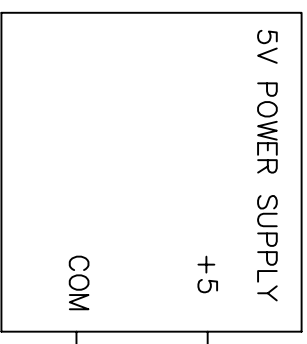


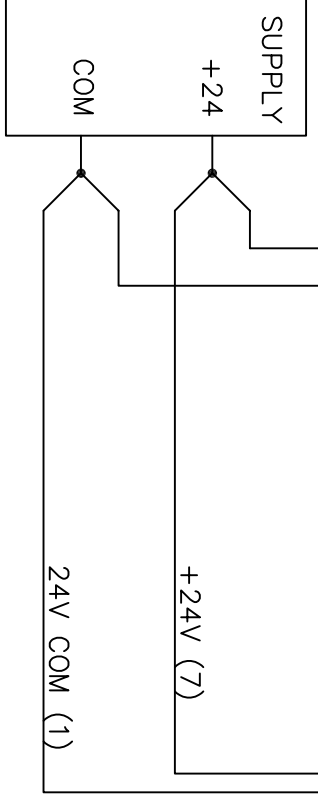
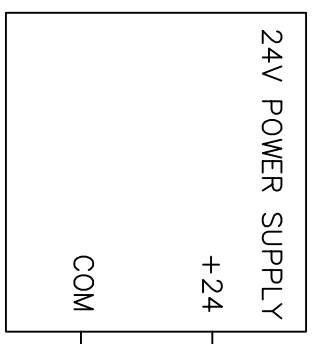
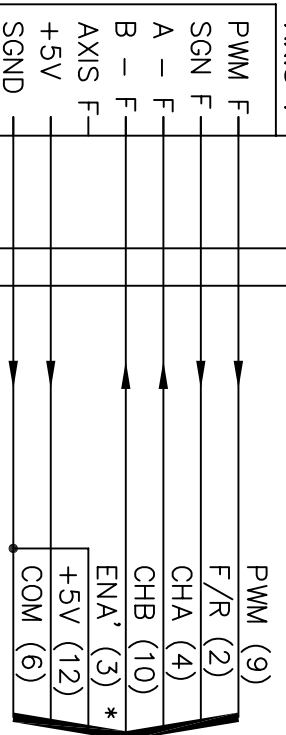
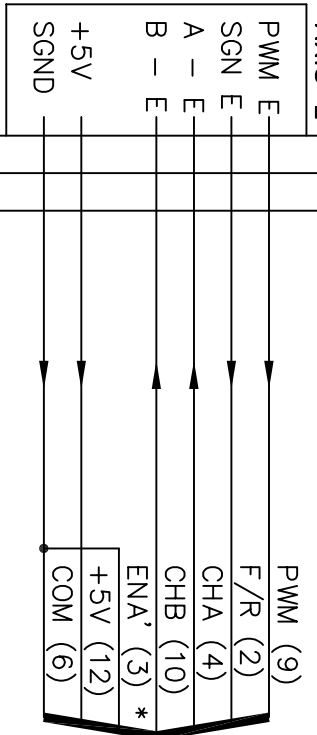
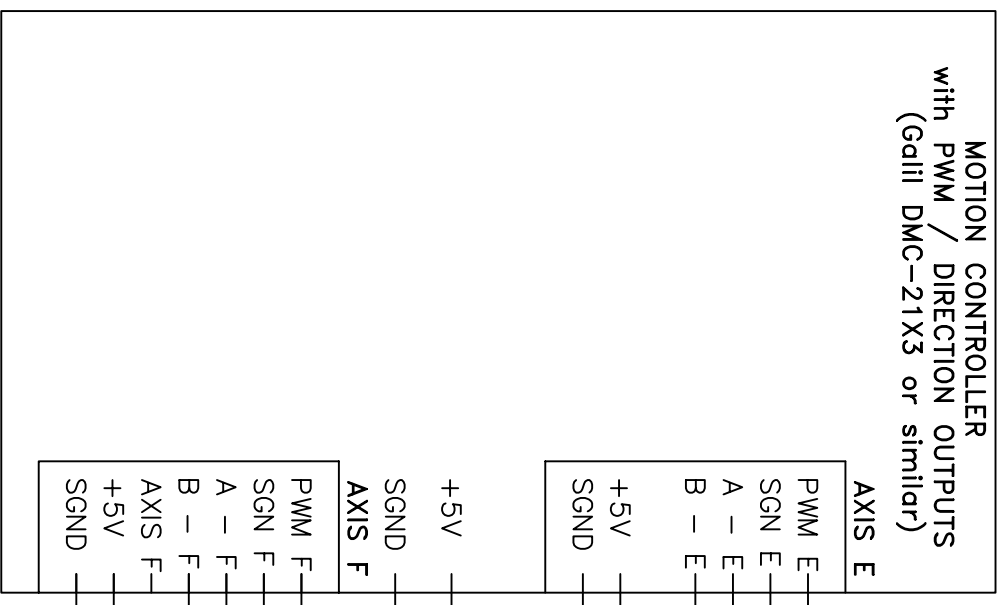
PART NO./REV. (ITEMREV)  
(DESC)

