

OUT580R/OUT580RM 油位控制器 Oil Level Regulator



适用于螺杆压缩机、活塞式压缩机、高压腔-低压腔涡旋压缩机的油位管理。

Suitable for screw compressor, piston compressor, high pressure chamber/low pressure chamber scroll compressor oil level management.

OUT580R 油位控制器利用摆臂原理监测油位,把实际的油位通过高精度霍尔传感器反馈给微处理器,油位控制器内设二个油位点,分别为电磁阀动作补油点与报警点,油视镜内油位下降到补油点时延时输出电压开启外置电磁阀;下降到报警点时延时报警。其输出干接点可直接接入控制电路中。

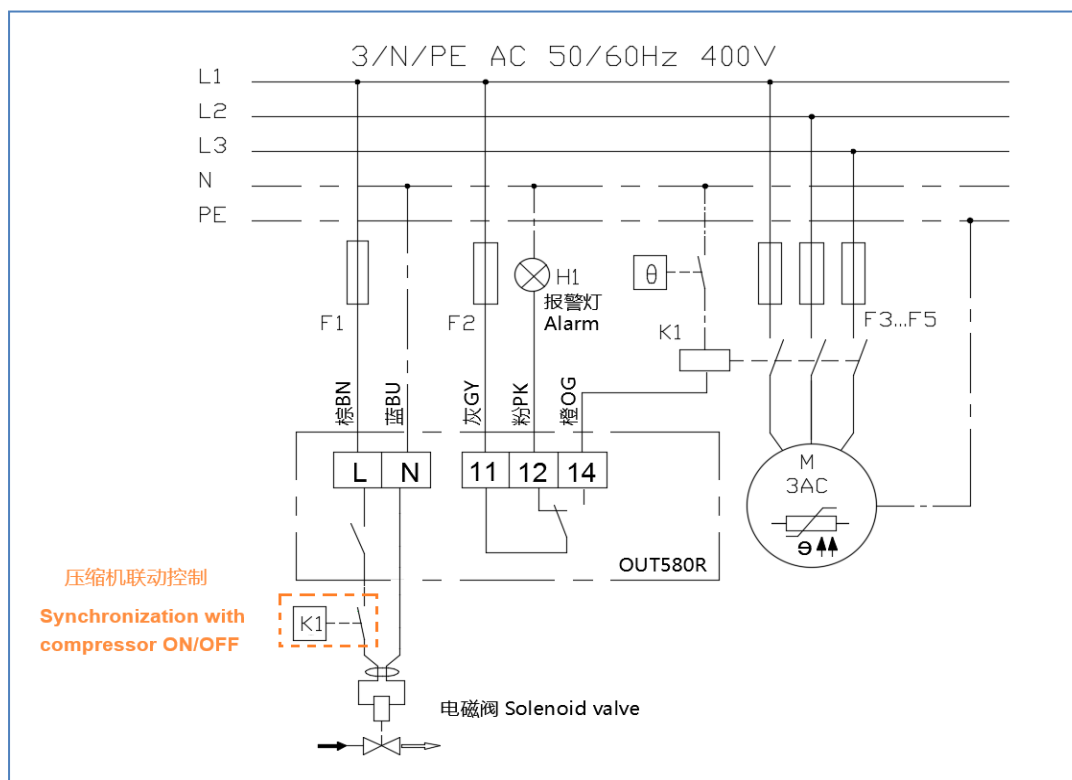
OUT580R 在接通电源后报警继电器吸合,上部 LED 为绿色或橙色。当油位低于视镜约 40%时,下部 LED 黄色点亮,延时输出电压开启外置电磁阀补油;油位回升到 55%时,关闭电磁阀停止补油,同时下部黄色 LED 灭,当油位低于 25%时,上部 LED 指示灯变为橙色,同时延时 120 秒计时启动,

延时时间到报警继电器输出断开,上部橙色指示灯变成红色。

当油位恢复后(高于 30%),报警继电器再次吸合,并上部 LED 变为绿色。

OUT580R uses a Hall-Sensor to measure the oil level. A magnetic float changes its position according to the oil level, not prone to errors by foaming or light. The hall sensor converts these magnetic field changes into an equivalent signal, which is used by the electronic controller to open or close an external solenoid valve which feeds missing oil directly into the compressor sump. If the oil level drops into the red zone the OUT580R generates an alarm signal and the alarm contact (SPDT) changes into alarm state. The latter may be used to shut down the compressor. In the Alarm status the OUT580R is still feeding oil into the compressor. If the oil level comes back to normal, the Alarm will be reset.

