LW series liquid level monitoring system

Refrigerant & oil level control in refrigeration applications

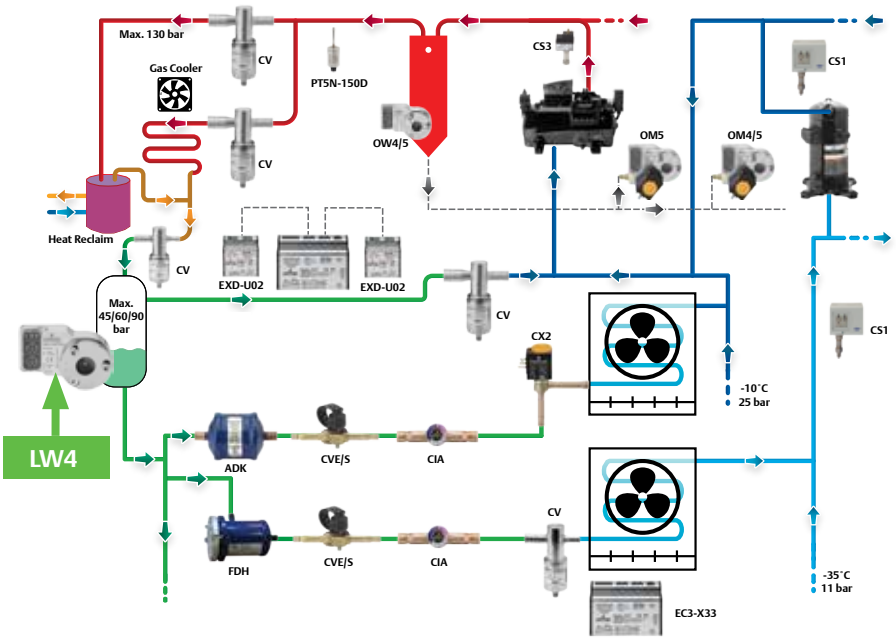
Emerson LW series are electronic refrigerant and oil level controllers. LW range offers the highest reliability and a stable functioning thanks to the hall sensing technology.

Features

- LW5 for liquid CO_2 and oil (MWP 130 bar)
  - CO_2 optimized gasket material
  - Special steel adapter LWO-CCA
- LW4 for HFC refrigerants, liquid CO_2 and oil (MWP 60 bar)
- "High" and "Low" Version of each model:
  - LW4/LW5-H for high liquid level monitoring
  - LW4/LW5-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
- Mounted at the sight glass connection of vessels, optical inspection of liquid levels fully maintained
- Dual monitoring and protection:
  - 24V output signal for control purpose
  - SPDT output contact for alarming in "red zone"
- Supply voltage 24V, 50/60Hz
- Max. medium temperature +80°C

Product selection and ordering

Type	LW5-H120 High	LW5-L120 Low	LW4-H120 High	Lw4-L120 Low
Part No.	805481	805480	805491	805490
Max. working pressure	130 bar	130 bar	60 bar	60 bar
Medium	CO_2 only, oil	CO_2 only, oil	HFC, CO_2, Oil	HFC, CO_2, Oil



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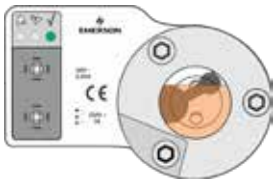
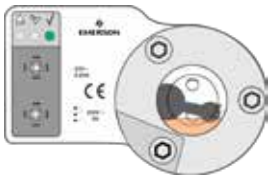
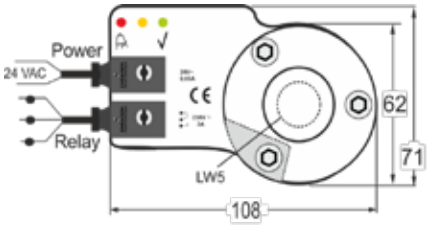
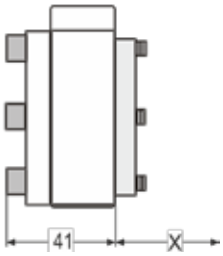
Function illustration

	Low liquid level monitoring		High liquid level monitoring	
	LW4-L120 LW5-L120	LW4X-L120 LW5X-L120	LW4-H120 LW5-H120	LW4X-H120 LW5X-H120
Green LED in ON Normal operation	Liquid level at desired level Floater position at higher level of sight glass 		Liquid level at desired level Floater position at lower level of sight glass 	
Red LED in ON NOT normal operation (Examples: Activation of alarm/ open or close of a valve/ stop or start operation a device)	Liquid level is too low (Not sufficient liquid in vessel) Floater position at lower level of sight glass 		Liquid level too high (Excessive liquid in vessel) Floater position at higher level of sight glass 	

Dimensions (mm)





X) Adapter dimension

Technical Data

Max. working pressure PS	LW4: 60 bar LW5: 130 bar
Max. test pressure PT	LW4: 66 bar LW5: 143 bar
Burst pressure	LW4: 230 bar LW5: 390 bar
Liquid oil density	700...1300 kg/m³
Medium temperature range by considering the density of liquid medium	Oil: -20... +80°C Refrigerant: R32: -20...+65°C R134a: 0...+80°C R404a: 20...+65°C R407A: -10...+80°C R407C: -15...+80°C R407F: -20...+75°C R410A: -20...+65°C R448A: -20...+75°C R449A: -20...+75°C R450A: -10...+80°C R507: 20...+65°C R513A: 0...+80°C R744: -20...+25°C LW4: 60 bar / LW5: 130 bar (Liquid phase)

Medium compatibility	LW4: HFC, HFO/HFO blends, CO_2, oil LW5: CO_2, oil Mineral, synthetic and ester lubricants
Storage, transport and ambient temperature	20...+50°C
Supply voltage Current	24VAC±10%, 50/60 Hz 0.05 A
Digital output contact	max. 3 A, 230 VAC SPDT dry contact
Time delay alarm	120 sec.
Protection class (IEC529/EN 60529)	IP65
Markings	CE acc. EMC and Low Voltage Directive

For more details, see climate.emerson.com/en-gb

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