Vertex Pointing System Error Messages August 24, 2001

Vertex reports status back from the Kollmorgen amplifiers as follows:

One PLC digital input per amplifier is used to report "Drive Fault". Vertex derives this bit from wire Or'ing two of the digital status bits from connector C2 on the amplifier. These bits are Output Fault (pin 7) which "indicates that either an overcurrent or overvoltage fault has ocurred in the Power Stage of the amplifier" and Overtemp (pin 9) which "indicates thatthe amp is being subjected to an excessive temperature condition". The two pins are wired together and pulled up to +24 VDC with a 1200 Ohm resistor.

Thus "Drive Fault" means over temperature or over voltage or over current.

A second PLC digital input per amplifier is used to report "Drive Up". This comes from pins 20 and 10, a relay contact closure inside the amplifier. Pin 20 is connnected to a +24VDC bus and pin 10 is routed to a PLC digital input bit.

One PLC analog input per amplifier is used to monitor analog motor current - which seems to be the maximum absolute value of the current in the three phases of the motor.

One PLC digital input per amplifier is used to report "PSR4 Fault" from pins 1 & 4, the fault contact pair. Note: the Kollmorgen manual does not specify what constitutes a power supply fault.

One PLC digital input per power supply is used to report a contact closure from a Dold Voltage Relais across the DC bus. Schematic symbol is " U < ", indicating that this is an undervoltage (or overvoltage detector). (Probably undervoltage, since DRIVE FAULT, from the amp, includes overvoltage). The schematic page showing the connection to the PLC digital card is marked "DC bus group 1/5 ok" and "DC bus group 4/8 ok"

Az. brake status: PLC 12.3 brakes az drives 3/4/7/8 released
PLC 12.2 brakes az drives 1/2/5/6 released