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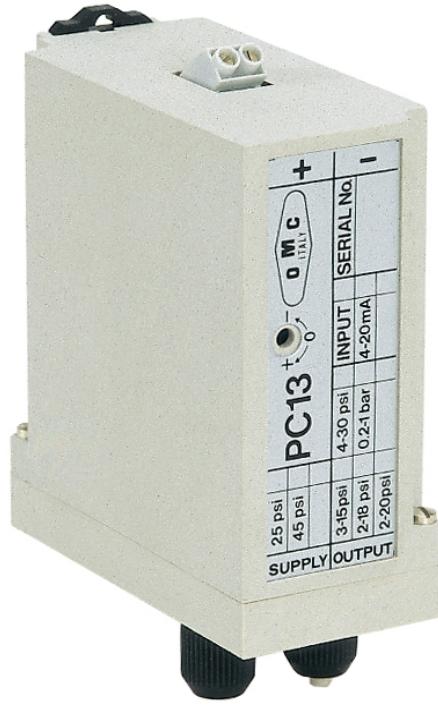
PC13

electropneumatic converter (panel mounting) - 电 气 变 换 器 (板安装)

ssPC13 - 01.2001

应 用

仪器用于把标准的直流电流信号转变成标准的气动信号，为了把电动控制器转变为气动控制阀或从电动测量系统转变为气动控制器。 PC13是一个力平衡装置，它将输入信号4~20mA,0~20mA, 或1~5V,0~10V转换成相对应的输出信号3~15psi(0.2~1巴),2~20psi(0.14~2巴)或4(6)~30 (0.3~2巴)，并有一个单独25或45psi(1.7~3巴)的气源压力。



APPLICATION

Instrument for conversion of a standard d.c. current signal into a standard pneumatic signal, for the change-over from electrical controllers to pneumatic control valves, or from electrical measuring system to pneumatic controllers. The PC13 is a force balance device, which converts the input signal 4...20 mA, 0...20 mA or 1...5 V, 0...10 V to a proportional output signal 3..15 psi (0.2..1 bar), 2..20 psi (0.14...2 bar) or 4(6)...30 (0.3...2 bar), with a respective supply pressure of 25 or 45 psi (1.7 - 3bar).

特 征

独特的紧密设计	Particularly compact design.
良好的动力响应	Good dynamic response.
不易受机械振动	Insensitive to mechanic vibrations.
低维修	Low maintenance.
低消耗	Low consumption.
高可靠性	High reliability.
可调节输出测量跨度	Adjustable output measuring span.

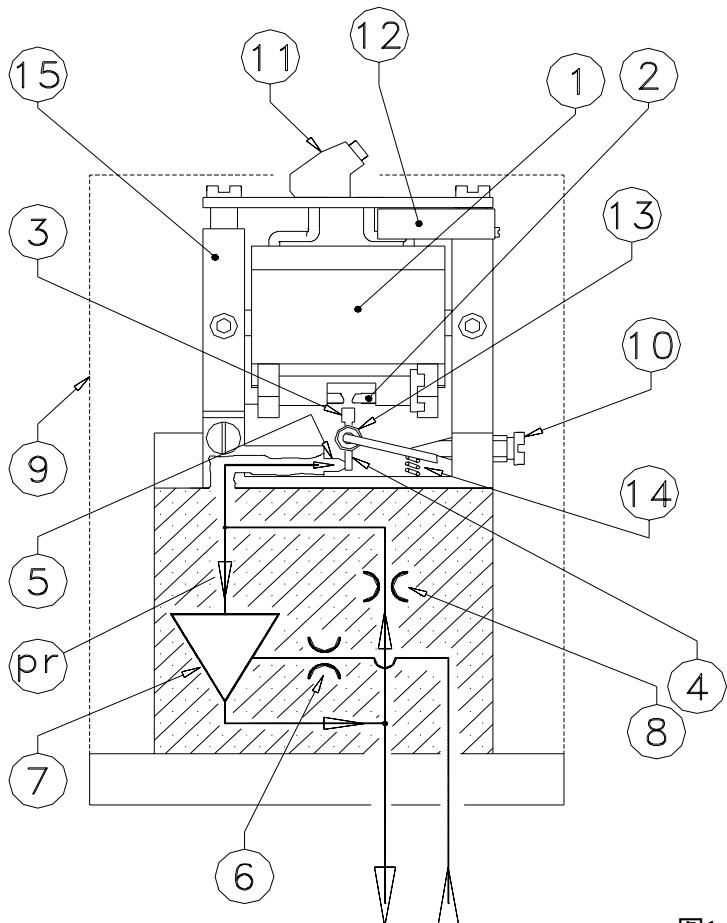
选 项

输出信号4(6)...30psi/0,3(0,4)...巴	Output signal 4(6)...30 psi / 0,3(0.4)...2 bar
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OPTIONS



OMC产品制造符合ISO-9001质量认证体系，并通过了Lloyd的注册，160050认证



1 - 线圈
2 - 场磁铁
3 - 永久磁铁
4 - 止回阀
5 - 喷嘴
6 - 放大器节流阀
7 - 放大器
8 - 喷嘴气阻节流阀
9 - 浇铸块
10 - 零点调节器
11 - 终端
12 - 测量跨度调节器
13 - 止回阀支点
14 - 弹簧

1 - Coil
2 - Field magnet
3 - Permanent magnet
4 - Flapper
5 - Nozzle
6 - Amplifier throttle
7 - Amplifier
8 - Nozzle restriction
9 - Cast block
10 - Zero point adjuster
11 - Terminals
12 - Measuring span adjuster
13 - Flapper fulcrum
14 - Spring

