TRANE

DRAWN BY: E. DUNMER © TRANE DATE: NOV-11-2009

REPLACES:

REVISION DATE: JAN-4-2010

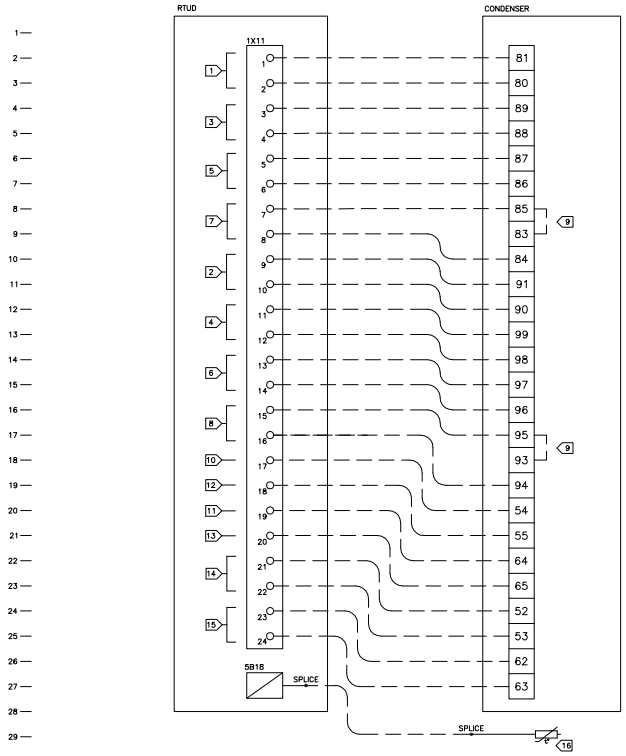
SIMILAR TO:

