

AIR PURGE UNIT
Series LSP-compact
Type: EJK 2-2
(Controlled with DigiFlow 515)



Installation - & Operation Manual

08/2021

THE EXPERT IN LEVEL AND FLOW

Intra-Automation
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Installation- & Operating Manual (IOM) „LSP-compact“
Printed 08/2021
Technical data subject to be changed.

AIR PURGE UNIT

Series: LSP-compact
Type: EJG-2-2
(controlled with DigiFlow 515)

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This manual contains instructions you have to take under consideration for your own security and, as well, to avoid damages. The instructions are indicated by a danger sign and according to the grade of risk designed as follows:



DANGER

means that death, personal injury or high damage to property **will** occur, if there should be taken no precaution.



WARNING

means that death, personal injury or high damage to property **can** occur, if there should be taken no precaution.



CAUTION

with danger sign means, that only small injuries can happen, if there should be taken no precaution.

CAUTION

without danger sign means, that damage to property can happen, if there should be taken no precaution.

ATTENTION

highlights actions or procedures which, if not performed correctly, may indirectly affect operation or lead to an instrument response which is not planned.



NOTE

is an important information about the product itself, the handling of the product or that part of the manual to which special attention is to be drawn..

Limited Liability

We have checked the contents of this manual in accordance with the hardware. But we cannot guarantee that there will be no differences between the manual and the hardware. The manual will be checked frequently to correct the manual in the following versions.

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Technical details are subject to be changed



NOTE

For reasons of clarity the manual does not contain detailed information about all types of products and cannot take into account every conceivable case of installation, operation or maintenance.

If you require further information or should any problems occur which are not sufficiently explained in the manual, you can consult your local Intra-Automation branch to obtain the necessary information.

May we also draw your attention to the fact that the contents of the manual are not part of a previous or existing agreement, approval or legal relationship or an amendment thereof. All obligations of the Intra-Automation GmbH result from the contract of purchase which also contains the full and solely valid warranty agreement. These contractual warranty conditions are neither extended nor restricted by the contents of the manual.

The contents reflect the technical state at the time of going to print. They are subject to technical modifications in the course of further development



WARNING

Intrinsically safe devices lose their license as soon as they are operated on circuits which do not meet the requirements of the EC test certificate.

The device may be operated with high pressure and corrosive media. Therefore serious injuries and/or considerable damage cannot be ruled out in the event of improper handling of the device.

The perfect and safe operation of this equipment is conditional upon proper transport, proper storage, installation and assembly as well as on careful operation and commissioning.

The equipment may only be used for the purposes specified in this instruction manual.

Exclusion of Liability

All modifications to the device require the expressed approval of the manufacturer. For damages due to unauthorized modifications Intra-Automation GmbH declines all liabilities.

Qualified Personnel

re persons familiar with the installation, assembly commissioning and operation of the product and who have the appropriate qualification for their actions, such as:

- training or instruction or authorization to operate and maintain devices/systems according to the standard of safety technology for high pressures and corrosive media.
- training or instruction according to the standards of safety engineering in the care and use of suitable safety equipment.
- training in first aid.

CAUTION!

Modules which are sensitive to electrostatic charge may be destroyed by voltages which are far below the human level of perception. These voltages occur already when you touch a component or electrical connections of a module without first discharging yourself electrostatically. The damage incurred by a module as a result of an over voltage is not usually immediately perceptible but only becomes noticeable after a long time in operation.

