req. air quality: according ISO-8573.1 class 3.4.3.

Materials

Body: Aluminium, epoxy coated
 Cover: Aluminium, epoxy coated
 Screws: Stainless steel
 Bushing: Bronze
 Gauges: Plastic, 2 pcs
 Internals: Stainless steel, treated aluminium, bakelite and brass
 Springs: Stainless steel
 Seals: Buna-N®

PR641 series

Electro-pneumatic positioner for control valves



dimensions in mm
symbols according to ISO1219-1

Specifications

Repetivity: < 0,3% full range
Hysteresis: < 0,5% full range
Linearity: > 99% full range
Sensitivity: change of the control signal
< 0.5% of the full range

Control signal: 4-20mA
Main air supply: max. 10 barg
Nominal flow: 800 NI/min
Consumed flow: 20 NI/min at 6 barg
Working temp.: -10°C to +50°C
Circuit imped.: 300 Ohm
Protection class: IP65
Pneum. Conn.: 1/4" BSP female
Supply converter module 1/8" BSP
(orifice 12)

Req. air quality: Supply converter module
according ISO-8573.1 class 1.-2.
Supply to the positioner according
ISO-8573.1 class 3.4.3.

Materials

Body: Aluminium, epoxy coated
Cover: Aluminium, epoxy coated
Screws: Stainless steel
Bushing: Bronze
Gauges: Plastic, 2 pcs
Internals: Stainless steel, treated aluminium,
bakelite and brass

Springs: Stainless steel
Seals: Buna-N®