2309-1969 SHEET 1 OF 2 REV C

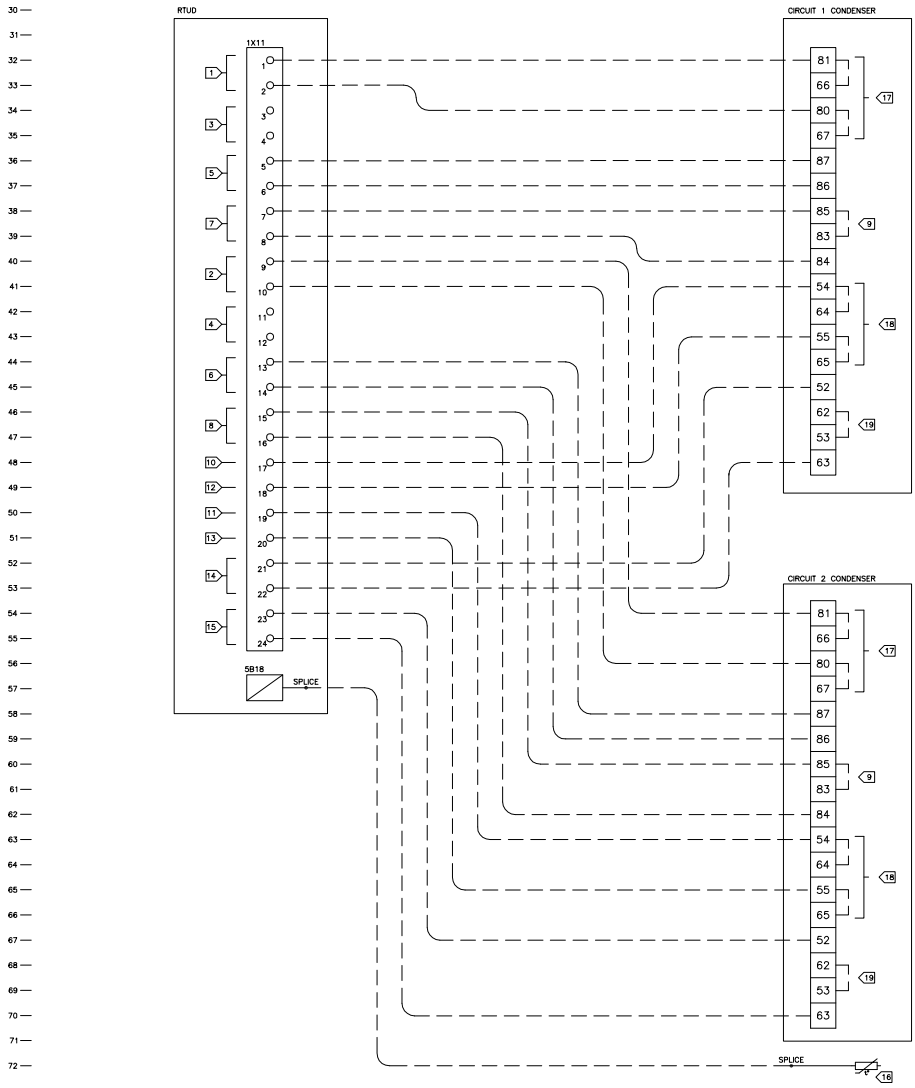
FIELD WIRING DIAGRAM

RTUD

PAIRED CONDENSER



TWO-CIRCUIT CONDENSER CONFIGURATION



SINGLE-CIRCUIT CONDENSERS CONFIGURATION

TRANE	2309-1969	SHEET 2 OF 2	REV C
THIS DRAWING IS PROPRIETARY AND SHALL NOT BE COPIED OR ITS CONTENTS DISCLOSED OUTSIDE OF TRANE WITHOUT THE WRITTEN CONSENT	FIELD WIRING DIAGRAM		
DRAWN BY: E. DUMMER ©TRANE DATE: NOV-11-2009	RTUD		
REPLACES:	PAIRED CONDENSER		
REVISION DATE: JAN-4-2010			
SIMILAR TO:			

