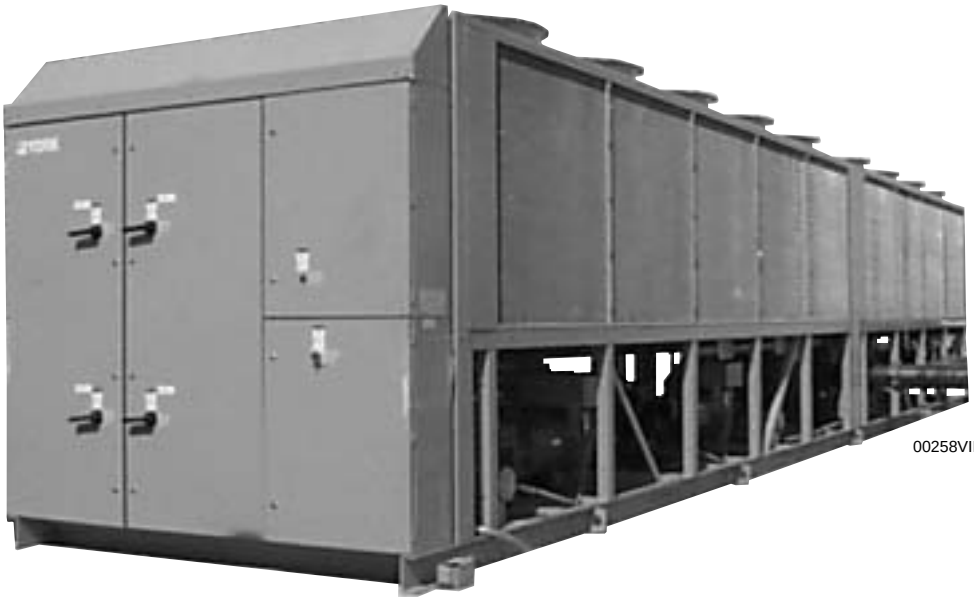
YORK®	AIR-COOLED SCREW LIQUID CHILLERS	
WIRING DIAGRAM	New Release	Form 201.19-W4 (1104)

YCAS AIR-COOLED LIQUID CHILLERS
YCAS0693 THROUGH YCAS0953 (3 COMPRESSOR)
YCAS1063 THROUGH YCAS1263 (4 COMPRESSOR)
STYLE G (R22)
(50 Hz)



00258VIP

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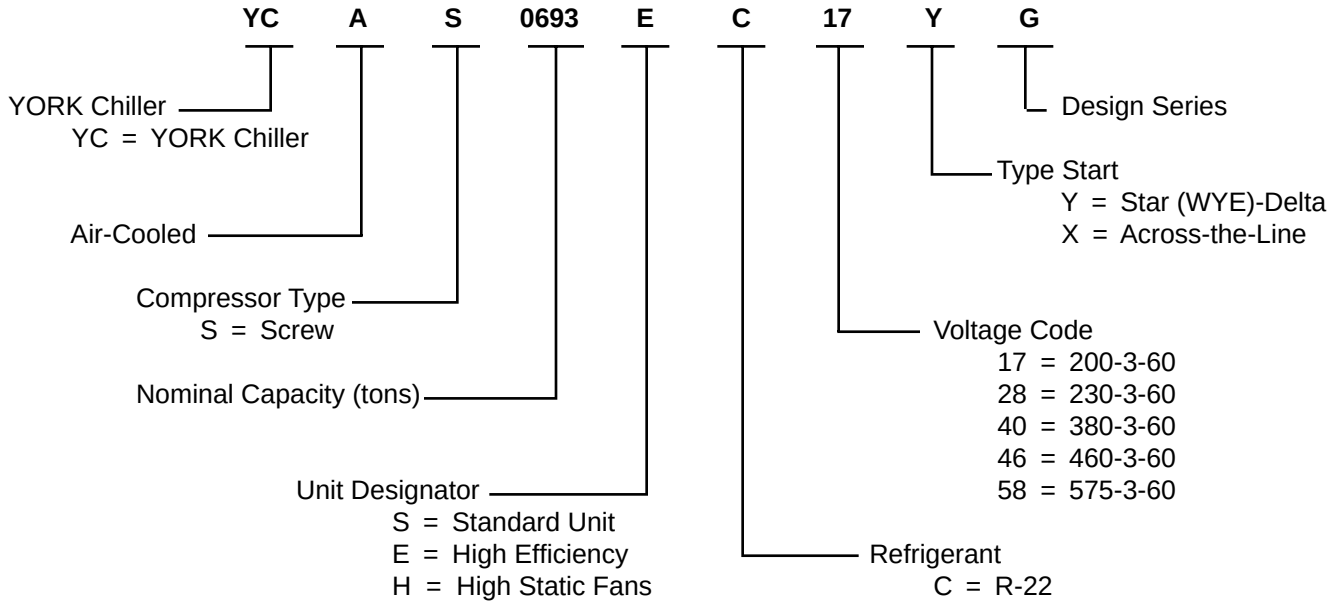
LIST OF FIGURES

NOMENCLATURE

The Model Number denotes the following characteristics of the unit:



WARNING

HIGH VOLTAGE
is used in the operation of this equipment.
DEATH OR SERIOUS INJURY
may result if personnel fail to observe safety precautions.

Work on electronic equipment should not be undertaken unless the individual(s) have been trained in the proper maintenance of equipment and is (are) familiar with its potential hazards.

Shut off power supply to equipment before beginning work and follow lockout procedures. When working inside equipment with power off, take care to discharge every capacitor likely to hold dangerous potential.

Be careful not to contact high voltage connections when installing or operating this equipment.

LOW VOLTAGE

DO NOT be misled by the term “low voltage”.
Voltages as low as 50 volts may cause death.

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ELECTRICAL NOTES

NOTES & LEGEND

LEGEND

ACR-LINE	ACROSS THE LINE START
C.B.	CIRCUIT BREAKER
D.E.	DUAL ELEMENT FUSE
DISC SW	DISCONNECT SWITCH
FACT CB	FACTORY-MOUNTED CIRCUIT BREAKER
FLA	FULL LOAD AMPS
HZ	HERTZ
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPACITY
MIN	MINIMUM
MIN NF	MINIMUM NON-FUSED
RLA	RUNNING LOAD AMPS
S.P. WIRE	SINGLE-POINT WIRING
Y-Δ	WYE-DELTA START
X-LRA	ACROSS-THE-LINE INRUSH LOCKED ROTOR AMPS
Y-LRA	WYE-DELTA INRUSH LOCKED ROTOR AMPS

VOLTAGE CODE
-50 = 380-3-50

NOTES

1. MRA is Maximum Running Amps, the maximum continuous current at any operating point in the rating range. Also referred to as MCA, or Minimum Circuit Ampacity to be provided by the installer. If a Factory Mounted Control Transformer is provided, add 3 amps to the system #1 MCA values in the YCAS Tables.
2. The recommended disconnect switch is based on a minimum of 115% of the summation rated load amps of all the loads included in the circuit, per N.E.C. 440 - 12A1.
3. Minimum recommended fuse size is based on 150% of the largest motor RLA plus 100% of the remaining RLAs. Minimum fuse rating = (1.5 x largest compressor RLA) + other compressor RLAs + (# fans x each fan motor FLA).
4. Maximum dual element fuse size is based on 225% maximum plus 100% of the rated load amps for all other loads included in the circuit, per N.E.C. 440-22. Maximum fuse rating = (2.25 x largest compressor RLA) + other compressor RLAs + (# fans x each fan motor FLA).
5. Minimum recommended circuit breaker is 150% maximum plus 100% of rated load amps included in the circuit. Minimum circuit breaker rating = (1.5 x largest compressor RLA) + other compressor RLAs + (# fans x each fan motor FLA).
6. Maximum circuit breaker is based on 225% maximum plus 100% of the rated load amps for all loads included in the circuit, per circuit, per U.L. **1995** Fig. 36.2. Maximum circuit breaker rating = (2.25 x largest compressor RLA) + other compressor RLAs + (# fans x each fan motor FLA).
7. The Incoming Wire Range is the minimum and maximum wire size that can be accommodated by unit wiring lugs. The (1), (2), or (3) indicate the number of termination points or lugs which are available per phase. Actual wire size and number of wires per phase must be determined based on ampacity and job requirements using N.E.C. wire sizing information. The above recommendations are based on the National Electrical Code and using **copper connectors** only. Field wiring must also comply with local codes.
8. A ground lug is provided for each compressor system to accommodate field grounding conductor per N.E.C. Article 250-54. A control circuit grounding lug is also supplied.
9. The field supplied disconnect is a “Disconnecting Means” as defined in N.E.C. 100.B, and is intended for isolating the unit from the available power supply to perform maintenance and troubleshooting. This disconnect is not intended to be a Load Break Device.
10. Two-compressor machines with single-point power connection, and equipped with Star-Delta compressor motor start must also include Factory provided circuit breakers in each motor control center.
11. Consult factory for Electrical Data on units equipped with “High Static Fan” option. 50Hz High Static Fans are 3.5kW each.
12. FLA for each “Low Noise Fan” motor: 380v/50Hz = 4.1A.

ELECTRICAL DATA

CONTROL POWER SUPPLY (UNITS WITHOUT STANDARD CONTROL CIRCUIT TRANSFORMER)

NO. OF COMPRESSORS	CONTROL POWER SUPPLY	MCA (MAX LOAD CURRENT)	MAX DUAL ELEMENT FUSE SIZE	NON-FUSED DISCONNECT SWITCH SIZE
3 or 4 (Non-CE 50/60Hz)	115V-1Ø	30A	30A	30A

CONTROL POWER SUPPLY (UNITS WITH STANDARD CONTROL CIRCUIT TRANSFORMER)

NO. OF COMPRESSORS	CONTROL POWER SUPPLY	MCA (MAX LOAD CURRENT)	RECOMMENDED DUAL ELEMENT FUSE SIZE	NON-FUSED DISCONNECT SWITCH SIZE
3 or 4	400V - 50 HZ	9.4A	15A	— — —

TABLE 2 – COMPRESSOR DATA

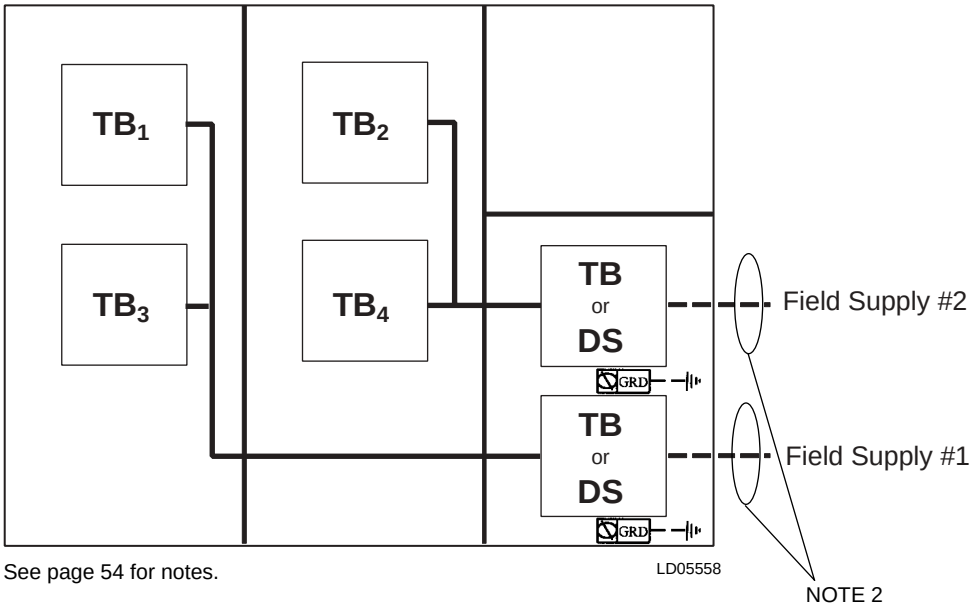
MAXIMUM kW AND AMPERAGE VALUES FOR DXST COMPRESSORS																		
	COMPRESSOR MODEL AND VOLTAGE CODE																	
	DXS45LA – MOTOR CODE A (B5N, B5E, B6N, B6E)						DXS36LA – MOTOR CODE A (A5N, A5E, A6N, A6E)						DXS24LA – MOTOR CODE (TBD) (C5N, C5E, C6N, C6E)					
VOLTAGE CODE-	-17	-28	-40	-46	-50	-58	-17	-28	-40	-46	-50	-58	-17	-28	-40	-46	-50	-56
MAX kW	150	150	150	150	113	150	150	150	150	150	113	150	105	105	105	105	80	105
MAX AMPS	492	428	259	214	193	171	492	428	259	214	193	171	338	294	178	147	135	118

ELECTRICAL DATA

MULTIPLE POINT POWER SUPPLY CONNECTION

Two field provided power supply circuits to the unit. Field Power Wiring connections to factory provided, Non-Fused Disconnect Switches (Opt), or Terminal Blocks (Opt) in the Option Box.

Suitable for:
Across-The-Line-Start



See page 54 for notes.

FIG. 1 – MULTIPLE POINT POWER SUPPLY CONNECTION

MULTIPLE POINT POWER SUPPLY CONNECTION – 3 & 4 COMPRESSOR UNITS

(Two Field Provided Power Supply Circuits to the Chiller. Field Connections to Factory provided Terminal Block (Std) or Disconnects (Opt) in the Options Panel or Individual System Circuit Breakers (opt[10]) in each of the two Motor Control Centers.)

Model YCAS	Volts	ELECTRICAL SYSTEM #1 FIELD SUPPLIED WIRING														
		Field Provided Power Supply				Factory Provided (Lugs) Wire Range[7]		Compressor #1			Compressor #3			Fan[11, 12] Data		
		MRA[1] (MCA)	Min NF Disc SW[2,9]	Over-current Protection[13]		Standard Terminal block	Optional NF Disc. Switch	RLA	Y-Δ LRA	X-LRA	RLA	Y-Δ LRA	X-LRA	Qty	FLA (ea)	LRA (ea)
				Min.[3, 5]	Max.[4, 6]											
0693	380	362	400	400	450	(1) 2/0-(2)4/0	(2) 3/0-250	140	283	907	124	283	907	7	4.4	17.1
0773	380	436	600	450	500	(2) 1/0-300	(2) 250-500	140	283	907	183	283	907	7	4.4	17.1
0783	380	402	400	450	500	(1) 2/0-(2)4/0	(2) 3/0-250	124	283	907	168	283	907	8	4.4	17.1
0873	380	457	600	500	500	(2) 1/0-300	(2) 250-500	168	283	907	168	283	907	8	4.4	17.1
0953	380	494	600	500	600	(2) 1/0-300	(2) 250-500	183	283	907	183	283	907	8	4.4	17.1
1063	380	413	600	450	500	(2) 1/0-300	(2) 250-500	161	283	907	140	283	907	8	4.4	17.1
1093	380	436	600	450	500	(2) 1/0-300	(2) 250-500	183	283	907	140	283	907	7	4.4	17.1
1163	380	457	600	500	500	(2) 1/0-300	(2) 250-500	168	283	907	168	283	907	8	4.4	17.1
1263	380	494	600	500	600	(2) 1/0-300	(2) 250-500	183	283	907	183	283	907	8	4.4	17.1

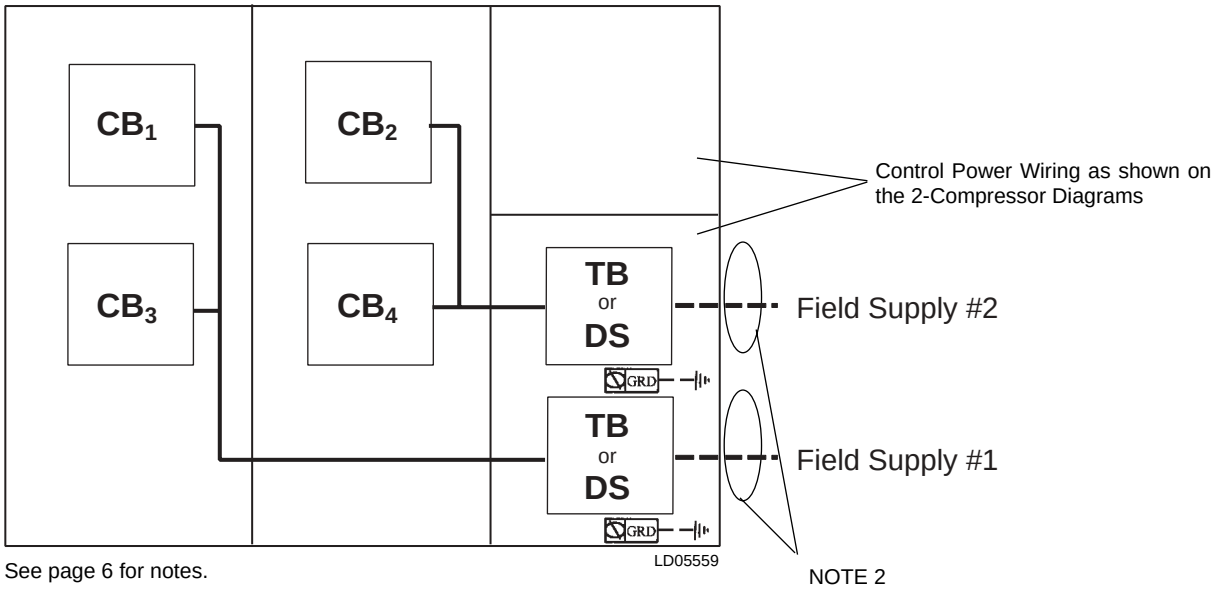
See page 6 for Electrical Data footnotes.

ELECTRICAL DATA (CONT'D)

MULTIPLE POINT POWER SUPPLY CONNECTION WITH OPTIONAL INDIVIDUAL SYSTEM CIRCUIT BREAKERS

Two field provided power supply circuits to the unit with individual branch circuit protection. Field Power Wiring connections to factory provided, Non-Fused Disconnect Switches (Opt), or Terminal Blocks (Opt) in the Option Box. Factory connections to each of the Circuit Breakers in each of the two power panels.

Suitable for:
Y - Δ Start and Across the Line Start
CE Mark



See page 6 for notes.

FIG. 2 – MULTIPLE POINT POWER SUPPLY CONNECTION WITH INDIVIDUAL SYSTEM CIRCUIT BREAKERS

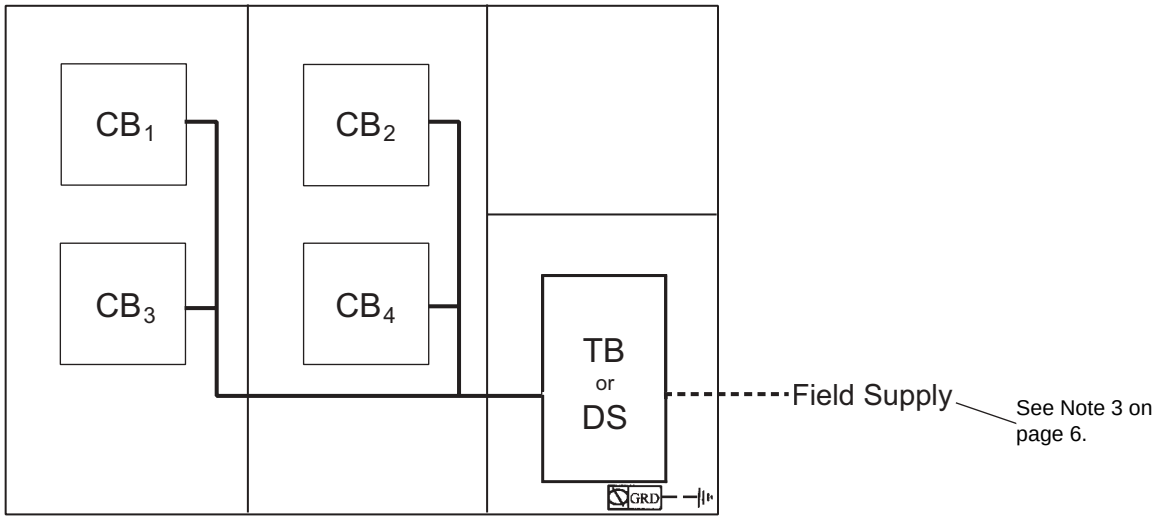
Chiller Model YCAS	Volts	ELECTRICAL SYSTEM #2 FIELD SUPPLIED WIRING														
		Field Provided Power Supply				Factory Provided (Lugs) Wire Range		Compressor #2			Compressor #4			Fan[11, 12] Data		
		MRA[1] (MCA)	Min NF Disc SW[2, 9]	Over-current Protection[13] Min.[3, 5]	Over-current Protection[13] Max.[4, 6]	*Standard Terminal block	*Optional NF Disc. Switch	RLA	Y-Δ LRA	X-LRA	RLA	Y-Δ LRA	X-LRA	Qty	FLA (ea)	LRA (ea)
0693	380	189	200	200	300	#2-4/0	# 4-300	140	283	907	—	—	—	3	4.4	17.1
0773	380	189	200	200	300	#2-4/0	# 4-300	140	283	907	—	—	—	3	4.4	17.1
0783	380	173	175	175	250	#2-4/0	# 4-300	124	283	907	—	—	—	4	4.4	17.1
0873	380	228	250	250	350	1/0-300	# 6-350	168	283	907	—	—	—	4	4.4	17.1
0953	380	247	250	250	400	1/0-300	# 6-350	183	283	907	—	—	—	4	4.4	17.1
1063	380	413	600	450	500	(2) 1/0-300	(2) 250-500	161	283	907	140	283	907	8	4.4	17.1
1093	380	436	600	450	500	(2) 1/0-300	(2) 250-500	183	283	907	140	283	907	7	4.4	17.1
1163	380	457	600	500	500	(2) 1/0-300	(2) 250-500	168	283	907	168	283	907	8	4.4	17.1
1263	380	494	600	500	600	(2) 1/0-300	(2) 250-500	183	283	907	183	283	907	8	4.4	17.1

ELECTRICAL DATA (CONT'D)

OPTIONAL SINGLE POINT POWER SUPPLY CONNECTION AND INDIVIDUAL SYSTEM CIRCUIT BREAKERS

Suitable for:
Y - Δ Start and
Across-The-Line-Start

One field provided power supply circuits to the unit with individual branch circuit protection. Field Power Wiring connections to factory provided, Non-Fused Disconnect Switches (Opt), or Terminal Blocks (Opt) in the Option Box.



