



Tel +1 (717) 767-6511
 Fax +1 (717) 764-0839
 www.redlion-controls.com

Bulletin No. LMP-D
 Drawing No. LP0166
 Released 9/02

LOGIC MAGNETIC PICKUPS - SUPER-SENSITIVE MAGNETIC PICKUPS WITH CURRENT SINKING OUTPUT OR CURRENT SOURCING OUTPUT



- DETECTS STEEL SENSING GEARS OR OTHER MOVING FERROUS TARGETS
- BUILT-IN PULSE SHAPING AMPLIFIER PROVIDES ULTRA-LOW-SPEED OPERATION WITH LARGE AIR GAPS
- TWO OUTPUT SIGNAL VERSIONS
- 3/4" DIAMETER STAINLESS STEEL CASE
- EPOXY ENCAPSULATED SENSOR FOR OIL, DIRT & MOISTURE RESISTANCE

DESCRIPTION

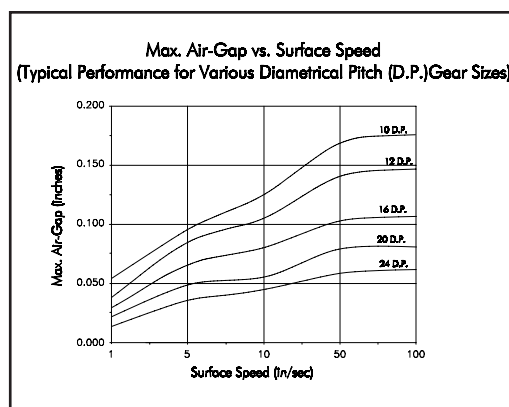
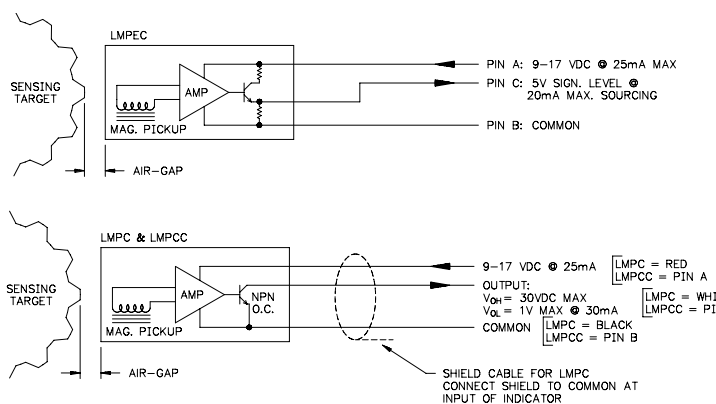
LOGIC MAGNETIC PICKUPS (LMP's) provide sensing sensitivities several orders of magnitude greater than standard magnetic pickups when detecting moving ferrous targets. By locating a high gain pre-amplifier & signal processing circuit "inside" the mag pickup housing, larger airgaps and slower target surface speeds can be achieved thereby greatly expanding application versatility as compared with conventional mag pickups. In addition, these units have excellent noise immunity and a frequency response to 10 KHz. The stainless steel sensing pole is mounted flush to the plastic sensing face allowing greater ease of setting airgaps and eliminating snagging the pole with a moving target.

Two output types are available (see ordering information). The **NPN Open Collector Transistor Output** unit provides a negative going current sinking output with the approach of a ferrous target and is current limited to 40 mA. The **Transistor Emitter-Follower Output** unit provides positive going 5 V pulses with the approach of a ferrous target and can source 20 mA of load current. The Open Collector units are available with either an integrally potted 10, 25 or 50 foot 3-wire shielded cable with neoprene strain relief boot or a polarized 3-pin 5/8"-24 threaded connector for quick change versatility (see following page for mating extension cable). The Emitter-Follower output unit is available in the 3-pin connector version only.

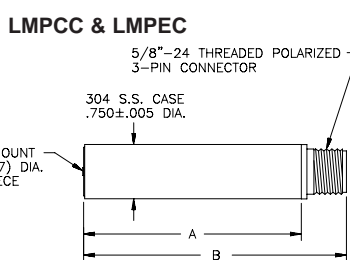
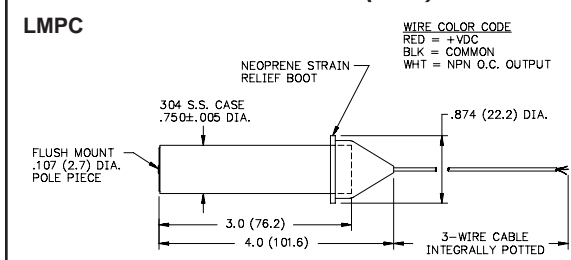
SPECIFICATIONS

1. **SUPPLY VOLTAGE (all versions):** +9 to +17 VDC @ 25 mA max.
2. **NPN OPEN COLLECTOR OUTPUT (LMPC & LMPC):** $V_{OH} = 30$ VDC max.; $V_{OL} = 1$ Vmax. @ 30 mA, output current is limited to 40 mA.
3. **EMITTER-FOLLOWER OUTPUT (LMPEC):** +5 V signal level @ 20 mA max. current sourcing.
4. **OPERATING FREQUENCY (all versions):** 10 KHz max.
5. **OPERATING TEMPERATURE:** -18°C to +60°C (0°F to +140°F)
6. **CONSTRUCTION:** Epoxy encapsulated in 0.750" ±0.005" dia. #304 stainless steel case. Plastic sensing face with stainless steel sensing pole.
7. **OUTPUT CABLE (LMPC only):** Integrally potted 10, 25 or 50 ft. PVC jacketed, 3-wire 22 AWG conductors, with stranded shield and 100% foil shield coverage.
8. **OUTPUT CONNECTOR (LMPC & LMPEC):** Polarized 5/8"-24 thread 3-pin connector.

