YORK® A JOHNSON CONTROLS COMPANY	AIR-COOLED LIQUID CHILLERS HERMETIC SCROLL	
WIRING	New Release	Form 150.72-W1 (109)

YLAA0070 - YLAA0175
AIR-COOLED SCROLL CHILLERS
STYLE A, B or C (60 Hz)
70 - 175 TON
246-613 KW

Tempo

Interim

GS560418.jpg

R-410A

ARI PERFORMANCE CERTIFIED ™
ARI Standard 550/590
Air-Cooled Chiller
www.aridirectory.org

ISO 9000 REGISTRATION

INTERTEK ETL CM LISTED C US

IMPORTANT!
READ BEFORE PROCEEDING!
GENERAL SAFETY GUIDELINES

This equipment is a relatively complicated apparatus. During installation, operation, maintenance or service, individuals may be exposed to certain components or conditions including, but not limited to: refrigerants, oils, materials under pressure, rotating components, and both high and low voltage. Each of these items has the potential, if misused or handled improperly, to cause bodily injury or death. It is the obligation and responsibility of operating/service personnel to identify and recognize these inherent hazards, protect themselves, and proceed safely in completing their tasks. Failure to comply with any of these requirements could result in serious damage to the equipment and the property in which it is situated, as well as severe personal injury or death to themselves and people at the site.

This document is intended for use by owner-authorized operating/service personnel. It is expected that this individual possesses independent training that will enable them to perform their assigned tasks properly and safely. It is essential that, prior to performing any task on this equipment, this individual shall have read and understood this document and any referenced materials. This individual shall also be familiar with and comply with all applicable governmental standards and regulations pertaining to the task in question.

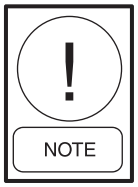
SAFETY SYMBOLS

The following symbols are used in this document to alert the reader to areas of potential hazard:

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

CAUTION identifies a hazard which could lead to damage to the machine, damage to other equipment and/or environmental pollution. Usually an instruction will be given, together with a brief explanation.

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



NOTE is used to highlight additional information which may be helpful to you.

External wiring, unless specified as an optional connection in the manufacturer's product line, is NOT to be connected inside the micro panel cabinet. Devices such as relays, switches, transducers and controls may NOT be installed inside the panel. NO external wiring is allowed to be run through the micro panel. All wiring must be in accordance with YORK's published specifications and must be performed ONLY by qualified YORK personnel. YORK will not be responsible for damages/problems resulting from improper connections to the controls or application of improper control signals. Failure to follow this will void the manufacturer's warranty and cause serious damage to property or injury to persons.

CHANGEABILITY OF THIS DOCUMENT

In complying with Johnson Controls policy for continuous product improvement, the information contained in this document is subject to change without notice. While Johnson Controls makes no commitment to update or provide current information automatically to the manual owner, that information, if applicable, can be obtained by contacting the nearest Johnson Controls Service office.

It is the responsibility of operating/service personnel to verify the applicability of these documents to the equipment in question. If there is any question in the mind of operating/service personnel as to the applicability of these documents, then prior to working on the equipment, they should verify with the owner whether the equipment has been modified and if current literature is available.

LIST OF FIGURES

YLAA 0070-0080-0090-0091-0100-0101-0115-0120-0125-0135-0150-0155

YLAA 0141-0156

YLAA 0170-0175

LEGEND

DESIGNATION	DESCRIPTION
ACC	ACCESSORY
-ADIS	DISPLAY BOARD
-AMB	MIRCOBOARD
-BAMB	AMBIENT
-BDP	DISCHARGE PRESSURE
-BECT	ENTERING CHILLED TEMP.
-BLCT	LEAVING CHILLED TEMP.
-BMP	MOTOR PROTECTOR COMPRESSOR
-BSP	SUCTION PRESSURE
-CPF	CAPACITOR POWER FACTOR
-ECH	CRANKCASE HEATER
-EEH	EVAPORATOR HEATER
-EPH	PUMP HEATER
-EXT	EXTERNAL TO CONTROL PANEL
-F	FUSE
-FHP	HIGH PRESSURE CUTOUT
-FSC	FAN SPEED CONTROLLER
-FSI	FAN SPEED INHIBIT TWO SPEED FAN OPTION ONLY
GND	GROUND
G/Y	GREEN / YELLOW
J	PLUG
-K	CIRCUIT BOARD RELAY
-KF	(INCLUDING COIL SUPPRESSOR)
-KFH	FAN CONTACTOR HIGH SPEED (INCLUDING COIL SUPPRESSOR)
-KFL	FAN CONTACTOR LOW SPEED (INCLUDING COIL SUPPRESSOR)
-KFOL	FAN OVERLOAD
-KFS	RELAY FAN SPEED
-KH	HEATER RELAY
-KM	COMPRESSOR RELAY (INCLUDING COIL SUPPRESSOR)
-KCR	CONTROL RELAY
-KP	PUMP CONTACTOR PART (INCLUDING COIL SUPPRESSOR)
-KT	RELAY TIMER
-M	COMPRESSOR MOTOR
-MF	MOTOR FAN
-MP	MOTOR PUMP
NU	NOT USED

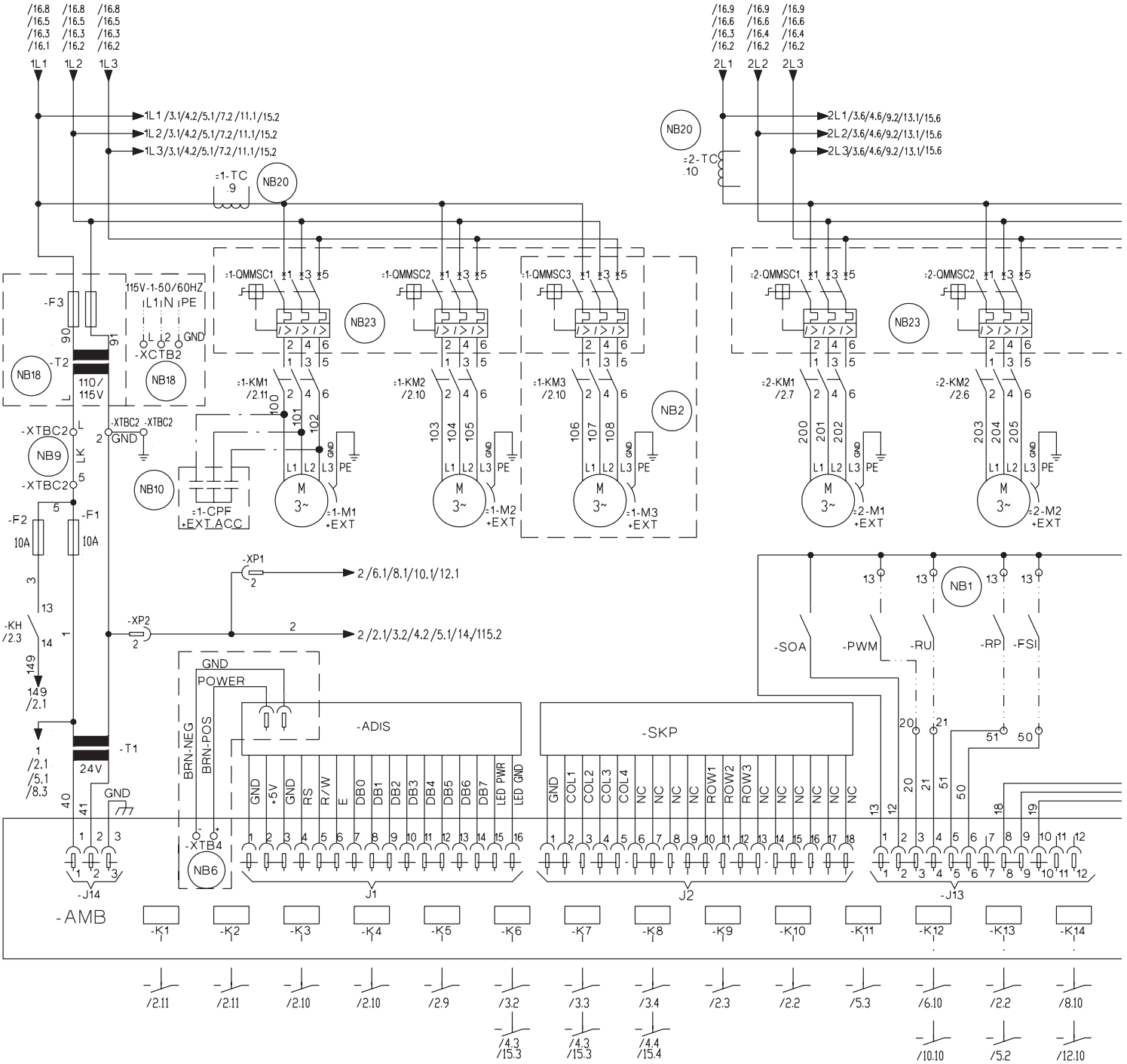
DESIGNATION	DESCRIPTION
PE	PROTECTIVE EARTH
PWM	PULSE WIDTH MODULATION
-QCB	CIRCUIT BREAKER
-QMMSC	MANUAL MOTOR STARTER COMPRESSOR
-QMMSP	MANUAL MOTOR STARTER PUMP
-QSD	SWITCH DISCONNECT
R	RESISTOR
RED	RED
RP	RUN PERMISSIVE
RU	REMOTE UNLOAD 1ST STEP
SCR	SCREEN
-SF	FLOW SWITCH
-SKP	KEYPAD
-SOA	SWITCH OFF AUTO
-T	TRANSFORMER
-TC	TRANSFORMER CURRENT
-UBR	BRIDGE RECTIFIER
WHT	WHITE
-XP	PLUGS BETWEEN POW./ MICRO SECTION
-XTBC	TERMINAL BLOCK CUSTOMER
-XTBF	TERMINAL BLOCK FACTORY
-YESV	EVAPORATOR SOLENOID VALVE
-YHGSV	HOT GAS SOLENOID VALVE (INCLUDING COIL SUPPRESSOR)
-YLLSV	LIQUID LINE SOLENOID VALVE FIELD MOUNTED AND WIRED ON REMOTE EVAP. UNIT
-ZCPR	COMPRESSOR
◯	NOTE WELL (SEE NOTE)
—— —— ——	WIRING AND ITEMS SHOWN ARE STANDARD YORK ACCESSORIES
-- — -- — --	WIRING AND ITEMS SHOWN ARE NOT SUPPLIED BY YORK
— — — —	ITEMS ENCLOSED FORM A COMPONENT OR SET OF COMPONENTS

NOTES

1. Refer to installation, commissioning , operation and maintenance manual for customer connections and customer connection notes. Non-compliance to these instructions WILL invalidate unit warranty.
2. Wiring and components for compressor 3 only fitted when unit has 3 compressors on the system. 1-BMP3 is replaced by a link across terminals 134 & 135. 2-BMP3 is replaced by a link across terminals 234 & 235.
3. FHP2 is only fitted on CE YLAA0180 and above. When NOT fitted 1-FHP2 is replaced by a link across terminals 132 & 139. 2-FHP2 is replaced by a link across terminals 232 & 239.
4. Fitted on units with Hot Gas Bypass option.
5. EMS option is wired as shown.
6. This wiring MUST be used for old display 031-01110-000.
7. Network connection point.
8. Printer port.
9. Remote emergency stop can be wired between terminal L and 5 after removing link.
10. Power factor correction accessory. Power factor correction fitted to each compressor contactor.
11. Not fitted on compressors with internal motor protection. For system 1 terminals 132 & 133, 133 & 134 are linked. For system 2 terminals 232 & 233, 233 & 234 and 234 & 235 are linked.
12. Only fitted on systems with 3 or 4 fans.
13. Only fitted on systems with 4 fans.
14. Only fitted on systems with 5 fans.
15. Only fitted on systems with 6 fans.
16. Input disconnect (Standard on CE units) or circuit breaker option replaces input terminal block.
17. Input switch disconnect & individual system circuit breaker option replaces input terminal block.
18. 115V control circuit requires a 115V supply unless control circuit transformer -T2 & F3 are fitted (standard on CE units).
19. For optional Hydro Kit. Heater -EPH is fitted and wired as shown. On single pump -KP1, -QMMSP1 & -MP1 are fitted & wired as shown. On two pump Hydro Kits -KP2, -QMMSP2 & -MP2 are also fitted as wired as shown.
20. Current measurement option wired as shown.
21. Only fitted on systems with single speed fans.
22. Only fitted on systems with two speed fans.
23. Optional compressor manual motors starters (standard on CE units).
24. See sheet 3 of connection diagram for power input options.
25. Alternate connections shown for different two speed motor types.
26. Only fitted on systems with a maximum of 4 fans.
27. 220/230V units require a separate fuse for units with 4 or more fans per system.
28. Low Ambient Kit - FSC for fan -MF1 is only fitted on systems with less than 4 fans.
29. Only fitted on YLAA0091.
30. Only fitted on YLAA0090, 0091, & 0135.
31. Input dual point circuit breaker option replaces input terminal block.
32. Field installed on remote evaporator units.
33. Fitted on units with single phase motors only.
34. Fitted on units with low ambient option only.

ELEMENTARY DIAGRAM
(YLAA0070-0080-0090-0091-0100-0101-0115-0120-0125-0135-0150-0155)

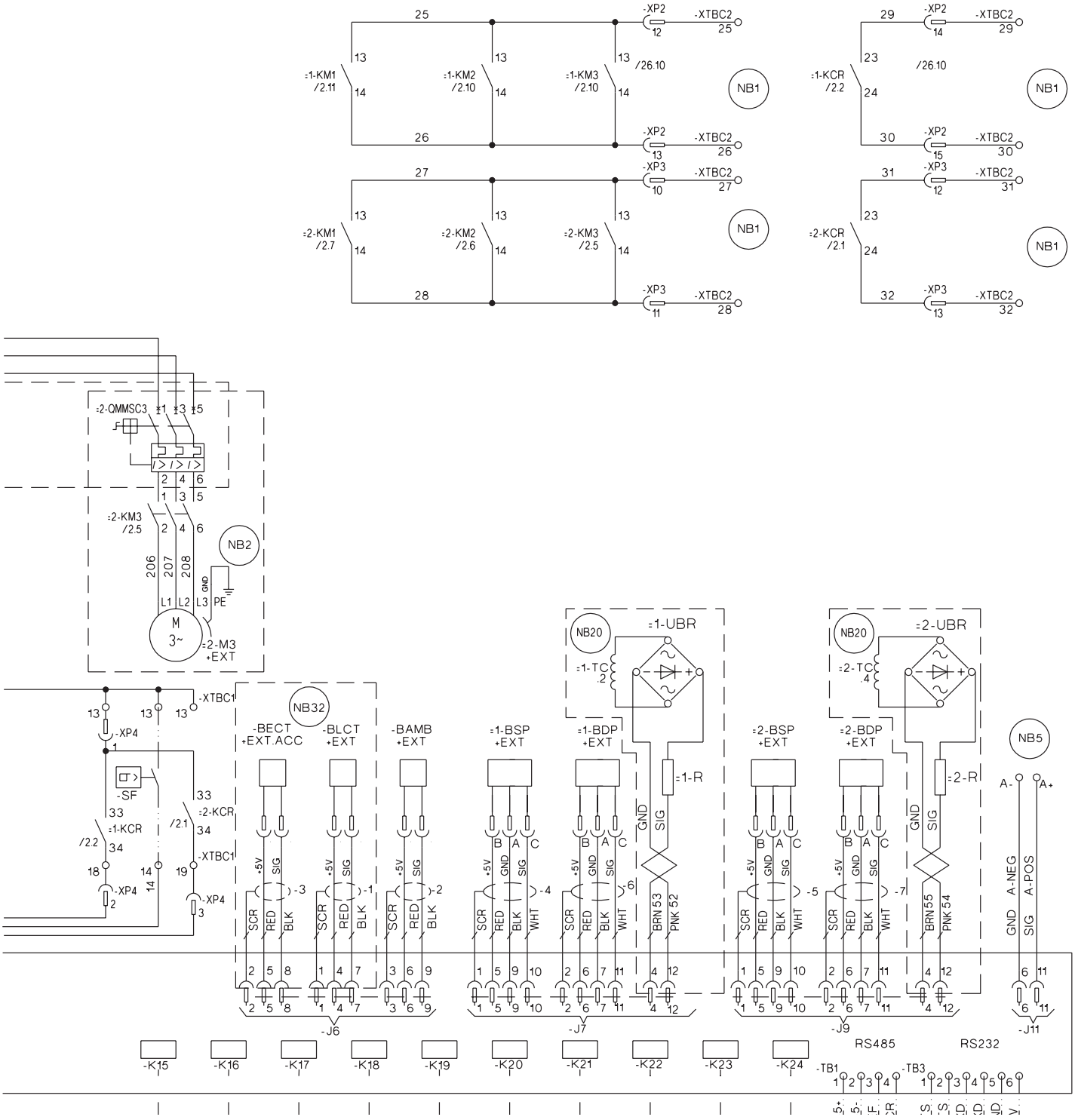
035-21583-101 Rev.C



LD13835

FIG. 1 – ELEMENTARY DIAGRAM

ELEMENTARY DIAGRAM (CON'T)
(YLAA0070-0080-0090-0091-0100-0101-0115-0120-0125-0135-0150-0155)



LD13835

FIG. 1 (CON'T) – ELEMENTARY DIAGRAM

ELEMENTARY DIAGRAM
(YLAA0070-0080-0090-0091-0100-0101-0115-0120-0125-0135-0150-0155)

035-21583-102 Rev. C

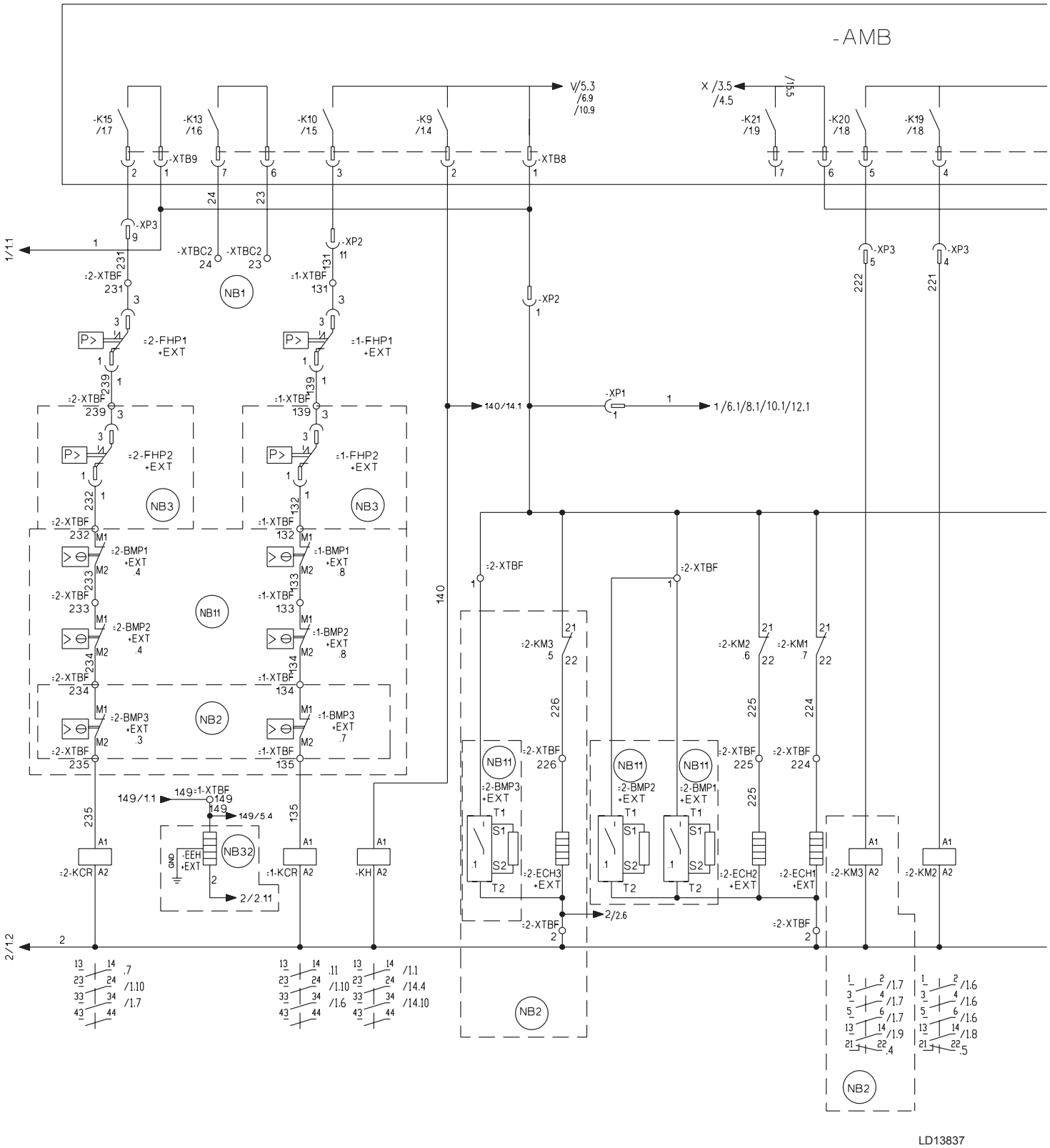


FIG. 2 – ELEMENTARY DIAGRAM

ELEMENTARY DIAGRAM (CON'T)
(YLAA0070-0080-0090-0091-0100-0101-0115-0120-0125-0135-0150-0155)

