CONFLOW s.p.a.
FLOW CONTROL SOLUTIONS

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV GL = ISO 9001 =

M/PPL/EPL/I/E	
07	2017

Manuale di installazione e manutenzione
Installation and maintenance manual

Posizionatori Pilota Lineari
Linear Pilot Positioners
Power Genex ®

PNEUMATICI SERIE PPL	ELETTROPNEUMATICI SERIE EPL
	
PNEUMATIC SERIES PPL	ELECTROPNEUMATIC SERIES EPL

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1 – DESCRIZIONE

PPL e EPL sono posizionatori a semplice e doppio effetto con segnale in entrata 3-15 psi e 4-20 mA per il controllo proporzionale di attuatori lineari. Gli apparecchi confrontano il segnale proveniente dall'unità regolante con la posizione della leva di feedback collegata allo stelo dell'otturatore. La comparazione tra queste due forze genera una pressione di uscita che agisce direttamente sulla membrana dell'attuatore.

1 – DESCRIPTION

PPL and EPL are simple or double acting positioner with input signal 3-15 psi and 4-20 mA for proportional control of pneumatic linear actuators. The positioner operate by comparing input signal, from the control unit, with the position of feedback lever joined to the valves stem. An amplified pressure, generates by the comparison of these two forces, operates directly on actuator diaphragm.

2- DATI TECNICI tipo PPL:

Protezione Std Tipo PPL	CE Waterproof IP 66
ATEX 2014/34/UE Tipo PPL-EX	CE II2GDc IICX Ex -20°C≤Ta≤+80°C
Segnale di Ingresso	3 - 15 psi … 0.2 – 1.0 bar
Split range	Disponibile
Alimentazione Aria	1.4 … 7 bar (20 … 100 psi)
Corsa Nominale	10 … 80 mm Unica molla
Connessioni Pneumatiche	1/4" NPT
Temperatura Ambiente	-20 ° … +80 °C
Linearità	Entro +/- 1.0 % fondo scala
Sensibilità	Entro 0.2 % fondo scala
Isteresi	Entro 0.5 % fondo scala
Ripetibilità	Entro +/- 0.5 % fondo scala
Consumo d'aria	5 LPM (alimentazione 1.4 bar)
Capacità	80 LPM (alimentazione 1.4 bar)
Capacità	80 LPM (alimentazione 1.4 bar)
Peso	2.1 Kg

2- TECHINICAL DATA type PPL:

Standard Protection Type PPL	CE Waterproof IP 66
ATEX 2014/34/UE Type PPL-EX	CE II2GDc IICX Ex -20°C≤Ta≤+80°C
Input Signal	3 - 15 psi … 0.2 – 1.0 bar
Split range	Available
Supply Air Pressure	1.4 … 7 bar (20 … 100 psi)
Standard stroke	10 … 80 mm Unic spring
Pneumatic connections	1/4" NPT
Ambient Temperature	-20 ° … +80 °C
Linearity	Within +/- 1.0 % F.S.
Sensitivity	Within 0.2 % F.S.
Hysteresis	Within 0.5 % F.S.
Repeatability	Within +/- 0.5 % F.S.
Air consumption	5 LPM (supply 1.4 bar)
Flow capacity	80 LPM (supply 1.4 bar)
Flow capacity	80 LPM (supply 1.4 bar)
Weight	2.1 Kg

3 - DATI TECNICI tipo EPL :

Protezione standard EPL	CE Waterproof IP 66
Tipo EPL - IECEx	Ex II 2G Exia IIC T6 Ga -20/70°C
Tipo EPL-ATEX	Ex II 2G Exia IIC T6 Ga c IIC T6 - Ta -20 °C / 70°C
ATEX EPL-EXD	Ex EExmd IIB T5 -20°C / 70°C
Segnale di Ingresso	4 – 20 mA
Impedenza entrata	235 +/- 15 Ω
Split range	Disponibile
Alimentazione Aria	1.4 … 7 bar (20 … 100 psi)
Corsa Nominale	10 … 80 mm Unica molla
Connessioni Pneumatiche	¼" NPT
Connessioni Elettriche	PG16 su attacco ½" NPT
Temperatura Ambiente	-20 ° … +70 °C
Linearità	Entro +/- 1.0 % fondo scala
Sensibilità	Entro 0.2 % fondo scala
Isteresi	Entro 0.5 % fondo scala
Ripetibilità	Entro +/- 0.5 % fondo scala
Consumo d'aria	5 LPM (alimentazione 1.4 bar)
Capacità	80 LPM (alimentazione 1.4 bar)
Peso EPL / EPL-EXATEX	2.1 Kg
Peso EPL-EXD	2.9 Kg

3- TECHINICAL DATA type EPL :

Standard protection EPL	CE Waterproof IP 66
Type EPL - IECEx	Ex II 2G Exia IIC T6 Ga -20/70°C
Type EPL-ATEX	Ex II 2G Exia IIC T6 Ga c IIC T6 -Ta -20 °C / 70°C
ATEX EPL-EXD	Ex EExmd IIB T5 -20°C / 70°C
Input Signal	4 – 20 mA
Input resistance - impedance	235 +/- 15 Ω
Split range	Available
Supply Air Pressure	1.4 … 7 bar (20 … 100 psi)
Standard stroke	10 … 80 mm Unic spring
Pneumatic connections	¼" NPT
Electric Connections	PG16 on connection ½" NPT
Ambient Temperature	-20 ° … +70 °C
Linearity	Within +/- 1.0 % F.S.
Sensitivity	Within 0.2 % F.S.
Hysteresis	Within 0.5 % F.S.
Repeatability	Within +/- 0.5 % F.S.
Air consumption	5 LPM (supply 1.4 bar)
Flow capacity	80 LPM (supply 1.4 bar)
Weight EPL / EPL-EXATEX	2.1 Kg
Weight EPL-EXD	2.9 Kg

4 – INFORMAZIONI GENERALI DI SICUREZZA

Prima di installare gli apparecchi rimuovere le protezioni di plastica poste a copertura degli attacchi di connessione.

ATTENZIONE Durante il funzionamento gli apparecchi contengono pressione d'aria.

ATTENZIONE Durante l'esercizio non toccare lo stelo perché é in movimento, potrebbe intrappolare le dita o i vestiti.

ATTENZIONE Prima di iniziare eventuali operazioni di manutenzione assicurarsi che il posizionatore non sia in pressione.

ATTENZIONE I posizionatori Tipo EPL – IECEx e Tipo EPL-ATEX devono essere alimentati da costruzioni elettriche associate, certificate in conformità alle norme EN 50.014 ed EN 50.020 che rispettino i limiti delle caratteristiche elettriche vedi punto 3.

La mancata osservanza delle informazioni generali di sicurezza, delle norme vigenti e delle istruzioni di montaggio possono:

- Causare pericolo per l'incolumità di chi sta eseguendo le manovre o di terzi.
- Compromettere l'efficiente funzionamento del posizionatore.

4 – GENERAL AND SAFETY INFORMATION

Before installing positioner, remove plastic caps placed on connection ends.

WARNING Be careful during functioning the positioners are under pressure.

WARNING Be careful not to touch the stem during operations, possible trapping of fingers and clothes.

WARNING Before starting maintenance be sure that the positioner is not pressurized.

WARNING The positioners type EPL – IECEx and type EPL-ATEX (must be feed by electric devices certified in conformity with EN 50.014 and EN 50.020 standards. The devices must comply the electric features mentioned on technical specification, see point 3.

In the event of non-observance of the general rules, safety information and of the installation instructions, this may:

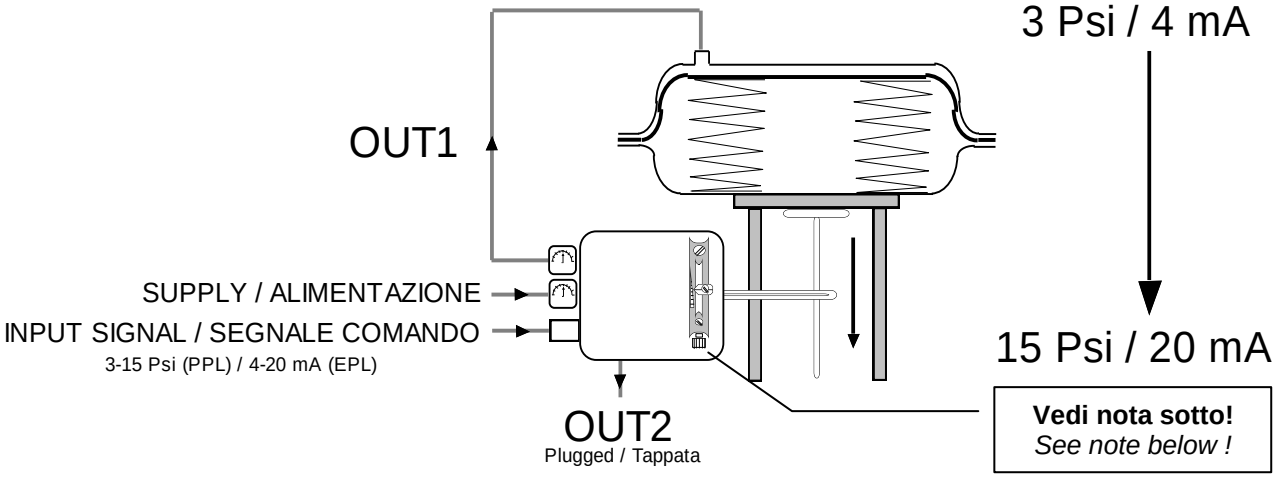
- Cause danger to life and limb of the user or third party
- Endanger the efficient functioning of the positioner

5 - ACCOPPIAMENTO POSIZIONATORE ATTUATORE

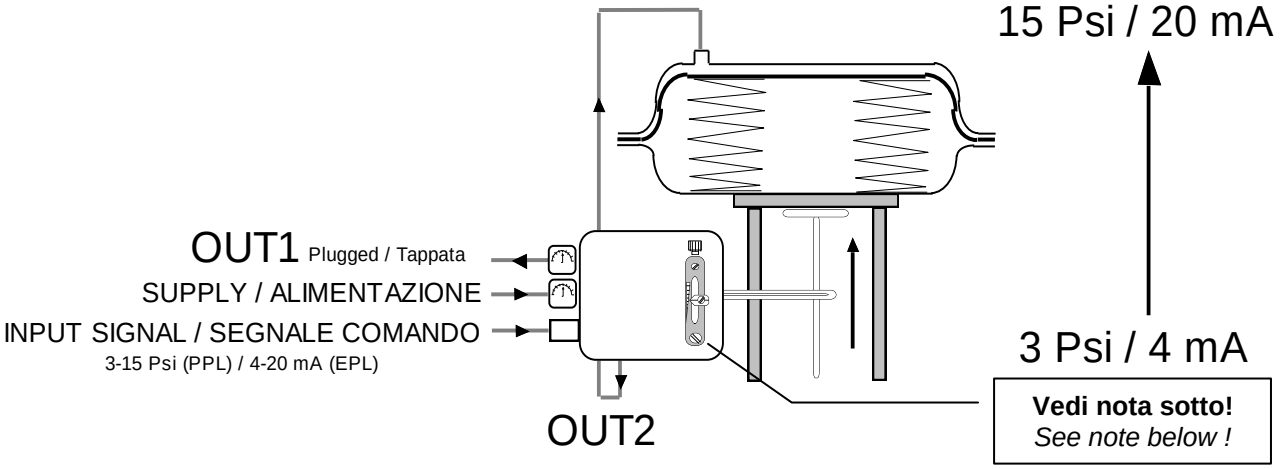
5- COUPLING POSITIONER – ACTUATOR

5.1 ATTUATORE NORMALMENTE APERTO (AD)	5.1 NORMALLY OPENED ACTUATOR (AD)
In mancanza di alimentazione primaria le molle portano in posizione di APERTO l'attuatore. Il posizionatore può essere configurato in 2 modalità diverse per ottenere la movimentazione dell'attuatore stesso in modo DIRETTO o ROVESCIO. **NOTA BENE:** Tutti i posizionatori vengono forniti pre-configurati per il funzionamento in azione diretta a semplice effetto (OUT 2 chiuso). Controllare sempre la posizione della leva dello SPAN.	Without air supply the springs OPEN the actuator. Pilot positioner can be set with 2 different modes for DIRECT or REVERSE control action. **IMPORTANT NOTE:** All positioners are normally supplied for single acting operation with direct action (out 2 closed). Always check for SPAN lever position.

