



ZFX – Safe Lubrication Process

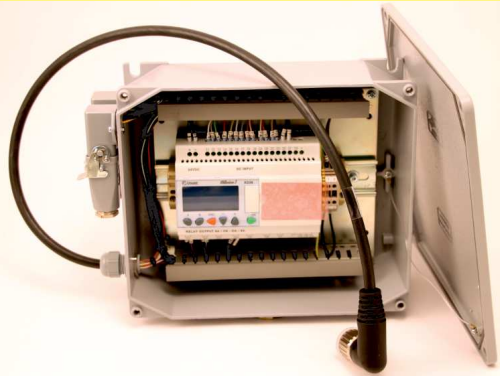
The new air+oil lubrication system presented by MWM Schmieranlagen sets new standards for minimal quantity lubrication of bearings in high-speed/power spindles for machine tools. The integration of patented optical sensor technology, with digital pressure sensors and advanced PLC functions, allows 100% control of all important parameters. The system provides a visual and instrumental feedback, through a simple alarm signal, for communication with machine. This ensures a reliable MQL at starting and 100% safety during operation.

MVF-A mixer with integrated optical sensors (International Patent) ensures an exact oil dosing starting from 10mm³.



The air+oil flow is continuously controlled by precise opto-electronic sensors which can detect changes in lubricant quantity and air-flow giving immediate signal to the PLC of the control unit. Mixer type MVF-A is available in versions from 1 up to 6 outlets.

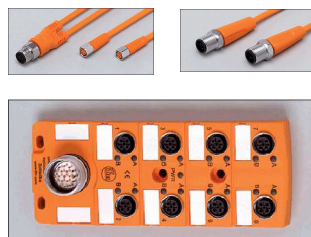
Air pressure digital sensors are mounted directly on mixer MVF-A and allow to set minimum and maximum working levels. If those limits are exceeded, sensors change colour (visual feedback) and transmit an electronic signal to PLC. This feature ensures monitoring of obstructions and interruptions in the air-oil line between SL Pro unit and spindle bearings; in this way it is ensured a 100% safe lubrication process.



Easy and user-friendly programming of pre-lubrication and lubrication cycles. Two control output with two different failure levels. Control can be connected to NC of machine.

Connections technology

All sensors have M12 connectors with LED (working signal), main connector M23 for easy maintenance.



ZFX Series

SLPro concept
Safe Lubrication Process
Air-oil lubrication unit

Minimal Quantity Lubrication
AIR+OIL
Minimal Quantity Lubrication
complete system
ready for use

Special features:
optical sensors IFX
Pressure digital sensors
Driving and control PLC

*Control and monitoring
of very small lubricant
flow rate*

**Exact
lubrication
for high-speed
spindles**

MQL application for:

- High speed bearings
- High speed gears
- Linear guides
- Ball circulation screws

Minimal Quantity Lubrication