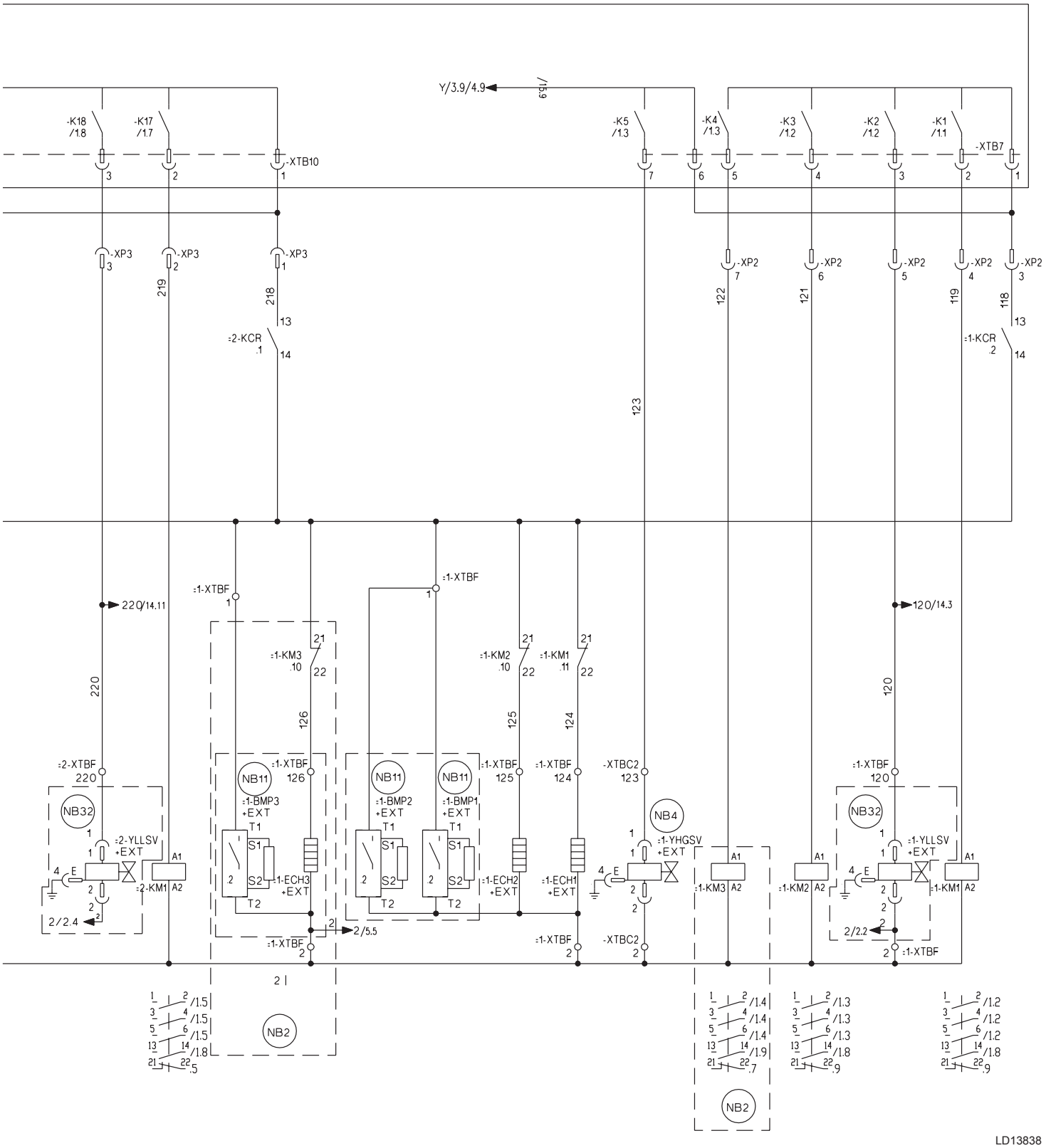
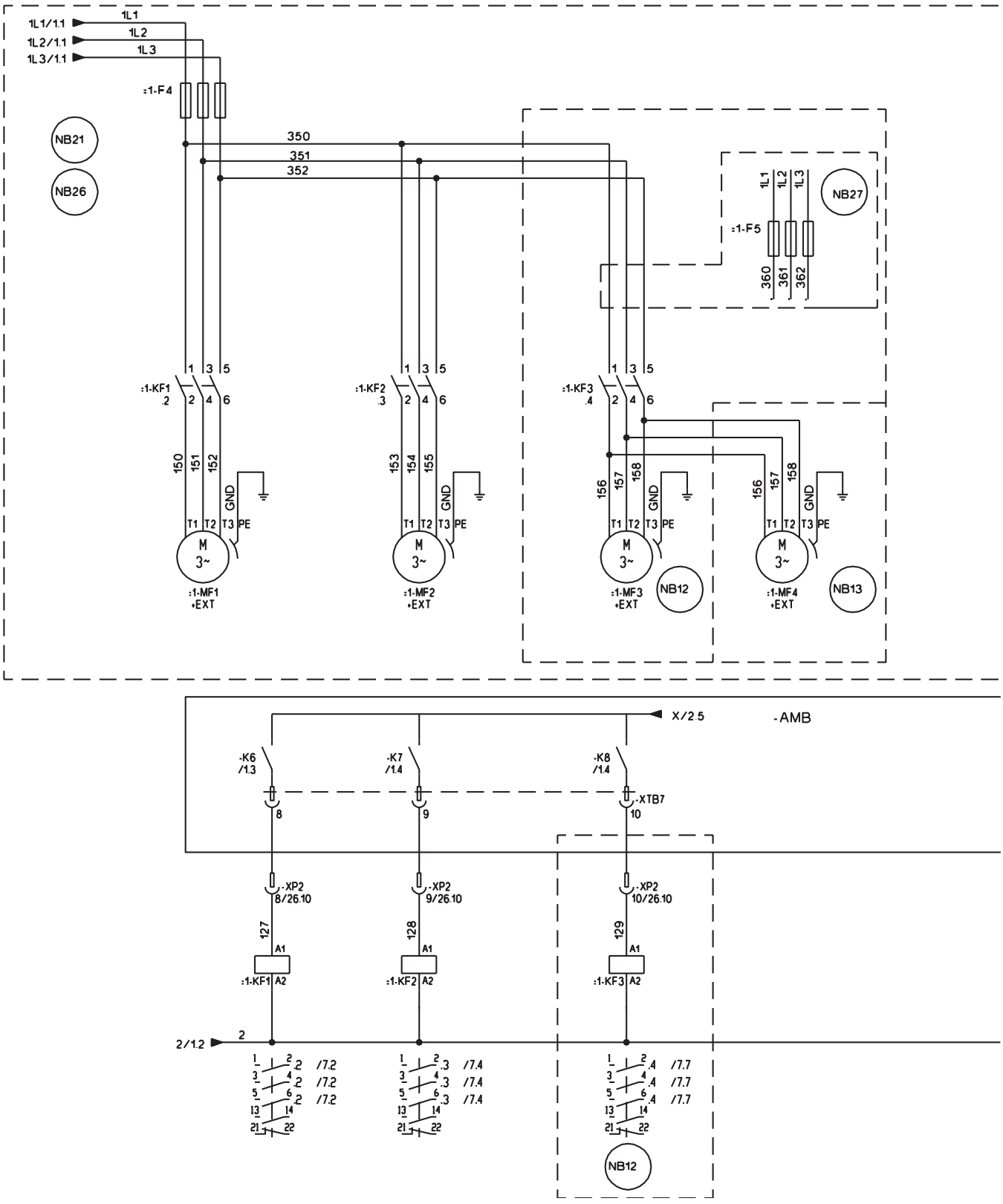


FIG. 2 (CON'T) – ELEMENTARY DIAGRAM

ELEMENTARY DIAGRAM

(YLAA0070-0080-0090-0091-0100-0101-0115-0120-0125-0135-0150-0155)

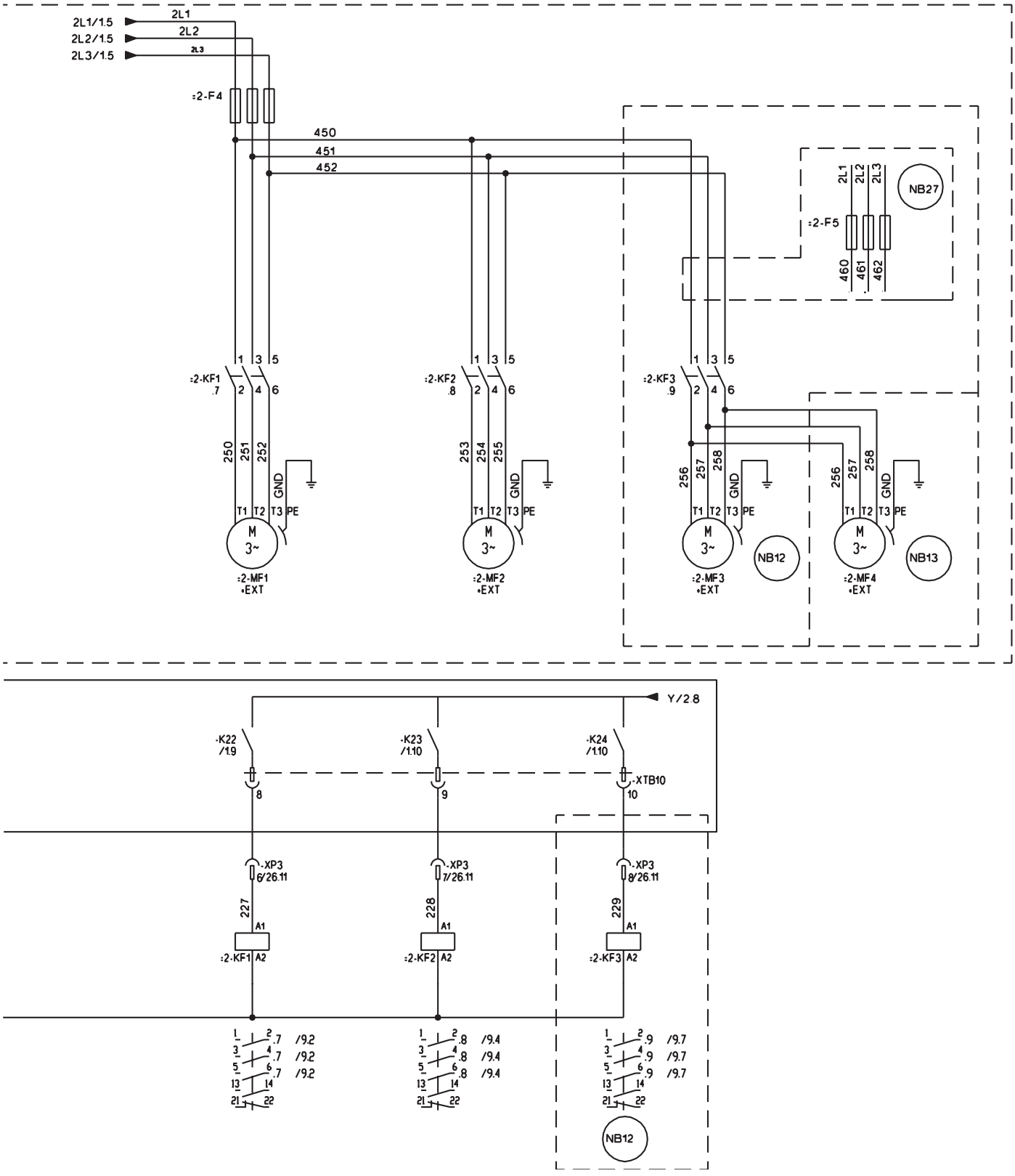
035-21583-103 Rev. B



LD13992

FIG. 3 – ELEMENTARY DIAGRAM

ELEMENTARY DIAGRAM (CON'T)
(YLAA0070-0080-0090-0091-0100-0101-0115-0120-0125-0135-0150-0155)

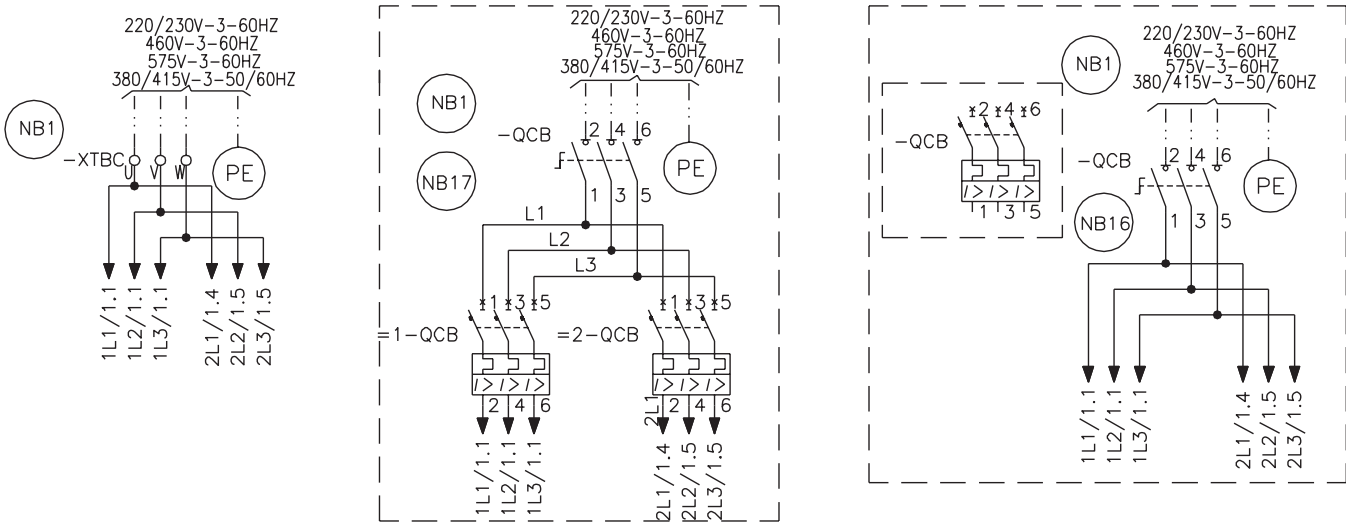


LD13993

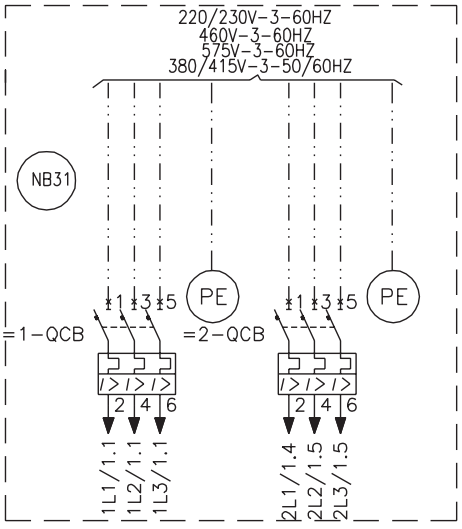
FIG. 3 (CON'T) – ELEMENTARY DIAGRAM

ELEMENTARY DIAGRAM
(YLAA0070-0080-0090-0091-0100-0101-0115-0120-0125-0135-0150-0155)

