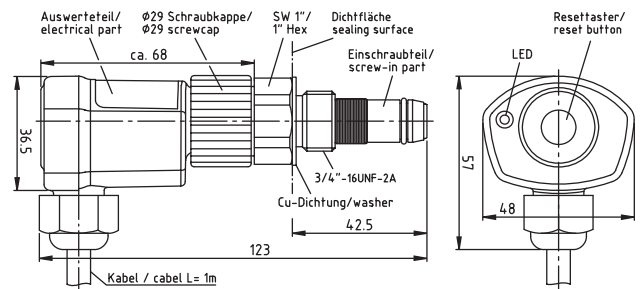


OIL PRESSURE DIFFERENTIAL SWITCH OPS2

1 Application:

The OPS2 monitors the oil pressure differential protecting the compressor against damage if the oil differential becomes too low. Internal channels drilled through the housing link the switch to the inlet and outlet ports of the oil pump. The brass mechanical sensor component is fitted as standard on all DWM Copeland™ Semi-Hermetic compressors which have a high pressure oil pump. This is directly screwed into the pump housing. The black electronic switch is screwed onto the brass mechanical sensor. If the electronic switch has to be removed from the brass sensor the refrigeration circuit will not be open to the atmosphere. The mechanical sensor fitting for the OPS2 is the same as the OPS1. The electronic switches are interchangeable but require changes to the wiring circuit.



1.1 Function

OPS2 is activated by the running signal of the compressor contactor. If the oil pressure differential drops below the preset value for longer than the time delay (120s) the output contact of the OPS2 opens and stops the compressor providing protection against internal damage. Repeated shorter periods of insufficient oil pressure are also recognized and will shut off the compressor after an appropriate time delay.

Power supply	115-230V AC, -15%... +10%, 3VA 50/60 Hz
Ambient temperature range	-30.....+ 70°C
Restart Relay after tripping	120 sec + 5 sec
Start up delay	3 sec + 1 sec
Differential Pressure	0.95 ± 0.15 bar
Connection cables	6 x AWG18 (0.75mm ²), L = 1m colour coded
Maximum pressure	30 bar
Refrigerant compatibility	Yes (brass)
Protection class according to EN 60529	IP 54
Reset	Manual
Weight	210 g
LED status: 2 x flashes at startup	Software version
LED status: 1 x flash after 2 x flashes above	Standby function
LED status: Continuous red light	No differential pressure
LED status: 10Hz flashing – 10 times per second	Malfunction: - Internal malfunction - Internal power supply is too low - Sensor not correctly mounted into mechanical part - Running signal ON, but relay OUT
LED status: 1 Hz flashing – 1 time per second	Restart delay
LED status: LED off	Correct operation

2 Commissioning

Switch on the compressor and wait until stable operating conditions are obtained. If insufficient oil differential pressure is built up during start up or during operation after the time delay expires, the output contact switches off and mechanically locks out. The power supply to the contactor coil is interrupted and the compressor is switched off. Restart is possible after reset and end of time delay of 120s.

NOTE: Trained electrical personnel must connect the unit. All valid standards for connecting electrical and refrigeration equipment must be observed. Limit values of the supply voltage of the unit may not be exceeded. The oil differential switch needs no maintenance.

