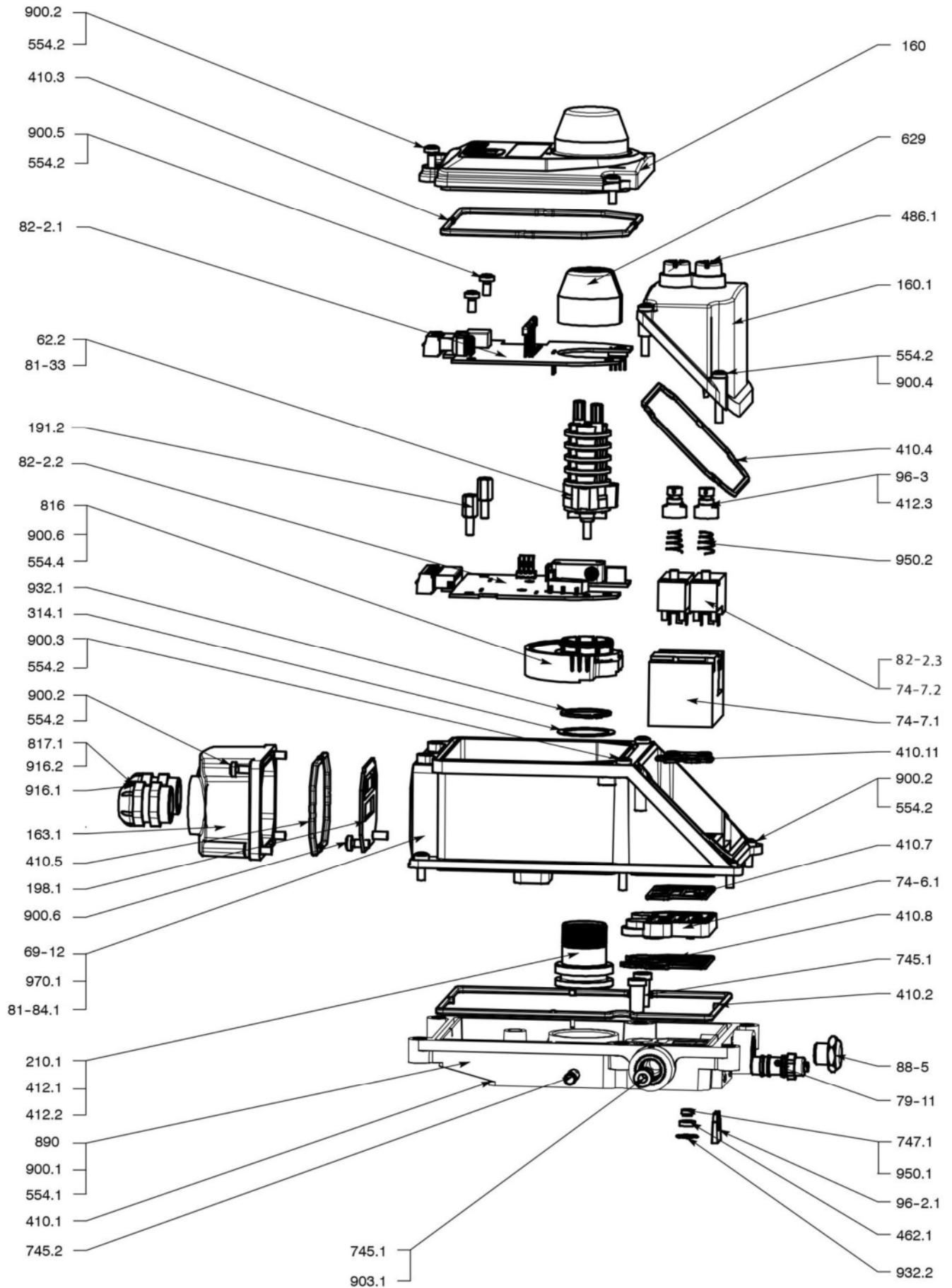


AMTRONIC AS- i R1300

Remote indication and control box
for pneumatic actuators



AMTRONIC R1300 AS- i can be fitted directly on all the range ACTAIR/DYNACTAIR pneumatic actuators, and for any type of VDI / VDE pneumatic actuator by external pipe.



Item	Designation	Materials
160	Cover	Polycarbonate SM60/0
160.1	Distributor cover	Polycarbonate SM60/0
163.1	Bonnet	Polycarbonate SM60/0
191.2	Bonnet	Nickel plate brass
198.1	Connection plate	
210.1	Shaft	Polycarbonate SM60/0
314.1	Friction washer	Stainless steel 304L
410.1	Profile joint	NBR 70
410.2	Profile joint	NBR 70
410.3	Profile joint	NBR 70
410.4	Profile joint	NBR 70
410.5	Profile joint	NBR 70
410.7	Profile joint	NBR 70
410.8	Profile joint	NBR 70
410.11	Profile joint	NBR 70
412.1	Profile joint	NBR 70
412.2	O-ring	NBR 70
412.3	O-ring	NBR 70
462.1	Conical washer	
486.1	Ball	Steel
554.1	Washer	Stainless steel
554.2	Washer	Stainless steel
554.4	Safety device	Steel
62.2	Sub- unit adjustable cam	
629	Sub- unit pointer	
69- 12	Case	Polycarbonate SM60/0
74- 6.1	Distribution plate	
74- 7.1	Pneumatic valve	
74- 7.2	Pilot	
745.1	Filter	
745.2	Filter	Bronze
747.1	Profile joint check valve	
79- 11	Flow control 1/8"	
81- 33	Detection plate	Steel
81- 84.1	Wiring diagram	
816	Sub- unit angle sensor	
817.1	Packing gland	
82- 2.1	Printed circuit board	
82- 2.2	Printed circuit board	
82- 2.3	Printed circuit board electro valve	
88- 5	Silencer	Bronze
96- 2.1	Padlockable plate	Polycarbonate SM60/0
96- 3	Manual override	Polycarbonate SM60/0
890	Base	Polycarbonate SM60/0
900.1	Screw	A2- 70
900.2	Screw	A2- 70
900.3	Screw	A2- 70
900.4	Screw	A2- 70
900.5	Screw	A2- 70
900.6	Screw	A2- 80
903.1	Plug	
916.1	Screwed plug	
916.2	Protection plug	Rubber
932.1	Circlip	Steel
932.2	Self- locking retaining ring	Steel
950.1	Valve spring	
950.2	Lockable override spring	Stainless steel
970.1	Identity plate	Adhesive polyester

Warnings



CAUTION!

Installation and commissioning of the electropneumatic actuators must be carried out in accordance with instrumentation professional standards, and in particular:

Piping:

When commissioning a new or modified installation, the piping must be blown through before connecting the actuator in order to clear the circuit of any impurities, which cannot be avoided during construction (iron filings, scale, Teflon, welding flux, etc.).

Electric wiring: The power supply voltage and the value of the control signal must be checked before final connection.

AMTRONIC R001300 box:

The cover and housing of the unit must be properly closed to protect the contents from humidity and, generally, from the outer atmosphere ("aggressive" atmosphere, dust, etc.) and any incidents which could damage the internal parts.

Connection by cable gland:

When the electric connection is made through a cable gland, make sure that:

- the cable gland is suitable for the cable diameter
- the cable gland is correctly tightened on the cable
- if just one of the 2 cable glands is used, replace the unused cable gland with a watertight plug or seal the cable gland

The pneumatic connection must be made according to the product specifications.
(see IV-1Pneumatic connection)

Never exceed the values indicated in this manual!

This box is an electrical device which contains pressurized gas components. As such, it can present a danger for property, or even personnel. Exceeding the values shown can cause damage.

Never uncouple or disassemble the AMTRONIC unit or its accessories when pressurized or powered.

Always make sure that the actuator reservoirs are decompressed by actioning the push-buttons on the pilot emergency controls before disassembling the distributor, its solenoid valves or the unit itself. Also, always check that the power supply cables are disconnected from their source before dismantling.

During workshop or on-site verifications, the valve associated with the actuator and its AMTRONIC unit shall be operated from full opening to full closing position.

This operation may be a highly significant injury hazard for personnel if the safety steps required are not taken to prevent access between the disc and the seat.

