

DUO Diagnostic Unit

Gear unit oil diagnostics through thermal analysis
for preventive maintenance

SERVICE



Avoid downtimes – increase system reliability

Preventive maintenance is becoming an increasingly important feature from an economic point of view. The DUO diagnostic unit from SEW-EURODRIVE is the perfect sensor to determine the remaining service life of gear unit oil and indicate the right time for an oil change. A thermal sensor installed in the gear unit measures the oil temperature and sends this information to an evaluation unit, which then calculates the time remaining for the specified oil type until the next oil change. The diagnostic unit takes the oxidation characteristics of the different oils into account under thermal stress.

The DUO diagnostic unit – benefits at a glance

- Reduction in oil costs
- Optimum utilization of oil service life
- Start-up can be performed directly on the diagnostic unit (without PC)
- 5 different oil types can be parameterized
- Simple detection and reading off of the time remaining until the next oil change
- A warning message is issued if predefined limit values are exceeded, such as max. oil temperature
- Permanent oil aging monitoring
- Maintenance intervals can be planned individually

Technical data of the DUO diagnostic unit

Oil types	OIL1 mineral oil CLP or bio oil OIL2 synthetic oil CLP HC or oil CLP PAO OIL3 poly glycol CLP PG OIL4 food grade oil OIL5 customer-specific (on request)	$T_{max} = 100\text{ °C}$ $T_{max} = 130\text{ °C}$ $T_{max} = 130\text{ °C}$ $T_{max} = 100\text{ °C}$
Switch outputs	1: Early warning (time to next oil change can be set to between 2 and 100 days) 2: Main alarm (time to oil change 0 days)	3: Temperature T_{max} exceeded 4: DUO ready
Permitted oil temperature	–40 to +130 °C	
Permitted thermistor	PT100 or PT1000	
Ambient temperature	–25 to +70 °C	
Operating voltage	DC 18 to 28 V	
Current consumption at 24 V _{DC}	< 90 mA	
Protection class	III	
Degree of protection	IP67 (optional IP69K)	
EMC	IEC 1000-4-2/ 3/ 4/ 6	
Housing materials	Evaluation unit: V2A, EPDM/X, PBT, FPM; Temperature sensor: V4A	
Electr. connection	Evaluation unit: M12 plug connections; Temperature sensor: PT1000 / M12 plug connection, PT100 / plug connection (DIN 43650)	

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