035-21583-116 Rev.-



SINGLE POINT WIRING OPTIONS



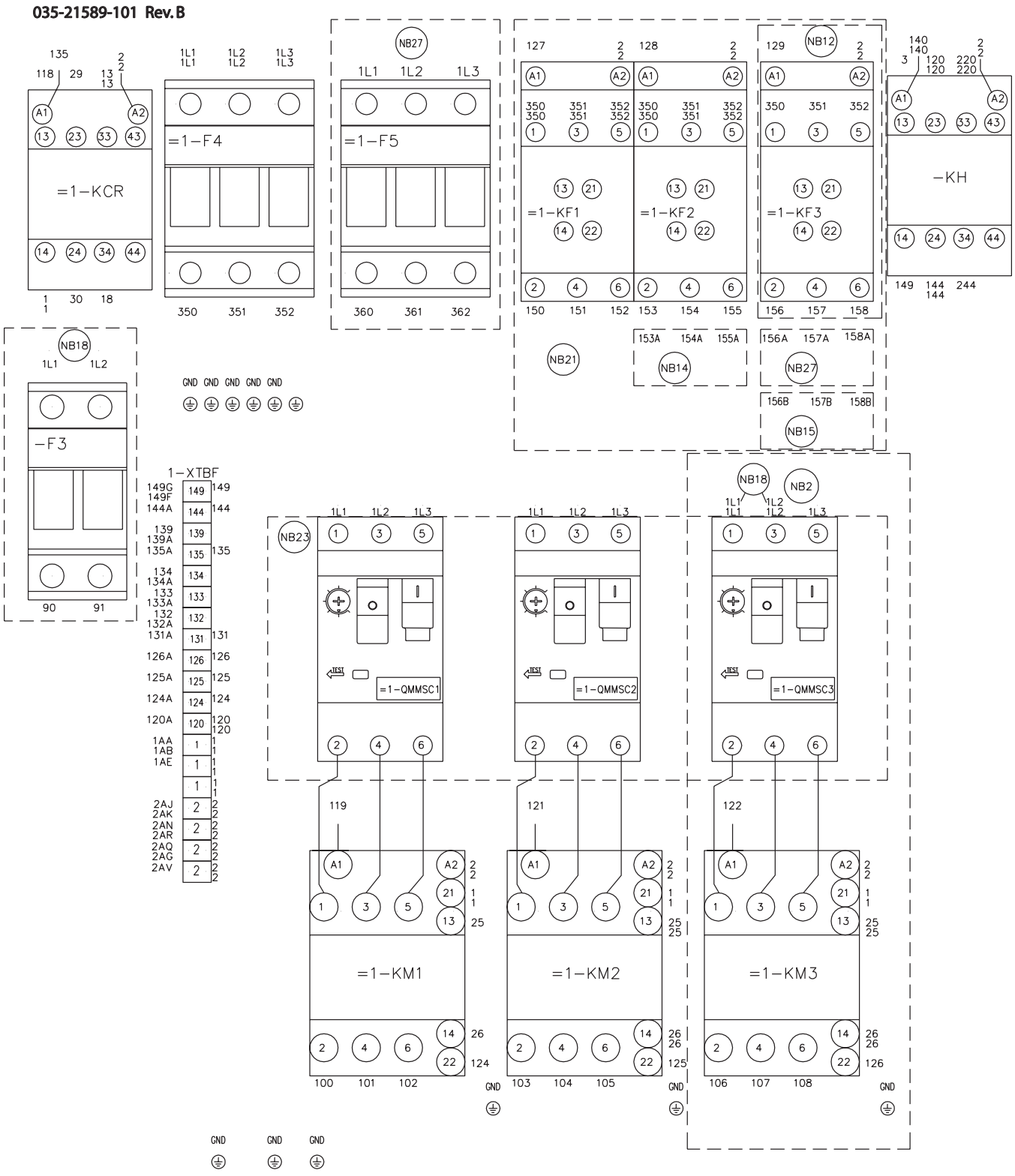
DUAL POINT WIRING OPTION

LD13992

FIG. 4 – ELEMENTARY DIAGRAM

THIS PAGE INTENTIONALLY LEFT BLANK

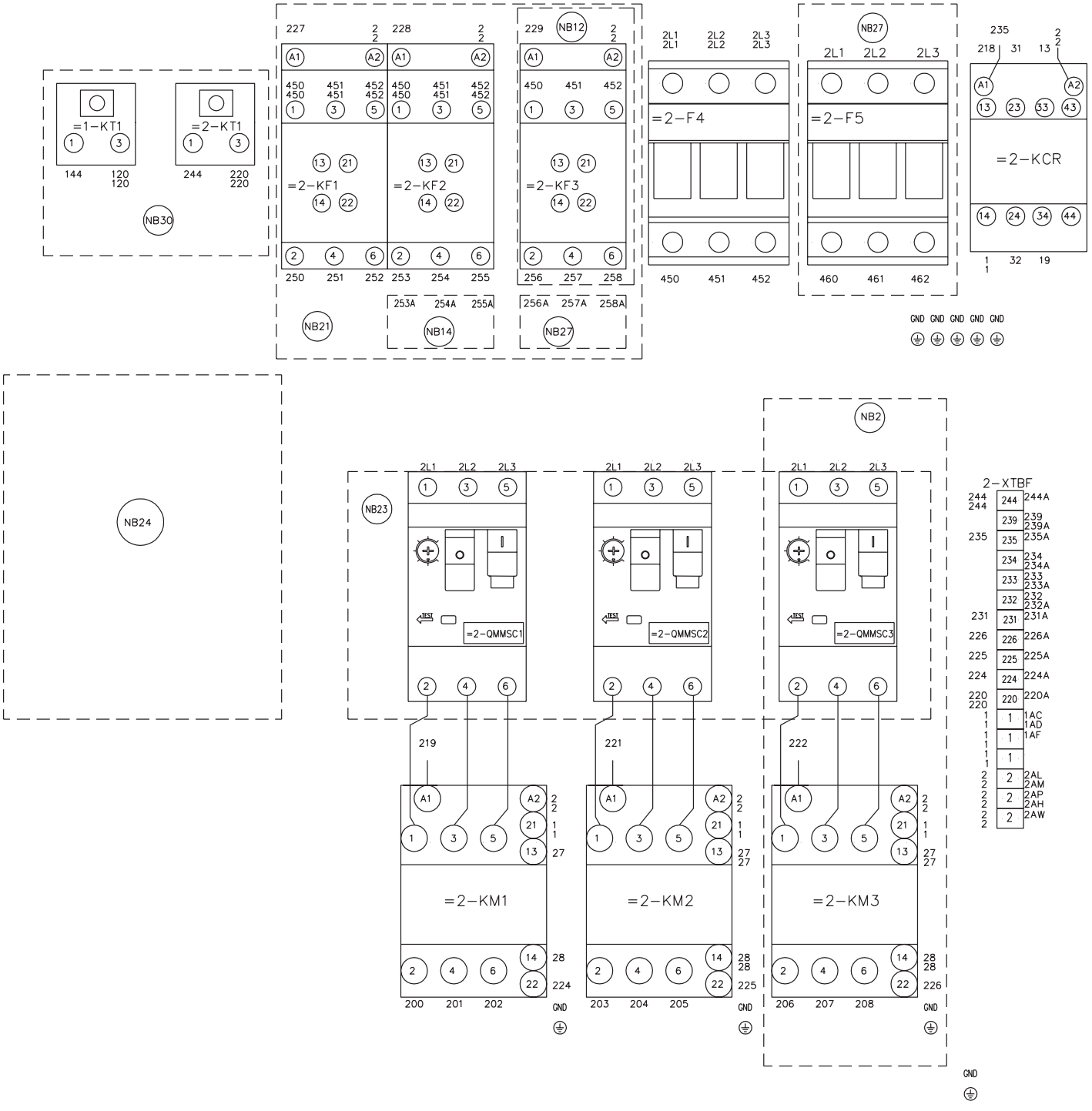
CONNECTION DIAGRAM
(YLAA0070-0080-0090-0091-0100-0101-0115-0120-0125-0135-0150-0155)



LD14025

FIG. 5 – CONNECTION DIAGRAM

CONNECTION DIAGRAM (CON'T)
(YLAA0070-0080-0090-0091-0100-0101-0115-0120-0125-0135-0150-0155)



LD14026

FIG. 5 (CON'T) – CONNECTION DIAGRAM

CONNECTION DIAGRAM
(YLAA0070-0080-0090-0091-0100-0101-0115-0120-0125-0135-0150-0155)

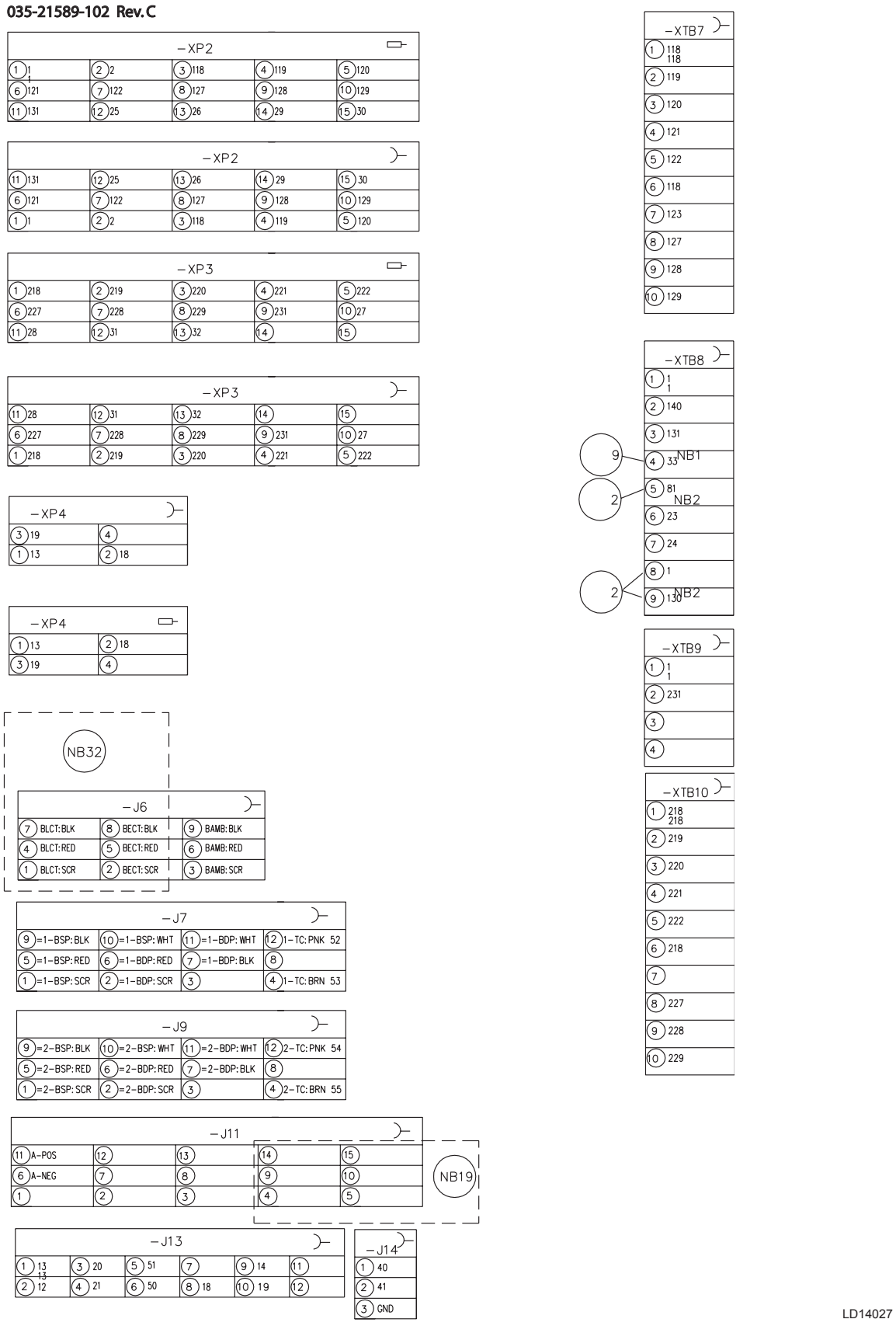
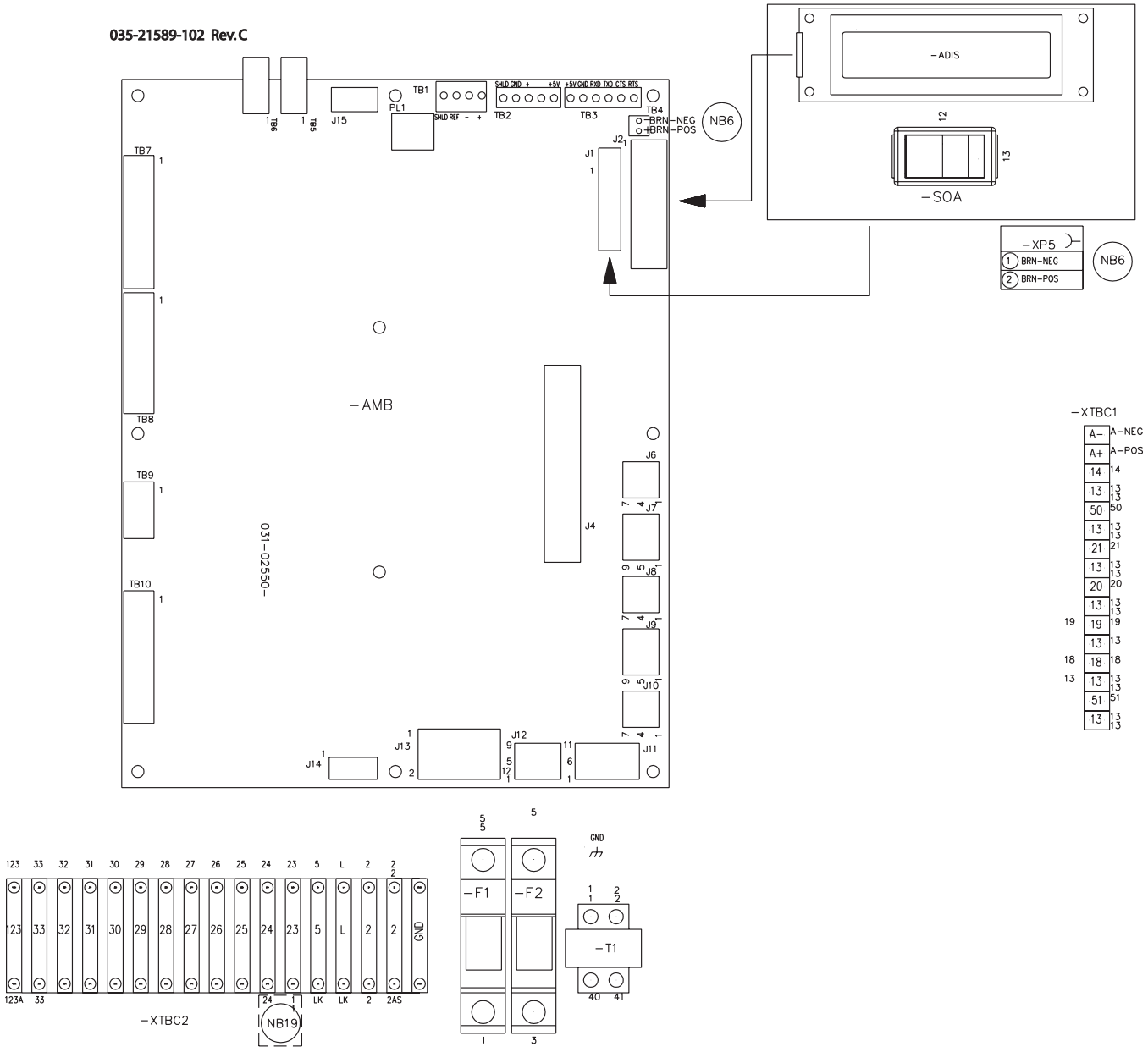


FIG. 6 – CONNECTION DIAGRAM

CONNECTION DIAGRAM (CON'T)
(YLAA0070-0080-0090-0091-0100-0101-0115-0120-0125-0135-0150-0155)

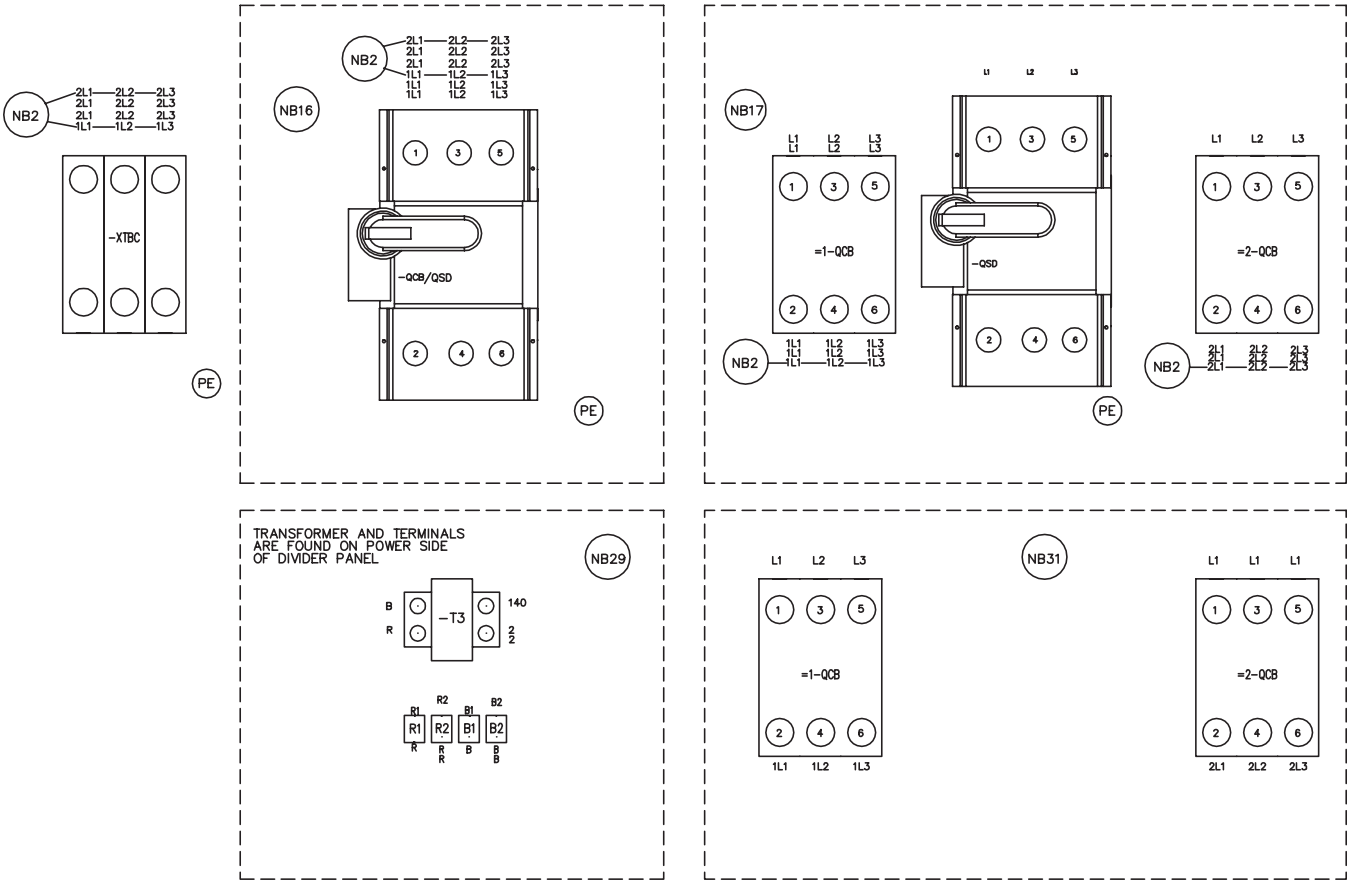


LD14027

FIG. 6 (CON'T) – CONNECTION DIAGRAM

CONNECTION DIAGRAM
(YLAA0070-0080-0090-0091-0100-0101-0115-0120-0125-0135-0150-0155)

035-21589-103 Rev. B

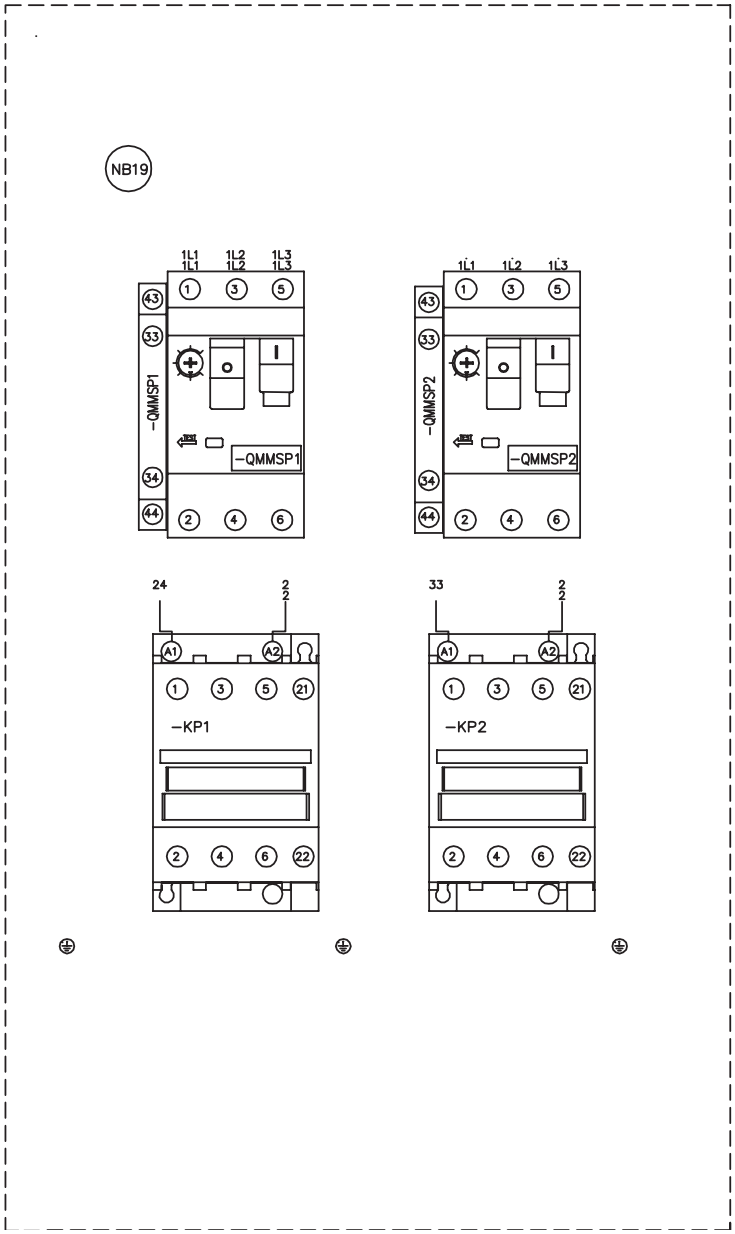


LD14029

FIG. 7 – CONNECTION DIAGRAM

CONNECTION DIAGRAM (CON'T)
(YLAA0070-0080-0090-0091-0100-0101-0115-0120-0125-0135-0150-0155)

