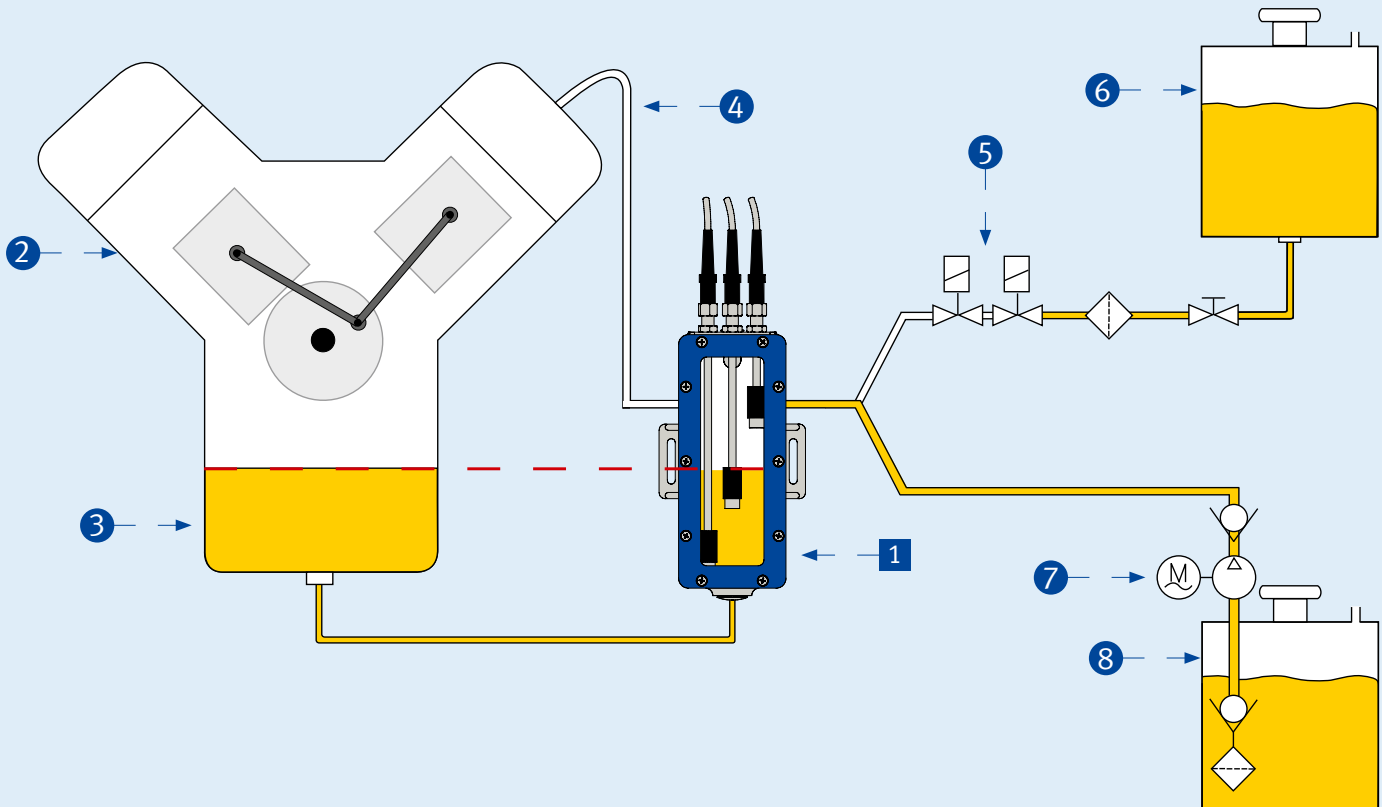


OLC Oil Level Controller Application Guide



OLC 
MOTORTECH OIL LEVEL CONTROLLER

Principle of the Oil Level Control and Oil Refill

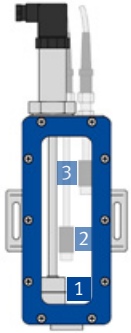


Position	Description	Chapter
1	OLC Oil level controller	A/B
2	Engine	-
3	Engine sump	-
4	Compensation line	-