See notes below.

LD05557

FIG. 3 – OPTIONAL SINGLE-POINT POWER SUPPLY CONNECTION WITH INDIVIDUAL SYSTEM CIRCUIT BREAKERS

NOTES:

1. – – – – – – – Dashed Line indicates Field Provided Wiring.
2. The above recommendations are based on the National Electrical Code and using copper conductors only. Field wiring must also comply with local codes.

OPTIONAL SINGLE-POINT POWER SUPPLY CONNECTION WITH INDIVIDUAL SYSTEM CIRCUIT BREAKERS – 3 & 4 COMPRESSOR UNITS

(One Field Provided Power Supply Circuit to the chiller. Field connections to Power Terminal Block (standard) or Non-Fused Disconnect (option) in 'Option Panel'. Individual System Circuit Breakers in each Motor Control Center.)

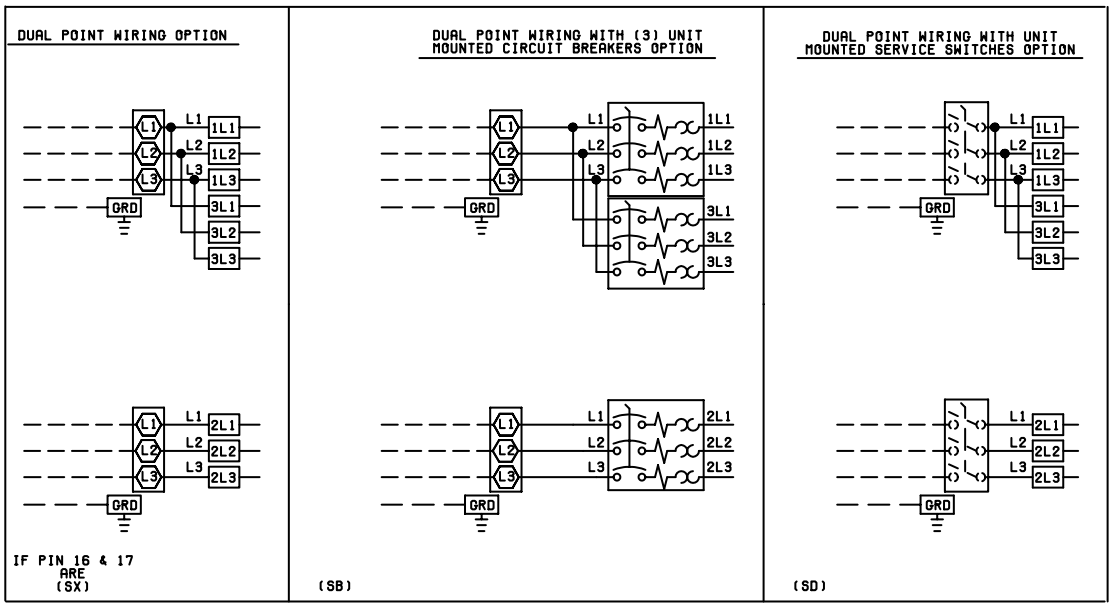
Chiller		FIELD SUPPLIED WIRING					
		Field Provided Power Supply Model				Factory Provided (Lugs) Wire Range[7]	
YCAS	Volts	MRA[1] (MCA)	Min NF Disc SW[2]	Over-Current Protection[13] Min.[3, 5]	Over-Current Protection[13] Max.[4, 6]	Terminal Block (Lugs) Wire Range	NF Disc. Switch (Lugs) Wire Range
0693	380	551	600	600	600	(2)2/0-500	(2)250-500
0773	380	625	800	700	700	(2)2/0-500	(3)2/0-400
0783	380	575	600	600	600	(2)2/0-500	(2)250-500
0873	380	685	800	700	700	(3)1/0-300	(3)2/0-400
0953	380	741	800	800	800	(3)1/0-300	(3)2/0-400
1063	380	826	1000	800	800	(3)2/0-500	(4)4/0-500
1093	380	872	1000	1000	1000	(3)2/0-500	(4)4/0-500
1163	380	914	1000	1000	1000	(3)2/0-500	(4)4/0-500
1263	380	989	1000	1000	1000	(3)2/0-500	(4)4/0-500

See page 6 for Electrical Data footnotes.

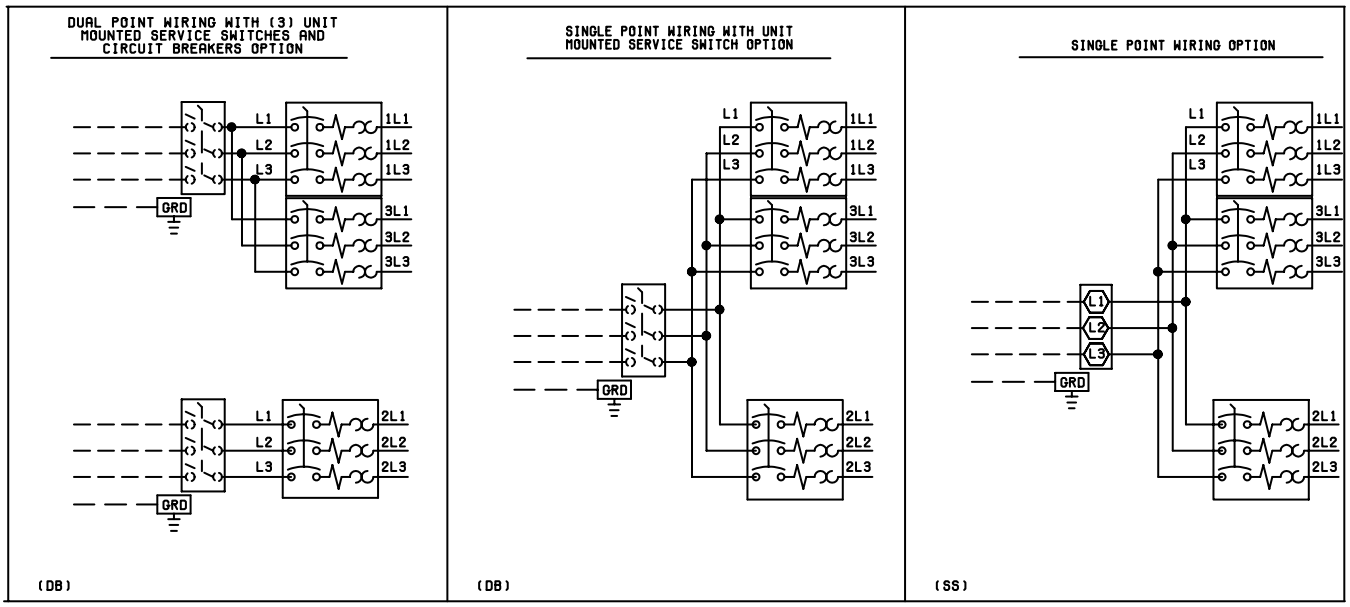
ELECTRICAL DATA (CONT'D)

ELECTRICAL SYSTEM #1 FIELD SUPPLIED WIRING									ELECTRICAL SYSTEM #2 FIELD SUPPLIED WIRING								
Compressor #1 Data			Compressor #3 Data			Fan Data[11, 12]			Compressor #2 Data			Compressor #4 Data			Fan Data[11, 12]		
RLA	Y-Δ LRA	X-LRA	RLA	Y-Δ LRA	X-LRA	Qty	FLA (ea)	LRA (ea)	RLA	Y-Δ LRA	X-LRA	RLA	Y-Δ LRA	X-LRA	Qty	FLA (ea)	LRA (ea)
140	283	907	124	283	907	7	4.4	17.1	140	283	907	—	—	—	3	4.4	17.1
140	283	907	183	283	907	7	4.4	17.1	140	283	907	—	—	—	3	4.4	17.1
124	283	907	168	283	907	8	4.4	17.1	124	283	907	—	—	—	4	4.4	17.1
168	283	907	168	283	907	8	4.4	17.1	168	283	907	—	—	—	4	4.4	17.1
183	283	907	183	283	907	8	4.4	17.1	183	283	907	—	—	—	4	4.4	17.1
161	283	907	140	283	907	8	4.4	17.1	161	283	907	140	283	907	8	4.4	17.1
183	283	907	140	283	907	7	4.4	17.1	183	283	907	140	283	907	7	4.4	17.1
168	283	907	168	283	907	8	4.4	17.1	168	283	907	168	283	907	8	4.4	17.1
183	283	907	183	283	907	8	4.4	17.1	183	283	907	183	283	907	8	4.4	17.1

ELEMENTARY WIRING DIAGRAM
YCAS0693 - YCAS0953 (3 COMPRESSOR)



035-15937-103
Rev - A



LD09350

FIG. 4 – WIRING DIAGRAM – DXST DIRECT DRIVE

ELEMENTARY WIRING DIAGRAM
YCAS0693 - YCAS0953 (3 COMPRESSOR)
ACROSS-THE-LINE START

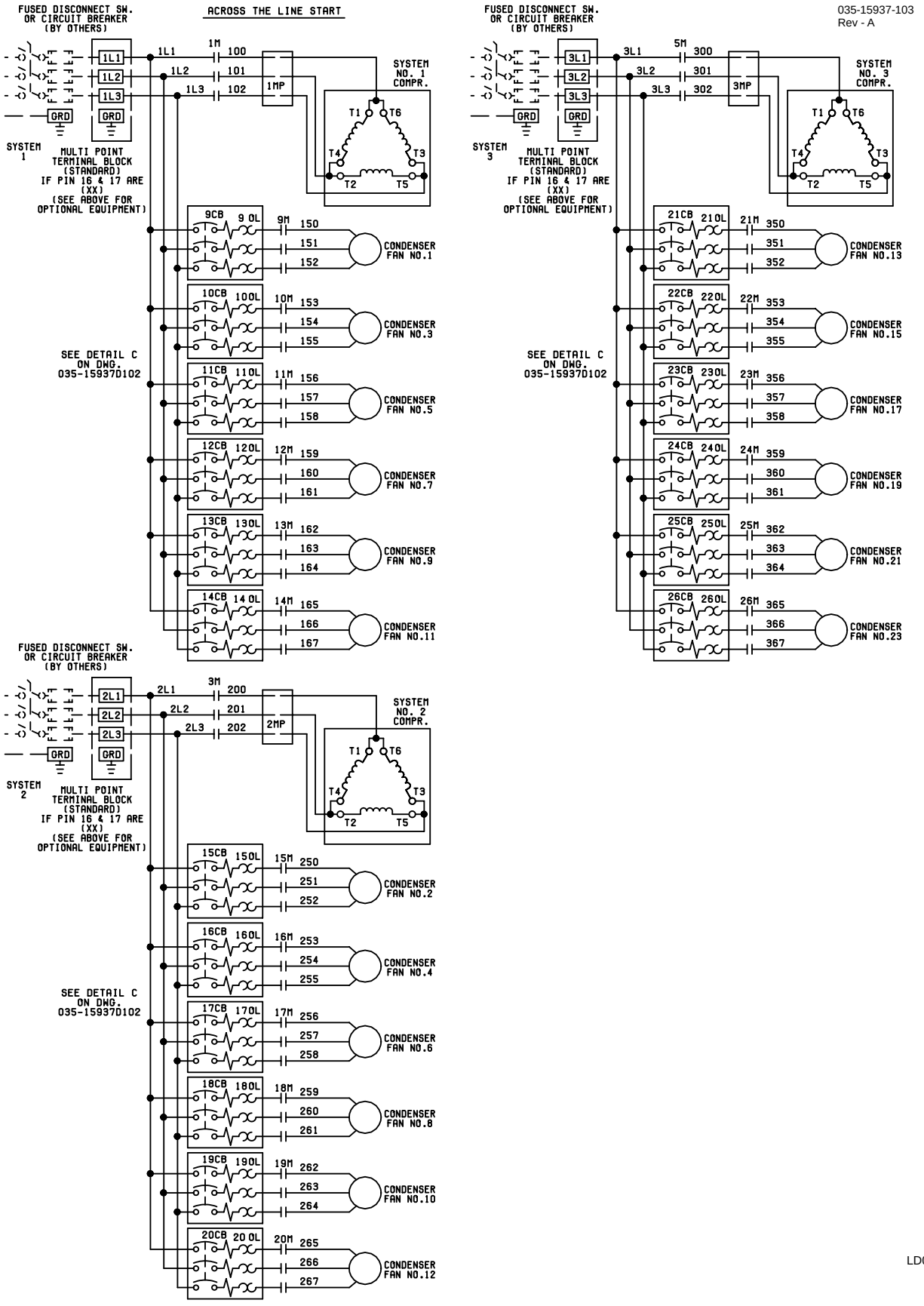


FIG. 5 – WIRING DIAGRAM – ACROSS-THE-LINE START

ELEMENTARY WIRING DIAGRAM
YCAS0693 - YCAS0953 (3 COMPRESSOR)
WYE DELTA START

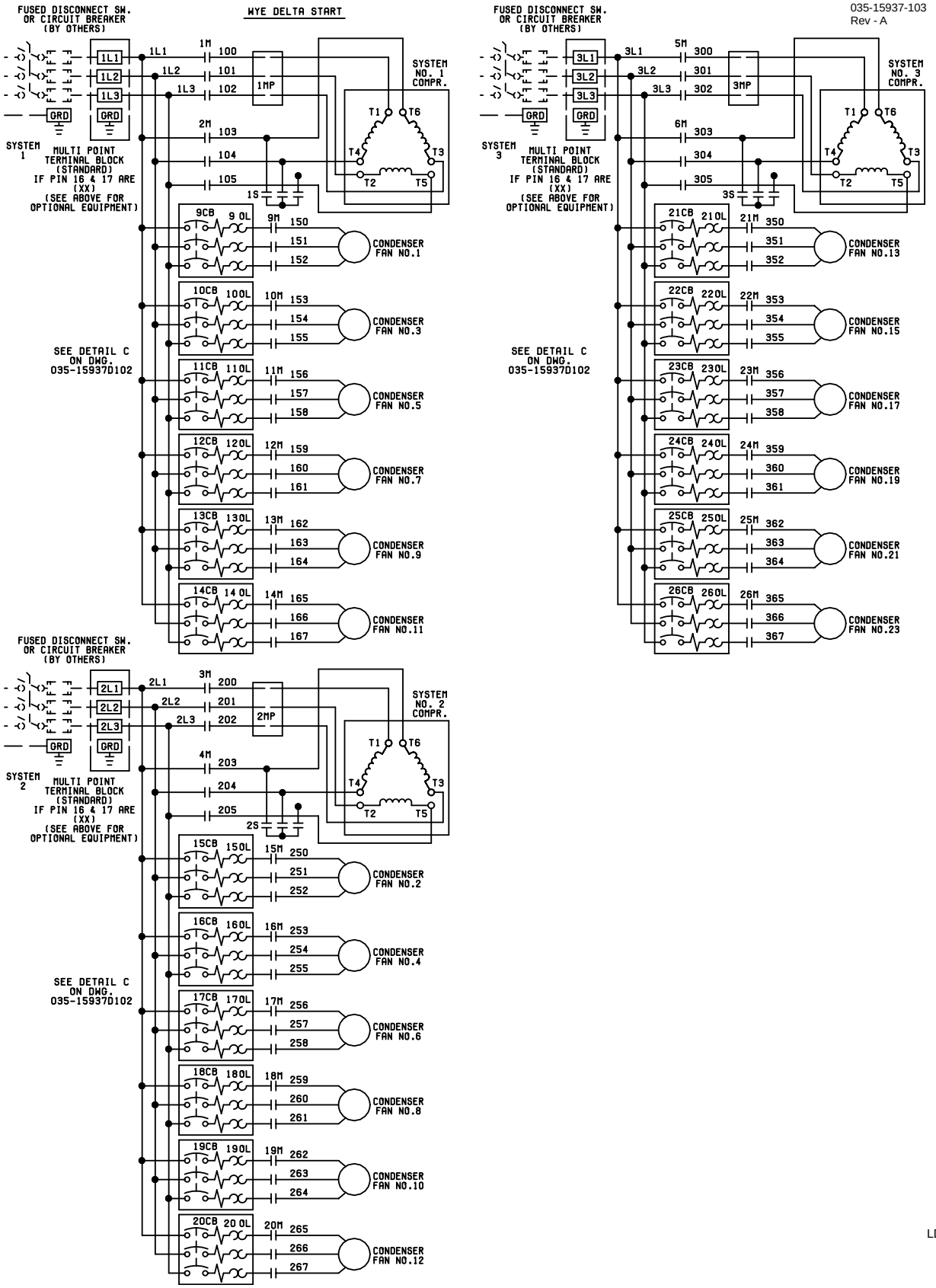


FIG. 6 – WIRING DIAGRAM – WYE DELTA START

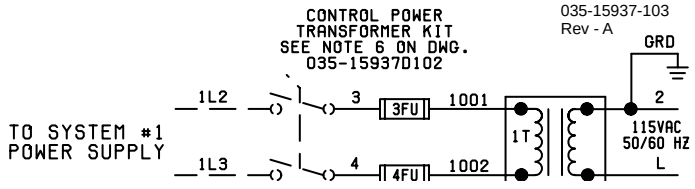
ELEMENTARY WIRING DIAGRAM (YCAS0693 - YCAS0953)
ACROSS-THE-LINE START
AND
WYE-DELTA START

NOTES:

1. Field wiring to be in accordance with the current edition of the National Electrical Code as well as all other applicable codes and specifications.
2. Contacts must be suitable for switching 24VDC, (Gold contacts recommend). Wiring shall not be run in the same conduit with any line voltage wiring.
3. To cycle the unit on and off automatically with contact shown, install a cycling device in series with the flow switch (FLSW). See note 2 for contact rating and wiring specifications.
4. To stop unit (Emergency Stop) with contacts other than those shown, install the stop contact between terminals 5 and 1. If a stop device is not installed, a jumper must be connected between terminals 5 and 1. Device must have a minimum contact rating of 100A at 115 volts A.C.
5. Alarm contacts are for annunciating alarm/unit malfunction. Contacts are rated at 115V, 100VA, load only, and must be suppressed at load by user.
6. See Installation, Operation and Maintenance Manual when optional equipment is used.
7. Jumper must be installed for three compressor operation.

LEGEND

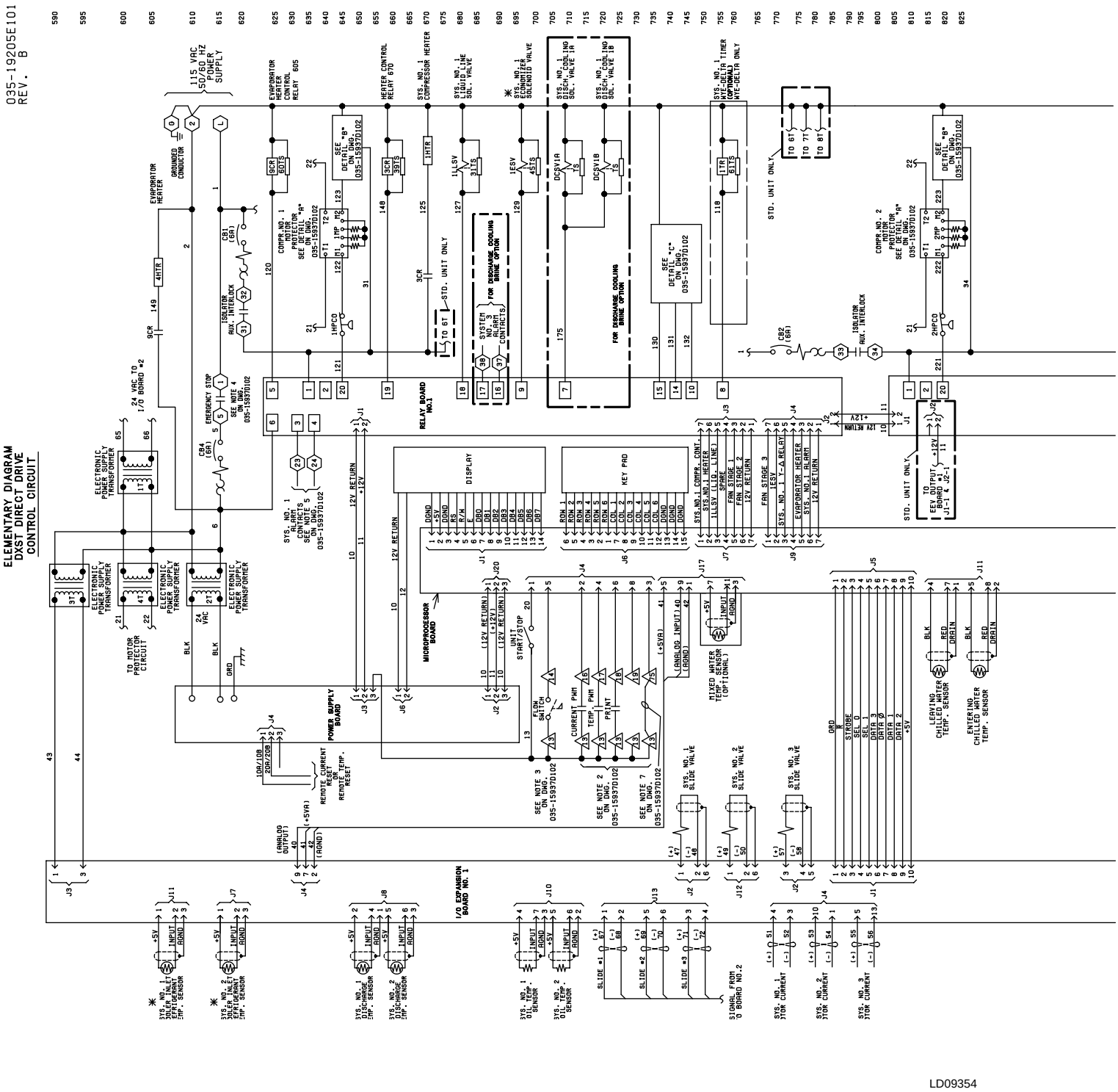
T S	Transient Voltage Suppression
⬡	Terminal Block for Customer Connections
△	Terminal Block for Customer Low Voltage (Class 2) Connections. See Note 2
▭	Terminal Block for YORK Connections Only
———	Wiring and Components by YORK
——– – ——–	Optional Equipment
—— ——	Wiring and/or Components by Others



LD09351

FIG. 7 – CONTROL POWER TRANSFORMER KIT

ELEMENTARY WIRING DIAGRAM
YCAS0693 - YCAS0953 (3 COMPRESSOR)



LD09354

FIG. 8 – ELEMENTARY WIRING DIAGRAM

CAUTION:

No Controls (relays, etc.) should be mounted in the Smart Panel enclosure or connected to power supplies in the control panel. Additionally, control wiring not connected to the Smart Panel should not be run through the cabinet. This could result in nuisance faults.

