

# DEPRAG

## Operating Instruction Booklet

### Flow Sensor

NW 7,2

NW 5,0

NW 2,7

361645 A

361645 B

361645 C

Dear Customer:

This tool is the result of more than 70 years of experience in the design and manufacturing of pneumatic tools for the industrial market.

We kindly ask that you read these operating instructions carefully so that you will be able to use this tool safely and for many years to come. If you need additional information, please contact your DEPRAG

Representative, one of our international support offices or us direct at DEPRAG. We will be happy to answer any questions. Please visit our web site: [www.deprag.com](http://www.deprag.com)

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## 1 General Information

The flow sensor allows to control the air flow in conjunction with pneumatic screwdrivers and other pneumatic devices.

### 1.1. General Safety Tips



**Please read the provided Operating Instruction Booklet carefully and adhere to all safety information, prior to operating this device.**

All items which directly relate to the safety of the Operator and the error-free operation of the flow sensor, are marked in the Operation Instructions with:

!

The flow sensor was designed and built to be primarily used in conjunction with the DEPRAG pneumatic tools (“intended use”).

“Intended use” also includes the strict observance of all operating instructions given by the manufacturer.

Any arbitrary modification of the sensor will void the manufacturer’s liability for all damages resulting from such modification.

!

This flow sensor has been designed and constructed for the sole purpose of use in conjunction with DEPRAG air-operated machinery (designated use). The use of this device in any other way is not acceptable. Furthermore,

!

When installing this device, make sure that the flow sensor is connection to the airline, prior to connecting the device to the electrical outlet.

When connecting directly (i.e. without coupler) into the airline, make sure that the airline is not under pressure.

## 1.2. Owner Obligation

The owner is obliged to only let persons operate the equipment, who

- are familiar with basic work environment safety rules and accident-preventing regulations. Also, those persons must have been instructed in the correct use of the equipment.
- have read and understood all safety and warning notifications in the Operating Instruction Booklet, as well as all other documentation pertaining to this equipment.
- check and confirm at regular intervals, that a safety oriented operation is guaranteed.

Only qualified and authorized personnel is allowed to operate, maintain and repair this equipment. A malfunction, which impairs operator safety, must be immediately removed.

## 1.3. Operator Obligation

Personnel, who is engaged in the operation of the equipment, must always be committed to

- observe the basic safety and accident preventing regulations,
- read and observe the safety and warning notifications of this operating instruction booklet.

## 1.4. Warranty and Liability

Unless otherwise specified, our “General Sales and Delivery Conditions” apply. Warranty and liability claims in regards to persons or equipment damages are invalid, if one or several of the following causes apply:

- Use of the equipment in a non-designated application.
- Improper installation, operation, service or maintenance of the machine.
- Operation of the machine with either defective or removed safety and protection devices.
- Non-observance of the requirements stated in the operating instruction booklet, in regards to transportation, storage, mounting, installation, operation, maintenance and service of the equipment.
- Structural change or adjustment on the equipment to a non-designated use.
- Inadequate supervision of wear parts.
- Improper repair, inspection or maintenance.
- Catastrophic cases because of a war, acts of god or other reasons which are beyond our control.

## 1.5. Symbol Description



Read and observe the Operating Instruction Booklet, prior to and during operation of tool.



### **DANGER**

Reference to an immediate danger to a person. May lead to serious injuries or even death, if unobserved!



Properly recycle environmentally damaging grease, cooling agents or detergents



### **RECOMMENDATIONS**

Important or additional information on the equipment or in the documentation



Use eye protection or wear safety goggles

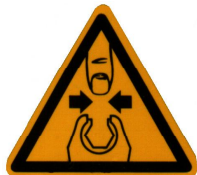


Wear hearing protection



Warning against hand-injuries.

Attention: Keep away your hands from areas, which are marked with this symbol!



Hands may be crushed, seized or otherwise injured.



## ESD-protected area

Equipment may be damaged or destroyed by an electrostatic discharge.

Maintenance and repair on hydraulic and pneumatic equipment may only be performed by specially trained personnel!



Disconnect equipment from air supply, prior to repair of pneumatic or hydraulic equipment.

Provide regular preventive maintenance on hoses and airlines. Exchange hose lines, even if there is no visible damage! (Observe corresponding requirements of the manufacturer!)

After repair and maintenance, check the following items:

- make sure all detached and re-attached connections are solid.
- confirm that removed covers, screens or filters were re-installed
- During disconnecting or reconnecting of an air-operated equipment, injury may occur due to a whipping air-hose

After conclusion of maintenance or repair and prior to start of operation, make sure to

- remove all materials, tools and other supplies needed for the maintenance or repair from work area of the equipment
- remove leaking liquid or oils
- make sure all safety devices on the equipment work perfectly!