图1

操作模式 (参见图1)

直流电流 "I" 在位于场磁铁 (2) 区的线圈 (1) 内流动。通过系统产生的磁通量有对应电流 "I" 的力。这个力相应地影响和移动固定在止回阀 (4) 处的永久磁铁 (3)。此力在止回阀 (4) 中通过由喷嘴 (5) 产生的动力背压 "Pr" 的力得到平衡。供气供给充气容量放大器 (7)，在节流阀 (8)，喷嘴 (5) 中流动并撞击止回阀 (4)。如果电流 "I" 增加，磁通量的力增加并且止回阀 (4) 向喷嘴 (5) 移动。因为如此，动力背压和因此产生的供给加速器 (3...15psi, 0,2...1巴) 的输出压力也被增加。压力增加到达到另一个平衡状态，"P" 也与输入电流 "I" 对应。

MODE OF OPERATION (see FIG. 1)

The d.c. current "I" flows through the coil (1) located in the field of a magnet (2). The magnetic flux created by the system has a force proportional to the current "I". This force influences and moves proportionally a permanent magnet (3) fixed on a flapper (4). The force is balanced in the flapper (4) by the force of the dynamic back pressure "Pr" which is generated by the nozzle (5). The supply air feeds the pneumatic volume amplifier (7), flows through the throttle (8), the nozzle (5) and hits the flapper (4). If the current "I" increases, the force of the magnetic flux increases and the flapper moves closer to the nozzle (5). Due to this, the dynamic back pressure "Pr" and consequently the output pressure "P" fed to the booster (3...15 psi, 0,2...1 bar) are increased. The pressures increase until a new balance state is reached and "P" is proportional to the input current "I".