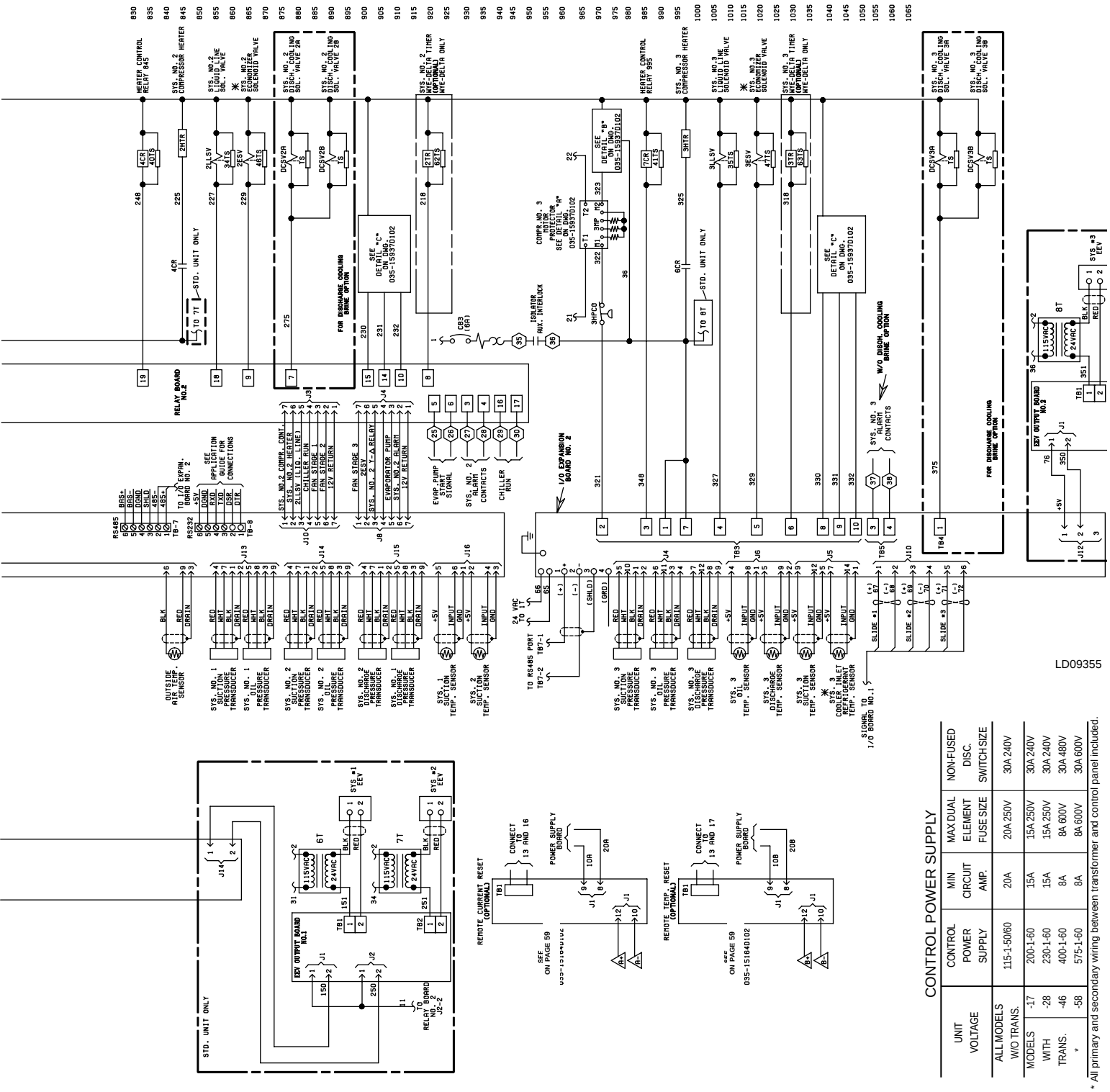
CAUTION:

Any inductive devices (relays) wired in series with the flow switch for start/stop, into the Alarm circuitry, or pilot relays for pump starters wired through motor contactor auxiliary contacts must be suppressed with YORK P/N 031-00808-000 suppressor across the relay/contactor coil.

Any contacts connected to flow switch inputs or BAS inputs on terminals 13 - 19 or TB3, or any other terminals, must be suppressed with a YORK P/N 031-00808-000 suppressor across the relay/contactor coil.

CAUTION:

Control wiring connected to the control panel should never be run in the same conduit with power wiring.



CONNECTION WIRING DIAGRAM (YCAS0693 - YCAS0953) (3 COMPRESSOR)

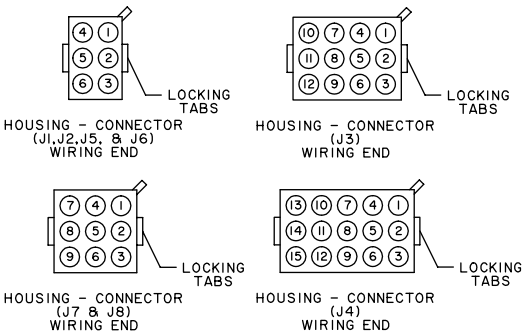
STANDARD AND REMOTE EVAP. UNITS

J1, J2, J3, J3A, J4, J4A, J5, J6, J7, J8, P7 & P8 —— POWER PANEL

P1, P2, P3, P3A, P4, P4A, P5, & P6 —— ELECTRONIC (MICRO) PANEL

NOTE: 1. WIRE NUMBERS IDENTIFIED IN (PARENTHESIS) INDICATE THE ACTUAL HARNESS CODE STAMPED ON THE WIRE.

035-19205E104
REV. A



1CR THRU 4CR, 9CR/ -K1 THRU -K4, -K9 -CONTROL RELAYS
CB1, CB2, CB3/ -QCB1,-QBC2,-QCB3 -CIRCUIT BREAKERS
9CB THRU 13CB -OVERLOAD CIRCUIT BREAKERS (SYS. #1)
15CB THRU 19CB -OVERLOAD CIRCUIT BREAKERS (SYS. #2)
9 OL THRU 13 OL -MOTOR OVERLOADS (SYS. #1)
15 OL THRU 19 OL -MOTOR OVERLOADS (SYS. #2)
-QFCB9 THRU -QFCB13 -MOTOR OVERLOADS W/OVERLOAD CIRCUIT BREAKERS (SYS. #1)
-QFCB15 THRU -QFCB19 -MOTOR OVERLOADS W/OVERLOAD CIRCUIT BREAKERS (SYS. #2)

LEGEND

1M, 3M/ 1-KLC OR 1-KALC, 2-KLC OR 2-KALC -COMPRESSOR CONTACTORS
2M, 4M/ 1-KDC, 2-KDC -COMPRESSOR CONTACTORS
1S, 2S/ 1-KSC, 2-KSC -COMPRESSOR CONTACTORS
9M THRU 13M/ -KF9 THRU -KF13 -CONDENSER FAN CONTACTORS (SYS. #1)
15M THRU 19M/ -KF15 THRU -KF19 -CONDENSER FAN CONTACTORS (SYS. #2)
1MP/1-FMP -MOTOR PROTECTOR (SYS. #1)
2MP/2-FMP -MOTOR PROTECTOR (SYS. #2)

2T, 3T, 4T/ -T2, -T3, -T4 -MICRO PANEL TRANSFORMERS
1TR, 2TR/ -K10, -K11 -TIMER RELAYS
TS/-ES -TRANSIENT SUPPRESSORS
PTB1, PTB2/ 1-XTB, 2-XTB -POWER TERMINAL BLOCK
MCB1, MCB2/ 1-QCB, 2-QCB -MOTOR CIRCUIT BREAKER
DSW1, DSW2/ 1-QSD, 2-QSD -DISCONNECT SERVICE SWITCH
——— -WIRING BY YORK
– — — – -WIRING BY OTHERS
▬▬▬ -OPTIONAL WIRING AND/OR COMPONENTS

PLUG NO.	WIRE NO.	PLUG PIN NO.
P1	21	1
	2	2
	22	3
	31	4
	32	5

PLUG NO.	WIRE NO.	PLUG PIN NO.
J1	21	1
	2	2
	22	3
	3Y	4
	3X	5

PLUG NO.	WIRE NO.	PLUG PIN NO.
P3A	125	1
	122	2

PLUG NO.	WIRE NO.	PLUG PIN NO.
J3A	25	1
	777	2

PLUG NO.	WIRE NO.	PLUG PIN NO.
P2	21	1
	2	2
	22	3
	33	4
	34	5

PLUG NO.	WIRE NO.	PLUG PIN NO.
J2	21	1
	2	2
	22	3
	3Y	4
	3X	5

PLUG NO.	WIRE NO.	PLUG PIN NO.
P4A	225	1
	222	2

PLUG NO.	WIRE NO.	PLUG PIN NO.
J4A	25	1
	777	2

PLUG NO.	WIRE NO.	PLUG PIN NO.
P3	2	1
	GRD	2
	125	4
	129	5
	127	6
	175	7
	121	11
	122	12

PLUG NO.	WIRE NO.	PLUG PIN NO.
J3	2	1
	GRD	2
	125A	4
	129A	5
	127A	6
	175A	7
	121A	11
	122	12

PLUG NO.	WIRE NO.	PLUG PIN NO.
P4	2	1
	GRD	2
	225	3
	227	4
	229	5
	275	7
	221	11
	222	12

PLUG NO.	WIRE NO.	PLUG PIN NO.
J4	2	1
	GRD	2
	225A	3
	227A	4
	229A	5
	275A	7
	221A	11
	222	12

PLUG NO.	WIRE NO.	PLUG PIN NO.
P5	130	1
	131	2
	132	3
	148	4
	118	6

PLUG NO.	WIRE NO.	PLUG PIN NO.
J5	30	1
	31	2
	32	3
	48	4
	18	6

PLUG NO.	WIRE NO.	PLUG PIN NO.
P6	230	1
	231	2
	232	3
	248	4
	218	6

PLUG NO.	WIRE NO.	PLUG PIN NO.
J6	30	1
	31	2
	32	3
	48	4
	18	6

PLUG NO.	WIRE NO.	PLUG PIN NO.
P7	125	1
	2	2
	123	3
	140	4
	141	5
	142	6
	32	7
	TRX	8
	44	9

PLUG NO.	WIRE NO.	PLUG PIN NO.
J7	25	1
	2	2
	23	3
	40	4
	41	5
	42	6
	3X	7
	TRX	8
	44	9

PLUG NO.	WIRE NO.	PLUG PIN NO.
P8	225	1
	2	2
	223	3
	240	4
	241	5
	242	6
	34	7
	TRX	8
	44	9

PLUG NO.	WIRE NO.	PLUG PIN NO.
J8	25	1
	2	2
	23	3
	40	4
	41	5
	42	6
	3X	7
	TRX	8
	44	9

LD09362

FIG. 9 – CONNECTION DIAGRAM 3 COMPRESSOR

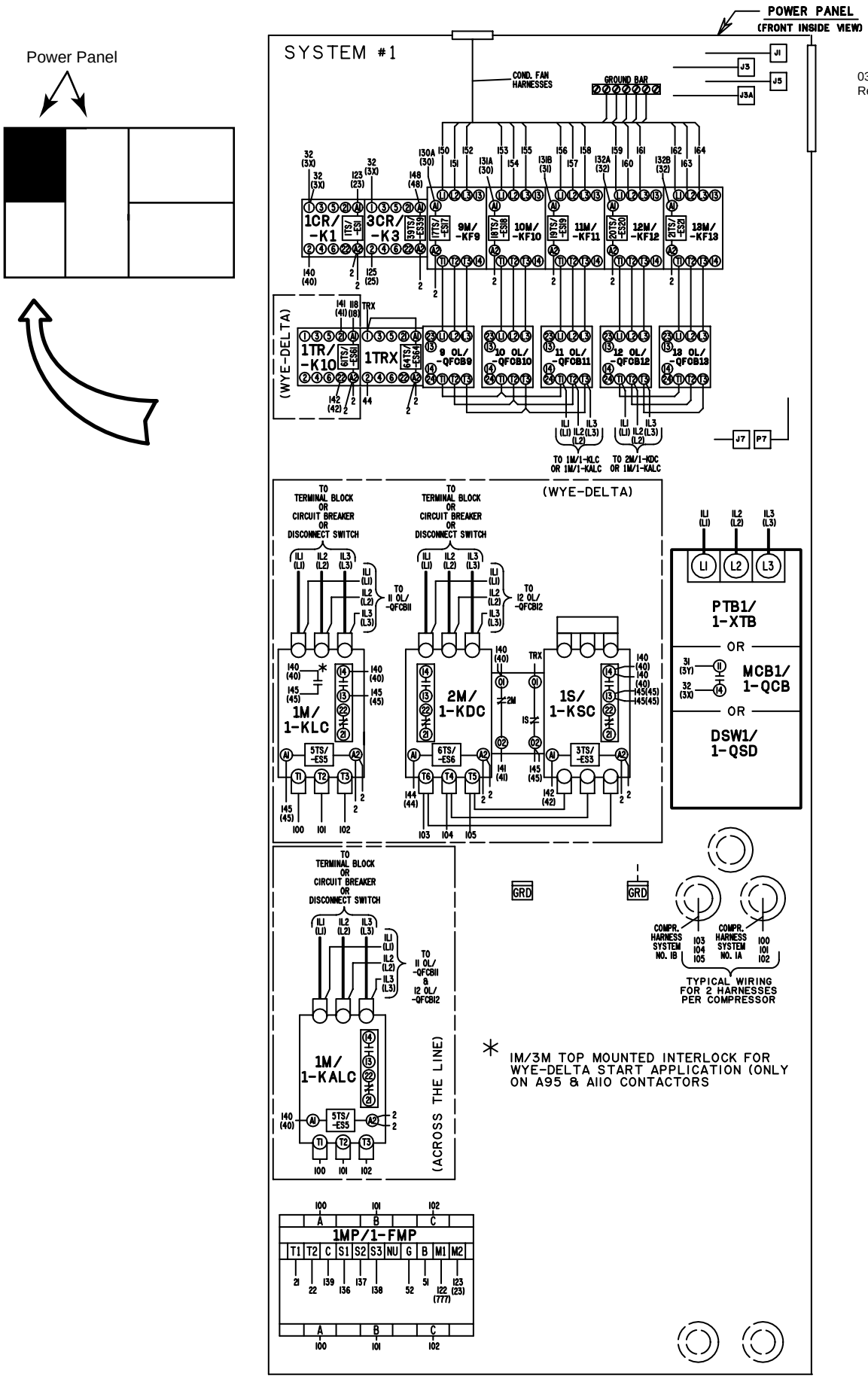


FIG. 10 – CONNECTION DIAGRAM 3 COMPRESSOR

CONNECTION WIRING DIAGRAM (CONT'D)

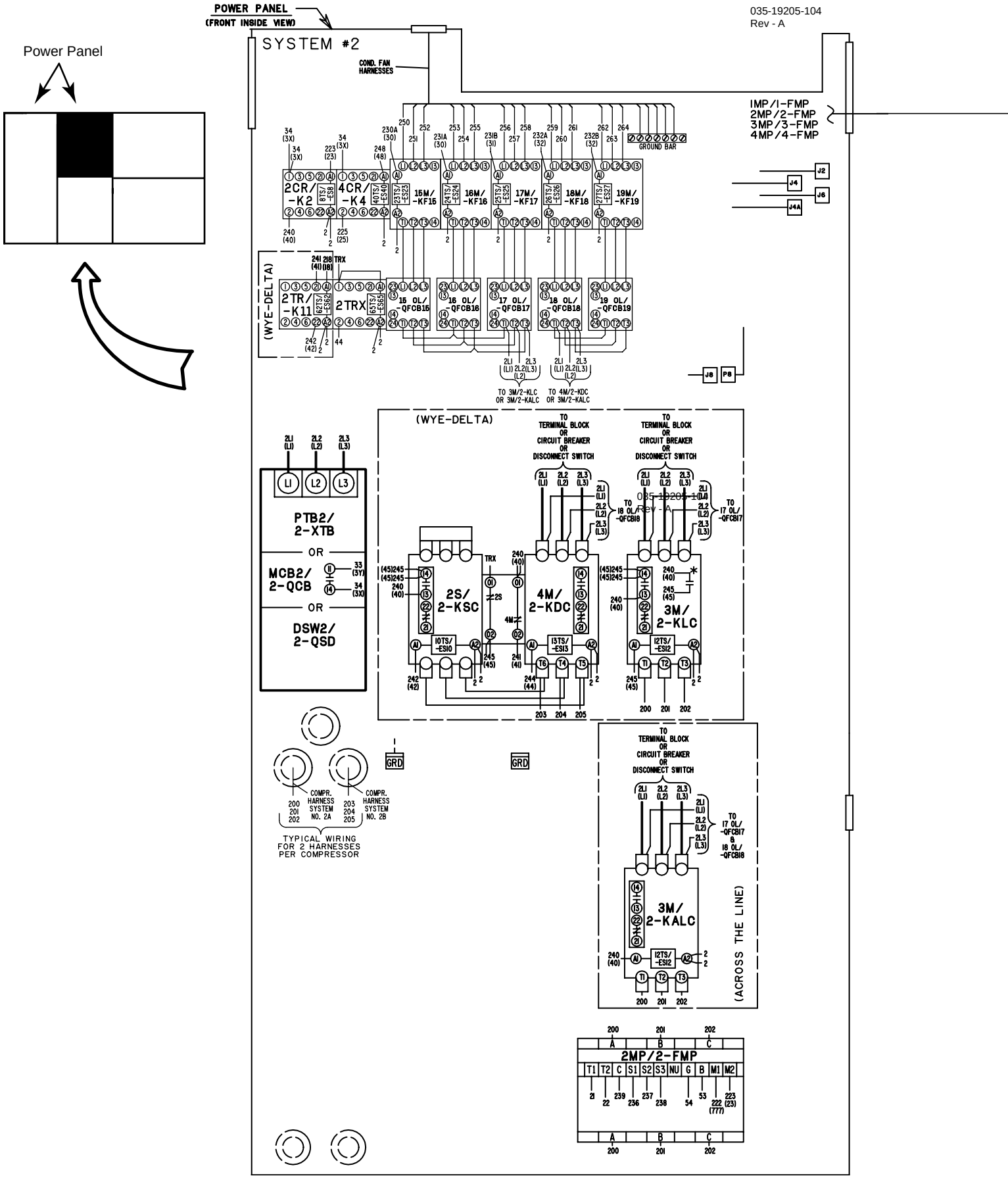
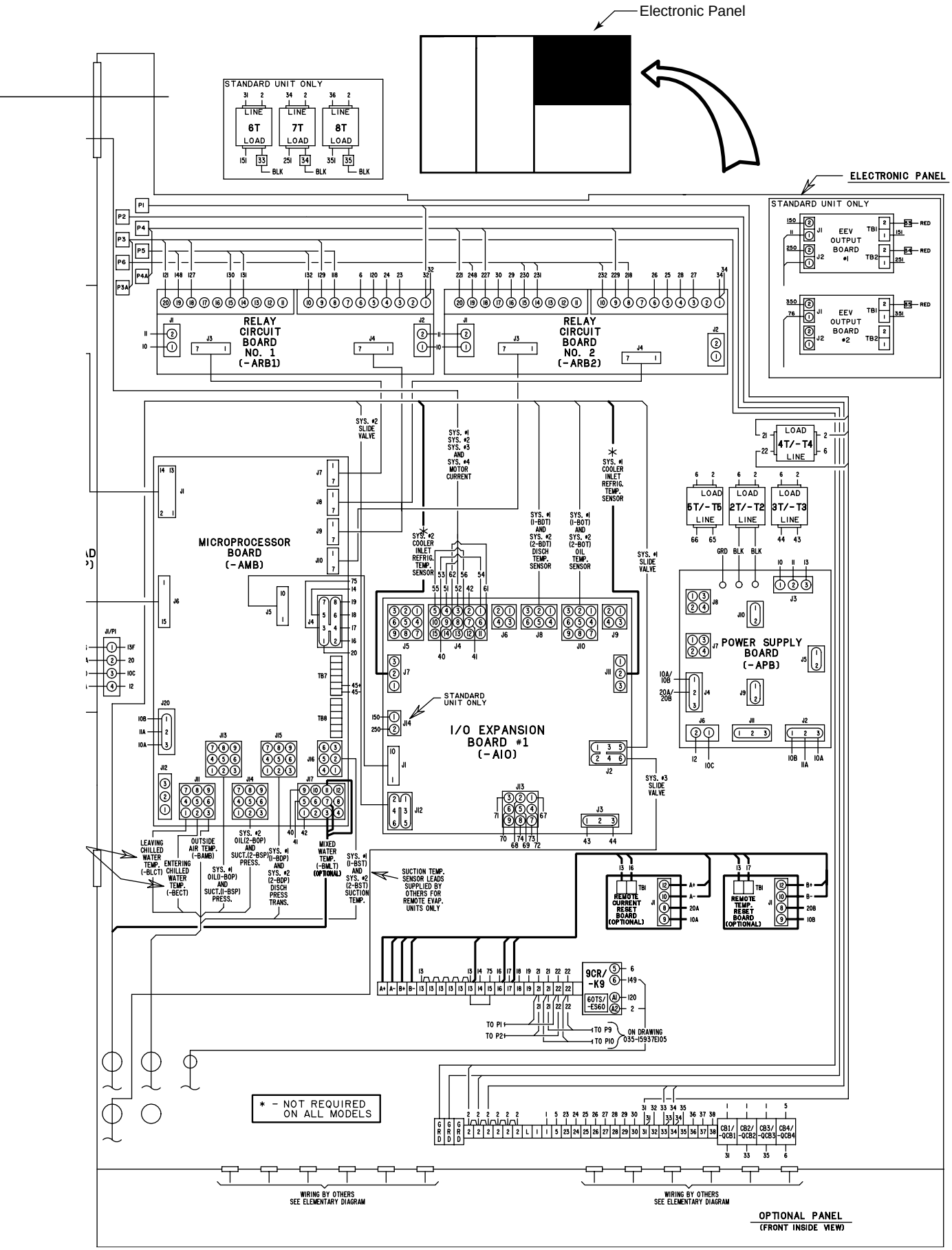


