Revision History

Date	Author	Description
2-18-2020	DEW	Setup
05-06-2020	DEW	Add photo, minor change pg 5 & 6

CARRIER 19XRV
ROCKWELL LIQUIFLO 1
RETROFIT
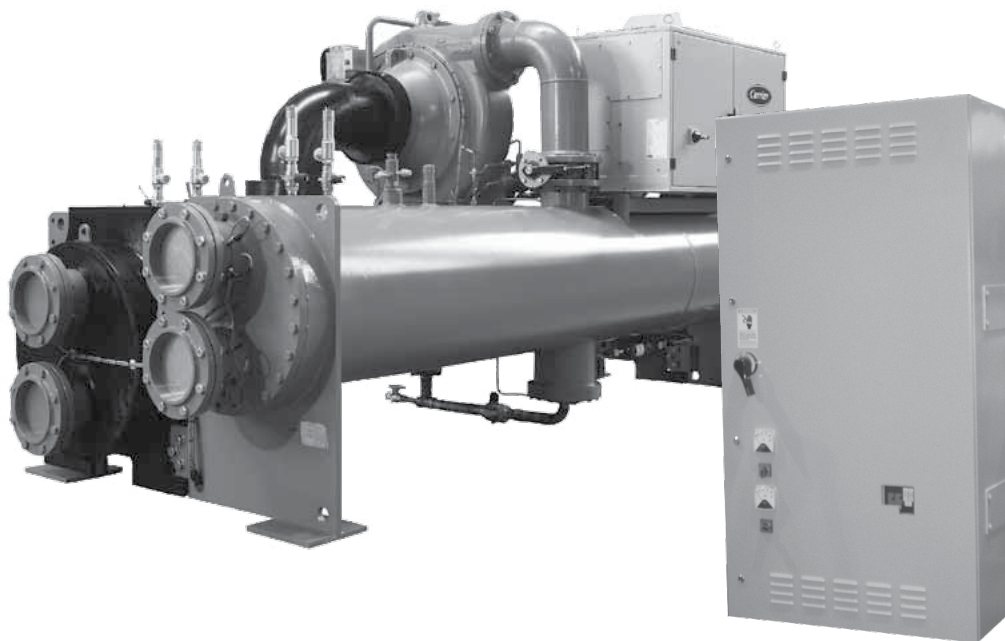
NOTES AND JUMPER SETTINGS
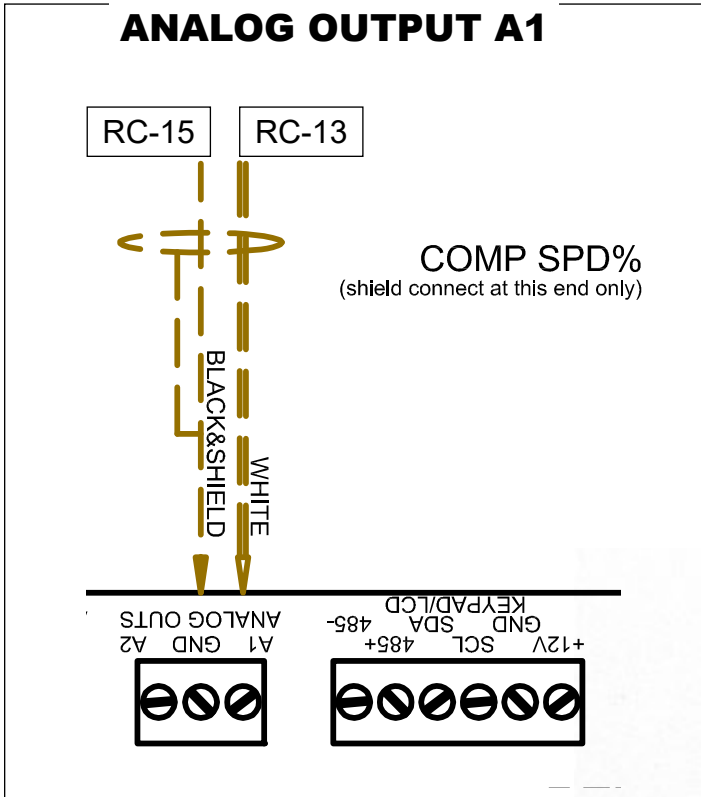
1. **Put the J4 jumper on the top 2 pins:**