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I - 3 Technical characteristics

Environment

Standard protection class	IP 67 according to EN 60529
Electromagnetic Compatibility	Complies with European directive CEM 2004/108/EC in accordance with NF EN 61000- 6- 2 and NF EN 61000- 6- 4
Climatic class	- Storage temperature: - 30 °C to + 80 °C - Working temperature: - 20 °C to + 80 °C
Vibrations	- According to IEC 68- 2- 6 Test Fc

Box

Material	PC 20% Fiberglass
Position signaling	By visible pointer on the cover
Pneumatic connection	2 times 1/4" gas
Electric connection	- by 2 M20 metallic or plastic cable glands for cable \varnothing 6 to 12 mm,
Internal connectors	- Length to be stripped: 7 mm - Cross- section of rigid or flexible conductor: 0.14mm ² to 1.5 mm ² - Cross- section of flexible conductor with end connector without insulating entry cone: 0.25 mm ² to 1.5 mm ² - Cross- section of flexible conductor with end connector with insulating entry cone: 0.25 mm ² to 0.5 mm ²
Weight	1,70 Kg

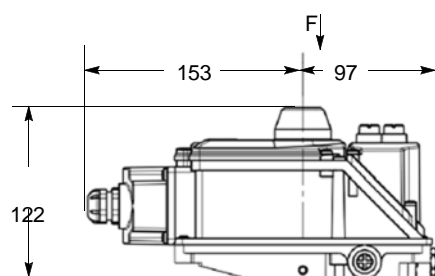
Pneumatic distribution

Pressure connection	Port 1/4" gas marked "P" equipped with an internal filter
Exhaust connection	Port 1/4" gas marked "E" equipped with a silencer or connectable to exhaust network
Operating pressure	3 to 8 bar (44 to 115 psi)
Filtration level	ISO 8573- 1 class 7 (< 40 μ m)
Dew point	ISO 8573- 1 class 5 (< 7 °C and in all cases < 5 °C at ambient temperature)
Lubrication	ISO 8573- 1 class 5 (< 25mg/m ³)
Maximum flow rate	400 NI/min
Consumption when idle	none

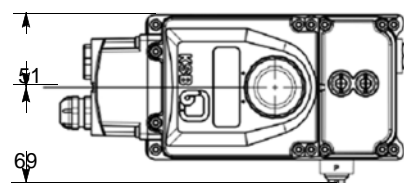
AS- i network

Electric consumption	150 mA (maximum)
Electric supply	By AS- i network (26.5 VDC to 31.5 VDC)
Profile	S- 3.0 or S- B.A.E
Maximum quantities of slaves	31 (profile S- 3.0) or 62 (profile S- B.A.E)

Dimensions (mm)

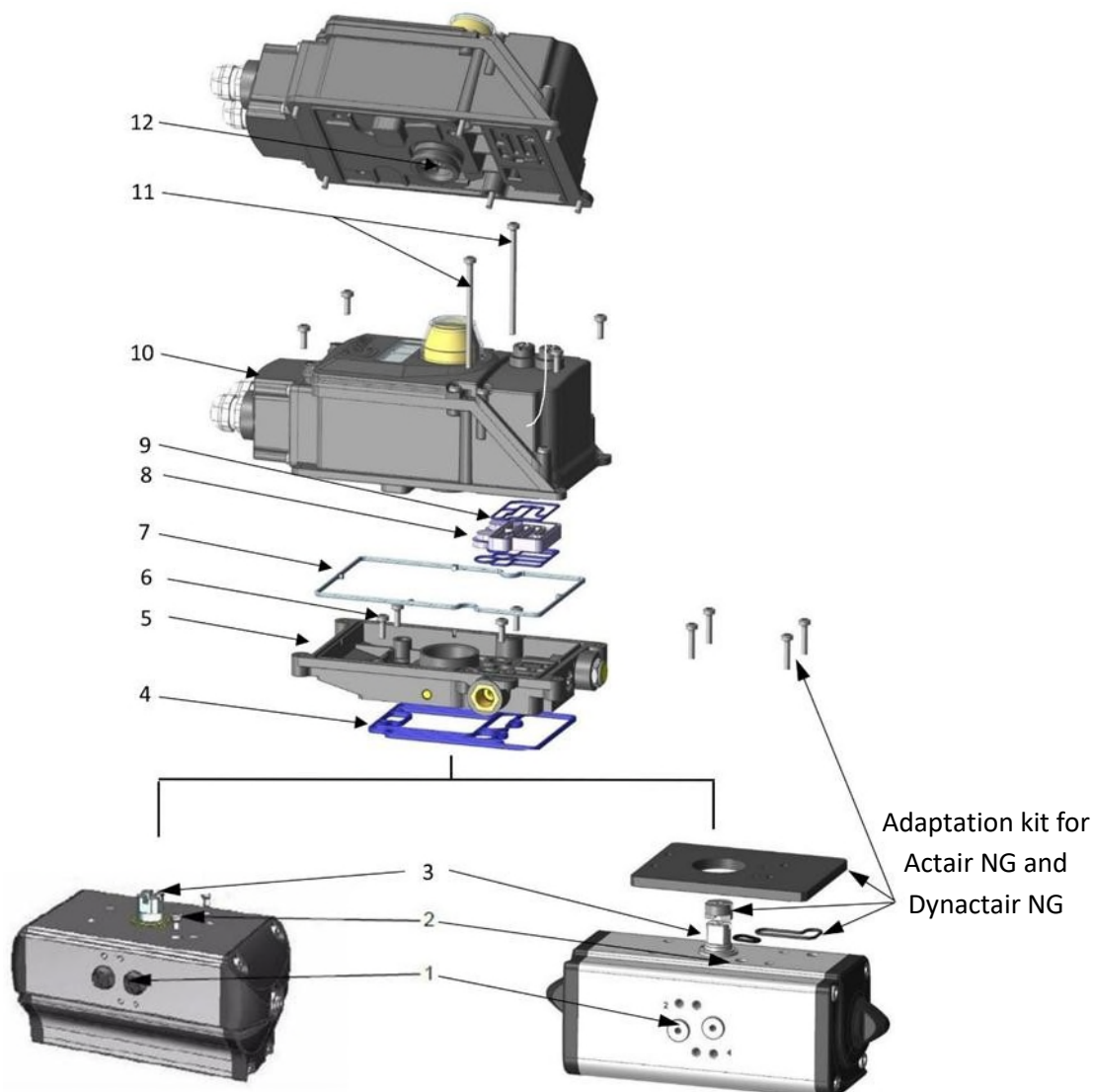


View from F



II - Assembly on pneumatic actuator

**II - 1 ACTAIR 3 to 200, ACTAIR NG 2 to 160,
DYNACTAIR 1.5 to 100 and DYNACTAIR 1 to 80**



- A- Check that the actuator has both plugs (item 1) on the external supply holes.
- B- Remove the two screws with seals (item 2) (TORX T20 screwdriver).
- C- Separate the unit (item 10) from the base (item 5) by unscrewing the 6 screws (item 11) (TORX T20 screwdriver).
- D- Remove distribution plate A or B (item 8) with both gaskets, item 9.
- E- Attach the base (item 5) to the actuator with the 4 screws (item 6) (TORX T20 screwdriver).
Tightening torque = 2.5 Nm



Check the correct position of the seal, item 4.

F- Reposition distribution plate A or B (item 8) with its two seals, item 9



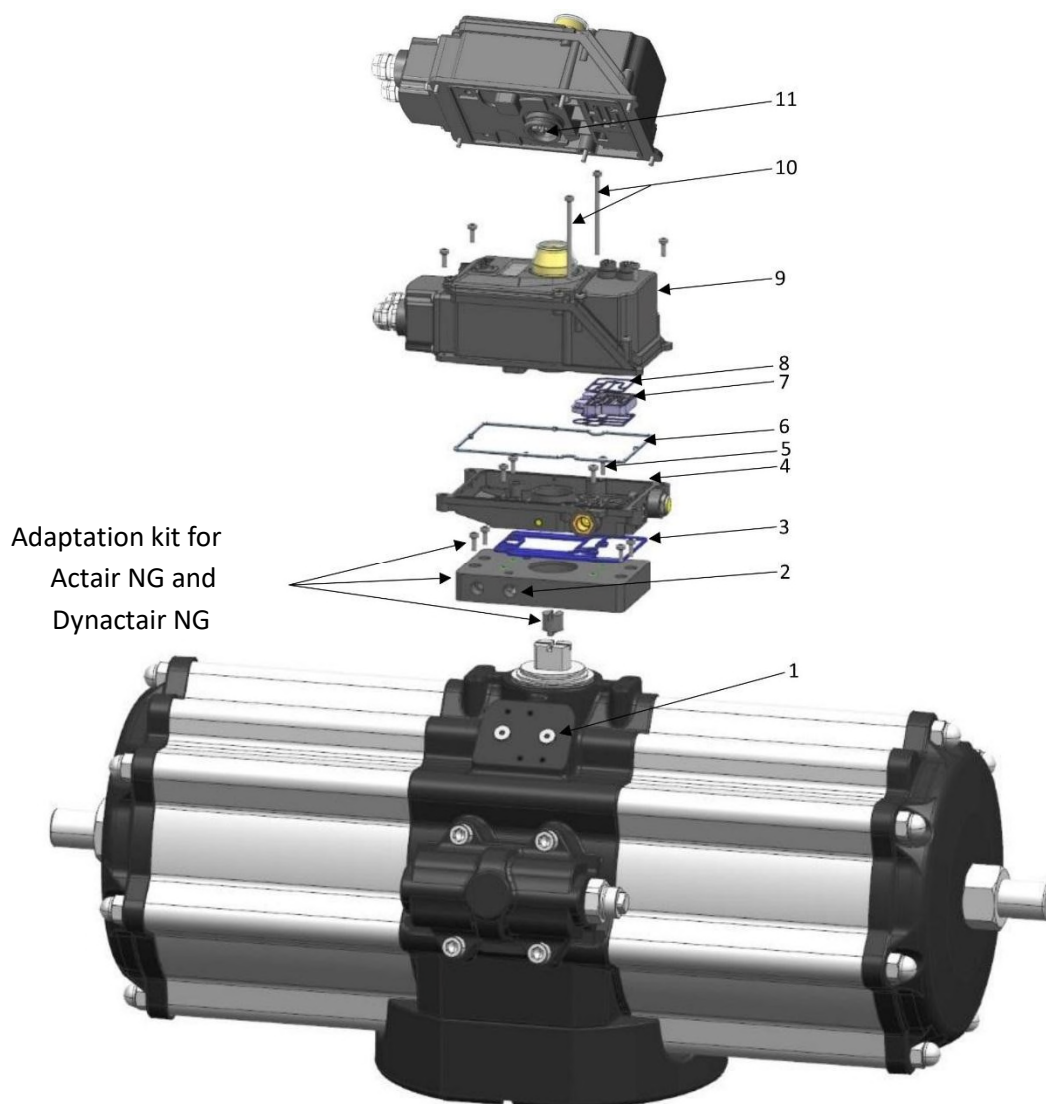
Check the correct position of the seal, item 9.