FIG. 11 – CONNECTION DIAGRAM 3 COMPRESSOR

CONNECTION WIRING DIAGRAM (CONT'D)



LD09359

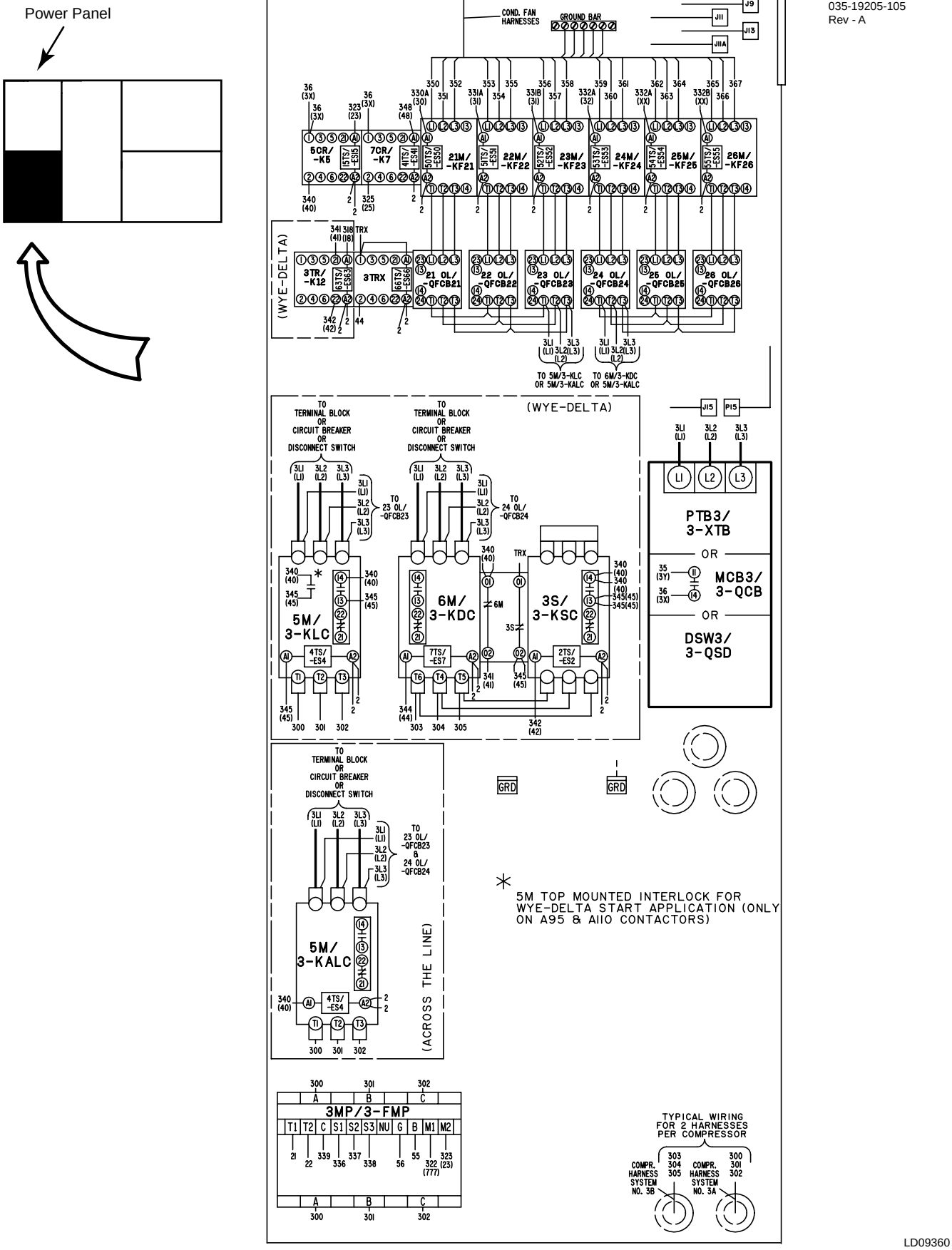
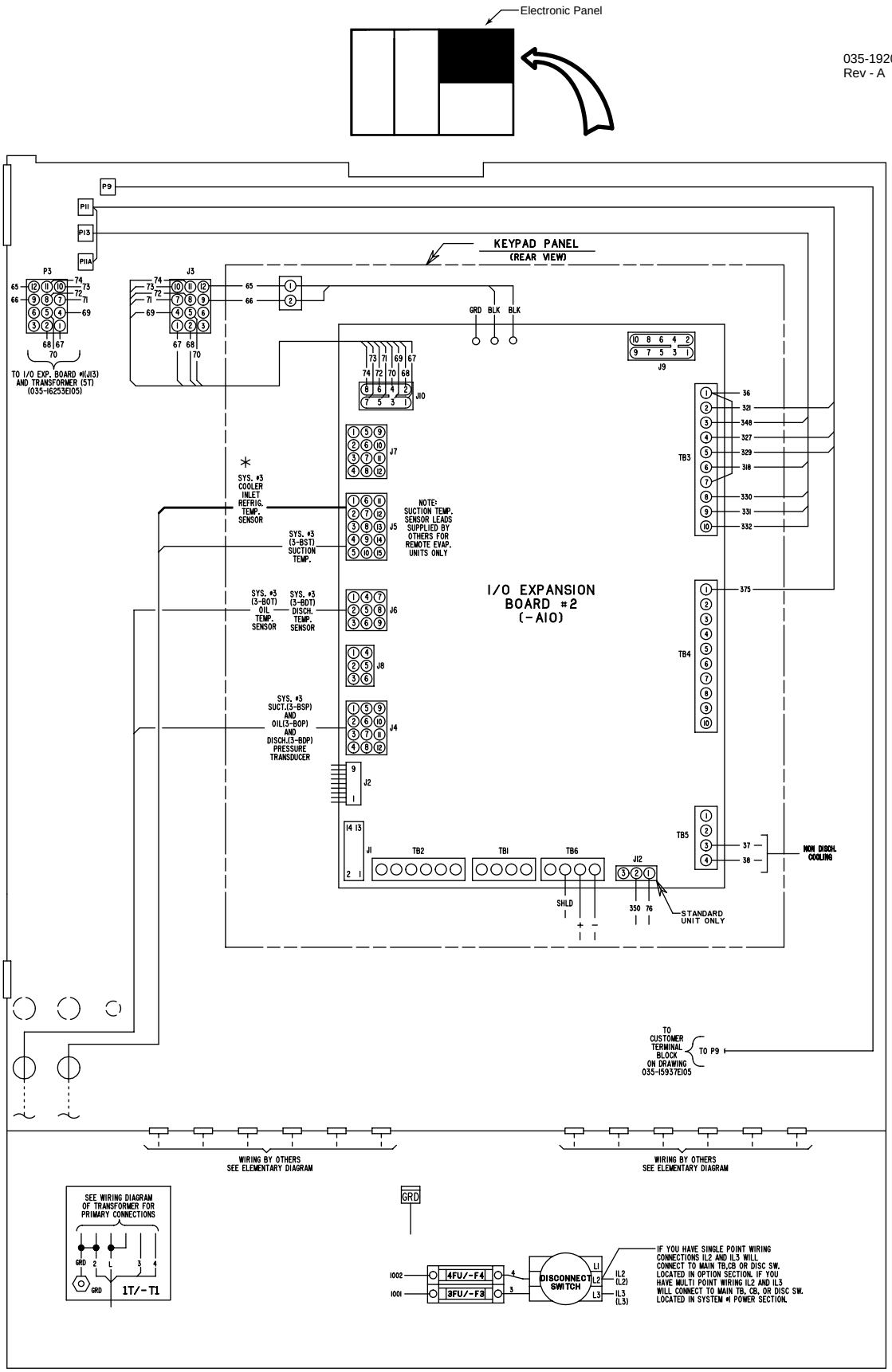


FIG. 12 – CONNECTION DIAGRAM 3 COMPRESSOR

CONNECTION WIRING DIAGRAM (CONT'D)

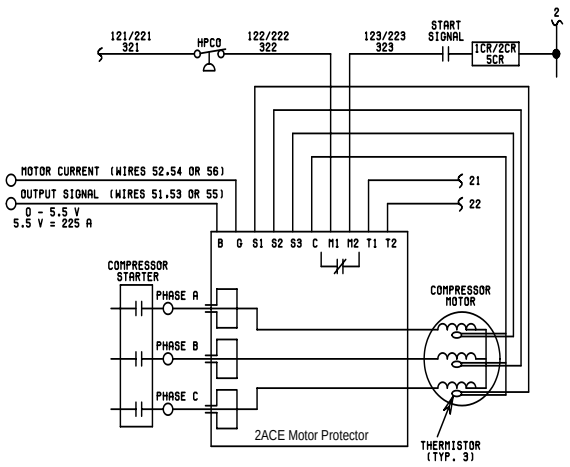


LD09361

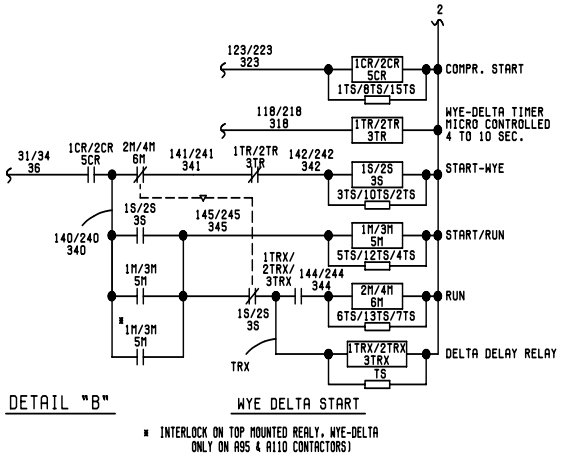
FIG. 13 – CONNECTION DIAGRAM 3 COMPRESSOR

ELEMENTARY DIAGRAM
DXST DIRECT DRIVE
CONTROL CIRCUIT

035-15937-102
Rev - D



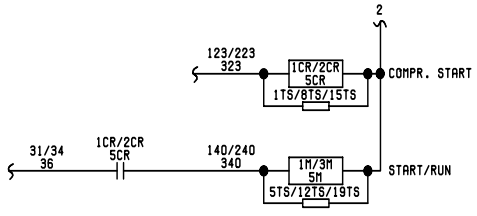
DETAIL "A"



DETAIL "B"

WYE DELTA START

∗ INTERLOCK ON TOP MOUNTED REALY, WYE-DELTA ONLY ON A95 & A110 CONTACTORS)



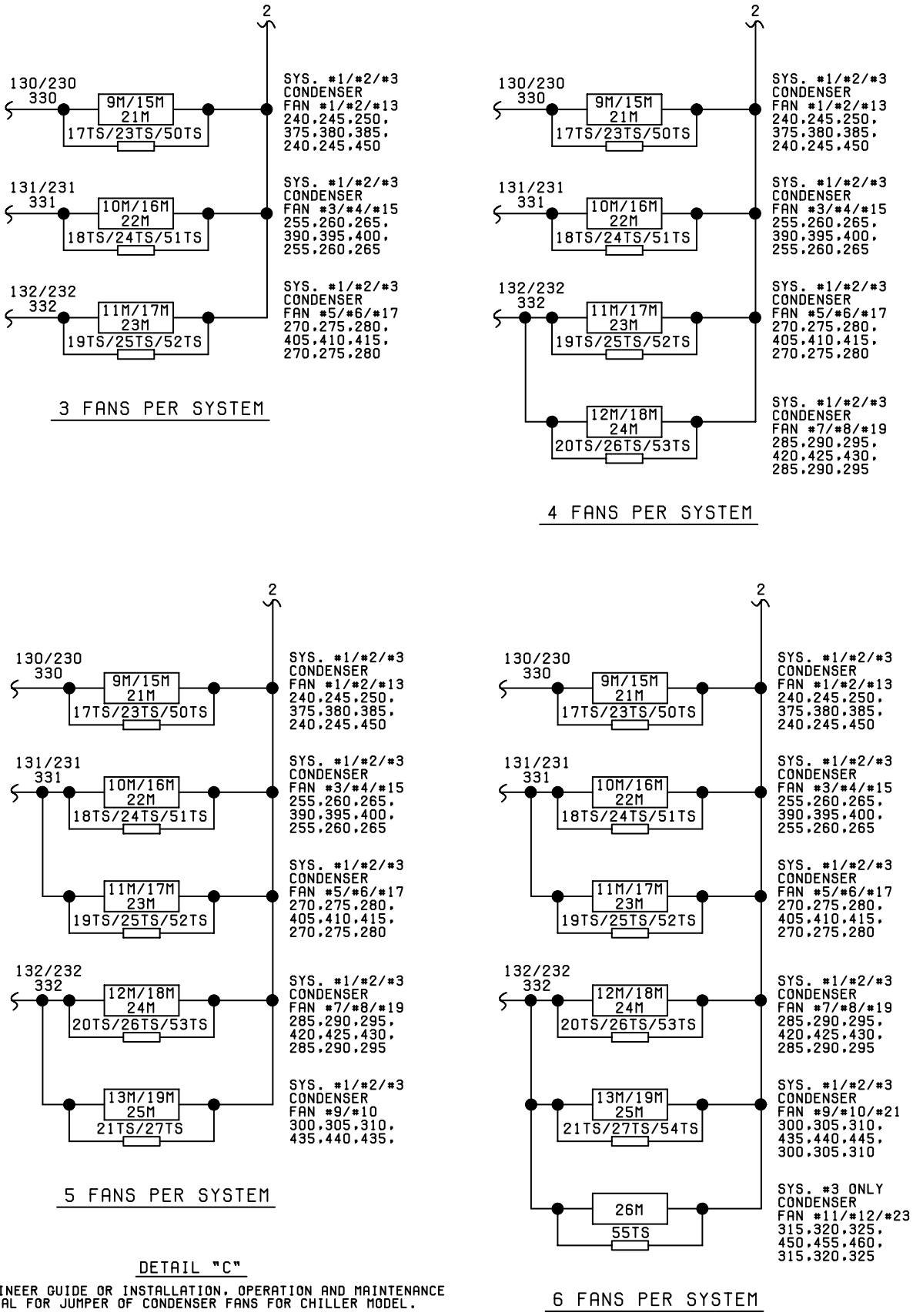
ACROSS THE LINE START

LD09363

FIG. 14 – ELEMENTARY DIAGRAM 3 COMPRESSOR DXST DIRECT DRIVE CONTROL CIRCUIT

ELEMENTARY WIRING DIAGRAM
(YCAS0693 - YCAS0953) (3 COMPRESSOR)

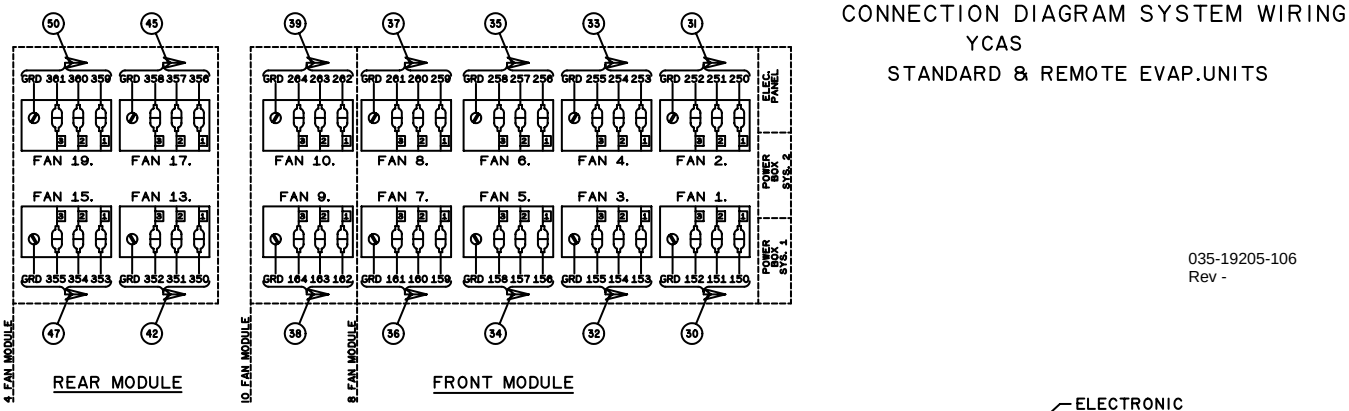
035-15937-102
Rev - D

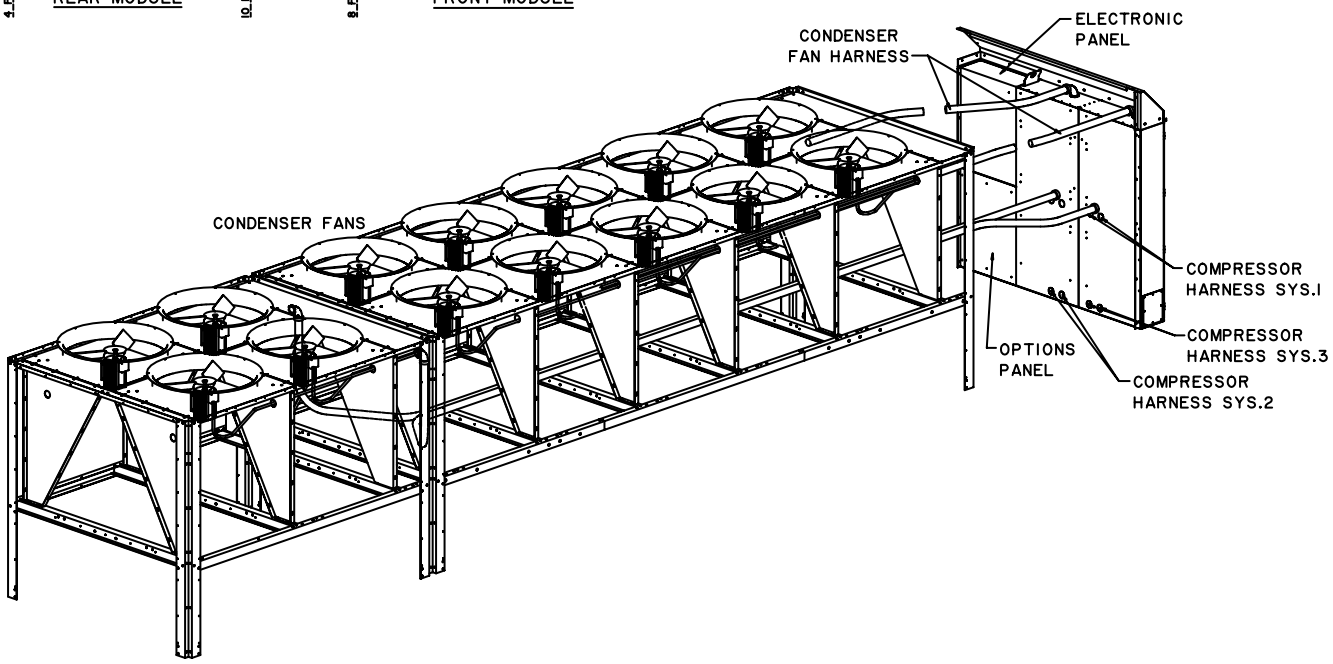


LD09364

FIG. 15 – ELEMENTARY DIAGRAM DXST DIRECT DRIVE - 3 COMPRESSOR

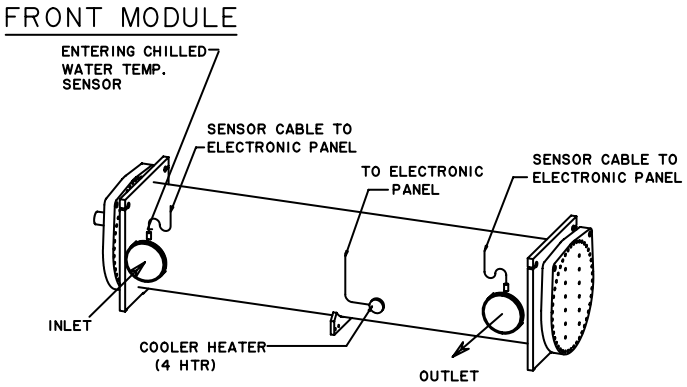
CONNECTION DIAGRAM SYSTEM WIRING (YCAS0693 - YCAS0953) (3 COMPRESSOR)