2. **Change parameter 'P.011' to '0' for 0-10Vdc input. Default should be 4.**

3. **Photo J4 jumper and finished wiring to the Rockwell RC Board as explained on the following pages:**

Picture of Jumper J4

Picture of RC BOARD WIRING
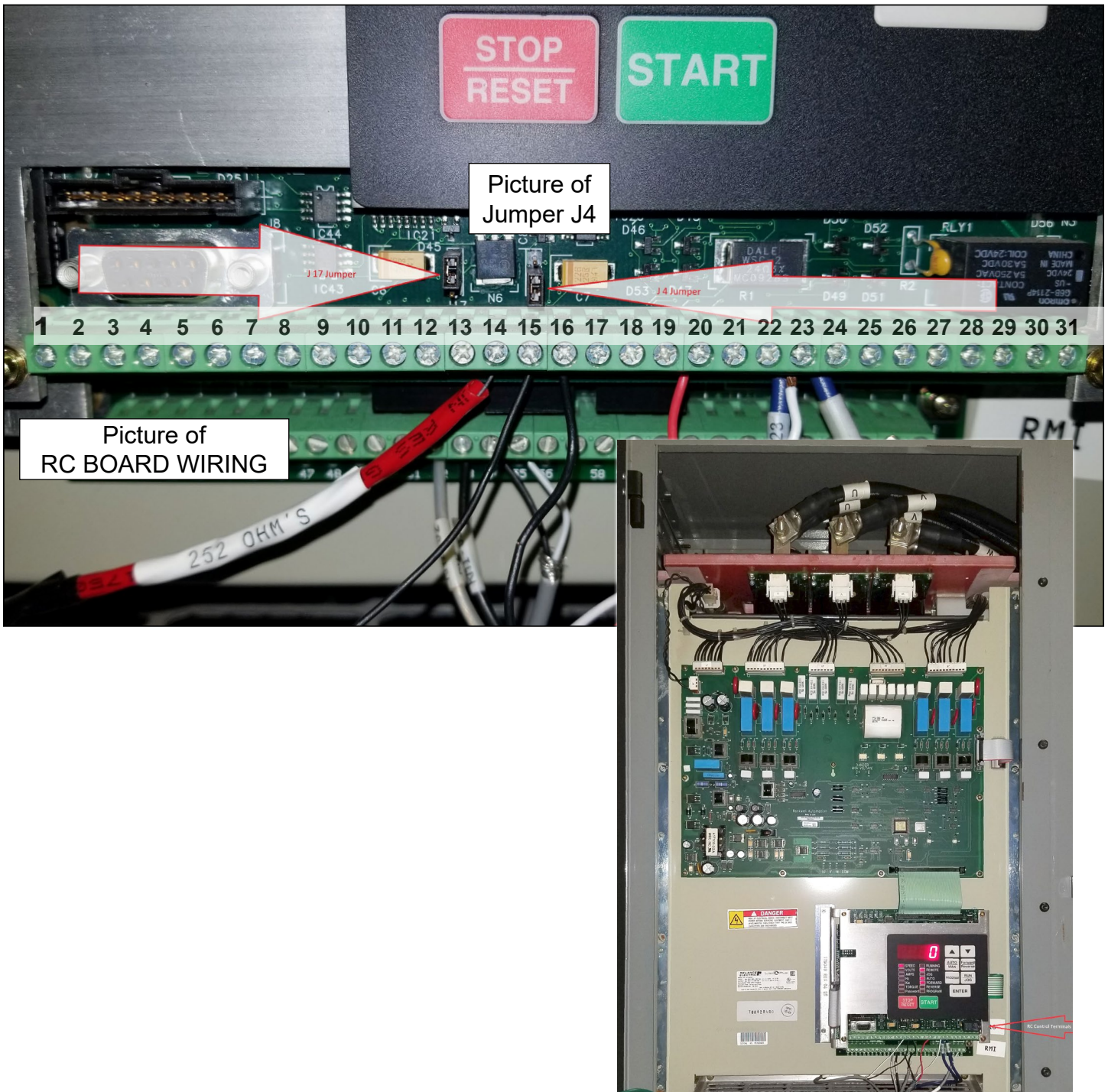
MCS WIRING
COMPRESSOR SPEED