MONTAGGIO CON AZIONE DIRETTA	MOUNTING WITH DIRECT ACTION
All'aumentare del segnale in ingresso lo stelo valvola si muove dall'alto verso il basso Attuatore : **AD /** Connessione : **Out 1**	As the input signal increases valve stem moves downwards Actuator : **AD /** Connection : **Out 1**



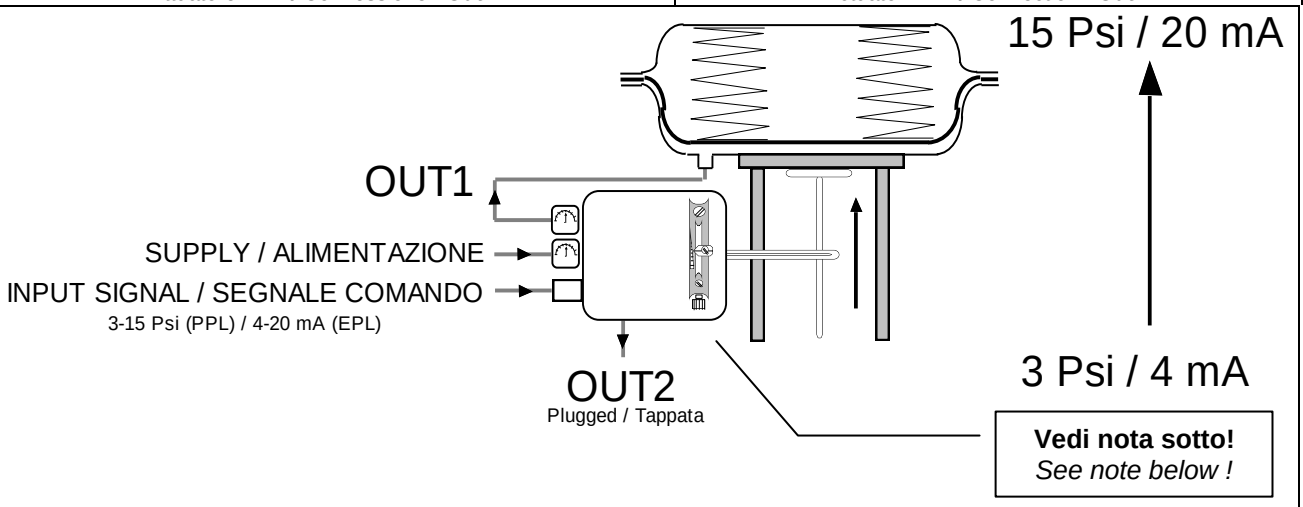
MONTAGGIO CON AZIONE ROVESCIA	MOUNTING WITH REVERSE ACTION
All'aumentare del segnale in ingresso lo stelo valvola si muove dal basso verso l'alto Attuatore : **AD /** Connessione : **Out 2**	As the input signal increases valve stem moves upwards Actuator : **AD /** Connection : **Out 2**



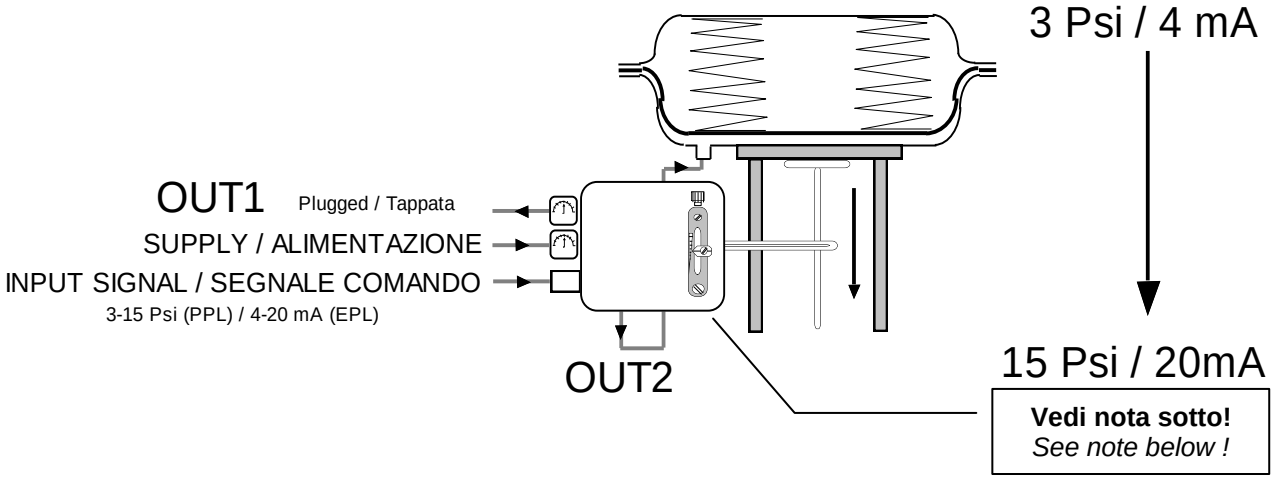
NOTA: la posizione della leva SPAN del presente schema è riferita al MONTAGGIO FRONTALE SINISTRO. Per montaggio FRONTALE DESTRO la leva deve essere invertita! Medesima nota è valida per il montaggio POSTERIORE DESTRO E SINISTRO.	**NOTE:** the position of SPAN lever is refered to FRONT LEFT MOUNTING. In case of FRONTAL RIGHT MOUNTING reverse the SPAN lever. Same operation must be made in case of BACK LEFT/RIGHT MOUNTING POSITION.

5.2 ATTUATORE NORMALMENTE CHIUSO (AR)	5.2 NORMALLY CLOSED ACTUATOR (AR)
In mancanza di alimentazione primaria le molle portano in posizione di CHIUSO l'attuatore. Il posizionatore può essere configurato in 2 modalità diverse per ottenere la movimentazione dell'attuatore stesso in modo DIRETTO o ROVESCIO.	Without air supply the springs CLOSED the actuator. Pilot positioner can be set with 2 different modes for DIRECT or REVERSE control action.
NOTA BENE: Tutti i posizionatori vengono forniti pre-configurati per il funzionamento in azione diretta a semplice effetto (OUT 2 chiuso). Controllare sempre la posizione della leva dello SPAN.	**IMPORTANT NOTE:** All positioners are normally supplied for single acting operation with direct action (out 2 closed). Always check for SPAN lever position.

MONTAGGIO CON AZIONE DIRETTA	MOUNTING WITH DIRECT ACTION
All'aumentare del segnale in ingresso lo stelo valvola si muove dal basso verso l'alto Attuatore : **AR /** Connessione : **Out 1**	As the input signal increases valve stem moves upwards Actuator : **AR /** Connection : **Out 1**



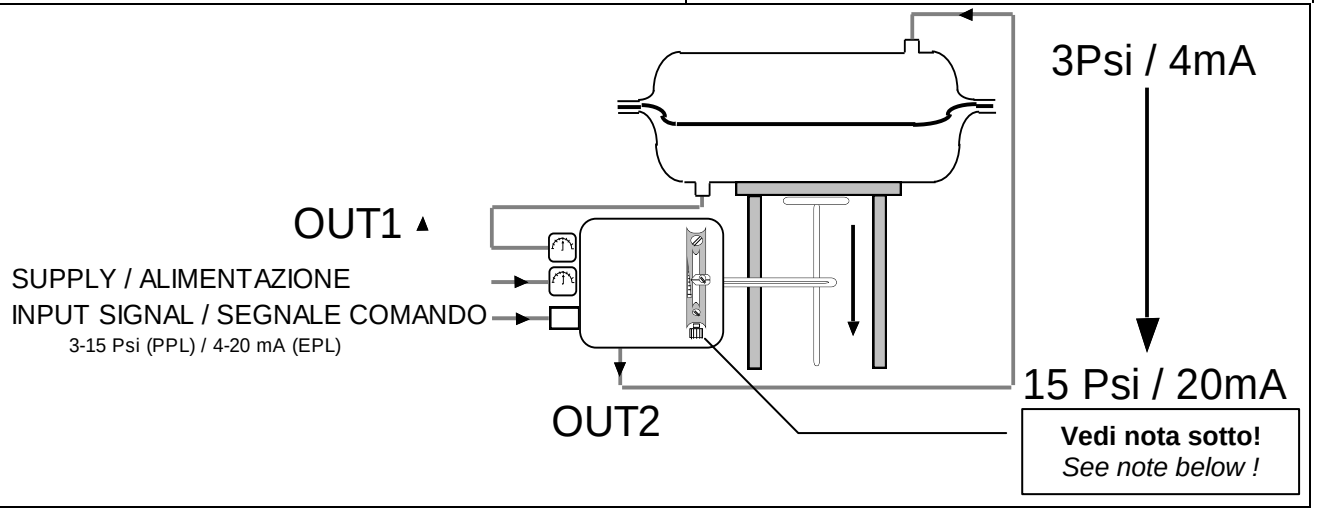
MONTAGGIO CON AZIONE ROVESCIA	MOUNTING WITH REVERSE ACTION
All'aumentare del segnale in ingresso lo stelo valvola si muove dall'alto verso il basso Attuatore : **AR /** Connessione : **Out 2**	As the input signal increases valve stem moves downwards Actuator : **AR /** Connection : **Out 2**



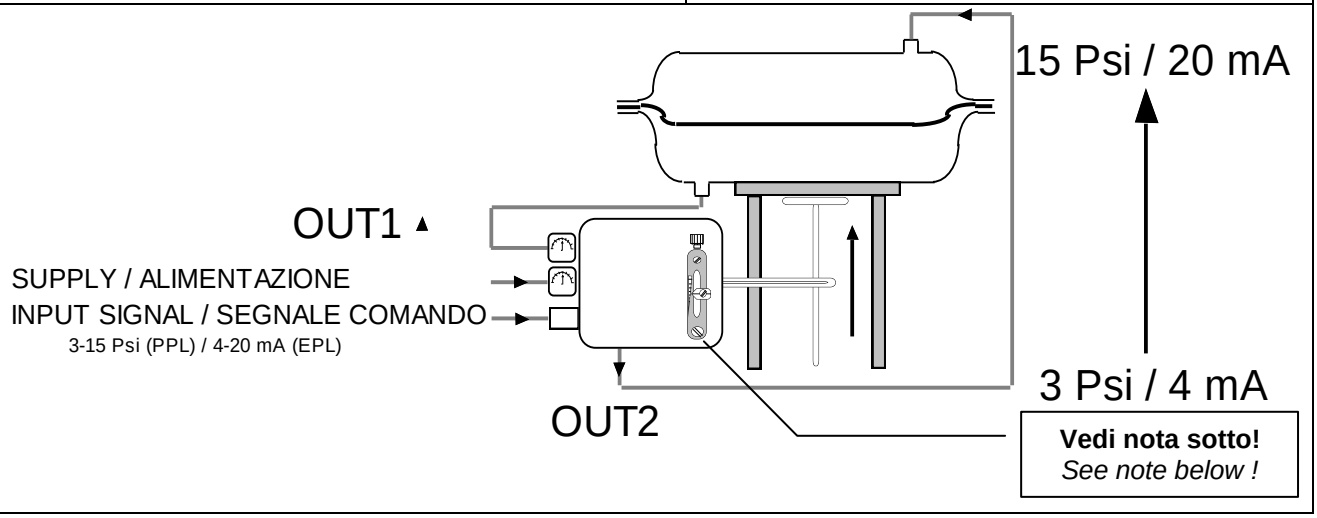
NOTA: la posizione della leva SPAN del presente schema è riferita al MONTAGGIO FRONTALE SINISTRO. Per montaggio FRONTALE DESTRO la leva deve essere invertita! Medesima nota è valida per il montaggio POSTERIORE DESTRO E SINISTRO.	**NOTE:** the position of SPAN lever is refered to FRONT LEFT MOUNTING. In case of FRONTAL RIGHT MOUNTING reverse the SPAN lever. Same operation must be made in case of BACK LEFT/RIGHT MOUNTING POSITION.

5.3 ATTUATORE DOPPIO EFFETTO (DE)	5.2 ATTUATORE DOPPIO EFFETTO (DE)
L'attuatore si porta in posizione CHIUSO o APERTO attraverso la spinta dell'aria e si ferma in posizione in assenza di alimentazione. Il posizionatore può essere configurato in 2 modalità diverse per ottenere la movimentazione dell'attuatore stesso in modo DIRETTO o ROVESCIO. **NOTA BENE:** Tutti i posizionatori vengono forniti pre-configurati per il funzionamento in azione diretta a semplice effetto (OUT 2 chiuso). Controllare sempre la posizione della leva dello SPAN.	Actuator moves to OPEN or CLOSE position by the air signal, in case of supply failure it stays in last position. Pilot positioner can be set with 2 different modes for DIRECT or REVERSE control action. **IMPORTANT NOTE:** All positioners are normally supplied for single acting operation with direct action (out 2 closed). Always check for SPAN lever position.

MONTAGGIO CON AZIONE DIRETTA	MOUNTING WITH DIRECT ACTION
All'aumentare del segnale in ingresso lo stelo valvola si muove dall'alto verso il basso Attuatore : **DE /** Connessione : **Out 1 + Out 2**	As the input signal increases valve stem moves downwards Actuator : **DE /** Connection : **Out 1 + Out 2**



MONTAGGIO CON AZIONE ROVESCIA	MOUNTING WITH REVERSE ACTION
All'aumentare del segnale in ingresso lo stelo valvola si muove dal basso verso l'altro Attuatore : **DE /** Connessione : **Out 1 + Out 2**	As the input signal increases valve stem moves upwords Actuator : **DE /** Connection : **Out 1 + Out 2**



NOTA: la posizione della leva SPAN del presente schema è riferita al MONTAGGIO FRONTALE SINISTRO. Per montaggio FRONTALE DESTRO la leva deve essere invertita! Medesima nota è valida per il montaggio POSTERIORE DESTRO E SINISTRO.	**NOTE:** the position of SPAN lever is refered to FRONT LEFT MOUNTING. In case of FRONTAL RIGHT MOUNTING reverse the SPAN lever. Same operation must be made in case of BACK LEFT/RIGHT MOUNTING POSITION.