接线原理图 Wiring diagram1



注：“压缩机联控”对于曲轴油箱在低压侧的压缩机来说并不是必须的，但是增加联动控制可以提高主动回油系统可靠性。当用于高压腔涡旋压缩机及内置油分螺杆压缩机时，压缩机停机时不得补油，也可以断开控制器电源并屏蔽油位故障信号检测，具体可以联系本公司工程师。

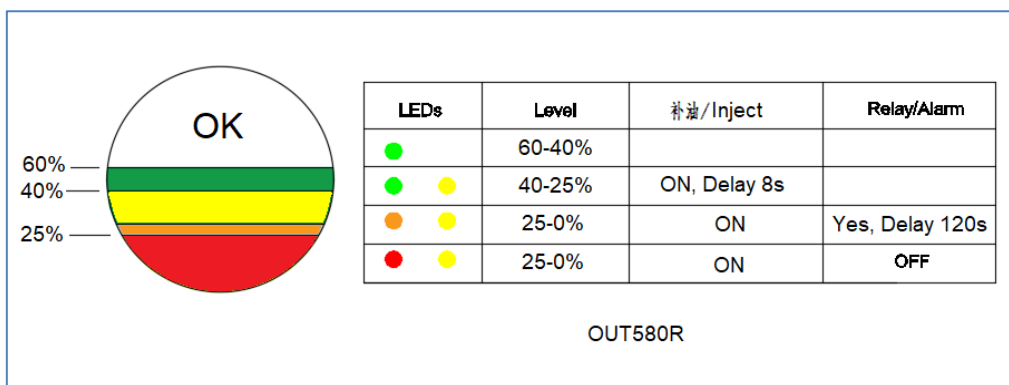
Note: " Synchronization with compressor ON/OFF " is not necessary for compressors with crankshaft tank on the low pressure side, but the addition of linkage control can improve the reliability of the active oil return system.

When used for high-pressure chamber scroll compressor and built-in oil separator screw compressor, compressor shutdown should not inject oil, can also disconnect the controller power and shield oil level fault signal detection, specific can contact the company engineer.