G- Position the unit (item 10) on the base (item 5) taking care to engage the column (item 12) with the actuator shaft (item 3) and tighten the 6 M4 screws (item 11) (TORX T20 screwdriver).



Check the correct position of the seal, item 7.

II – 2 ACTAIR NG 240 to 700 and DYNACTAIR NG 120 to 350



- A- Position the adaptations elements for Actair NG and Dynactair NG
- B- Fix the adapter kit plate to the actuator interface with 4 M5 screws
- C- Separate the unit (item 9) from the base (item 4) by unscrewing the 6 screws (item 10) (TORX T20 screwdriver).
- D- Remove distribution plate A or B (item 7) with its two seals (item 5).
- E- Fix the base (item 4) to the actuator using 4 M5 screws + seals + washers (item 5) (TORX T20 screwdriver).
Tightening torque = 2.5 Nm



Check the correct position of the seal (item 3).

F- Reposition distribution plate A or B (item 7) with its two seals (item 8).



Check the correct position of the seal (item 8).

G- Position the unit (item 9) on the base (item 4) taking care to engage the column (item 11) with the adapter and tighten the 6 M4 screws (item 10) (TORX T20 screwdriver).

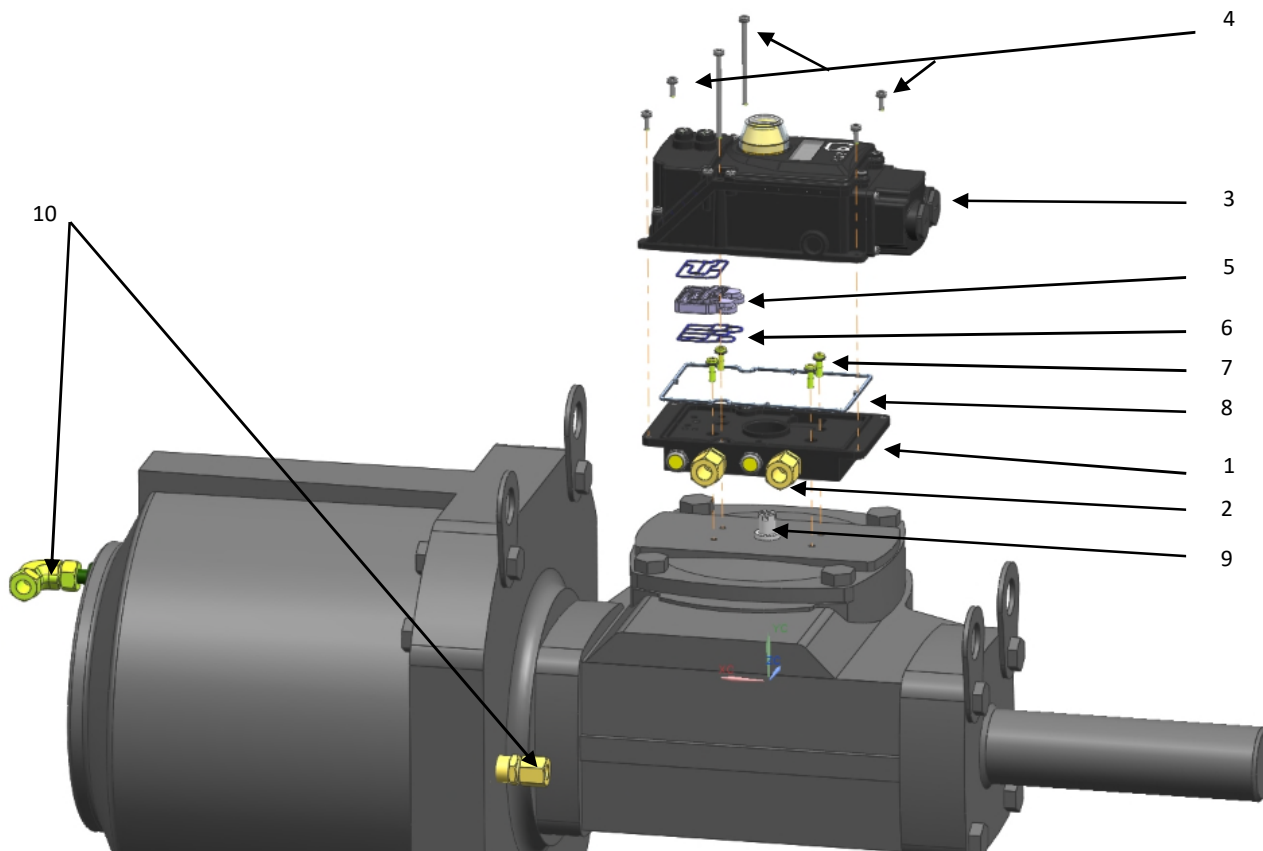


Check the correct position of the seal (item 6).

II - 3 ACTAIR 400 to 1600 and DYNACTAIR 200 to 800 and other ¼ turn actuators



These instructions only relate to pneumatic ¼ turn actuators whose flange complies with VDI/VDE 3845 with the following dimensions: A = 80 mm; B = 20 mm (actuator shaft height).
For the other VDI/VDE dimensions, please contact us.



A – Check that the base (item 1) supplied with the unit is intended for this type of actuator.
It must have two ¼" gas pneumatic openings (item 2 - connections not supplied) on the side, to supply the actuator chambers).

B – Separate the unit (item 3) from the base (item 1) by unscrewing the 6 M4 screws (item 4) (TORX T20 screwdriver).

C – Remove distribution plate A or B (item 5) with its two seals (item 6)

D – Fix the base (item 1) to the actuator using 4 M5 screws + seals + washers (item 7) (TORX T20 screwdriver)

E – Reposition distribution plate A or B (item 5) with its two seals (item 6)

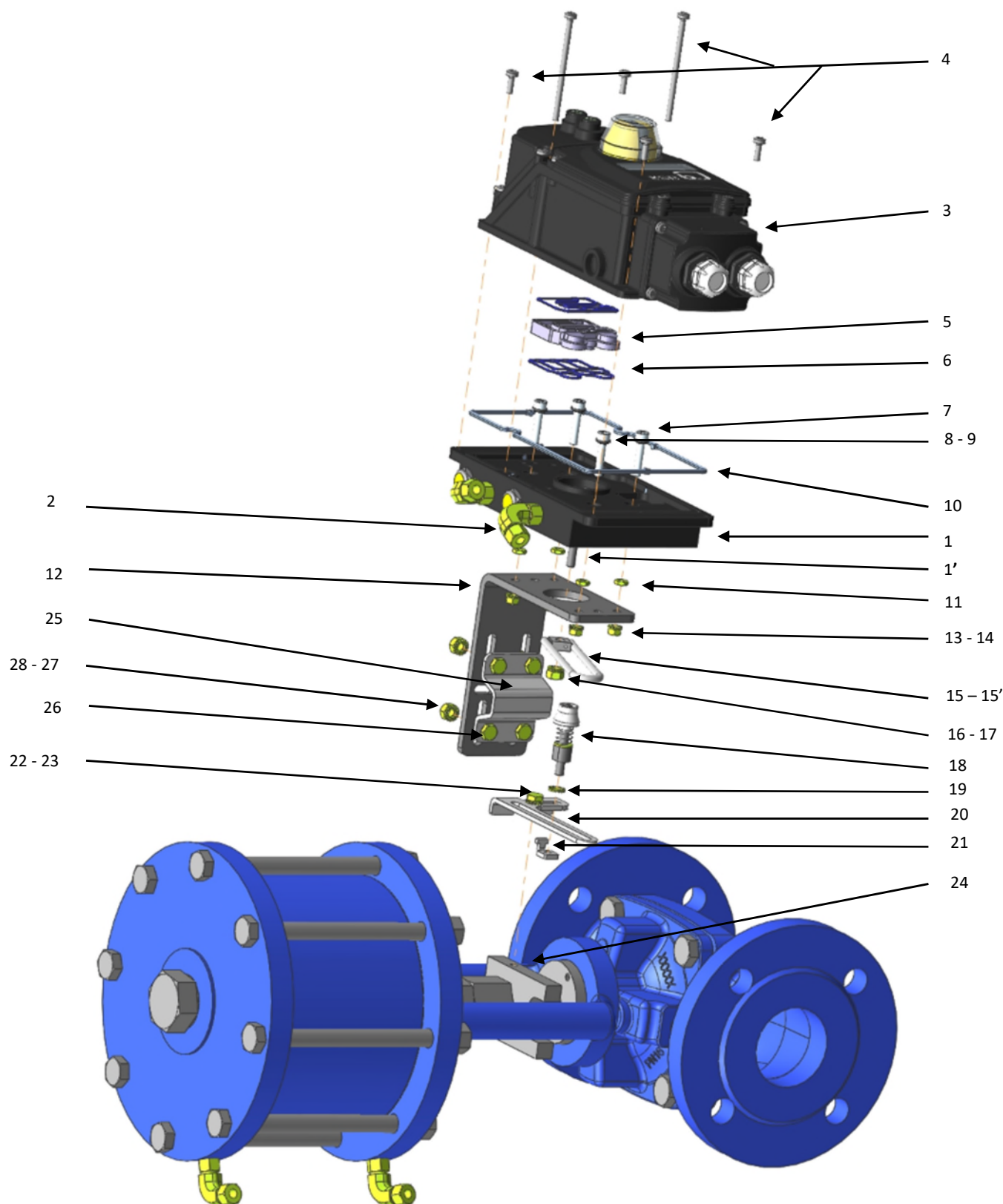


Check that the seal is correctly positioned (item 8)

F – Position the unit (item 3) on the base (item 1) taking care to engage the white shaft of the unit with the shaft (item 9) of the actuator and tighten the 6 M4 screws (item 4) (TORX T20 screwdriver)

G – The openings of the base (2 x ¼" G) (item 2) must be connected to the pneumatic actuator (item 10) as shown in the actuator instructions.