EJG 2-2

3. Recommended Application

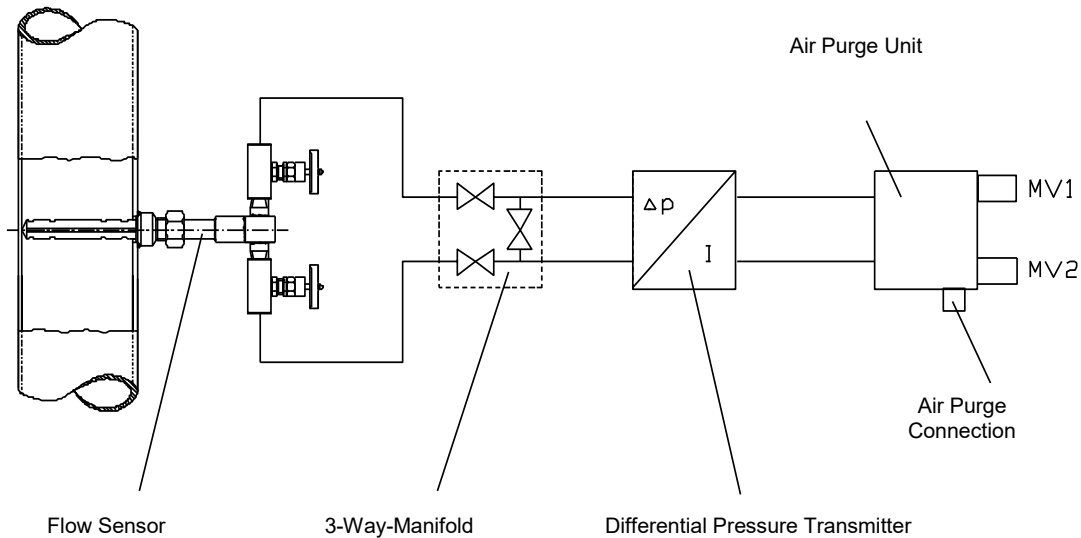
Bei folgenden Feststoffanteilen (hier Staub) im Medium (hier Gas) ist die Anwendung einer Luftspüleinrichtung empfohlen:

Feststoffanteil in mg/m ³	Empfehlung
< 140	Keine Luftspüleinrichtung notwendig
140... 280	Luftspüleinrichtung empfohlen
> 280	Luftspüleinrichtung notwendig

Im Zweifel: Bitte lassen Sie sich von uns beraten.

EJG 2-2

4. Design



EJG 2-2

5. Assembly

The air purge block has to be mounted directly to the differential pressure transmitter (s. Fig. 1) by using the provided screws (M10 x 50mm, DIN 912) and seals (material: PTFE).

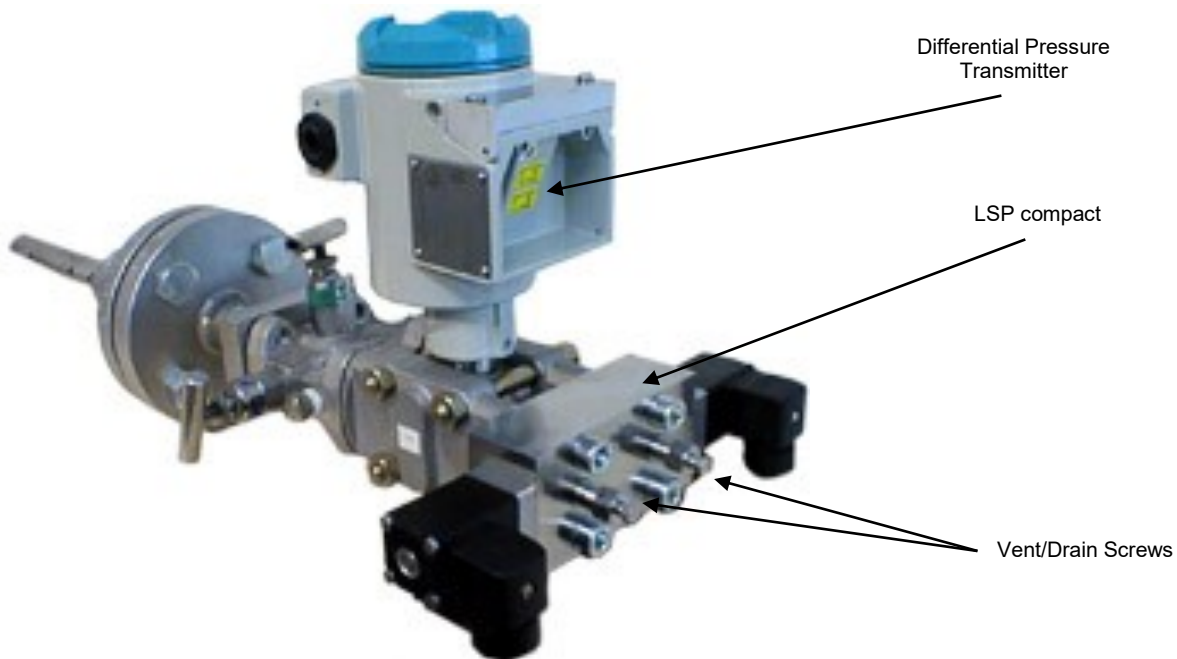


Fig. 1

The Δp -transmitter has to be screwed to the air purge block using the provided vent/drain screws ($\frac{1}{4}$ "-NPT) (s. Fig. 2). On the opposite side of the Δp -transmitter you have to connect the pressure drop pipes (s. Fig. 1: Direct mounting IBF with flange plate and 3-way-manifold). This will ensure that both – flow sensor and transmitter – are purged and cleaned correctly.