1. CONNECTIONS ENABLE CIRCUIT 1, FAN GROUP 1. STANDARD CONDENSER PROVIDES CLASS 1 CONTROL POWER RATED 250 VA AT 115 V. LOW-AMBIENT CONDENSER PROVIDES CLASS 2 CONTROL POWER RATED 130 mA AT 24V VDC. RTUD CHILLER PROVIDES NORMALLY OPEN DRY CONTACTS. CONTACTS ARE RATED FOR 7.2 AMPS RESISTIVE, 2.88 AMPS PILOT DUTY, OR 1/3 HP, 7.2 FLA AT 120 V. CONTACTS ARE RATED FOR 5 AMPS GENERAL PURPOSE DUTY AT 240 V. CONNECTIONS ARE REQUIRED ON ALL CONDENSERS.
2. CONNECTIONS ENABLE CIRCUIT 2, FAN GROUP 1. STANDARD CONDENSER PROVIDES CLASS 1 CONTROL POWER RATED 250 VA AT 115 V. LOW-AMBIENT CONDENSER PROVIDES CLASS 2 CONTROL POWER RATED 130 mA AT 24VDC. RTUD CHILLER PROVIDES NORMALLY OPEN DRY CONTACTS. CONTACTS ARE RATED FOR 7.2 AMPS RESISTIVE, 2.88 AMPS PILOT DUTY, OR 1/3 HP, 7.2 FLA AT 120 V. CONTACTS ARE RATED FOR 5 AMPS GENERAL PURPOSE DUTY AT 240 V. CONNECTIONS ARE REQUIRED ON ALL CONDENSERS.
3. CONNECTIONS ENABLE CIRCUIT 1, FAN GROUP 2. CONDENSER PROVIDES CONTROL POWER RATED 250 VA AT 115 V. RTUD CHILLER PROVIDES NORMALLY OPEN DRY CONTACTS. CONTACTS ARE RATED FOR 7.2 AMPS RESISTIVE, 2.88 AMPS PILOT DUTY, OR 1/3 HP, 7.2 FLA AT 120 V. CONTACTS ARE RATED FOR 5 AMPS GENERAL PURPOSE DUTY AT 240 V. CONNECTIONS ARE ONLY REQUIRED ON THE FOLLOWING CONDENSERS:
   - TWO-CIRCUIT, 10 FANS
4. CONNECTIONS ENABLE CIRCUIT 2, FAN GROUP 2. CONDENSER PROVIDES CONTROL POWER RATED 250 VA AT 115 V. RTUD CHILLER PROVIDES NORMALLY OPEN DRY CONTACTS. CONTACTS ARE RATED FOR 7.2 AMPS RESISTIVE, 2.88 AMPS PILOT DUTY, OR 1/3 HP, 7.2 FLA AT 120 V. CONTACTS ARE RATED FOR 5 AMPS GENERAL PURPOSE DUTY AT 240 V. CONNECTIONS ARE ONLY REQUIRED ON THE FOLLOWING CONDENSERS:
   - TWO-CIRCUIT, 10 FANS
5. CONNECTIONS ENABLE CIRCUIT 1, FAN GROUP 3. CONDENSER PROVIDES CONTROL POWER RATED 250 VA AT 115 V. RTUD CHILLER PROVIDES NORMALLY OPEN DRY CONTACTS. CONTACTS ARE RATED FOR 7.2 AMPS RESISTIVE, 2.88 AMPS PILOT DUTY, OR 1/3 HP, 7.2 FLA AT 120 V. CONTACTS ARE RATED FOR 5 AMPS GENERAL PURPOSE DUTY AT 240 V. CONNECTIONS ARE REQUIRED ON ALL CONDENSERS.
6. CONNECTIONS ENABLE CIRCUIT 2, FAN GROUP 3. CONDENSER PROVIDES CONTROL POWER RATED 250 VA AT 115 V. RTUD CHILLER PROVIDES NORMALLY OPEN DRY CONTACTS. CONNECTIONS ARE REQUIRED ON ALL CONDENSERS.
7. CONNECTIONS ENABLE CIRCUIT 1, FAN GROUP 4. CONDENSER PROVIDES CONTROL POWER RATED 250 VA AT 115 V. RTUD CHILLER PROVIDES NORMALLY OPEN DRY CONTACTS. CONTACTS ARE RATED FOR 7.2 AMPS RESISTIVE, 2.88 AMPS PILOT DUTY, OR 1/3 HP, 7.2 FLA AT 120 V. CONTACTS ARE RATED FOR 5 AMPS GENERAL PURPOSE DUTY AT 240 V. CONNECTIONS ARE REQUIRED ON ALL CONDENSERS.
8. CONNECTIONS ENABLE CIRCUIT 2, FAN GROUP 4. CONDENSER PROVIDES CONTROL POWER RATED 250 VA AT 115 V. RTUD CHILLER PROVIDES NORMALLY OPEN DRY CONTACTS. CONTACTS ARE RATED FOR 7.2 AMPS RESISTIVE, 2.88 AMPS PILOT DUTY, OR 1/3 HP, 7.2 FLA AT 120 V. CONTACTS ARE RATED FOR 5 AMPS GENERAL PURPOSE DUTY AT 240 V. CONNECTIONS ARE REQUIRED ON ALL CONDENSERS.
