Fig.1

Optical sensor assembly scheme

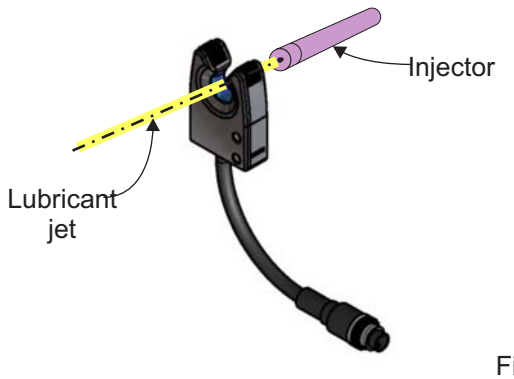

Fig.2

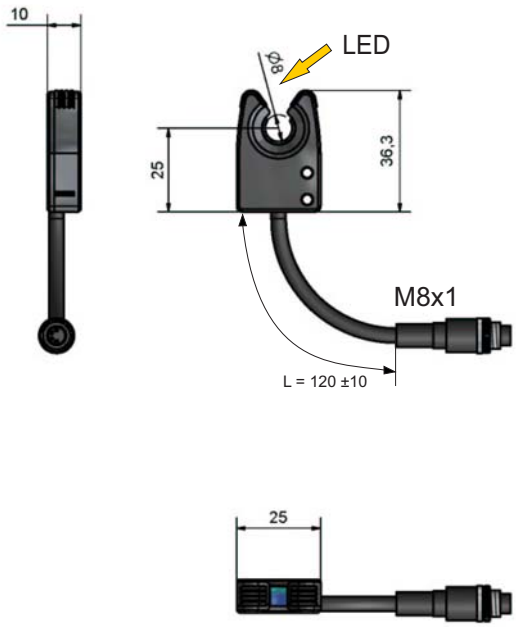

Fig.3

Programmable optical sensor N870

Immage Flux Sensor - *IFX-S08*

(Patent Pending)

Application:

Used for the automatic control of the air-oil mixture in spray systems, jet lubrication and tool minimal quantity lubrication equipments.

- **Electronic monitoring**
- **Visual control through LED**
- **High precision**
- **Quick reaction time**
- **Programming through external controller or PC software**
- **Easy installation and compact block**

Function:

The sensor *IFX-S08* let the instantaneous detection of lubricant spray/jet. It is supplied as a programmed device according to order specifications.

The sensor is equipped with a light emitting diode (1) which projects a beam on an electronic receiver. Any image variation in the moving air-oil mixture under control is detected and monitored according to a patented and advanced technology.

The lubricant flow causes the green LED (2) to flash. In case of a system block or lack of lubricant, an alarm output is provided and red LED (3) goes on.

The sensor must be positioned and fixed in front of the spray nozzle as represented in the fig. 2. The check value is selected before delivery and remains fixed, adjustments of the pre-set value are possible with an external controller or a suitable PC software which are available as accessories.

Technical data:

Min. delivery volume:	abt. 10 mm/stroke
Programmable alarm output:	N.O. or N.C.
Connection:	M8x1 4 poles
Power supply voltage:	12÷24 VDC ±20%
Max. absorption	30 mA
Connection :	standard PNP
	NPN on demand
Installation:	any
Operating temperature:	10 ÷ +60 °C
Materials: housing:	PA66 antistatic
Protection class :	IP 67
tropicalized electronics and optics PA 12 oil resistant	
EMV EN 61000-4-2 ESD	4 kV CD/ 8 kV AD
EN 61000-4-3 HF irradiation	10V/m
EN 61000-4-4 explosion	± 1-2 kV/m
EN 61000-4-5 overcurrent/voltage	± 1-2 kV/m
EN 61000-4-6 HF conductivity	3V

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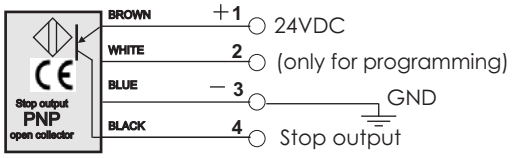
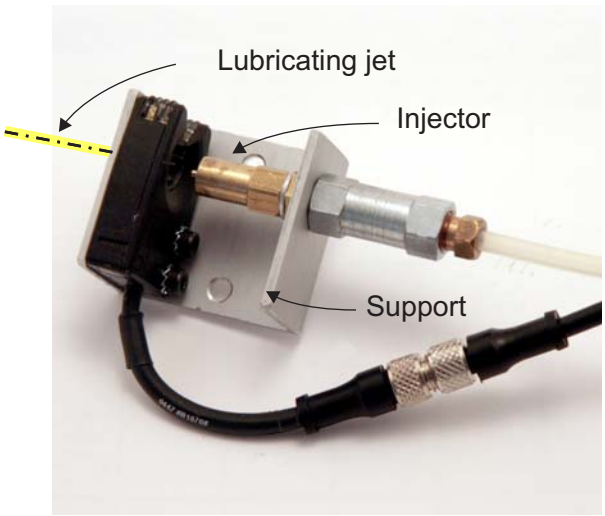
Electrical scheme



Sensor condition	Signalling lights		STOP output (4) PNP	
	green	red	NO	NC
Normal running	ON	OFF	Open	+24V
Fault	OFF	ON	+24 V	Open

	Green led on.	Normal operation, lubricant is running inside the system. No technical fault detected by the sensor.
	Green led on. Red led on.	During machine operation, the sensor has detected a temporary fault. STOP signal off.
	Green led off. Red led on.	Reaction time elapsed (see order coding page 3): permanent fault. STOP signal on!

