OUT360-K1 and OUT360-K2Oil Level Monitoring System

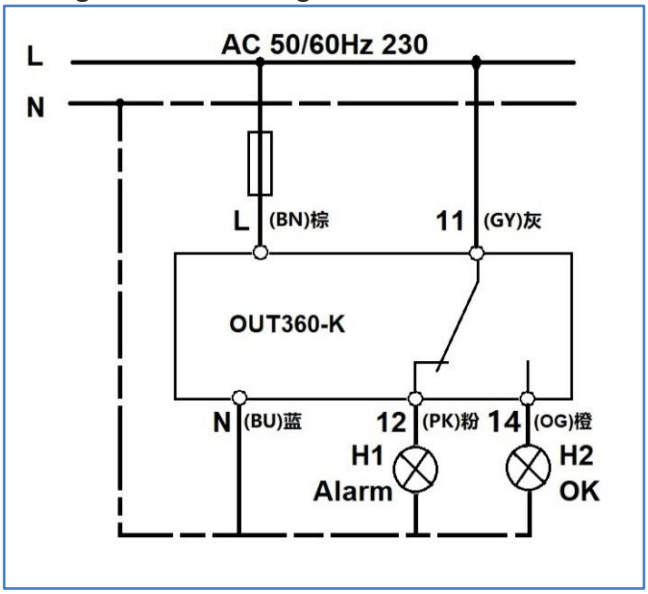
Features

•OUT360-K1/K2 for CO2 subcritical and HFCs, HCFCs refrigerants
- max. working pressure PS: 60 bar
•3 Zone Level Control by using precise Hall-sensor measure-ment, not prone to errors by foaming or light like optical sensors
• Alarm, status and 3 zone indication by LED's
• SPDT output contact for compressor shut down or alarming, rating (230VAC / 5A)
• Supply 230V AC, 50/60Hz
• Adapters suitable for various types of compressors

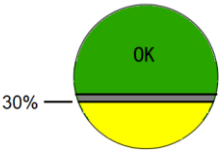
Function

OUT360-K1/K2use a Hall-Sensor to measure the oil level. Unaffected from foaming oil or light a magnetic float changes its position according to the oil level. The hall sensor converts these magnetic field changes into an equivalent signal, which is used by the integrated electronic controller to monitor the actual oil level by LEDs. If the oil level drops into the yellowzone and after a delay time of 90 or 120seconds,OUT360-K1 and OUT360-K2 generates an alarm signal, the alarm contact (SPDT) changes into alarm state and the green Led OFF. The alarm contact may be used to shut down the compressor. If the oil level comes back to normal, the Alarm will be reset.

Wiring schematic diagram



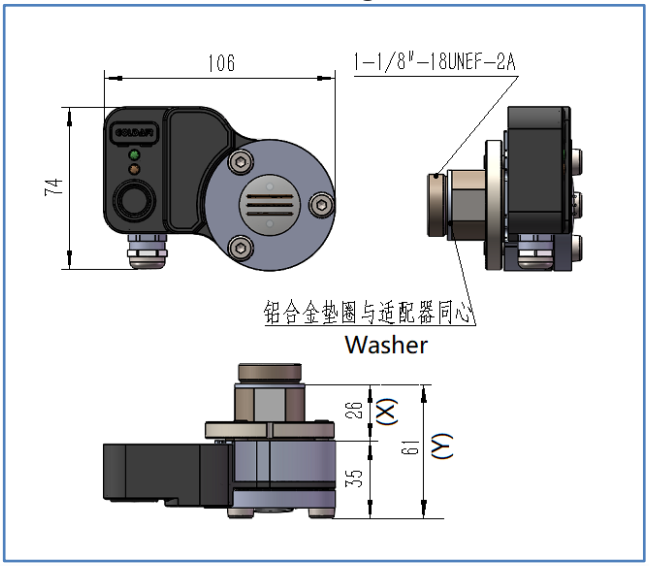
Sight-Glass Level Control Zones



LEDs	Status	Alarm
●	Oil level above 35% relay ON	
● ●	Oil level below 30% relay ON	Yes,delay 90s/120s
●	Oil level below 30% relay OFF	Alarm

OUT360-K1/K2

Outline dimension drawing1



Technical Data

Supply voltage	230VAC,50/60Hz, ±15%, 15VA
Ambient/Storage temperature	-30to +70℃
Medium temperature	Max.+100℃, Max.+120℃(<720h)
Alarm oil level Delay :OUT360-K1 OUT360-K2	Below30%±5% 90sec±10sec 120sec±10sec
Reset hysteresis	8%±3%
Working/Test pressure	60bar/69bar
Relay contact (SPDT)	AC240V, Max 2.5A, C300
Connection type	Cable 5xAWG20, L=1m, colure coded
Protection class	IP54 (EN60529)
Materials	Aluminum,SUS304,PA66+GF
Medium compatibility	HFC,HCFC,CO2, Mineral, Syntheticand ester lubricants
Orientation of base unit	horizontal, +/- 1°
Weight	850g incl. F34-45 adapter
Check base	EN61000-6-2,EN61000-6-3 EN61000-1:2010 Overvoltage category II Pollution level 2
CE Marking	Low Voltage Directive:2014/35/EU EMC Directive:2014/30/EU