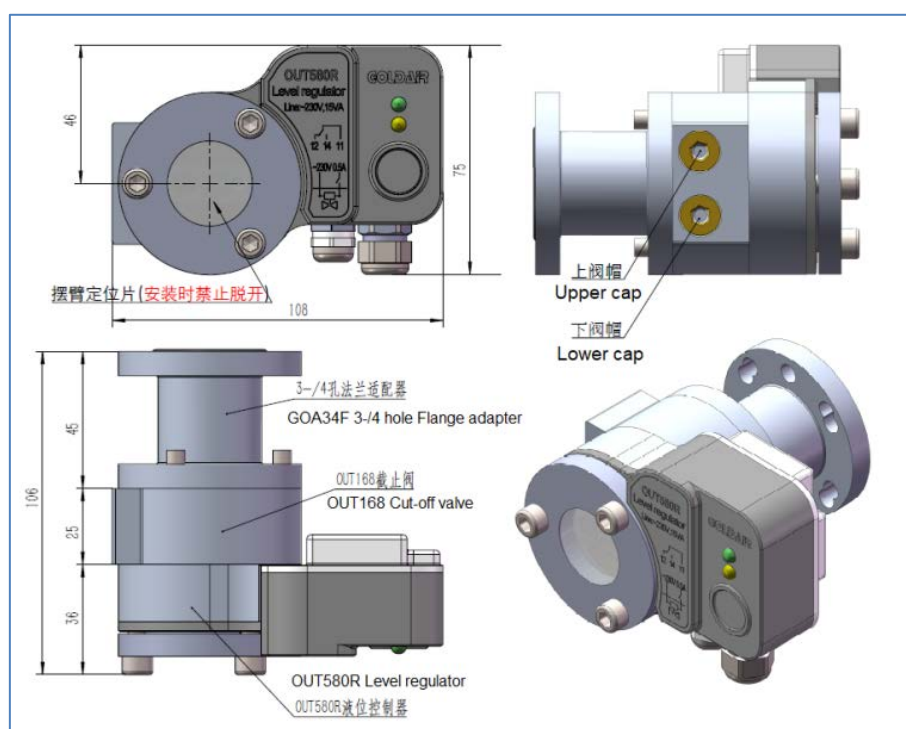
技术参数 Technical Data

供电电压 Supply voltage	230V AC +10/-15%, 3 VA, 50/60Hz
环境/储存温度Ambient/Storage tem.	-40 to +60°C
介质温度Medium temperature	-20...+100°C
最高工作压力Max. working pressure	45bar(OUT580R); 60bar(OUT580RM)
保护等级Protection class (EN 60529)	IP65
延时 Delay	补油延时 Time Delay Filling: 8S±2S 报警延时 Time Delay Alarm: 120S±10S
电磁阀 1Solenoid valve 1for OUT580R 最高工作压力 Max. working pressure 55bar 功率 接口 Oil connection	最大压差 MOPD: 31bar Flow rate at $\Delta P=3.5\text{bar}$, H ₂ O, 3.2L/min (SV20F-2) 13VA @ AC 50/60Hz 230V 1/4" -SAE (7/16" -20UNF)
电磁阀 2 Solenoid valve 2 for OUT580RM 最高工作压力 Max. working pressure 60bar 功率 进口侧接口 Inlet oil connection 出口侧接口 Exit oil connection	最大压差 MOPD: 31bar Flow rate at $\Delta P=3.5\text{bar}$, H ₂ O, 2.0L/min (SV16F-2) 16VA @ AC 50/60Hz 230V 1/4"-ODF 或 3/8"-SAE 1/4"-SAE (7/16"-20UNF)
输出继电器 OUTPUT Relay	单刀双掷 5A, 240V AC, C300, 干接点 SPDT, 5A, 240V AC, C300, dry contact
连接电缆 Connecting cable	5 芯 AWG20# 颜色编码 colour coded, L=2m
电磁阀连接电缆 Solenoid cable	2 芯 AWG20# 颜色编码 colour coded, L=1.5m
材料 Materials	铝合金, 钢镀锌镍合金, PA6/PA66+GF Aluminum, nickel-plated Steel, PA6/PA66+GF,
油介质 Medium compatibility	HFC, HCFC, CO ₂ (亚临界) 标准矿物油和酯油, 不含添加剂(比重大于 0.85) HCFC, HFC, CO ₂ , mineral, Synthetic and ester lubricants
安装位置 Orientation of base unit	水平安装 Horizontal ±1°
重量 Weight	约 1kg (含 F34 适配器) About 1kg incl. GOA34F adapter
订货号 Order data	22G15 580R □□□

