



OM3, OM4 and OM5 TraxOil™ Oil Management

The Emerson TraxOil oil management is a self-contained and reliable electronically controlled system with an integrated solenoid valve, which feeds missing oil directly into the compressor sump. The sight glass function remains fully available, status and level information is indicated by LED's. The integrated alarm function with compressor shut down completes the overall proven solution for compressor protection.

OM3 and OM4 are released for A2L refrigerants:

- The power supply must be 24VAC only.
- The voltage of alarm contact is max. 24VAC.

While OM3 is the well-proven solution for HFC refrigerants, OM4 can also be used for subcritical CO₂ systems.

OM5 TraxOil has been specially developed for transcritical CO₂ applications, the new adapters are equipped with special types of O-rings to guarantee safe long-term and reliable operation.

Features

- OM3 for selected HFC and HFO/HFO blends refrigerants
 - max. allowable pressure PS: 46 bar
- OM4 for liquid R744 (CO₂) subcritical and selected HFC and HFO/HFO blends refrigerants
 - max. allowable pressure PS: 60 bar
- OM5 for liquid R744 (CO₂) transcritical
 - max. allowable pressure PS: 130 bar
 - max. operating pressure differential: 100 bar
 - CO₂ optimized gasket material
 - Adapters with CO₂ optimized gasket material
 - High wattage ESC-W coil to achieve high pressure differential MOPD of 100 bar
- Self-contained unit with oil level sensor and integral solenoid to manage oil level supply
- 3 Zone Level Control by using precise Hall-Sensor measurement, not prone to errors by foaming or light like optical sensors
- Alarm, status and level indication by LED's
- Supply 24 VAC or 230 VAC
- SPDT output contact for compressor shut down or alarming, rating 230 VAC / 3 A
- Easy installation by sight-glass replacement and front side mounting without nuts
- Adapters suitable for various types of compressors
- Recommended by leading compressor manufacturers
- **CE** marking under LVC and EMC Directive



OM5 + ESC-W Coil 24V



OM4 + ESC Coil 230V + OM-230V

Selection Table OM3 and OM4 (Select One Item of Each Group)

1. Base Units (Supplied Without Adapter and Coil)

Type	Part No.	Max. Allowable Pressure PS	Time Delay Alarm
OM3-020	805 133	46 bar	20 Sec
OM3-120	805 134		120 Sec
OM4-020	805135	60 bar	20 Sec
OM4-120	805136		120 Sec



2. Adapter

OM0-CUA	805 037	Flange Adapter 3- / 4-Hole
OM0-CBB	805 038	Screw Adapter 1 1/8"-18 UNEF
OM0-CCA	805 039	Screw Adapter 3/4"-14 NPTF
OM0-CCB	805 040	Screw Adapter 1 1/8"-12 UNF
OM0-CCC	805 041	Flange Adapter 3-Hole
OM0-CCD	805 042	Rotalock Adapter 1 3/4"-12UNF
OM0-CCE	805 043	Rotalock Adapter 1 1/4"-12UNF
OM0-CCL	805 261	Braze adapter Ø22.5 mm

Note: For use with A2L refrigerants, only the OM0-CCL can be used.

3. Cables Alarm Relay

OM3-N30	805 141	Connection to Relay 3 m
OM3-N60	805 142	Connection to Relay 6 m
OM3-N100	805 146	Connection to Relay 10 m

Supply Voltage 24V

4. Solenoid Coil

Type	Part No.	
ESC-24VAC	801033	50 Hz, 17VA

5. Cable Assembly Power Supply and Solenoid

OM3-P30	805 151	24V, 3 m
OM3-P60	805 152	24V, 6 m
OM3-P100	805 153	24V, 10 m

Note: For A2L, the power supply must be 24VAC only.

Supply Voltage 230V

4. Solenoid Coil

Type	Part No.	
ESC-230 VAC	801031	50 Hz, 17VA

5. Cable Assembly with 230V Module

OM-230V-3	805 163	230V, 3.0m
OM-230V-6	805 164	230V, 6.0m

Oil Management Kits Including Adapter and 24V Coil: Cross Reference

Kit Inc. Adapter	Part No.		Base Unit	Part No.	Adapter	Part No.	Coil	Part No.
OM3-CUA	805 301	⇒	OM3-020	805133	OM0-CUA	805037	ESC 24 VAC	801 062
OM3-CBB	805 303				OM0-CBB	805038		
OM3-CCA	805 304				OM0-CCA	805039		
OM3-CCB	805 305				OM0-CCB	805040		
OM3-CCC	805 306				OM0-CCC	805041		
OM3-CCD	805 302				OM0-CCD	805042		
OM3-CCE	805 300				OM0-CCE	805043		
OM3-CCL (A2L)	805126				OM0-CCL	805261		
OM4-CUA	805 307		OM4-020	805 135	OM0-CUA	805 337	ESC 24 VAC	801031
OM4-CBB	805 309				OM0-CBB	805 338		
OM4-CCA	805 310				OM0-CCA	805 339		
OM4-CCB	805 311				OM0-CCB	805 340		
OM4-CCC	805 312				OM0-CCC	805 341		
OM4-CCD	805 308				OM0-CCD	805 342		
OM4-CCE	805 313				OM0-CCE	805 343		
OM4-CCL (A2L)	805129				OM0-CCL	805261		

Selection Table OM5 (Select One Item of Each Group)

1. Base Units (Supplied Without Adapter and Coil)

Type	Part No.	Max. Allowable Pressure PS	Time Delay Alarm
OM5-020	805230	130 bar	20 Sec
OM5-120	805231		120 Sec