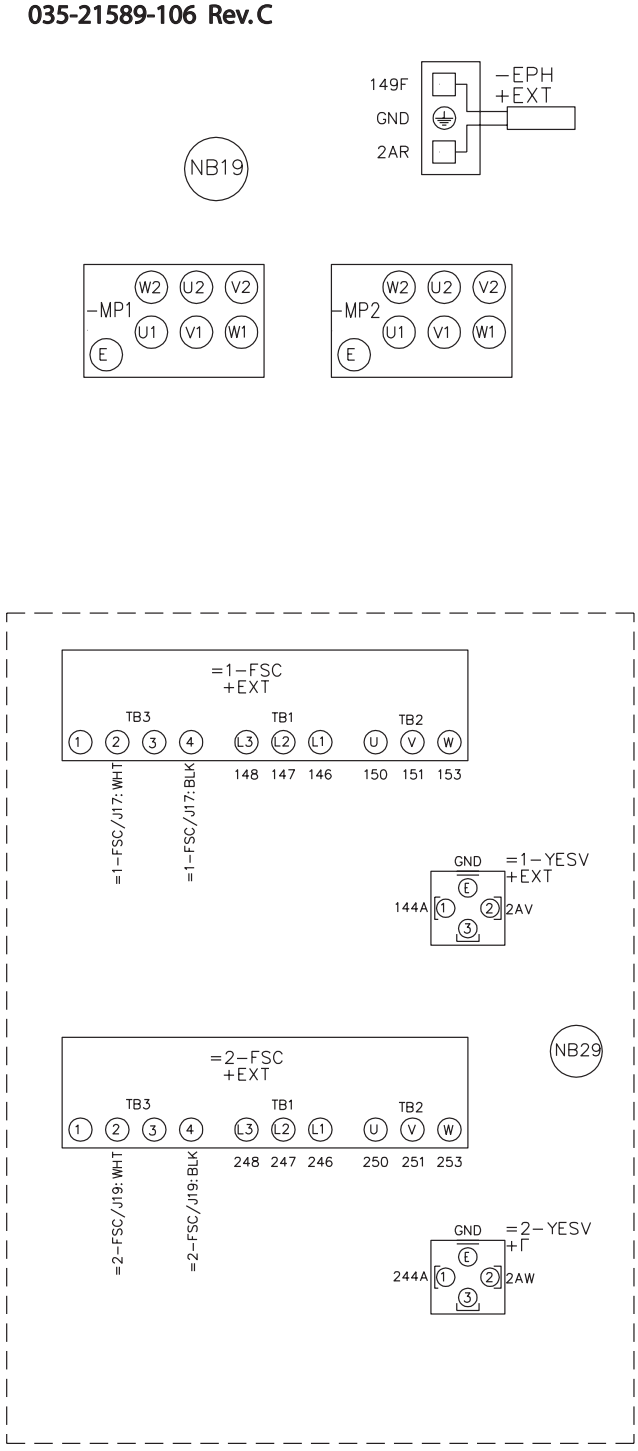
035-21589-103 Rev. B



LD14030

FIG. 7 (CON'T) – CONNECTION DIAGRAM

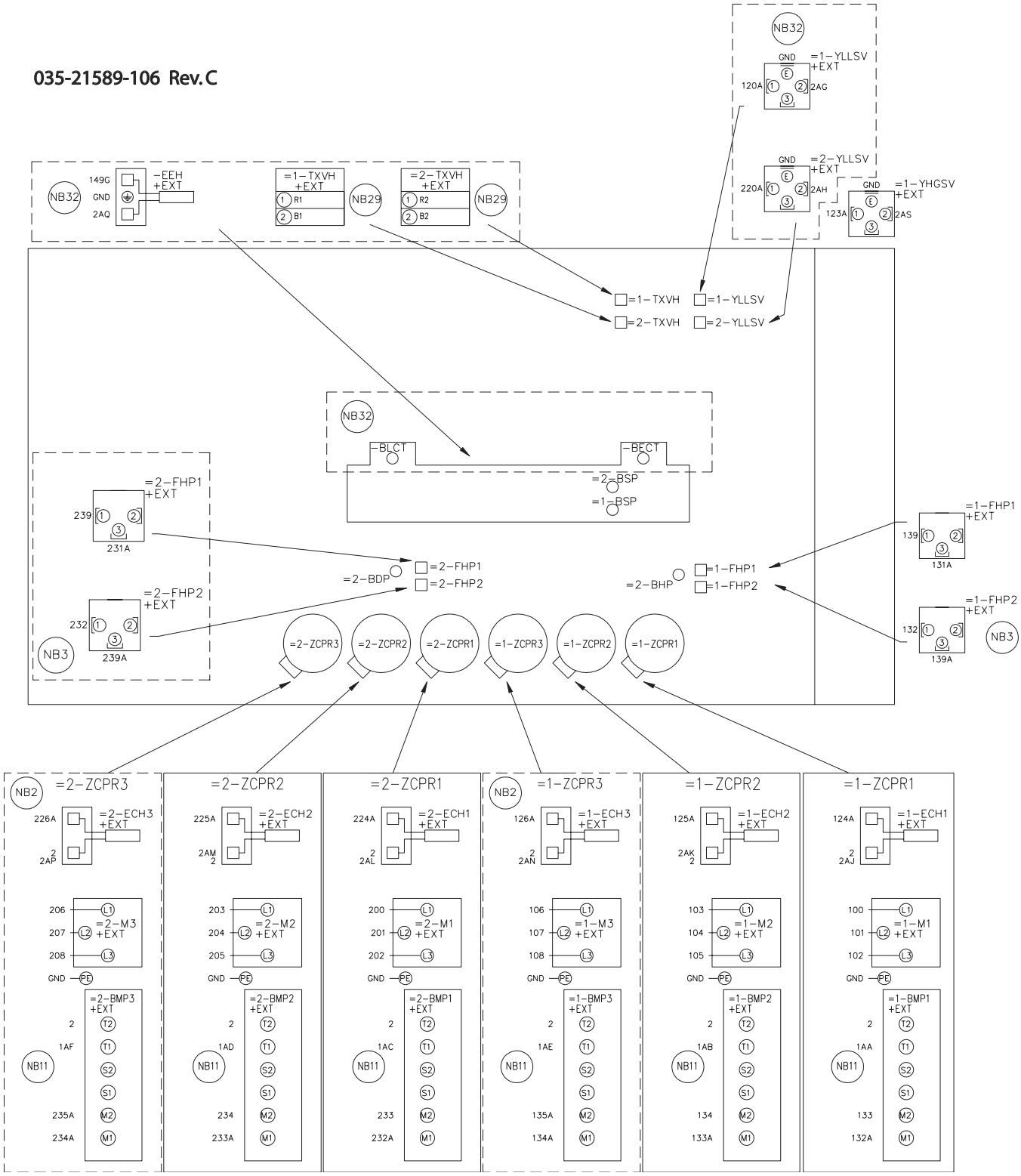
CONNECTION DIAGRAM
(YLAA0070-0080-0090-0091-0100-0101-0115-0120-0125-0135-0150-0155)



LD14031

FIG. 8 – CONNECTION DIAGRAM

CONNECTION DIAGRAM (CON'T)
(YLAA0070-0080-0090-0091-0100-0101-0115-0120-0125-0135-0150-0155)

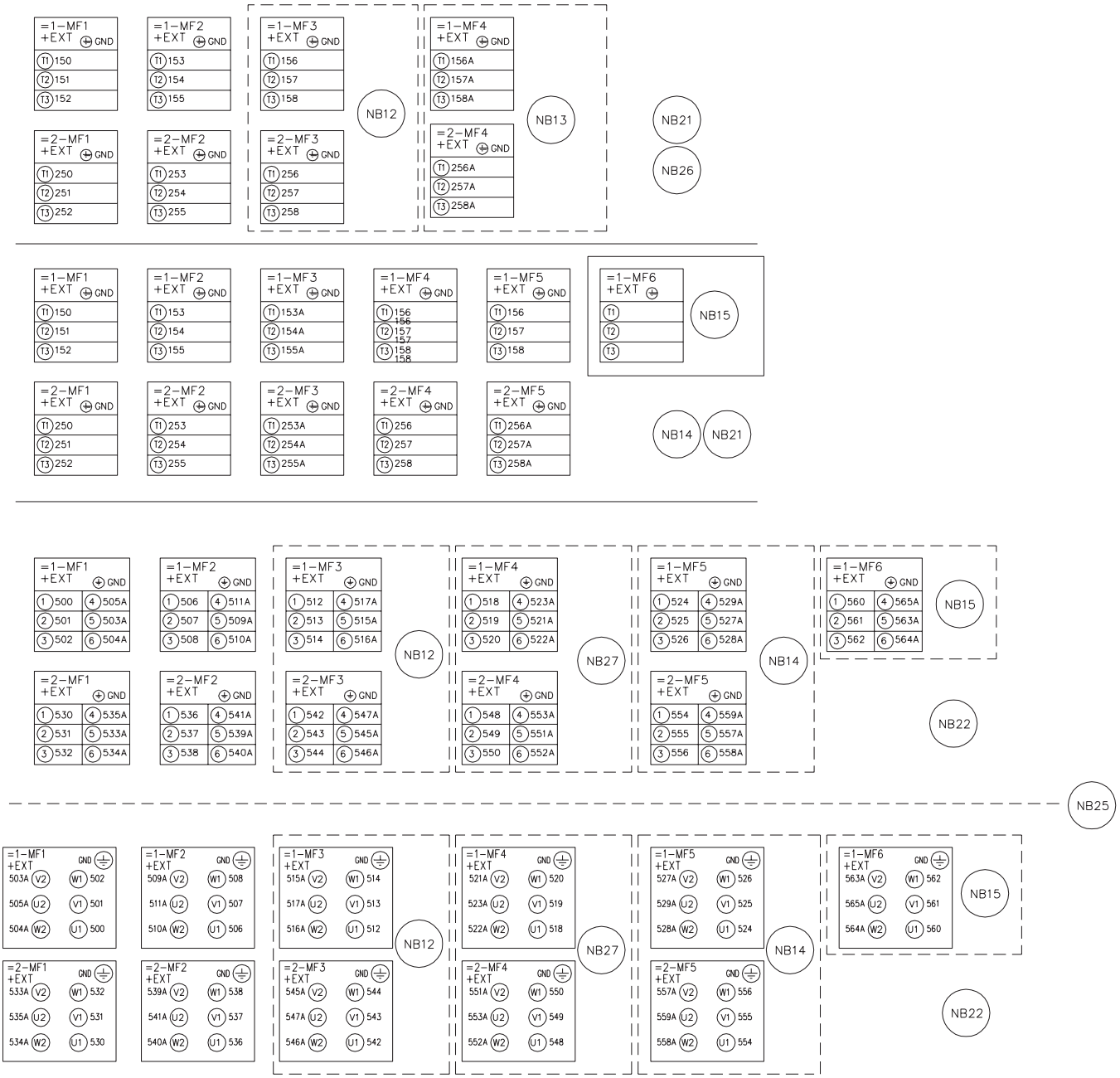


LD14032

FIG. 8 (CON'T) – CONNECTION DIAGRAM

CONNECTION DIAGRAM
(YLAA0070-0080-0090-0091-0100-0101-0115-0120-0125-0135-0150-0155)

035-21589-107 Rev. A

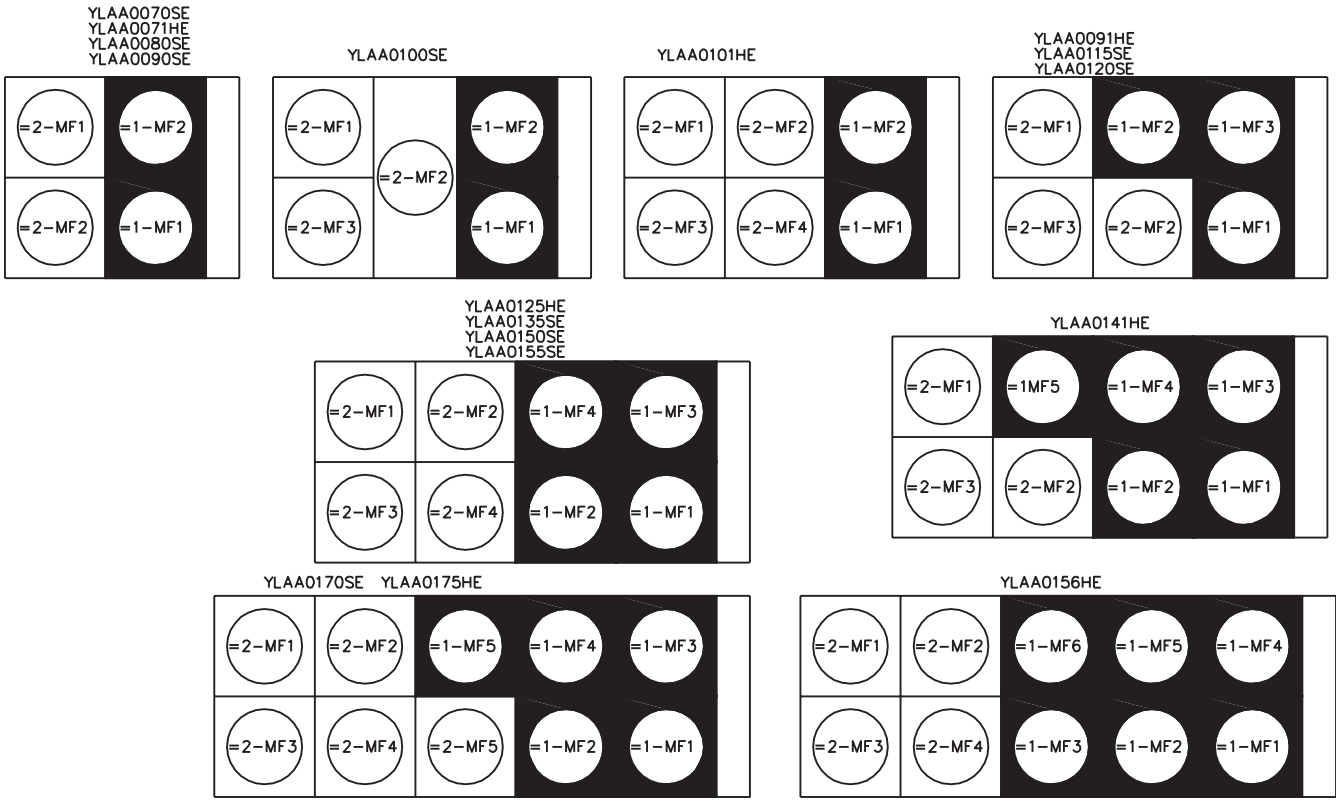


LD14034

FIG. 9 – CONNECTION DIAGRAM

CONNECTION DIAGRAM (CON'T)
(YLAA0070-0080-0090-0091-0100-0101-0115-0120-0125-0135-0150-0155)

035-21589-107 Rev. A

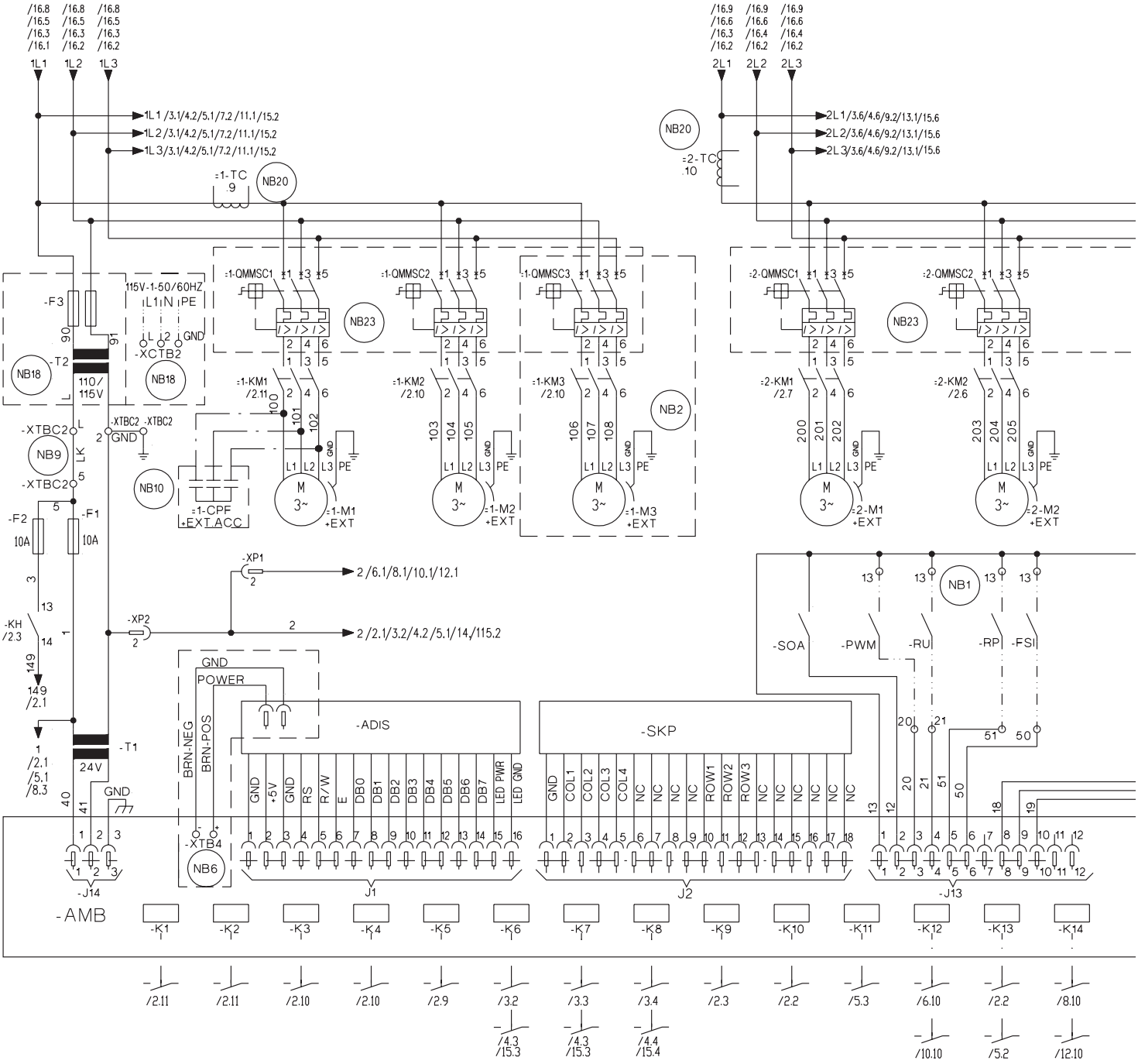


LD14035

FIG. 9 (CON'T) – CONNECTION DIAGRAM

ELEMENTARY DIAGRAM
(YLAA0141-0156)