MCS-MAGNUM
ANALOG OUTPUT A1

RC-15   RC-13

COMP SPD%
(shield connect at this end only)

BLACK&SHIELD   WHITE

A2 GND A1   485- SDA SCL +12V   485+ GND SDA SCL +12V
ANALOG OUTS   KEYPAD/LCD

WIRING
MAGNUM A1 to RC TERMINALS
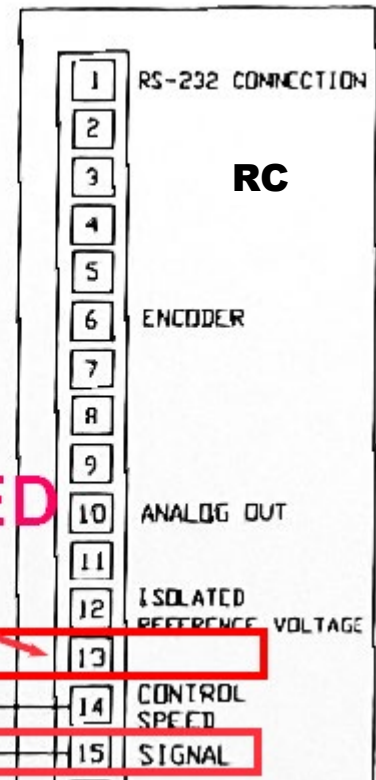
Analog Output - COMP SPD%