Position	Description	Chapter
5	Solenoid valve	C
6	Overhead oil tank	-
7	Oil pump	D
8	Bottom-mounted oil tank	-

A) OLC Oil Level Controller with Analog Level Sensor

OLC Oil Level Controller with Analog Level Sensor – Oil Level Monitoring with Refilling



Possible Applications

Level Sensor	Event	State	Action
1	Oil level too high	Overfilling	Engine stop
	Optimal oil level – MAX	Refilling	Oil pump off / close solenoid valve
	Optimal oil level – MIN	Refilling	Oil pump on / open solenoid valve
	Oil level too low	No oil	Engine stop

Technical Data

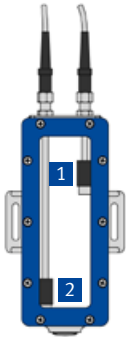
- Up to 12 switch points
- Switch points in control freely programmable
- Visualization possible via control
- Measuring transducer built into metal housing (incl. connection plug)
- Versions available in redundant design with float switches
- Measuring range 125.0 mm
- Resolution 10.0 mm
- Resistance range 625 Ω – 8.5 k Ω
- Output 4-20 mA
- Supply voltage 12 – 32 VDC

Ordering Information

P/N	Description	Float switch	Cable length	Cable insulation
80.01.214	OLC oil level controller with analog level Sensor, transducer in metal housing	–	–	–
80.01.214-1104	OLC oil level controller with analog level Sensor, transducer in metal housing	2 (MIN)	4.0 m	PVC
80.01.214-1204	OLC oil level controller with analog level Sensor, transducer in metal housing	3 (MAX)	4.0 m	PVC
80.01.214-2104	OLC oil level controller with analog level Sensor, transducer in metal housing	2 / 3 (MIN/MAX)	4.0 m	PVC

B) OLC Oil Level Controller with Float Switches

OLC Oil Level Controller with two Float Switches – Oil Level Monitoring with or without Refilling



Possible Applications

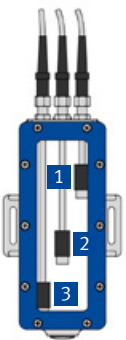
Float switch	Event	State	Action
1	Optimal oil level – MAX	Refilling	Oil pump off / close solenoid valve
2	Optimal oil level – MIN	Refilling	Oil pump on / open solenoid valve

Float switch	Event	State	Action
1	Oil level too high	Overfilling	Engine stop
2	Oil level too low	No oil	Engine stop

Ordering Information

P/N	Description	Float switch	Function	Length Guide tube	Cable length	Cable insulation	Series resistor
80.01.210-2001	OLC oil level controller	1	NC	150.0 mm	1.0 m	PVC	47 Ω
		2	NO	230.0 mm	1.0 m	PVC	47 Ω
80.01.210-2004	OLC oil level controller	1	NC	150.0 mm	4.0 m	PVC	47 Ω
		2	NO	230.0 mm	4.0 m	PVC	47 Ω

OLC Oil Level Controller with three Float Switches – Oil Level Monitoring with Refilling



Possible Applications

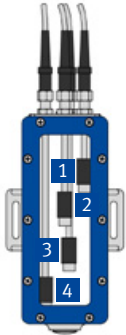
Float switch	Event	State	Action
1	Oil level too high	Overfilling	Engine stop
2	Optimal oil level – MAX	Refilling	Oil pump off / close solenoid valve
3	Optimal oil level – MIN	Refilling	Oil pump on / open solenoid valve

Float switch	Event	State	Action
1	Optimal oil level – MAX	Refilling	Oil pump off / close solenoid valve
2	Optimal oil level – MIN	Refilling	Oil pump on / open solenoid valve
3	Oil level too low	No oil	Engine stop