Positioning example with injector support N873101



Electric connections:
Connect the oil streak sensors according to the connection scheme beside.

Attention: always attach the entrance (-3) to earth (GND).

Function of LEDs:

The sensors have two signaling lights (green LED, red LED), whose meaning is described in the side table.
Sensors are equipped with a "Touch Light" button which allows the automatic numbering of the sensors ; in that case the programming unit SMART IFX is needed (see Accessories page 3).

Example of application:

In the picture at the right side:
Coupling support to fix an optical sensor IFX-S08.

Thanks to the support, you can correctly collocate the sensor with respect to the oil jet you have to control and the sensor will be firmly fixed.
(see Accessories page 3).

With IFX sensors you can stop the running machine immediately and therefore starting up the control system, solenoid valves and other devices.

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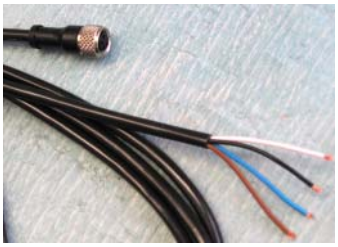


Connection cable to CN
Fig.5

Sensor/injector support
Fig.6

Software PC LINK FLUX
Fig.7

SMART IFX 24VDC
Fig.8

Accesories (to be ordered separately**):**

Connection cable to CN standard with connector male straight 4 poles (3 conn.) M8 female 4 poles (3 conn.) M8 with cable 3 m Pur N860062

Connection cable to CN with connector straight 4 poles female M8 with cable 3 m loose end N860060

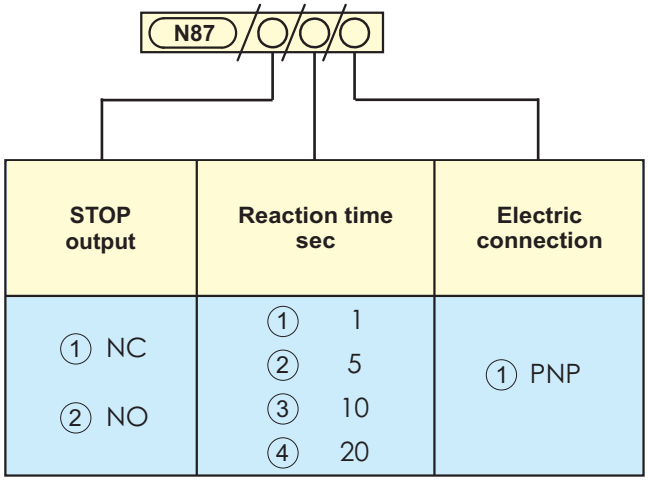
Coupling support Fig. 6 N873101
To mount the sensor linked to an injector

Controlling and programming software PC LINK Flux Fig. 7 N860170

External tool for controlling and programming SMART IFX 24VDC Fig.8 N860190

Delivery cable for SMART
2000 mm FE10/200 N860080
5000 mm.FE 10/500 N860090

Order coding:
Fluid Sensor **IFX-S08**



Standard type: N87/1/2/1

Further versions are available by request.

Order example:
Optical sensor for spray nozzle/sprayer, with stop output normally closed (open in case of fault), reaction time 5 sec and PNP connection

Order designation:
Fluid Sensor IFX Code N87/1/2/1

Supply conditions:
Before the delivery the sensors are tested and set according to order specifications. Each device is packed with its test report. The registration number and the installed software version are indicated for each sensor.

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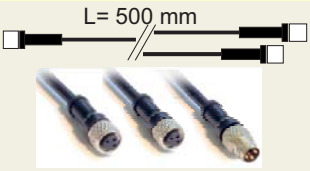
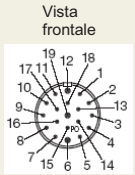
To connect to distr. boxes with M12-4 poles plugs

Connection cable L=500mm
M8 fem 4p.- M12 mal. 4 p.

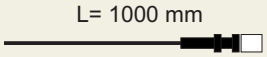


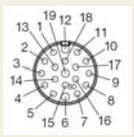
Y-connection Cable L=500mm
M8x2 fem. 4p.- M12 mal. 5 p.



Distribution box with 8 plugs M12 4 poles
with cable conn. M23 mal. 19 poles

Connector M23 - fem. 19 poles
(link to CN panel)
Cable L=1 m





Accessories for electrical connections: **Code**
(to be ordered separately)

Connection cable for optical sensor IFX **N860075**
M8x1 fem. 4 p./M12x1 mal. 4 p.
PVC L=500mm

Y-connection Cable **N860072**
for optical sensors IFX
M8x2 fem. 4 p. (3 conn.) / M12x1 mal. 5 p.
PVC L=500mm

Distribution box 8 inlets **N860048**
M12x1 fem. 4 poles
straight connector M23 mal. 19 poles

Shielded cable L= 1 m **N860200**
straight connector M23 fem. 19 pole
PUR cable (UL 300V) loose end

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