On the lower side of the purge block you will find the connections for purge air (s. fig. 2). Standard is two $\frac{1}{4}$ "-NPT-F threads (other dimensions on request).

LSP COMPACT

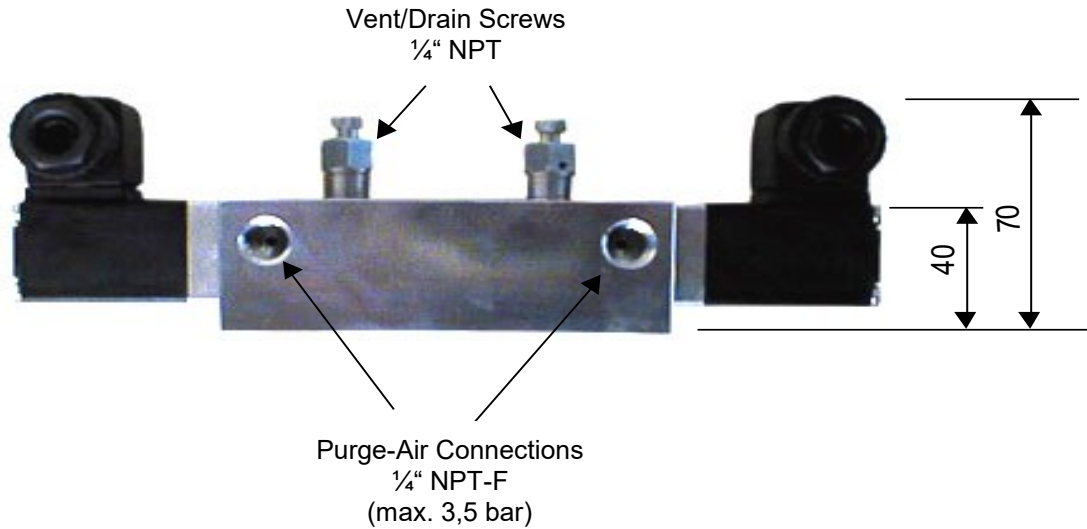


Fig. 2

Please note the necessary power supply for operating note on the nameplate.

ATTENTION

Before starting the purge unit please ensure that the supply voltage is in accordance with the data on the nameplate.

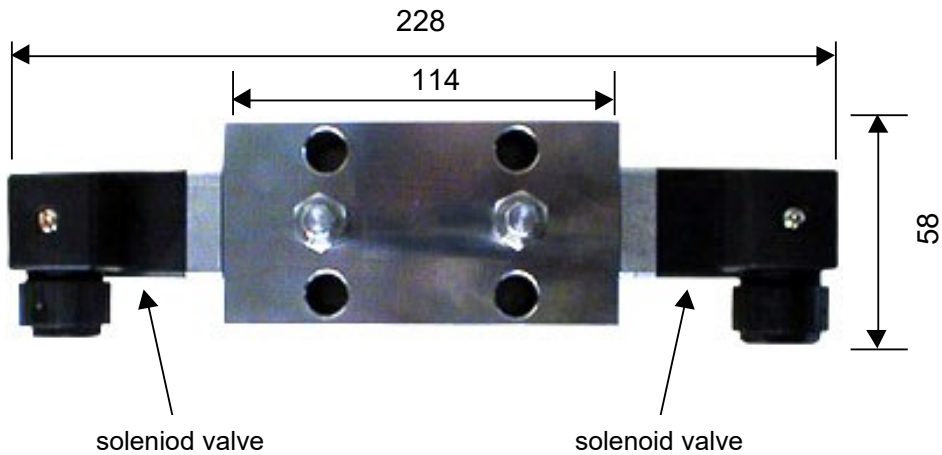


Fig. 3

EJG 2-2

6. Operation

LSP-Compact can be controlled by the customer using their own switch devices, i.e. mechanical switches, relays or using his SPS.

Customer can also use the DigiFlow for controlling the air purge unit. The solenoid valves MV1 and MV2 of the LSP-Compact can be control by using relay #1 or #2 of the DigiFlow.

By controlling the solenoid valves the powered scavenging air gets through the Δp -transmitter into the flow sensor.