LEGEND

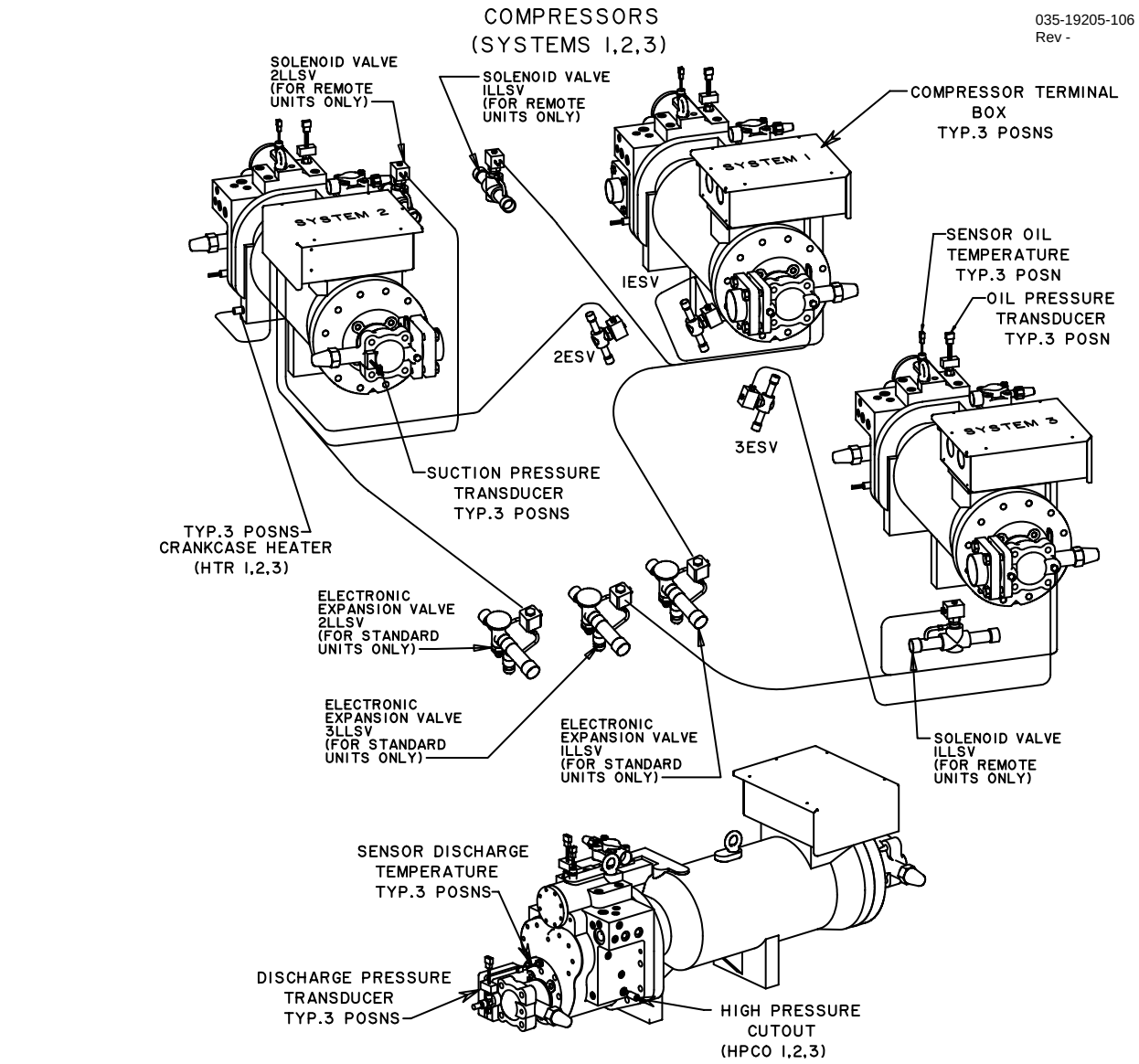
1 HPCO	SYS. NO.1 HIGH PRESS. CUTOUT
2 HPCO	SYS. NO.2 HIGH PRESS. CUTOUT
3 HPCO	SYS. NO.3 HIGH PRESS. CUTOUT
1 HTR	SYS.NO.1 COMPR. CRANKCASE HEATER
2 HTR	SYS.NO.2 COMPR. CRANKCASE HEATER
3 HTR	SYS.NO.3 COMPR. CRANKCASE HEATER
4 HTR	COOLER HEATER
1 LLSV	SYS.NO.1 LIQUID LINE SOLENIOD VALVE (UNIT IDENT)
2 LLSV	SYS.NO.2 LIQUID LINE SOLENIOD VALVE (UNIT IDENT)
3 LLSV	SYS.NO.3 LIQUID LINE SOLENIOD VALVE (UNIT IDENT)
1 ESV	ECONOMIZER SOLENOID VAVLE (UNIT IDENT)
2 ESV	ECONOMIZER SOLENOID VAVLE (UNIT IDENT)
3 ESV	ECONOMIZER SOLENOID VAVLE (UNIT IDENT)
TXV 1	SYS.NO.1 THERMAL EXPANSION VALVE (UNIT IDENT)
TXV 2	SYS.NO.2 THERMAL EXPANSION VALVE (UNIT IDENT)
TXV 3	SYS.NO.3 THERMAL EXPANSION VALVE (UNIT IDENT)



LD09365

FIG. 16 – CONNECTION DIAGRAM SYSTEM WIRING 3 COMPRESSOR

CONNECTION DIAGRAM SYSTEM WIRING



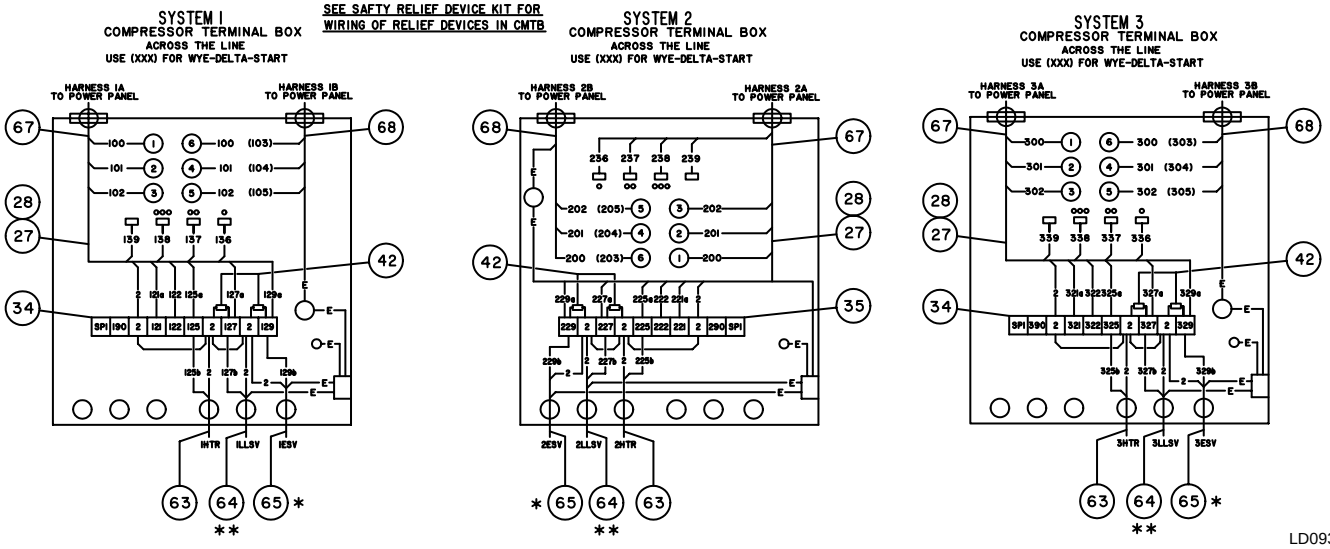
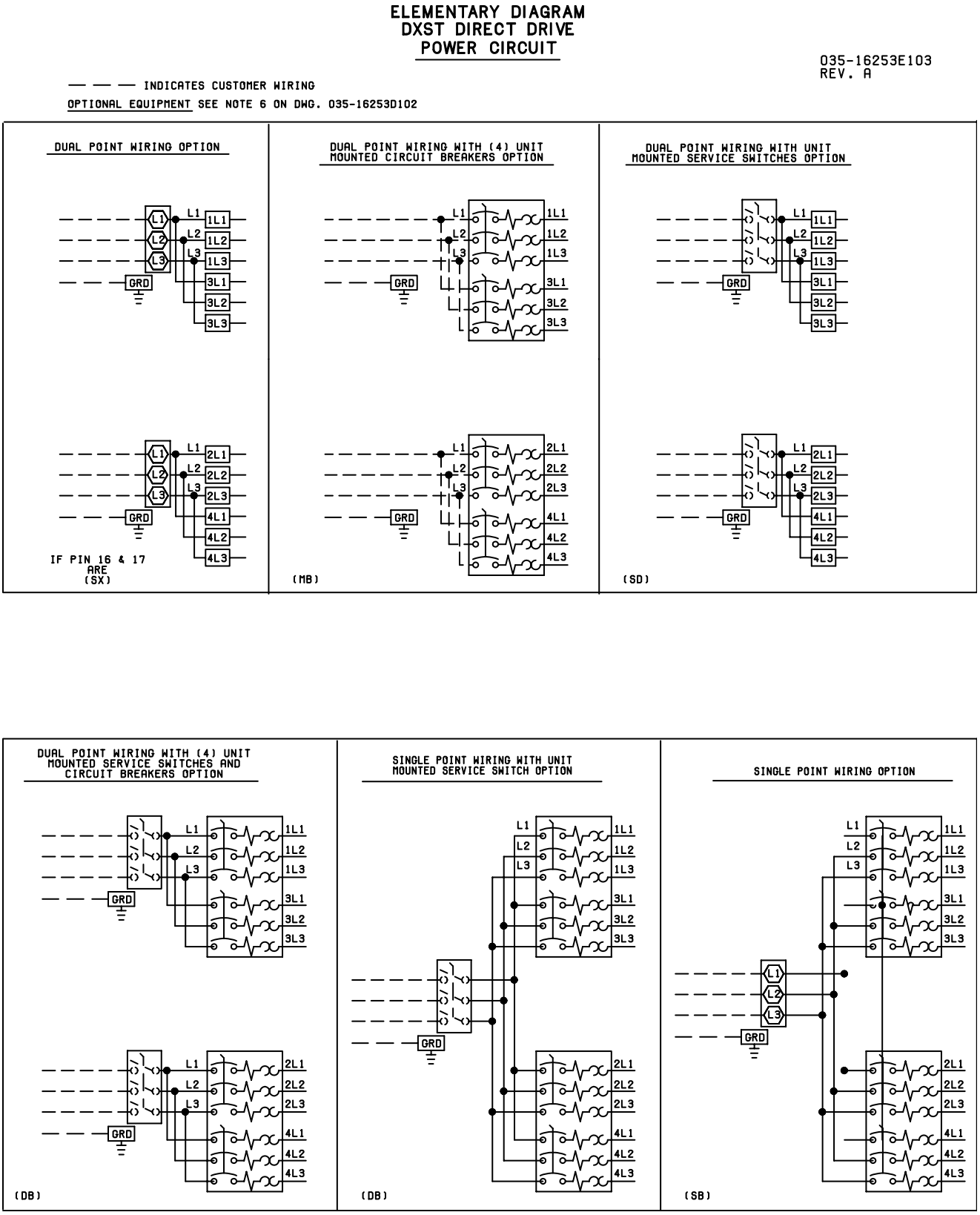


FIG. 17 – CONNECTION DIAGRAM STSTEM WIRING - 3 COMPRESSOR

ELEMENTARY WIRING DIAGRAM
YCAS1063 - YCAS1263 (4 COMPRESSOR)



LD09367

FIG. 18 – ELEMENTARY WIRING DIAGRAM - 4 COMPRESSOR

ELEMENTARY WIRING DIAGRAM
YCAS1063 - YCAS1263 (4 COMPRESSOR)

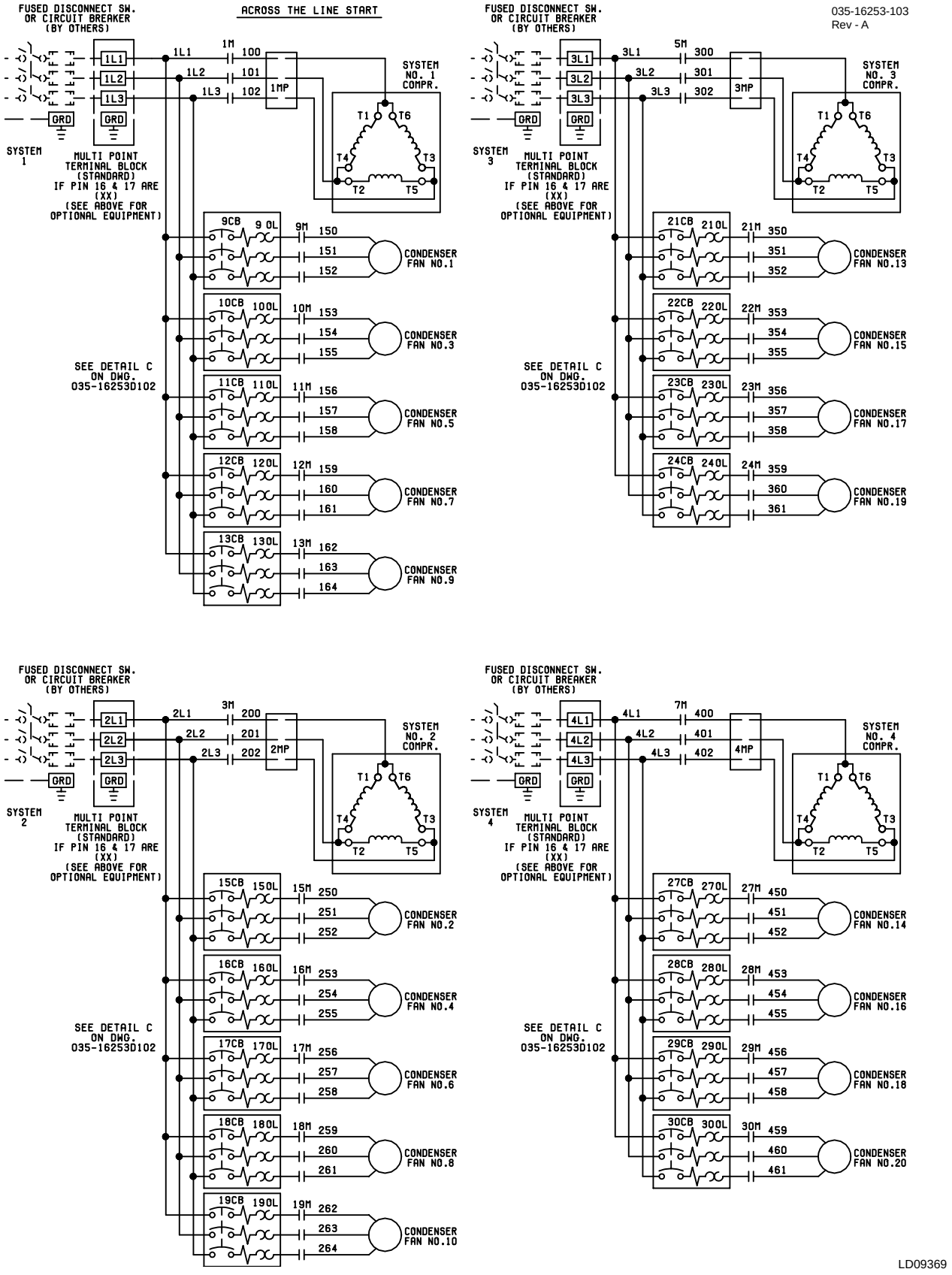


FIG. 19 – ELEMENTARY WIRING DIAGRAM - ACROSS-THE-LINE START

ELEMENTARY WIRING DIAGRAM
YCAS1063 - YCAS1263 (4 COMPRESSOR)

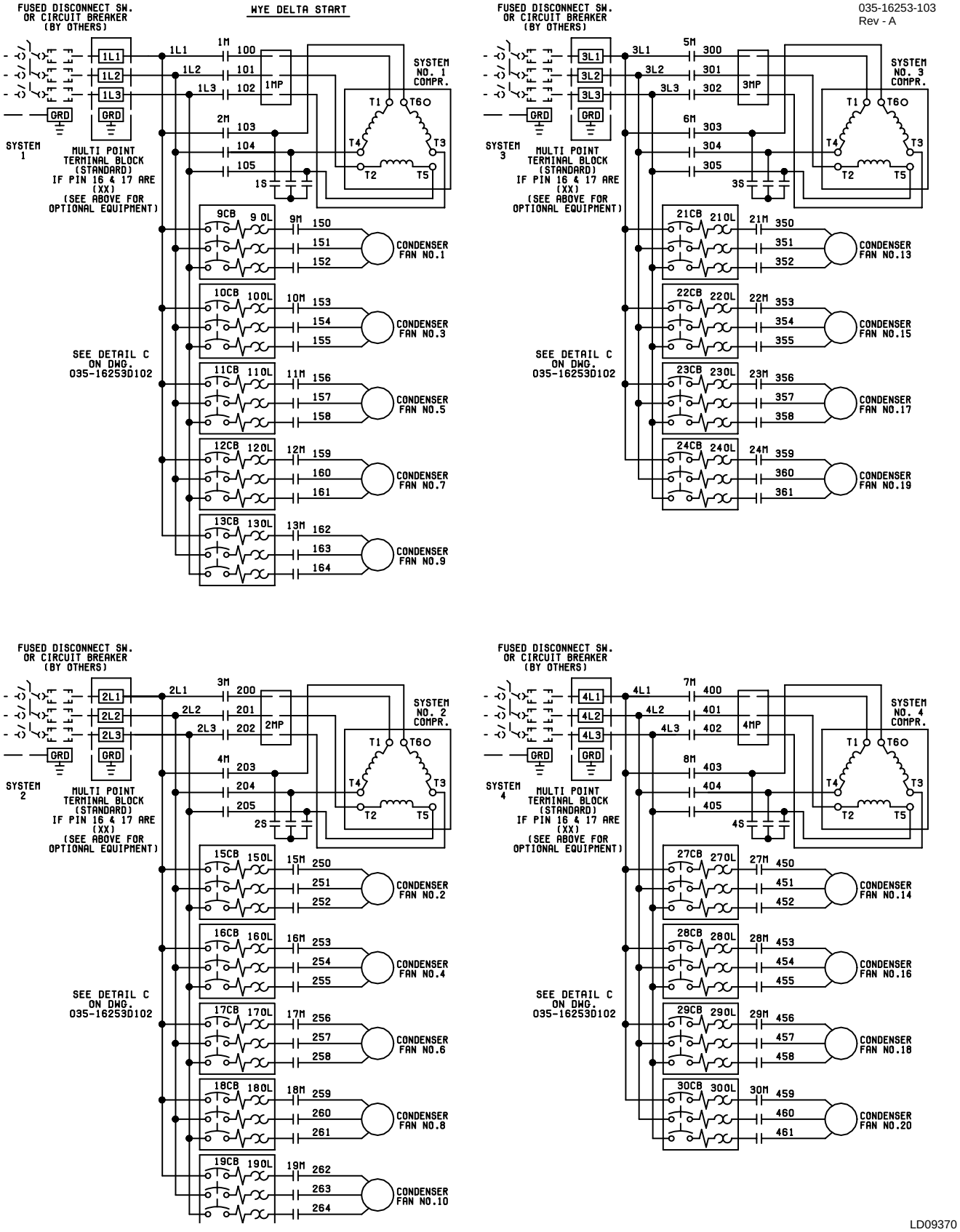


FIG. 20 – ELEMENTARY WIRING DIAGRAM - WYE DELTA

ELEMENTARY WIRING DIAGRAM (YCAS1063 - YCAS1263)
ACROSS-THE-LINE START
AND
WYE-DELTA START

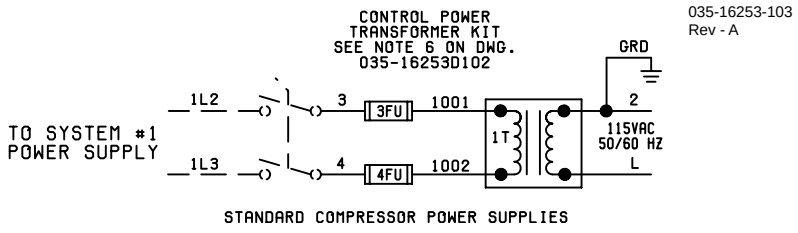
035-16253-102
REV B

NOTES:

1. Field wiring to be in accordance with the current edition of the National Electrical Code as well as all other applicable codes and specifications.
2. Contacts must be suitable for switching 24VDC, (Gold contacts recommend). Wiring shall not be run in the same conduit with any line voltage wiring.
3. To cycle the unit on and off automatically with contact shown, install a cycling device in series with the flow switch (FLSW). See note 2 for contact rating and wiring specifications.
4. To stop unit (Emergency Stop) with contacts other than those shown, install the stop contact between terminals 5 and 1. If a stop device is not installed, a jumper must be connected between terminals 5 and 1. Device must have a minimum contact rating of 100A at 115 volts A.C.
5. Alarm contacts are for annunciating alarm/unit malfunction. Contacts are rated at 115V, 100VA, load only, and must be suppressed at load by user.
6. See Installation, Operation and Maintenance Manual when optional equipment is used.

