

LSIS USA VFD Bulletin

C100, S100, H100, and iS7 Analog Input Wiring

Purpose

This document is a supplement to the user manual. This document demonstrates how to wire up a 4-20mA or 0-10VDC source to the LSIS VFDs. This document focuses on transducer, speed POT, and PLC connection sources but can be applied to any 4-20mA or 0-10VDC device. This covers LSIS VFD series C100, S100, H100 and iS7.

1. 4-20mA Analog Input Wiring

Transducer (4-20mA): Transducers are typically 4-20mA devices which require a 24VDC power source. For 2-wire transducers connect to the 24VDC and 4-20mA input terminals listed below (Table 1). Connect the positive lead of the device to the 24/24V terminal and the signal lead to the analog input terminal (AI, I1, or I2).

Drive	Terminals
C100	24V & AI
S100	24 & I2
H100	24V & I2
iS7	24 & I1 (see note)

Table 1

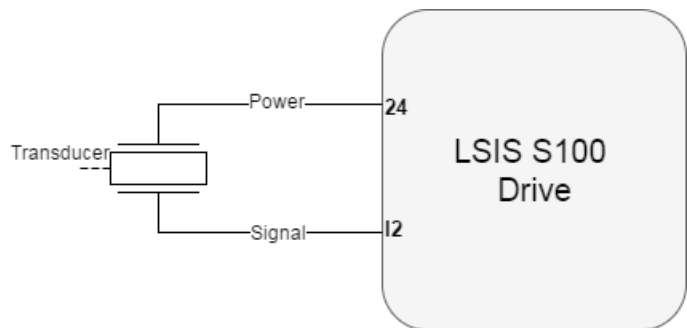


Figure 1: Transducer wiring for S100

NOTE: The iS7 Basic I/O Module (found on 22 kW and smaller iS7's) requires a jumper from terminal CM to 5G. The isolation I/O modules (30kW and larger) does NOT require this.

PLC (4-20mA): The wiring for connecting a PLC's 4-20 mA output to the analog input of a VFD differs slightly from the transducer wiring discussed above. The positive (signal) lead is wired to the corresponding analog input while the negative (common) lead is wired to the drives common. Reference to Table 2 and Figure 2 below.

Drive	Terminals
C100	AI & CM
S100	I2 & CM
H100	I2 & CM
iS7	I1 & 5G or CM*

Table 2

* For iS7's 22 kW and smaller use terminal 5G for common. 30kW and larger use terminal CM.

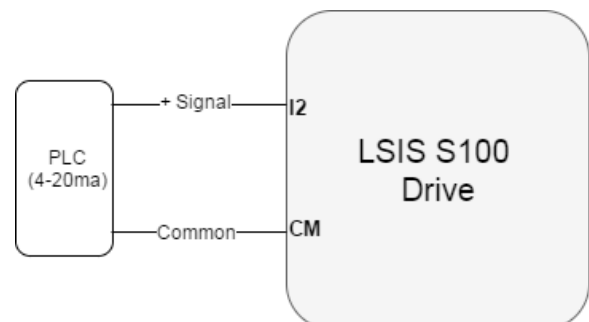


Figure 2: PLC (4-20mA) wiring for S100

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2. 0-10VDC Analog Input Wiring

Speed POT/Rheostat (0-10VDC): Speed potentiometers have three wires which must be connected to properly vary a 0-10VDC signal. The required terminal connections will vary slightly depending on the drive series. Reference to Table 3 and Figure 3. The wiper of the speed POT should always be connected to the analog input.

Drive	Terminals
C100	VR, AI, & CM (see note)
S100, H100	VR, V1, & CM
iS7	VR+,V1, & 5G or CM*

Table 3

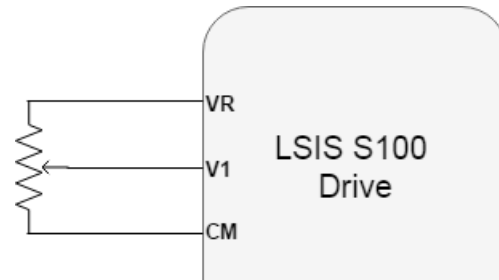


Figure 3: Speed POT wiring for S100

NOTE: For the C100 drive, be sure the J1 dip switch is set to position “V” for 0-10VDC.

PLC (0-10VDC): The wiring for connecting a PLC’s 0-10VDC output to the analog input of a VFD differs slightly from the speed POT wiring discussed above. The positive (signal) lead is wired to the corresponding analog input while the negative (common) lead is wired to the drives common. Reference to Table 4 and Figure 4 below.

Drive	Terminals
C100	AI & CM (see note)
S100, H100	V1 & CM
iS7	V1 & 5G or CM*

Table 4

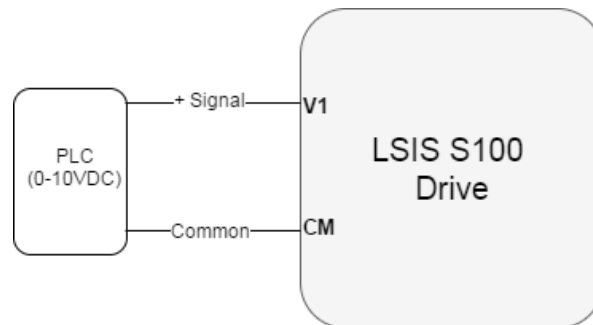


Figure 4: PLC (0-10VDC) wiring for S100

* For iS7’s 22 kW and smaller use terminal 5G for common. 30kW and larger use terminal CM.

NOTE: For the C100 drive, be sure the J1 dip switch is set to position “V” for 0-10VDC.