6 - INSTALLAZIONE SU VALVOLA

6.1 MONTAGGIO SU VALVOLA CON ATTUATORE A CASTELLO INTEGRALE (IEC 534)

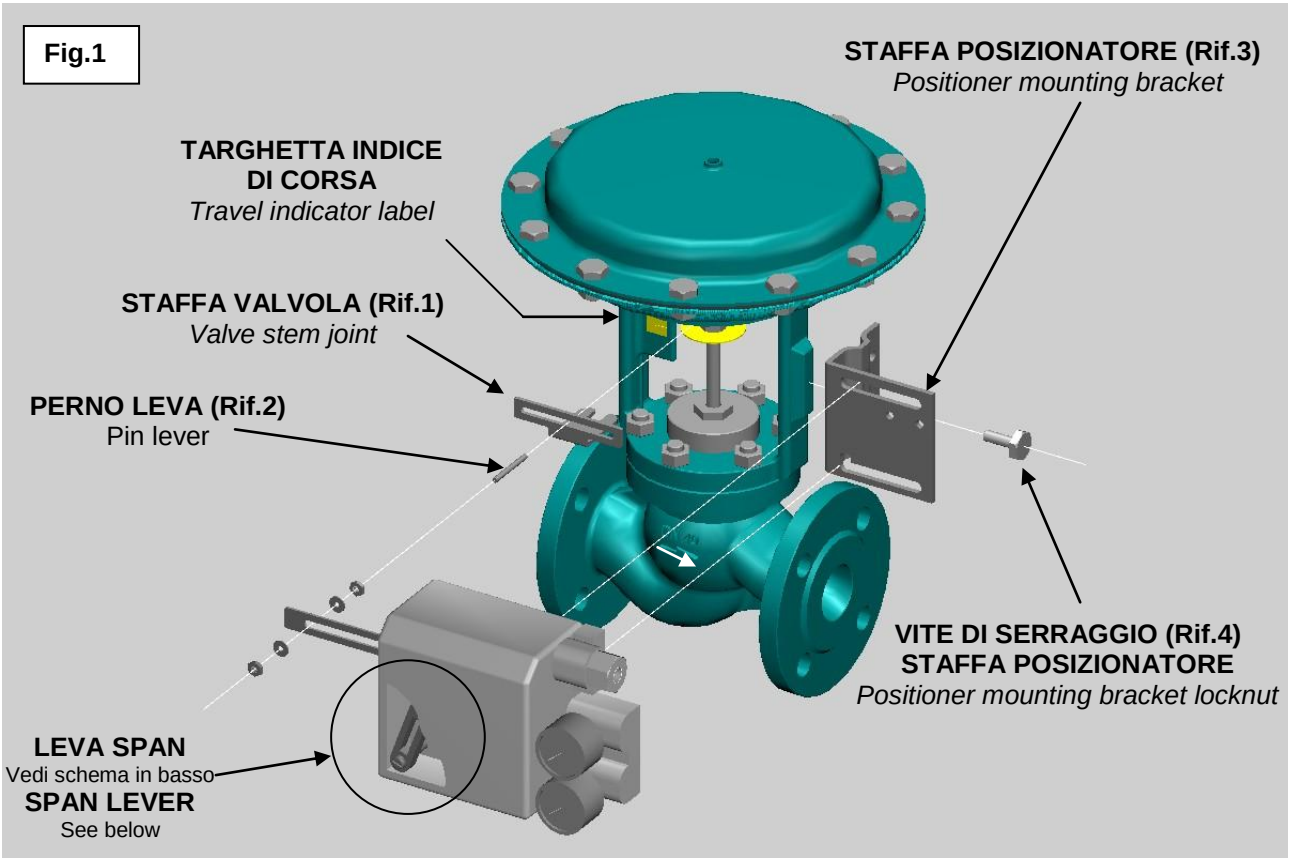
6.1.1 – MONTAGGIO FRONTALE
Montare il posizionatore come indicato nella fig. 1

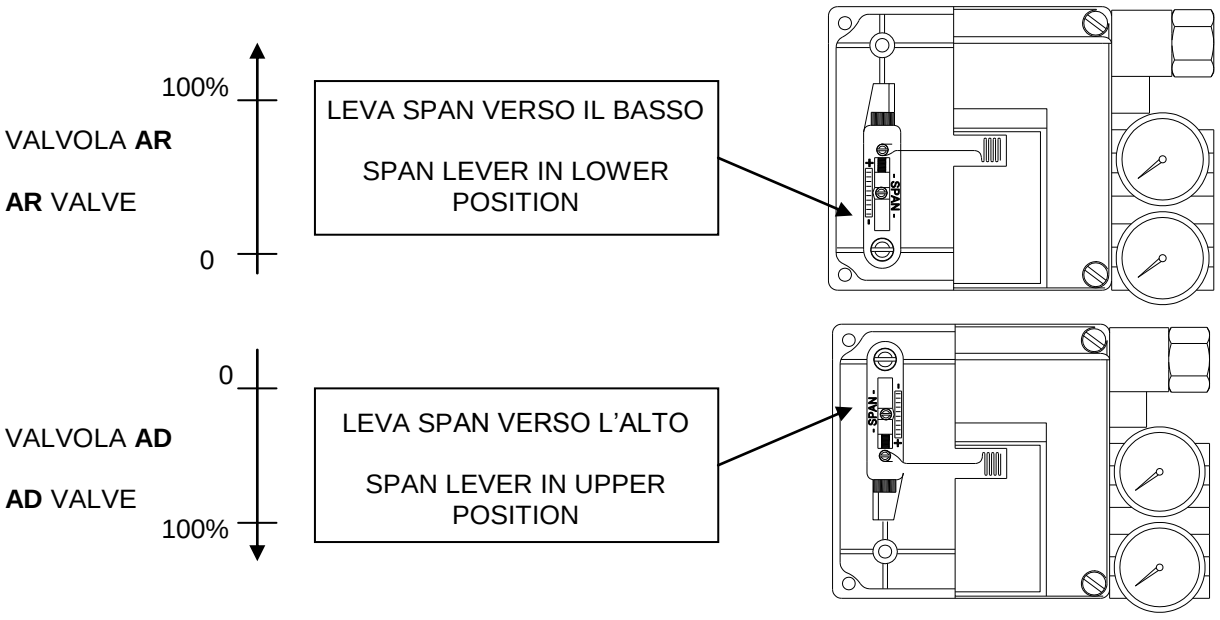
6- INSTALLATION ON VALVE

6.1 FITTING THE POSITIONER TO YOKE TYPE ACTUATOR (IEC 534)

6.1.1 – FRONT POSITION MOUNTING
Mount the positioner as showed on fig.1

Fig.1





Fissare la staffa (Rif.1) allo stelo, appena sotto il disco indicatore, serrandola con i due dadi.
Fissare il perno leva (Rif.2) alla leva del posizionatore per mezzo dei dadi in dotazione (posizione centrale).
Fissare il posizionatore alla staffa (Rif.3) e serrare provvisoriamente la vite di ancoraggio al castello (Rif.4).
Dare aria all'attuatore fino a raggiungere meta' corsa, quando la leva è in posizione orizzontale bloccare definitivamente la vite (Rif.4) quindi togliere l'aria dall'attuatore.

Connect the valve stem joint (Ref.1) to the valve stem, just below the indicator disc and screw it with two nuts.
Place the pin lever (Ref.2) in the middle of positioner feed-back lever using the nuts included.
Place the positioner on the mounting bracket (Ref.3) and tight the locknut (Ref.4).
Supply air to the actuator up to half stroke, when the lever is horizontal (50% of stroke) screw definitively the locknut (Ref.4) and discharge air from the actuator.

6 - INSTALLAZIONE SU VALVOLA

6.1 MONTAGGIO SU VALVOLA CON ATTUATORE A CASTELLO INTEGRALE (IEC 534)

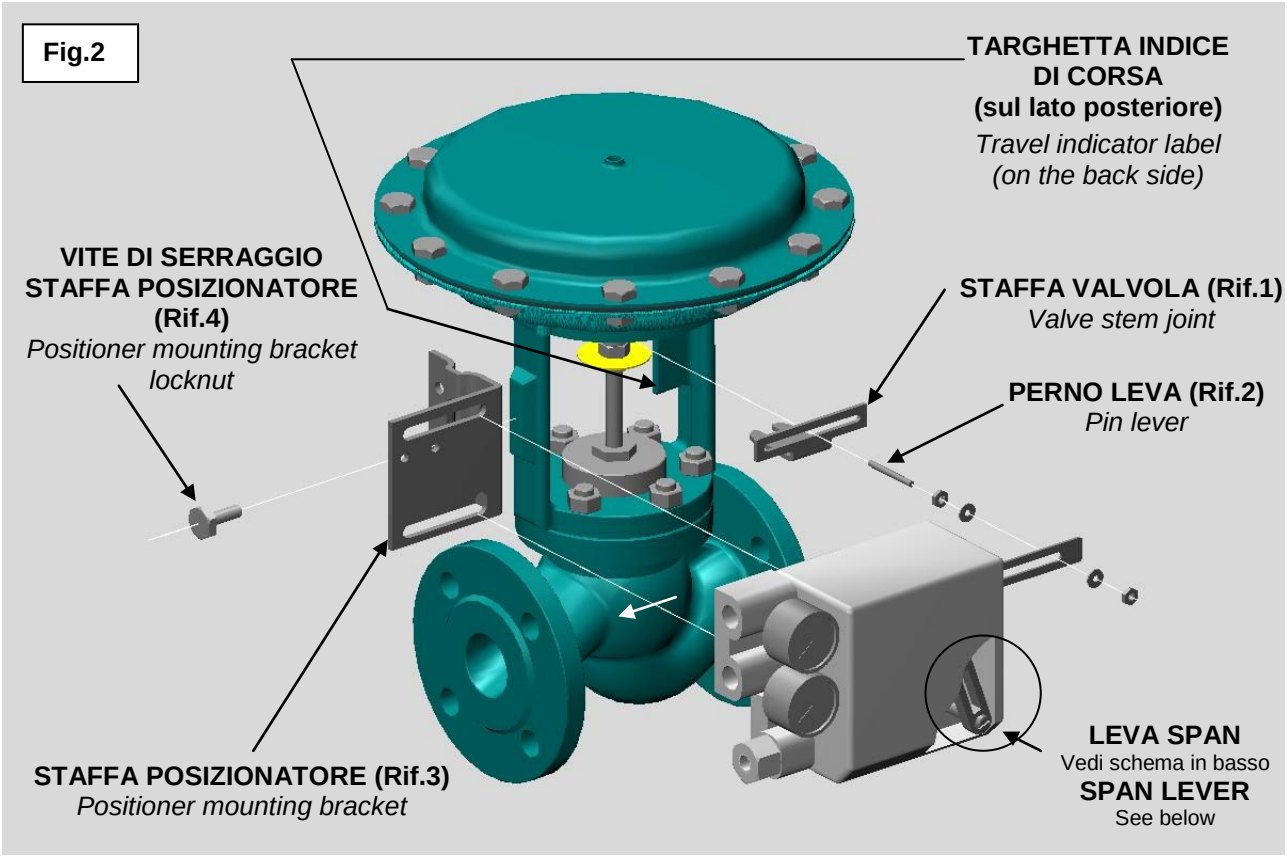
6.1.2 – MONTAGGIO POSTERIORE
Montare il posizionatore come indicato nella fig. 2

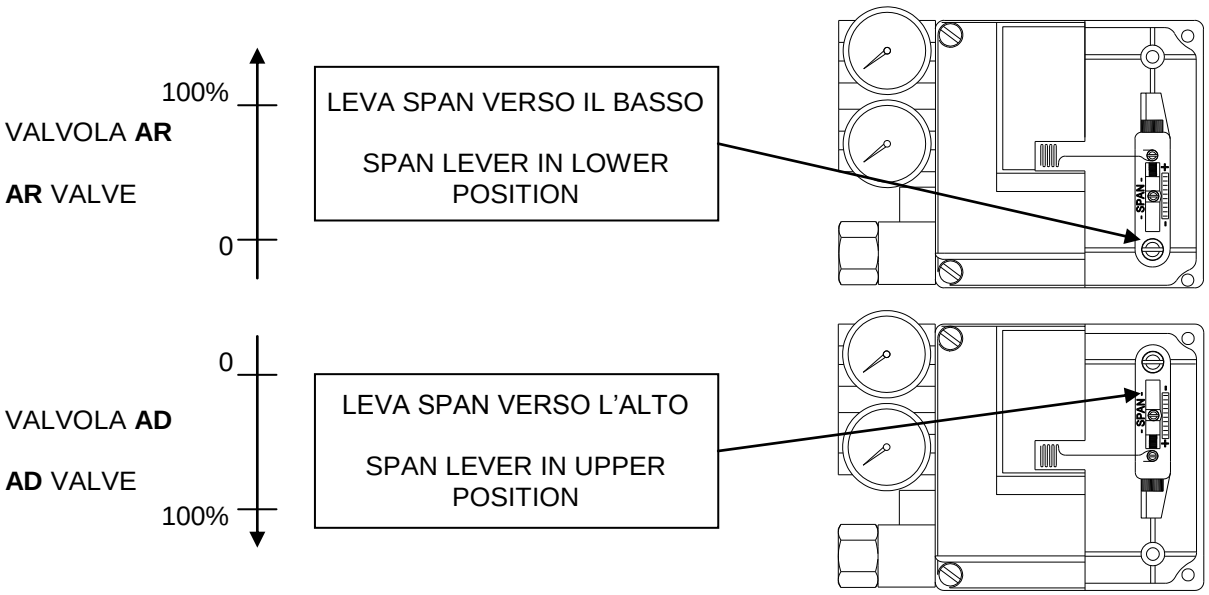
6- INSTALLATION ON VALVE

6.1 INSTALLATION ON CASTED ACTUATOR YOKE (IEC 534)

6.1.2 – BACK POSITION MOUNTING
Mount the positioner as showed on fig.2

Fig.2





Fissare la staffa (Rif.1) allo stelo, appena sotto il disco indicatore, serrandola con i due dadi.
Fissare il perno leva (Rif.2) alla leva del posizionatore per mezzo dei dadi in dotazione (posizione centrale).
Fissare il posizionatore alla staffa (Rif.3) e serrare provvisoriamente la vite di ancoraggio al castello (Rif.4).
Dare aria all'attuatore fino a raggiungere meta' corsa, quando la leva è in posizione orizzontale bloccare definitivamente la vite (Rif.4) quindi togliere l'aria dall'attuatore.