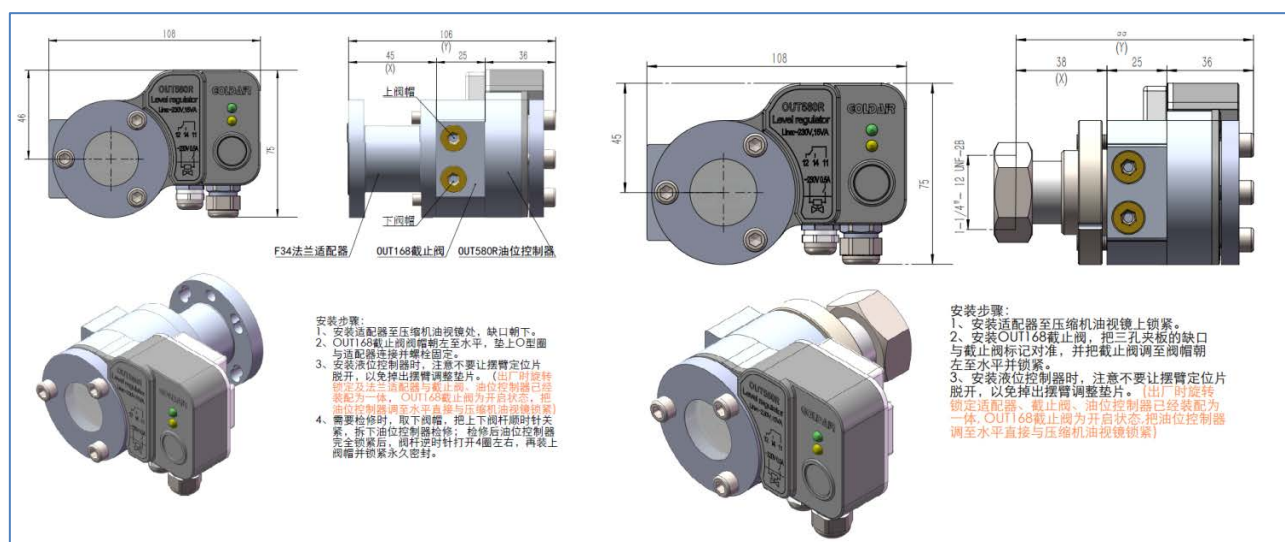
指示灯示例 Sight-glass level control zones



外形尺寸图 1 Dimensions 1



外形尺寸图 2 Dimensions 2



适配器供货选型(上图示例)Adapter selection guideline (See the picture above)

型号Model	名称Description	长度Length (X)	总高Lenght (Y)	适配压缩机系列Compressor Series
GOA34B	3-/4 孔法兰 3-/4-hole Flange adapter	40	101	Frascold: A, B, D, F, S, V, W, Z, A-SK, D-SK, F-SK, Q-SK, S-SK Bitzer: 4VC, 4TC, 4TE, 4PC, 4NC, 4J, 4H, 4G, 6J, 6H, 6G, 6F, 8GC, 8FC Bock: HA, HG, O-Series; Dorin: all KP, K sizes Copeland: 4M & 6M, D2, D3, D4, D6, D9, 4CC, 6CC, ZBH, D8D, D8S
GOA118	1-1/8"-18UNEF-2A外螺纹 1-1/8" -18 UNEF-2A Thread adapter	26	87	Bitzer: 2KC, 2JC, 2HC, 2GC, 2FC, 2EC, 2DC, 2CC, 4FC, 4EC, 4DC, 4CC Bock: HA12/22/34, HG12/22/34 Dorin: all H, K100C, K150C, K180C, K200CC, K230CS, K235CC, K240SB, K40CC, K50CS, K75CC/CS Maneurop: LT, MT, SM, SZ; L'UniteHerm. TAH, TAG
GOA114	1-1/4" -12 UNF-2B旋转锁紧适配接头 1-1/4" -12 UNF-2B Rotalock adapter	38	99	Copeland: ZB15 to ZB114, ZF06 to ZF54, ZFI20 to ZFI81 ZBD21 to ZBD45 - after 06/2014, ZS21 to ZS45 - after 06/2014 INVOTECH: Series YM, YF
GOA134-42	1-3/4" -12 UNF-2B旋转锁紧适配接头 1-3/4" -12 UNF-2B Rotalock adapter	42	103	Copeland: ZB130, ZB150, ZB190, ZB220 ZFI 96, ZFI 122, ZFI 140, ZH, ZR 90, 11, 12, 16, 19 ZR250 to ZR380, ZF24 to ZF48, ZS56 to ZS11
GOA118CSH	1/8"-18UNEF-2A加长外螺纹 1/8"-18UNEF-2A Long thread adapter	96	157	FUSHENG: SRL-MS, SRL-DS; HANBELL: RC2 RefComp: SRC-S, SRC-XS; Bitzer: CSK, CSH
GOA34N	3/4"-14NPTF圆锥外管螺纹 3/4"-14NPTF Thread adapter	30	91	Trank: Series K Bitzer: Series ZL, ZM
GOA320F	3 孔法兰 3-hole Flange adapter	20	81	INVOTECH: YSM, YSF; Panasonic: 3CC, 2CC, ACC, C-SC Frascold: A, B, D, Q, S, V, W, Z, A-SK, D-SK, F-SK, Q-SK, S-SK