A1   - RC-13
GND -   RC-15

CARRIER RC TERMINALS

#13 - Actual Control Speed
#15 - Signal

CARRIER
RC TERMINALS

RC

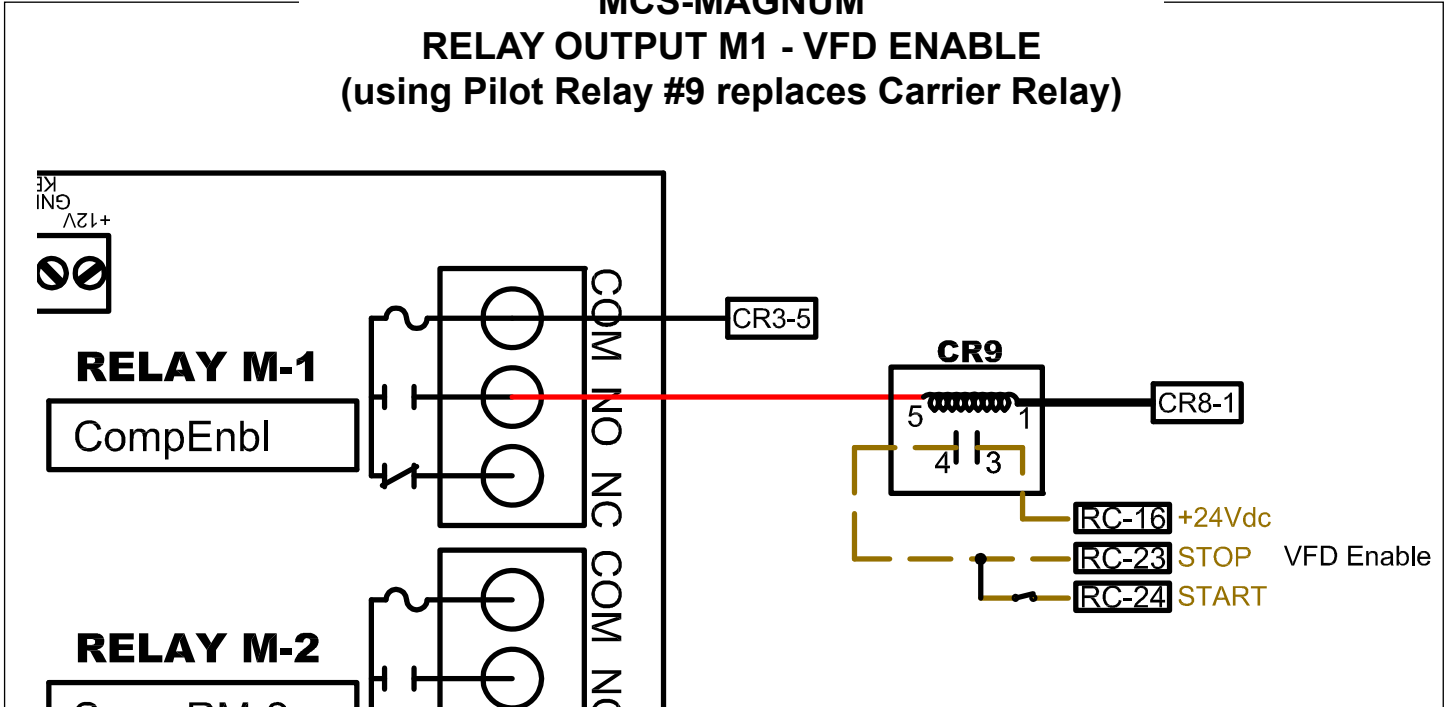A0-A1 SPEED

#13 Actual Control
Speed terminal

#14 NOT USED

ISM J8-1

ISM J8-2

1 RS-232 CONNECTION
2
3
4
5
6 ENCODER
7
8
9
10 ANALOG OUT
11
12 ISOLATED
      REFERENCE VOLTAGE
13
14 CONTROL
      SPEED
15 SIGNAL

MCS WIRING

VFD ENABLE

MCS-MAGNUM
RELAY OUTPUT M1 - VFD ENABLE
(using Pilot Relay #9 replaces Carrier Relay)