Ordering Information

P/N	Description	Float switch	Function	Length Guide tube	Cable length	Cable insulation	Series resistor
80.01.210-3001	OLC oil level controller	1	NC	150.0 mm	1.0 m	PVC	47 Ω
		2	NC	180.0 mm	1.0 m	PVC	47 Ω
		3	NO	230.0 mm	1.0 m	PVC	47 Ω
80.01.210-3004	OLC oil level controller	1	NC	150.0 mm	4.0 m	PVC	47 Ω
		2	NC	180.0 mm	4.0 m	PVC	47 Ω
		3	NO	230.0 mm	4.0 m	PVC	47 Ω

OLC Oil Level Controller with four Float Switches – Oil Level Monitoring with Refilling



Possible Applications

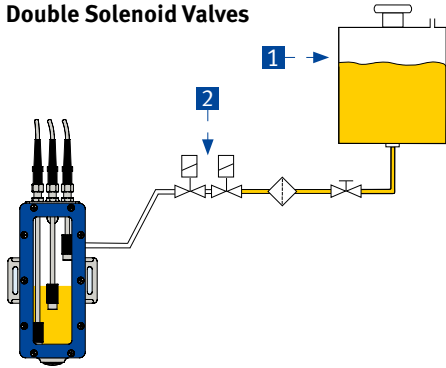
Float switch	Event	State	Action
1	Oil level too high	Overfilling	Engine stop
2	Optimal oil level – MAX	Refilling	Oil pump off / close solenoid valve
3	Optimal oil level – MIN	Refilling	Oil pump on / open solenoid valve
4	Oil level too low	No oil	Engine stop

Ordering Information

P/N	Description	Float switch	Function	Length Guide tube	Cable length	Cable insulation	Series resistor
80.01.210-4001	OLC oil level controller	1	NC	150.0 mm	1.0 m	PVC	47 Ω
		2	NC	180.0 mm	1.0 m	PVC	47 Ω
		3	NC	180.0 mm	1.0 m	PVC	47 Ω
		4	NO	230.0 mm	1.0 m	PVC	47 Ω
80.01.210-4004	OLC oil level controller	1	NC	150.0 mm	4.0 m	PVC	47 Ω
		2	NC	180.0 mm	4.0 m	PVC	47 Ω
		3	NC	180.0 mm	4.0 m	PVC	47 Ω
		4	NO	230.0 mm	4.0 m	PVC	47 Ω

C) OLC Oil Level Controller – Solenoid Valves

Double Solenoid Valves



Application

An oil storage tank **1** positioned above the engine, from which the oil flows by gravity, requires a solenoid valve for blocking, or better yet a double solenoid valve for reasons of redundancy **2**.

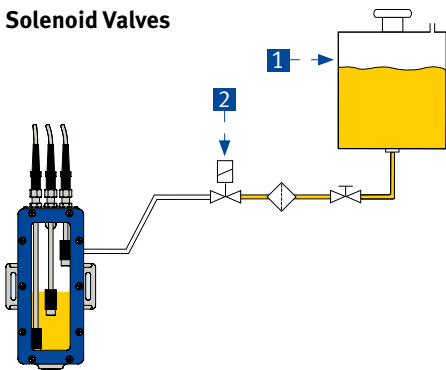
Technical Data

- Directly controlled via 2/2 way valve
- connected with double nipple
- normally closed
- electric plug in connection with two connection leads
- NW 2
- G 1/4 inside

