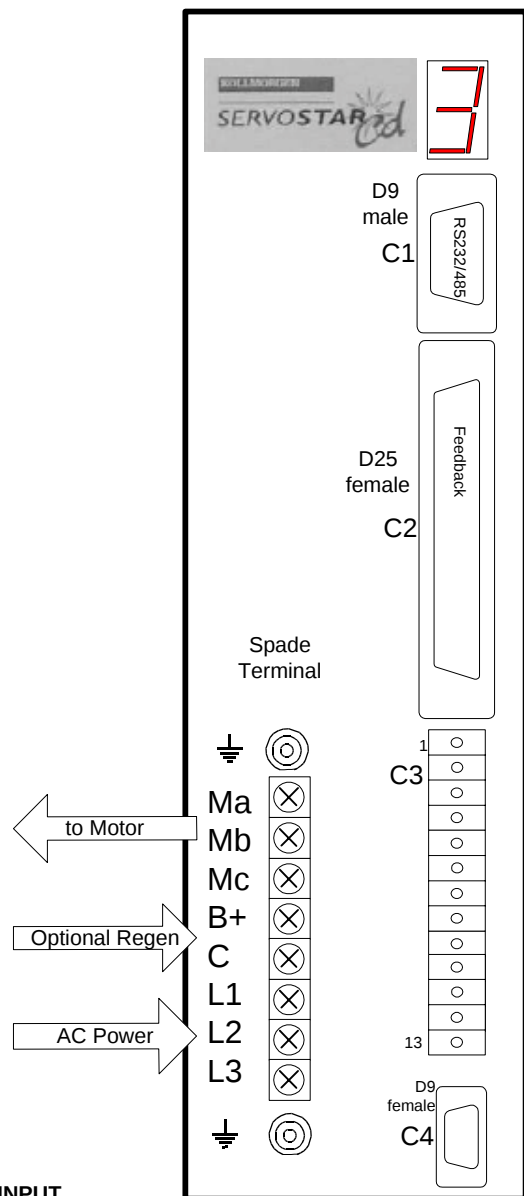
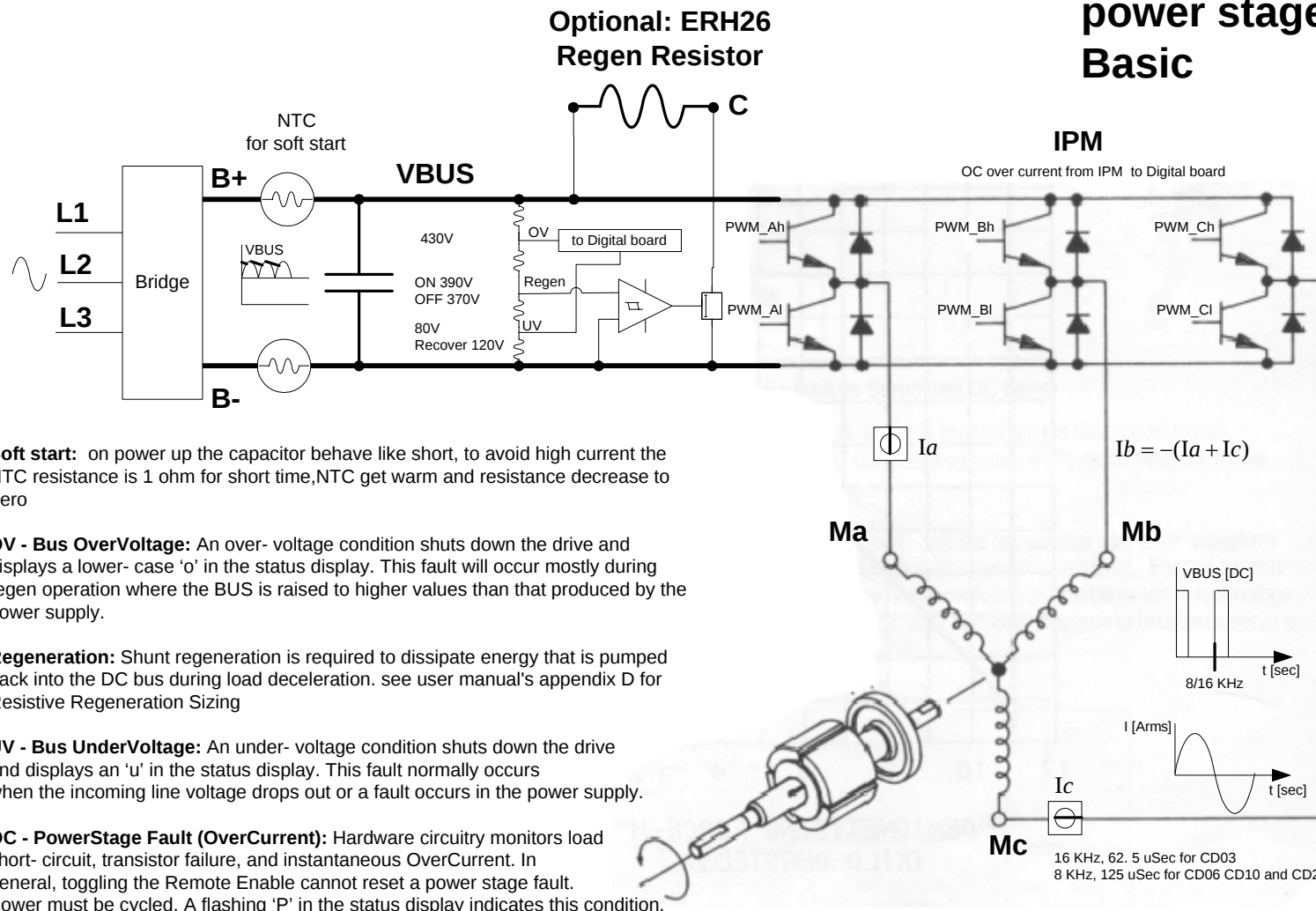
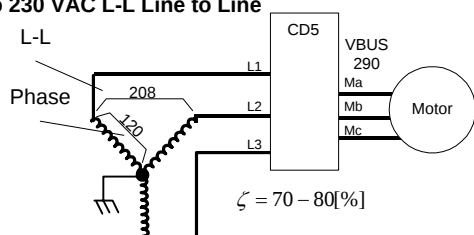