## 1.6. Observe Environmental Regulations



When working on or with the equipment, it is imperative to observe all requirements in regards to waste-disposal and proper recycling.

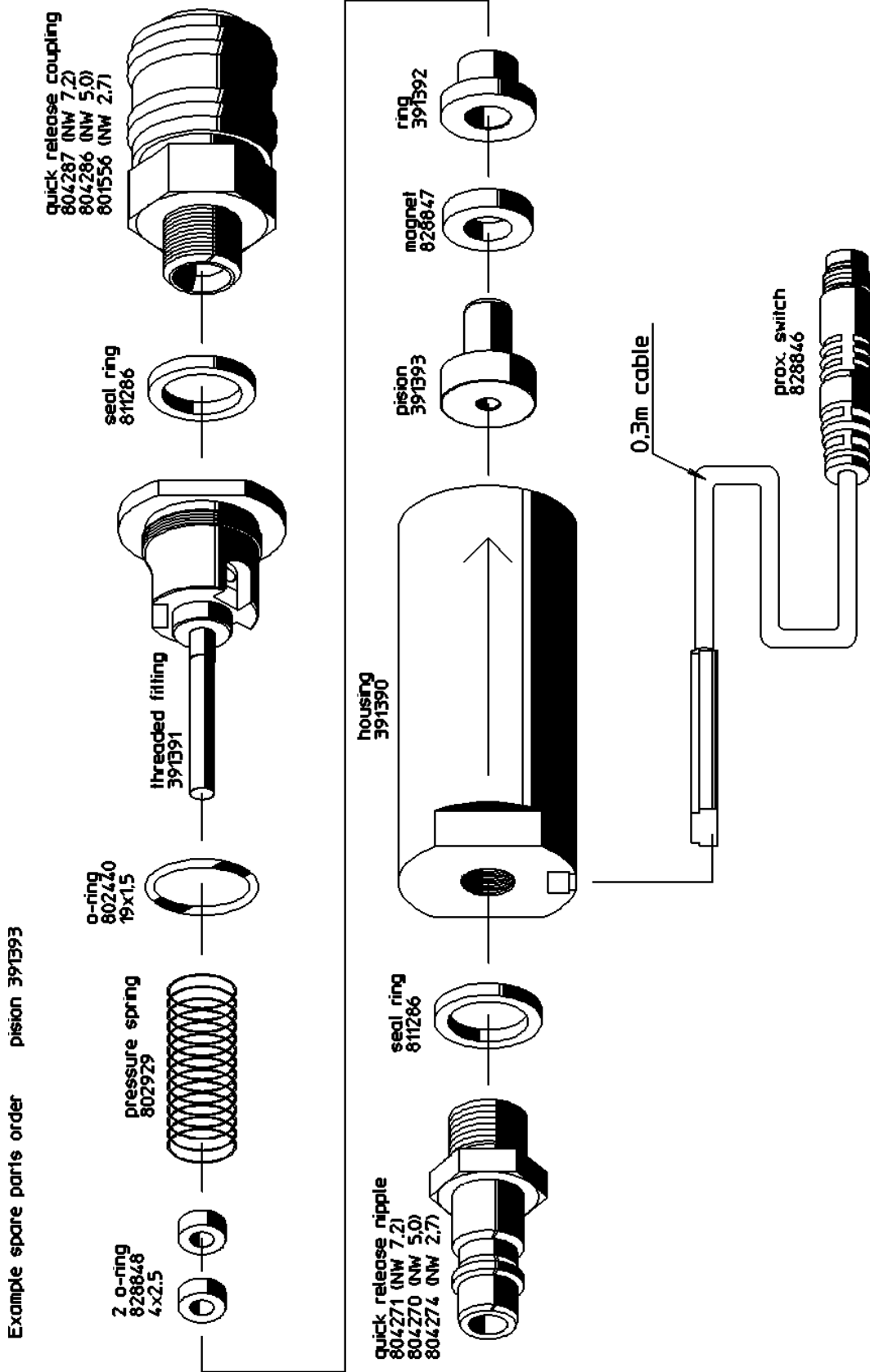
Especially during installation, repair or maintenance, water damaging agents such as

- lubricating grease and oil
- hydraulic fluid
- cooling agents
- solvent-containing cleaning agents

must not leak into the ground or into the sewage system!

Such materials must be stored, transported, contained and recycled in suitable containers.

