M 3

CIRCUIT DRAWN WITH POWER SUPPLY OFF

W (C) 2
V (B) 3
U (A) 1

3 PHASE SUPPLY

E

C1   C2

TRANSISTOR SWITCHING FOR 24VDC CONTACTORS (IQ10-35) RELAYS ONLY FITTED WHEN 120VAC CONTACTOR IS FITTED FOR IQ40,70,90,91 & 95

FS1

PS1

U W X Y Z

SK2
0VAC   1
120VAC 4
0VDC   3   4
24VDC   6   5

24VDC NOMINAL SUPPLY (OUTPUT) AVAILABLE WHEN AC POWERED ONLY

SK14
0VDC   1
24VDC   2

INTERNAL SUPPLY FOR AUX POWER

SK13
26 WAY
SK13

TRANSFORMER TAPPING OPTIONS	
Tap	Nominal 50/60Hz
TYPE 1	
W	220/230
X	380/400
Y	400,415/420
Z	440/460
FUSE FS1=250mA ANTI-SURGE	
TYPE 2	
W	346/380
X	480/500
Y	240/240
Z	550/575
FUSE FS1=250mA ANTI-SURGE	
TYPE 3	
X	660/660-690
Y	690/-
FUSE FS1=150mA ANTI-SURGE	

REFER TO SHEET 2 FOR NOTES & OPTION PCB'S IF FITTED

DO NOT CONNECT TO TERMINALS MARKED ◇

SK3
6
5
4
3
2
1

SK8
10 WAY

TORQUE SENSOR

POSITION SENSOR

BATTERY   -

FS2 (IF FITTED) 100mA

SK9
4
1
+

50%

18 WAY

SK6

SK14
MONITOR RELAY
1   42
3   43
2   44

SK7
BREAT AT CT/LS   S1   1   6
BREAK AT OT/LS   S2   8   7
                       2   8
                       7   9
MAKE AT FULLY SHUT   S3   3   10
                          6   11
MAKE AT FULLY OPEN   S4   4   12
                          5   13

SK4
CLOSE   9   33
STOP/ MAINTAIN 10   34
OPEN   8   35
COMMON -VE   1   36

ESD   12   25
OPEN INTERLOCK 13   37
CLOSE INTERLOCK 14   38
COMMON -VE   5   31

SK1 SLOT A
SK1 SLOT C

SK2 SLOT B
SK2 SLOT D
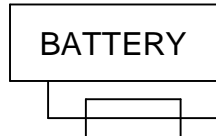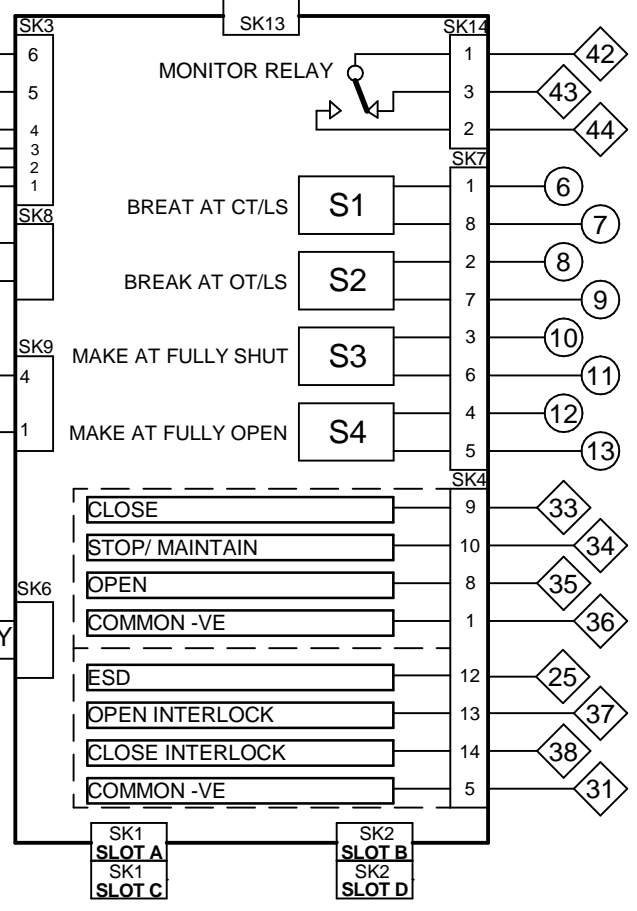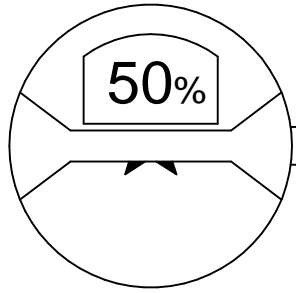
Iss	Date	Chkd	Revision Details
1	DEC-21	SN	First Issue
2	May-21	JB	Option Cards moved around in slots