Connect the valve stem joint (Ref.1) to the valve stem, just below the indicator disc and screw it with two nuts.
Place the pin lever (Ref.2) in the middle of positioner feed-back lever using the nuts included.
Place the positioner on the mounting bracket (Ref.3) and tight the locknut (Ref.4).
Supply air to the actuator up to half stroke, when the lever is horizontal (50% of stroke) screw definitively the locknut (Ref.4) and discharge air from the actuator.

6 - INSTALLAZIONE SU VALVOLA

6.2 MONTAGGIO SU VALVOLA CON ATTUATORE A COLONNA (IEC 534)

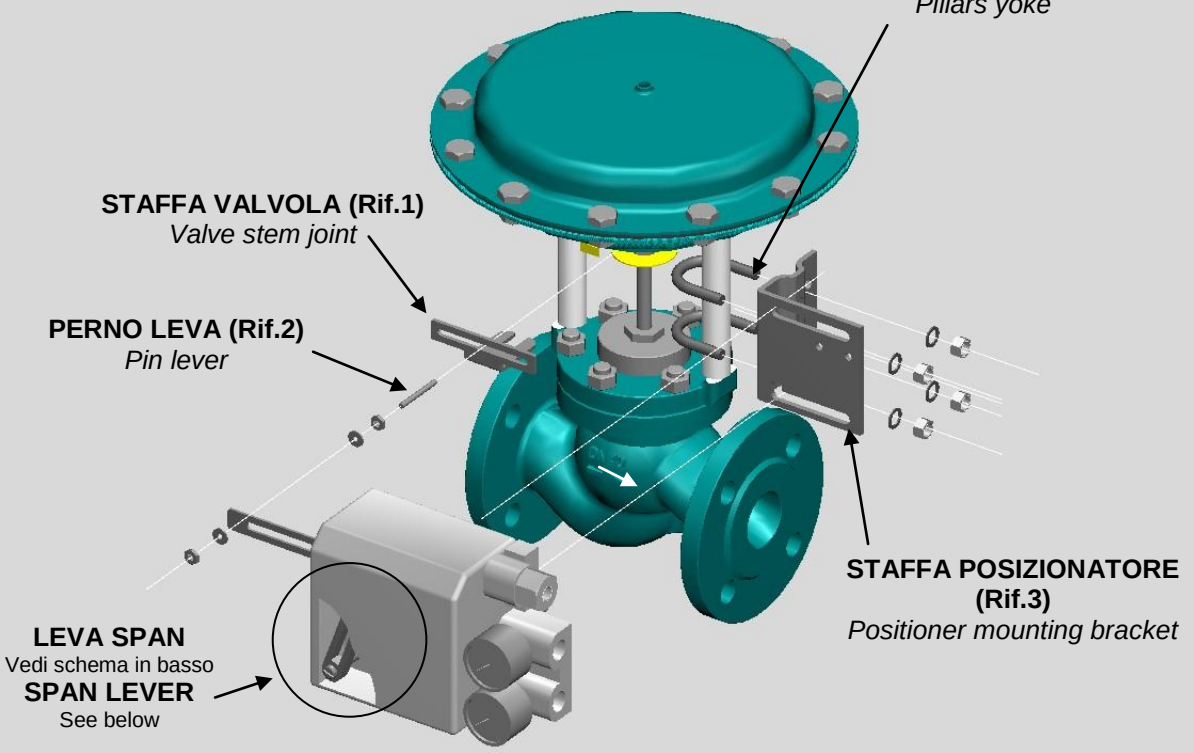
6.2.1 – MONTAGGIO FRONTALE
Montare il posizionatore come indicato nella fig. 3

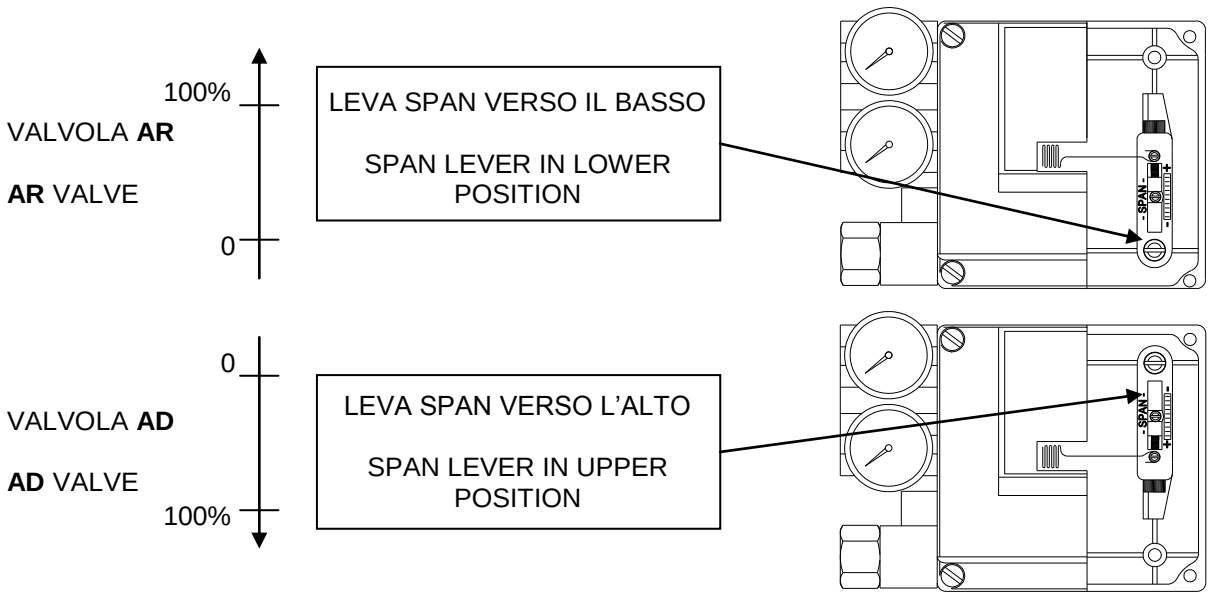
6- INSTALLATION ON VALVE

6.2 INSTALLATION ON PILLAR ACTUATOR YOKES (IEC 534)

6.2.1 – FRONT POSITION MOUNTING
Mount the positioner as showed on fig.3

Fig.3





Fissare la staffa (Rif.1) allo stelo, appena sotto il disco indicatore, serrandola con i due dadi.
Fissare il perno leva (Rif.2) alla leva del posizionatore per mezzo dei dadi in dotazione (posizione centrale).
Fissare il posizionatore alla staffa (Rif.3) e serrare provvisoriamente i dadi degli archetti (Rif.4).
Dare aria all'attuatore fino a raggiungere meta' corsa, quando la leva è in posizione orizzontale bloccare definitivamente i dadi degli archetti (Rif.4) quindi togliere l'aria dall'attuatore.

Connect the valve stem joint (Ref.1) to the valve stem, just below the indicator disc and screw it with two nuts.
Place the pin lever (Ref.2) in the middle of positioner feed-back lever using the nuts included.
Place the positioner on the mounting bracket (Ref.3) and tight the pillars yoke locknuts (Ref.4).
Supply air to the actuator up to half stroke, when the lever is horizontal (50% of stroke) screw definitively the pillars yoke locknuts (Ref.4) and discharge air from the actuator.

8 - CONNESSIONI PNEUMATICHE ED ELETTRICHE

Tutti i collegamenti pneumatici sono facilmente accessibili (vedi Fig.7). Per le connessioni elettriche della serie EPL basta inserire i due fili nel passacavo e collegarli alla morsettiera interna contrassegnata con "+" e "-" (vedi Fig. 8).

ATTENZIONE I posizionatori EPL-EX (sicurezza intrinseca – flameproof) devono essere alimentati da costruzioni elettriche associate, certificate in conformità alle norme EN 50.014 ed EN 50.020 che rispettino i limiti delle caratteristiche elettriche indicate nel punto 3.

8- PNEUMATIC AND ELECTRIC CONNECTIONS

All pneumatic connections are easily accessibile (see Fig.7).
For the electric connections of EPL series put the two cables into the cable gland and plug them to the internal terminal board marked by "+" and "-" (see fig.8)

WARNING The positioners type EPL-EX (intrinsic safety – flameproof) must be feed by electric devices certified in conformity with EN 50.014 and EN 50.020 standards. The devices must comply the electric features mentioned on technical specification, see point 3.

Fig.7

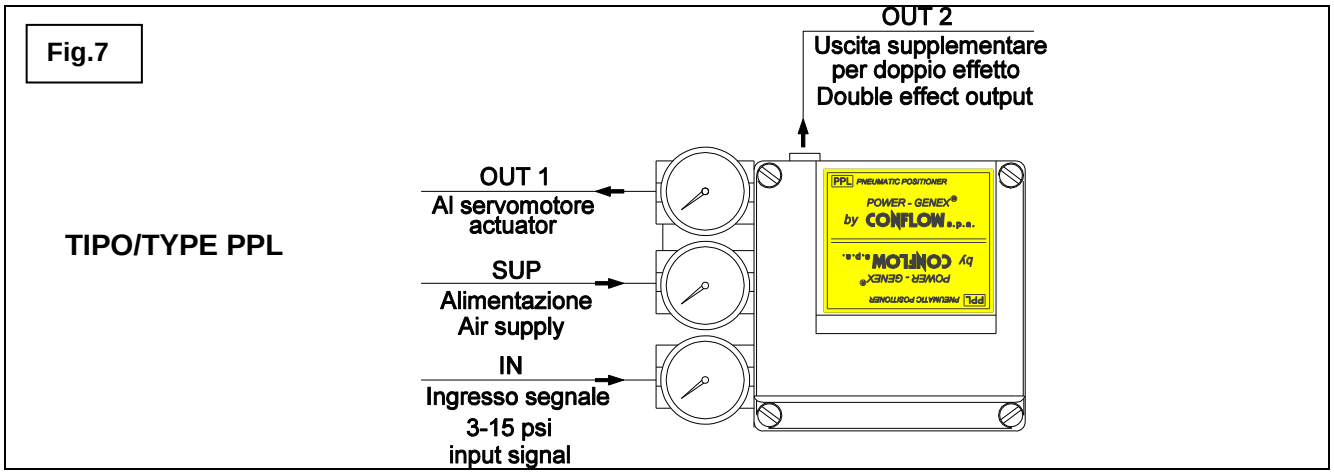
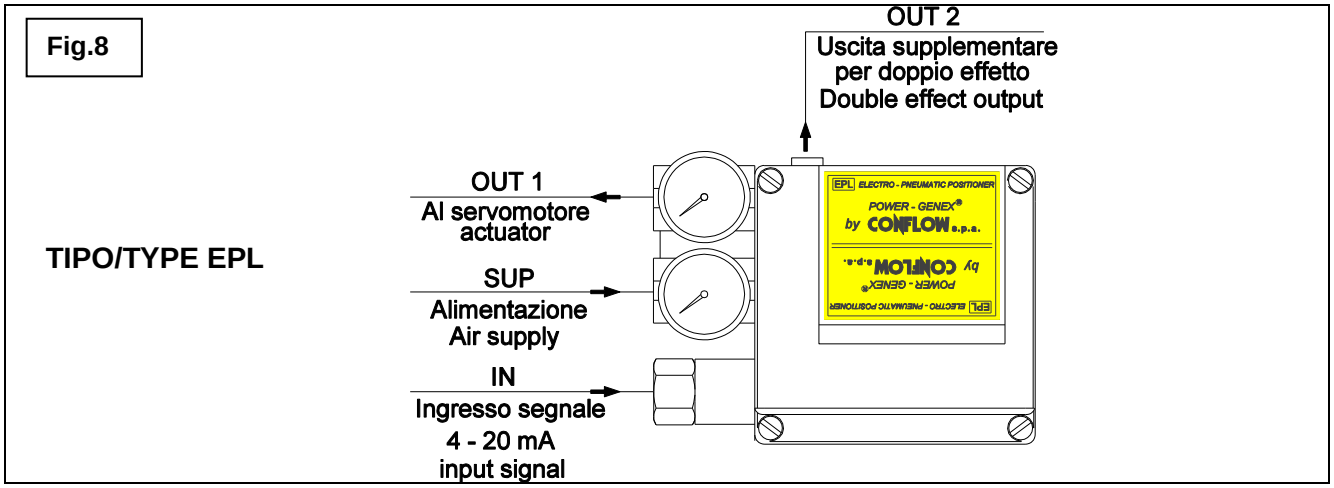
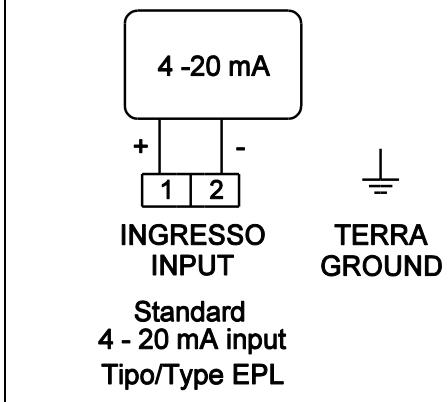