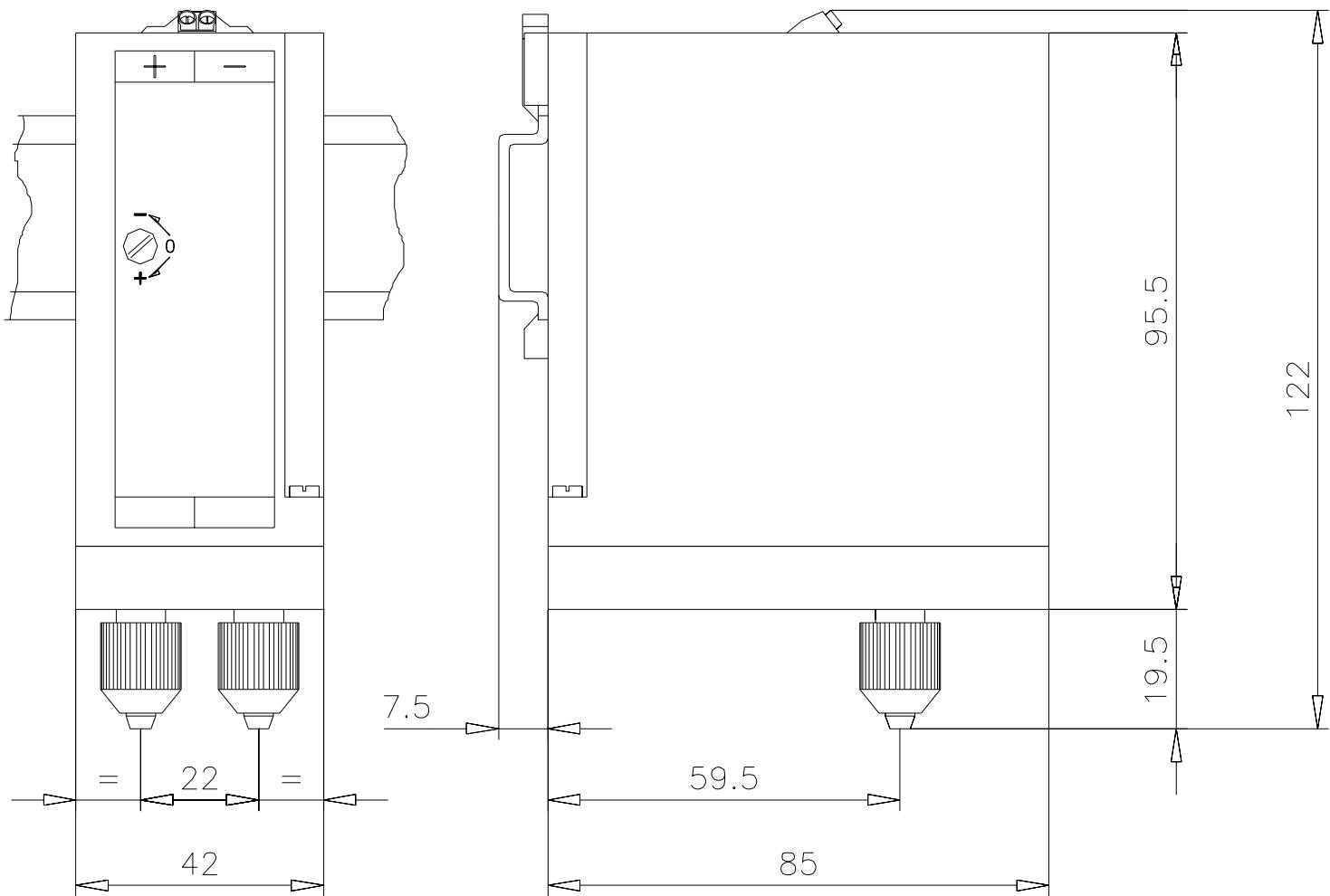
机 械 数 据 - TECHNICAL DATA

外壳	- Cover	ABS Tecnopolimer, 10%加固玻璃纤维 ABS Tecnopolimer, 10% fiber glass stiffened	
保护度	- Degree of protection	IP20	
装备	Mounting	根据DIN EN 50 022在35mm宽的轨道上 On 35 mm wide rail acc. to DIN EN 50 022	
气动连接	Pneumatic connections	管道的管接头4x1(外部直径6mm) Pipe fitting for tube 4x1 (outer diam. 6mm)	
电动连接	Electric Connections	双线连接的终端 直径0,5..1,5mm Terminal for 2 wires conn. Ø0,5..1,5 mm	
输入	- Input	4 ~ 20 mA (0~20mA , 1~5V , 0~10V)*	
供气压力	- Supply air pressure	25 psi / 1,7 巴	45 psi / 3 巴
输出	- Output	3~15 (2~18, 2~20)* psi	(4~30)* psi
电压	- Voltage	\leq 30 V	
电流	- Current	\leq 150 mA	
能量消耗	- Power consumption	\leq 0,80 W	
阻抗	- Impedance	最大250	
电容器调节	- Trimmer adjustment	\pm 0.5 psi	
精度	- Linearity error	\leq 1 %	
磁滞现象错误	- Hysteresis error	\leq 0,5 %	
重复性误差	- Max repeatability error	\leq 0,2 %	
空气消耗	- Air Consumption	0,15Nm ³ /h(气源.25psi)	
空气输送	- Air delivery	2,6Nm ³ /h(气源.25psi)	
环境温度	- Ambient Temperature	$-20....+70$ °C	
存储温度	- Storage Temperature	$-30....+80$ °C	
重量	- Weight	260克	

* 备 索 / on request

尺寸

- DIMENSIONS



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PC15

field I to P converter - 范围 I 到 P 变换器

ssPC15 - 11/2001

应用

仪器用于把标准的直流电流信号转变成标准的气动信号，实现把电动控制转变为气动控制阀即将从电动测量系统转变为气动控制。PC15是一个力平衡装置，它将输入信号4...20mA, 0...20mA, 或1...5V, 0...10V转换成相对应的输出信号3...15psi(0,2...1巴), 2...20psi(0,14...2巴)或4(6)...30(0,3...2巴，并有一个相应地25或45psi(1,7-3巴)的电源压力。



APPLICATION

Instrument for conversion of a standard d.c. current signal into a standard pneumatic signal, for the change-over from electrical controllers to pneumatic control valves, or from electrical measuring system to pneumatic controllers. The PC15 is a force balance device, which converts the input signal 4...20 mA, 0...20 mA or 1...5 V, 0...10 V to a proportional output signal 3..15 psi (0,2...1 bar), 2...20 psi (0,14...2 bar) or 4(6)...30 (0,3...2 bar), with a respective supply pressure of 25 or 45 psi (1,7 - 3bar).

特征

独特的紧凑设计
良好的动力响应
不易受机械振动
低维修
低消耗
高可靠性
可调节输出测量跨度

FEATURES

Particularly compact design.
Good dynamic response.
Insensitive to mechanic vibrations.
Low maintenance.
Low consumption.
High reliability.
Adjustable output measuring span.

附件

2"管的装备支架

ACCESSORIES

Mounting bracket for 2" pipe.

选项

Output signal 4(6)...30 psi / 0,3(0.4)...2 bar
固有安全类型
电缆衬垫PG13,5

OPTIONS

Output signal 4(6)...30 psi / 0,3(0.4)...2 bar
Intrinsically Safe version.
Cable gland PG13,5



OMC产品制造符合ISO-9001质量认证体系，并通过了Lloyd的注册，160050认证

操作模式(参见图1)

d.c.电流 "I" 在位于场磁铁 (2) 区的线圈 (1) 内流动。通过系统产生的磁通量有对应电流 "I" 的力。这个力相应地影响和移动固定在止回阀 (4) 处的永久磁铁 (3)。此力在止回阀 (4) 中通过由喷嘴 (5) 产生的动力背压 "Pr" 的力得到平衡。供气供给充气容量扩音器 (7)，在节流阀 (8)，喷嘴 (5) 中流动并碰击止回阀 (4)。如果电流 "I" 增加，磁通量的力增加并且止回阀 (4) 向喷嘴 (5) 移动。因为如此，动力背压和因此产生的供给加速器 (3...15psi, 0,2...1巴) 的输出压力也被增加。压力增加到达到另一个平衡状态，“P”也与输入电流 "I" 对应。

MODE OF OPERATION (SEE FIG. 1)

The d.c. current "I" flows through the coil (1) located in the field of a magnet (2). The magnetic flux created by the system has a force proportional to the current "I". This force influences and moves proportionally a permanent magnet (3) fixed on a flapper (4). The force is balanced in the flapper (4) by the force of the dynamic back pressure "Pr" which is generated by the nozzle (5). The supply air feeds the pneumatic volume amplifier (7), flows through the throttle (8), the nozzle (5) and hits the flapper (4). If the current "I" increases, the force of the magnetic flux increases and the flapper moves closer to the nozzle (5). Due to this, the dynamic back pressure "Pr" and consequently the output pressure "P" fed to the booster (3...15 psi, 0,2...1 bar) are increased. The pressures increase until a new balance state is reached and "P" is proportional to the input current "I".

