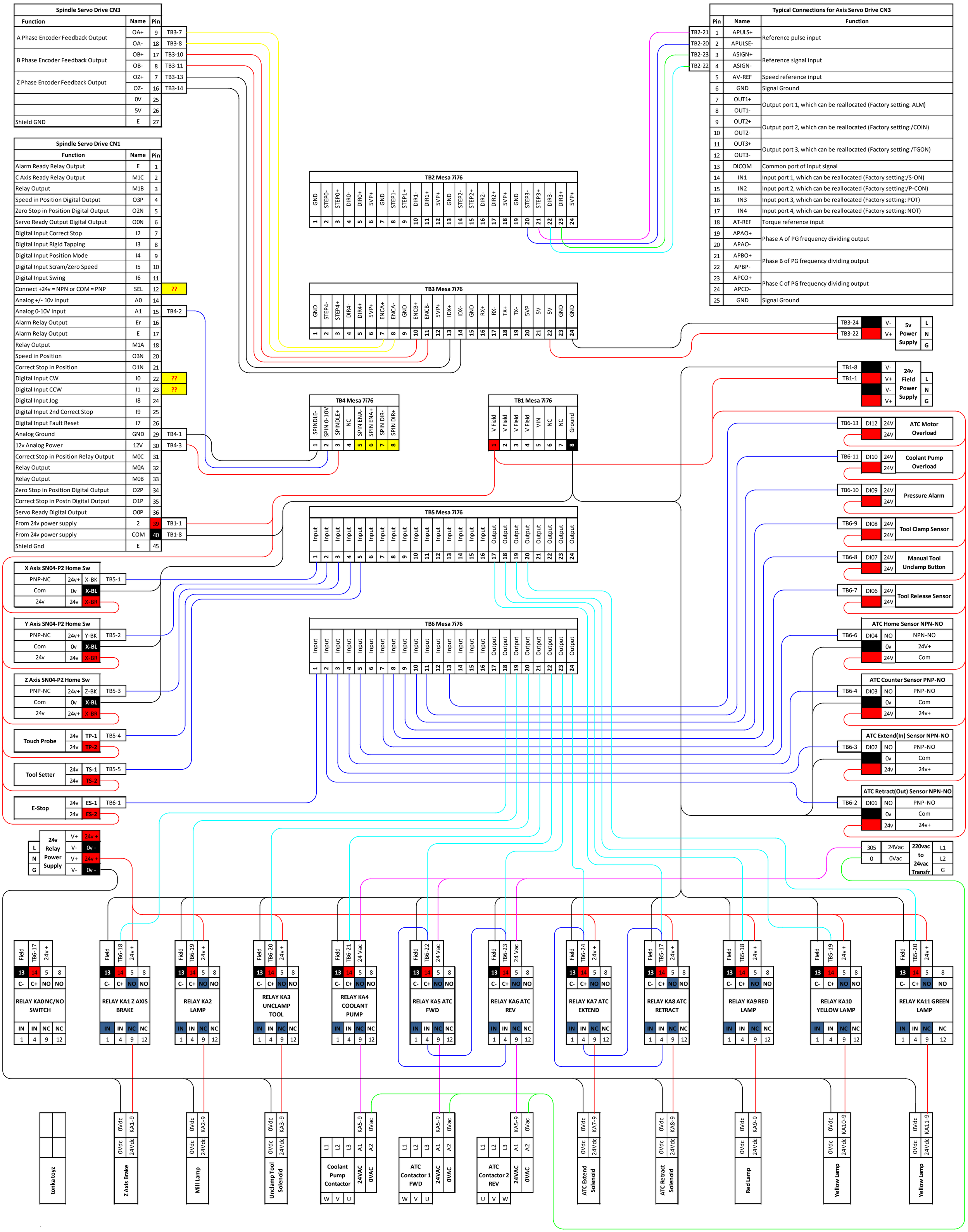
Spindle Servo Drive CN3
Function | Name | Pin
A Phase Encoder Feedback Output | OA+ | 9 | TB3-7
OA- | 18 | TB3-8
B Phase Encoder Feedback Output | OB+ | 17 | TB3-10
OB- | 8 | TB3-11
Z Phase Encoder Feedback Output | OZ+ | 7 | TB3-13
OZ- | 16 | TB3-14
0V | 25
5V | 26
Shield GND | E | 27
Spindle Servo Drive CN1
Function | Name | Pin
Alarm Ready Relay Output | E | 1
C Axis Ready Relay Output | M1C | 2
Relay Output | M1B | 3
Speed in Position Digital Output | O3P | 4
Zero Stop in Position Digital Output | O2N | 5
Servo Ready Output Digital Output | O0N | 6
Digital Input Correct Stop | I2 | 7
Digital Input Rigid Tapping | I3 | 8
Digital Input Position Mode | I4 | 9
Digital Input Scram/Zero Speed | I5 | 10
Digital Input Swing | I6 | 11
Connect +24v = NPN or COM = PNP | SEL | 12 | ??
