

TK4MB @80 bar Oil Level Regulator with integrated Modbus RTU connectivity

SUITABLE FOR CO₂ SYSTEMS

Some advantages of this solution:

- Modbus RTU Serial connection to system controller
- Extremely compact dimensions
- Left/Right mounting possibility with the same TK4-MB
- Reduction of the number of junctions in the circuit with less possibility of having leakages

- Usage of less components (simplified circuit and easier warehouse management)
- Simplified Installation (cost savings in terms of installation time)
- Revolutionary connectivity capabilities.

Main Features

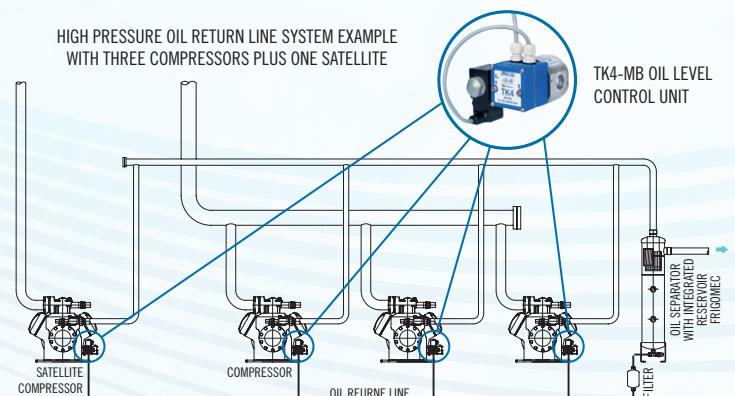
- High reliability ensured by absence of mechanical moving parts.
- Sight glass and electronic LEDs can be checked on the same side where is more comfortable to do inspections.
- Well consolidated steel with fused glass technology with absence of seals ensures no leakage and good chemical compatibility.
- Direct sight glass replacement (3/4/6 holes flange connection).
- 24 VAC / 230 VAC power supply options.

- Easy maintenance of the coil of the valve and of the Electro-Optic sensor that can be easily replaced without emptying or depressurizing the plant.
- 230 VAC /2A alarm relay output suitable for direct connection in the security chain of the system.
- Adapters suitable for various types of compressors.
- Unit conform to directives 2014/30/UE and 2014/35/UE.

Application Description

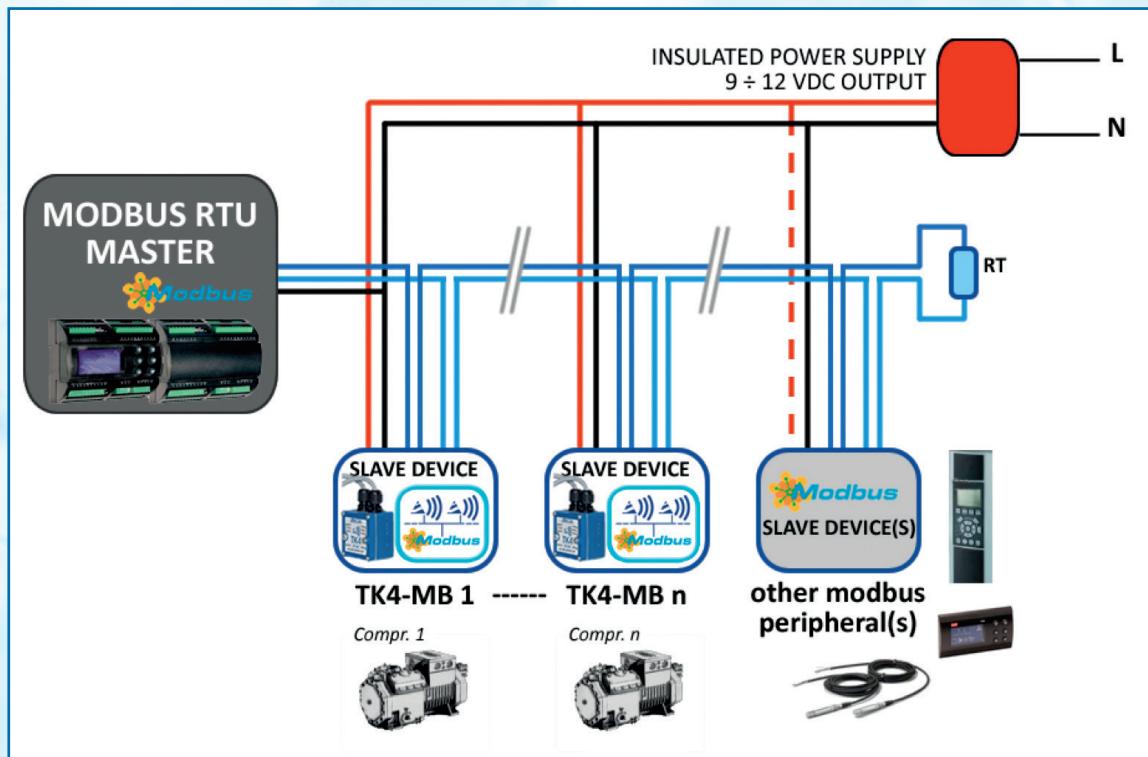
The TK4-MB is designed to control the oil level in the compressor crankcase in order to avoid the compressor to run without oil and so improve its lifetime. TK4-MB monitors the oil level with the embedded electro-optic sensor and comprises a solenoid valve for oil filling and a relay output contact to give an alarm.

HIGH PRESSURE OIL RETURN LINE SYSTEM EXAMPLE WITH THREE COMPRESSORS PLUS ONE SATELLITE



SUPPLY VOLTAGE	24 VAC \pm 10% or 230 VAC \pm 10% depending on model
SUPPLY CURRENT	Each TK4MB requires 30VA (depending on the solenoid valve)
ELECTRICAL CONNECTION	EN175301-803 Connector / Spare wires
OUTPUT SIGNAL	Contact free relay output NO and NC
RELAY OUTPUTS	Up to 230VAC @2A
HOUSING MATERIAL	Nickel plated steel + fused glass PA glass fibre reinforced
ENCLOSURE PROTECTION CLASS	IP 65
MEDIA TEMPERATURE	-40°C÷+85°C
AMBIENT TEMPERATURE	-40°C÷+60°C
MAX WORKING PRESSURE	80 bar (higher pressure limits available on different TK4-MB models)
MOPD	60 bar (higher pressure limits available on different TK4-MB models)
OIL RETURN LINE	7/16 – 20 UNF male
CABLE TYPE	PVC cable CEI 20-22. Working temp.: -20 ÷ +70 °C (fixed laying)

Modbus RTU typical application



Ordering Codes

ELECTRICAL CONNECTION POWER SUPPLY	CABLE GLANDS 3 m
24 V	TK4MB-C60AA13-02
230 V	TK4MB-C60BA13-02

Program interfaces available. Suggested ordering codes
not include oil strainer element. Adapters must be
ordered separately.