CD Series 5 power stage Basic



INPUT

180 to 230 VAC L-L Line to Line



Soft start: on power up the capacitor behave like short, to avoid high current the NTC resistance is 1 ohm for short time, NTC get warm and resistance decrease to Zero

OV - Bus OverVoltage: An over- voltage condition shuts down the drive and displays a lower- case 'o' in the status display. This fault will occur mostly during regen operation where the BUS is raised to higher values than that produced by the power supply.

Regeneration: Shunt regeneration is required to dissipate energy that is pumped back into the DC bus during load deceleration. see user manual's appendix D for Resistive Regeneration Sizing

UV - Bus UnderVoltage: An under- voltage condition shuts down the drive and displays an 'u' in the status display. This fault normally occurs when the incoming line voltage drops out or a fault occurs in the power supply.

OC - PowerStage Fault (OverCurrent): Hardware circuitry monitors load short- circuit, transistor failure, and instantaneous OverCurrent. In general, toggling the Remote Enable cannot reset a power stage fault. Power must be cycled. A flashing 'P' in the status display indicates this condition.

OT - Drive OverTemperature: The internal heatsink temperature is monitored for an unsafe condition. This condition causes a 't' to be displayed and disables the drive. The drive will eventually cool enough to allow reset of this condition.

RMS OverCurrent (FoldBack): The FoldBack detection system can 'clamp' the available output current. This is not a true fault condition, but may cause undesired performance, due to the command current being limited below what is required to achieve the desired performance. This condition is indicated with a flashing 'F' in the status display and can be detected by monitoring the FOLD switch variable. This is a software fault

$$L - L = L3 - L2 = L3 - L1 = L2 - L1$$

$$L - L(3P) = \sqrt{3} \times Phase[VAC]$$

$$VBUS(1P) = \sqrt{2} \times L - L$$

$$VBUS(3P) = \sqrt{2} \times \sqrt{3} \times Phase[VAC]$$

VBUS :