9. JUMPER ALLOWS FAN GROUP 4 TO ENABLE 2 FANS. CONNECTION IS ONLY REQUIRED ON THE FOLLOWING CONDENSERS:
   - TWO-CIRCUIT, 10 FANS
   - TWO-CIRCUIT, 8 FANS
   - SINGLE-CIRCUIT, 10 FANS
   - SINGLE-CIRCUIT, 8 FANS
10. CONNECTION PROVIDES A 0-10-VDC SIGNAL AT 22 mA MAXIMUM FOR CIRCUIT 1, GROUP 1, CONDENSER FAN SPEED CONTROL. CONNECTION IS ONLY REQUIRED WHEN LOW-AMBIENT CONDENSER IS ORDER. CONNECTION IS CLASS 2 POWER.
11. CONNECTION PROVIDES A 0-10-VDC SIGNAL AT 22 mA MAXIMUM FOR CIRCUIT 2, GROUP 1, CONDENSER FAN SPEED CONTROL. CONNECTION IS ONLY REQUIRED WHEN LOW-AMBIENT CONDENSER IS ORDER. CONNECTION IS CLASS 2 POWER.
12. CONNECTION PROVIDES A COMMON FOR A 0-10-VDC SIGNAL AT 22 mA MAXIMUM FOR CIRCUIT 1, GROUP 1, CONDENSER FAN SPEED CONTROL. CONNECTION IS ONLY REQUIRED WHEN LOW-AMBIENT CONDENSER IS ORDER. CONNECTION IS CLASS 2 POWER.
13. CONNECTION PROVIDES A COMMON FOR A 0-10-VDC SIGNAL AT 22 mA MAXIMUM FOR CIRCUIT 2, GROUP 1, CONDENSER FAN SPEED CONTROL. CONNECTION IS ONLY REQUIRED WHEN LOW-AMBIENT CONDENSER IS ORDER. CONNECTION IS CLASS 2 POWER.
14. CONNECTIONS PROVIDE FAULT FEEDBACK FOR CIRCUIT 1, GROUP 1, CONDENSER FAN CONTROL. CONDENSER PROVIDES DRY CONTACTS. CONTACTS ARE RATED FOR 2 A AT 25 VDC, 1 A AT 50 VDC, 2 A AT 250 V. RTUD CHILLER PROVIDES 24-VDC SIGNAL AT 12 mA. CONNECTION IS CLASS 2 POWER.
15. CONNECTIONS PROVIDE FAULT FEEDBACK FOR CIRCUIT 2, GROUP 1, CONDENSER FAN CONTROL. CONDENSER PROVIDES DRY CONTACTS. RTUD CHILLER PROVIDES 24-VDC SIGNAL AT 12 mA. CONNECTION IS CLASS 2 POWER.
16. FACTORY INSTALLED OUTDOOR AIR TEMPERATURE SENSOR LEAD LENGTH TO BE SPLICED AND EXTENDED BY CUSTOMER. 18-AWG, TWISTED-PAIR RECOMMENDED. CONNECTION IS CLASS 2 POWER.
17. JUMPERS ALLOW FAN GROUP 1 TO ENABLE 2 FANS. CONNECTION IS ONLY REQUIRED ON THE FOLLOWING CONDENSERS:
   - SINGLE-CIRCUIT, 10 FANS
   - SINGLE-CIRCUIT, 8 FANS
18. JUMPERS ALLOW FAN GROUP 1 TO SHARE 0-10-VDC SPEED SIGNAL BETWEEN 2 FANS. CONNECTION IS ONLY REQUIRED ON THE FOLLOWING CONDENSERS:
   - SINGLE-CIRCUIT, 10 FANS WITH LOW-AMBIENT OPTION
   - SINGLE-CIRCUIT, 8 FANS WITH LOW-AMBIENT OPTION
19. JUMPER ALLOWS FAN GROUP 1 TO SHARE FAULT FEEDBACK SIGNAL BETWEEN 2 FANS. CONNECTION IS ONLY REQUIRED ON THE FOLLOWING CONDENSERS:
   - SINGLE-CIRCUIT, 10 FANS WITH LOW-AMBIENT OPTION
   - SINGLE-CIRCUIT, 8 FANS WITH LOW-AMBIENT OPTION
20. TERMINAL BLOCKS LOCATED IN THE RTUD CHILLER HAVE A WIRE RANGE OF 22-12 AWG.
21. TERMINAL BLOCKS LOCATED IN CONDENSER HAVE THE FOLLOWING WIRE RANGE.

WIRES PER LUG		WIRE	IN-LB LUG
MIN	MAX	SIZE	TORQUE
1	1	#10	10
1	2	#12	10
1	2	#14	10
1	4	#16	10
1	5	#18	10
1	8	#20	10
1	10	#22	10

22. ALL WIRING IS CLASS 1 POWER, EXCEPT WHERE NOTED.