RELAY M-1

CompEnbl

CR3-5

CR9

CR8-1

5   1
4   3

RC-16   +24Vdc
RC-23   STOP   VFD Enable
RC-24   START

RELAY M-2

COM NO NC   COM NO NC

CARRIER TERMINALS

ST
C138

5

C134

1M
3   5

TEST/RUN

RO M-1

Pilot Relay #9 takes the place of this Carrier Relay

16   +24Vdc
17   DIGITAL INPUTS
18
19
20   FUNCTION LOSS
21   RUN/JOG
22   RESET
23   STOP
24   START
25
26
27
28
29

C146   TB5-50   30   DRIVE MODULE START
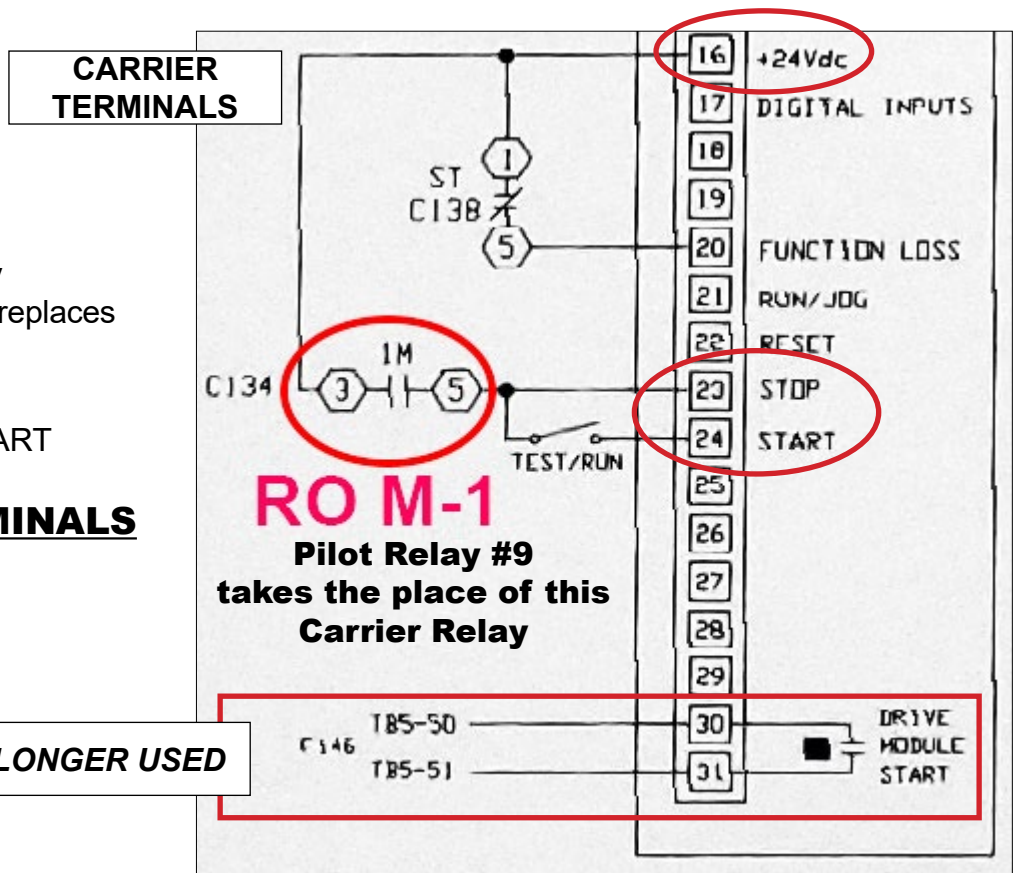TB5-51   31

WIRING

MAGNUM M1 - Relay
(using Pilot Relay #9, replaces Carrier Relay)