OUT168 液位截止阀 (选配) Cut-off valve (Optional)

OUT168 液位截止阀用于油路闭锁。装在油位控制器与适配器之间，在检修需要时可以关闭液位截止阀，对油位控制器进行维修更换，而不需要对压缩机中液体泄压放空。

- 1、外螺纹适配器安装：松开 OUT168 液位截止阀上的三颗 M6 内六角螺栓，使适配器在三孔夹板内能自由旋转，把带有密封垫圈的适配器拧紧至油视镜孔上，确保密封，扭矩不超过 75N.M；然后把三孔夹板的缺口对准 OUT168 液位截止阀背部的标记处，套上三颗 M6 螺栓，整体把截止阀调整至水平位置（阀帽在左边），水平度不超过 $\pm 1^\circ$ ，把螺栓拧紧（注意连接处的 O 型圈安装到位）。
- 2、法兰适配器或旋转锁紧适配器安装时，直接把 OUT168 调节至水平 $\pm 1^\circ$ ，并阀帽朝左，拧紧螺丝。
- 3、OUT168 液位截止阀出厂时为打开状态，当需要时，先拆下阀帽，再把上下 2 个截止阀阀芯顺时针拧紧至完全关闭，可以把油位监视器拆下检修，完成检修固定好油位监视器后，再把 2 个截止阀阀芯逆时针旋转 4 圈左右（不得超过 5 圈）至完全打开状态，然后再把阀帽完全拧紧至永久密封。

OUT168 Cut-off valve is utilized as oil circuit blockage, and installed between oil level regulator and adapter, which could be switched off when maintenance needs and replacement of oil level regulator. And it is not necessary to drain the oil within the compressor.

1. Install OUT168 Cut-off valve horizontally, and valve cap on the left, tighten bolts.
2. OUT168 cut-off valve is defaulted as open status when out factory.
3. When it needs technique maintenance, Firstly, remove the valve cap, and then tighten the upper and lower valve spool clockwise until completely close, and then remove oil level monitor to maintenance, keep oil level monitor in place after maintenance, then turn the spool of the two stop valves anticlockwise about 4 rounds (not exceeding 5 rounds) to the completely open status. Ultimately, tighten the valve cap completely again to a permanent seal.