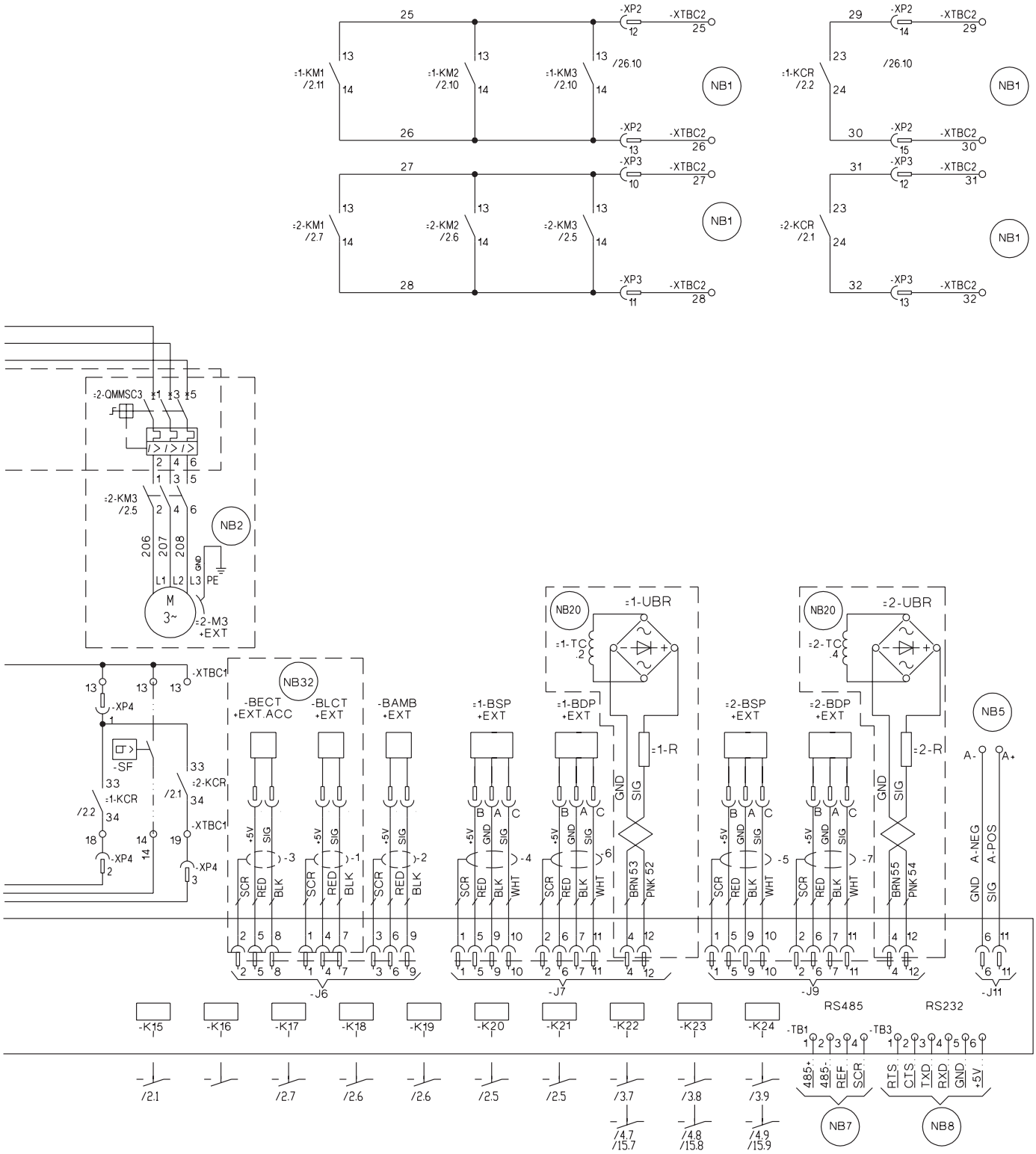
035-21583-101 Rev.C



LD13835

FIG. 10 – ELEMENTARY DIAGRAM

ELEMENTARY DIAGRAM (CON'T)
(YLAA0141-0156)



LD13835

FIG. 10 (CON'T) – ELEMENTARY DIAGRAM

ELEMENTARY DIAGRAM
(YLAA0141-0156)

035-21583-102 Rev. C

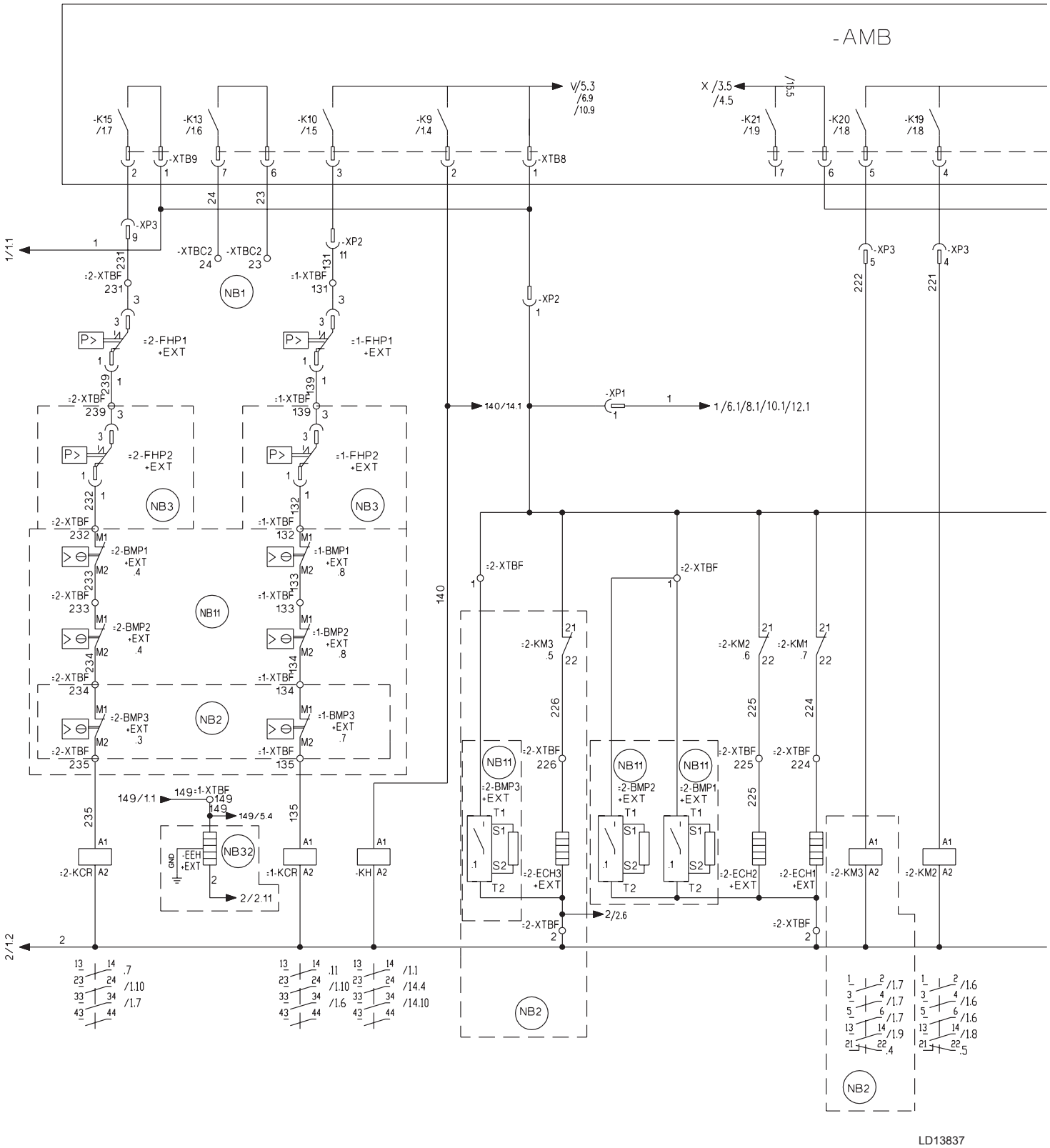
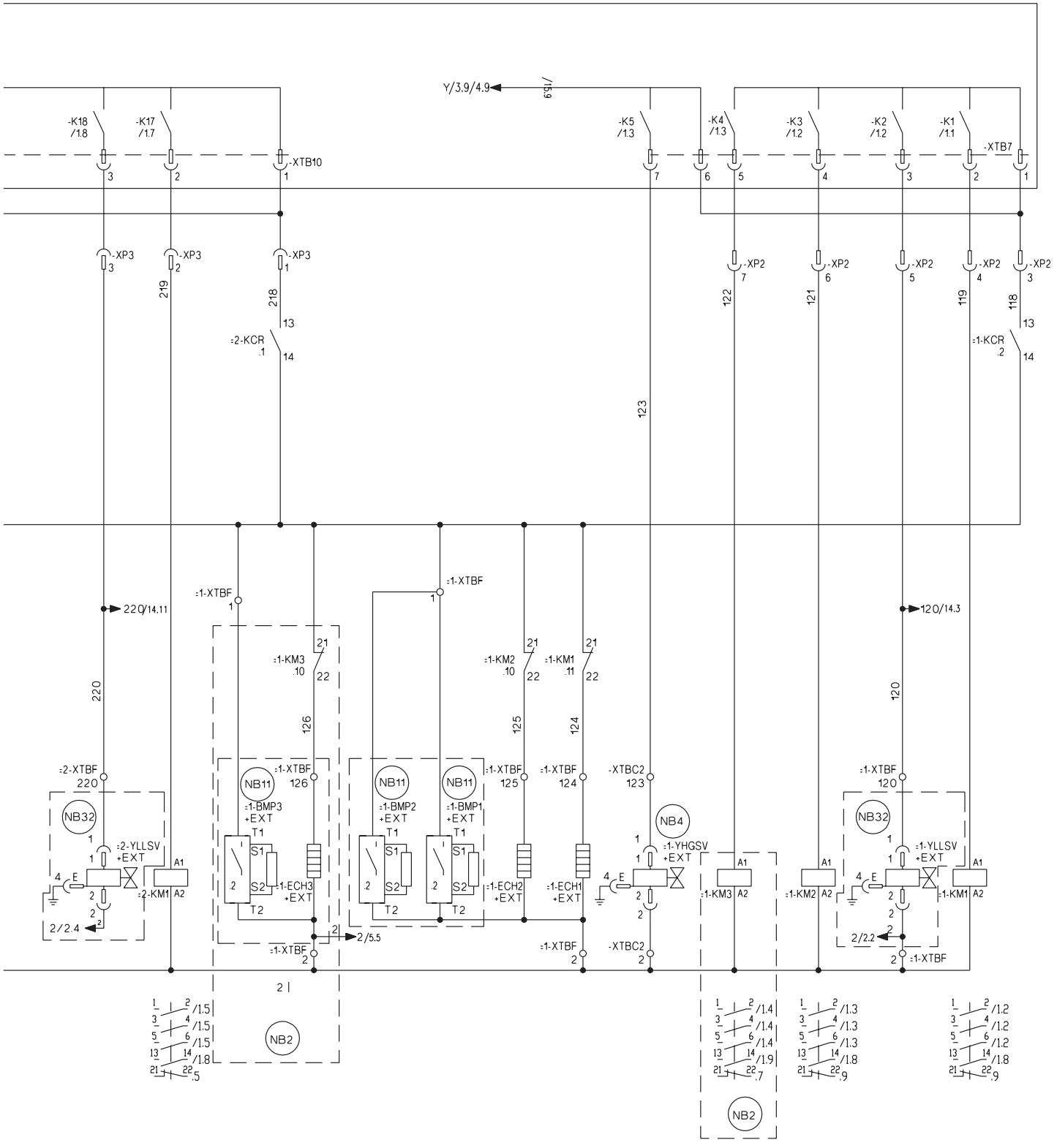


FIG. 11 – ELEMENTARY DIAGRAM

ELEMENTARY DIAGRAM (CON'T)
(YLAA0141-0156)



LD13838

FIG. 11 (CON'T) – ELEMENTARY DIAGRAM

ELEMENTARY DIAGRAM
(YLAA0141-0156)

035-21583-116 Rev. A

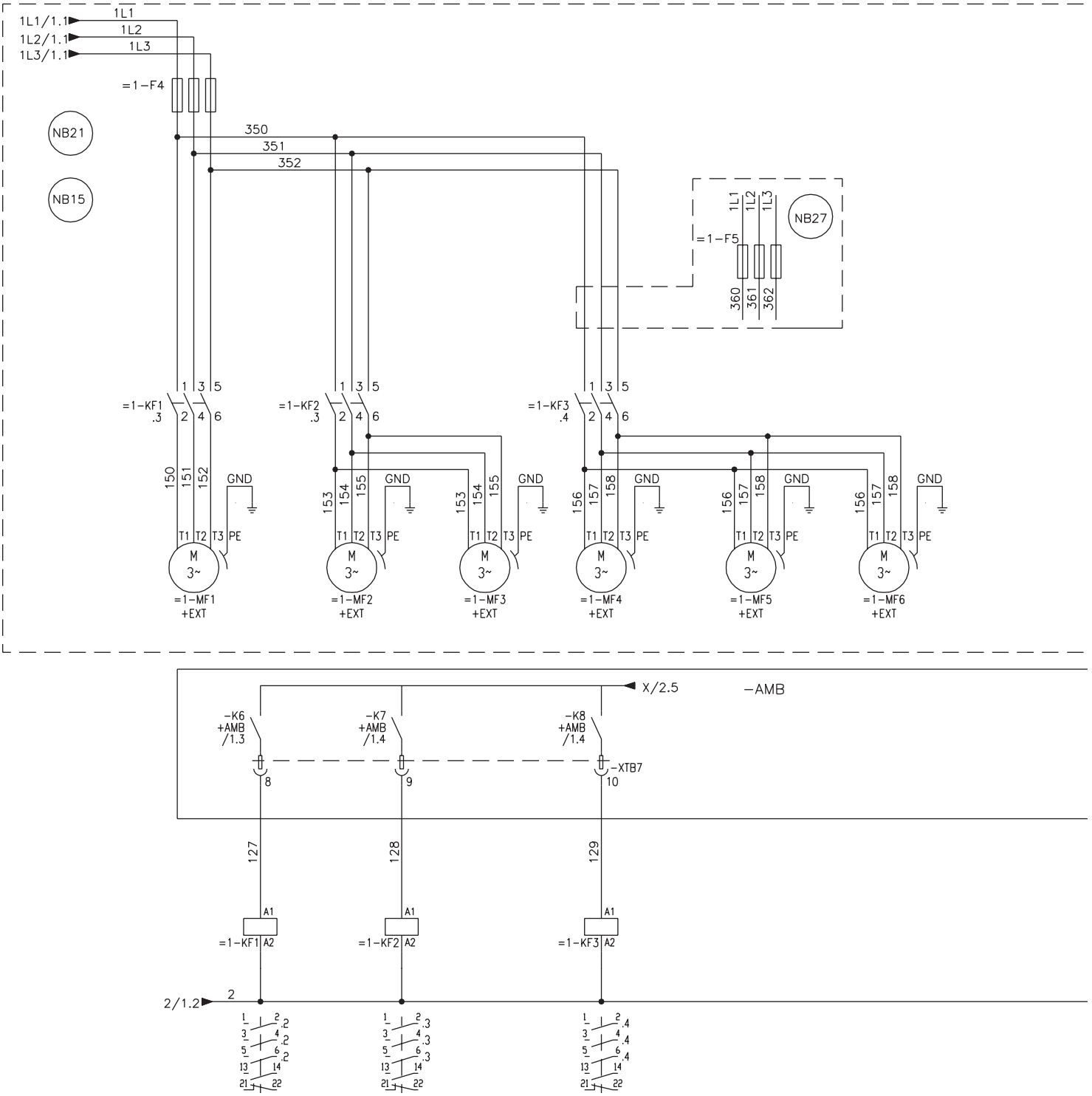
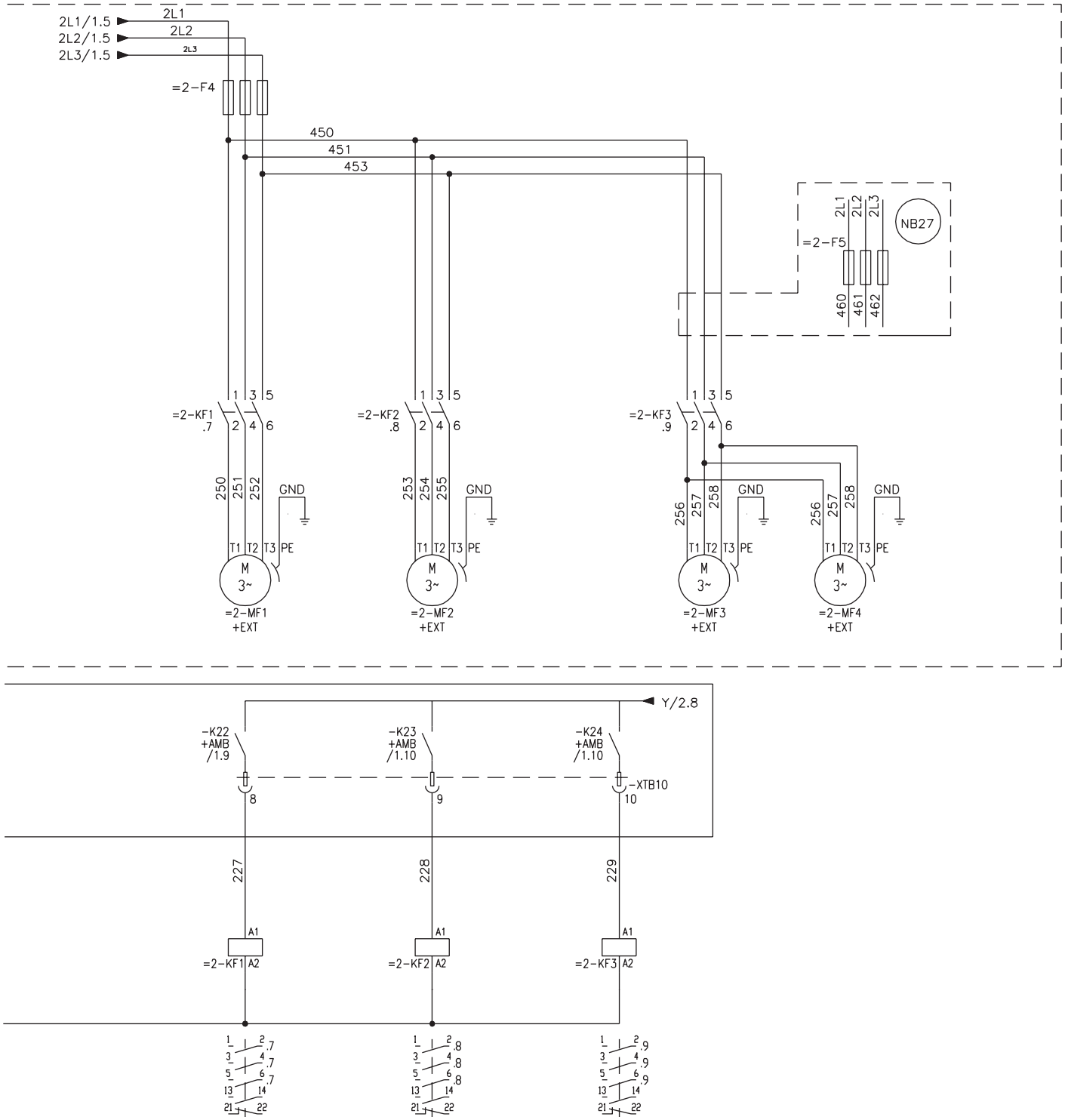