$$160 = \sqrt{2} \times 115$$

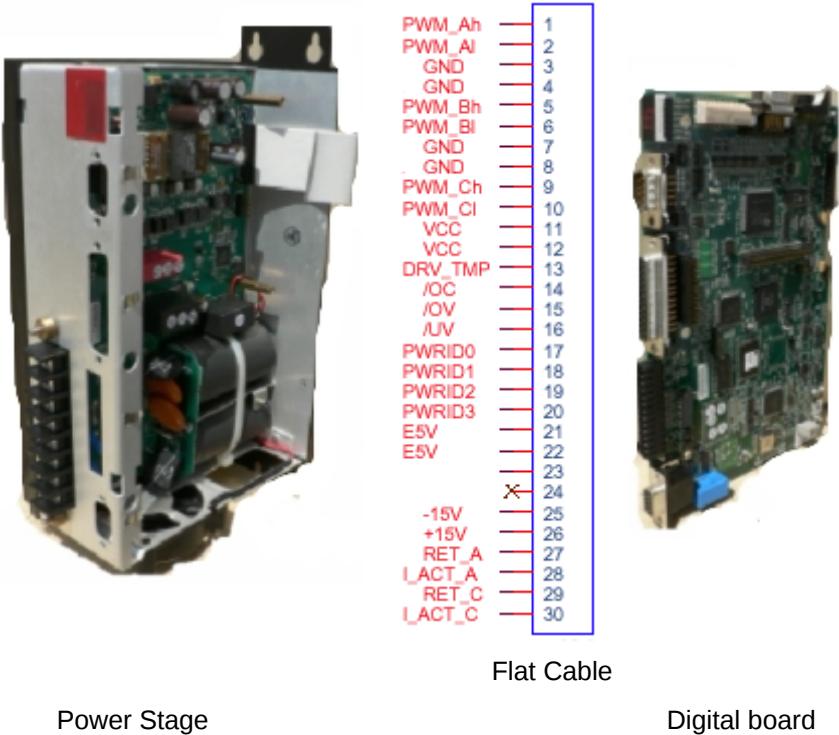
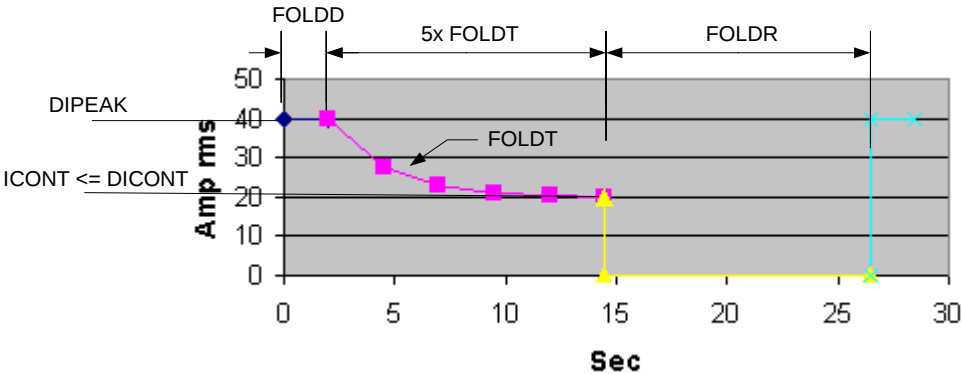
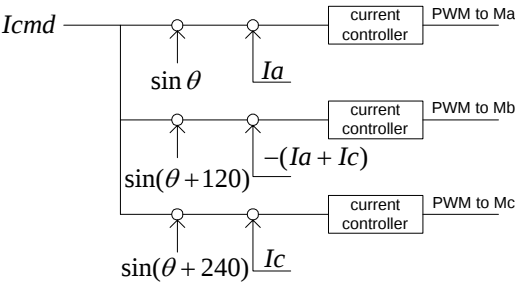
$$290 = \sqrt{2} \times 208$$

$$325 = \sqrt{2} \times 230$$

Three Phase controller

$I_a = I_{cmd} \times \sin \theta$
 $I_b = I_{cmd} \times \sin(\theta + 120)$
 $I_c = I_{cmd} \times \sin(\theta + 240)$

$I = \sqrt{\frac{4}{3} \times (I_a^2 + I_b^2 + I_c^2)}$



PWM_Ah	1
PWM_Ai	2
GND	3
GND	4
PWM_Bh	5
PWM_Bi	6
GND	7
GND	8
PWM_Ch	9
PWM_Ci	10
VCC	11
VCC	12
DRV_TMP	13
/OC	14
/OV	15
/UV	16
PWRID0	17
PWRID1	18
PWRID2	19
PWRID3	20
E5V	21
E5V	22
	23
-15V	24
+15V	25
RET_A	26
I_ACT_A	27
RET_C	28
I_ACT_C	29
	30

Note: if ILIM is less then DIPEAK the drive calculate a "new" fold back graph where the FOLDD is more and the exp line "moves" to the right.

CD03

DIPEAK	90	9	A rms
DICONT	30	3	A rms
FOLDD	1000	1	Sec
FOLDT	1450	1.45	Sec
FOLDR	17000	17	Sec

CD06

DIPEAK	180	18	A rms
DICONT	60	6	A rms
FOLDD	1000	1	Sec
FOLDT	1450	1.45	Sec
FOLDR	17000	17	Sec

CD10

DIPEAK	200	20	A rms
DICONT	100	10	A rms
FOLDD	2000	2	Sec
FOLDT	2500	2.5	Sec
FOLDR	12000	12	Sec

CD20

DIPEAK	400	40	A rms
DICONT	200	20	A rms
FOLDD	2000	2	Sec
FOLDT	2500	2.5	Sec
FOLDR	12000	12	Sec

Chassis and Digital ground are connected
Leakage current from Ln to Chassis

Amplifier Rating:	3A	6A	10A	20A
Leakage current	1.7mA	1.8mA	1.7mA	0.1mA