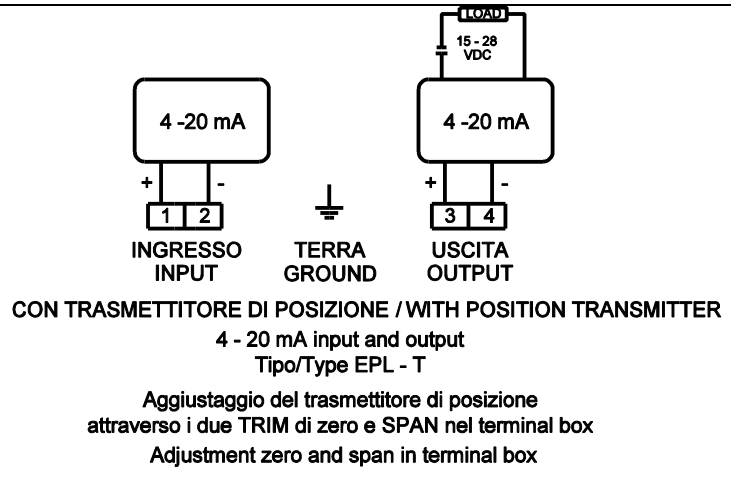
Fig.8



SCHEMA ELETTRICO



WIRE DIAGRAMS



9 - AVVIAMENTO

- Controllare che tutti i collegamenti elettrici-pneumatici siano corretti e che il posizionatore sia montato in accordo alla tipologia di attuatore e di azione (vedi sez. 5)
- Fornire il segnale di comando, valori consigliati :
  3,5 psi versione PPL / 4,5 mA versione EPL
  C'è una leggera differenza nella taratura se la valvola è posta in orizzontale o in verticale (0,2 psi – 0,2 mA) nel dubbio tarare il valore di partenza :
  3,7 psi versione PPL / 4,7 mA versione EPL
  Girare la rotella dello zero in senso orario o antiorario fino ad ottenere la partenza della valvola vedi Fig. 9
- Controllare la corsa della valvola fornendo il segnale max di 15 psi o 20 mA. Se la corsa non raggiunge il 100 % svitare o avvitare la vite dello SPAN fino a raggiungere il 100% vedi Fig.9.

Controllare nuovamente lo zero

9 - START-UP

- Check that all pneumatic and electrics connections are correct and that positioner is correctly mounted according to the actuator action and function required (refer to section 5)
- Supply the input signal, suggested values
  3,5 psi PPL version / 4,5 mA EPL version
  There is a slight difference in calibration if the valve is placed horizontally or vertically (0.2 psi - 0.2 mA) in doubt calibrate the starting value:
  3,7 psi PPL version / 4,7 mA EPL version

  3 psi or 4 mA. Turn the zero adjusting screw clockwise or counter clockwise to set the zero position
- Check the stroke of the control valve by setting input signal 15 psi or 20 mA. If the stroke does not meet 100%, turn the span adjusting screw clockwise or counter clockwise until 100% is reached., the same operation is necessary if the positioner reached the 100% before with max signal

Check again the zero position

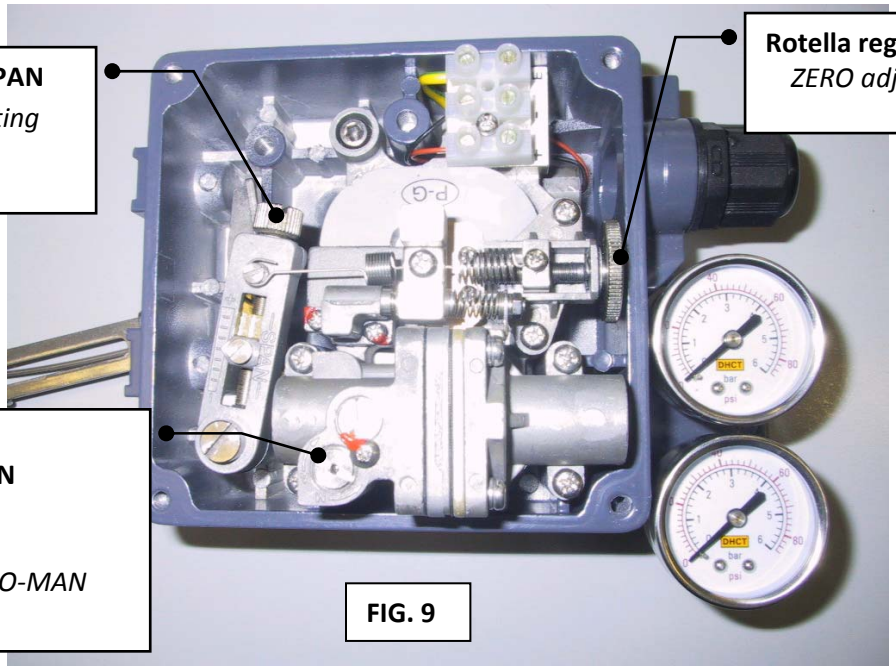


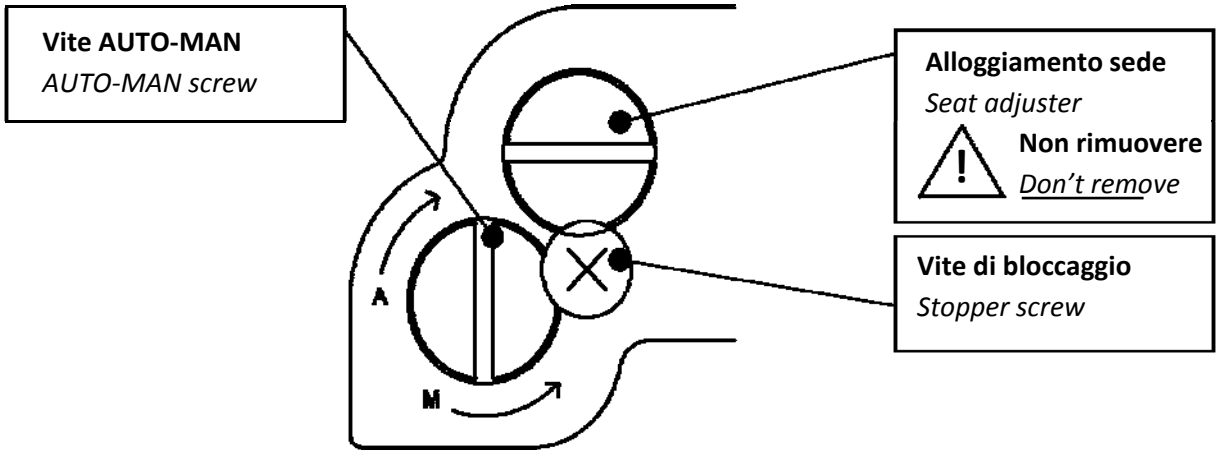
FIG. 9

10 - OPERAZIONE AUTO - MANUALE

Per operare manualmente usare un filtro riduttore e posizionare la vite Auto – Manuale presente nel pilota in posizione M. (Vedi dettaglio "A" sotto). Questa operazione permette di bypassare il segnale di ingresso 3-15 psi.

10 – AUTO-MANUAL OPERATION

For manual operation using an external air regulator, set the Auto / Manual switch located on the pilot valve to M (see detail "A" below). This will bypass the 3-15 psi input signal.



11 - ORIFIZIO RIDOTTO PER VALVOLA PILOTA

ATTENZIONE Prima di rimuovere il pilota, assicurarsi di avere scollegato segnale ed alimentazione.

Nel caso il posizionatore risulti troppo veloce, viene fornito, insieme al posizionatore, un kit di orifizi a passaggio ridotto. Per installarlo, occorre rimuovere dal posizionatore il pilota:

- Svitare le quattro viti "A" (Vedi Fig. 10) di fissaggio
- Togliere la molla di compensazione "B" (vedi Fig.10)
- Una volta rimosso il pilota, ruotarlo sottosopra (vedi Fig.11)
- Rimuovere gli O-rings dalle porte Out1 e Out2 (vedi Fig 11)
- Posizionare i piattelli degli orifizi nelle rispettive sedi e porre sopra di essi i nuovi O-rings, quindi rimontare il pilota

11.1 MANUTENZIONE VALVOLA PILOTA

Nel caso sia necessario sostituire la valvola pilota a seguito di usura, operare come sopra.

11 – REDUCED PILOT VALVE ORIFICES

WARNING Before removing pilot valve, be sure to disconnect positioner from the signal and supply air.

If positioner is too fast during working phase apply the restricted pilot valve orifice kit. To install it, the pilot valve must be removed from the positioner:

- Remove the four screws " A" (see Fig.10) holding the pilot to the positioner body.
- Remove the compensation spring "B" (see Fig.10)
- When the pilot valve is removed, reverse it (see Fig.11)
- Remove the o-rings from Out1 and Out2 (see Fig.11)
- Place the orifices plates in their places with the new o-rings above them and re-install the pilot valve.

11.1 PILOT VALVE MAINTENANCE

If pilot valve has to be replaced please follow instructions as above and maintain the original orifice without applying reduced type.

Fig.10

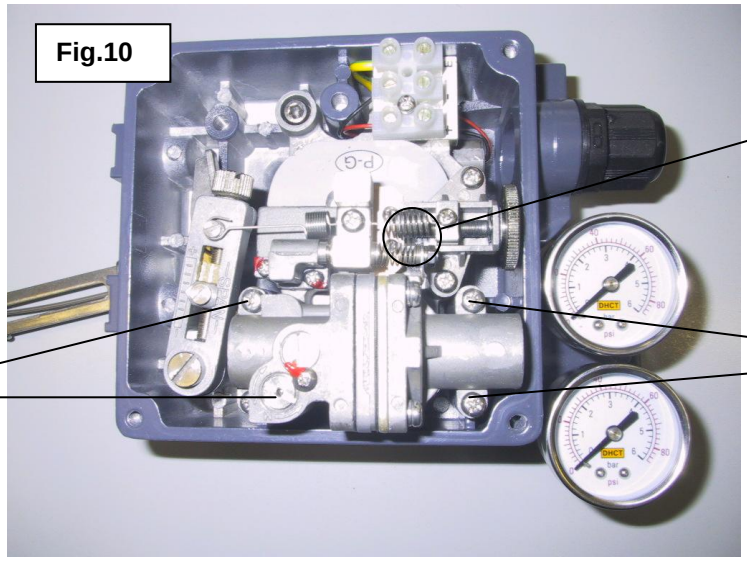
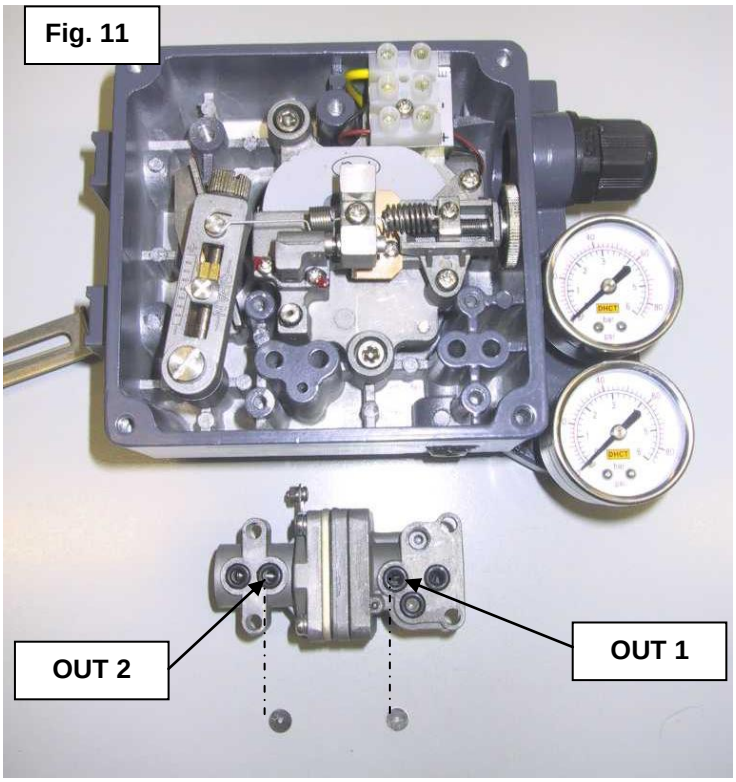