FIG. 12 – ELEMENTARY DIAGRAM

ELEMENTARY DIAGRAM (CON'T)
(YLAA0141-0156)

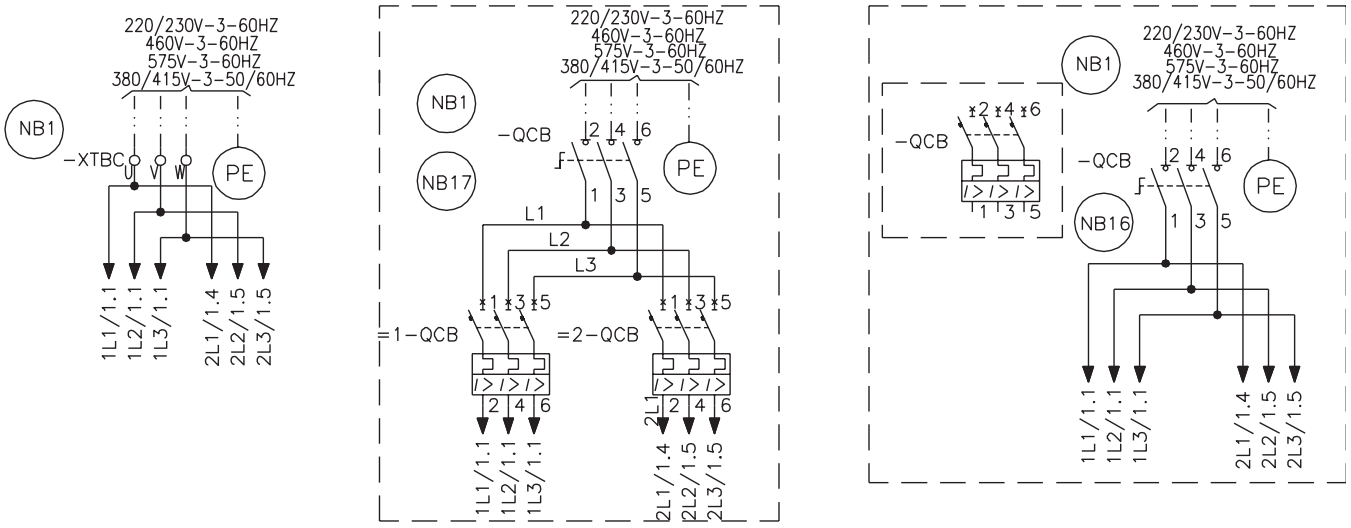


LD14037

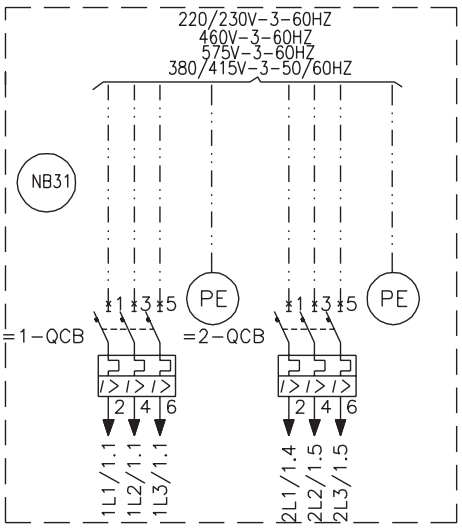
FIG. 12 (CON'T) – ELEMENTARY DIAGRAM

ELEMENTARY DIAGRAM
(YLAA0141-0156)

035-21583-116 Rev.-



SINGLE POINT WIRING OPTIONS



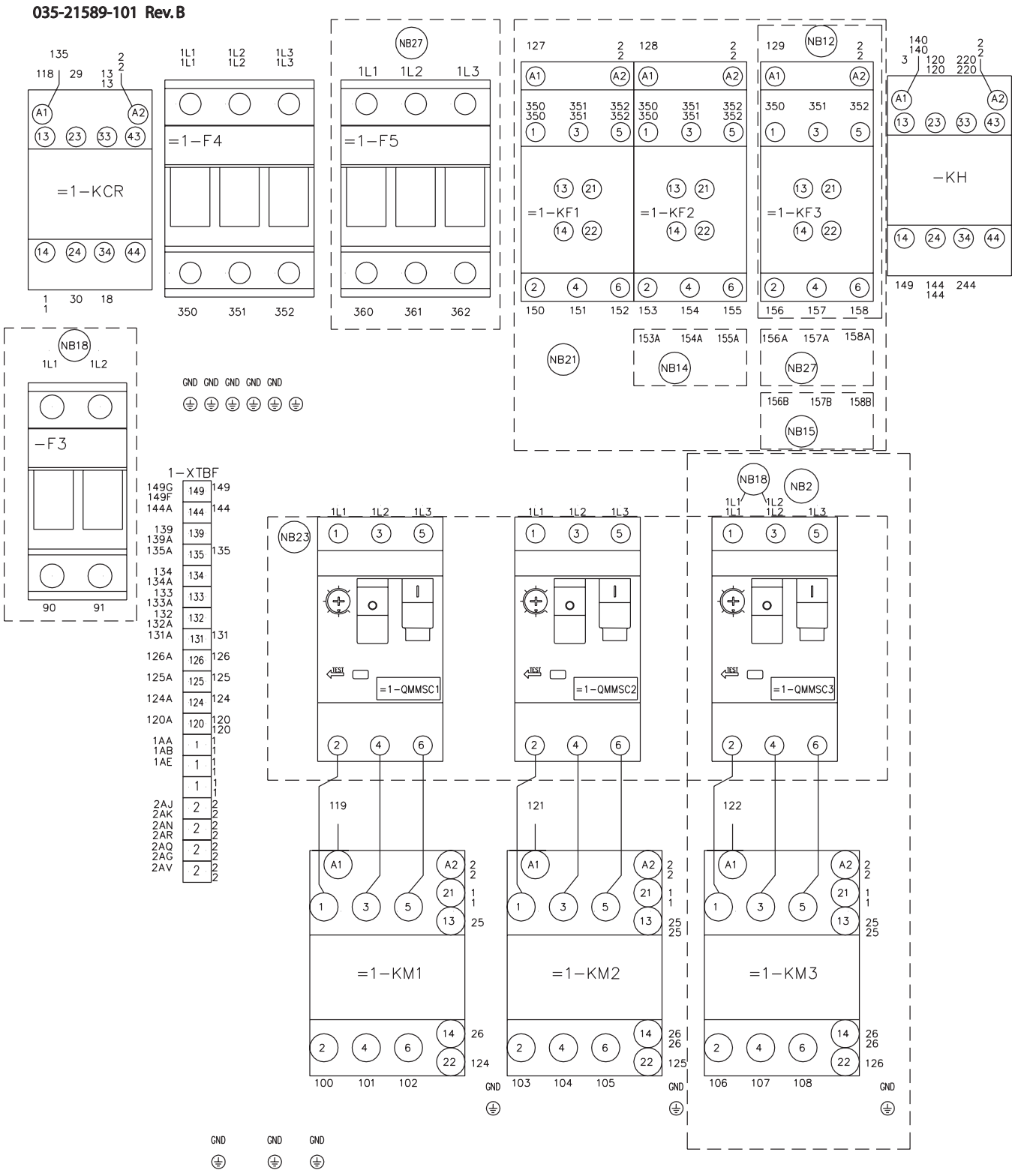
DUAL POINT WIRING OPTION

LD14033

FIG. 13 – ELEMENTARY DIAGRAM

THIS PAGE INTENTIONALLY LEFT BLANK

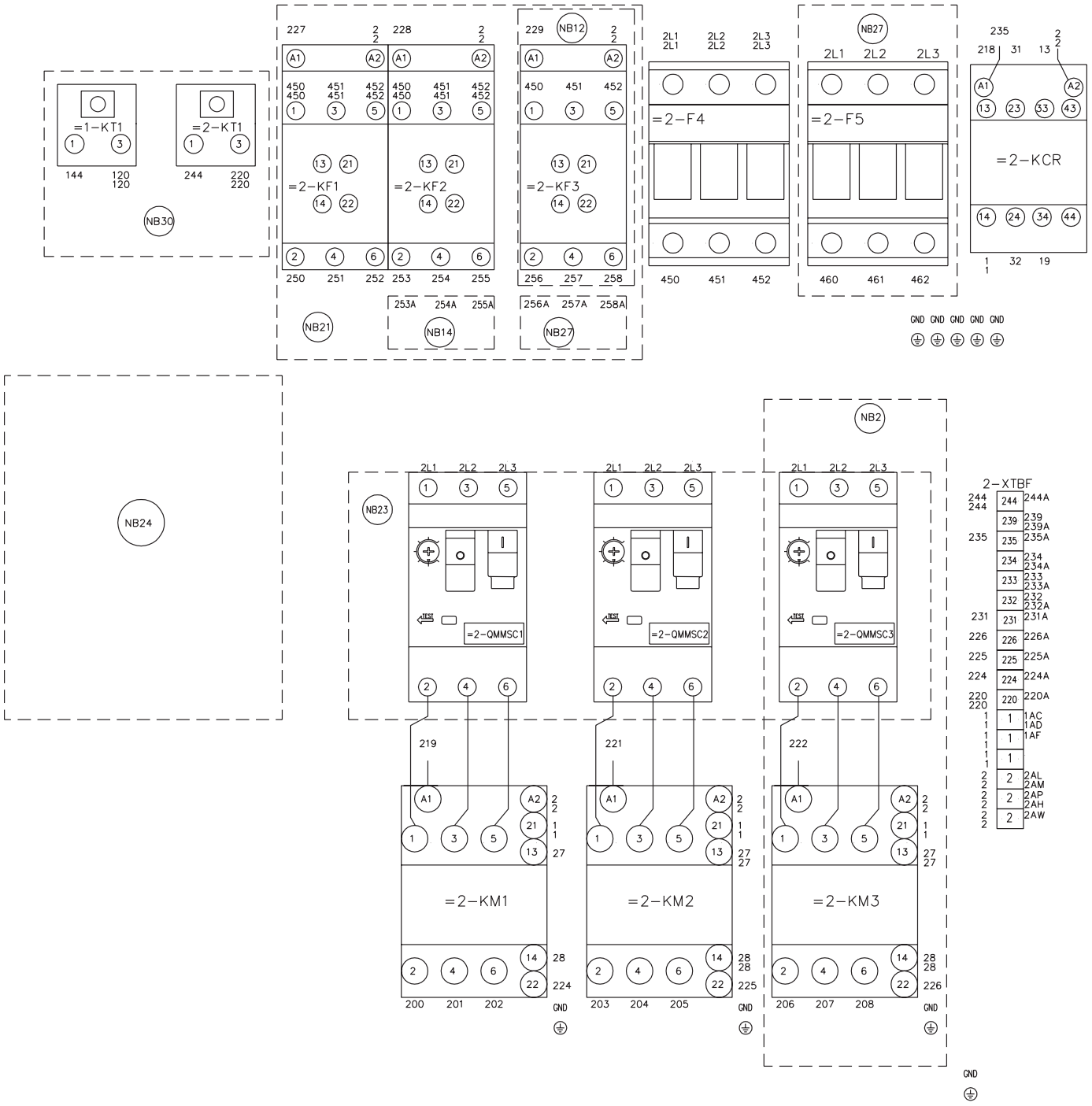
CONNECTION DIAGRAM
(YLAA0141-0156)



LD14025

FIG. 14 – CONNECTION DIAGRAM

CONNECTION DIAGRAM (CON'T)
(YLAA0141-0156)



LD14026

FIG. 14 (CON'T) – CONNECTION DIAGRAM

2

CONNECTION DIAGRAM
(YLAA0141-0156)

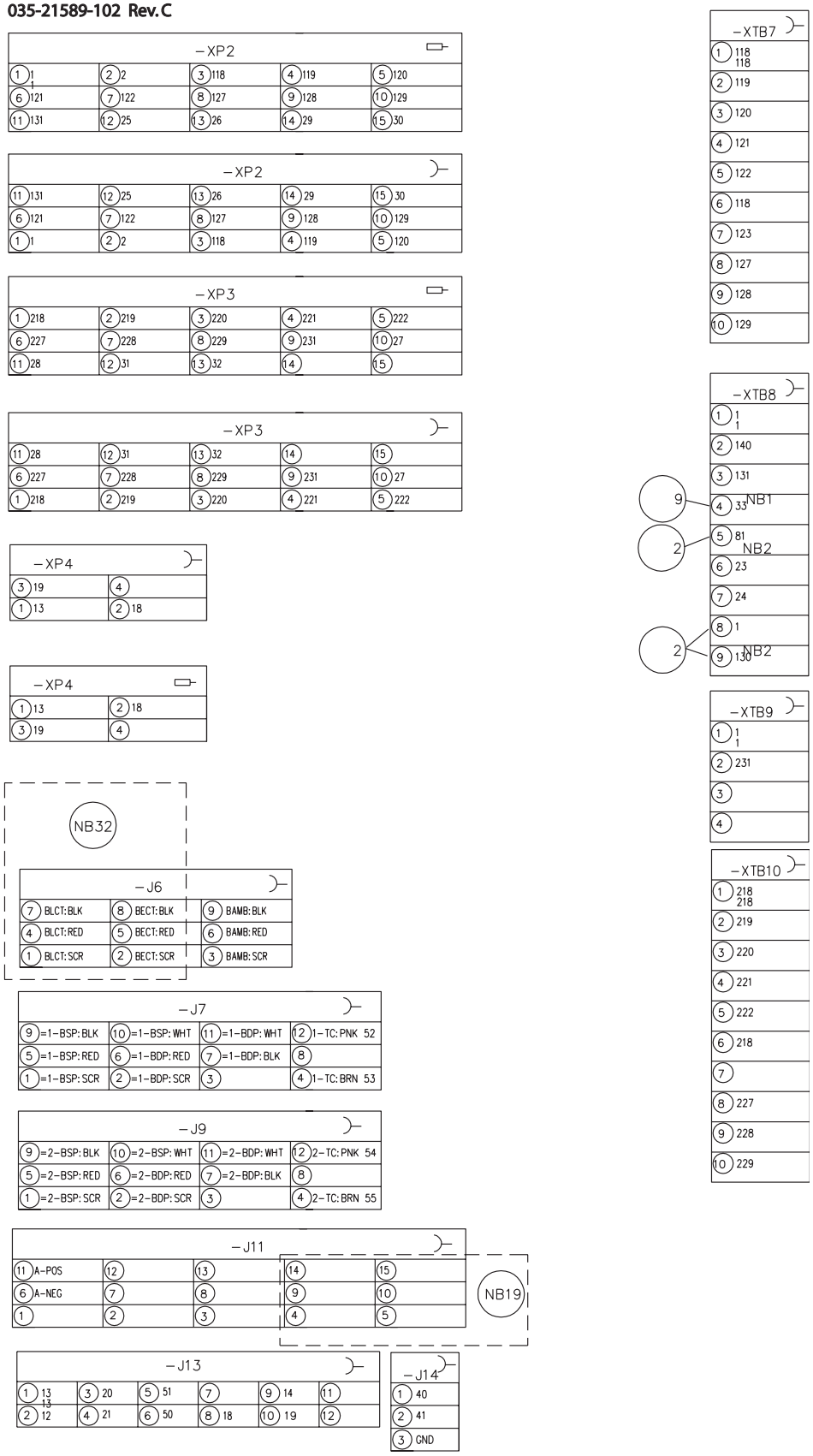
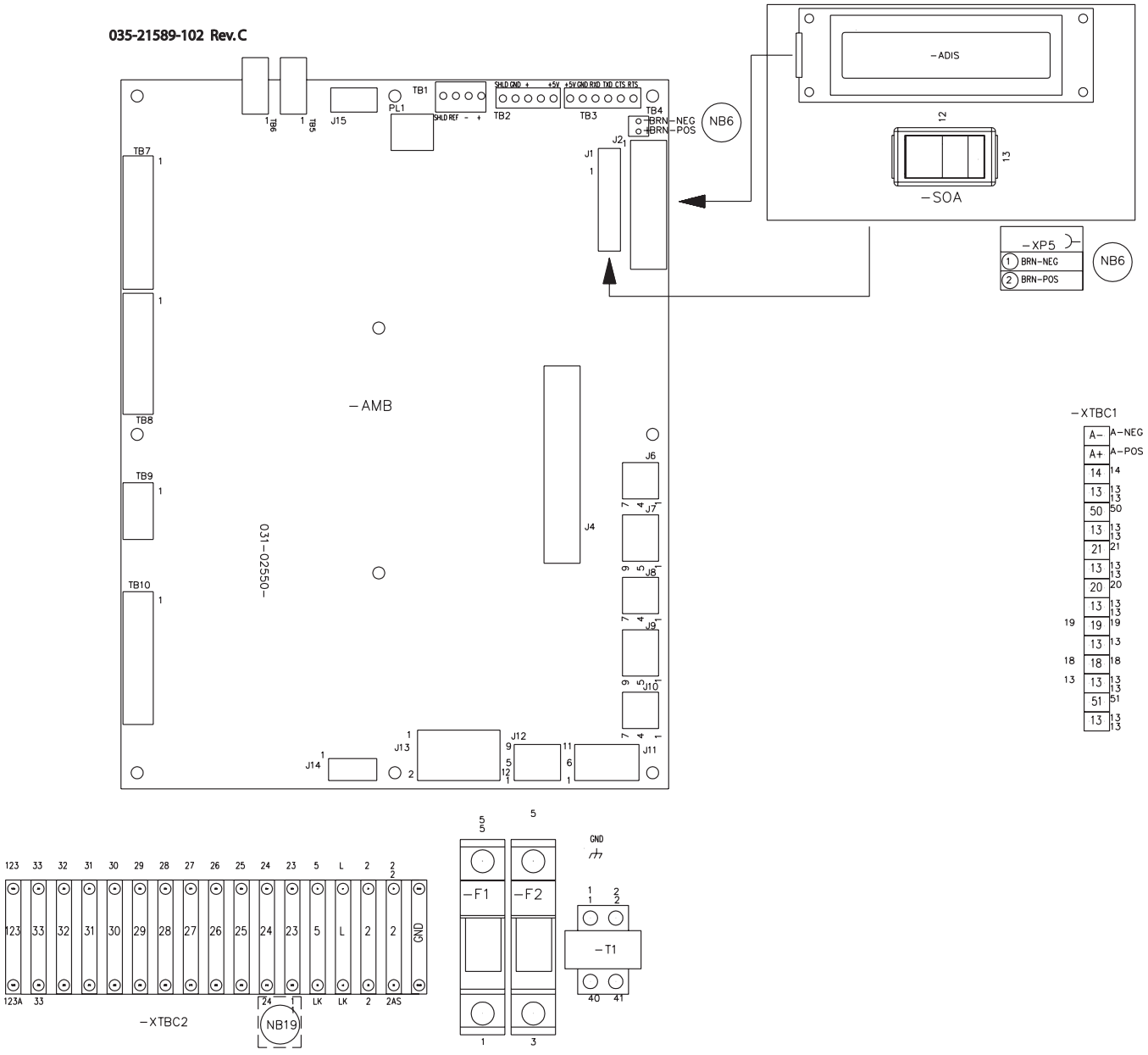


FIG. 15 – CONNECTION DIAGRAM

CONNECTION DIAGRAM (CON'T)
(YLAA0141-0156)