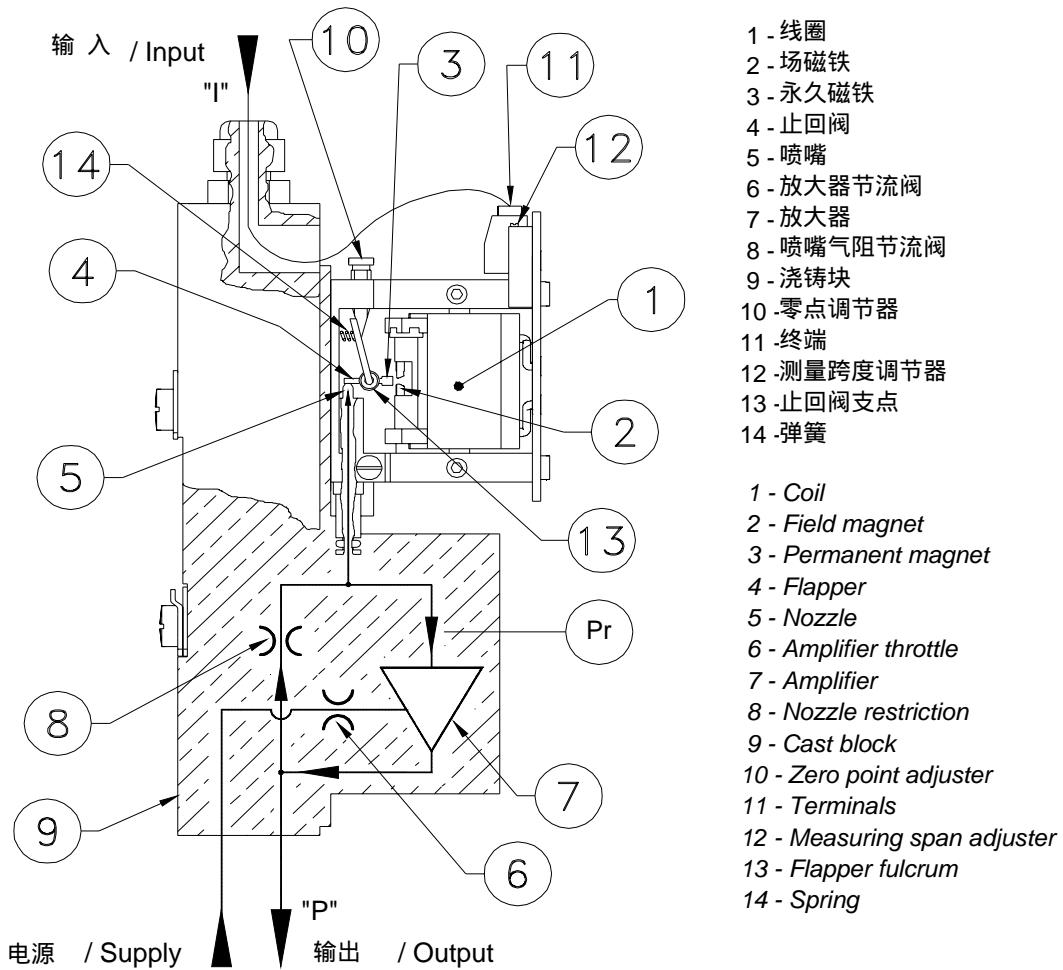


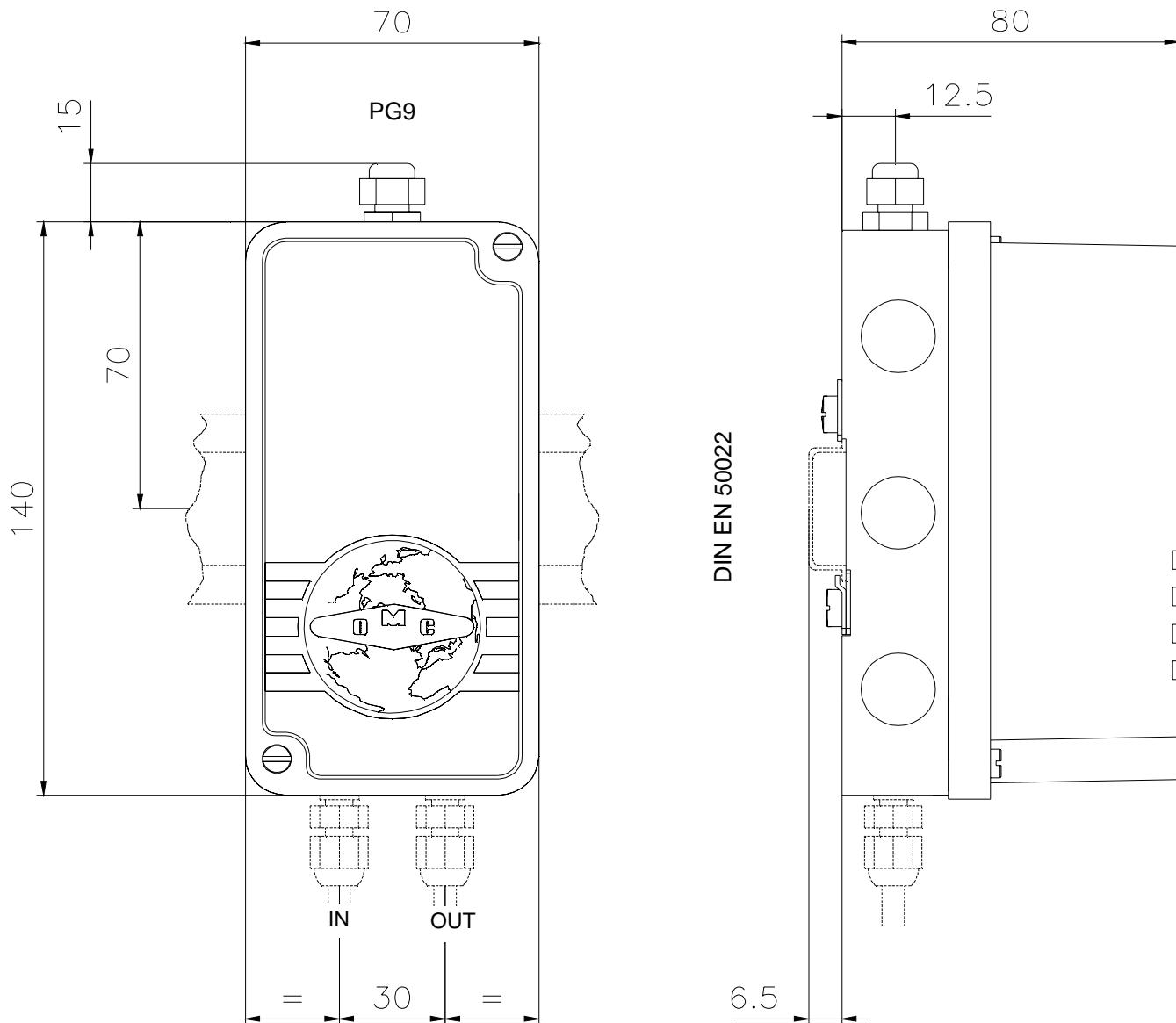
图1 示意图表 / Schematic diagram

机 械 数 据 I - TECHNICAL DATA

外壳 - Cover	标准版本：聚碳酸酯 EEx 版本(PC15.1)：带防腐漆的铝质压铸件 EEx version (PC15.1): Die cast alumunium with anti corrosive paint		
机身 Body	带防腐漆的铝质压铸件 Die cast alumunium with anti corrosive paint		
保护度 - Degree of protection	IP55 (IP65)*		
安装 Mounting	根据DIN EN 50 022在35mm宽的轨道上 On 35 mm wide rail acc. to DIN EN 50 022		
气动连接 Pneumatic connections	1/8" NPT (1/4" NPT)*		
供气压力 - Supply air pressure	25 psi / 1,7巴	45 psi / 3巴	
输出 - Output	3~15 (2~18, 2~20)* psi	(4~30)* psi	
电容器调节 - Trimmer adjustment	±0.5 psi		
精度 - Linearity error	≤ 1 %		
磁滞现象错误 - Hysteresis error	≤ 0,5 %		
重复性误差 - Max repeatability error	≤ 0,2 %		
空气消耗 - Air Consumption	0,15 Nm³/h (气源. 25 psi) - 0,15 Nm³/h (supply. 25 psi)		
空气输送. Air delivery	2,6 Nm³/h (气源. 25 psi) - 2,6 Nm³/h (supply. 25 psi)		
环境温度 - Ambient Temperature	- 20....+ 70 °C		
存储温度 Storage Temperature	- 30....+ 80 °C		
重量 - Weight	0,8公斤		
输入 - Input	4 ~ 20 mA (0~20mA , 1~5V , 0~10V)*		
Ui	≤ 30 V		
Ii	≤ 150 mA		
Pi	≤ 0,80 W		
阻抗 - Impedance	最大 250 Ω		
Ci	≈ 0 (可忽略) (negligible		
