

Float Actuated Oil Level SWICHGAGE® Installation Instructions



Models L100, L100W, L120, L127, and L128

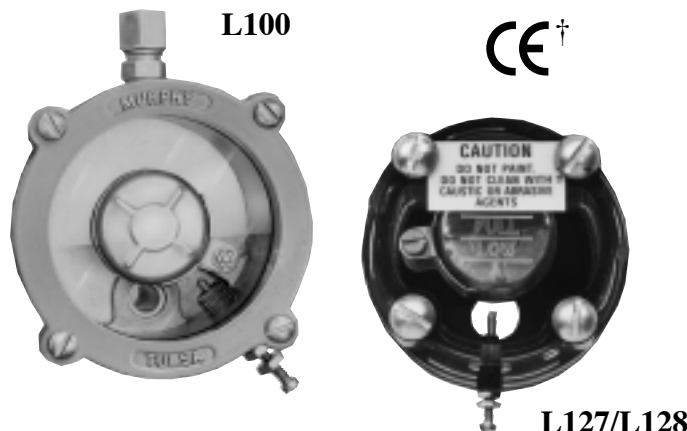
Read the following information before installing. A visual inspection of this product for damage during shipping is recommended before mounting. These installation instructions are intended for all L100, L120, L127, and L128 Series models.

GENERAL INFORMATION

WARNING

BEFORE BEGINNING INSTALLATION OF THIS MURPHY PRODUCT

- Disconnect all electrical power to the machine.
- Make sure the machine cannot operate during installation.
- Follow all safety warnings of the machine manufacturer.
- Read and follow all installation instructions.



Description

The L100, L100W series are general purpose level SWICHGAGE® instruments designed for small engines and pumps. They connect to the crankcase through a 1/4 NPT pipe nipple and/or 1/2 NPT fittings.

The L120, L127 and L128 series Lube Level SWICHGAGE® instruments are designed for specific engines and mount directly to the machined surface on the crankcase.

- L120 Series fits engines previously manufactured by Witte Engine Works, Lufkin Industries and now manufactured by Arrow Speciality Company.
- L127 Series fits Fairbanks-Morse ZC series engines, Bell Manufacturing, and similar engines.
- L128 Series fits Arrow Speciality engines and the Climax/Continental Emsco series.

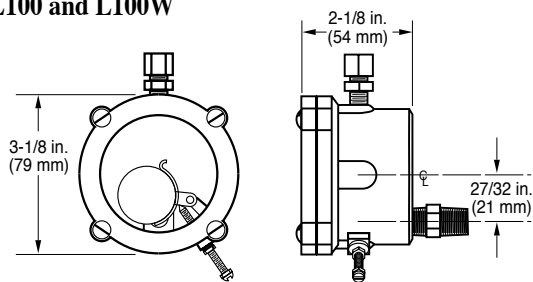
Specifications

	Contact Rating	Case	Float	Gasket
L100/L100W	2A 30 V	Aluminum	Brass	Neo-Cork
L120	2A 30 V	Aluminum	Brass	Buna-N
L127	2A 30 V	Nylon	Brass	Buna-N
L128	2A 30 V	Nylon	Brass	Neo-Cork

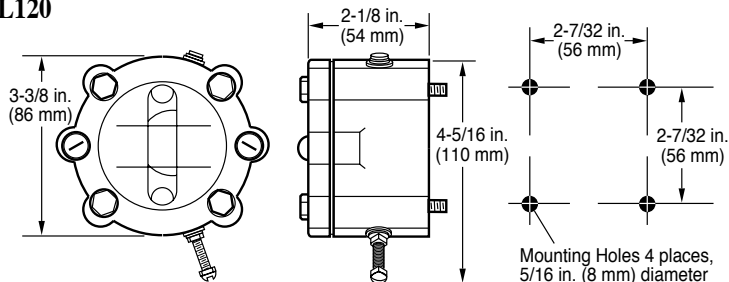
† Products covered by this literature comply with EMC Council directive 89/336/EEC regarding electromagnetic compatibility except as noted.

DIMENSIONS

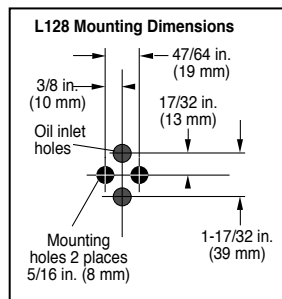
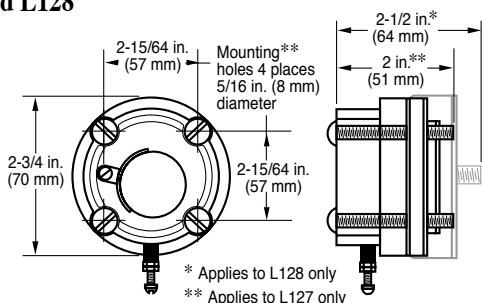
L100 and L100W



L120



L127 and L128



Call MurCal To Place Your Order



INSTALLATION



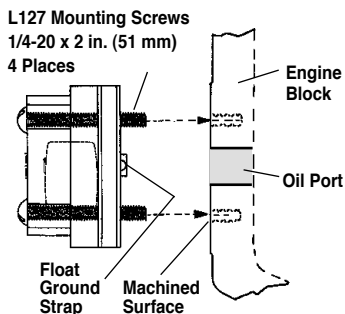
WARNING: Disconnect all electrical power from the equipment and disable the equipment so it cannot start during the installation period.