II - 3 Linear actuators





These instructions only relate to linear pneumatic actuators which comply with VDI/VDE 3847 with rod-shaped pillars:
For the other actuator types, please contact us.

A – Check that the base (item 1) supplied with the unit is intended for this type of actuator.
It must have two ¼" gas pneumatic openings (item 2 - connections not supplied) on the side, to supply the actuator chambers).

B – Separate the unit (item 3) from the base (item 1) by unscrewing the 6 M4 screws (item 4) (TORX T20 screwdriver).

C – Remove distribution plate A or B (item 5) with its two seals (item 6)

D – Fit a washer (item 9) and an O-ring (item 8) on each of the 4 M5 screws (item 7)

E – Tighten these 4 screws onto the base (item 1) with the 4 low-profile nuts (item 11)

F – Fix the base (item 1) to the plate (item 12) by tightening the 4 screws (item 7) and the washers (item 13) and nuts (item 14)



The base can be positioned every 180° according to requirements/ constraints

G – Mount the fluted rivet (item 15') on the driver (item 15). Mount the unit onto the shaft (item 1') and tighten with the nut (item 17) and washer (item 16)

H – Reposition distribution plate A or B (item 5) with its two seals (item 6)



Check that the seal is correctly positioned (item 10)

I – Position the unit (item 3) on the base (item 1) taking care to engage the white shaft of the unit with the shaft (item 1) of the base and tighten the 6 M4 screws (item 4) (TORX T20 screwdriver)

J – Mount the sub-assembly (item 18) fitted with the washer (item 19) on the plate (item 20) by tightening it onto the counterplate (item 21)

K – Fix the assembled plate (item 20) onto the valve slider (item 24) with the screws (item 22) and washers (item 23).

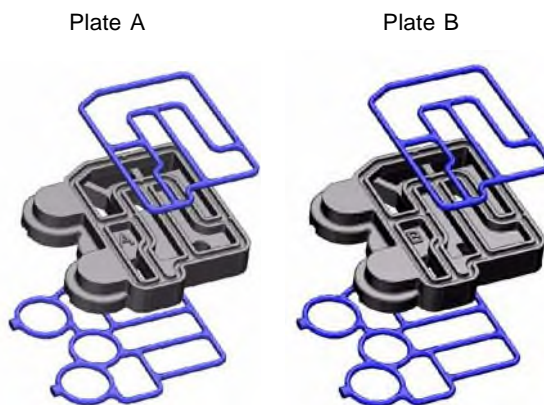
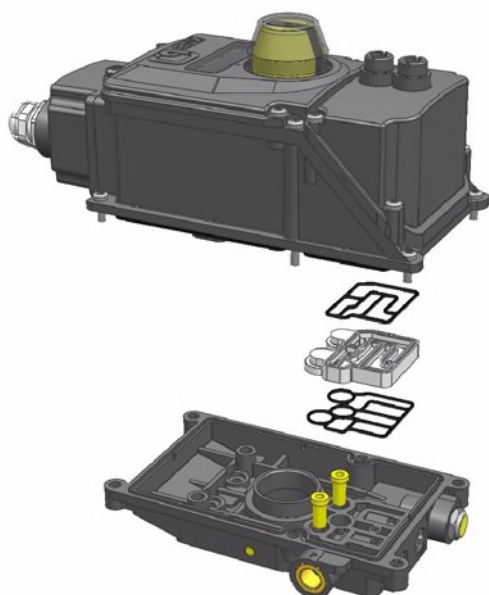
L – Fix the plate (item 12) to one of the actuator pillars using the plate (item 25) by tightening the 4 screws (item 26) and the washers (item 27) and nuts (item 28)



Adjust the position of the plate (item 12) and the sub-assembly (item 18) so that the sub-assembly (item 18) slides in the driver (item 15) (without exiting) over the entire valve stroke.

III - Safety position on loss of current

The safety position on loss of current of the AMTRONIC is configured in the factory according to the order. It can be modified by changing the distribution plate (Plate A or B) or by changing the type of the solenoid valves 4/3 center closed.



The 2 plate types

Position of the plate A or B

Depending on the plate used (A or B) and depending on the actuator size, we obtain different safety positions on loss of current.

- Distributor monostable

Actuator	Safety position on loss of current	
	Plate A	Plate B
ACTAIR 3 to 200 (End-stops on closing)	Closing	Opening
ACTAIR NG 2 to 160 (End-stops on closing)	Closing	Closing
ACTAIR 3 to 200 (End-stops on opening)	Opening	Closing
ACTAIR NG 2 to 160 (End-stops on opening)	Opening	Closing
DYNACTAIR 1.5 to 25 (Air fail close)	Closing	
DYNACTAIR 1.5 to 25 (Air fail open)	Opening	
DYNACTAIR 50 and 100 (Air fail close)		Closing
DYNACTAIR NG 1 to 80 (Air fail close)		Closing
DYNACTAIR 50 and 100 (Air fail open)		Opening
DYNACTAIR NG 1 to 80 (Air fail open)		Opening

Other actuators: plate A

- Distributor bistable

Always plate A.

In case of power failure, the box remains in the last commanded position (open or closed).

- Distributor 4/3 center closed

Always plate B.

The safety position in case of power failure is defined by the type of solenoid valve NO (Normally Open) or NC (normally closed).

Actuator	Safety position on loss of current		
	EV1 (NC) EV2 (NC)	EV1 (NO) EV2 (NC)	EV1 (NC) EV2 (NO)
ACTAIR 3 to 200 (End-stops on closing)	STOP	Closing	Opening
ACTAIR NG 2 to 160 (End-stops on closing)	STOP	Closing	Opening
ACTAIR 3 to 200 (End-stops on opening)	STOP	Opening	Closing
ACTAIR NG 2 to 160 (End-stops on opening)	STOP	Opening	Closing
DYNACTAIR 1.5 to 25 (Air fail close)	STOP	Closing	Opening
DYNACTAIR 1.5 to 25 (Air fail open)	STOP	Opening	Closing
DYNACTAIR 50 and 100 (Air fail close)	STOP	Opening	Closing
DYNACTAIR NG 1 to 80 (Air fail close)	STOP	Opening	Closing
DYNACTAIR 50 and 100 (Air fail open)	STOP	Closing	Opening
DYNACTAIR NG 1 to 80 (Air fail open)	STOP	Closing	Opening

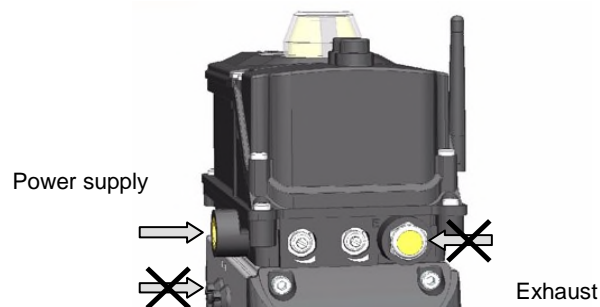
IV - Pneumatic supply

IV - 1 Pneumatic connection

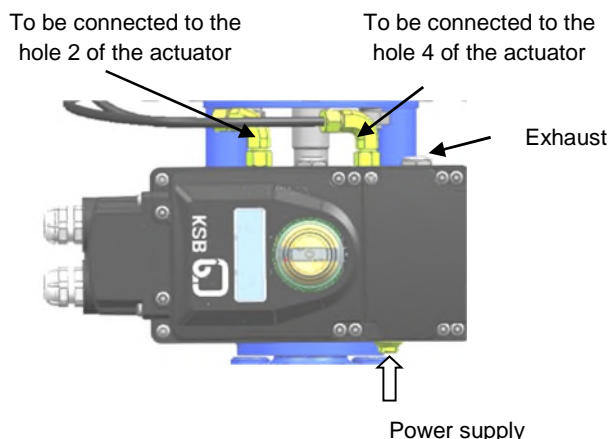
Before making any pneumatic connections, check that there are no impurities in the piping, especially when starting the installation. As a measure of safety, the box is equipped with a filter in the input port in order to prevent the clogging of the distributor with impurities.