Fig. 11



12 - SPLIT-RANGE

Se l'applicazione lo richiede è possibile eseguire il 100% di corsa con il segnale in ingresso ridotto del 50 % esempio :

- Serie PPL 3-9 psi … 9-15 psi
- Serie EPL 4-12 mA … 12- 20 mA

Per ottenere questo funzionamento è necessario effettuare in opzione le seguenti regolazioni :

1. Regolare il perno sulla leva di feedback vedi fig.12 dettaglio A
2. Regolare la vite dello SPAN lever vedi fig. 12 dettaglio B
3. Spostare il posizionatore sulla staffa vedi fig. 12 dettaglio C (operazione consigliata solo per corse superiori a 30 mm)

Una volta raggiunto il campo desiderato procedere come al cap. 9

12 – SPLIT RANGE

If required the 100% of stroke can be obtained with 50% of reduced input signal. Example:

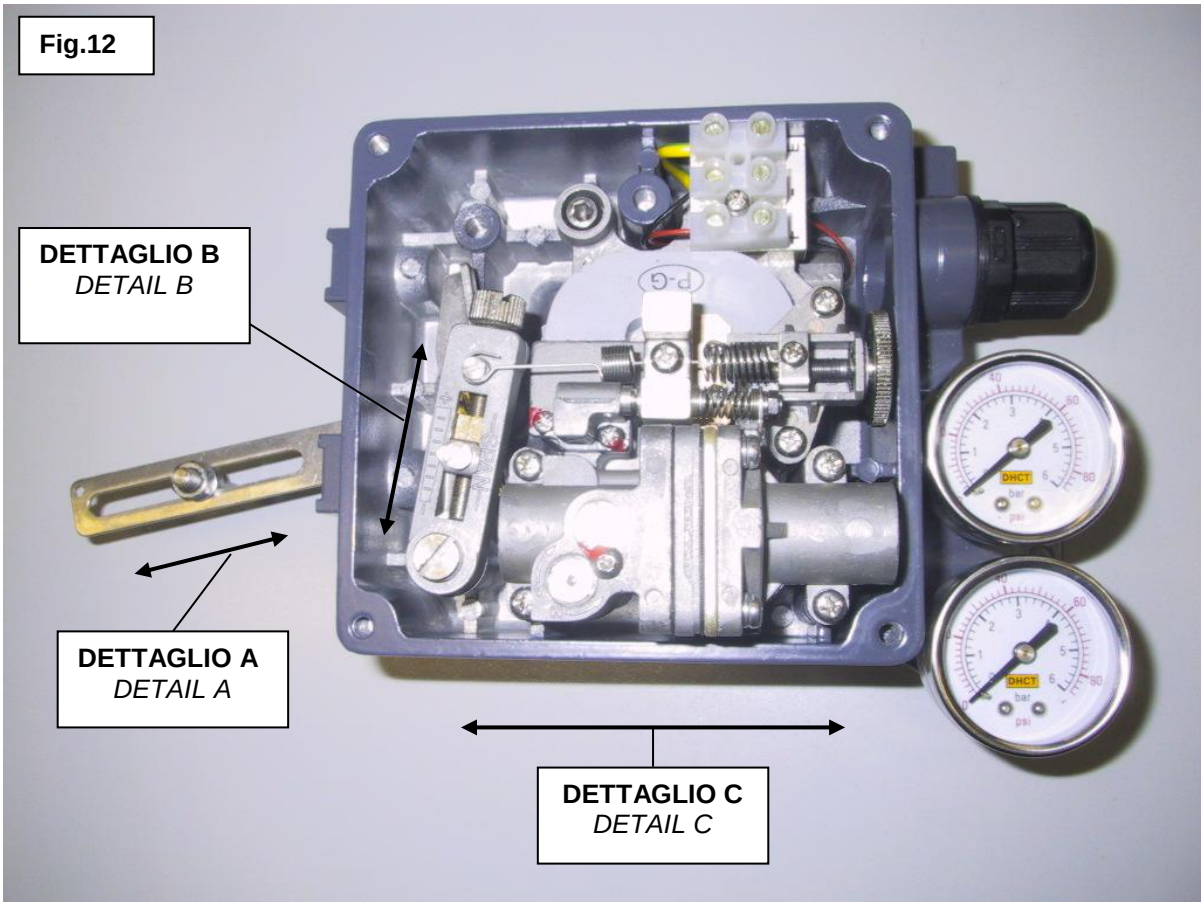
- PPL series 3-9 psi … 9-15 psi
- EPL series 4-12 mA … 12- 20 mA

To obtain this function it is necessary to make the following set-up:

1. Move the pin on feedback lever (see Fig.12, detail A)
2. Turn the screw span lever (see Fig.12, detail B)
3. Move the positioner on the bracket (see Fig.12, detail C) (Operation suggested only for stroke upper 30 mm)

When the right span is obtained, follow the instructions in the chapter 9.

Fig.12



13 - ANOMALIE DI FUNZIONAMENTO

Riportiamo qui di seguito alcuni inconvenienti che si possono verificare durante il funzionamento :

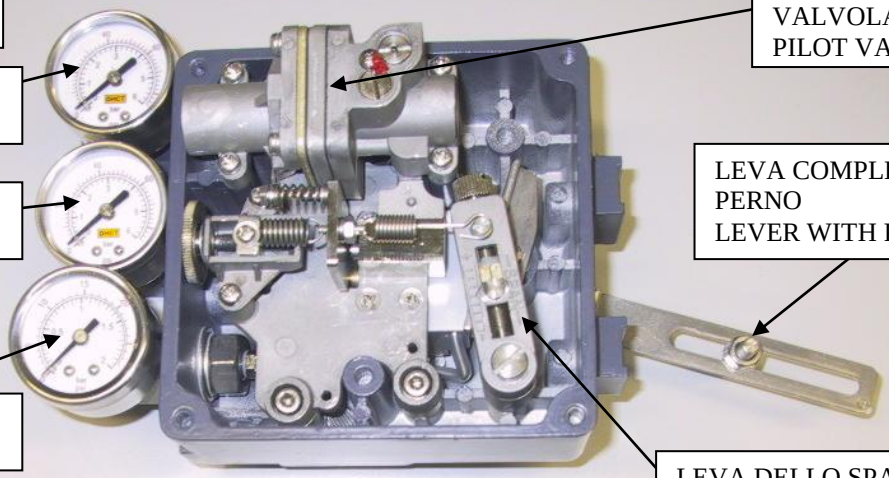
INCONVENIENTI RISCONTRATI	CAUSA	PROVVEDIMENTO
L'attuatore pendola e non si stabilizza	Velocità troppo elevata	Diminuire la velocità vedi punto 10
Il posizionatore non regola correttamente apertura e chiusura dell'attuatore	Connessioni pneumatiche non corrette	Vedi punto 8 fig. 7
	Accoppiamento tra posizionatore e attuatore errato	Vedi punto 5
	Collegamenti elettrici errati	Vedi punto 8 fig.8
	Mancanza del segnale di alimentazione	Controllare e sistemare
	Mancanza del segnale di comando	Controllare e sistemare
L'attuatore non compie il campo desiderato	Regolazione del campo errata	Vedi punto 9
L'attuatore non parte dalla posizione desiderata	Regolazione dello zero errata	Vedi punto 9

13 - TROUBLES SHOOTING

Here below some of the possible causes giving troubles during normal working conditions :

SYMPTOMS	POSSIBLE CAUSE	REMEDY
Actuator hutting	Opening / Closing speed too high	Reduce the speed see chapter 10
Positioner with wrong control action	Wrong pneumatic connections	See chapter 8 fig. 7
	Actuator and positioner coupling is not correct	See chapter 5
	Wrong electric connections	See chapter 8 fig.8
	Supply air missing	Check and adjust
	Control signal missing	Check and adjust
Actuator span inadeguate	Span adjustment is wrong	See chapter 9
Actuator start point shifted	Zero adjustment is wrong	See chapter 9

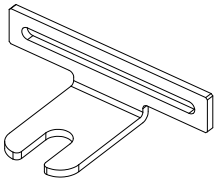
PPL SERIES



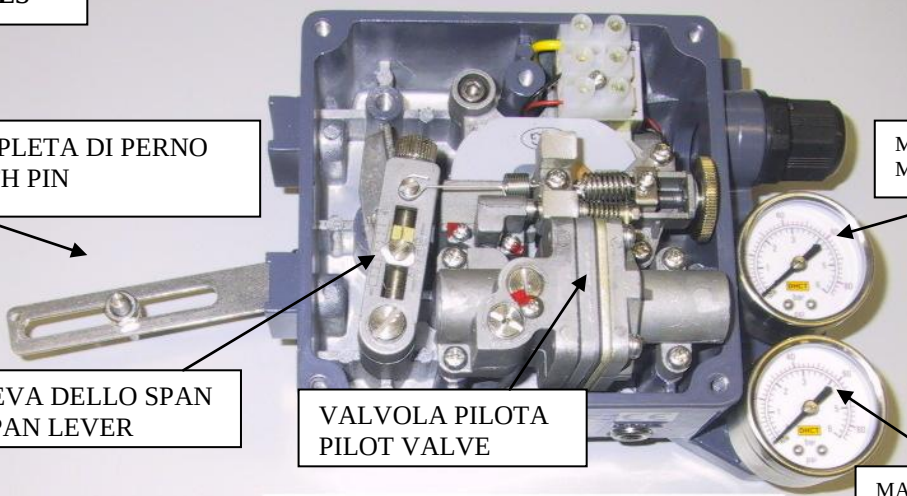
STAFFA E VITI DI SERRAGGIO
BRACKET WITH SCREWS



STAFFA STELO VALVOLA
VALVE STEM BRACKET



EPL SERIES



STAFFA E VITI DI SERRAGGIO
BRACKET WITH SCREWS



POWER-GENEX®

EU Declaration of Conformity

We herewith declare , **Power-Genex Ltd.**
99, Eunbong-ro, Namdong-gu,
Incheon 21639 Korea

declare that the DoC is issued under our sole responsibility and belongs to the following product:

Product Name	**:**	**Electro-Pneumatic Positioner**
Product Model	**:**	**EPL, EPR Series**

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

EMC Directive 2004/108/EC(until 19th April, 2016) and
EMC Directive 2014/30/EU(from 20th April, 2016)

ATEX Directive 94/9/EC(until 19th April, 2016) and
ATEX Directive 2014/34/EU(from 20th April, 2016)

The following harmonised standards and technical specifications have been applied:

EN 61000-6-1 : 2007 / EN 61000-6-2 : 2005 / EN61000-6-3 : 2007 / EN 61000-6-4 : 2007
EN 60079-0 : 2009 / EN 60079-11 : 2007 / EN 13463-1 : 2009 / EN 13463-5 : 2010

EC-Type Examination Certificate : INERIS 12ATEX0030X

Conformity with the requirements of these Directives is proven by complete adherence to the following standards.

- Date : Apr 20, 2016

Koh Sung-won, Head of R&D

Lee Soon-hyuk, Head of Quality Management

This declaration certifies the conformity to the specified directives but contains no assurance of properties.

(2) **Equipment and protective systems intended for use in potentially explosive atmospheres Directive 94/9/EC**

(1) # EC-TYPE EXAMINATION CERTIFICATE

(3) Number of the EC type examination certificate: **INERIS 12ATEX0030X**

(4) Equipment or protective system:

ELECTRO-PNEUMATIC POSTIONER TYPE EPL/EPR...

(5) Manufacturer: **POWER-GENEX Ltd.**

(6) Address: 44B9L, 434-9, Nonhyun-Dong, Namdong-Gui
Incheon, 405-848 KOREA

(7) This equipment or protective system and any other acceptable alternative of this one are described in the annex of this certificate and the descriptive documents quoted in this annex.

(8) INERIS, notified body and identified under number 0080, in accordance with article 9 of Council Directive 94/9/EC of the 23rd March 1994, certifies that this equipment or protective system fulfils the Essential of Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, described in annex II of the Directive.

The examinations and the tests are consigned in report No 026098/12.

(9) The respect of the Essential Health and Safety Requirements is ensured by:

- conformity with:

EN 60079-0	:	2009
EN 60079-11	:	2007
EN 13463-1	:	2009
EN 13463-5	:	2010

- specific solutions adopted by the manufacturer to meet the Essential Health and Safety Requirements described in the descriptive documents.

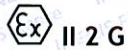
Only the entire document including annexes may be reprinted. IM1337AC

Parc Technologique Alata BP 2 F-60550 Verneuil-en-Halatte
tél + 33(0)3 44 55 66 77 fax + 33(0)3 44 55 66 99 internet www.ineris.fr
Institut national de l'environnement industriel et des risques
Etablissement public à caractère industriel et commercial - RCS Senlis B 381 984 921 - Siret 381 984 921 00019 - APE 7120B

(10) Sign X, when it is placed following the Number of the EC type examination certificate, indicates that this equipment and protective system is subjected to the special conditions for safe use, mentioned in the annex of this certificate.