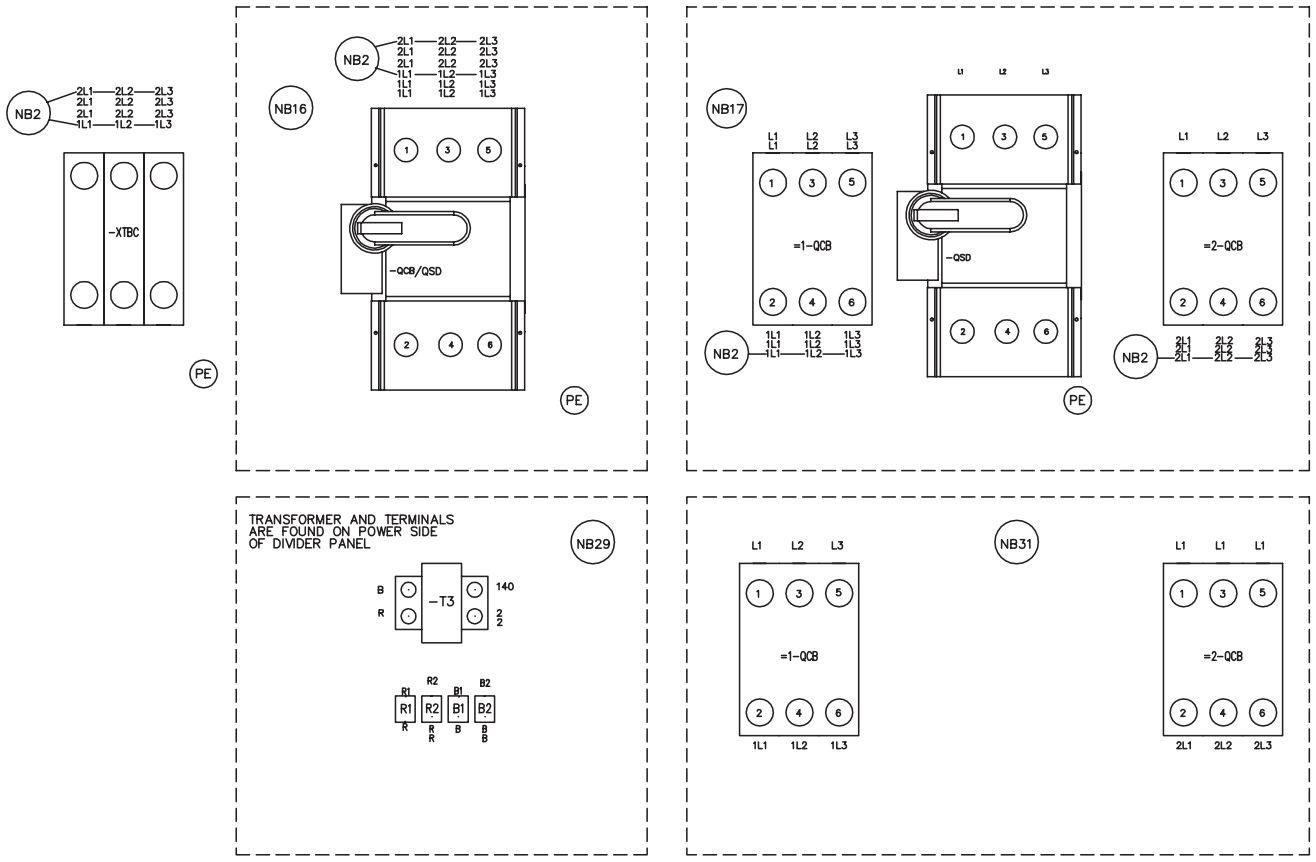


LD14028

FIG. 15 (CON'T) – CONNECTION DIAGRAM

CONNNECTION DIAGRAM
(YLAA0141-0156)

035-21589-103 Rev. B

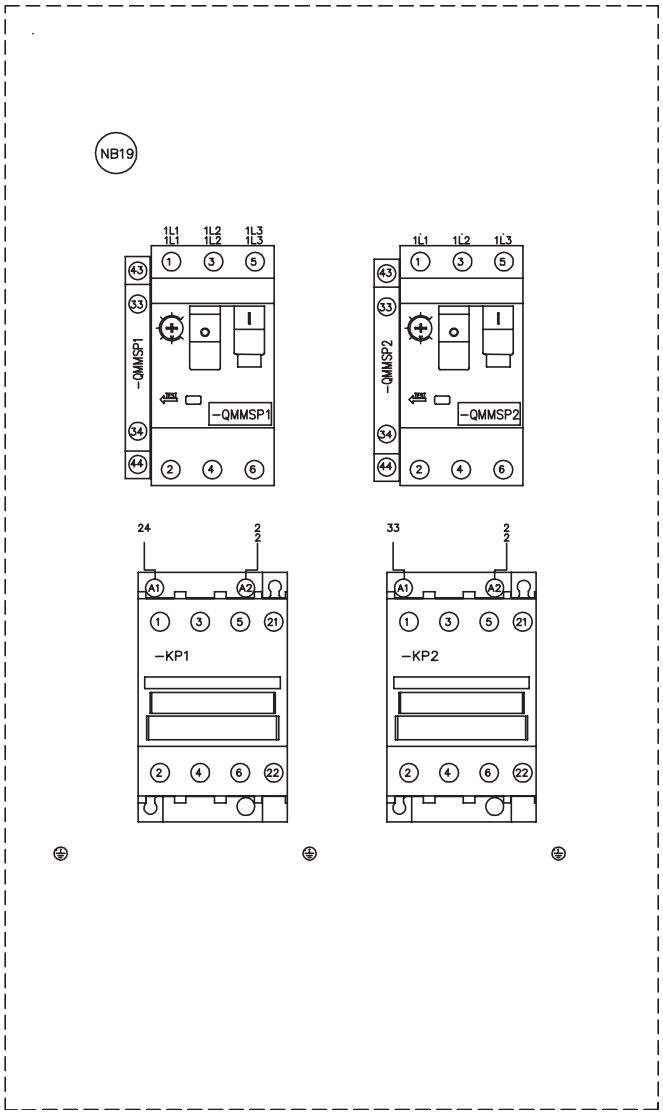


LD14029

FIG. 16 – CONNECTION DIAGRAM

CONNECTION DIAGRAM (CON'T)
(YLAA0141-0156)

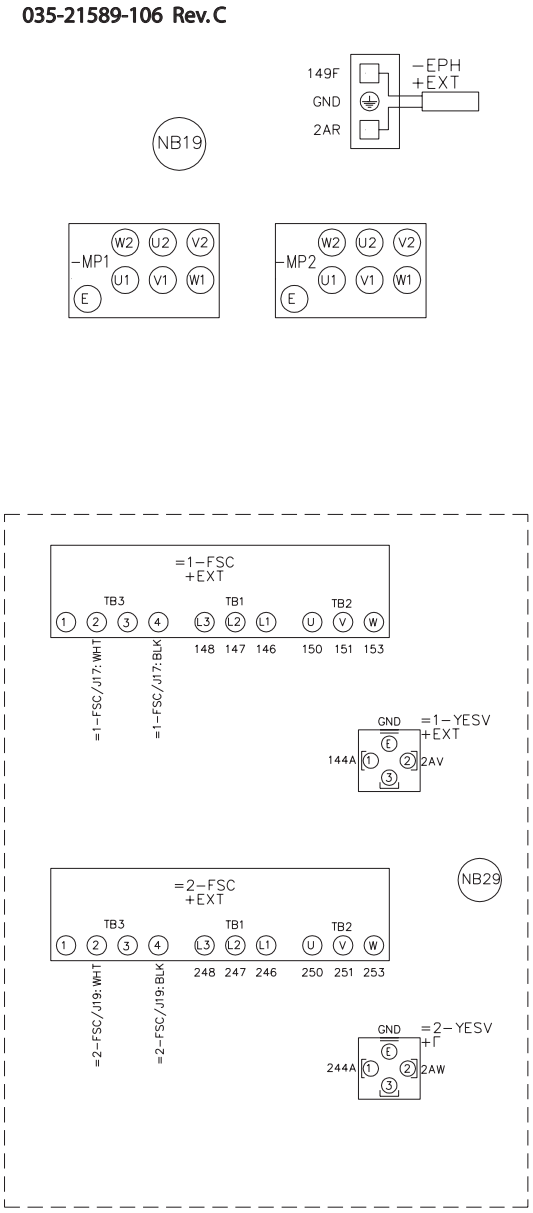
035-21589-103 Rev. B



LD14030

FIG. 16 (CON'T) – CONNECTION DIAGRAM

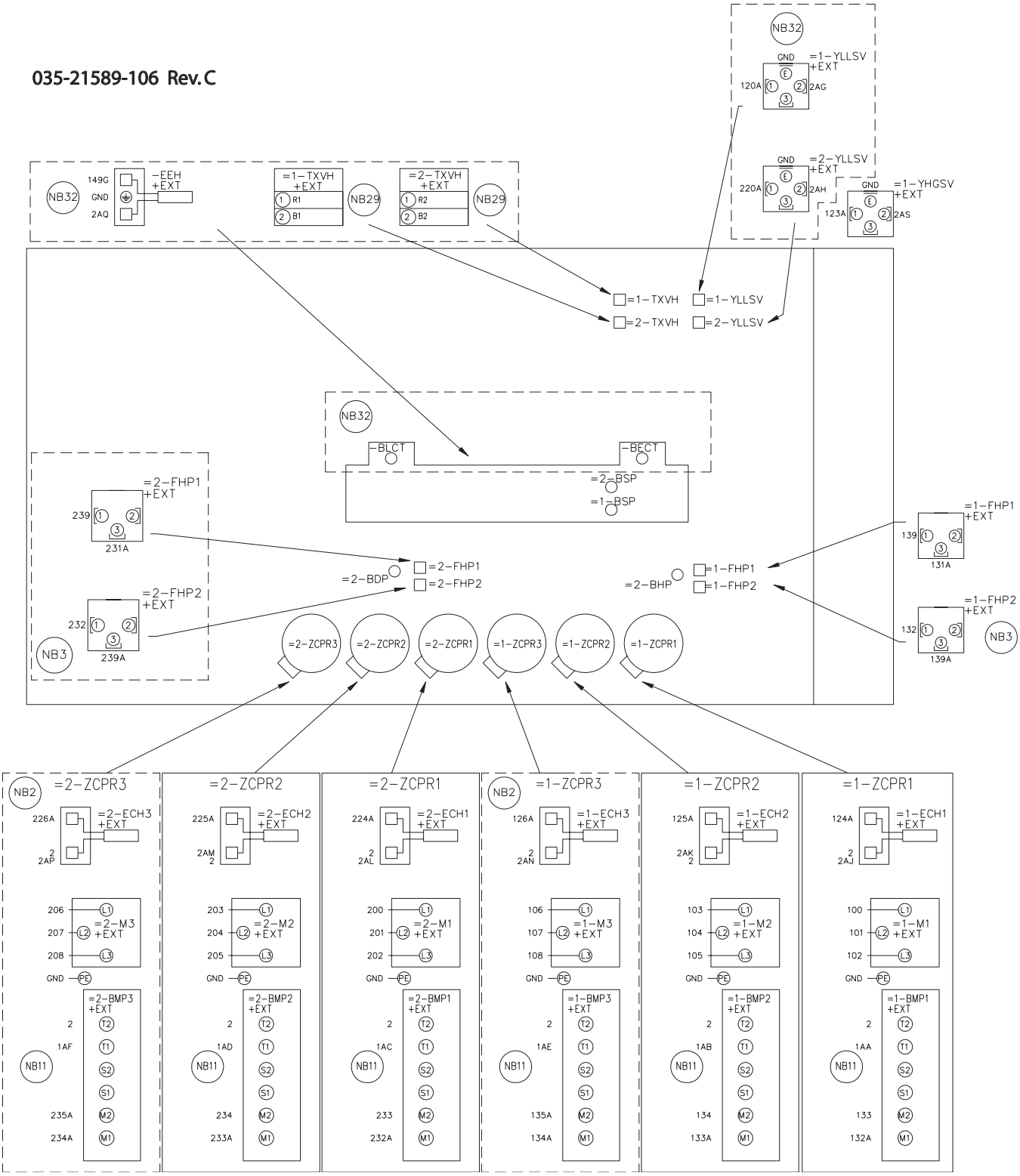
CONNNECTION DIAGRAM
(YLAA0141-0156)



LD14031

FIG. 17 – CONNECTION DIAGRAM

CONNECTION DIAGRAM (CON'T)
(YLAA0141-0156)

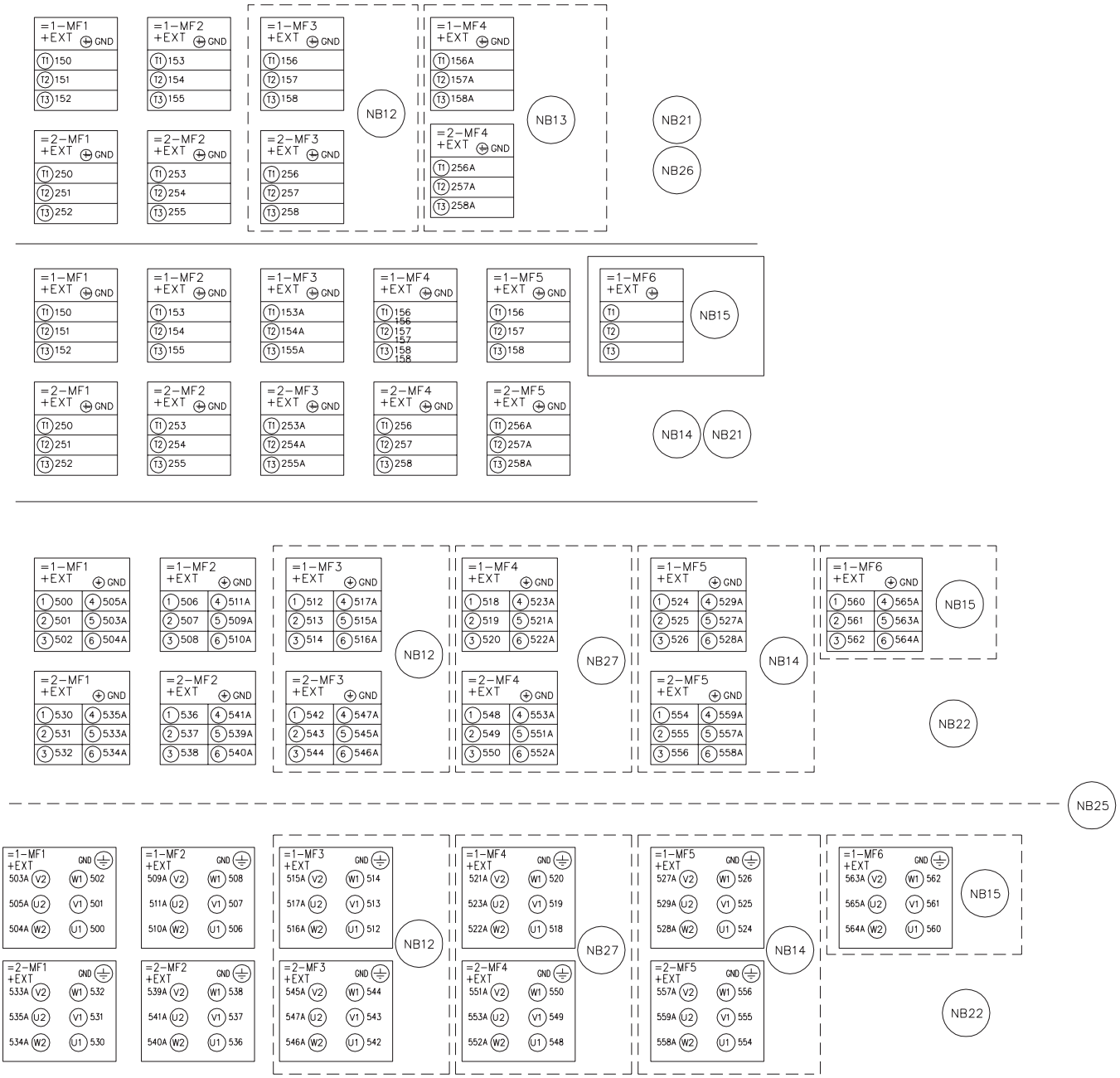


LD14032

FIG. 17 (CON'T) – CONNECTION DIAGRAM

CONNNECTION DIAGRAM
(YLAA0141-0156)

035-21589-107 Rev. A

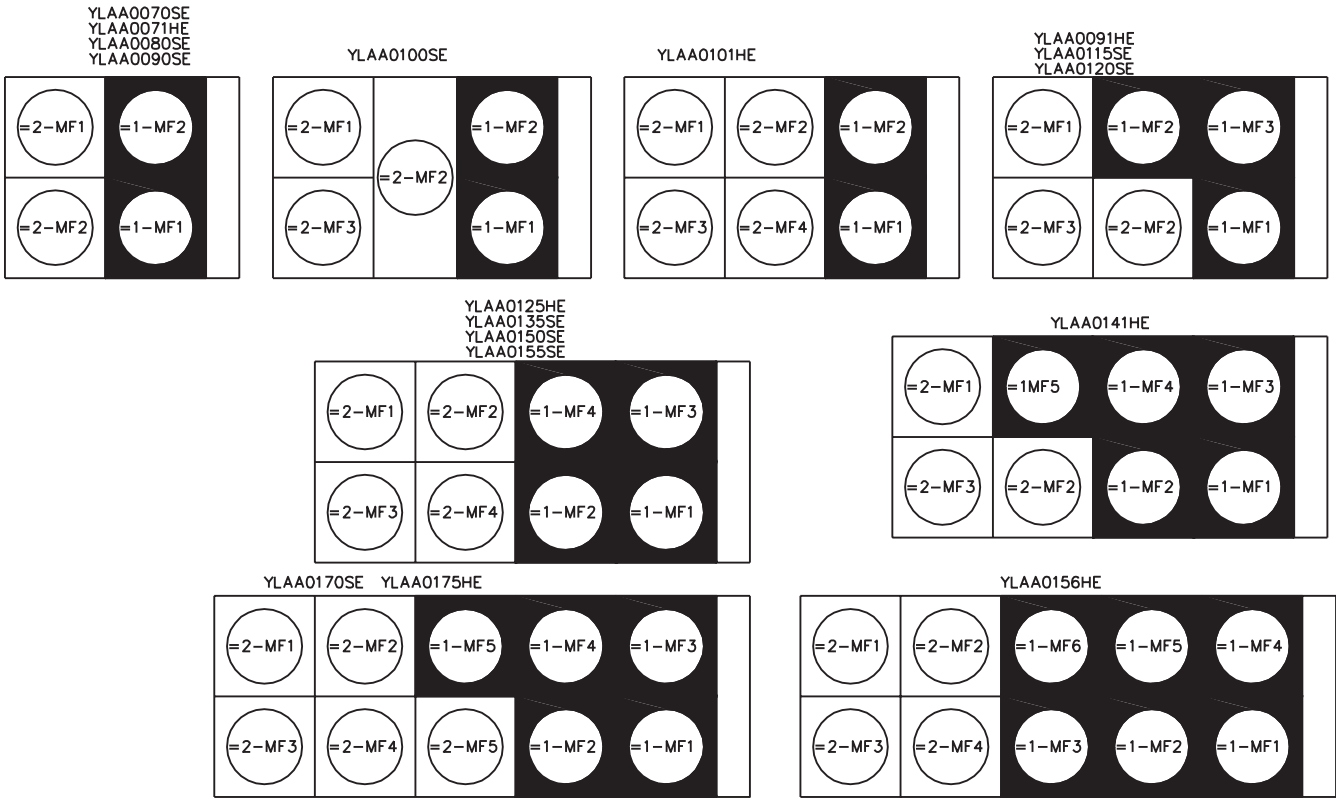


LD14034

FIG. 18 – CONNECTION DIAGRAM

CONNECTION DIAGRAM (CON'T)
(YLAA0141-0156)

035-21589-107 Rev. A



LD14035

FIG. 18 (CON'T) – CONNECTION DIAGRAM

ELEMENTARY DIAGRAM
(YLAA0170-0175)