www.rotork.com

ROTORK CONTROLS LTD
BATH, BA1 3JQ
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ROTORK CONTROLS INC
ROCHESTER
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IQ SET + CPT + AUX POWER + INDICATION RELAYS S5-S12

Drawn by: PMJ
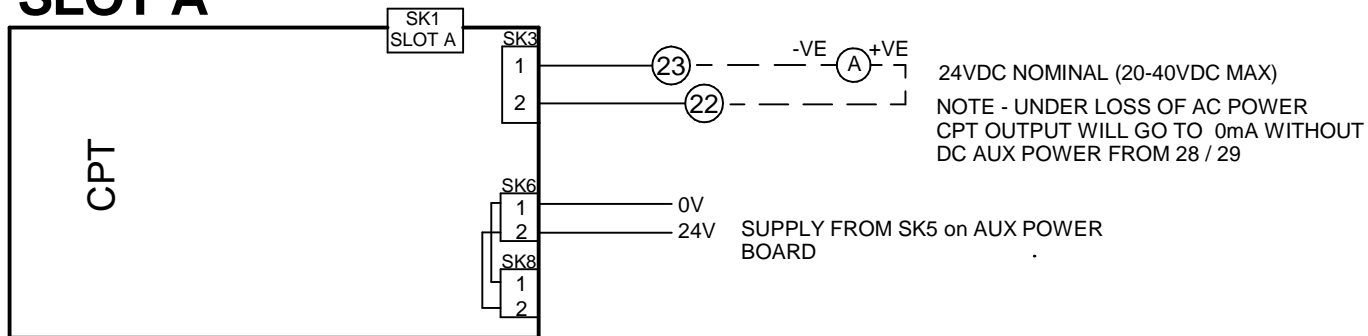Date   : 050521
Base WD: 101S1020
Job No   : - -
MI No   : - -

Circuit Diagram Number
101S1020
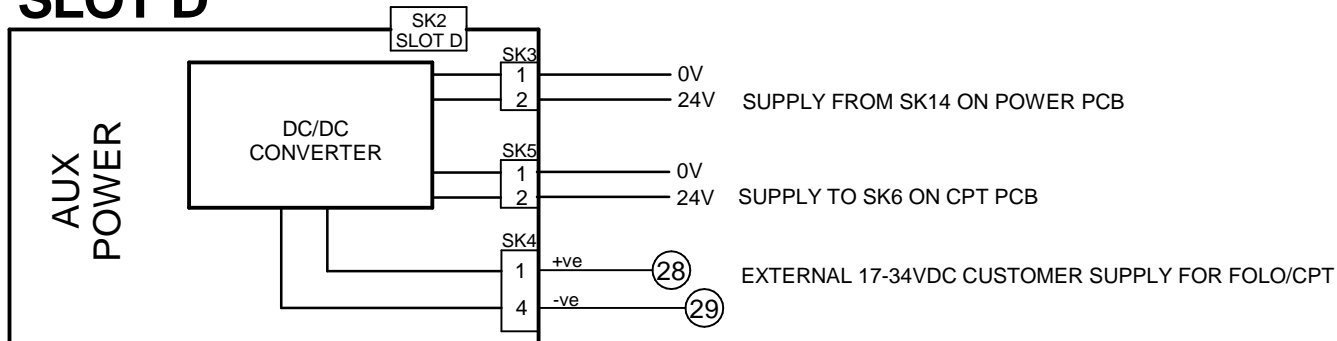
| 92 | 94 | B1 | C1 | B2 | C2 | J1 | T1 | A1 | A2 | A1 | A2 |