Li	≈ 0 (可忽略) (negligible		
电动连接 Electric Connections	PG9(PG13,5)*, 双线连接的终端 直径0,5..1,5mm PG9 (PG13,5)*, Terminal for 2 wires conn. Ø0,5..1,5 mm		

* 备 索 / on request

尺 寸 (mm) - DIMENSIONS (mm)



注意

I到P转换器PC15.1型号(固有安全)必须通过与EN50.014和EN50.020一致的通过认证的电气装置供料。装置必须遵照机械说明书上出现的电气特征(参见机械数据)。

ATTENTION!

The I to P converters type PC15.1 (intrinsic safety) must be feed by electric devices certificated in conformity with EN 50.014 and EN 50.020 standards. The devices must comply the electric features mentioned on technical specification (see TECHNICAL DATA).



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PC18

electropneumatic converter - 电 气 变 换 器

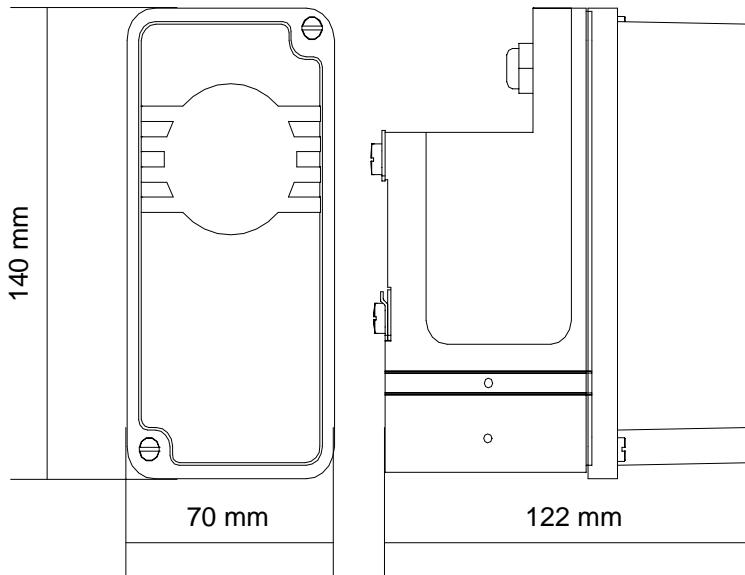
ssPC18 - 11/2001

应用

仪器用于将由电动控制器发出的标准直流电流转换成高动力驱动器的标准气动信号。通过转换4~20mA, 0~20mA, 1~5V或0~10V的输入信号为相应的最大可调节的0,5~8巴的输出信号。

APPLICATION

Instrument for conversion of a standard D.C. current sent by an electronic controllers into a standard pneumatic signal for high power actuators. PC18 operates on the force balance system by changing the input signal of 4-20mA, 0-20mA, 1-5V or 0-10V in a proportional output signal of 0,5-8bar max adjustable.



