



### Black Panelist (Phenolic)

#### Models:

- 303-C** (3 1/2"),
- 503-C** (4 1/2"),
- 603-C** (5 1/2") (shown)

See page 3 for dimensions.



### Clear Panelist

#### Models:

- 202-C** (2 1/2")
- 302-C** (3 1/2")
- 502-C** (4 1/2")
- 602-C** (5 1/2") (shown)

See page 3 for dimensions.



### Ruggedized

#### Models:

- 255-C** (2 1/2")
- 355-C** (3 1/2") (shown)
- 455-C** (4 1/2")

See page 7 for dimensions.

### Features

- ▲ Simple contact circuit for limit control
- ▲ No amplifiers required
- ▲ Wide range of models and styles
- ▲ Available to match Analog Panel Meter Series

Locking-Coil meter-relays are essentially d'Arsonval meter mechanisms with setpoint arms and contacts. The locking coil of the meter-relay is an integral part of the signal coil and is wound with the signal coil as part of the meter-relay's moving element. The locking coil is energized when the indicating pointer reaches the setpoint. Torque produced by the locking current drives the contacts together and holds them firmly together to create an excellent low resistance control circuit. The way that LFE/api locking coil contacts open is another reason for their consistent performance. The meter-relays are designed so that the contacts open only after the locking coil circuit has been broken. A small spark is produced when the contacts "make". This keeps them free from pitting while a wiping motion on each "make" and "break" keeps them clean.

The LFE/api locking-coil meter-relay is an extremely simple and stable device to apply in limit control applications. It indicates as well as controls. No readout circuitry is needed in the control system, and precise control with indication is provided at moderate cost. Only three basic components are required for the system: a high or low setpoint locking-coil meter-relay, a load relay and a DC power source. A double setpoint control system is hardly more complicated; it requires only a LFE/api double setpoint meter-relay and an extra load relay.

DC Ranges	
DC Microamperes	5 to 1000
DC Milliamperes	1 to 1000
DC Amperes	1 to 50 <sup>1</sup>
DC Millivolts	5 to 1000
DC Volts	1 to 500

Process Ranges	
DC Milliamperes	1-5 4-20 10-50
DC Volts	1-5, 0-10

AC Ranges (Rectifier Type)	
AC Microamperes	100 to 1000
AC Milliamperes	1 to 1000
AC Amperes	1 to 50
AC Millivolts	250 & 500
AC Volts	1 to 500

### Thermocouple Pyrometers

Contact Factory

<sup>1</sup> Ruggedized models available in a range of 1 to 9 amperes DC



Contact Factory for Additional Specifications on the C Series Locking-Coil Meter-Relays

Locking-Coil Meter Relays - C Series Specifications					
Specifications	DC Ranges		AC Ranges (Rectifier Type)		Pyrometer
	Current	Voltage	Current	Voltage	
Accuracy	±2%	±2%	±3%	±3%	±2%
Tracking	Optional	Optional	Optional	Optional	N/A
Balance	±1%	±1%	±1%	±1%	±1%
Repeatability	Taut band	< 1/4%	< 1/4%	< 1/4%	< 1/4%
	Pivot-and-Jewel	2%	2%	2%	2%
Resistance Tolerance	±20%	±5%	—	< 10V ±20% ≥ 10V ±5%	N/A
Overload Capacity	1 Second	1000%	≤ 100V 1000% > 100V 200%	150%	150%
	Continuous	150%	120%	150%	150%
Calibration Frequency	—	—	60 Hz	60 Hz	N/A
Overshoot (maximum)	20%	20%	20%	20%	N/A
Response Time (maximum)	Sensitivity ≥50µa	1.5 sec	1.5 sec	1.5 sec	1.5 sec
	Sensitivity <50µa	3 sec	3 sec	3 sec	3 sec

Effects of shock, vibration, humidity and temperature are equal to or better than ANSI C39.1-1981.  
 Safety (dielectric test, leakage and other hazards): instruments are equal to or better than ANSI C39.5-1974.  
 The above tolerance limits apply to the standard ranges listed in this bulletin. Special instruments may vary from these limits.  
 Rated circuit to ground voltage = 500 Vrms (700 Peak).