## 2 Flow Sensor Components





## Installation Tips:

1. The flow sensor is to be integrated between the valve and the pneumatic tool – as close to the air supply connection of the tool as possible.
2. The flow direction is shown in picture *Flow Sensor Connection*.
3. Principally, operation is permitted with filtered air (< 40 µm) only. Please also pay attention to the air quality required for the pneumatic tool.
4. The flow sensor should not be positioned within an induction field. The minimum distance to ferrous materials should be 20mm (see picture 3.2).
5. Observe the maximum rated values of Prox. Switch.

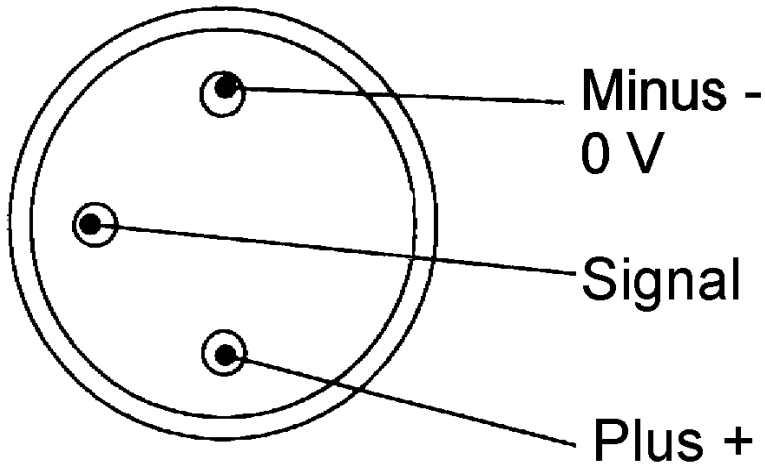
## 4 Function of Flow Sensor

The flow sensor functions as per the principle of the “suspended-body level measurement”. The “suspended body” (signal provider) contains permanent magnets. The air flowing in will move the signal provider in the direction of the air flow and the flow sensor will provide a signal (will be shown on integrated LED).

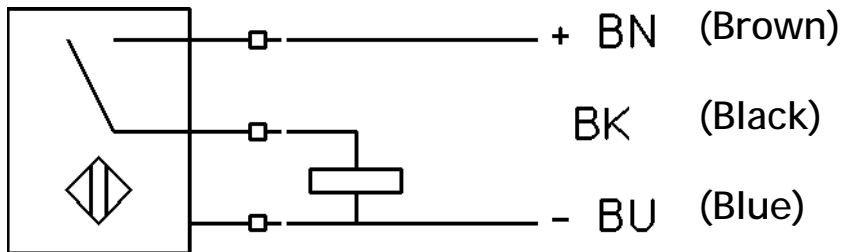
The proximity switch 828846 is a non-bridging contact and its lifetime will last for several millions of operations.

The flow sensor does not require any special servicing and is not intended to be disassembled by the customer. So in case of malfunction please return it to us (complete) for evaluation.

## 5 Pin Layout of Plug



## 6 Control Diagram



PNP NO

## 7 Delivery Capacity

Please check the delivery capacity in regards to its completeness.

QUANTITY	NAME	PART No.
1	Flow Sensor	361645 A/B/C
1	Operating Instruction Booklet	010734 EN

## 8 Storage

Unused machines should be stored in a dry, locked area.

## 9 Technical Data

**Manufacturer** DEPRAG SCHULZ GMBH u. CO.  
**Address** Kurfürstenring 12 - 18 Postfach 1352  
D-92224 Amberg D-92203 Amberg  
**Phone** 09621/371-0  
**Fax** 09621/371-120

Model No.	NW 7,2	NW 5,0	NW 2,7
Part No.	361645 A	361645 B	361645 C
Maximum Current	200 mA		
Maximum Voltage	10 –30 V		
Protection DIN 40050	IP 68		
Connector Cable Length	300 mm		
Electrical Connection	M8 x 1 screw-in and plug-in type		
Pneumatic Connection	by Coupler to Plug		
Operating Pressure	max. 6,3 bar		
Weight	0,172kg		
Standard Flow Capacity	0,8 Nm <sup>3</sup> /min	0,4Nm <sup>3</sup> /min	0,1Nm <sup>3</sup> /min

## 10 Disposal

Unused machines should be stored in a dry, locked area. Observe local and environmental regulations for the separation and recycling of materials.



**Recycle waste oil to avoid environmental contamination!**

## 11 Service Locations and Authorized Partners

### ARGENTINA

#### ERIN s.a.

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RA-1431 Buenos Aires  
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Fax: +36 (0) 1 / 260 060 83  
Internet: <http://www.noniusz.hu>  
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Fax: +91 / 22 / 2756.2881  
Internet: [www.leaptechcorp.com](http://www.leaptechcorp.com)  
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ZERTIFIZIERT NACH DIN EN ISO 9001

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Jun-05 Änderungen vorbehalten / Technical alterations reserved