CR9-3   -   +24Vdc
CR9-4 -   STOP / START

CARRIER TERMINALS

#16 - +24Vdc
#23 - STOP
#24 - START

THIS IS NO LONGER USED

MCS WIRING
SHUNT TRIP
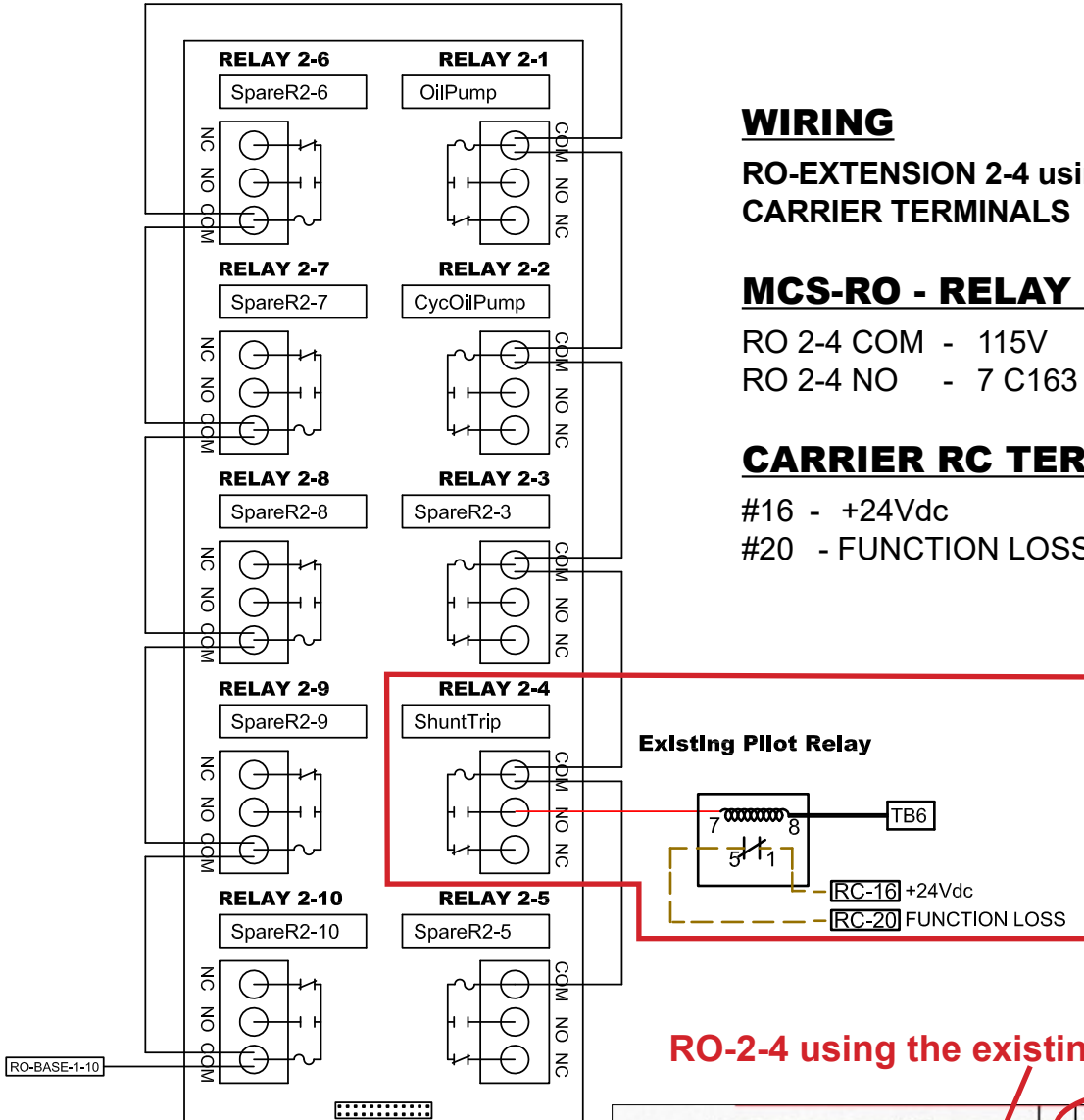
MCS-RO EXTENSION
RELAY OUTPUT 2-4 - SHUNT TRIP

WIRING
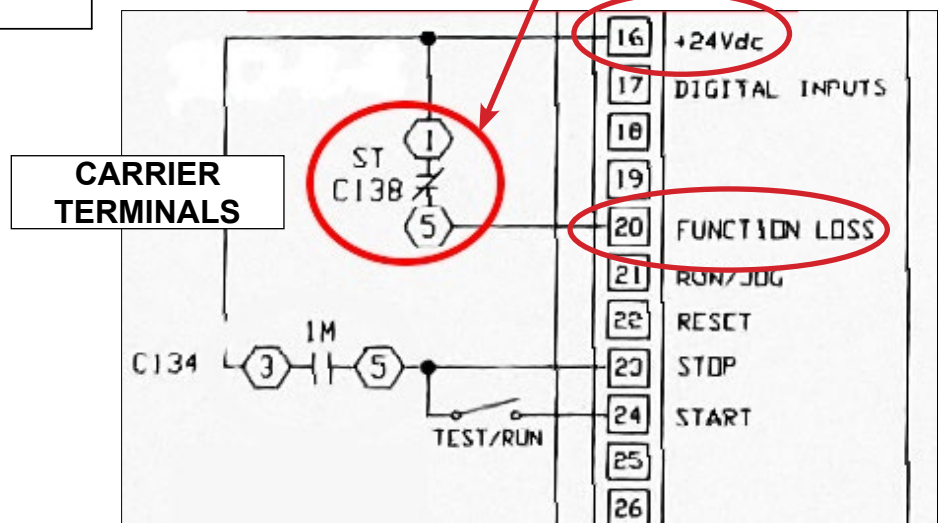
RO-EXTENSION 2-4 using Pilot Relay
CARRIER TERMINALS