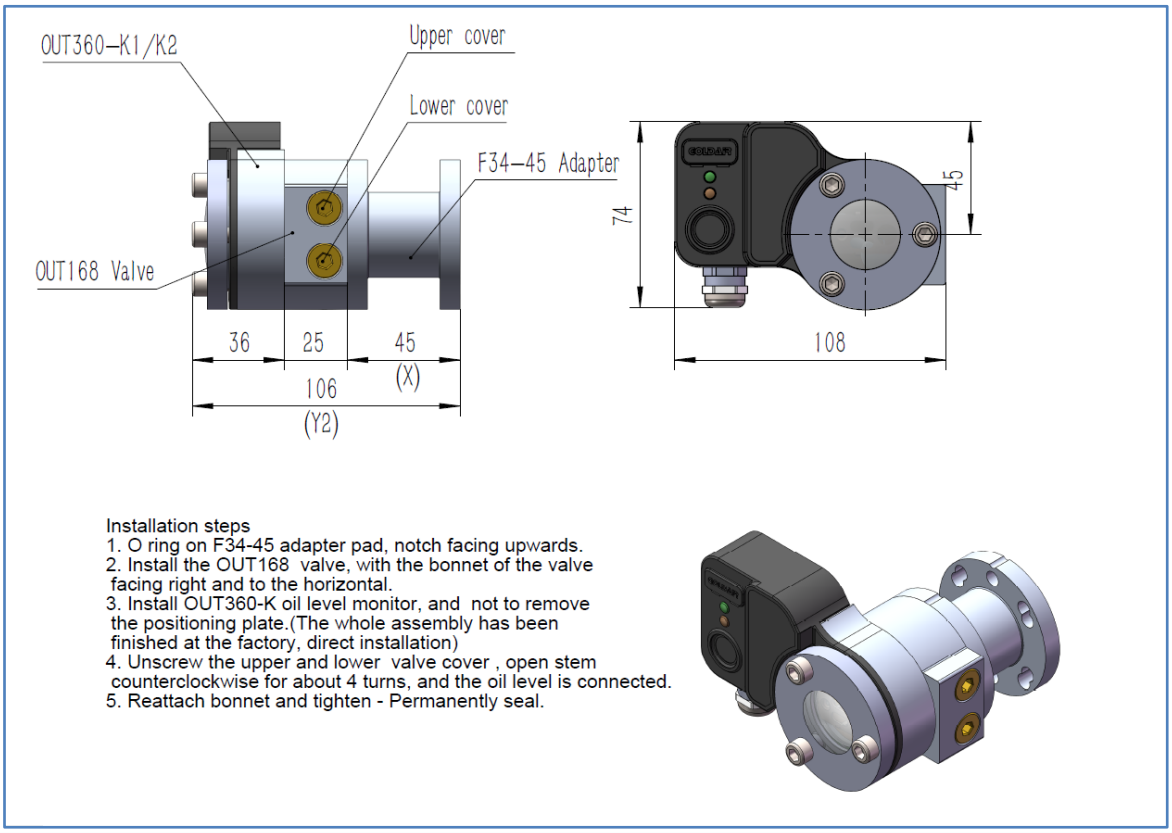
Technical Bulletin

OUT360-K1 and OUT360-K2 are intended for systems requiring oil level monitoring and alarm

AdapterSelection

Type	Description	Length（X）	Not install OUT168 Height (Y1)	With OUT168 Height (Y2)	
F320	Flange adapter 3-hole (Can not connectOUT168）	20	55	--	See Figure 1
168F34	Flange adapter 3-/4-hole (Only connect OUT168）	19	--	80	See Figure 2
F34-45	Flange adapter 3-/4-hole	45	80	106	
G0A118-35	Screw adapter1-1/8"-18UNEF-2A	26	62	86	
G0A118CSH	Screw adapter1-1/8"-18UNEF-2A(Lengthen)	96	132	156	
G0A34-46	Screw adapter3/4"-14NPTF	30	65	90	
G0A114-38	Rotalock adapter 1-1/4”-12 UNF-2B	38	74	99	
G0A134-42	Rotalock adapter 1-3/4”-12 UNF-2B	42	78	102	

Outline dimension drawing 2(Install OUT168 valve)



Installation steps
1. O ring on F34-45 adapter pad, notch facing upwards.
2. Install the OUT168 valve, with the bonnet of the valve facing right and to the horizontal.
3. Install OUT360-K oil level monitor, and not to remove the positioning plate.(The whole assembly has been finished at the factory, direct installation)
4. Unscrew the upper and lower valve cover , open stem counterclockwise for about 4 turns, and the oil level is connected.
5. Reattach bonnet and tighten - Permanently seal.

OUT168 valve

The OUT168 valve is used for fluid separation between the oil level monitor and the compressor. When maintenance is needed, the valve can be closed, without the need to discharge the compressor oil.

1. Threaded adapter installation: Install the threaded adapter, align the notch of the three-hole splint of the adapter with the mark on the back of the OUT168 valve, adjust the valve to the horizontal position (valve cover on the right), the levelness does not exceed ±1°, and fixed the bolts.
2. When installing flange adapter or rotalock adapter, directly adjust the OUT168 to horizontal ±1° and fix the valve cover to the right.
3. The OUT168 valve is closed when it leaves the factory. After installing the oil level monitor, remove the valve cover first, then rotate the spool of the two valves cover counterclockwise for about 4 times to fully open, and then fixed the valve cover completely to seal permanently.