Issue No 2

Sheet 1 of 2

IQ3

CIRCUIT DRAWN WITH POWER SUPPLY OFF

SLOT A

SK1
SLOT A
SK3

CPT

1 — (23) - - - -VE (A) +VE
2 — (22) - - - - - 24VDC NOMINAL (20-40VDC MAX)

NOTE - UNDER LOSS OF AC POWER
CPT OUTPUT WILL GO TO 0mA WITHOUT
DC AUX POWER FROM 28 / 29

SK6
1 — 0V
2 — 24V   SUPPLY FROM SK5 on AUX POWER
SK8   BOARD   .
1
2

SLOT D

SK2
SLOT D
SK3

AUX
POWER

DC/DC
CONVERTER

1 — 0V
2 — 24V   SUPPLY FROM SK14 ON POWER PCB

SK5
1 — 0V
2 — 24V   SUPPLY TO SK6 ON CPT PCB

SK4
1 +ve (28)
4 -ve (29)   EXTERNAL 17-34VDC CUSTOMER SUPPLY FOR FOLO/CPT

SLOT B

EXTRA CHANGE OVER CONTACTS
DEFAULT SETTINGS SHOWN
FOR OTHER SETTINGS SEE PUB002-038

SK 2
SLOT B
SK3

2 (14)
MAKE AT FULLY SHUT   S5   3 (16)
1

5 (17)
MAKE AT FULLY OPEN   S6   6 (19)
4

8 (20)
MAKE WHEN STALLED   S7   9 (24)
7

11 (30)
MAKE ON LOSS OF   S8   12 (47)
PHASE   10

NOTES

1.FUSES:
-PS1 is a self-resetting fuse.
-Refer to publication PUB002-039 for approved fuses FS1 and FS2.
-Actuator rated voltage specified on nameplate. Voltage tolerance +/-10%,
applies for rated torque performance; duty cycle is not guaranteed.
2.CONTROL:
-Supply provided on terminals 4 & 5 only available when power is applied to the
  actuator :
  -Max external load 5W at 24Vdc / 5VA at 120Vac
-Connect motor control contactor coils in series with CT/LS S1(closed) and
OT/LS
  S2(open).
-Voltage applied to CT/LS & OT/LS must not exceed 120V AC or DC.
-Maximum individual switching power must not exceed 60W inductive or 150W
resistive.

3.INDICATION:
-For typical position, status and alarm indication see PUB002-041.
-"S" contacts are user configurable and are shown in their default
setting.
-Voltage applied to indication contacts must not exceed 120V AC or
DC
-Maximum individual Switching power must not exceed 60W inductive
load or 150W resistive load
-Total switched current for contacts S1 to S4 must not exceed 8A, with
maximum individual current of 5A.

4.BATTERY:
-Battery maintains local and remote "S" contact indication only.
-Refer to installation manual for approved replacement battery types.

* FOR FUNCTION POSITION (0-99%), MAKE OR BREAK REFERS
TO CONTACT STATUS AFTER TRIPPING WHEN TRAVELLING IN
THE OPEN DIRECTION

SLOT C

EXTRA RELAY CONTACTS
DEFAULT SETTINGS SHOWN
FOR OTHER SETTINGS SEE PUB002-038

SK1
SLOT C
SK3

1 (15)
MAKE AT --% OPEN*   S9   2 (18)

4 (21)
BREAK AT --% OPEN*   S10   5 (39)

7 (40)
MAKE AT --% OPEN*   S11   8 (41)

10 (45)
BREAK AT --% OPEN*   S12   11 (46)