Ordering Information

P/N	Description	Coil voltage	Maximum pressure	Cable length	Cable insulation
81.00.310-01	Double solenoid valve, 2/2 way	230 V / 50 Hz	24 bar	1.0 m	PVC
81.00.310-04	Double solenoid valve, 2/2 way	230 V / 50 Hz	24 bar	4.0 m	PVC
81.00.311-01	Double solenoid valve, 2/2 way	24 V	16 bar	1.0 m	PVC
81.00.311-04	Double solenoid valve, 2/2 way	24 V	16 bar	4.0 m	PVC
81.00.312-01	Double solenoid valve, 2/2 way	12 V	16 bar	1.0 m	PVC
81.00.312-04	Double solenoid valve, 2/2 way	12 V	16 bar	4.0 m	PVC
81.00.313-01	Double solenoid valve, 2/2 way	24 V / 50 Hz	24 bar	1.0 m	PVC
81.00.313-04	Double solenoid valve, 2/2 way	24 V / 50 Hz	24 bar	4.0 m	PVC

Solenoid Valves



Application

An oil storage tank **1** positioned above the engine, from which the oil flows by gravity, requires a solenoid valve for blocking **2**, or better yet a double solenoid valve for reasons of redundancy.

Technical Data

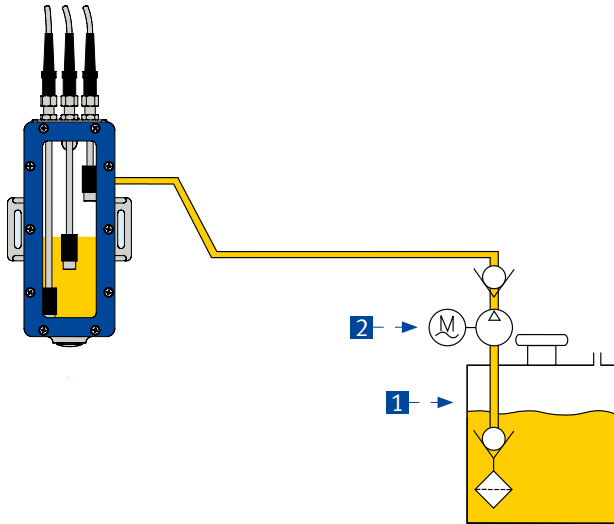
- Directly controlled 2/2-way valve
- normally closed
- electric plug-in connection
- with connection lead
- NW 2
- G 1/4 inside

Ordering Information

P/N	Description	Coil voltage	Maximum pressure	Cable length	Cable insulation
81.00.300-01	Solenoid valve, 2/2 way	230 V / 50 Hz	24 bar	1.0 m	PVC
81.00.300-04	Solenoid valve, 2/2 way	230 V / 50 Hz	24 bar	4.0 m	PVC
81.00.301-01	Solenoid valve, 2/2 way	24 V	16 bar	1.0 m	PVC
81.00.301-04	Solenoid valve, 2/2 way	24 V	16 bar	4.0 m	PVC
81.00.302-01	Solenoid valve, 2/2 way	12 V	16 bar	1.0 m	PVC
81.00.302-04	Solenoid valve, 2/2 way	12 V	16 bar	4.0 m	PVC
81.00.303-01	Solenoid valve, 2/2 way	24 V / 50 Hz	24 bar	1.0 m	PVC
81.00.303-04	Solenoid valve, 2/2 way	24 V / 50 Hz	24 bar	4.0 m	PVC

D) OLC Oil Level Controller – Oil Pumps

Oscillating Piston Pumps



Application

An oil storage tank located below the engine **1** must be equipped **2** with an electric pump.

Technical Data

- On-period 100% at 20 °C oil temperature, 45% at 45 °C oil temperature
- max. 50 °C oil temperature
- max. suction head 2 m
- Oil viscosity up to about 500 cSt

Ordering Information

P/N	Description	Voltage	Connected load	Protection class	Max. pump capacity	Max. pressure
81.00.510	Oscillating piston pump	230 V / 50 Hz	30 W	IP 66	0.4 l/min.	0.7 bar
81.00.511	Oscillating piston pump	230 V / 50 Hz	60 W	IP 65	1.5 l/min.	2.5 bar

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