



# DS78LS120/DS88LS120 Dual Differential Line Receiver (Noise Filtering and Fail-Safe)

## General Description

The DS78LS120 and DS88LS120 are high performance, dual differential, TTL compatible line receivers for both balanced and unbalanced digital data transmission. The inputs are compatible with EIA, Federal and MIL standards.

The line receiver will discriminate a  $\pm 200$  mV input signal over a common-mode range of  $\pm 10$ V and a  $\pm 300$  mV signal over a range of  $\pm 15$ V.

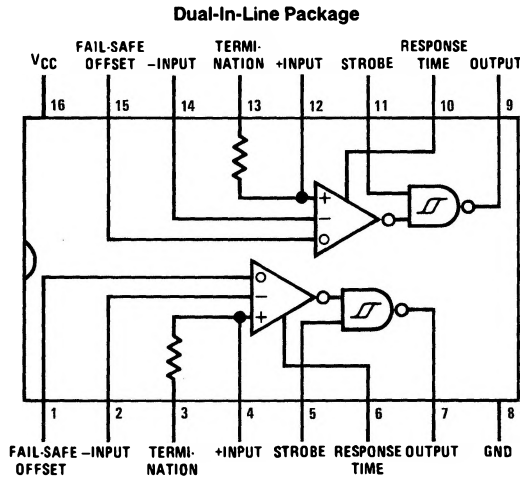
Circuit features include hysteresis and response control for applications where controlled rise and fall times and/or high frequency noise rejection are desirable. Threshold offset control is provided for fail-safe detection, should the input be open or short. Each receiver includes an optional  $180\Omega$  terminating resistor and the output gate contains a logic strobe for time discrimination. The DS78LS120 is specified over a  $-55^\circ\text{C}$  to  $+125^\circ\text{C}$  temperature range and the DS88LS120 from  $0^\circ\text{C}$  to  $+70^\circ\text{C}$ .

Input specifications meet or exceed those of the popular DS7820/DS8820 line receiver.

## Features

- Meets EIA standards RS232-C, RS422 and RS423, Federal Standards 1020, 1030 and MIL-188-114
- Input voltage range of  $\pm 15$ V (differential or common-mode)
- Separate strobe input for each receiver
- 5k typical input impedance
- Optional  $180\Omega$  termination resistor
- 50 mV input hysteresis
- 200 mV input threshold
- Separate fail-safe mode

## Connection Diagram



TL/F/7499-1

**Order Number DS78LS120J, DS88LS120J or DS88LS120N**  
 See NS Package Number J16A or N16A