可使用型号 PC18.1
EEx ia IIC T6, T5 EN 50.014, EN 50.020
ATEX (94/9/CE): II 1 G

特 点

独特的紧凑设计
良好的动力响应
不易受机械振动
低维修
低消耗
高可靠性
可调节输出测量跨度

FEATURES

Particularly compact design.
Good dynamic response.
Insensitive to mechanic vibrations.
Low maintenance.
Low consumption.
High reliability.
Adjustable output measuring span.

附 件

2"管的装备支架

ACCESSORIES

Mounting bracket for 2" pipe.

选 项

电缆衬垫PG13,5
固有安全类型

OPTIONS

Cable gland PG13,5
Intrinsically Safe version.



OMC产品制造符合ISO-9001质量认证体系，并通过了Lloyd的注册，160050认证

机 械 数 据

- TECHNICAL DATA

外壳 - Cover	标准版本：聚碳酸酯 EEx 版本(PC18.1)：带抗腐蚀漆的铝质压铸件 Standard version: Polycarbonate EEx version (PC18.1): Die cast aluminium with anti corrosive paint
机身 Body	带抗腐蚀漆的铝质压铸件 Die cast aluminium with anti corrosive paint
保护度 - Degree of protection	IP55 (IP65)*
安装 Mounting	根据DIN EN 50 022在35毫米宽的轨道上 On 35 mm wide rail acc. to DIN EN 50 022
气动连接 Pneumatic connections	1/8" NPT (1/4" NPT)*
供气压力 - Supply air pressure	最大9巴
输出 - Output	最小0~4巴-最大0~8巴
电容器调节 - Trimmer adjustment	±0.5 psi
精度 - Linearity error	≤ 2 %
磁滞现象错误 - Hysteresis error	≤ 0,8 %
重复性错误 - Max repeatability error	≤ 0,2 %
空气消耗 - Air Consumption	0,4 Nm³/h (气源.9巴) - 0,4 Nm³/h (supply. 9 bar)
空气输送: Air delivery	8,5 Nm³/h (气源.9巴) - 8,5 Nm³/h (supply. 9 bar)
环境温度 - Ambient Temperature	- 20....+ 70 °C
存储温度 Storage Temperature	- 30....+ 80 °C
重量 - Weight	1.5公斤
输入 - Input	4 ~ 20 mA (0~20mA , 1~5V , 0~10V)*
Ui	≤ 30 V
Ii	≤ 150 mA
Pi	≤ 0,80 W
阻抗 - Impedance	最大 250 Ω
Ci	≈ 0 (可忽略) (negligible)
Li	≈ 0 (可忽略) (negligible)
电动连接 Electric Connections	PG9(PG13,5)*, 双线连接的终端 直径0,5..1,5mm PG9 (PG13,5)*, Terminal for 2 wires conn. Ø0,5..1,5 mm

* 备 索 / on request



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PR15

field I to P converter - 范围 I 到 P 变换器

ssPR15 - 11/2001

应用

仪器用于把标准的直流电流信号转变成标准的气动信号。PR15主要把电动控制器转变为气动控制阀即将电动测量系统转变为气动控制器。PR15的显著特征是在一个不用其他任何逆流减压器气源压力就可达到10巴的基础上的完整的空气减压器。



APPLICATION

Instrument for conversion of a standard d.c. current signal into a standard pneumatic signal. PR15 is mainly used for the change-over from electrical controllers to pneumatic control valves, or from electrical measuring system to pneumatic controllers. The peculiar feature of PR15 is an air pressure reducer integrated in the base which allows a supply pressure up to 10 bar **without any other pressure reducer upstream.**

特征

独特的紧凑设计
良好的动力响应
不易受机械振动
低维修
低消耗
高可靠性
可调节输出测量跨度



可使用型号 PC18.1
Ex ia IIC T6, T5 EN 50.014, EN 50.020
ATEX (94/9/CE): II 1 G

FEATURES

Particularly compact design.
Good dynamic response.
Insensitive to mechanic vibrations.
Low maintenance.
Low consumption.
High reliability.
Adjustable output measuring span.

附件

2"管的装备支架

ACCESSORIES

Mounting bracket for 2" pipe.

选项

Output signal 4(6)...30 psi / 0,3(0.4)...2 bar
固有安全类型
电缆衬垫PG13,5

OPTIONS

Intrinsically Safe version.
Cable gland PG13,5



OMC产品制造符合ISO-9001质量认证体系，并通过了Lloyd的注册，160050认证

操作模式(参见图1)

d.c.电流 "I" 在位于场磁铁 (2) 区的线圈 (1) 内流动。通过系统产生的磁通量有对应电流 "I" 的力。这个力相应地影响和移动固定在止回阀 (4) 处的永久磁铁 (3)。此力在止回阀 (4) 中通过由喷嘴 (5) 产生的动力背压 "Pr" 的力得到平衡。供气供给充气容量扩音器 (7) , 在节流阀 (8) , 喷嘴 (5) 中流动并撞击止回阀 (4)。如果电流 "I" 增加 , 磁通量的力增加并且止回阀 (4) 向喷嘴 (5) 移动。因为如此 , 动力背压和因此产生的供给加速器 (3...15psi, 0,2...1巴) 的输出压力也被增加。压力增加到达到另一个平衡状态, "P" 也与输入电流 "I" 对应。