MCS-RO - RELAY 2-4

RO 2-4 COM - 115V
RO 2-4 NO   - 7 C163 Shunt Trip Pilot Relay

CARRIER RC TERMINALS
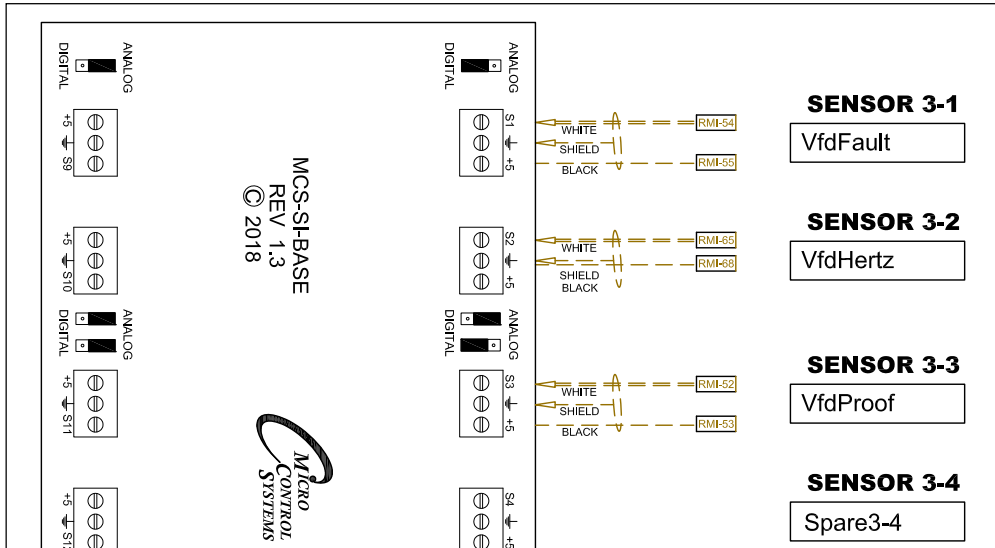
#16 - +24Vdc
#20 - FUNCTION LOSS

RELAY 2-6 — SpareR2-6 — NC / NO / COM

RELAY 2-1 — OilPump — COM / NO / NC

RELAY 2-7 — SpareR2-7 — NC / NO / COM

RELAY 2-2 — CycOilPump — COM / NO / NC

RELAY 2-8 — SpareR2-8 — NC / NO / COM

RELAY 2-3 — SpareR2-3 — COM / NO / NC

RELAY 2-9 — SpareR2-9 — NC / NO / COM

RELAY 2-4 — ShuntTrip — COM / NO / NC

Existing Pilot Relay

7 / 8 — TB6
5 / 1
RC-16 +24Vdc
RC-20 FUNCTION LOSS

RELAY 2-10 — SpareR2-10 — NC / NO / COM

RELAY 2-5 — SpareR2-5 — COM / NO / NC

RO-BASE-1-10

RO-2-4 using the existing Pilot Relay

CARRIER TERMINALS

16 +24Vdc
17 DIGITAL INPUTS
18
19
20 FUNCTION LOSS
21 RUN/JOG
22 RESET
23 STOP
24 START
25
26

ST C138

C134 3 / 1M / 5

TEST/RUN

MCS WIRING
VFD FAULT, HERTZ AND PROOF

SENSOR 3-1
VfdFault

SENSOR 3-2
VfdHertz

SENSOR 3-3
VfdProof

SENSOR 3-4
Spare3-4

WIRING

THE ROCKWELL LIQUIFLO 1
FEEDBACK TO THE MCS INPUTS

SENSOR 3-1 INPUT
VFD FAULT

3-1 S1 - RMI - #54
3-1 +5 - RMI - #55

SENSOR 3-2 INPUT
VFD HERTZ

3-2 S2   - RMI - #65
3-2 GND - RMI - #68

SENSOR 3-3 INPUT
VFD PROOF

3-3 -S3 - RMI - #52
3-3 +5   - RMI - #53