

4/20/98

To: AME

From: David MacNair

Re: PEP-II Chopper status codes

Each Bitbus controller reports back 7 interlocks and 4 status bits for each power supply. The intermediate power supplies do not typically use magnet interlocks 1 to 3, or the status bits. The choppers and bulk supplies do use all of the interlocks and status expect for magnet interlock 1 and the internal ground fault detection.

The choppers use the following configuration;

Magnet Interlock 0	01H	Klixon interlock
Magnet Interlock 1	02H	Not used
Magnet Interlock 2	04H	Ground fault
Magnet Interlock 3	08H	Ground fault transductor not OK
Power Supply Ready	10H	Power supply ready
Regulated Transductor	20H	Regulated transductor not OK
Ground fault	40H	Not used
Status 0	01H	Input Bus Undervoltage
Status 1	02H	Overcurrent
Status 2	04H*	Output Ripple Fault Output Overvoltage (>550V) IGBT A Failure IGBT B Failure
Status 3	08H*	Chopper heatsink klixon Chopper Fan LCW Flow Capacitor Pressure

* Combined into chopper OK signal. Trips bulk supply when faulted.

The chopper bulk supplies use the following configuration;

Magnet Interlock 0	01H	Klixon interlock
Magnet Interlock 1	02H	Not used
Magnet Interlock 2	04H	Ground fault
Magnet Interlock 3	08H	Not used
Power Supply Ready	10H	Power supply ready
Regulated Transductor	20H	Not used
Ground fault	40H	Not used
Status 0	01H	Rectifier Ready
Status 1	02H	PPS Permits A and B
Status 2	04H	Chopper OK
Status 3	08H	Switchgear ON