MODE OF OPERATION (SEE FIG. 1)

The d.c. current "I" flows through the coil (1) located in the field of a magnet (2). The magnetic flux created by the system has a force proportional to the current "I". This force influences and moves proportionally a permanent magnet (3) fixed on a flapper (4). The force is balanced in the flapper (4) by the force of the dynamic back pressure "Pr" which is generated by the nozzle (5). The supply air feeds the pneumatic volume amplifier (7), flows through the throttle (8), the nozzle (5) and hits the flapper (4). If the current "I" increases, the force of the magnetic flux increases and the flapper moves closer to the nozzle (5). Due to this, the dynamic back pressure "Pr" and consequently the output pressure "P" fed to the booster (3...15 psi, 0,2...1 bar) are increased. The pressures increase until a new balance state is reached and "P" is proportional to the input current "I".

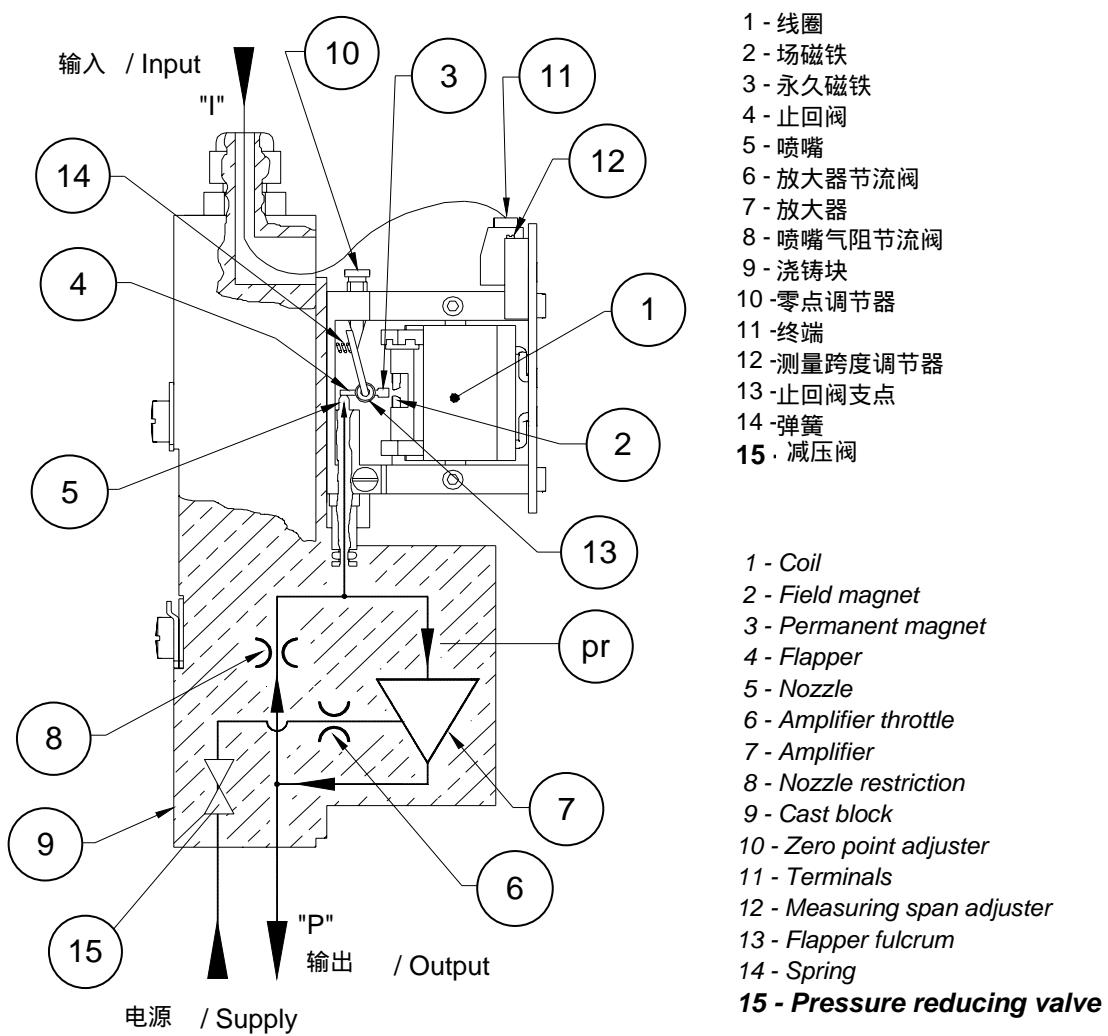
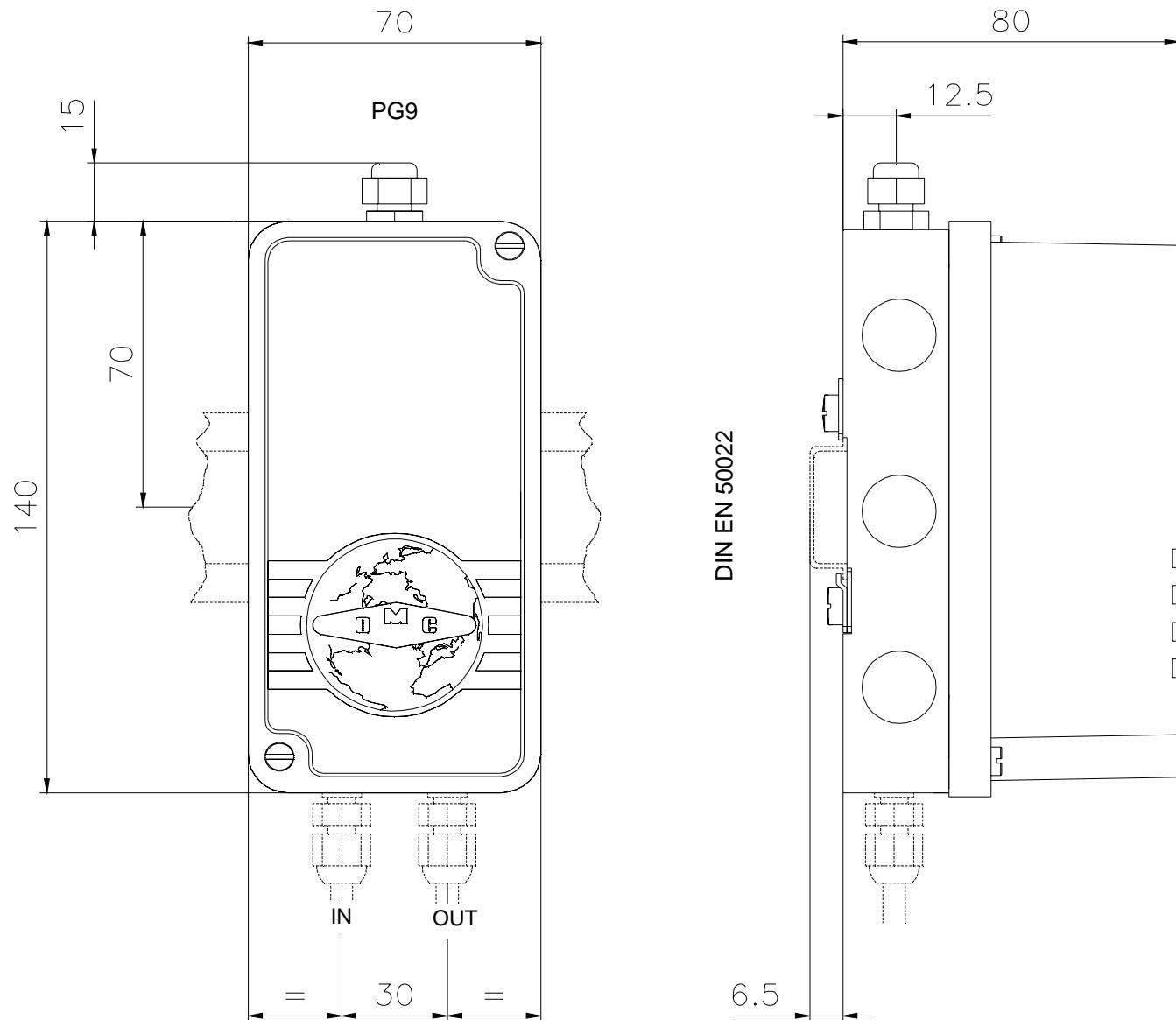


