STARTER PANEL | PLC CONTROL PANEL | STARTER PANEL | PLC CONTROL PANEL

Left section (lines 1–35):

1 L1 FU2 MF O/L GRINDER MOTOR
2 L2 5HP
3 L3 DISC. MR CURRENT SWITCH CS449 TO LINE 45
600VAC FROM MCC
FU1
CONTROL TRANSFORMER 600V / 120V
7 E-STOP FU3 N
8 XX XX GRINDER E-STOP
9 XX XX
10 1001 P.T.T POWER ON PILOT LIGHT
11 1001
12 1001 CR4-A P.T.T GRINDER FAULT PILOT LIGHT
13 1001
14 CR1 GRINDER FORWARD REQUEST
15 1001 CR4/B AUTO MAN PLC STOP REV FWD TD4 P.T.T FORWARD
16 1001
17 TD3 CR2 GRINDER REVERSE REQUEST
18 P.T.T REVERSE
19 1001
20 CR6 CR8/A XX XX GRINDER MOTOR OVERLOAD
21 XX CR6 XX
22 XX XX GRINDER START/STOP COMMAND
23 XX XX
24 XX XX GRINDER REMOTE MODE
25 XX XX
26 CR1/A MF FORWARD STARTER   MF XX XX GRINDER RUNNING STATUS
27 CR2/A MR REVERSE STARTER   MR XX
28 XX XX
29 1001 CR7 CR5/A OL CR3 GRINDER FAULT
30 1001 CR3/A TD5 CR4 GRINDER FAULT LATCH ON
31 1001 RESET CR4   CR5/A XX XX GRINDER JAM
32 1001 OVERTEMP MOTOR (NOTE 2) CR7 MOTOR HIGH TEMP   XX XX
33
34 1001 TD5 ON-DELAY TIMER 2.5 SEC   CR7/A XX XX GRINDER MOTOR HIGH TEMP
35 1001 OL CR8 MOTOR OVERLOAD   XX XX

Right section (lines 36–70):

1001 ... N

37 CR2/B C1 DIGITAL COUNTER/TIMER SETUP:
   STOP - COUNTER TIMER COMBO
   REV FWD - COUNTER AUTO RESET T >30SEC
38 RESET - OUTPUT 1: COUNTER, SET: 3
   - OUTPUT 2: TIMER SET: 30 SEC
39 C1 (CTT-1C-A120)
40 0V(11) CP1(CT)(12) CP2(13) LOAD NO(1) CR5 GRINDER JAMMED
41 12V(6) RST1(7) START(Tr)(8) 0V(9) COM(3) P.T.T GRINDER JAMMED PILOT LIGHT
   CR5
42 OUTPUT1 COM(10) NO(15) (4) (5) NC(2) 1001
44
45 1001 CR1/B CURRENT SWITCH S1–S2 OVER CURRENT TD1 JAMMED CONDITION DE-BOUNCER TIMER ON-DELAY 2 SEC
46 TD1 CLEAR JAM CR6 CLEAR JAM/REVERSE RUN REQUEST
47 CR6/A TD2 OVER CURRENT TIMER TD2 REVERSE RUNTIME TIMER ON-DELAY 5 SEC
48 CR1/C TRANSITION DELAY TD3 FORWARD-REVERSE TRANSITION DELAY TIMER OFF-DELAY 2-SEC
50 CR2/C TRANSITION DELAY TD4 REVERSE-FORWARD TRANSITION DELAY TIMER OFF-DELAY 2-SEC

CONTROL PHILOSOPHY:

POWER ON INDICATOR LIGHT
- ILLUMINATES WHEN 120VAC POWER IS AVAILABLE

GRINDER CONTROL MODE SELECTOR SWITCH, MAN
- CONTROL BY REVERSE-STOP-FORWARD SELECTOR SWITCH, FORWARD/REVERSE RELAYS AND INDICATOR LAMPS

GRINDER CONTROL MODE SELECTOR SWITCH, AUTO
- GRINDER AUTOMATICALLY RUNS FORWARD OR CLEARS JAMS (SEE GRINDER JAM CLEARING SEQUENCE BELOW)

GRINDER CONTROL MODE SELECTOR SWITCH, PLC
- REMOTELY START/STOP GRINDER THROUGH DIGITAL OUTPUT RELAY CONTACT FROM SPS-ICP-4XX; GRINDER RUNS FORWARD OR CLEARS JAMS (SEE GRINDER JAM CLEARING SEQUENCE BELOW)

ALARM RESET PUSHBUTTON
- RESETS GRINDER FAULT LATCH RELAY AND CLEAR ALARM LIGHT

GRINDER JAMMED INDICATOR LIGHT
- ILLUMINATES WHEN A JAM CONDITION IS ON (SEE GRINDER JAM CLEARING SEQUENCE BELOW)

GRINDER FAULT INDICATOR LIGHT
- ILLUMINATES WHEN ALARM CONDITION IS SET FOR ANY OF THE FOLLOWING: (I) GRINDER JAM, (II) GRINDER MOTOR OVERLOAD, (III) GRINDER MOTOR HIGH TEMP

EMERGENCY STOP PUSHBUTTON
- SHUTDOWN ALL GRINDER CONTROL MODES, DE-ENERGIZE MOTOR CONTACTORS

GRINDER JAM CLEARING SEQUENCE
- WHEN THE CURRENT SENSOR DETECTS A JAM, THE MOTOR FORWARD CONTACTOR WILL BE MOMENTARILY DE-ENERGIZED
- THE MOTOR REVERSE CONTACTOR WILL BE ENERGIZED FOR A PRE-DETERMINED PERIOD OF TIME AND RE-ENERGIZED
- THE MOTOR FORWARD CONTACTOR WILL BE RE-ENERGIZED
- THIS SEQUENCE IS REPEATED, AS REQUIRED, TO CLEAR THE JAM FOR A TOTAL OF NO MORE THAN 3 REVERSALS IN A 30-SECOND PERIOD.
- IF THE JAM IS NOT CLEARED IN ACCORDANCE WITH THIS SEQUENCE, AN ALARM CONDITION IS SET
- IN ORDER TO AVOID NUISANCE TRIPS, THE INRUSH CURRENT IS IGNORED FOR A PRE-DEFINED PERIOD WHEN THE MOTOR IS ENERGIZED.

Title block:

Region of Peel — working with you

PUBLIC WORKS STANDARD DRAWING

INLET GRINDER CONTROL PANEL SCHEMATIC

REV. DATE: JULY 2021
APPROVED BY: MM
DRAWN BY: ERAMOSA
STD. DWG. NUMBER: SPS-210
SCALE: Not to Scale

NOTES:
1. SHORT CIRCUIT CURRENT (SCCR) FOR THE CONTROLLER IS 18kA @ 600V.
2. A JUMPER IS PRE-INSTALLED; INSTALLATION CONTRACTOR TO REMOVE AND CONNECT TO GRINDER MOTOR OVER TEMPERATURE.
3. ALL FAULT CONDITIONS TO BE WIRED TO THE PLC AS FAIL SAFE CONTACTS.