LEGEND

T S	Transient Voltage Suppression
⬡	Terminal Block for Customer Connections
△	Terminal Block for Customer Low Voltage (Class 2) Connections. See Note 2
▭	Terminal Block for YORK Connections Only
———	Wiring and Components by YORK
——– – ——–	Optional Equipment
—— ——	Wiring and/or Components by Others



LD09368

FIG. 21 – CONTROL POWER TRANSFORMER KIT

ELEMENTARY WIRING DIAGRAM
YCAS1063 - YCAS1263 (4 COMPRESSOR)

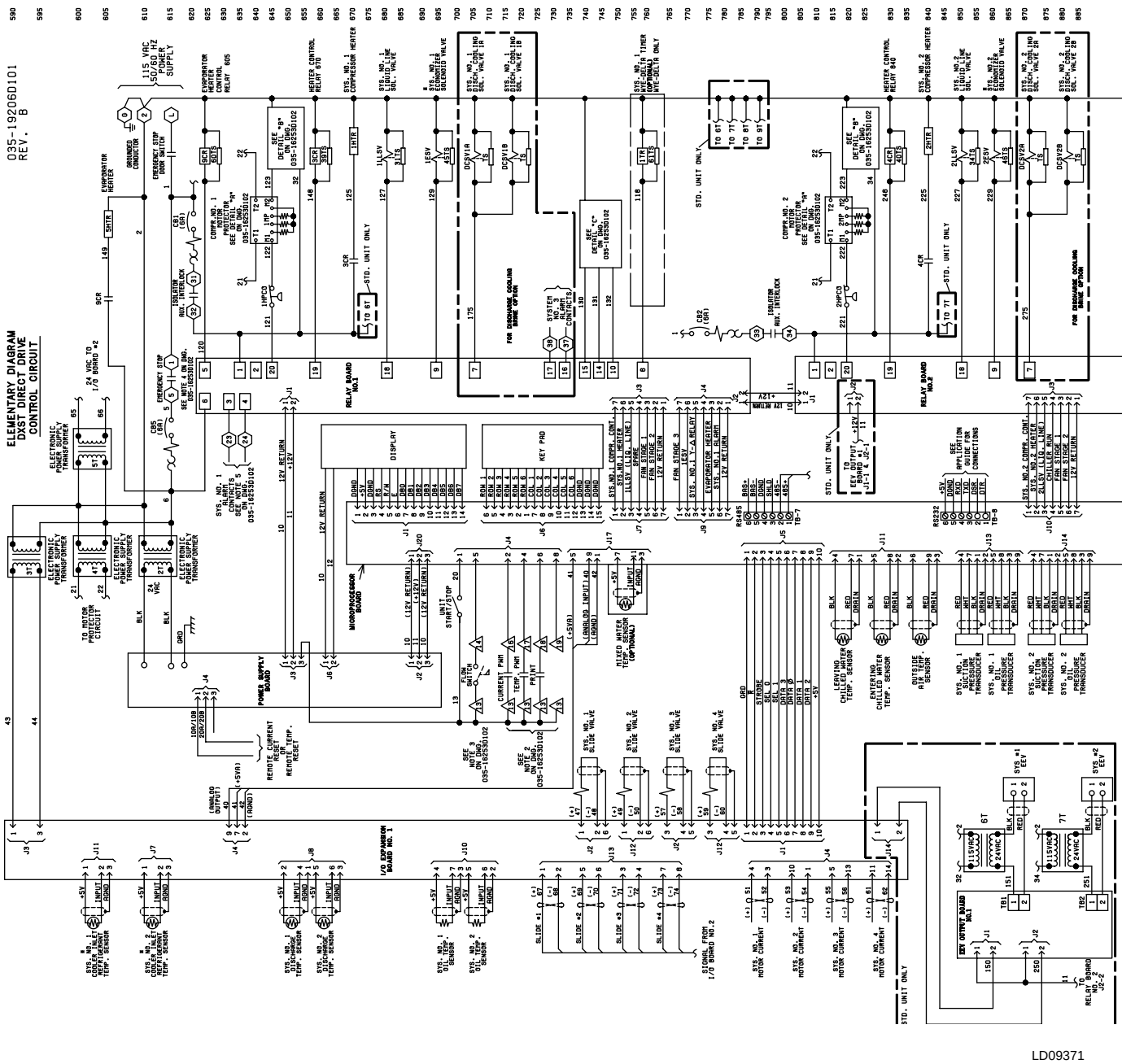


FIG. 22 – ELEMENTARY WIRING DIAGRAM

CAUTION:

No Controls (relays, etc.) should be mounted in the Smart Panel enclosure or connected to power supplies in the control panel. Additionally, control wiring not connected to the Smart Panel should not be run through the cabinet. This could result in nuisance faults.

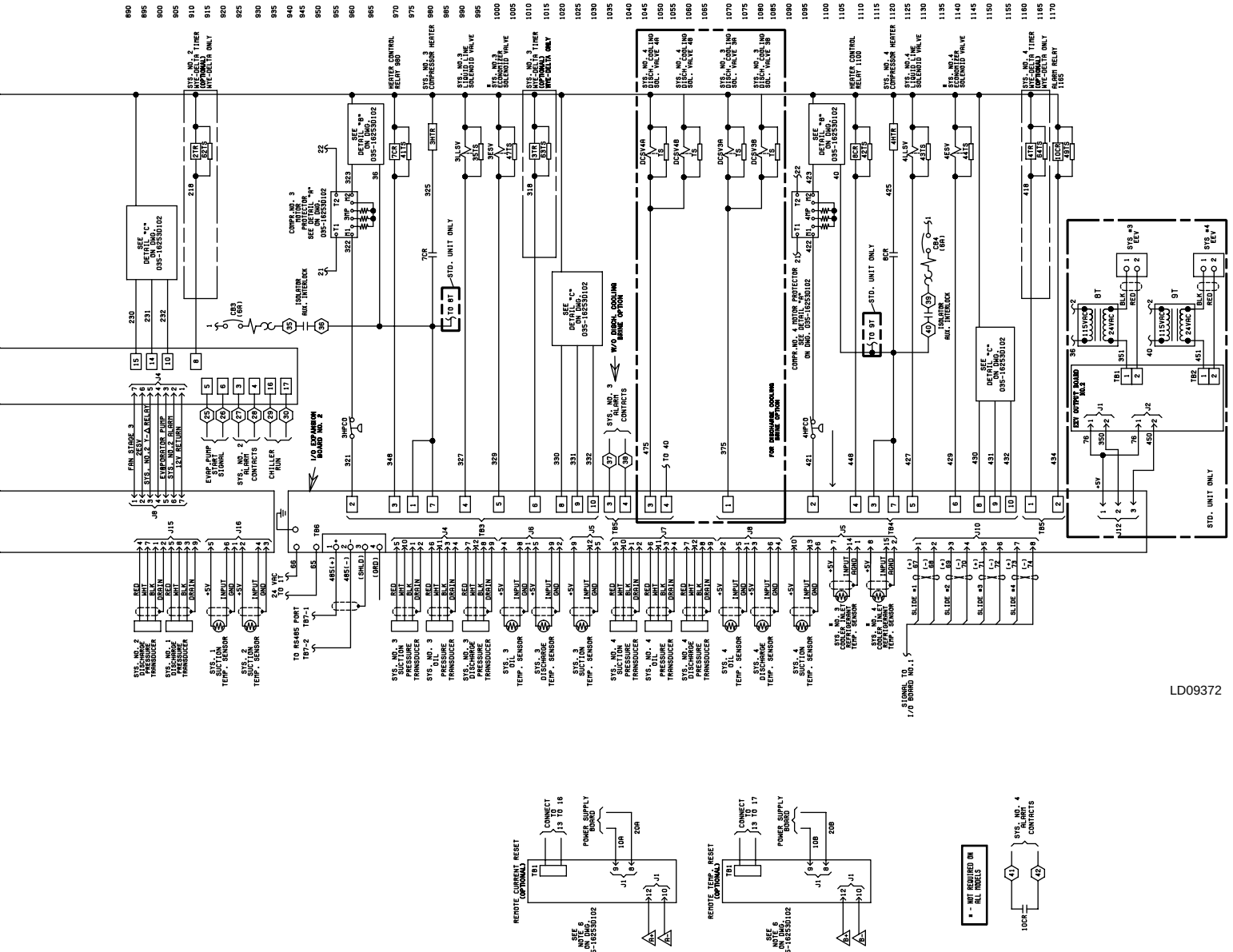
CAUTION:

Any inductive devices (relays) wired in series with the flow switch for start/stop, into the Alarm circuitry, or pilot relays for pump starters wired through motor contactor auxiliary contacts must be suppressed with YORK P/N 031-00808-000 suppressor across the relay/contactor coil.

Any contacts connected to flow switch inputs or BAS inputs on terminals 13 - 19 or TB3, or any other terminals, must be suppressed with a YORK P/N 031-00808-000 suppressor across the relay/contactor coil.

CAUTION:

Control wiring connected to the control panel should never be run in the same conduit with power wiring.



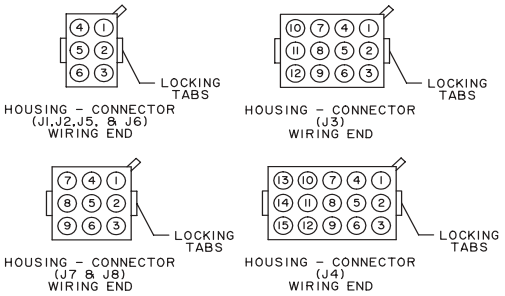
CONNECTION DIAGRAM, ELEC. BOX
YCAS1063 - 1263

STANDARD AND REMOTE EVAP. UNITS

J1, J2, J3, J3A, J4, J4A, J5, J6, J7, J8, P7 & P8 — POWER PANEL

P1, P2, P3, P3A, P4, P4A, P5, & P6 — ELECTRONIC (MICRO) PANEL

NOTE: 1. WIRE NUMBERS IDENTIFIED IN (PARENTHESIS) INDICATE THE ACTUAL HARNESS CODE STAMPED ON THE WIRE.



035-19206E104
REV. A

LEGEND

1CR THRU 4CR, 9CR/ -K1 THRU -K4, -K9	-CONTROL RELAYS
CB1, CB2, CB3/ -QCB1,-QBC2,-QCB3	-CIRCUIT BREAKERS
9CB THRU 13CB	-OVERLOAD CIRCUIT BREAKERS (SYS. #1)
15CB THRU 19CB	-OVERLOAD CIRCUIT BREAKERS (SYS. #2)
9 OL THRU 13 OL	-MOTOR OVERLOADS (SYS. #1)
15 OL THRU 19 OL	-MOTOR OVERLOADS (SYS. #2)
-QFCB9 THRU -QFCB13	-MOTOR OVERLOADS W/OVERLOAD CIRCUIT BREAKERS (SYS. #1)
-QFCB15 THRU -QFCB19	-MOTOR OVERLOADS W/OVERLOAD CIRCUIT BREAKERS (SYS. #2)
1M, 3M/ 1-KLC OR 1-KALC,	-COMPRESSOR CONTACTORS 2-KLC OR 2-KALC
2M, 4M/ 1-KDC, 2-KDC	-COMPRESSOR CONTACTORS
1S, 2S/ 1-KSC, 2-KSC	-COMPRESSOR CONTACTORS
9M THRU 13M/ -KF9 THRU -KF13	-CONDENSER FAN CONTACTORS (SYS. #1)
15M THRU 19M/ -KF15 THRU -KF19	-CONDENSER FAN CONTACTORS (SYS. #2)
1MP/1-FMP	-MOTOR PROTECTOR (SYS. #1)
2MP/2-FMP	-MOTOR PROTECTOR (SYS. #2)
2T, 3T, 4T/ -T2, -T3, -T4	-MICRO PANEL TRANSFORMERS
1TR, 2TR/ -K10, -K11	-TIMER RELAYS
TS/-ES	-TRANSIENT SUPPRESSORS
PTB1, PTB2/ 1-XTB, 2-XTB	-POWER TERMINAL BLOCK
MCB1, MCB2/ 1-QCB, 2-QCB	-MOTOR CIRCUIT BREAKER
DSW1, DSW2/ 1-QSD, 2-QSD	-DISCONNECT SERVICE SWITCH
———	-WIRING BY YORK
_ — — _	-WIRING BY OTHERS
———	-OPTIONAL WIRING AND/OR COMPONENTS

PLUG NO.	WIRE NO.	PLUG PIN NO.
P1	21	1
	2	2
	22	3
	31	4
	32	5

PLUG NO.	WIRE NO.	PLUG PIN NO.
J1	21	1
	2	2
	22	3
	3Y	4
	3X	5

PLUG NO.	WIRE NO.	PLUG PIN NO.
P3A	125	1
	122	2

PLUG NO.	WIRE NO.	PLUG PIN NO.
J3A	25	1
	777	2

PLUG NO.	WIRE NO.	PLUG PIN NO.
P2	21	1
	2	2
	22	3
	33	4
	34	5

PLUG NO.	WIRE NO.	PLUG PIN NO.
J2	21	1
	2	2
	22	3
	3Y	4
	3X	5

PLUG NO.	WIRE NO.	PLUG PIN NO.
P4A	225	1
	222	2

PLUG NO.	WIRE NO.	PLUG PIN NO.
J4A	25	1
	777	2

PLUG NO.	WIRE NO.	PLUG PIN NO.
P3	2	1
	GRD	2
	125	4
	129	5
	127	6
	175	7
	121	11
	122	12

PLUG NO.	WIRE NO.	PLUG PIN NO.
J3	2	1
	GRD	2
	125A	4
	129A	5
	127A	6
	175A	7
	121A	11
	122	12

PLUG NO.	WIRE NO.	PLUG PIN NO.
P4	2	1
	GRD	2
	225	3
	227	4
	229	5
	275	7
	221	11
	222	12

PLUG NO.	WIRE NO.	PLUG PIN NO.
J4	2	1
	GRD	2
	225A	3
	227A	4
	229A	5
	275A	7
	221A	11
	222	12

PLUG NO.	WIRE NO.	PLUG PIN NO.
P5	130	1
	131	2
	132	3
	148	4
	118	6

PLUG NO.	WIRE NO.	PLUG PIN NO.
J5	30	1
	31	2
	32	3
	48	4
	18	6

PLUG NO.	WIRE NO.	PLUG PIN NO.
P6	230	1
	231	2
	232	3
	248	4
	218	6

PLUG NO.	WIRE NO.	PLUG PIN NO.
J6	30	1
	31	2
	32	3
	48	4
	18	6

PLUG NO.	WIRE NO.	PLUG PIN NO.
P7	125	1
	2	2
	123	3
	140	4
	141	5
	142	6
	32	7
	TRX	8
	44	9

PLUG NO.	WIRE NO.	PLUG PIN NO.
J7	25	1
	2	2
	23	3
	40	4
	41	5
	42	6
	3X	7
	TRX	8
	44	9

PLUG NO.	WIRE NO.	PLUG PIN NO.
P8	225	1
	2	2
	223	3
	240	4
	241	5
	242	6
	34	7
	TRX	8
	44	9

PLUG NO.	WIRE NO.	PLUG PIN NO.
J8	25	1
	2	2
	23	3
	40	4
	41	5
	42	6
	3X	7
	TRX	8
	44	9

LD09375

FIG. 23 – CONNECTION DIAGRAM 4 COMPRESSOR

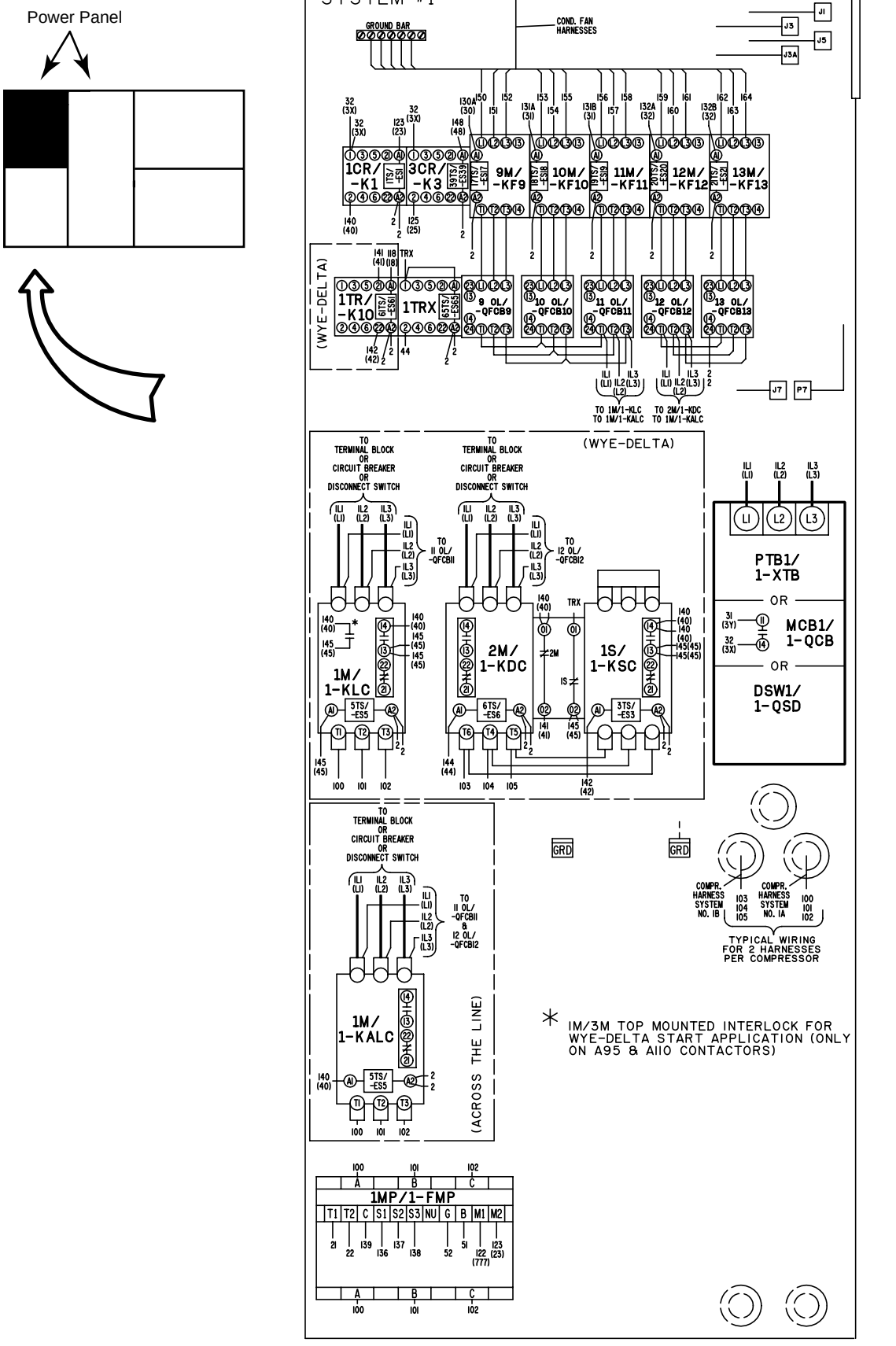
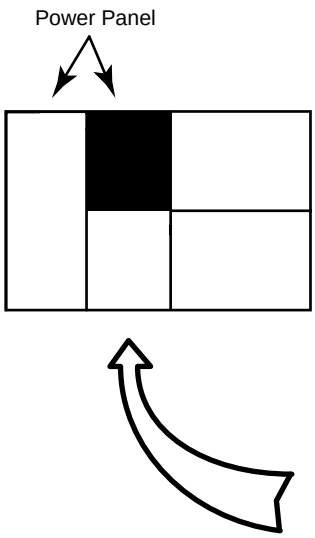
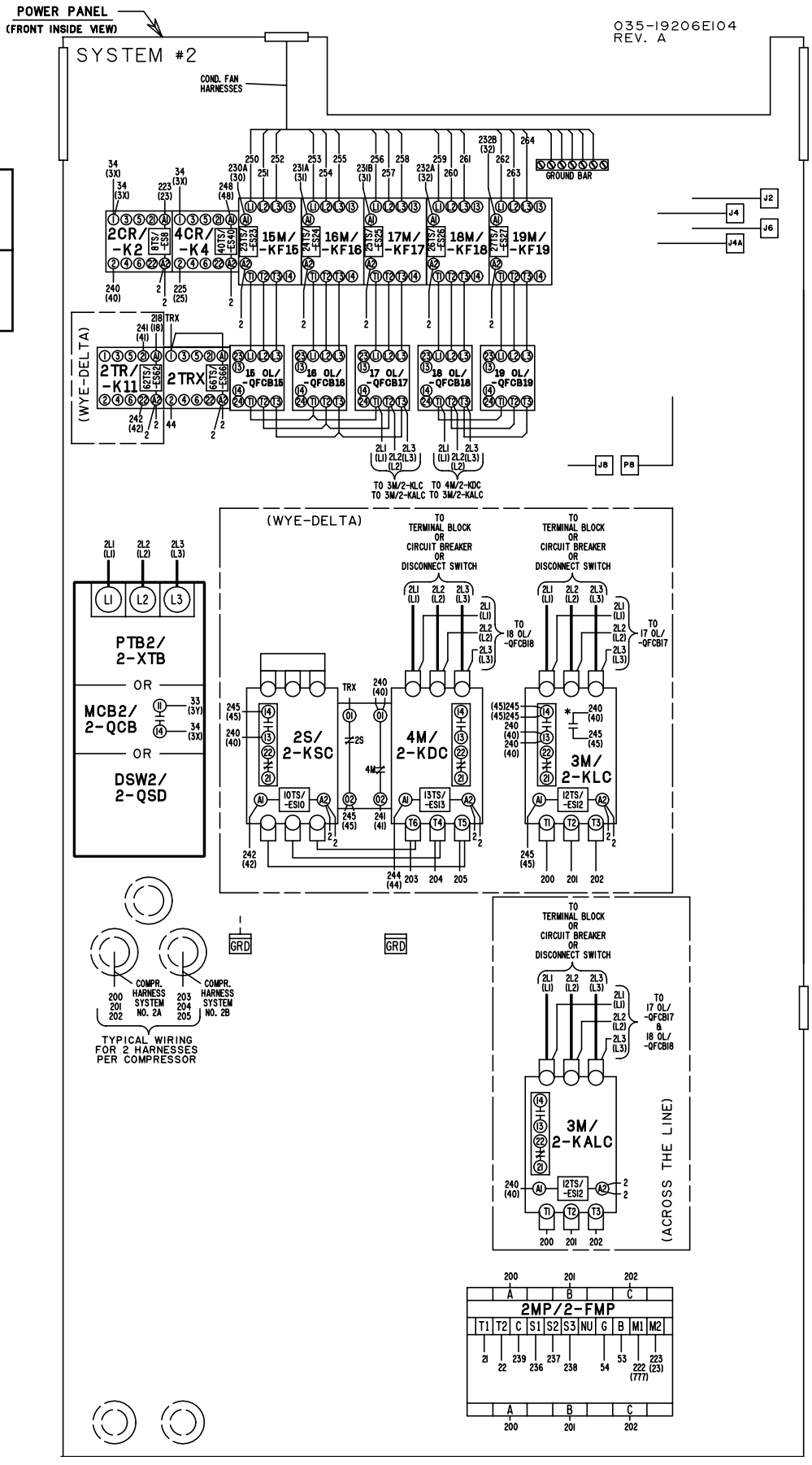