图1 示意图表 / Schematic diagram

外壳 - Cover	标准版本：聚碳酸酯 EEx 版本(PR15.1)：带抗腐蚀漆的铝质压铸件 Standard version: Polycarbonate EEx version (PR15.1): Die cast alumunium with anti corrosive paint
机身 Body	带抗腐蚀漆的铝质压铸件 Die cast alumunium with anti corrosive paint
保护度 IEC144	- Degree of protection IP55 (IP65)*
安装 Mounting	根据DIN EN 50 022在35mm宽的轨道上 On 35 mm wide rail acc. to DIN EN 50 022
气动连接 Pneumatic connections	1/8" NPT (1/4" NPT)*
供气压力 - Supply air pressure	最大145psi(10巴)无空气逆流减压器 max 145 psi (10 bar) without air pressure reducer upstream
输出 - Output	3~15 psi (0,2~1巴), 2~20 psi (0,14~1,4巴), 4(6)*~30 psi(0,3~2巴)
电容器调节 - Trimmer adjustment	±0,5 psi
精度 - Linearity error	≤ 1 %
磁滞现象错误 - Hysteresis error	≤ 0,5 %
重复性错误 - Max repeatability error	≤ 0,2 %
空气消耗 - Air Consumption	0,15 Nm³/h (气源. 25 psi) - 0,15 Nm³/h (supply. 25 psi)
空气输送 Air delivery	2,6 Nm³/h (气源. 25 psi) - 2,6 Nm³/h (supply. 25 psi)
环境温度 - Ambient Temperature	- 20....+ 70 °C
存储温度 Storage Temperature	- 30....+ 80 °C
重量 - Weight	0,8 Kg
输入 - Input	4 ~ 20 mA (0~20mA , 1~5V , 0~10V)*
Ui	≤ 30 V
Ii	≤ 150 mA
Pi	≤ 0,80 W
阻抗 - Impedance	最大 250 Ω
Ci	≈ 0 (可忽略) (negligible)
Li	≈ 0 (可忽略) (negligible)
电动连接 Electric Connections	PG9(PG13,5)*, 双线连接的终端 直径0,5..1,5mm PG9 (PG13,5)*, Terminal for 2 wires conn. Ø0,5..1,5 mm

尺寸 (mm) - DIMENSIONS (mm)



注意

I到P转换器PR15.1型号(固有安全)必须通过与EN50.014和EN50.020一致的通过认证的电气装置供料。装置必须遵照机械说明书上出现的电气特征(参见机械数据)。

ATTENTION!

The I to P converters type PR15.1 (intrinsic safety) must be feed by electric devices certificated in conformity with EN 50.014 and EN 50.020 standards. The devices must comply the electric features mentioned on technical specification (see TECHNICAL DATA).



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