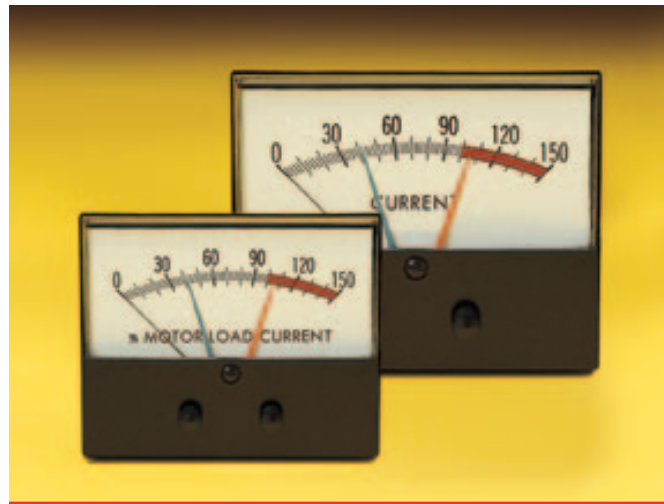


# Optical Meter-Relays / Rear Mount Control Module - 195 & 196 Series.



## 195 Series

**Models:** 1952 (2 1/2"), 1953 (3 1/2"), 1954 (4 1/2")

- ▲ Plug-in control module
- ▲ Long life lamp operation
- ▲ Plastic front and base
- ▲ Proven optical setpoints
- ▲ On/Off or alarm control

## 196 Series

**Models:** 1963 (3 1/2"), 1964 (4 1/2")

- ▲ Modern rectangular appearance
- ▲ Plug-in control module
- ▲ Proven optical setpoints
- ▲ Available with mounting bezels (Models 1965 & 1966)
- ▲ Limit lights & manual reset switches optional (Model 1967)

The 195 and 196 Series Meter-Relays contain an exclusive light sensitive transistor switch that provides the ultimate in control simplicity and reliability. This switch controls the load relays. There are no pointer contacts or mechanical interference in the meter mechanism. The controllers are supplied with a plug-in control module that mounts directly on the rear of the Meter-Relay or may be remotely mounted with an accessory cable.

Optical Meter-Relays - 195 & 196 Series Specifications					
Specifications		DC Ranges		AC Ranges (Rectifier Type)	
		Current	Voltage	Current	Voltage
Accuracy		±2%	±2%	±3%	±3%
Balance		±1%	±1%	±1%	±1%
Repeatability		±2%	±2%	±2%	±2%
Resistance Tolerance		±20%	±5%	—	< 10V ±20% ≥ 10V ±5%
Overload Capacity	1 Second	1000%	≤ 100V 1000% > 100V 200%	150%	150%
	Continuous	150%	120%	150%	150%
Calibration Frequency		N/A	N/A	60 Hz	60 Hz
Overshoot (maximum)		20%	20%	20%	20%
Response Time (maximum)		3 sec	3 sec	3 sec	3 sec

**Supply Power:** 120 VAC 50/60Hz 7VA MAX  
**Load Relay Rating:** DPDT 5A @ 120VAC Relative (Model 1967 - SPDT only)

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 = 800 Vrms (1100 Peak).



DC Ranges	
DC Microamperes	50 to 1000
DC Milliamperes	1 to 1000
DC Amperes	1 to 50
DC Millivolts	20 to 1000
DC Volts	1 to 750

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 50
AC Amperes	5
AC Millivolts	None
AC Volts	1 to 500

### 195 Series Dimensions

Model	Height	Width	Depth*	Depth w/ Module*
1952 (2 1/2")	2.70	2.70	3.222	N/A
1953 (3 1/2")	3.50	3.50	2.897	6.745
1954 (4 1/2")	4.41	4.85	2.897	6.745

### 196 Series Dimensions

Model	Height	Width	Depth*	Depth w/ Module*
1953 (3 1/2")	3.006	3.756	2.897	6.745
1954 (4 1/2")	3.756	4.632	2.897	6.745

Dimensions are in inches.  
 \* Depth = front of panel to end of terminals.  
 See price sheet for part numbers.  
 Contact Factory for more information & dimensional drawings.