Models L100, L100W

1. Install the pipe fittings into the crankcase drain or other fitting in the bottom of the crankcase. Use Teflon tape or non-hardening thread sealant. A tee should be installed so that it can be used as the crankcase drain. Be sure to install a pipe plug in the open side of the tee.
2. For crankcases vented to atmosphere, install the 1/4 in. (6 mm) tube fitting and cane in the top of the L100/L100W. For non-atmospheric crankcases, install the tube fitting and connect 1/4 in. (6 mm) copper tubing to a suitable fitting in the crankcase cavity above the normal operating and splash level of the lubricant. Note that the tube must remain open at all times and that it can be closed by oil splash. This will cause improper operation of the lube level SWICHGAGE®.

Models L120, L127 and L128

1. All mounting surfaces must be clean of oil, grease, and dirt.
2. Be sure the mounting plate to engine crankcase gasket is properly aligned with the bolt hole and mounting plate hole patterns.
3. **FOR THE L127**, be sure that the float grounding strap extends into the crankcase cavity and fits tight against the crankcase.



4. Tighten mounting screws in a crisscross pattern. Do not overtighten the screws as this may cause case or mounting plate distortion resulting in oil leakage.

All Models

1. Fill the crankcase with oil to the engine manufacturer's specified **LOWEST** level.
2. **IMPORTANT:** Adjust the low level contact screw so that the circuit "makes" (check continuity with an Ohm meter). Contact is NOT factory set.
3. Fill the crankcase to "full" level and observe that the float has risen and no longer "makes" with the low level contact. If the SWICHGAGE® also has a high level contact the float should NOT "make" with the high level contact with normal oil level. Set the high level contact at an appropriate setting for a crankcase overfill condition.
4. Attach appropriate wiring to the engine shutdown or alarm system. Consult appropriate Murphy or engine manufacturer's wiring instructions. Typical wiring is shown below.
5. Start the engine and verify that the oil level remains in a "safe" running level and that there are no oil leaks. Allow the engine to warm up and check that mounting screws are tight. **CAUTION:** Do not over tighten.
6. To check switch operation, open crankcase drain to allow oil level to drop until the low level contact "makes" and shuts down the engine. Refill crankcase.



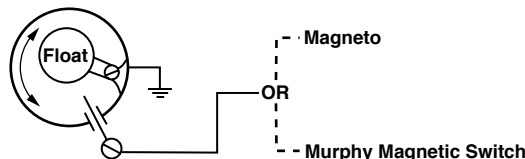
CAUTIONS: Do NOT paint L127 or L128. Do NOT clean L127 or L128 with caustic or abrasive solutions or compounds. Do NOT clean L127 or L128 with solvents. Clean ONLY with soap and water.

TYPICAL WIRING DIAGRAM



CAUTION: Perform the wiring operation with the power source off. Observe all contact and voltage ratings.

The oil level SWICHGAGE® can be connected to a Murphy magnetic switch or magneto. Switch contact rating is 2 A @ 30 VAC/DC resistive, circuit closes to ground.



SERVICE PARTS

L100 and L100W

15-01-0103 Glass lens, gasket, 4 screws, contact assembly, float assembly.

L120

15-05-0714 Case
 15-05-0008 Float Shaft
 15-01-0194 Float assembly
 15-05-0211 Gasket, dial to case, 3 required
 15-05-0142 Glass lens
 15-05-0799 Lid
 80-04-1402 Screw, Machine 1/4-20 x 5/8 (16 mm) 2 required
 80-01-1407 Screw, Hex Head Cap 1/4-20 x 2-1/2 (64 mm) 4 required
 15-05-0242 Gasket, case to engine
 15-01-0186 Contact assembly

L127

15-00-0180 Case and contact assembly
 15-00-0181 Mounting plate and float assembly

L128

15-00-0180 Case and contact assembly
 15-00-0188 Less case assembly

Warranty

A two-year limited warranty on materials and workmanship is provided with this Murphy product. Details are available on request and are packed with each unit.

MURPHY



USA-ISO 9001 FM 24221
 UK-ISO 9002 FM 29422

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