2. Adapter

OM0-CUA CO2	805337	Flange Adapter 3- / 4-Hole
OM0-CCC CO2	805341	Flange Adapter 3-Hole
OM0-CUD CO2	805049	Flange Adapter 6- / 6-Hole
OM0-CBB CO2	805338	Screw Adapter 1 1/8"-18 UNEF
OM0-CCA CO2	805339	Screw Adapter 3/4"-14 NPTF
OM0-CCB CO2	805340	Screw Adapter 1 1/8"-12 UNF
OM0-CCD CO2	805342	Rotalock Adapter 1 3/4"-12UNF
OM0-CCE CO2	805343	Rotalock Adapter 1 1/4"-12UNF

3. Cables Alarm Relay

OM3-N30	805 141	Connection to Relay 3 m
OM3-N60	805 142	Connection to Relay 6 m
OM3-N100	805 146	Connection to Relay 10 m

Supply Voltage 24V

4. Solenoid Coil

Type	Part No.	Description
ESC-W24VAC	801028	50 Hz, 38 VA

5. Cable Assembly Power Supply and Solenoid

OM3-P30	805 151	24V, 3 m
OM3-P60	805 152	24V, 6 m
OM3-P100	805 153	24V, 10 m

Supply Voltage 230V

4. Solenoid Coil

Type	Part No.	Description
ESC-W230VAC	801029	50 Hz, 38 VA

5. Cable Assembly with 230V Module

OM-230V-3	805 163	230V, 3 m
OM-230V-6	805 164	230V, 6 m

Accessories and Spare Parts

Type	Part No.	Description
ECT-623	804 421	Transformer 230 VAC / 24VAC, 60 VA (Supply of 3 Pieces Base Unit)
ESC-K01	801 080	Retainer Kit ESC Including O-Rings
ODP-33A	800 366	Differential Oil Check Valve 3.5 bar, PS: 46 bar (Inlet 5/8"-UNF Female, Outlet 5/8"- UNF Male)
OM3-K01	805 036	Repair Kit OM3/OM4 (Consists of Sight Glass with O-Ring and Screws, Oil Adapter with Strainer, O-Ring Back Side)
OM5-K01	805 067	Repair Kit OM5 for CO ₂ (Consists of Sight Glass with O-Ring and Screws, Oil Adapter with Strainer, O-Ring Back Side)
OM-HFC-K01	805 081	Sealing Kit OM3/OM4 (Consists of all O-Rings for OM3/OM4 and for All Types of Adapters)
OM-HFC-K02	805 083	Enclosing Tube for OM3/OM4 (Including O-Ring), Only for Replacement of New Version with Hexagonal Nut!
OM-CO2-K01	805 079	Sealing Kit CO ₂ for OM5 (Consists of All O-Rings for OM5 and for All Types of Adapters)
OM-CO2-K02	805 082	Enclosing Tube for OM5 (Including O-Ring), Only for Replacement of New Version with Hexagonal Nut!

Technical Data

Markings	CE Under: - Low Voltage Directive - EMC Directive
Max. Allowable Pressure PS	OM3: 46 bar OM4: 60 bar OM5: HP Side (Inlet): 130 bar LP Side (Outlet): 100 bar
Max. Test Pressure PT	OM3: 51 bar OM4: 66 bar OM5: 143 bar
Supply Voltage / Total Power • With ESC-24VAC Coil • With ESC-230VAC Coil and OM-230V-x Module • With ESC-W24VAC Coil • With ESC-W230VAC Coil and OM-230V-x Module	OM3/OM4: Max. 24VAC for A2L 24 VAC \pm 10%, 50Hz, 17 VA 230 VAC \pm 10%, 50Hz, 17 VA only OM5: 24VAC, 50 Hz, \pm 10%, 38VA 230VAC, 50 Hz, \pm 10%, 38VA
Solenoid Valve MOPD	OM3/OM4: 30 bar OM5: 100 bar (50Hz) See Fig. 1
Medium Temperature Ambient/Storage Temperature	-20...+80°C -20...+50°C
Medium Compatibility	OM3/OM4: A1: R134a, R404A, R407C, R450A, R452A, R448A, R449A, R507, R513A, R410A A2L: R32, R452B, R454B, R454A, R454C, R455A, R1234ze, R1234yf, Note: A2L only with oil: Emkarate RL-3MAF, R32 only with SP32 oil type OM4/OM5: R744

Flow Rate	OM3/OM4 at $\Delta P = 3$ bar: 340g/min. (22°C Oil Temperature, Oil type HM46) OM5: See Fig. 1
Orientation of Base Unit	horizontal, $\pm 1^\circ$
Level Control	40% to 60% of Sight Glass Height
Alarm Contact	Max. 3 A, 230 VAC, (max. 24VAC for A2L) SPDT dry contact
Time Delay Alarm	20 Sec.: OM3/4/5-020, All OM3/4 Kits 120 Sec.: OM3/4/5-120
Time Delay Filling	10 Sec.
Protection Class	IP 65 with plug/cable assembly acc. EN 60529 test conditions
Oil Connection	7/16"-20 UNF Male, with Strainer and O-Ring (Replaceable, See Acc.)
Enclosing Tube	Replaceable for Cleaning, Hexagon Wrench Size 18, See Spare Parts

Fig. 1: OM5: Performance Related to Supply Voltage: Flow Rate and Differential Pressure Between Inlet and Outlet (Oil Type Reniso C85E, Oil Temperature 54°C)