FIG. 24 – CONNECTION DIAGRAM 4 COMPRESSOR

CONNECTION WIRING DIAGRAM

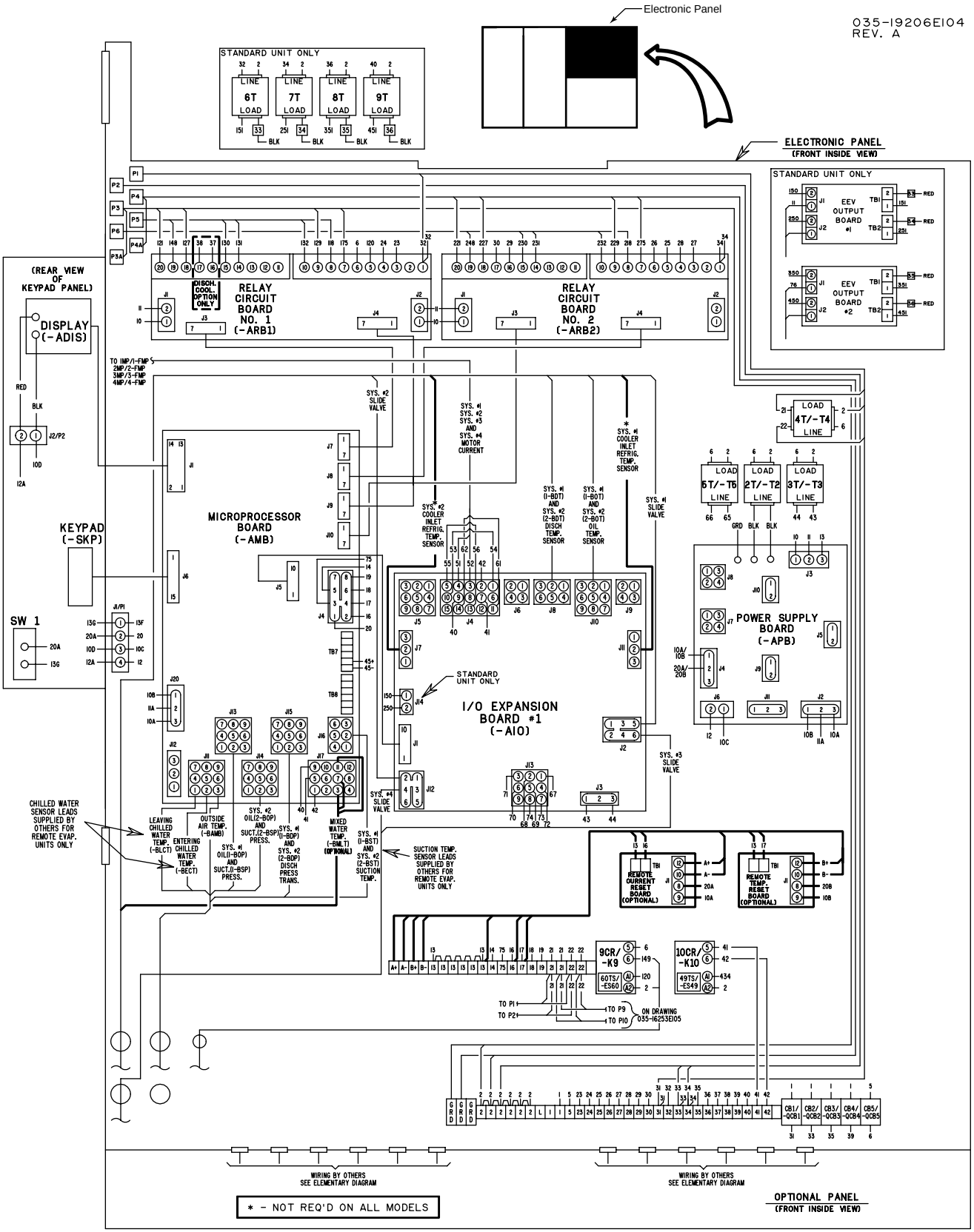




LD09377

FIG. 25 – ELEMENTARY WIRING DIAGRAM

CONNECTION WIRING DIAGRAM



LD09378

CONNECTION DIAGRAM, ELEC. BOX

YCAS1063 - 1263

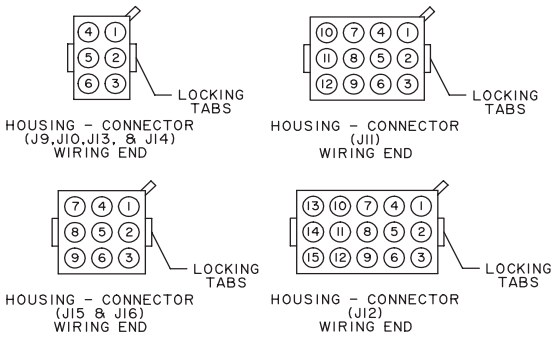
STANDARD AND REMOTE EVAP. UNITS

J9, J10, J11, J11A, J12, J12A, J13, J14, J15, J16, P15 & P16 —— POWER PANEL

P9, P10, P11, P11A, P12, P12A, P13, & P14 —— ELECTRONIC (MICRO) PANEL

NOTE: 1. WIRE NUMBERS IDENTIFIED IN (PARENTHESIS) INDICATE THE ACTUAL HARNESS CODE STAMPED ON THE WIRE.

035-19206E105
REV. A



LEGEND

5CR THRU 8CR, 10CR/ -K5 THRU -K8, -K10	-CONTROL RELAYS
CB4, CB5, CB6/ -QCB4,-QBC5,-QCB6	-CIRCUIT BREAKERS
21CB THRU 24CB	-OVERLOAD CIRCUIT BREAKERS (SYS. #3)
27CB THRU 30CB	-OVERLOAD CIRCUIT BREAKERS (SYS. #4)
21 OL THRU 24 OL	-MOTOR OVERLOADS (SYS. #3)
27 OL THRU 30 OL -QFCB21 THRU -QFCB24	-MOTOR OVERLOADS (SYS. #4) -MOTOR OVERLOADS W/OVERLOAD CIRCUIT BREAKERS (SYS. #3)
-QFCB27 THRU -QFCB30	-MOTOR OVERLOADS W/OVERLOAD CIRCUIT BREAKERS (SYS. #4)
3FU, 4FU/ -F3, -F4	-TRANSFORMER FUSE (OPTIONAL)
5M, 7M/ 3-KLC OR 3-KALC,	-COMPRESSOR CONTACTORS 4-KLC OR 4-KALC
6M, 8M/ 3-KDC, 4-KDC	-COMPRESSOR CONTACTORS
3S, 4S/ 3-KSC, 4-KSC	-COMPRESSOR CONTACTORS
21M THRU 24M/ -KF21 THRU -KF24	-CONDENSER FAN CONTACTORS (SYS. #3)
27M THRU 30M/ -KF27 THRU -KF30	-CONDENSER FAN CONTACTORS (SYS. #4)
3MP/3-FMP	-MOTOR PROTECTOR (SYS. #3)
4MP/4-FMP	-MOTOR PROTECTOR (SYS. #4)
1T/-T1	-CONTROL TRANSFORMER 2KVA (OPTIONAL)
6T, 7T, 8T/ -T6, -T7, -T8	-MICRO PANEL TRANSFORMERS
3TR, 4TR/ -K12, -K13	-TIMER RELAYS
TS/-ES	-TRANSIENT SUPPRESSORS
PTB3, PTB4/ 3-XTB, 4-XTB	-POWER TERMINAL BLOCK
MCB3, MCB4/ 3-QCB, 4-QCB	-MOTOR CIRCUIT BREAKER
DSW3, DSW4/ 3-QSD, 4-QSD	-DISCONNECT SERVICE SWITCH
————	-WIRING BY YORK
— — — —	-WIRING BY OTHERS
————	-OPTIONAL WIRING AND/OR COMPONENTS

PLUG NO.	WIRE NO.	PLUG PIN NO.
P9	21	1
	2	2
	22	3
	35	4
	36	5

PLUG NO.	WIRE NO.	PLUG PIN NO.
J9	21	1
	2	2
	22	3
	3Y	4
	3X	5

PLUG NO.	WIRE NO.	PLUG PIN NO.
P11A	325	1
	322	2

PLUG NO.	WIRE NO.	PLUG PIN NO.
J11A	25	1
	777	2

PLUG NO.	WIRE NO.	PLUG PIN NO.
P10	21	1
	2	2
	22	3
	39	4
	40	5

PLUG NO.	WIRE NO.	PLUG PIN NO.
J10	21	1
	2	2
	22	3
	3Y	4
	3X	5

PLUG NO.	WIRE NO.	PLUG PIN NO.
P12A	425	1
	422	2

PLUG NO.	WIRE NO.	PLUG PIN NO.
J12A	25	1
	777	2

PLUG NO.	WIRE NO.	PLUG PIN NO.
P11	2	1
	GRD	2
	325	3
	329	5
	327	4
	375	7
	321	11
	322	12

PLUG NO.	WIRE NO.	PLUG PIN NO.
J11	2	1
	GRD	2
	325A	3
	329A	5
	327A	4
	375A	7
	321A	11
	322	12

PLUG NO.	WIRE NO.	PLUG PIN NO.
P12	2	1
	GRD	2
	425	4
	427	6
	429	5
	475	7
	421	11
	422	12

PLUG NO.	WIRE NO.	PLUG PIN NO.
J12	2	1
	GRD	2
	425A	4
	427A	6
	429A	5
	475A	7
	421A	11
	422	12

PLUG NO.	WIRE NO.	PLUG PIN NO.
P13	330	1
	331	2
	332	3
	348	4
	318	6

PLUG NO.	WIRE NO.	PLUG PIN NO.
J13	30	1
	31	2
	32	3
	48	4
	18	6

PLUG NO.	WIRE NO.	PLUG PIN NO.
P14	430	1
	431	2
	432	3
	448	4
	418	6

PLUG NO.	WIRE NO.	PLUG PIN NO.
J14	30	1
	31	2
	32	3
	48	4
	18	6

PLUG NO.	WIRE NO.	PLUG PIN NO.
P15	325	1
	2	2
	323	3
	340	4
	341	5
	342	6
	32	7
	TRX	8
	44	9

PLUG NO.	WIRE NO.	PLUG PIN NO.
J15	25	1
	2	2
	23	3
	40	4
	41	5
	42	6
	3X	7
	TRX	8
	44	9

PLUG NO.	WIRE NO.	PLUG PIN NO.
P16	425	1
	2	2
	423	3
	440	4
	441	5
	442	6
	34	7
	TRX	8
	44	9

PLUG NO.	WIRE NO.	PLUG PIN NO.
J16	25	1
	2	2
	23	3
	40	4
	41	5
	42	6
	3X	7
	TRX	8
	44	9

LD09379

FIG. 26 – CONNECTION DIAGRAM 4 COMPRESSOR

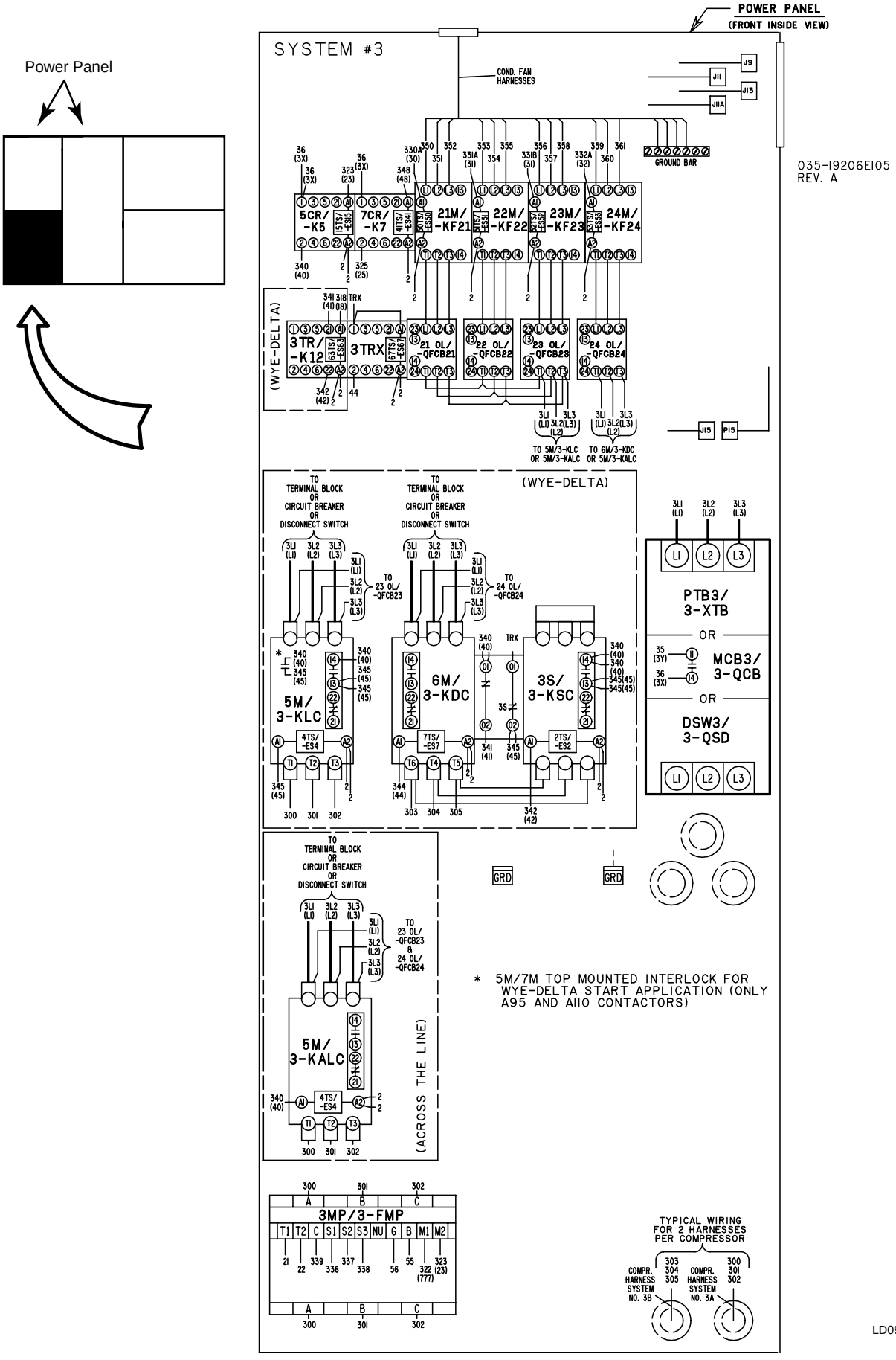


FIG. 27 – CONNECTION DIAGRAM 4 COMPRESSOR

CONNECTION WIRING DIAGRAM

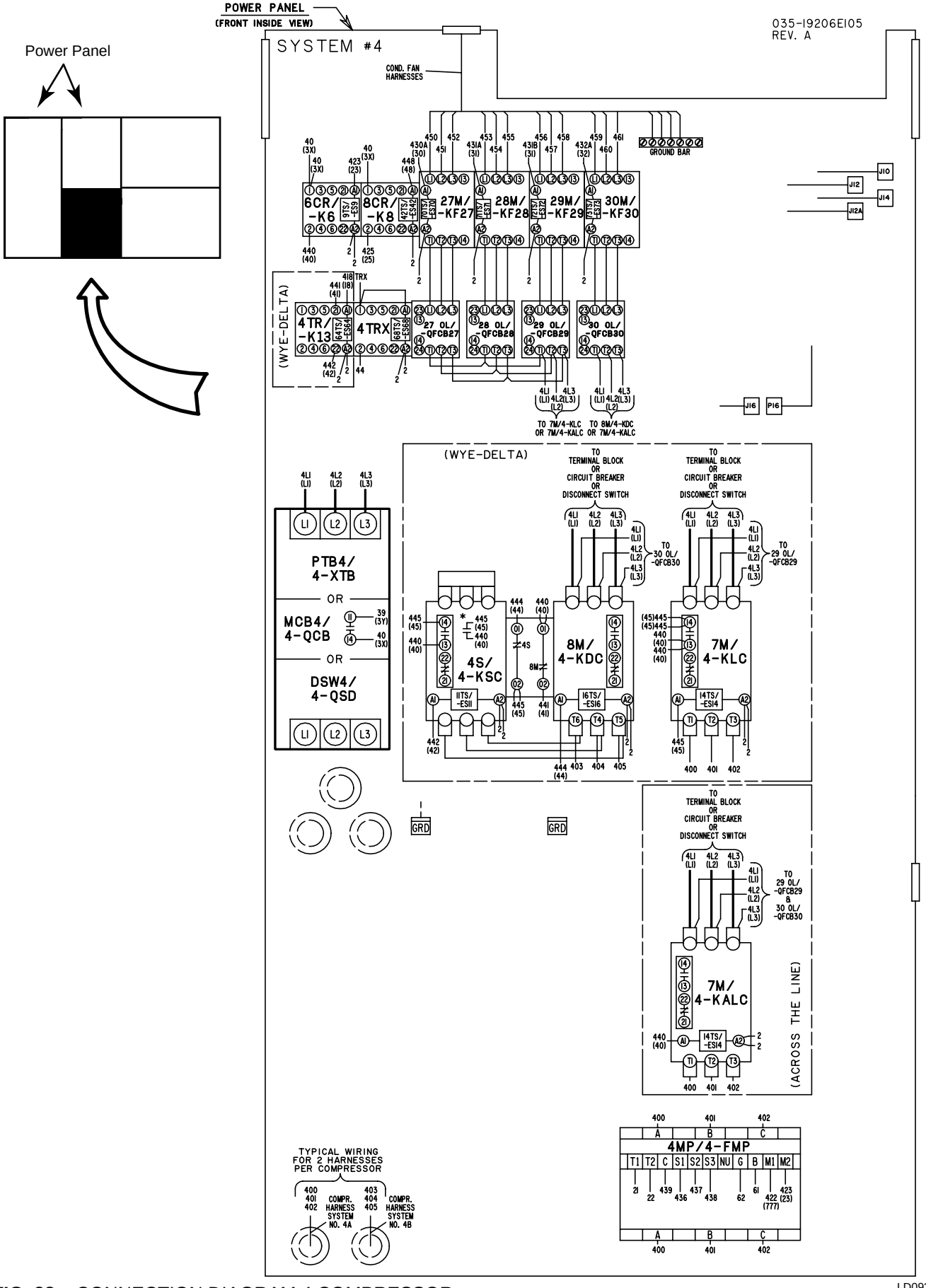
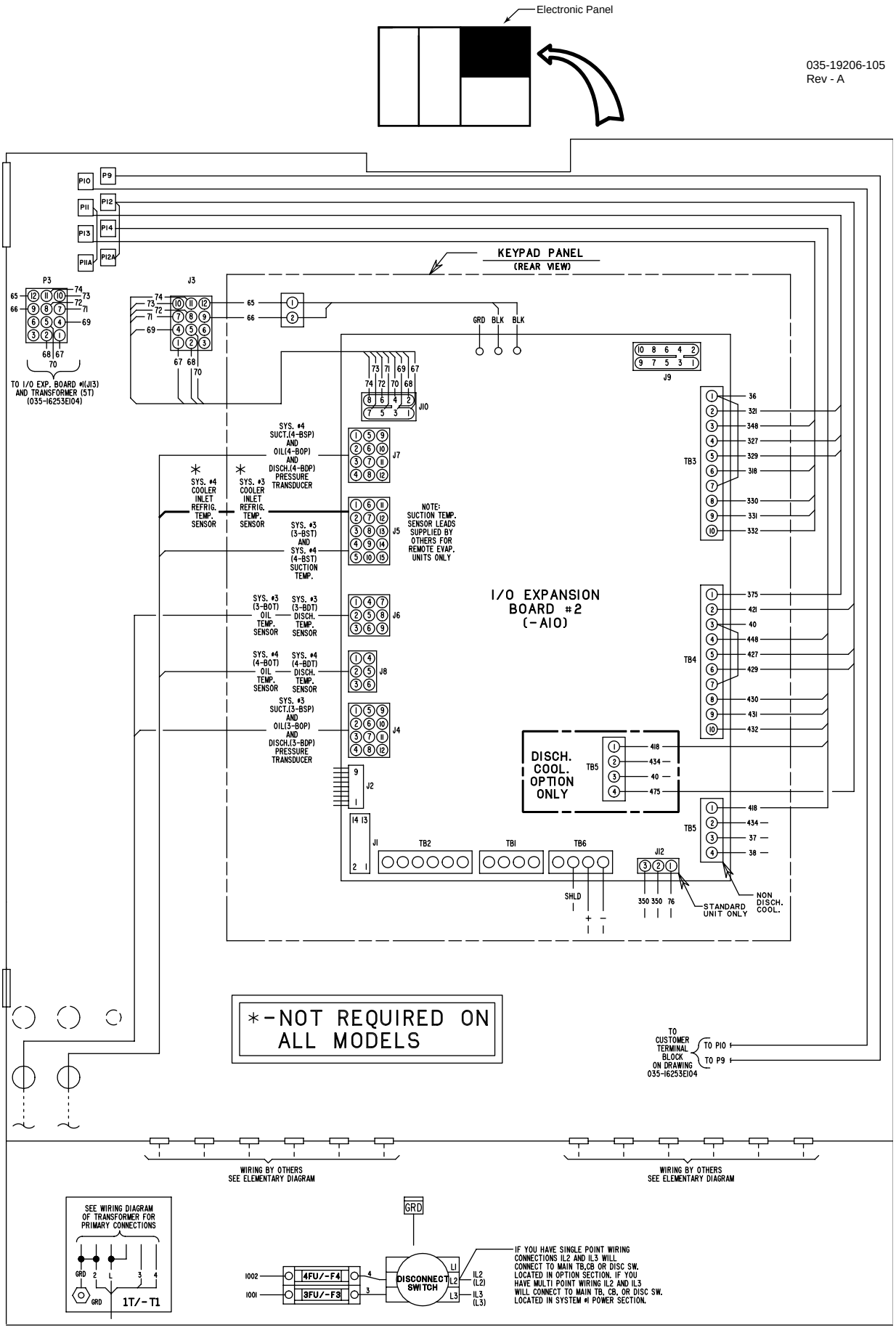