This filter can be cleaned: remove and clean it with solvent or compressed air.

Direct pneumatic connection



Pneumatic connection by piping



- The connection is made on the AMTRONIC box
- Operating pressure: 3 to 8 bar (44 to 115 psi)
- Pressure connection: hole "P"
- Exhaust connection: port marked "E" equipped with a silencer or connectable to an exhaust network.

Caution: To avoid any premature wear of mechanical parts, particularly for the actuator, it is recommended to use a lubricated air (between 5 and 25 mg/m³).

Attention: If severe vibrations are expected or excessive tensile strain (max. 80 kg) needs to be prevented at the ¼" gas thread connections, the use of flexible tubing is strongly recommended for pneumatic connection.

IV - 2 Mechanical adjustment of the operating time

It is possible to adjust the valve operating time by actioning the screws at the base of the box.

Procedure :

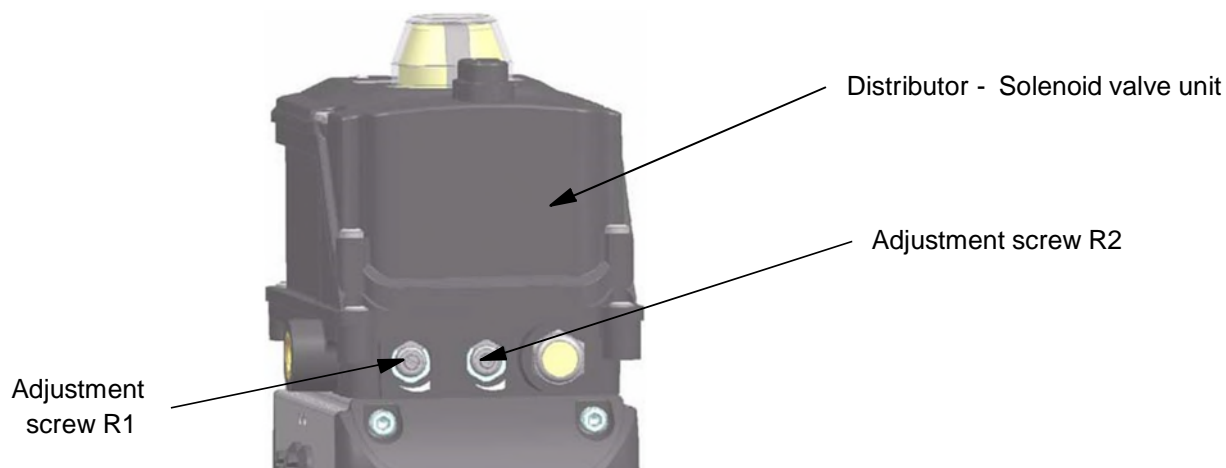
Adjust the adjustment screws depending on the type of actuator used (see figure below).

Double-acting actuators	
Type	Min. operating time
ACTAIR 3	1 second
ACTAIR 6	1 second
ACTAIR 12	2 seconds
ACTAIR 25	4 seconds
ACTAIR 50	5 seconds
ACTAIR 100	6 seconds
ACTAIR 200	9 seconds
ACTAIR 400	25 seconds
ACTAIR 800	50 seconds
ACTAIR 1600	90 seconds

Double-acting actuators	
Type	Min. operating time
ACTAIR NG 2	1 second
ACTAIR NG 5	1 second
ACTAIR NG 10	1 second
ACTAIR NG 15	2 seconds
ACTAIR NG 20	2 seconds
ACTAIR NG 30	2 seconds
ACTAIR NG 40	3 seconds
ACTAIR NG 60	3 seconds
ACTAIR NG 80	5 seconds
ACTAIR NG 120	7 seconds
ACTAIR NG 160	9 seconds
ACTAIR NG 240	17 seconds
ACTAIR NG 340	18 seconds
ACTAIR NG 500	30 seconds
ACTAIR NG 700	40 seconds

Single-acting actuators	
Type	Min. operating time
DYNACTAIR 1.5	2 seconds
DYNACTAIR 3	2 seconds
DYNACTAIR 6	2 seconds
DYNACTAIR 12	4 seconds
DYNACTAIR 25	6 seconds
DYNACTAIR 50	10 seconds
DYNACTAIR 100	15 seconds
DYNACTAIR 200	45 seconds
DYNACTAIR 400	90 seconds
DYNACTAIR 800	180 seconds

Single-acting actuators	
Type	Min. operating time
DYNACTAIR NG 1	1 second
DYNACTAIR NG 2	1 second
DYNACTAIR NG 4	1 second
DYNACTAIR NG 6	3 seconds
DYNACTAIR NG 8	3 seconds
DYNACTAIR NG 12	4 seconds
DYNACTAIR NG 16	6 seconds
DYNACTAIR NG 25	8 seconds
DYNACTAIR NG 35	11 seconds
DYNACTAIR NG 50	16 seconds
DYNACTAIR NG 80	23 seconds
DYNACTAIR NG 120	14 seconds
DYNACTAIR NG 160	16 seconds
DYNACTAIR NG 240	27 seconds
DYNACTAIR NG 350	37 seconds

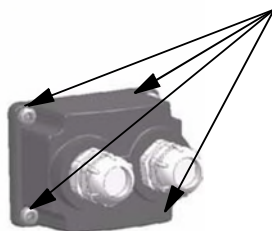


ACTAIR 3 to 200 and ACTAIR NG 2 to 160		R1	R2
Stop on closing (standard version)		Closing time	Opening time
Stop on opening (upon request)		Opening time	Closing time
DYNACTAIR 1.5 to 100 and DYNACTAIR NG 1 to 80	Safety position on loss of pneumatic	R1	R2
DYNACTAIR 1.5 to 25	Closed	Closing time	Opening time
DYNACTAIR 50 and 100	Open		
DYNACTAIR NG 1 to 80	Open		
DYNACTAIR 1.5 to 25	Open	Opening time	Closing time
DYNACTAIR 50 and 100	Closed		
DYNACTAIR NG 1 to 80	Closed		

V - Electric connections

V - 1 General

L'AMTRONIC is shipped with 2 IP67 plugs.



To access the electrical connection terminals, unscrew the 4 TORX screws (T20) from the connection housing.
Tightening torque: 2Nm

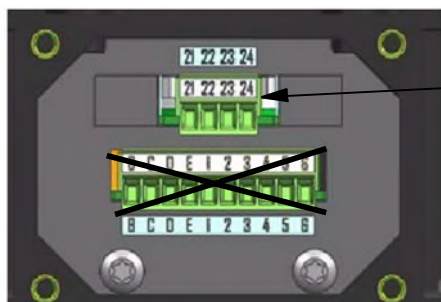
Connection on unpluggable connector:

- Length to be stripped: 7 mm
- Cross- section of rigid or flexible conductor: 0.14mm² to 1.5 mm²
- Cross- section of flexible conductor with end connector without insulating entry cone: 0.25 mm² to 1.5 mm²
- Cross- section of flexible conductor with end connector with insulating entry cone: 0.25 mm² to 0.5 mm²

Cable gland (option):

- 2 M 20 plastic cable glands (polyamide) for cable ø 6 to 12,
- 2 M 20 metallic cable glands (nickel- plated brass) for cable ø 7 to 12.

V - 2 Connection to the AS- i network



VI - AS-i communication

Installation on the network varies depending on the type of board (specify when ordering):

- Profile S- 3.0:
 - up to 31 slaves on the AS- i network.
 - 100% compatible with AMTRONIC AS- i first generation.
- Profile S- B.A.E :
 - up to 62 slaves on the AS- i network (extended addressing),
 - 100% compatible with AMTRONIC AS- i v2.11 second generation

VI - 1 AMTRONIC profile S- 3.0

VI - 1 - 1 Profile of the AS - i slave

The profile of the AS- i slave is 3.0. It complies with AS- i version v2.00, which corresponds to IO = 3 and ID = 0.

The box is delivered with address 0. An address between 1 and 31 must be assigned prior to installation in the network.

This address is stored in non- volatile memory in the AS- i slave circuit. Addressing can be carried out by the master or a specific pocket terminal.

During installation on an AS-i v2.11 network, the following parameters must be entered:
ID 1 = F and ID 2 = F.

VI - 1 - 2 Inputs / Outputs

I / O	Type	Description	State	Meaning
I 0	Input (AMTRONIC)	state of the travel limit sensor corresponding to the valve closed position	0	valve not closed
			1	valve closed
I 1	Input (AMTRONIC)	state of the travel limit sensor corresponding to the valve open position	0	valve not open
			1	valve open
O 2	Output (AMTRONIC)	control of solenoid valve EV 2	0	Non-controlled solenoid valve EV 2
			1	Controlled solenoid valve EV 2
O 3	Output (AMTRONIC)	control of solenoid valve EV 1	0	Non-controlled solenoid valve EV 1
			1	Controlled solenoid valve EV 1

For the actions of solenoid valves EV1 and EV2, refer to chapter VII - Pneumatic distribution.

VI - 2 AMTRONIC profile S- B.A.E

VI - 2 - 1 Profile of the AS - i slave

The AMTRONIC AS- i slave complies with specification V2.11 and can be configured in an extended addressing mode.