SCHEMATIC - INTEGRA FV DEMO  
(22B2 / 24V)

GRAPHIC BY	MBM	DESIGNER	{DESIGNER}
REF.	XXX XX XXX	DCR NO:	{DCR_NO}
GRAPHIC NO./REV. XXX XX XXX X			
<b>BODINE ELECTRIC COMPANY</b>			



MOTION CONTROLLER  
with PWM / DIRECTION OUTPUTS  
(Gallil DMC-21X3 or similar)



Program Gains: (Values determined by tuning system response for actual inertia and friction loading for each axis)

KP: 50  
KI: 5  
KD: 500

Encoder resolution is 1024 counts / rev (256 Line encoder standard)  
Speed - 1000 RPM = 1000/60\*1024 = 17067 (counts/sec)  
Accel - 25000 counts/sec^2  
Decel - 25000 counts/sec^2

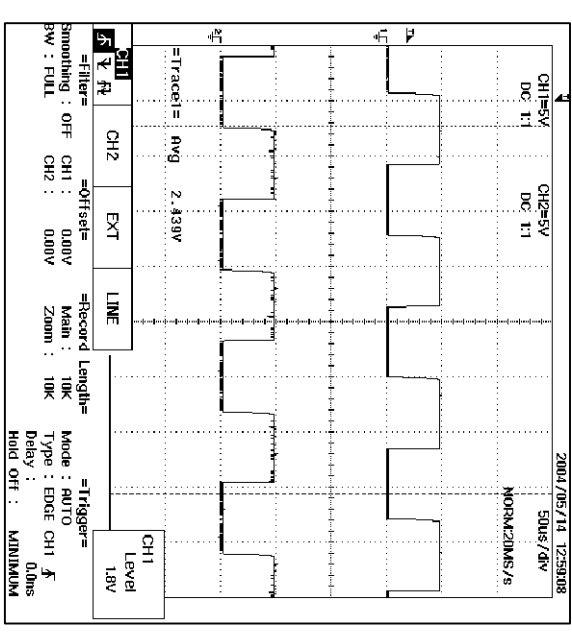
GALLIL MC LANGUAGE PROGRAM:

```

KP 50,50 : REM E and F axes
KD 500,500
KI 5,5
SH E,F:REM enable both E and F axes and hold position
DP 0,0:Define current position as 0 for E and F axes
AC 25000,25000:REM set accel for E and F axes
DC 25000,25000:REM set decel for E and F axes
SP 17067,17067:REM set speed for E and F axes
PR 10240,20480:REM set relative move of 10 rev (E) and 20 rev (F)
BG E,F: Begin motion both axes

```

ENCODER OUTPUT



Note: Integra enable input is active low, Gallil axis enable is active high. Programmable logic outputs may be used for individual axis enable commands if desired.