FIG. 28 – CONNECTION DIAGRAM 4 COMPRESSOR

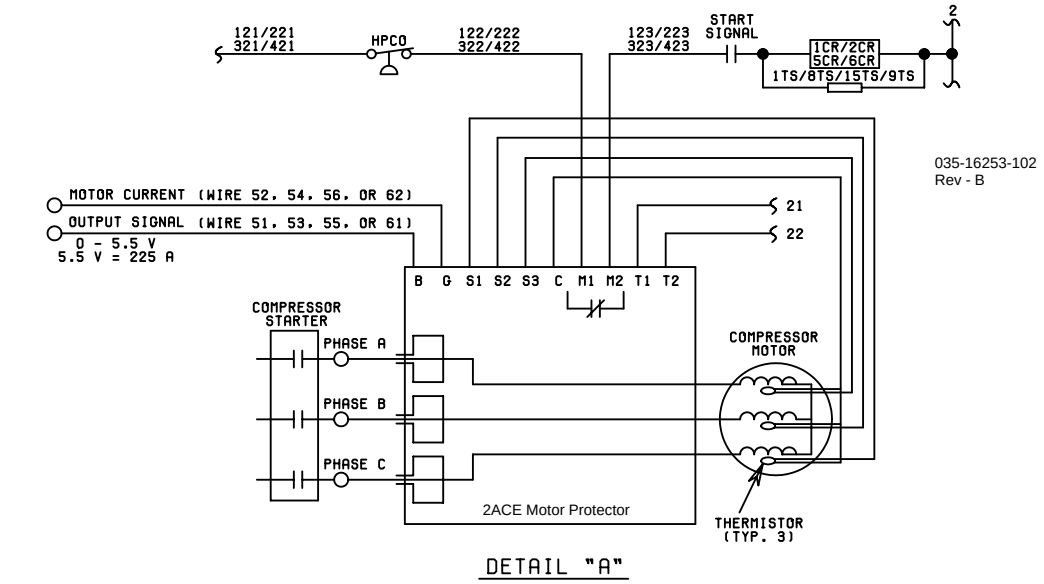
CONNECTION WIRING DIAGRAM



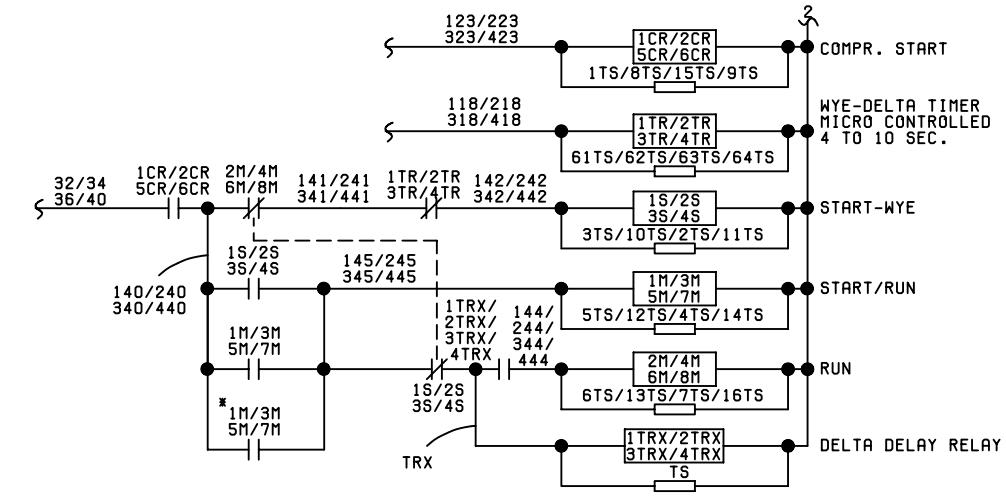
LD09382

FIG. 29 – CONNECTION DIAGRAM 4 COMPRESSOR

ELEMENTARY DIAGRAM
DXST DIRECT DRIVE
CONTROL CIRCUIT



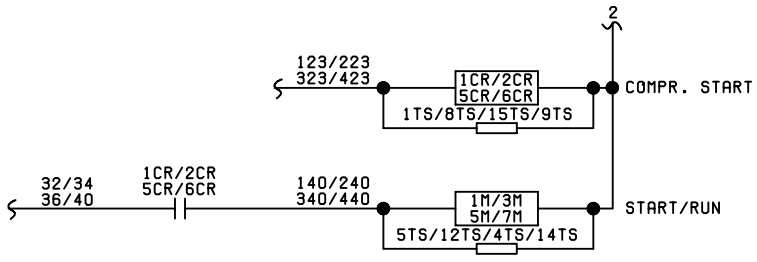
DETAIL "A"



DETAIL "B"

WYE DELTA START

* INTERLOCK ON TOP MOUNTED RELAY, WYE-DELTA (ONLY ON A95 & A110 CONTRACTORS)



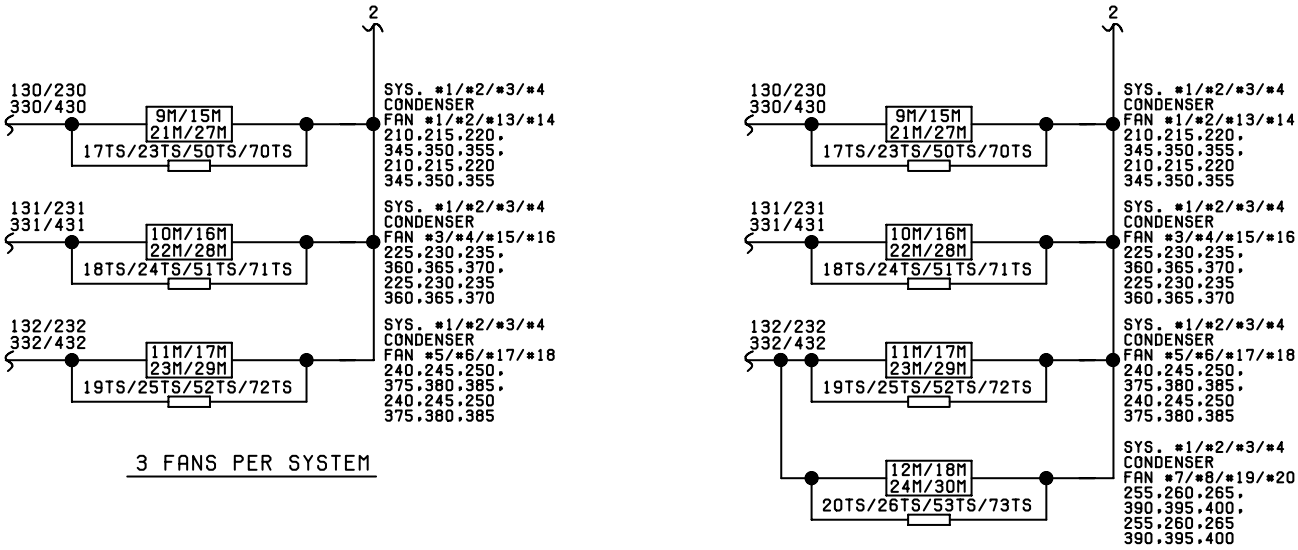
ACROSS THE LINE START

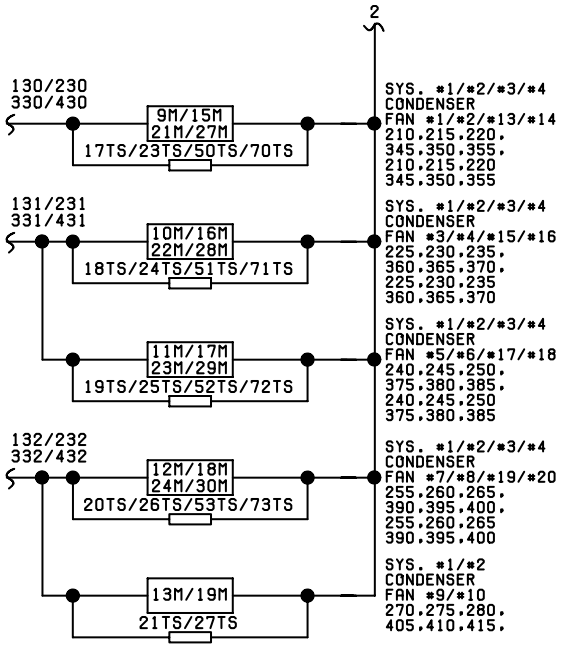
LD09373

FIG. 30 – ELEMENTARY DIAGRAM - DXST DIRECT DRIVE CONTROL CIRCUIT

ELEMENTARY DIAGRAM
DXST DIRECT DRIVE
CONTROL CIRCUIT

035-16253-102
Rev - B



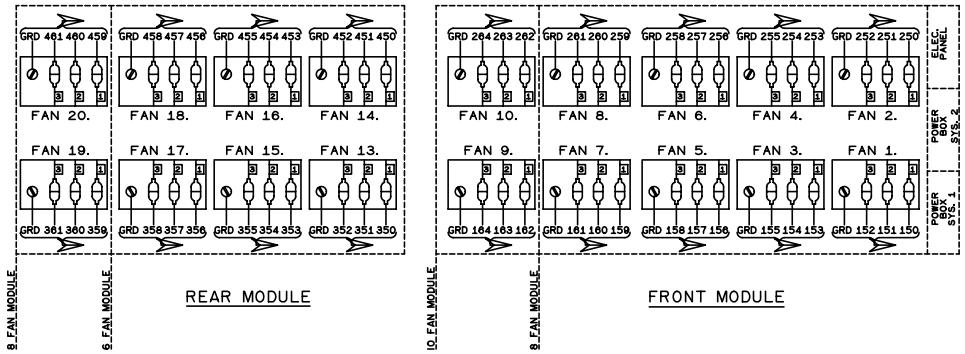


DETAIL "C"

LD09374

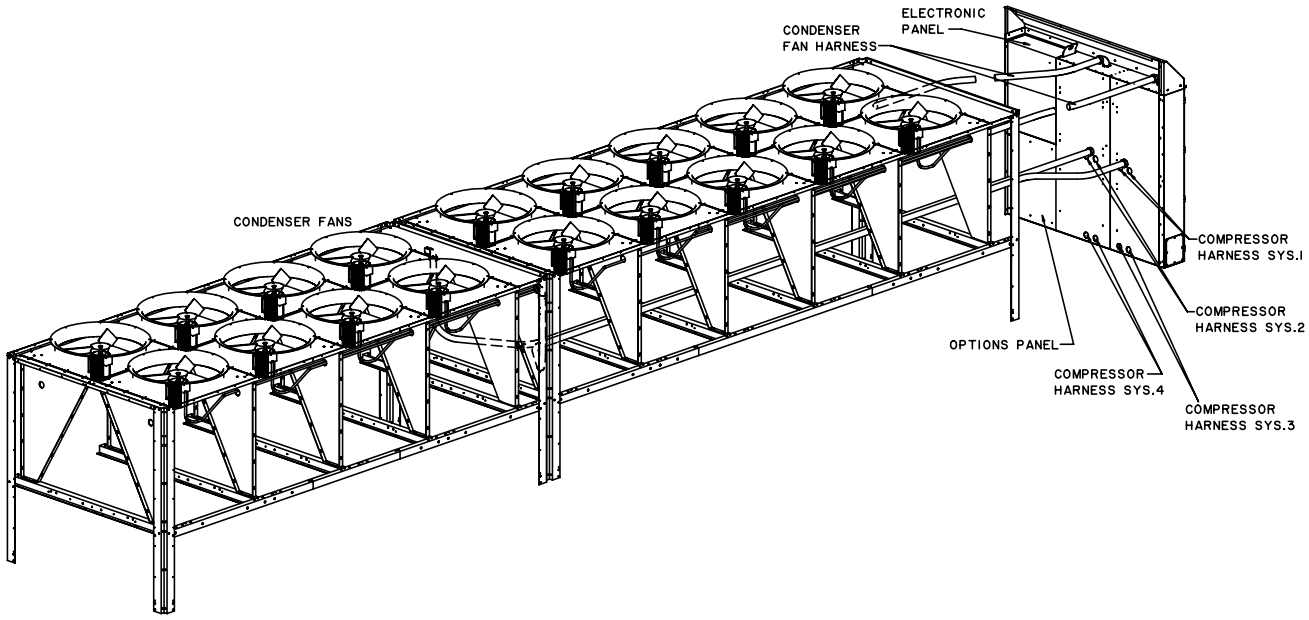
FIG. 31 – ELEMENTARY DIAGRAM - DXST DIRECT DRIVE CONTROL CIRCUIT

CONNECTION DIAGRAM SYSTEM WIRING
STANDARD AND REMOTE EVAP UNITS



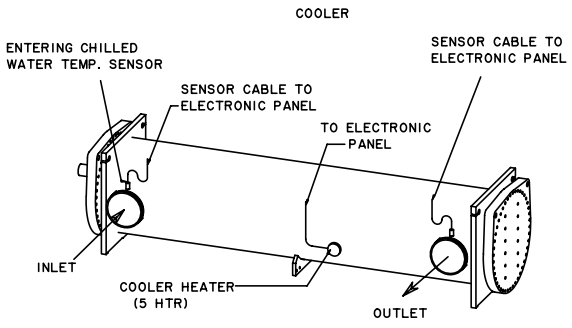
CONNECTION DIAGRAM SYSTEM WIRING
YCAS 1063 - 1263
STANDARD & REMOTE EVAP. UNITS

035-19206-106
Rev -



LEGEND

1 HPCO	SYS. NO.1 HIGH PRESS. CUTOUT
2 HPCO	SYS. NO.2 HIGH PRESS. CUTOUT
3 HPCO	SYS. NO.3 HIGH PRESS. CUTOUT
4 HPCO	SYS. NO.4 HIGH PRESS. CUTOUT
1 HTR	SYS.NO.1 COMPR. CRANKCASE HEATER
2 HTR	SYS.NO.2 COMPR. CRANKCASE HEATER
3 HTR	SYS.NO.3 COMPR. CRANKCASE HEATER
4 HTR	SYS.NO.4 COMPR. CRANKCASE HEATER
5 HTR	COOLER HEATER
1 LLSV	SYS.NO.1 LIQUID LINE SOLENIOD VALVE (UNIT IDENT)
2 LLSV	SYS.NO.2 LIQUID LINE SOLENIOD VALVE (UNIT IDENT)
3 LLSV	SYS.NO.3 LIQUID LINE SOLENIOD VALVE (UNIT IDENT)
4 LLSV	SYS.NO.4 LIQUID LINE SOLENIOD VALVE (UNIT IDENT)
1 ESV	ECONOMIZER SOLENOID VAVLE (UNIT IDENT)
2 ESV	ECONOMIZER SOLENOID VAVLE (UNIT IDENT)
3 ESV	ECONOMIZER SOLENOID VAVLE (UNIT IDENT)
4 ESV	ECONOMIZER SOLENOID VAVLE (UNIT IDENT)
TXV 1	SYS.NO.1 THERMAL EXPANSION VALVE (UNIT IDENT)
TXV 2	SYS.NO.2 THERMAL EXPANSION VALVE (UNIT IDENT)
TXV 3	SYS.NO.3 THERMAL EXPANSION VALVE (UNIT IDENT)
TXV 4	SYS.NO.4 THERMAL EXPANSION VALVE (UNIT IDENT)



LD09383

FIG. 32 – CONNECTION DIAGRAM SYSTEM WIRING

CONNECTION DIAGRAM SYSTEM WIRING
STANDARD AND REMOTE EVAP UNITS

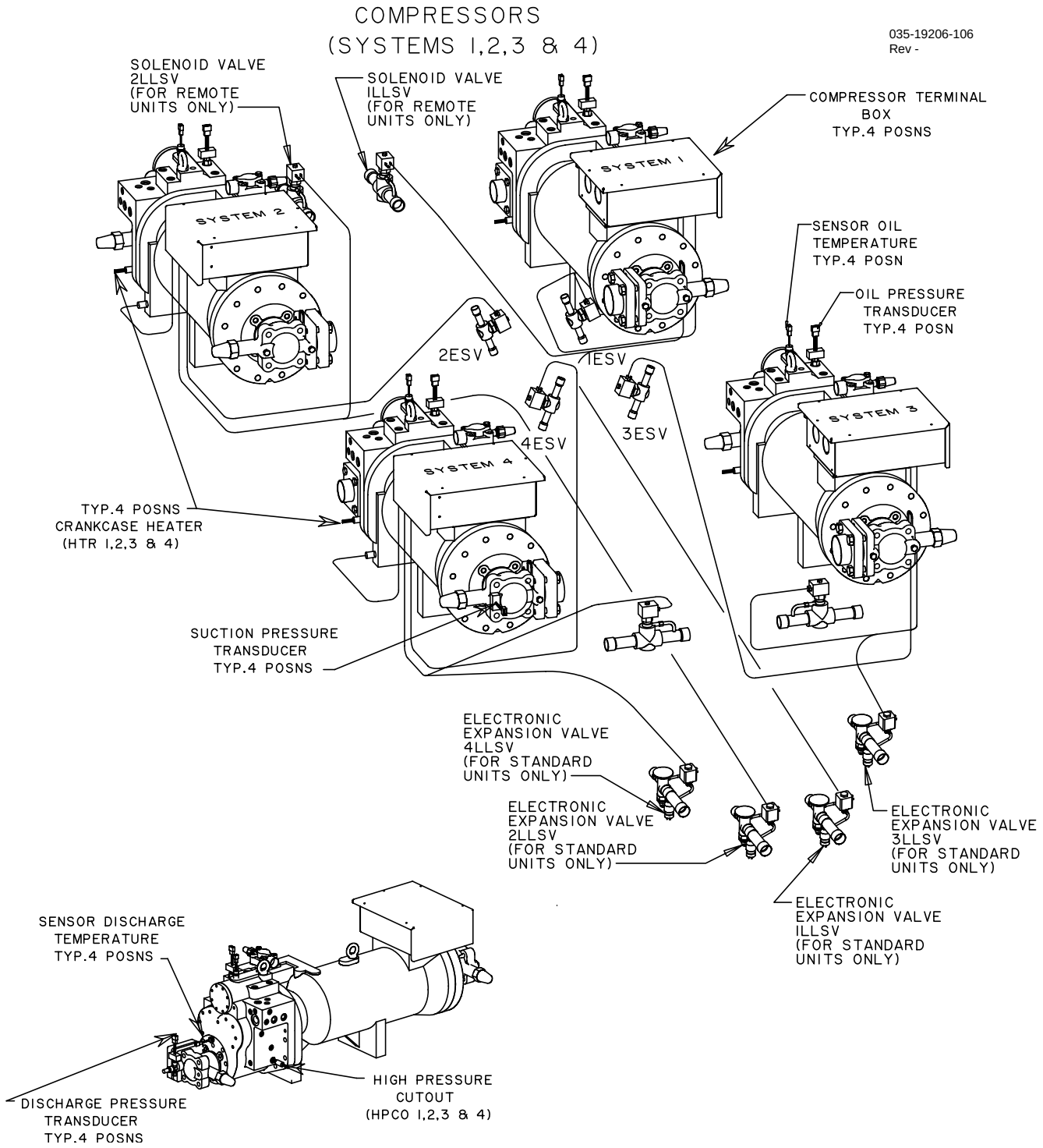


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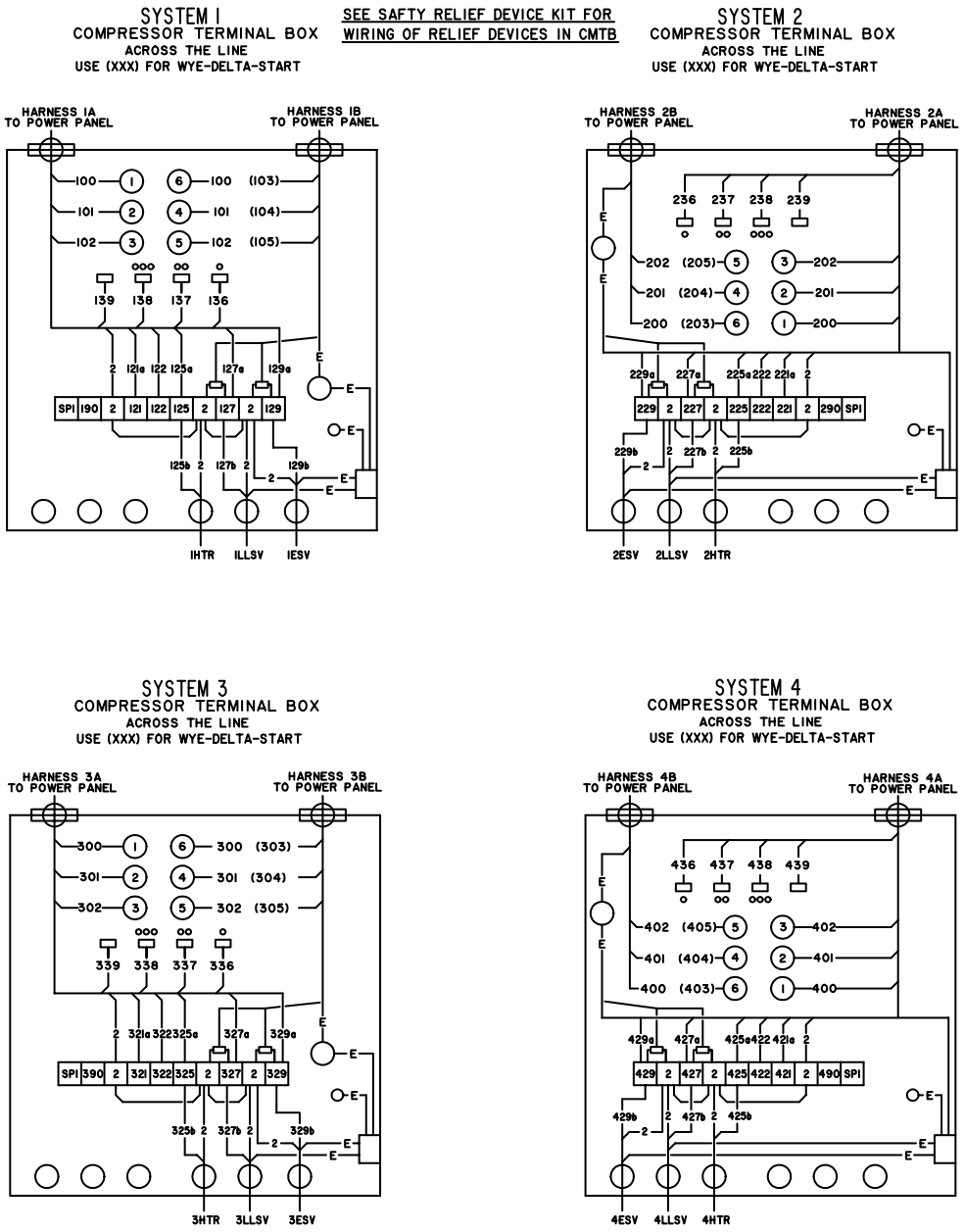
FIG. 33 – CONNECTION DIAGRAM SYSTEM WIRING

COMPRESSOR TERMINAL BOX
SYSTEM 1 THROUGH 4

035 19206 106
Rev -



LD10055

FIG. 34 – COMPRESSOR TERMINAL BOX, SYSTEM 1-4

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