Analog +/- 10v Input | A0 | 14
Analog 0-10V Input | A1 | 15 | TB4-2
Alarm Relay Output | Er | 16
Alarm Relay Output | E | 17
Relay Output | M1A | 18
Speed in Position | O3N | 20
Correct Stop in Position | O1N | 21
Digital Input CW | I0 | 22 | ??
Digital Input CCW | I1 | 23 | ??
Digital Input Jog | I8 | 24
Digital Input 2nd Correct Stop | I9 | 25
Digital Input Fault Reset | I7 | 26
Analog Ground | GND | 29 | TB4-1
12v Analog Power | 12V | 30 | TB4-3
Correct Stop in Position Relay Output | M0C | 31
Relay Output | M0A | 32
Relay Output | M0B | 33
Zero Stop in Position Digital Output | O2P | 34
Correct Stop in Postn Digital Output | O1P | 35
Servo Ready Digital Output | O0P | 36
From 24v power supply | 2 | 39 | TB1-1
From 24v power supply | COM | 40 | TB1-8
Shield Gnd | E | 45
Typical Connections for Axis Servo Drive CN3
Pin | Name | Function
TB2-21 | 1 | APULS+ | Reference pulse input
TB2-20 | 2 | APULSE-
TB2-23 | 3 | ASIGN+ | Reference signal input
TB2-22 | 4 | ASIGN-
5 | AV-REF | Speed reference input
6 | GND | Signal Ground
7 | OUT1+ | Output port 1, which can be reallocated (Factory setting: ALM)
8 | OUT1-
9 | OUT2+ | Output port 2, which can be reallocated (Factory setting:/COIN)
10 | OUT2-
11 | OUT3+ | Output port 3, which can be reallocated (Factory setting:/TGON)
12 | OUT3-
13 | DICOM | Common port of input signal
14 | IN1 | Input port 1, which can be reallocated (Factory setting:/S-ON)
15 | IN2 | Input port 2, which can be reallocated (Factory setting:/P-CON)
16 | IN3 | Input port 3, which can be reallocated (Factory setting: POT)
17 | IN4 | Input port 4, which can be reallocated (Factory setting: NOT)
18 | AT-REF | Torque reference input
19 | APAO+ | Phase A of PG frequency dividing output
20 | APAO-
21 | APBO+ | Phase B of PG frequency dividing output
22 | APBP-
23 | APCO+ | Phase C of PG frequency dividing output
24 | APCO-
25 | GND | Signal Ground
TB2 Mesa 7i76
GND STEP0- STEP0+ DIR0- DIR0+ 5VP+ GND STEP1- STEP1+ DIR1- DIR1+ 5VP+ GND STEP2- STEP2+ DIR2- DIR2+ 5VP+ GND STEP3- STEP3+ DIR3- DIR3+ 5VP+
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TB3 Mesa 7i76
GND STEP4- STEP4+ DIR4- DIR4+ 5VP+ ENCA+ ENCA- GND ENCB+ ENCB- 5VP+ IDX+ IDX- GND RX+ RX- TX+ TX- 5VP 5V 5V GND GND
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TB4 Mesa 7i76
SPINDLE- SPIN 0-10V SPINDLE+ NC SPIN ENA- SPIN ENA+ SPIN DIR- SPIN DIR+
1 2 3 4 5 6 7 8
TB1 Mesa 7i76
V Field V Field V Field V Field VIN NC NC Ground
1 2 3 4 5 6 7 8
TB5 Mesa 7i76
Input Input Input Input Input Input Input Input Input Input Input Input Input Input Input Input Output Output Output Output Output Output Output Output
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TB6 Mesa 7i76
