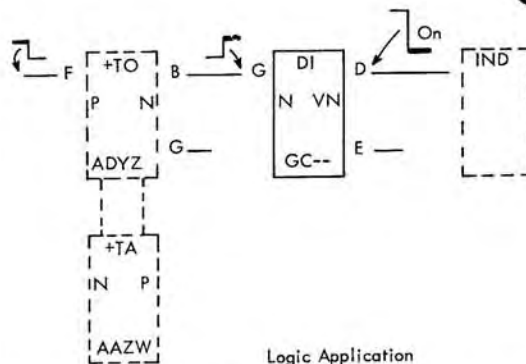
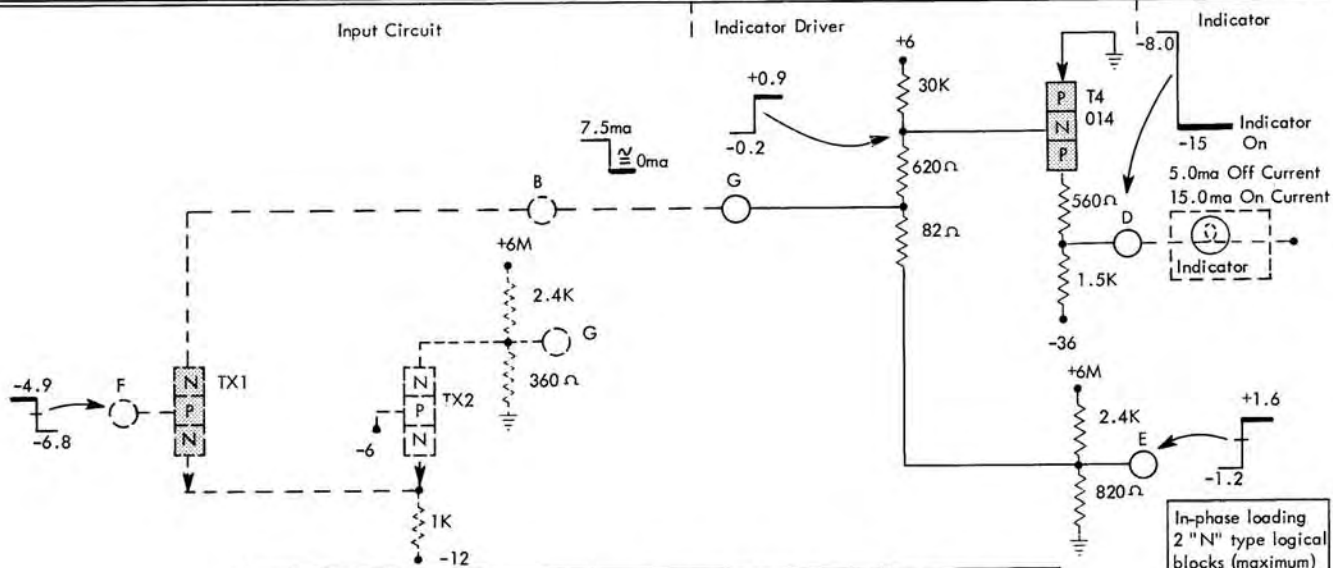


ADL Configuration



Logic Application



Card Code	Part Number	Input		In-Phase Output		Out-Of-Phase Output (Nominal)
		Current (ma)		Min	Max	
GC--	371050	Min	4.82	+0.4	+1.7	-8.0
		Nom	7.5	-0.4	-2.4	
		Max	10.38			

In-phase loading  
2 "N" type logical  
blocks (maximum)

### Current Mode + N Indicator Driver

The GC -- card consists of three voltage mode indicator driver circuits. Each circuit supplies up to 15ma to an incandescent lamp connected to its out-of-phase output pin. In addition, the in-phase output is capable of driving two N type logic blocks. The indicator drivers accept a current input from either the in-phase or out-of-phase outputs of a P type current switching block or its equivalent.

#### Circuit Description

In the state shown, tx1 is forward-biased on and supplies input current (7.5ma) to the indicator driver. This current flow into the divider network decreases the base voltage of T4 below ground and provides a -N output from pin E. T4 is forward-biased on and appears as a low resistance in parallel with the indicator lamp. Saturation current flows through T4 and limits the current to the indicator to about

5ma; this pre-energization current is not sufficient to light the lamp. The voltage that exists at pin D at this time is -8.0v.

When the input to tx1 drops to -6.8v, tx1 is cut off and tx2 is biased on. The input current to the indicator driver drops to near 0ma (a small  $I_{CO}$  would flow). Decreasing current flow into the divider network raises the base voltage of T4 to +0.9v and the output at pin E to a +N level. T4 is reverse-biased off and now appears as a relatively high resistance in parallel with the indicator lamp. Current flow into the lamp increases to 15.0ma and lights the lamp.

#### Application

Each circuit supplies the necessary current to light one incandescent lamp and drive 2 N type logic blocks. A typical logic application is shown.