The profile is S- B.A.E (2 inputs and 2 outputs): IO = B, ID = A, ID1 = 7, ID2 = E.

The AMTRONIC slave is delivered with address 0.

The address can be programmed as follows:

- 1 to 31 with an AS- i v2.00 master
- 1A to 31B with an AS- i v2.11 master

VI - 2 - 2 Inputs / Outputs

I/O	Type	Description	State	Meaning
I 2	Input (AMTRONIC)	state of the travel limit sensor corresponding to the valve closed position	0	valve not closed
			1	valve closed
I 3	Input (AMTRONIC)	state of the travel limit sensor corresponding to the valve open position	0	valve not open
			1	valve open
O 1	Output (AMTRONIC)	control of solenoid valve EV 2	0	Non-controlled solenoid valve EV 2
			1	Controlled solenoid valve EV 2
O 0	Output (AMTRONIC)	control of solenoid valve EV 1	0	Non-controlled solenoid valve EV 1
			1	Controlled solenoid valve EV 1

For the actions of solenoid valves EV1 and EV2, refer to chapter VII - Pneumatic distribution.

VI - 3 Indication of the box operating status

LEDs fitted on the top of the box indicate the AMTRONIC operation state.



Power LED:

- Off: box not powered up
- Lit: box powered up

Fault LED:

- Off: communication with an AS- i master
- Lit: no AS- i communication

EV2 LED: state of EV2 control

EV1 LED: state of EV1 control

CLED: state of closure travel limit

OLED: state of opening travel limit

VII - Pneumatic distribution

VII - 1 Monostable distributor

A single pilot connected to EV1.

Safety position on loss of electrical supply	EV1=0	EV1=1
Closed	Closed	Open
Open	Open	Closed

VII - 2 Bistable distributor

The solenoid valve action depends on the valve safety position when the device has no electrical supply and for the type of actuator in application.

Case N° 1:

- ACTAIR 3 to 200, end-stops on closing
- ACTAIR NG 2 to 160, end-stops on closing
- DYNACTAIR 1.5 to 25, closing by air failure, end-stops on closing
- DYNACTAIR 50 and 100, opening by air failure, end-stops on opening
- DYNACTAIR NG 1 to 80, opening by air failure, end-stops on opening

EV1=0 EV2=0	EV1=1 EV2=0	EV1=0 EV2=1
Last command	Closed	Open

Case N° 2:

- ACTAIR 3 to 200, end-stops on opening
- ACTAIR NG 2 to 160, end-stops on opening
- DYNACTAIR 1.5 to 25, opening by air failure, end-stops on opening
- DYNACTAIR 50 and 100, closing by air failure, end-stops on closing
- DYNACTAIR NG 1 to 80, closing by air failure, end-stops on closing

EV1=0 EV2=0	EV1=1 EV2=0	EV1=0 EV2=1
Last command	Open	Closed

VII - 3 4/3 distributor

The solenoid valve action depends on the valve safety position when the device has no electrical supply and for the type of actuator in application.

Case N° 1:

- ACTAIR 3 to 200, end-stops on closing
- ACTAIR NG 2 to 160, end-stops on closing
- DYNACTAIR 1.5 to 25, closing by air failure, end-stops on closing
- DYNACTAIR 50 and 100, opening by air failure, end-stops on opening
- DYNACTAIR NG 1 to 80, opening by air failure, end-stops on opening

Safety position on loss of electrical supply	EV1=0 EV2=0	EV1=1 EV2=0	EV1=0 EV2=1	EV1=1 EV2=1
STOP (stays in position)	STOP (stays in position)	Closed	Open	
Closed	Closed	STOP (stays in position)		Open
Open	Open		STOP (stays in position)	Closed

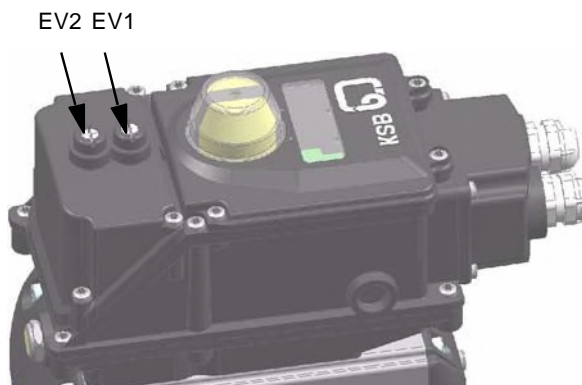
Case N° 2:

- ACTAIR 3 to 200, end-stops on opening
- ACTAIR NG 2 to 160, end-stops on opening
- DYNACTAIR 1.5 to 25, opening by air failure, end-stops on opening
- DYNACTAIR 50 and 100, closing by air failure, end-stops on closing
- DYNACTAIR NG 1 to 80, closing by air failure, end-stops on closing

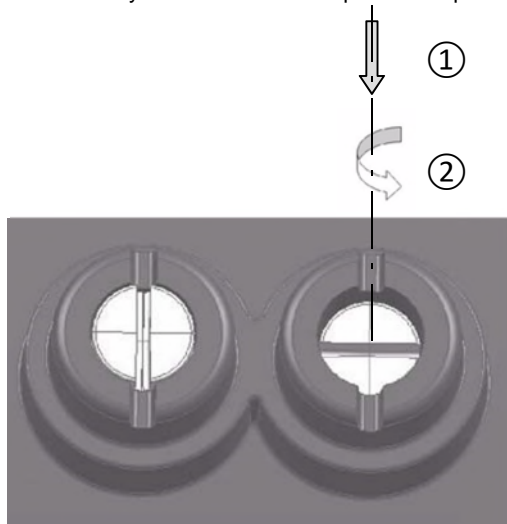
Safety position on loss of electrical supply	EV1=0 EV2=0	EV1=1 EV2=0	EV1=0 EV2=1	EV1=1 EV2=1
STOP (stays in position)	STOP (stays in position)	Open	Closed	
Closed	Closed		STOP (stays in position)	Open
Open	Open	STOP (stays en position)		Closed

VII - 4 Use of emergency manual controls

External emergency controls can be used to operate the solenoid valves manually.



To avoid any interference with the solenoid valve electrical controls, it is recommended that emergency controls only be used when the product is powered off.



EV2 = 0

EV1 = 1

The emergency controls are fitted with a locking mechanism.

Pour activer une commande de secours :

- ① Push the emergency control
- ② Rotate through 90° to lock into position.

Monostable distributor

A single manual emergency control on EV1.

Its action is inverse to the valve safety position on loss of electrical supply.

Safety position on loss of electrical supply	EV1=0	EV1=1
Closed	Closed	Open
Open	Open	Closed

Bistable distributor

Case N° 1:

- ACTAIR 3 to 200, end-stops on closing
- ACTAIR NG 2 to 160, end-stops on closing
- DYNACTAIR 1.5 to 25, closing by air failure, end-stops on closing
- DYNACTAIR 50 and 100, opening by air failure, end-stops on opening
- DYNACTAIR NG 1 to 80, opening by air failure, end-stops on opening

EV1=0 EV2=0	EV1=1 EV2=0	EV1=0 EV2=1
Last command	Closed	Open

Case N° 2:

- ACTAIR 3 to 200, end-stops on opening
- ACTAIR NG 2 to 160, end-stops on opening
- DYNACTAIR 1.5 to 25, opening by air failure, end-stops on opening
- DYNACTAIR 50 and 100, closing by air failure, end-stops on closing
- DYNACTAIR NG 1 to 80, closing by air failure, end-stops on closing

EV1=0 EV2=0	EV1=1 EV2=0	EV1=0 EV2=1
Last command	Open	Closed

4/3 distributor

Case N° 1:

- ACTAIR 3 to 200, end-stops on closing
- ACTAIR NG 2 to 160, end-stops on closing
- DYNACTAIR 1.5 to 25, closing by air failure, end-stops on closing
- DYNACTAIR 50 and 100, opening by air failure, end-stops on opening
- DYNACTAIR NG 1 to 80, opening by air failure, end-stops on opening

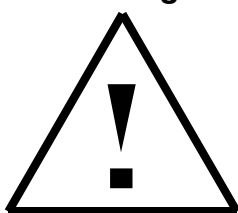
Safety position on loss of electrical supply	EV1=0 EV2=0	EV1=1 EV2=0	EV1=0 EV2=1
STOP (stays in position)	STOP (stays in position)	Closed	Open
Closed	Emergency manual controls not available		
Open			

Case N° 2:

- ACTAIR 3 to 200, end-stops on opening
- ACTAIR NG 2 to 160, end-stops on opening
- DYNACTAIR 1.5 to 25, opening by air failure, end-stops on opening
- DYNACTAIR 50 and 100, closing by air failure, end-stops on closing
- DYNACTAIR NG 1 to 80, closing by air failure, end-stops on closing

Safety position on loss of electrical supply	EV1=0 EV2=0	EV1=1 EV2=0	EV1=0 EV2=1
STOP (stays in position)	STOP (stays in position)	Open	Closed
Closed	Emergency manual controls not available		
Open			

Warnings



CAUTION

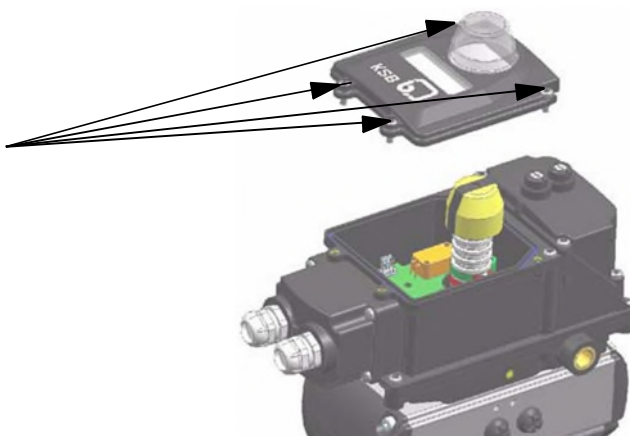
After using the emergency controls, remember to return the 2 controls to position 0.
If you do not, the solenoid valve electrical controls will be inactive.