应用说明 Application Considerations

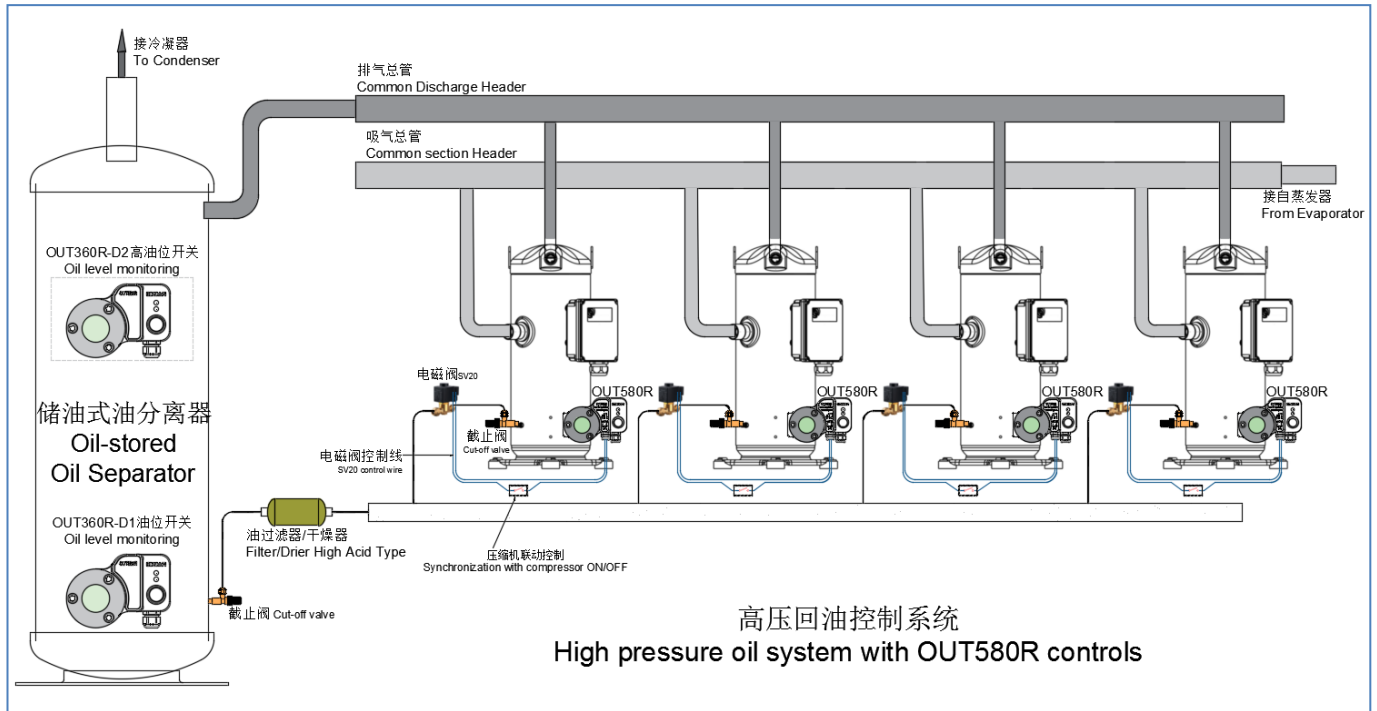
- 1、储油式油分（或者储油器）的油路出口请依次安装截止阀、300 目（50um）精过滤器，以免杂质进入造成电磁阀卡死漏油，
- 2、螺杆及高压腔涡旋压缩机因为曲轴油箱设置不在低压侧，因此必须往压缩机吸气口（低压）注油；曲轴油箱设置在低压侧的压缩机，注油口适宜选择与曲轴油箱直通的，并不低于油视镜中心的接口，也可以往吸气口注油。请在注油口安装检修阀后再与电磁阀连接。
- 3、定期检查摆臂跟随油位的灵活性，发现带磁性的摆臂被黑色油腻吸附时请及时清理。

1、The oil outlet of the oil storage type oil separator should be installed in turn with the cut-off valve and 300 mesh (50um) fine filter to avoid the impurities entering the solenoid valve.

2、Screw and high pressure chamber scroll compressor because the crankshaft tank is not set on the low pressure side, so must be to the compressor suction port (low pressure) oil injection; The crankshaft oil tank is set on the low pressure side of the compressor, the oil injection port is suitable to choose the crankshaft oil tank through, not lower than the oil mirror center interface, you can also inject oil to the suction port. Please install the maintenance valve at

the oil filling port before connecting with the solenoid valve.

3、Periodically check the flexibility of the magnetic float to follow the oil level, if the magnetic float is adsorbed by black grease, please clean it in time.



友情提醒 Caution

在正确安装及使用前提下发现产品质量问题，请寄回 **GOLDAIR** 公司进行保修或者更换，保修的期限按照合同约定，没有约定的为 18 个月。**GOLDAIR** 不承担保修产品的来回运费，不承担因用户使用该产品对财产或人员的损害、停工或者任何直接的、间接的、偶然的、实际的、刑罚的、惩罚性的、附加的或余波所及的损害，或者因本产品的安装、使用或本产品无法使用导致的任何其它责任，即使 **GOLDAIR** 已被告知可能会发生此类损害。

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