



## ELECTRONIC TUBE REFERENCE

## HL10

Triode - HV Shunt Regulator electronic tube

CONSOLIDATED TECHNICAL DATA

## 1 SECTION

CONSTRUCTION

## TRIODE

High-voltage control triode for shunt regulation and variable-resistance service in high-voltage DC power supplies.

## GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | —                 | BASE PINS            | —             |
| NOMINAL HEATER      | 4 V / 1.5 A       | PARALLEL HEATER      | — / —         |
| HEATING             | Indirect          | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

## SECTION RATINGS

|                                                                                                                                                                                 |         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| SECTION 1 Triode                                                                                                                                                                |         |
| AMPLIFICATION FACTOR                                                                                                                                                            | 300     |
| MAXIMUM PLATE VOLTAGE                                                                                                                                                           | 20000 V |
| MAXIMUM PLATE DISSIPATION                                                                                                                                                       | 30 W    |
| MAXIMUM CATHODE CURRENT                                                                                                                                                         | 10 mA   |
| <i>Published Ferranti ratings and characteristics promoted where applicable; additional electrical, pulse, regulator, microwave, and operating data retained as parameters.</i> |         |

High-voltage control triode for shunt regulation and variable-resistance service in high-voltage DC supplies.

## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1963 Ferranti

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1963 FERRANTI

## Section 1 · Triode

| OTHER                               |                 |                  |
|-------------------------------------|-----------------|------------------|
| PARAMETER                           | PUBLISHED VALUE | CONDITION / NOTE |
| Peak anode current maximum          | 30 mA           | —                |
| Mean anode current maximum          | 10 mA           | —                |
| Negative grid voltage maximum       | -250 V          | —                |
| Grid circuit resistance maximum     | 2 Mohm          | —                |
| Peak heater-cathode voltage maximum | 150 V           | —                |
| Cathode heating time minimum        | 30 s            | —                |

| CHARACTERISTICS                      |                 |                  |
|--------------------------------------|-----------------|------------------|
| PARAMETER                            | PUBLISHED VALUE | CONDITION / NOTE |
| Control-grid cutoff voltage at 5 kV  | -24 V           | —                |
| Control-grid cutoff voltage at 10 kV | -40 V           | —                |
| Control-grid cutoff voltage at 15 kV | -59 V           | —                |
| Control-grid cutoff voltage at 20 kV | -80 V           | —                |

| CAPACITANCE        |                 |                  |
|--------------------|-----------------|------------------|
| PARAMETER          | PUBLISHED VALUE | CONDITION / NOTE |
| Input capacitance  | 40 pF           | —                |
| Output capacitance | 20 pF           | —                |

| APPLICATION |                                              |                  |
|-------------|----------------------------------------------|------------------|
| PARAMETER   | PUBLISHED VALUE                              | CONDITION / NOTE |
| Application | High-voltage shunt regulator / control valve | —                |