VIII - Adjusting limit switches or contacts

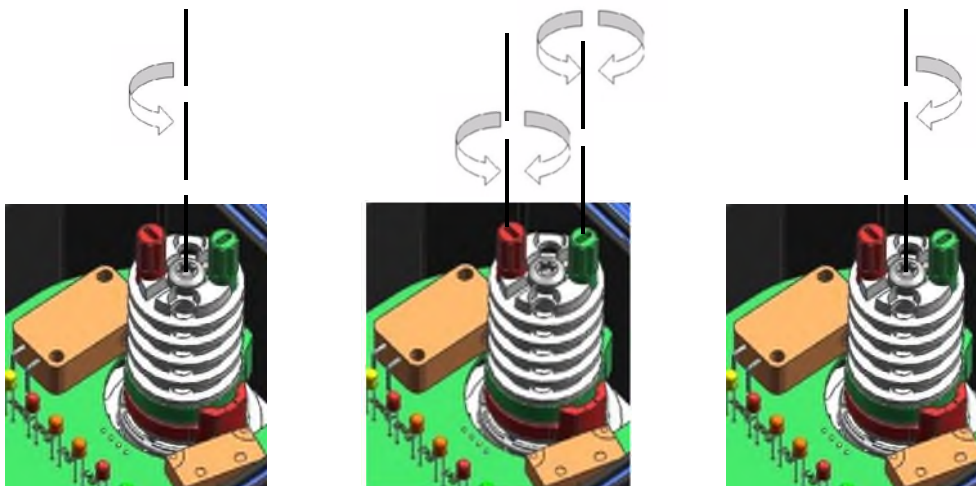
The cams are preset in the factory. However, it is possible to adjust their positions, in particular if the actuator mechanical stops are modified.

- 1 - Open the unit housing to access cam adjustment.

Unscrew the 4 TORX screws (T20) from the cover.
Tightening torque: 2 Nm



- 2 - Move the positioner to the end position (O or C).
- 3 - Remove the position pointer.
- 4 - Loosen the central screw of the cam (Torx screwdriver T20).
- 5 - Adjust triggering of the required contact by turning the coloured screw corresponding to the colour of the cam to be adjusted (Red: closing; green: opening).
- 6 - Proceed in the same manner with the opposite contact (from step 2).
- 7 - Each cam is set independently and has no impact on the setting of the other cams.
- 8 - When the settings are finished, tighten the central screw of the cam moderately to lock the settings.



IX - Operating faults - Causes and solutions

<i>Operating faults</i>	<i>Causes</i>	<i>Corrections</i>
When the valve is closed, limit does not change condition.	<ul style="list-style-type: none"> - The closure detection cam is positioned incorrectly. 	<ul style="list-style-type: none"> - Adjust the cam position.
When the valve is open, limit does not change condition.	<ul style="list-style-type: none"> - The opening detection cam is positioned incorrectly. 	<ul style="list-style-type: none"> - Adjust the cam position.
One or more solenoid valves are activated but the actuator does not move.	<ul style="list-style-type: none"> - Control of solenoid valves does not conform with the AMTRONIC configuration - Manual control(s) activated - No air supply - Air pressure too high ($P > 8$ bar). - Air pressure too low ($P < 3$ bar). - Valve blocked - Actuator blocked or destroyed - Distributor obstructed by impurities 	<ul style="list-style-type: none"> - Check that the solenoid valve control corresponds to the box configuration (see VII - Pneumatic distribution) - Check that the manual controls are in position 0 - Check the pneumatic supply. - Check and restore pressure P. - Check and restore pressure P. - Check the freedom of movement of the valve. - Change the actuator. - Change the inlet filter.
Operating time too long.	<ul style="list-style-type: none"> - Brake adjustment too long. - Air pressure too high ($P > 8$ bar). - Air pressure too low ($P < 3$ bar). 	<ul style="list-style-type: none"> - Unscrew the brakes (operating time adjustment) - Check and restore pressure P. - Check and restore pressure P.
The AS- i AMTRONIC does not communicate with the AS- i master	<ul style="list-style-type: none"> - the AS- i board is not powered up (Power LED off) - Bad profile declared in the master - Bad AS- i addressing. 	<ul style="list-style-type: none"> - Check the wiring and voltage of the AS- i power supply - Check that the profile of the slave declared in the master corresponds to that of the AMTRONIC - Check that the address AS- i of the slave declared in the master corresponds to that of the AMTRONIC

X - Codifications

Codification										Designation									
R001300 / 0 . . 6 0 0										Box									
										AMTRONIC									
										Detection									
R----- / 1 0 0 0 0 . . 6 0 0										Microswitche on printed circuit board									
R----- / 2 0 0 0 0 . . 6 0 0										Microswitche on printed circuit board									
R----- / B 1 1 0 0 . 6 0 0										Microswitche V3 with wires									
R----- / B 2 1 0 0 . 6 0 0										Microswitche V3 with cable									
R----- / B 3 1 0 0 . 6 0 0										Microswitche V3 with cable lug 4.8									
R----- / B 4 1 0 0 . 6 0 0										Microswitche V3 with cable lug 6.3									
R----- / B 6 1 0 0 . 6 0 0										Microswitche V3 terminal to weld									
R----- / H 2 1 0 0 . 6 0 0										Detector V3 PNP with cable 3 wires									
R----- / H 2 2 0 0 . 6 0 0										Detector V3 NPN with cable 3 wires									
R----- / H A 3 0 0 . 6 0 0										Detector V3 CC/CA with cable 2 wires									
R----- / H A 4 0 0 . 6 0 0										Detector V3 NAMUR with cable 2 wires									
R----- / H 3 1 0 0 . 6 0 0										Detector V3 PNP with 3 cable lugs 4.8									
R----- / H B 3 0 0 . 6 0 0										Detector V3 CC/CA with 2 cable lugs 4.8									
R----- / H B 4 0 0 . 6 0 0										Detector V3 NAMUR with 2 cable lugs 4.8									
R----- / H 4 1 0 0 . 6 0 0										Detector V3 PNP with 3 cable lugs 6.3									
R----- / J 2 1 . . . 0 0 0 . 6 0 0										Detector 40x26x12 PNP with cable 3 wires									
R----- / J A 3 . . . 0 0 0 . 6 0 0										Detector 40x26x12 CC/CA with cable 2 wires									
R----- / K 2 1 . . . 0 0 0 . 6 0 0										Detector dia. 6,5 PNP with cable 3 wires									
R----- / L 2 1 . . . 0 0 0 . 6 0 0										Detector M8 PNP with cable 3 wires									
R----- / M 2 1 . . . 0 0 0 . 6 0 0										Detector M12 PNP with cable 3 wires									
R----- / M A 3 . . . 0 0 0 . 6 0 0										Detector M12 CC/CA with cable 2 wires									
R----- / M A 4 . . . 0 0 0 . 6 0 0										Detector M12 NAMUR with cable 2 wires									
R----- / N A 4 . . . 0 0 0 . 6 0 0										Detector M14 NAMUR with cable 2 wires									
R----- / P 2 1 . . . 0 0 0 . 6 0 0										Detector M18 PNP with cable 3 wires									
R----- / P 2 2 . . . 0 0 0 . 6 0 0										Detector M18 NPN with cable 3 wires									
R----- / P A 3 . . . 0 0 0 . 6 0 0										Detector M18 CC/CA with cable 2 wires									
R----- / P A 4 . . . 0 0 0 . 6 0 0										Detector M18 NAMUR with cable 2 wires									
										Position detection									
R----- / 1 0 . . 6 0 0										1/O and 1/C									
R----- / 3 0 . . 6 0 0										1/O									
R----- / 4 0 . . 6 0 0										1/C									
R----- / 6 0 0 . 0 6 0 0										1/O and 1/C and 2/I									
										Feed- back position									
R----- / 0 0 . . 6 0 0										Without feed- back									
R----- / 1 0 0 0 6 0 0										With angle sensor 5kOhm									
R----- / 4 0 0 0 6 0 0										With feed- back 4- 20 mA - Passive (2 wires)									
R----- / 5 0 0 0 6 0 0										With feed- back 20- 4 mA - Passive (2 wires)									
										Electrical output									
R----- / 0 0 . . 6 0 0										2 plastic plugs M20 IP67									
R----- / 1 0 . . 6 0 0										2 plastic packing glands M20 IP67 (dia. 6 to 12)									
R----- / 2 0 . . 6 0 0										2 metallic packing gland M20 IP67 (dia. 6 to 12)									