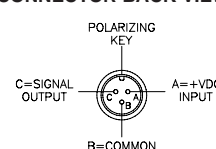
A = +VDC, B = COMMON, C = SIGNAL OUTPUT



DIMENSIONS In inches (mm)



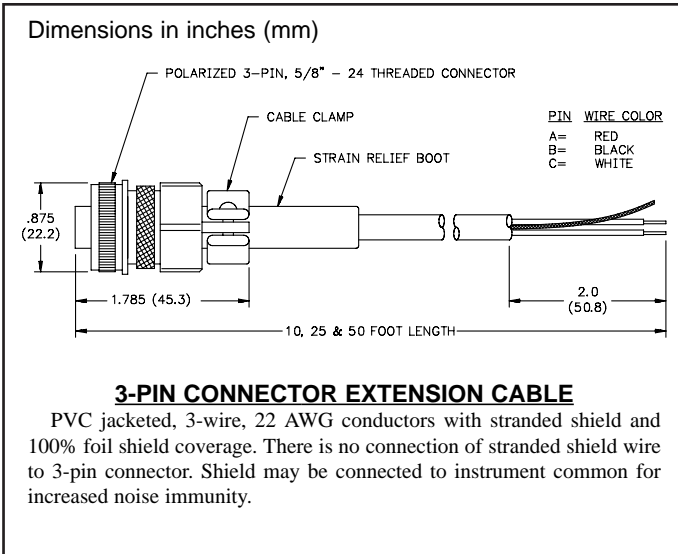
CONNECTOR BACK VIEW



MODEL	DIMENSIONS	
	A	B
LMPC	3.5" (88.9)	4.125" (104.8)
LMPEC	3.0" (76.2)	3.625" (92.1)

3-PIN CONNECTOR EXTENSION CABLE (LMPC & LMPEC)

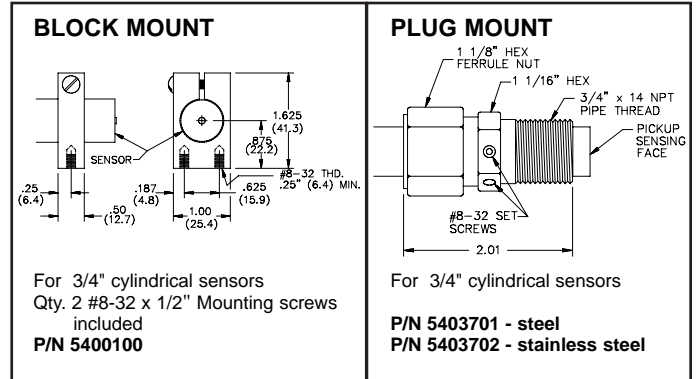
This cable and connector assembly (see diagram below) is composed of PVC jacketed, 3-wire 22 AWG conductors with stranded shield and 100% foil shield coverage for noise immunity and is oil and water resistant. Connector/cable junctions are silicone sealed. The 5/8"-24 threaded ring is fitted with an O-ring to make a moisture proof connection. Cable is available in 10, 25, or 50 foot lengths.



3/4" DIAMETER CYLINDRICAL SENSOR MOUNTING

Logic Magnetic Pickups and other Red Lion Controls 3/4" dia. cylindrical pickups may be easily mounted using Model 5400100 **BLOCK MOUNT** (see diagram below). This machined block of solid aluminum provides for rigid mounting using the two included #8-32 x 1/2" screws. The one screw split-clamp design allows for easy adjustment of airgap and locks the unit securely without deforming the case.

The **PLUG MOUNT** (see diagram below) allows 3/4" dia. cylindrical sensors to be mounted in "thru-wall" applications. The Plug Mounts 3/4-14 NPT thread is installed into a threaded wall or casing. The sensor is then installed through the plug mount. The sensor-to-target airgap is adjusted and the sensor is tightened into position by two #8-32 set screws. Tightening the ferrule nut compresses a teflon ferrule around the sensor providing an oil tight seal. Plug Mounts are available in both steel and stainless steel (see ordering information).



ORDERING INFORMATION

MODEL NO.	DESCRIPTION	PART NUMBER
LMPC	Logic Magnetic Pickup, NPN O.C., 10 ft. Cable	LMPC0000
	Logic Magnetic Pickup, NPN O.C., 25 ft. Cable	LMPC0025
	Logic Magnetic Pickup, NPN O.C., 50 ft. Cable	LMPC0050
LMPC	Logic Magnetic Pickup, NPN O.C., 3-Pin Connector	LMPC0000
*LMPEC	Logic Magnetic Pickup, Emitter Follower, 3-Pin Connector	LMPEC000
	Block Mount for 3/4" Cylindrical Sensors	5400100
	Steel Plug Mount	5403701
	Stainless Steel Plug Mount	5403702
CCA3	3-Pin Connector Extension Cable, 10 ft.	CCA3PC00
	3-Pin Connector Extension Cable, 25 ft.	CCA3PC25
	3-Pin Connector Extension Cable, 50 ft.	CCA3PC50

* This Model is a direct replacement for P/N 5171000.

Red Lion Controls
20 Willow Springs Circle
York PA 17402
Tel +1 (717) 767-6511
Fax +1 (717) 764-0839

Red Lion Controls BV
Basicweg 11b
NL - 3821 BR Amersfoort
Tel +31 (0) 334 723 225
Fax +31 (0) 334 893 793

Red Lion Controls Asia
31, Kaki Bukit Road 3 #06-02 TechLink
Singapore 417818
Tel +65 6744-6613
Fax +65 6743-3360