(11) This EC type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system, these are not covered by this certificate.

(12) The marking of the equipment or the protective system will have to contain:



Verneuil-en-Halatte, 2012.07.18



Director of the Certifying Body,
By delegation
T. HOUEIX
Certification Officer
Certification Division

(13) # ANNEX

(14) EC TYPE EXAMINATION CERTIFICATE N°INERIS 12ATEX0030X

(15) DESCRIPTION OF THE EQUIPMENT OR THE PROTECTIVE SYSTEM

Electro-Pneumatic Positioner is a valve control device made in Aluminum and protected by intrinsic security "Ex i" and constructional safety "c" for the mechanical part.

The equipment comprises the following major parts:

- Torque motor with 4-20 mA input signal
- Pilot Valve
- Gauge
- Dome indicator (only for EPR)

The equipment gets the protection degrees IP66 according to EN 60529.

PARAMETERS RELATING TO THE SAFETY

Ui : 28V
Ii : 100mA
Pi : 1W
Ci = 0
Li = 2µH

MARKING

Marking has to be readable and indelible; it has to include the following indications:

POWER-GENEX Ltd.
Incheon, 405-848 KOREA
EPL/EPR...(*)
INERIS 12ATEX0030X
(Serial number)
(Year of construction)

II 2 G
Ex ia IIC T6 Ga
c IIC T6
T.Amb : -20°C to + 70°C

WARNING : POTENTIAL ELECROSTATIC CHARGING HAZARD - SEE INTRUCTIONS

WARNING : POTENTIAL ELECROSTATIC CHARGING HAZARD - SEE INTRUCTIONS

(*) The dots are replaced by a codification according to the manufacturing variations. The different types are indicated in the descriptive documents.

Marking may be carried out in the language of the country of use.

The protective system or equipment has also to carry the marking normally stipulated by its construction standards.

ROUTINE EXAMINATIONS AND TESTS

None.

(16) DESCRIPTIVE DOCUMENTS

The descriptive document quoted hereafter constitutes the technical documentation of the equipment, subject of this certificate.

- Certification file EPL/EPR dated and signed on 2011.08.30

(17) SPECIAL CONDITIONS FOR SAFE USE

For the risk of electrostatic discharge, the user will have to read the instructions.

(18) ESSENTIAL SAFETY AND HEALTH REQUIREMENTS

The respect of the Essential Health and Safety Requirements is ensured by:

- Conformity to the standards quoted in clause (9).
- All provisions adopted by the manufacturer and defined in the descriptive documents.

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx KTL 11.0012X issue No.:0	Certificate history:
Status:	**Current**	
Date of Issue:	**2011-09-30**	Page 1 of 3
Applicant:	**Power-Genex Ltd.** 44B9L, 434-9, Nonhyun-Dong, Namdong-Gu, Incheon, 405-849 **Korea, Republic of**	
Electrical Apparatus: *Optional accessory:*	**Model EPL/EPR Electro-Pneumatic Positioner**	
Type of Protection:	**Intrinsic safety "i"**	
Marking:	**Ex ia IIC T6 Ga** **Ambient Temperature Range : -20℃ to +70℃** **Ui = 28V, Ii = 100mA, Pi = 1.0W, Ci = 0, Li = 2μH** **IECEx KTL 11.0012X**	
Approved for issue on behalf of the IECEx Certification Body:	Hee-Soo Kim	
Position:	Managing director	
Signature: *(for printed version)*		
Date:		

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Korea Testing Laboratory
222-13, Guro-Dong, Guro-Gu
Seoul, 152-718
Korea, Republic of

IECEx Certificate of Conformity

Certificate No.: IECEx KTL 11.0012X

Date of Issue: **2011-09-30** Issue No.: **0**

Manufacturer: **Power-Genex Ltd.**
44B9L, 434-9, Nonhyun-Dong, Namdong-Gu, Incheon, 405-849
Korea, Republic of

Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2007-10 Edition: 5	Explosive atmospheres - Part 0:Equipment - General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
KR/KTL/ExTR11.0012/00

Quality Assessment Report:

KR/KTL/QAR11.0002/00

IECEx Certificate of Conformity

Certificate No.: IECEx KTL 11.0012X

Date of Issue: **2011-09-30** Issue No.: **0**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The Model EPL/EPR Electro-Pneumatic Positioner is intrinsically safe equipment, which is designed to be operated by a torque motor with 4~20mA electrical signal for control of valve position. The equipment comprises a pilot valve, a lever, dial gauges, a torque motor assembly and so on. They are housed in an aluminium or stainless steel enclosure. 24V DC power supply shall be transmitted to the equipment through an intrinsically safe barrier.
EPa-bcdefghij
a=Actuator Action : L-Linear type, R-Rotary type
b=Ex-Protection Type : I-Intrinsic safety(Ex ia IIC T6)
c=Feedback Shaft : A, B, C, A, N
d=Gauge : 1, 2
e=Pilot Valve Orifice : S, M
f =Position Feedback : N-None
g=Connection Threads : 3, 4, 5
h=Dome Indicator : N, D
i=High Temperature : T-70℃(std)
j=Mounting Bracket : N, L, R, F

For the detailed information, refer to the manual.

CONDITIONS OF CERTIFICATION: YES as shown below:

WARNING-POTENTIAL ELECTROSTATIC CHARGING HAZARD-SEE INSTRUCTIONS.
1. The non-metallic parts incorporated in the enclosure of this equipment may generate an ignition capable level of electrostatic charge. Therefore particularly when it used for applications that specifically require Group IIC, EPL Ga equipment, the equipment shall not be installed in a location where the external conditions are conductive to the build-up of electrostatic charge on such surfaces. Additionally, the equipment shall only be cleaned with a damp cloth.
2. The encolsure contains aluminum and is considered to present a potential risk of ignition by impact or friction. Care must be taken during installation and use to prevent impact or friction.

POWER-GENEX®

EU Declaration of Conformity

We herewith declare , **Power-Genex Ltd.**
99, Eunbong-ro, Namdong-gu,
Incheon 21639 Korea

declare that the DoC is issued under our sole responsibility and belongs to the following product:

Product Name	**:**	**Electro-Pneumatic Positioner**
Product Model	**:**	**EPL, EPR Series**

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

EMC Directive 2004/108/EC(until 19th April, 2016) and
EMC Directive 2014/30/EU(from 20th April, 2016)

ATEX Directive 94/9/EC(until 19th April, 2016) and
ATEX Directive 2014/34/EU(from 20th April, 2016)

The following harmonised standards and technical specifications have been applied:
EN 61000-6-1 : 2007 / EN 61000-6-2 : 2005 / EN61000-6-3 : 2007 / EN 61000-6-4 : 2007
EN 60079-0 : 2012/A11 : 2013 / EN 60079-1 : 2007 / EN 60079-18 : 2009

EC-Type Examination Certificate : INERIS 14ATEX0062X

Conformity with the requirements of these Directives is proven by complete adherence to the following standards.

- Date : Apr 20, 2016

Koh Sung-won, Head of R&D

Lee Soon-hyuk, Head of Quality Management

This declaration certifies the conformity to the specified directives but contains no assurance of properties.

(2) **Equipment and protective systems intended for use in potentially explosive atmospheres Directive 94/9/EC**

(1) # EC-TYPE EXAMINATION CERTIFICATE

(3) Number of the EC type examination certificate: **INERIS 14ATEX0062X**

(4) Equipment or protective system:

ELECTRO-PNEUMATIC POSITIONER TYPE EPL-D...N.T. and EPR-D...N.T.

(5) Manufacturer: **POWER-GENEX Ltd.**

(6) Address: 44B9L, 434-9, Nonhyun-Dong, Namdong-Gu
Incheon, 405-848 KOREA

(7) This equipment or protective system and any other acceptable alternative of this one are described in the annex of this certificate and the descriptive documents quoted in this annex.

(8) INERIS, notified body and identified under number 0080, in accordance with article 9 of Council Directive 94/9/EC of the 23rd March 1994, and accredited by COFRAC under number 5-0045 for certification of products and services (scope of accreditation available on the website www.cofrac.fr) certifies that this equipment or protective system fulfils the Essential of Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, described in annex II of the Directive.

The examinations and the tests are consigned in report No 029195/14.

The rules of certification are available on the website www.ineris.fr.

(9) The respect of the Essential Health and Safety Requirements is ensured by:

- conformity with:

EN 60079-0	:	2012/A11 : 2013
EN 60079-1	:	2007
EN 60079-18	:	2009

- specific solutions adopted by the manufacturer to meet the Essential Health and Safety Requirements described in the descriptive documents.

Parc Technologique Alata BP 2 F-60550 Verneuil-en-Halatte
tél + 33(0)3 44 55 66 77 **fax** + 33(0)3 44 55 66 99 **internet** www.ineris.fr
Institut national de l'environnement industriel et des risques
Etablissement public à caractère industriel et commercial - RCS Senlis B 381 984 921 - Siret 381 984 921 00019 - APE 7120B

(10) Sign X, when it is placed following the Number of the EC type examination certificate, indicates that this equipment and protective system is subjected to the special conditions for safe use, mentioned in the annex of this certificate.

(11) This EC type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system, these are not covered by this certificate.

(12) The marking of the equipment or the protective system will have to contain:

Ex II 2 G

Verneuil-en-Halatte, 2015.01.16

The Chief Executive Officer of INERIS
By delegation
T. HOUEIX
Ex Certification Officer

ATMOSPHERES EXPLOSIVES ORGANISME NOTIFIE INERIS NOTIFIED BODY EXPLOSIVE ATMOSPHERES

(13) # ANNEX

(14) EC TYPE EXAMINATION CERTIFICATE N°INERIS 14ATEX0062X

(15) DESCRIPTION OF THE EQUIPMENT OR THE PROTECTIVE SYSTEM

The Model EPL/EPR electro-pneumatic positioner is an Ex d mb type equipment that is applied in hazardous area, which is used for control of linear and rotary valve position.

PARAMETERS RELATING TO THE SAFETY

Input signal	:	4-20 mA signal
Air supply max	:	7 bar

MARKING

Marking has to be readable and indelible; it has to include the following indications:

POWER-GENEX Ltd.
Incheon, 405-848 KOREA
EPL-D...N.T. and EPR-D...N.T. (*)
INERIS 14ATEX0062X
(Serial number)
(Year of construction)
Ⓔx II 2 G
Ex d mb IIC T6 or T5 Gb
Tamb : -40°C...+55°C or -40°C...+70°C

WARNING : DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT

(*) The dots are replaced by a codification according to the manufacturing variations. The different types are indicated in the descriptive documents.

Marking may be carried out in the language of the country of use.

The protective system or equipment has also to carry the marking normally stipulated by its construction standards.

ROUTINE EXAMINATIONS AND TESTS

In accordance with clause 16.2 of the EN 60079-1 standard, the equipment defined above is exempted of routine test in owing to the fact that it has undergone a static type test at 4 times the reference pressure under 28.15 bar.

(16) DESCRIPTIVE DOCUMENTS

The descriptive documents quoted hereafter constitute the technical documentation of the equipment, subject of this certificate.

- Certification file dated and signed on 2013.05.07

(17) SPECIAL CONDITIONS FOR SAFE USE

- The gap of flameproof joints is less than the values specified in tables of the EN 60079-1 standard.
- The width of the different flameproof joints is superior to the values specified in tables of the EN 60079-1 standard.

The other conditions are stipulated in the instructions.

(18) ESSENTIAL SAFETY AND HEALTH REQUIREMENTS

The respect of the Essential Health and Safety Requirements is ensured by:

- Conformity to the standards quoted in clause (9).
- All provisions adopted by the manufacturer and defined in the descriptive documents.

ТАМОЖЕННЫЙ СОЮЗ

СЕРТИФИКАТ СООТВЕТСТВИЯ

EAC

№ ТС RU C-KR.ГБ08.В.00646

Серия RU № 0239683

ОРГАН ПО СЕРТИФИКАЦИИ ВЗРЫВОЗАЩИЩЕННОГО ОБОРУДОВАНИЯ ЗАО ИСПЫТАТЕЛЬНОГО ЦЕНТРА ТЕХНИЧЕСКИХ ИЗМЕРЕНИЙ, БЕЗОПАСНОСТИ И РАЗРАБОТОК (ОС ВО ЗАО ТИБР), аттестат аккредитации № РОСС RU.0001.11ГБ08, срок действия с 15.06.2011 г. по 15.06.2016 г., выдан Федеральным Агентством по техническому регулированию и метрологии. Адрес: 105082, г. Москва, ул. Фридриха Энгельса, д. 75, стр.11, офис 204, Россия (юридический адрес); 301760, Тульская обл., г. Донской, ул. Горноспасательная, д. 1, стр. А, Россия (фактический адрес). Тел./факс: (48746) 5-59-53, e-mail: pmv@tiber.ru, http://www.tiber.ru

ЗАЯВИТЕЛЬ

ООО «Диалкон Технолоджи», ОГРН 1085047010839
Адрес: 141400, Московская область, г. Химки, ул. Рабочая, дом 2 А, корпус 22 А, офис 306, Россия
Телефон:+74957413972, факс: +74957413972

ИЗГОТОВИТЕЛЬ POWER-GENEX Ltd.
Адрес: 44B9L, 434-9, NonHyun-Dong, Namdong-Gui Incheon, 405-848, Республика Корея
Телефон: +82-10-5474-0945, факс: +82-32-812-6645

ПРОДУКЦИЯ

Позиционеры и датчики положения серии EPR/EPL, SS2L/SS2R, SS3L/SS3R, LSB-7xxx, LSB-3xxx
Серийный выпуск.