Codification															Designation														
															Pneumatic valve														
R----- / P . . . 0 . . 6 0 0															4/2 monostable - On / Off														
R----- / Q . . . 0 . . 6 0 0															4/2 bistable - On / Off														
R----- / R . . . 0 . . 6 0 0															4/3 double- acting centre closed - position (POS)														
															Pneumatic valve voltage														
R----- / 2 . . . 0 . . 6 0 0															230 Vac 50/60Hz														
R----- / 3 . . . 0 . . 6 0 0															115 Vac 50/60Hz														
R----- / 4 . . . 0 . . 6 0 0															48 Vac 50/60Hz														
R----- / 5 . . . 0 . . 6 0 0															24 Vac 50/60Hz														
R----- / 7 . . . 0 . . 6 0 0															24 Vdc														
															Actuator														
R----- / 2 . 0 . . 6 0 0															Actair 3 to 200 with end- stops on closing (F)														
R----- / 3 . 0 . . 6 0 0															Actair 3 to 200 with end- stops on opening (O)														
R----- / 4 . 0 . . 6 0 0															Actair 400 to 1600														
R----- / 6 . 0 . . 6 0 0															Dynactair 1,5 to 25 Closing by air failure (FMA)														
R----- / 7 . 0 . . 6 0 0															Dynactair 1,5 to 25 Opening by air failure (OMA)														
R----- / 8 . 0 . . 6 0 0															Dynactair 50 and 100 Closing by air failure (FMA)														
R----- / 9 . 0 . . 6 0 0															Dynactair 50 and 100 Opening by air failure (OMA)														
R----- / J . 0 . . 6 0 0															Dynactair 200 to 800 Closing by air failure (FMA)														
R----- / K . 0 . . 6 0 0															Dynactair 200 to 800 Opening by air failure (OMA)														
R----- / L . 1 . . 6 0 0															Actair NG 2 to NG 700														
R----- / M . 2 . . 6 0 0															Dynactair NG 1 to NG 350 Closing by air failure (FMA)														
R----- / N . 3 . . 6 0 0															Dynactair NG 1 to NG 350 Opening by air failure (OMA)														
R----- / W . 0 . . 6 0 0															Pneumatic quarter- turn actuator, double- acting														
R----- / X . 0 . . 6 0 0															Pneumatic quarter- turn actuator, single- acting														
R----- / Y . 0 . . 6 0 0															Pneumatic linear actuator, double- acting														
R----- / Z . 0 . . 6 0 0															Pneumatic linear actuator, single- acting														
															Fallback position														
R----- / A 0 . . 6 0 0															Closing by current failure (FMC)														
R----- / B 0 . . 6 0 0															Opening by current failure (OMC)														
R----- / R . C 0 . . 6 0 0															Held in position by current failure (MPMC)														
R----- / Q . D 0 . . 6 0 0															Position undefined by current failure (PIMC)														
															Field bus														
R----- / 0 0 . 6 0 0															Without														
R----- / 1 0 . . 7 . 0 2 0 6 0 0															Profibus DP														
R----- / 1 0 . . 7 . 0 7 0 6 0 0															AS- i Profil S- BAE (62 slaves)														
R----- / 1 0 . . 7 . 0 8 0 6 0 0															AS- i S- 3.0 (31slaves)														
															Heating module														
R----- / 0 . 0 6 0 0															Without														
R----- / 1 0 0 . 1 6 0 0															With heating module 12 to 24 Vdc														
R----- / 1 0 0 . 2 6 0 0															With heating module 100 to 240 Vac														
															Visualisation														
R----- / 0 . . 6 0 0															By potyhole 3D														

Codification	Designation
R----- / 0 . . 6 0 0	Configuration Without
R----- / 0 . . 6 0 0	Diagnosis Without

Distribution possibilities

Codification	Designation
4/2 distributor monostable	
R----- / P . 2 A	4/2 mono (On/Off) - Actair 3 to 200 "F" - FMC
R----- / P . 2 B	4/2 mono (On/Off) - Actair 3 to 200 "F" - OMC
R----- / P . 3 A	4/2 mono (On/Off) - Actair 3 to 200 "O" - FMC
R----- / P . 3 B	4/2 mono (On/Off) - Actair 3 to 200 "O" - OMC
R----- / P . 4 A	4/2 mono (On/Off) - Actair 400 to 1600 - FMC
R----- / P . 4 B	4/2 mono (On/Off) - Actair 400 to 1600 - OMC
R----- / P . 6 A	4/2 mono (On/Off) - Dynactair 1,5 to 25 - FMA - FMC
R----- / P . 7 B	4/2 mono (On/Off) - Dynactair 1,5 to 25 - OMA - OMC
R----- / P . 8 A	4/2 mono (On/Off) - Dynactair 50 and 100 - FMA - FMC
R----- / P . 9 B	4/2 mono (On/Off) - Dynactair 50 and 100 - OMA - OMC
R----- / P . J A	4/2 mono (On/Off) - Dynactair 200 to 800 - FMA - FMC
R----- / P . K B	4/2 mono (On/Off) - Dynactair 200 to 800 - OMA - OMC
R----- / P . L A	4/2 mono (On/Off) - Actair NG 2 to NG 700 - FMC
R----- / P . L B	4/2 mono (On/Off) - Actair NG 2 to NG 700 - OMC
R----- / P . M A	4/2 mono (On/Off) - Dynactair NG 1 to NG 350 FMA - FMC
R----- / P . N B	4/2 mono (On/Off) - Dynactair NG 1 to NG 350 - OMA - OMC
R----- / P . W	4/2 mono (On/Off) - Quarter- turn actuator, double- acting
R----- / P . X	4/2 mono (On/Off) - Quarter- turn actuator, single- acting
R----- / P . Y	4/2 mono (On/Off) - Linear actuator, double- acting
R----- / P . Z	4/2 mono (On/Off) - Linear actuator, single- acting
Distributor 4/2 bistable	
R----- / Q . 2 D	4/2 bis (On/Off) - Actair 3 to 200 "F" - PIMC
R----- / Q . 3 D	4/2 bis (On/Off) - Actair 3 to 200 "O" - PIMC
R----- / Q . 4 D	4/2 bis (On/Off) - Actair 400 to 1600 - PIMC
R----- / Q . L D	4/2 bis (On/Off) - Actair NG 2 to NG 700 - PIMC
R----- / Q . W D	4/2 bis (On/Off) - Quarter- turn actuator, double- acting
R----- / Q . Y D	4/2 bis (On/Off) - Linear actuator, double- acting

Codification		Designation
4/3 distributor center closed		
R----- /	R 7 2 A	4/3 cf (POS) - Actair 3 to 200 "F" - FMC
R----- /	R 7 2 B	4/3 cf (POS) - Actair 3 to 200 "F" - OMC
R----- /	R . 2 C	4/3 cf (POS) - Actair 3 to 200 "F" - MPMC
R----- /	R 7 3 A	4/3 cf (POS) - Actair 3 to 200 "O" - FMC
R----- /	R 7 3 B	4/3 cf (POS) - Actair 3 to 200 "O" - OMC
R----- /	R . 3 C	4/3 cf (POS) - Actair 3 to 200 "O" - MPMC
R----- /	R 7 4 A	4/3 cf (POS) - Actair 400 to 1600 - FMC
R----- /	R 7 4 B	4/3 cf (POS) - Actair 400 to 1600 - OMC
R----- /	R . 4 C	4/3 cf (POS) - Actair 400 to 1600 - MPMC
R----- /	R 7 6 A	4/3 cf (POS) - Dynactair 1,5 to 25 - FMA - FMC
R----- /	R 7 7 B	4/3 cf (POS) - Dynactair 1,5 to 25 - OMA - OMC
R----- /	R 7 8 A	4/3 cf (POS) - Dynactair 50 and 100 - FMA - FMC
R----- /	R 7 9 B	4/3 cf (POS) - Dynactair 50 and 100 - OMA - OMC
R----- /	R 7 J A	4/3 cf (POS) - Dynactair 200 to 800 - FMA - FMC
R----- /	R 7 K B	4/3 cf (POS) - Dynactair 200 to 800 - OMA - OMC
R----- /	R 7 L A	4/3 cf (POS) - Actair NG 2 to NG 700 - FMC
R----- /	R 7 L B	4/3 cf (POS) - Actair NG 2 to NG 700 - OMC
R----- /	R 7 L C	4/3 cf (POS) - Actair NG 2 to NG 700 - MPMC
R----- /	R 7 M A	4/3 cf (POS) - Dynactair NG 1 to NG 350 FMA - FMC
R----- /	R 7 N B	4/3 cf (POS) - Dynactair NG 1 to NG 350 - OMA - OMC
R----- /	R 7 W	4/3 cf (POS) - Quarter- turn actuator, double- acting
R----- /	R . W C	4/3 cf (POS) - Quarter- turn actuator, double- acting - MPMC
R----- /	R 7 X	4/3 cf (POS) - Quarter- turn actuator, single- acting
R----- /	R 7 Y	4/3 cf (POS) - Linear actuator , double- acting
R----- /	R . Y C	4/3 cf (POS) - Linear actuator , double- acting - MPMC
R----- /	R 7 Z	4/3 cf (POS) - Linear actuator , single- acting

XI - Spare parts kit

Please contact us

Notes:

