

Level watch LW4 and LW5 liquid level control

LW4 and LW5 are self-contained units intended for liquid level monitoring and control at the sight glass connection of vessels, maintaining a permanent visibility of the liquid level versus other liquid level sensors.

Features

- LW4 for liquid CO₂, selected HFC and HFO/HFO blends refrigerants and oil
 - Max. allowable pressure PS: 60 bar
- LW5 for liquid CO₂ and oil
 - Max. allowable pressure PS: 130 bar
 - CO₂ optimized gasket material, not released for HFCs
 - Adapters with CO₂ optimized gasket material
- Two Versions of each model:
 - LW4/5-H for high liquid level monitoring
 - LW4/5-L for low liquid level monitoring
- 3 Zone level control by using precise Hall-sensor measurement, not prone to errors by foaming or light like optical sensors
- Alarm, status and 3 zone indication by LED's
- Dual monitoring and protection:
- 24 V output signal for critical liquid levels
- SPDT output contact for alarming, rating 230 VAC / 3 A
- Easy installation by sight-glass replacement and front side mounting without nuts
- Supply 24 VAC, 50/60 Hz
- **CE** marking under LVD and EMC Directive



LW4



LW5

Selection table (select one item of each group)

1. Base units (supplied without adapter)

Type	Part No.	Max. Allowable Pressure	Liquid Vessel Connection \varnothing	Medium
LW4-H120	805491	60 bar	Larger than 1/2"	HFC, HFO/HFO blends, CO ₂ , Oil
LW4-L120	805490			
LW4X-H120	805494		1/2"	
LW4X-L120	805493			

2. Adapter

OM0-CUA	805037	Flange Adapter 3-/4-Hole
OM0-CCC	805041	Flange Adapter 3-Hole
OM0-CBB	805038	Screw Adapter 1-1/8"-18 UNEF
OM0-CCA	805039	Screw Adapter 3/4"-14 NPTF
OM0-CCB	805040	Screw Adapter 1-1/8"-12 UNF
OM0-CCD	805042	Rotalock Adapter 1-3/4"-12UNF
OM0-CCE	805043	Rotalock Adapter 1-1/4"-12UNF
LW0-1/2	805256	Screw adapter 1/2"-14 NPTF

3. Cables alarm relay

OM3-N30	805141	Connection to Relay 3.0 m
OM3-N60	805142	Connection to Relay 6.0 m
OM3-N100	805146	Connection to Relay 10.0 m

4. Cable power supply

LW-24V-3	805500	Connection to Power Supply 24V AC 3.0 m
LW-24V-6	805501	Connection to Power Supply 24V AC 6.0 m
LW-24V-10	805502	Connection to Power Supply 24V AC 10.0 m

Selection table (select one item of each group)

1. Base units (supplied without adapter)

Type	Part No.	Max. Allowable Pressure	Liquid Vessel Connection \varnothing	Medium
LW5-H120	805481	130 bar	Larger than 1/2"	CO ₂ Oil
LW5-L120	805480	130 bar		
LW5X-H120	805484	130 bar	1/2"	
LW5X-L120	805483	130 bar		

2. Adapter

LW0-CCA CO2	805254	Screw Adapter 3/4"-14 NPTF Steel
LW0-1/2 CO2	805257	Screw adapter 1/2"-14 NPTF

3. Cables alarm relay

OM3-N30	805141	Connection to Relay 3.0 m
OM3-N60	805142	Connection to Relay 6.0 m
OM3-N100	805146	Connection to Relay 10.0 m

4. Cable power supply

LW-24V-3	805500	Connection to Power Supply 24V AC 3.0 m
LW-24V-6	805501	Connection to Power Supply 24V AC 6.0 m
LW-24V-10	805502	Connection to Power Supply 24V AC 10.0 m

Accessories and spare parts

Type	Part No.	Description
ECT-623	804421	Transformer 230 VAC / 24 VAC, 60 VA
OM-HFC-K01	805081	Sealing-Kit LW4 (Contains All Gaskets Incl. Adapter Gaskets)
OM-CO2-K01	805079	Sealing-Kit LW5 for CO ₂ (Contains All Gaskets Incl. Adapter Gaskets)

Function

LW Liquid Level Monitoring Systems use a Hall-Sensor to measure the liquid levels. 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 liquid level by LEDs.

Technical data

Marking	 Under: - Low Voltage Directive - EMC Directive
Max. Allowable Pressure PS Max. Test Pressure PT	LW4: 60 bar LW5: 130 bar LW4: 66 bar LW5: 143 bar
Supply Voltage Current	24 VAC, 50/60 Hz, $\pm 10\%$, 0.05 A
Medium Temperature Ambient/Storage Temperature	-20...80°C -20...50°C
Medium Compatibility	LW4: R410A, R134a, R22, R404A, R507, R407C, R1234ze, R448A, R449A, R450A, R513A, R452A, R744 LW5: R744 Mineral, Synthetic and Ester Lubricants

Orientation of Base Unit Level Control	Horizontal, +/- 1° 30%...60% Sight Glass Height
Alarm Contact	Max. 3 A, 230 VAC SPDT Dry Contact
Output Signal	24 VAC Inductive Load: 35 VA
Time Delay Alarm	120 Sec
Protection Class	IP 65 (IEC529/EN 60529)