Input Input Input Input Input Input Input Input Input Input Input Input Input Input Input Input Output Output Output Output Output Output Output Output
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
TB3-24 V- TB3-22 V+ 5v Power Supply L N G
TB1-8 V- TB1-1 V+ V- V+ 24v Field Power Supply L N G
TB6-13 DI12 24V 24V ATC Motor Overload
TB6-11 DI10 24V 24V Coolant Pump Overload
TB6-10 DI09 24V 24V Pressure Alarm
TB6-9 DI08 24V 24V Tool Clamp Sensor
TB6-8 DI07 24V 24V Manual Tool Unclamp Button
TB6-7 DI06 24V 24V Tool Release Sensor
ATC Home Sensor NPN-NO
TB6-6 DI04 NO NPN-NO
0v 24V+
24V Com
ATC Counter Sensor PNP-NO
TB6-4 DI03 NO PNP-NO
0v Com
24V 24v+
ATC Extend(In) Sensor NPN-NO
TB6-3 DI02 NO PNP-NO
0v Com
24v 24v+
ATC Retract(Out) Sensor NPN-NO
TB6-2 DI01 NO PNP-NO
0v Com
24v 24v+
305 24Vac 0 0Vac 220vac to 24vac Transfr L1 L2 G
X Axis SN04-P2 Home Sw
PNP-NC 24v+ X-BK TB5-1
Com 0v X-BL
24v 24v X-BR
Y Axis SN04-P2 Home Sw
PNP-NC 24v+ Y-BK TB5-2
Com 0v X-BL
24v 24v X-BR
Z Axis SN04-P2 Home Sw
PNP-NC 24v+ Z-BK TB5-3
Com 0v X-BL
24v 24v+ X-BR
Touch Probe 24v TP-1 TB5-4 24v TP-2
Tool Setter 24v TS-1 TB5-5 24v TS-2
E-Stop 24v ES-1 TB6-1 24v ES-2
24v Relay Power Supply L N G V+ 24v + V- 0v - V+ 24v + V- 0v -
Field TB6-17 24v + 13 14 5 8 C- C+ NO NO RELAY KA0 NC/NO SWITCH IN IN NC NC 1 4 9 12
Field TB6-18 24v + 13 14 5 8 C- C+ NO NO RELAY KA1 Z AXIS BRAKE IN IN NC NC 1 4 9 12
Field TB6-19 24v + 13 14 5 8 C- C+ NO NO RELAY KA2 LAMP IN IN NC NC 1 4 9 12
Field TB6-20 24v + 13 14 5 8 C- C+ NO NO RELAY KA3 UNCLAMP TOOL IN IN NC NC 1 4 9 12
Field TB6-21 24 Vac 13 14 5 8 C- C+ NO NO RELAY KA4 COOLANT PUMP IN IN NC NC 1 4 9 12
Field TB6-22 24 Vac 13 14 5 8 C- C+ NO NO RELAY KA5 ATC FWD IN IN NC NC 1 4 9 12
Field TB6-23 24 Vac 13 14 5 8 C- C+ NO NO RELAY KA6 ATC REV IN IN NC NC 1 4 9 12
Field TB6-24 24v + 13 14 5 8 C- C+ NO NO RELAY KA7 ATC EXTEND IN IN NC NC 1 4 9 12
Field TB5-17 24v + 13 14 5 8 C- C+ NO NO RELAY KA8 ATC RETRACT IN IN NC NC 1 4 9 12
Field TB5-18 24v + 13 14 5 8 C- C+ NO NO RELAY KA9 RED LAMP IN IN NC NC 1 4 9 12
Field TB5-19 24v + 13 14 5 8 C- C+ NO NO RELAY KA10 YELLOW LAMP IN IN NC NC 1 4 9 12
Field TB5-20 24v + 13 14 5 8 C- C+ NO NO RELAY KA11 GREEN LAMP IN IN NC NC 1 4 9 12
tonka toyz
0Vdc KA1-9 0Vdc 24Vdc Z Axis Brake
0Vdc KA2-9 0Vdc 24Vdc Mill Lamp
0Vdc KA3-9 0Vdc 24Vdc Unclamp Tool Solenoid
KA5-9 0Vac L1 L2 L3 A1 A2 Coolant Pump Contactor 24VAC 0VAC W V U
KA5-9 0Vac L1 L2 L3 A1 A2 ATC Contactor 1 FWD 24VAC 0VAC W V U
KA5-9 0Vac L1 L2 L3 A1 A2 ATC Contactor 2 REV 24VAC 0VAC U V W
0Vdc KA7-9 0Vdc 24Vdc ATC Extend Solenoid
0Vdc KA8-9 0Vdc 24Vdc ATC Retract Solenoid
0Vdc KA9-9 0Vdc 24Vdc Red Lamp
0Vdc KA10-9 0Vdc 24Vdc Yellow Lamp
0Vdc KA11-9 0Vdc 24Vdc Yellow Lamp