Control time t_s (purging time), t_n (settle time) and t_a (cycle time) can be configured in the operating program of the DigiFlow 515 easily (see operation manual of DigiFlow -chap. 1.2, page 35).

7.1 Type: EJG 2.2-1/-2/-3 (Standard Version)

article no.	:	EJG 2-2-1/-2/-3
valve type	:	2/2 way, direct controlled
medium	:	air
function	:	in rest position closed
pipe connection	:	1/4" NPT
fitting position	:	random
nominal width	:	3 mm
Kv-flow rate	:	approx. 0.23 m ³ /h
operating pressure	:	max. 6 bar
nominal stroke	:	1 mm
leakage rate	:	no bubble tracking
temperature of medium	:	-10...+90 °C
ambient temperature	:	max. 55 °C
material of valve body	:	anodized aluminium or StSt
material of parts inside	:	StSt
material of seals	:	FPM
nominal voltage	:	AC: 24 V, 110 V or 220 V / 50 Hz DC: 24 V
protection class	:	without
make time	:	100%
type of protection	:	IP 65
electrical connection	:	acc. DIN 43650
power consumption	:	21 VA AC (start up) 12 VA/ 8 W (during work)
weight	:	approx. 2.7 kg

7.2 Type: EJG 2.2-8 (EEx-m Version)

article no.	:	EJG 2-2-8
valve type	:	2/2 way, direct controlled
medium	:	air
function	:	in rest position closed
pipe connection	:	1/4" NPT
fitting position	:	random
nominal width	:	2 mm
Kv-flow rate	:	approx. 0.23 m ³ /h
operating pressure	:	max. 5 bar
nominal stroke	:	1 mm
leakage rate	:	no bubble tracking
temperature of medium	:	-10...+100 °C for temperature class T6 -30...+60 °C für single mounting
ambient temperature	:	max. 135 °C
material of valve body	:	anodized aluminium or StSt
material of parts inside	:	StSt
material of seals	:	FPM
nominal voltage	:	UC: 230 V/50 Hz
protection class	:	EEx m II 2G/D T4; EEx em II 2G/D T4
make time	:	100%
type of protection	:	IP 65
electrical connection	:	Pressed-in cable (3000 mm)
power consumption	:	7 W
weight	:	approx. 2.7 kg

Code	Description		
EJG	Air purge unit LSP.compact		
	Code	Design	
	2-2	2/2-way-valve, direct mounted	
	Code	Non-explosion proof (standard) (Power supply - options see terminal plug)	
	1	230 V / 50 Hz	
	2	110 V / 50 Hz	
	3	24 V DC	
	Code	Explosion proof II G EEx m T4 (Power supply - incl. Spark suppression, with 3 m cable)	
	8	24 V DC	
	Code	Material valve body	
	A	Aluminium (Standard)	
	S	Stainless steel	
	Code	Terminal plug with spark suppression	
	-	without	
	V	incl. Varistor (only non-explosion proof)	
	L	incl. Varistor & LED (only non-explosion proof)	
EJG	2-2		

DO YOU NEED SUPPORT?

Are you searching for solutions regarding level and flow measurement?

Do you search for special accessories for your metering point?

Do you need support regarding calculation or design of your special application?





Please contact us! Intra-Automation is not just manufacturer and supplier of hardware, we are also

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and are willing to share our knowledge on request.



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Please do not wait. contact us today!



INTRA-AUTOMATION



MESS- UND REGELINSTRUMENTE / MEASUREMENT AND CONTROL



Since its founding in 1977, Intra-Automation GmbH focused its corporate activities on measurement and control systems for flow, level, pressure, absolute pressure and differential pressure. Our mag. level gauges ITA and our flow sensors Itabar were the locomotives for the successful development of Intra-Automation GmbH.

Over the years, our product range has been extended by devices for flow correction and ultrasonic measurement as well as auxiliary equipment for flow and level. In a further step, the core competences "differential pressure flow measurement" and "bypass level measurement" have been strengthened by broadening the product line.

Today, Intra-products enjoy a good reputation in more than 72 countries and many industries all around the world, including chemical and pharmaceutical industry, the oil and gas sector, shipbuilding, machinery and plant construction, the food and beverage industry, water treatment as well as environmental engineering.

Our product range includes instruments for level measurement and control for temperatures up to 400°C and a pressure range up to PN320 as well as differential pressure measuring instruments up to 1200°C and up to PN400.

A continuous quality management according to DIN EN ISO 9001 and constant development guarantee recognized quality and reliability as well as reproducible parameters for all products.

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