КОД ТН ВЭД ТС 9032 89 000 9

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ Технического регламента Таможенного союза «О безопасности оборудования для работы во взрывоопасных средах» (ТР ТС 012/2011); ГОСТ Р МЭК 60079-0-2011, ГОСТ IEC 60079-1-2011, ГОСТ Р МЭК 60079-11-2010, ГОСТ Р МЭК 60079-18-2012

СЕРТИФИКАТ ВЫДАН НА ОСНОВАНИИ Протокол испытаний № 611/447-Ex от 13.10.2014 г., ИЛ ВО ЗАО ТИБР, рег. № РОСС RU.0001.21ГБ08 от 15.06.2011 г. Адрес: 301760, Тульская обл., г. Донской, ул. Горноспасательная, д. 1, стр. А, Россия, акт анализа состояния производства изготовителя № 447/АСП от 16.06.2014 г.

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ Схема оценки (подтверждения) соответствия 1с
Сертификат действителен только с приложением (бланк № 0156374, 0156375, 0156376)

СРОК ДЕЙСТВИЯ С 19.11.2014 **ПО** 18.11.2019 **ВКЛЮЧИТЕЛЬНО**

М.П.

Руководитель (уполномоченное лицо) органа по сертификации (подпись) Д.С. Подсевалов (инициалы, фамилия)

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) (подпись) М.В. Пономарев (инициалы, фамилия)

Бланк изготовлен ЗАО "ОПЦИОН", www.opcion.ru (лицензия № 05-05-09/003 ФНС РФ), тел. (495) 726 4742, Москва, 2013

ТАМОЖЕННЫЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ТС RU C-KR.ГБ08.В.00646

Серия RU № 0156374

1. Назначение и область применения.

Позиционеры серий EPR/EPL, SS2L/SS2R, SS3L/SS3R предназначены для преобразования управляющего сигнала (электрического или пневматического) в угол поворота исполнительного механизма.

Датчик положения LSB-3xxx, LSB-7xxx предназначены для регистрации состояния положения.

Позиционеры и датчики предназначены для применения во взрывоопасных зонах в соответствии с присвоенной маркировкой взрывозащиты.

2. Описание конструкции и средств обеспечения взрывозащиты.

Позиционеры серий EPR/EPL представляют собой алюминиевый корпус с антикоррозионным покрытием, внутри которого помещены электрические и механические части. На корпусе имеется блок индикаторов-манометров, визуальный индикатор положения (только для EPR/EPL), ЖК экран (только для SS2L/SS2R, SS3L/SS3R).

Датчик положения LSB-3xxx, LSB-7xxx представляет алюминиевый корпус с антикоррозионным покрытием, внутри которого помещены электрические части.

3. Специальные условия применения.

3.1. Позиционеры серий EPR/EPL, SS2L/SS2R, SS3L/SS3R, имеют риска разряда статического электричества, протирать только влажной тканью и обеспечить возможность стекания статического электричества.

3.2. У позиционеров серий EPR/EPL, SS2L/SS2R изоляция между искробезопасными цепями и корпусом не способны выдержать испытания 500 В на электрическую прочность. Это должно быть принято во внимание во время установки.

3.3. Позиционеры серий EPR/EPL, SS3L/SS3R запрещено открывать при возможности присутствии взрывоопасных газов или при существовании опасности воспламенения горючей пыли.

3.4. Позиционеры серий EPR/EPL, SS3L/SS3R и датчик положения LSB-7xxx имеют зазор меньше, чем максимально допустимый зазор, установленный ГОСТ IEC 60079-1-2011. Ответственность за недопущение превышения максимально допустимого зазора между корпусом и крышкой, возлагается на потребителя данного оборудования.

3.5. Датчик положения LSB-7xxx, LSB-3xxx имеют риски разряда статического электричества, протирать только влажной тканью и обеспечить возможность стекания статического электричества. Запрещено открывать при возможности присутствии взрывоопасных газов или при существовании опасности воспламенения горючей пыли.

4. Маркировка.

Маркировка, наносимая на оборудование должна включать следующие данные:

1) наименование изготовителя или его зарегистрированный товарный знак;
2) обозначение типа оборудования;
3) заводской номер;
4) номер сертификата соответствия;
5) маркировку взрывозащиты

Позиционеры серий EPR и EPL - **0 Ex ia IIC T6 Ga X/II Gb c T6 X**
1 Ex d mb IIC «T6/T5» Gb X/II Gb c T6/T5 X

Позиционеры серий SS2L/SS2R - **0 Ex ia IIC «T6-T5» Ga X/II Gb c T6-T5 X**

Позиционеры серий SS3L/SS3R – **1 Ex d IIC T6 Gb X/II Gb c T6**

Датчик положения LSB-7xxx - **1 Ex d IIB+H2 T6 Gb X**

Датчик положения LSB-3xxx - **1 Ex d IIC «T6/T5/T4 Gb» X**

6) изображение специального знака взрывобезопасности установлено в ТР ТС 012/2011 (приложение 2)

М.П.

Руководитель (уполномоченное лицо) органа по сертификации (подпись) Д.С.Подсевалов (инициалы, фамилия)

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) (подпись) М.В. Пономарев (инициалы, фамилия)

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ТАМОЖЕННЫЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ТС RU C-KR.ГБ08.В.00646

Серия RU № 0156375

5. Основные технические данные.

5.1. Позиционеры серий EPR/EPL (0 Ex ia IIC T6 Ga X/II Gb c T6 X)

5.1.1. Искробезопасные параметры

Ui, В 28

Ii, мА 100

Pi, мВт 1

Ci ..... пренебрежимо мало

Li, мкГц 2

5.1.2. Входной/выходной сигнал, мА ..... 4 – 20

5.1.3. Температура окружающей среды, ^{0}C ..... от минус 20 до +70

5.2. Позиционеры серий EPR/EPL (1 Ex d mb IIC «T6/T5» Gb X/II Gb c T6/T5 X)

5.2.1. Температура окружающей среды, ^{0}C ..... от минус 40 до +55 (для T6), до +70 (для T5)

5.2.2. Входной/выходной сигнал, мА ..... 4 – 20

5.2.3. Входной сигнал, В (DC) 24

5.2.4. Входной/выходной сигнал, В (AC) 125/250

5.2.5. Входной/выходной сигнал, В (DC) 125/250

5.2.6. Степень защиты оболочки по ГОСТ 14254-96 ..... IP66

5.3. Позиционеры серий SS2L/SS2R (0 Ex ia IIC «T6-T5» Ga X/II Gb c T6-T5 X)

5.3.1. Искробезопасные параметры

(Port 1)

Ui, В 28

Ii, мА 93

Pi, мВт 651

Ci, нФ 23

Li, мкГц ..... пренебрежимо мало

(Port 2)

Ui, В 28

Ii, мА 93

Pi, мВт 651

Ci, нФ 22

Li, мкГц ..... пренебрежимо мало

(Port 4-1)

Ui, В 28

Ii, мА 93

Pi, мВт 651

Ci, нФ ..... пренебрежимо мало

Li, мкГц ..... пренебрежимо мало

5.3.2. Входной/выходной сигнал, мА ..... 4 – 20

5.3.3. Температура окружающей среды, ^{0}C ..... от минус 40 до +40 (для T6), до +80 (для T5)

М.П.

Руководитель (уполномоченное лицо) органа по сертификации — (подпись) — Д.С.Подсевалов (инициалы, фамилия)

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) — (подпись) — М.В. Пономарев (инициалы, фамилия)

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ТАМОЖЕННЫЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ТС RU C-KR.ГБ08.В.00646

Серия RU № 0156376

5.4. Позиционеры серий SS3L/SS3R – (1 Ex d IIC T6 Gb X/II Gb c T6)
5.4.1. Входной/выходной сигнал, мА ..... 4 – 20
5.4.2. Входной сигнал, В (DC) 24
5.4.3. Входной/выходной сигнал, В (AC) 250
5.4.4. Входной сигнал, В (DC) ..... 9 – 32
5.4.5. Max/min токи, мА 3,6/50
5.4.6. Степень защиты оболочки по ГОСТ 14254-96 ..... IP66
5.4.7. Температура окружающей среды, ^{0}C ..... от -30 до +75
5.5. Датчик положения LSB-7xxx – (1 Ex d IIB+H2 T6 Gb X)
5.5.1. Напряжение, В ..... 220 (AC)/110(AC)/24 (DC)/48(DC)
5.5.2. Степень защиты оболочки по ГОСТ 14254-96 ..... IP67
5.5.3. Входной/выходной сигнал, мА ..... 4 – 20
5.5.4. Входной/выходной сигнал, В ..... 8(DC)/8.2(DC)/24(DC)/30(DC)/120(AC)/125(AC)/240(AC)/250(AC)
5.5.5. Температура окружающей среды, ^{0}C ..... от минус 30 до +75
5.6. Датчик положения LSB-3xxx – (1 Ex d IIC «T6/T5/T4 Gb» X)
5.6.1. Напряжение. В ..... 220 (AC)/110(AC)/24 (DC) /48(DC)
5.6.2. Степень защиты оболочки по ГОСТ 14254-96 ..... IP67
5.6.3. Входной/выходной сигнал, В ..... 8(DC)/8.2(DC)/24(DC)/30(DC)/120(AC)/125(AC)/240(AC)/250(AC)
5.6.4. Температура окружающей среды, ^{0}C .от минус 40 до +75(для T6), до +80 (для T5), до +125 (для T4)

При внесении изготовителем в конструкцию и (или) техническую документацию, подтверждающую соответствие оборудования и (или) Ex-компонента требованиям ТР ТС 012/2011, изменений, влияющих на показатели взрывобезопасности оборудования, он должен предоставить в ОС ВО ЗАО ТИБР, описание изменений, техническую документацию (чертежи средств обеспечения взрывозащиты) с внесенными изменениями и образец для проведения дополнительных испытаний, если ОС ВО ЗАО ТИБР посчитает недостаточным проведение только экспертизы технической документации с внесенными изменениями для принятия решения о соответствии оборудования и (или) Ex-компонента ТР ТС 012/2011 с внесенными изменениями.

М.П.

Руководитель (уполномоченное лицо) органа по сертификации (подпись) Д.С.Подсевалов (инициалы, фамилия)

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) (подпись) М.В. Пономарев (инициалы, фамилия)

Бланк изготовлен ЗАО "ОПЦИОН", www.opcion.ru (лицензия № 05-05-09/003 ФНС РФ), тел. (495) 726 4742, Москва, 2013

CONFLOW s.p.a.
Via Lecco 69/71
20864 AGRATE BRIANZA (MB) - ITALY

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV GL = ISO 9001 =

CE

DICHIARAZIONE DI CONFORMITA'
AI SENSI DELLA DIRETTIVA EUROPEA "ATEX" N° 2014/34/UE (allegato X)
Declaration of conformity according to
ATEX DIRECTIVE N° 2014/34/UE (Annex X)

A. **Descrizione / Description : Posizionatoe Pneumatico Pilota Tipo :**
Pneumatic Pilot Positioner Type :

PPL – EX (Tipo Lineare – Linear Type)
PPR – EX (Tipo Rotante – Rotary Type)

B. **CLASSIFICAZIONE secondo Allegato I : Gruppo 2 Categoria 2 G / D c IIC X**
CLASSIFICATION according ANNEX I : Group 2 Category 2 G / D c IIC X

II 2GD c IIC X

TEMPERATURA AMBIENTE : -20°C ≤ Ta ≤ +70°C
AMBIENT ACTUATOR TEMPERATURE

C. **Procedure di valutazione di conformità utilizzata :**
Capitolo II, Articolo 8, lettera b), lettera ii) ALLEGATO VIII – Modulo A+

Conformity Assessment procedures followed :
Chapter II, Article 8, section b), section ii) ANNEX VIII – Modul A+

D. **Nome e Numero dell'ente che detiene il fascicolo tecnico N° PPLEXPPREX/ATEX/2006 :**
Name and Number of Notified Body where is manteined the technical documentation N° PPLEXPPREX/ATEX/2006 :

0496 – DNV MODULO UNO S.c.a.r.l. – Via Cuorgnè, 21 10156 TORINO

Per quanto esposto si dichiara che gli apparecchi descritti al punto A, classificati secondo il punto B e valutati in accordo al punto C, soddisfano i requisiti essenziali di sicurezza previsti nell'allegato II della Direttiva 2014/34/UE e ad essa applicabili.

We declare that the equipments mentioned on above point A, classificated according to point B, valuated according to point C, are conformed to the most essential safety requirements as required by Directive 2014/34/UE annex II.

CONFLOW s.p.a.
Firma del Costruttore / Manufacturer Signature

Data di rilascio 08/05/07
Date of Issue

CONFLOW s.p.a.

FLOW CONTROL SOLUTIONS

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