035-21583-101 Rev.C

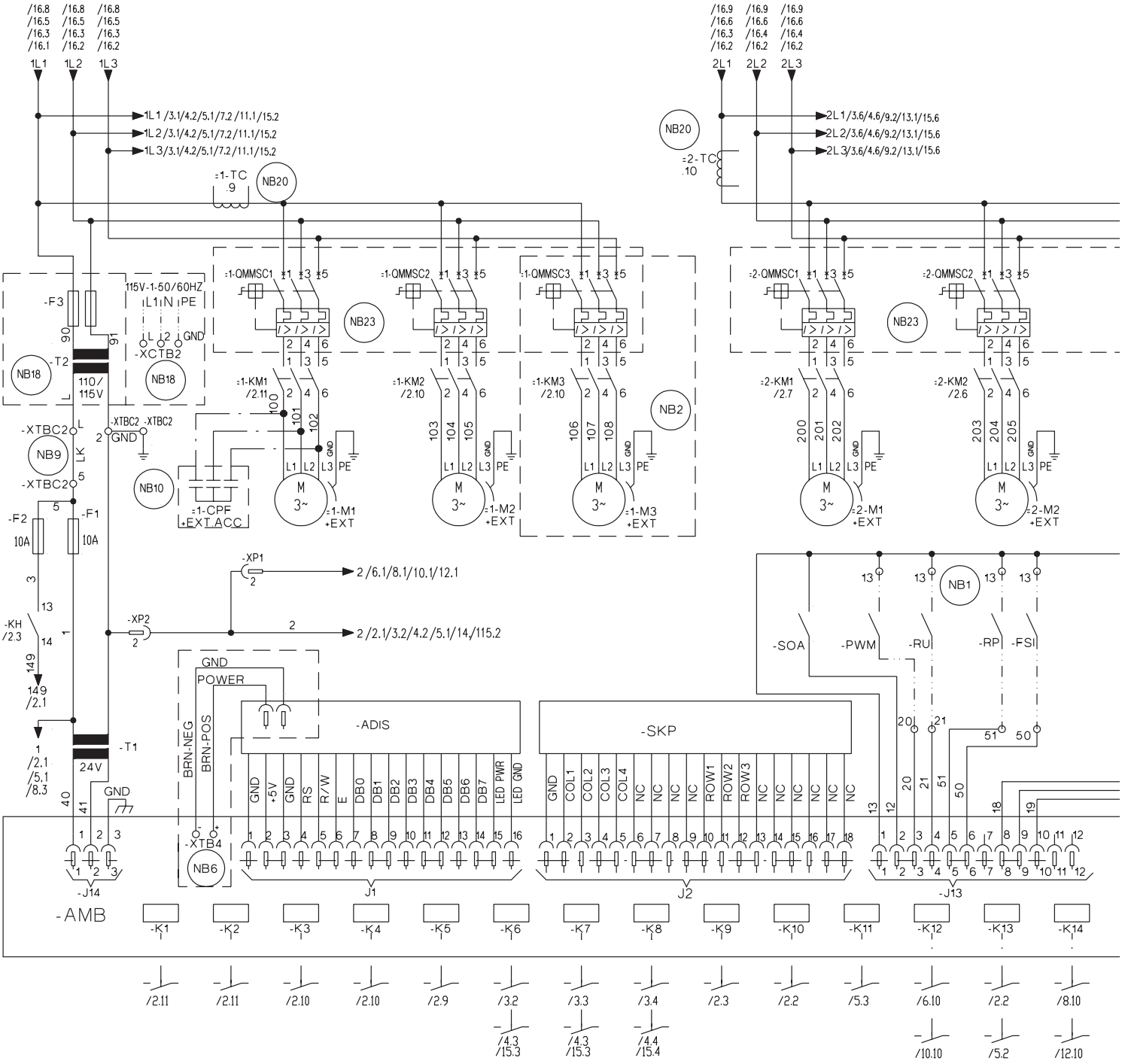
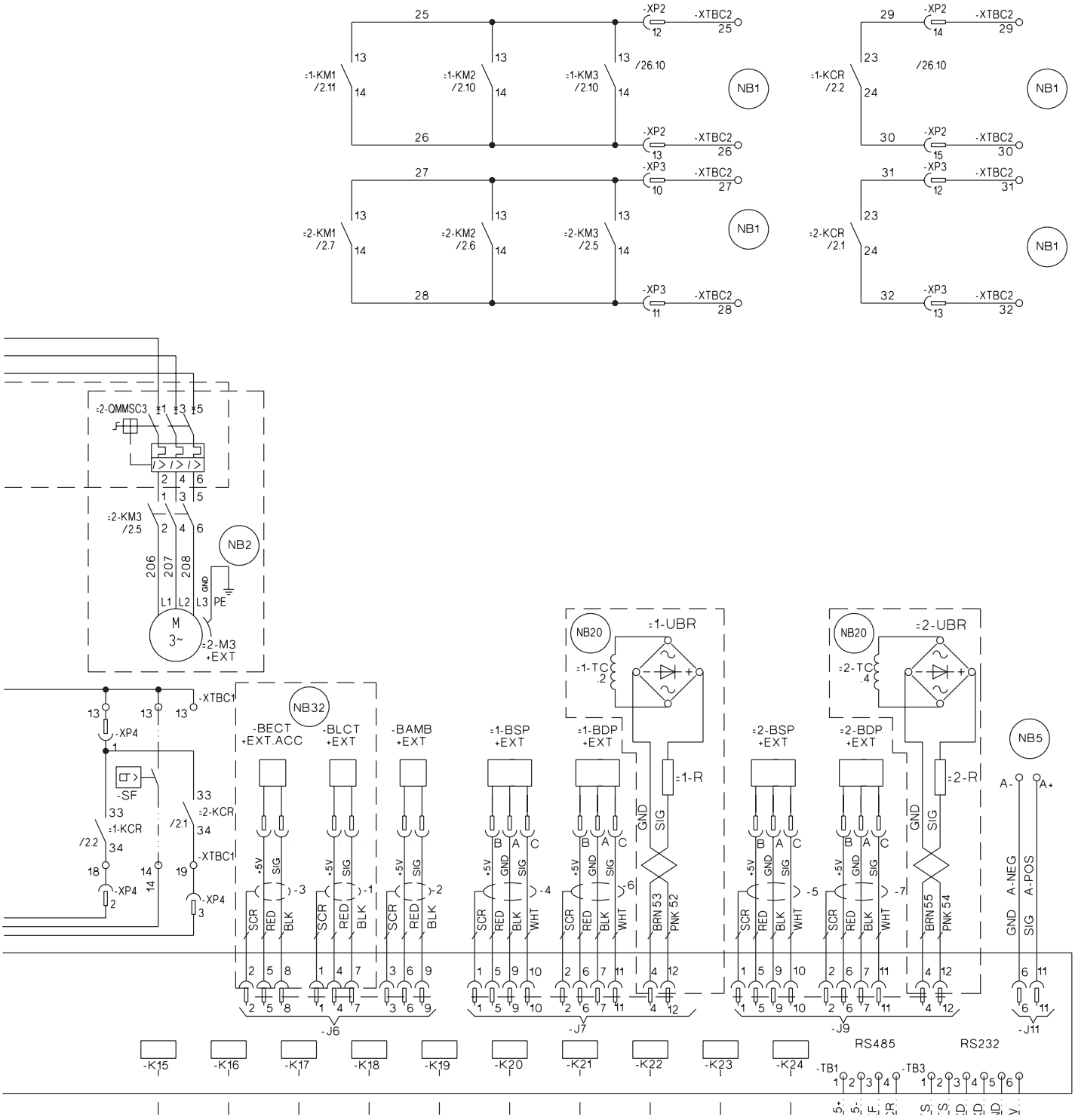


FIG. 19 – ELEMENTARY DIAGRAM

ELEMENTARY DIAGRAM (CON'T)
(YLAA0170-0175)



LD13835

FIG. 19 (CON'T) – ELEMENTARY DIAGRAM

ELEMENTARY DIAGRAM
(YLAA0170-0175)

035-21583-102 Rev. C

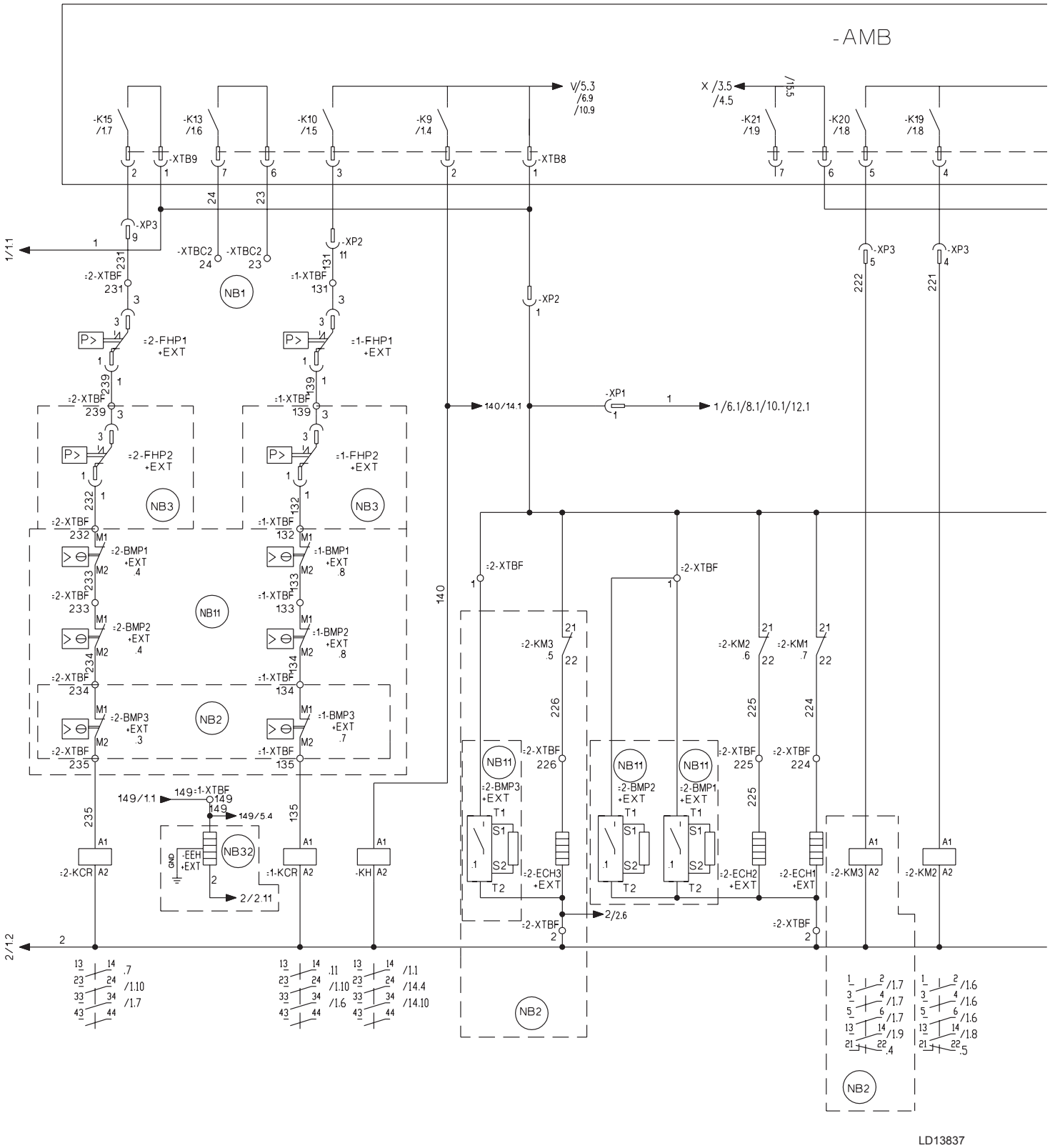
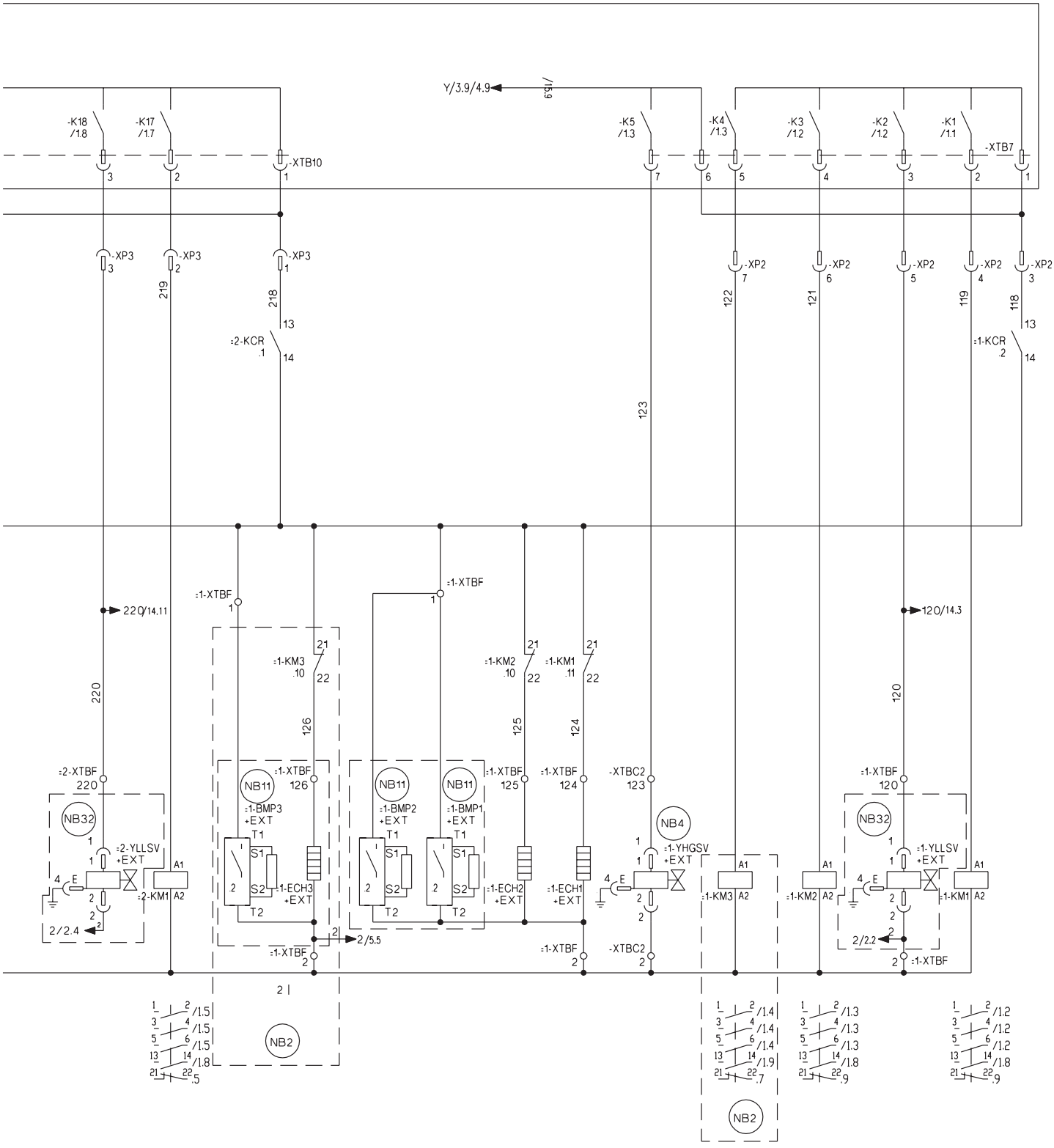


FIG. 20 – ELEMENTARY DIAGRAM

ELEMENTARY DIAGRAM (CON'T)
(YLAA0170-0175)

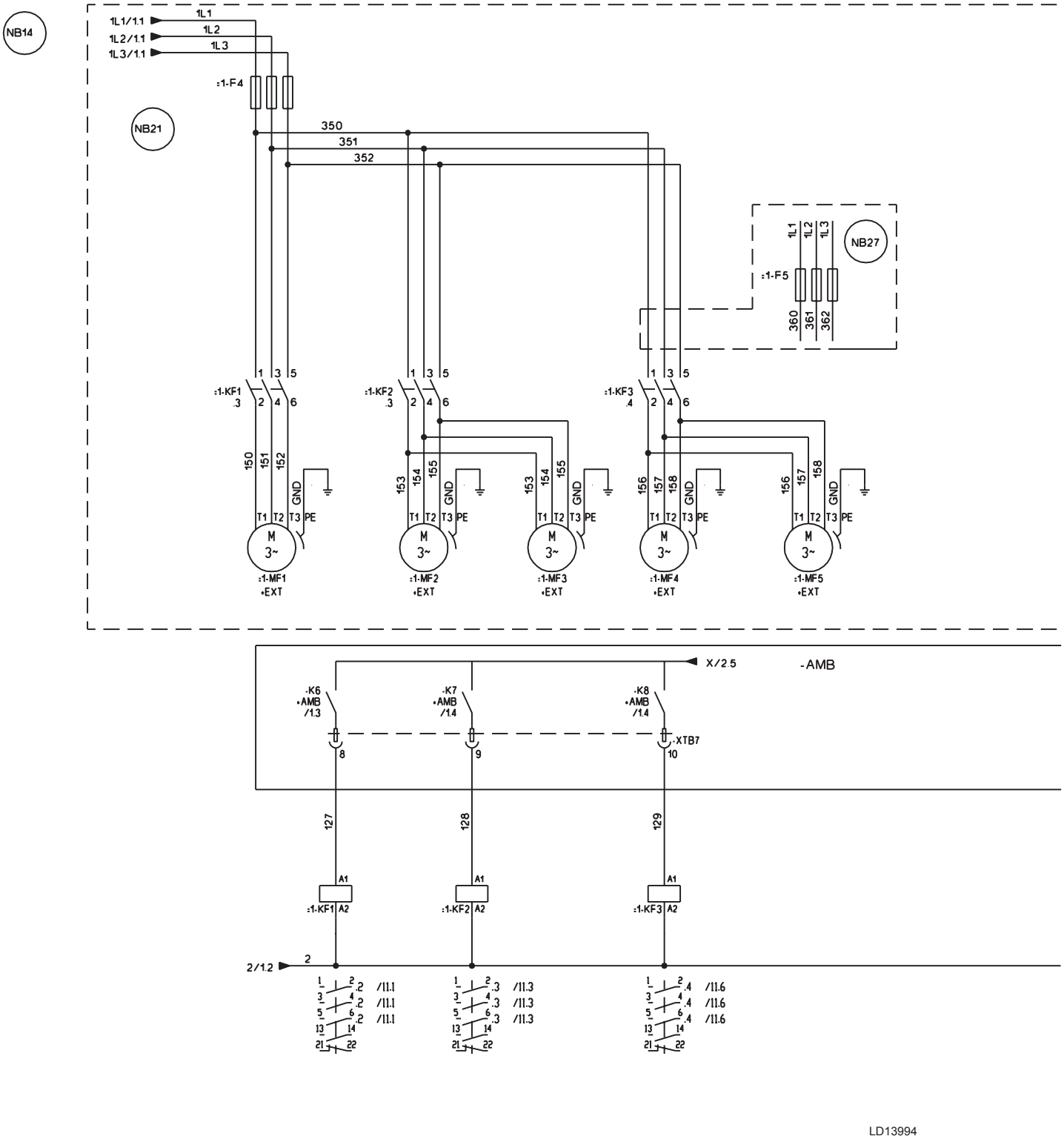


LD13838

FIG. 20 (CON'T) – ELEMENTARY DIAGRAM

ELEMENTARY DIAGRAM
(YLAA0170-0175)

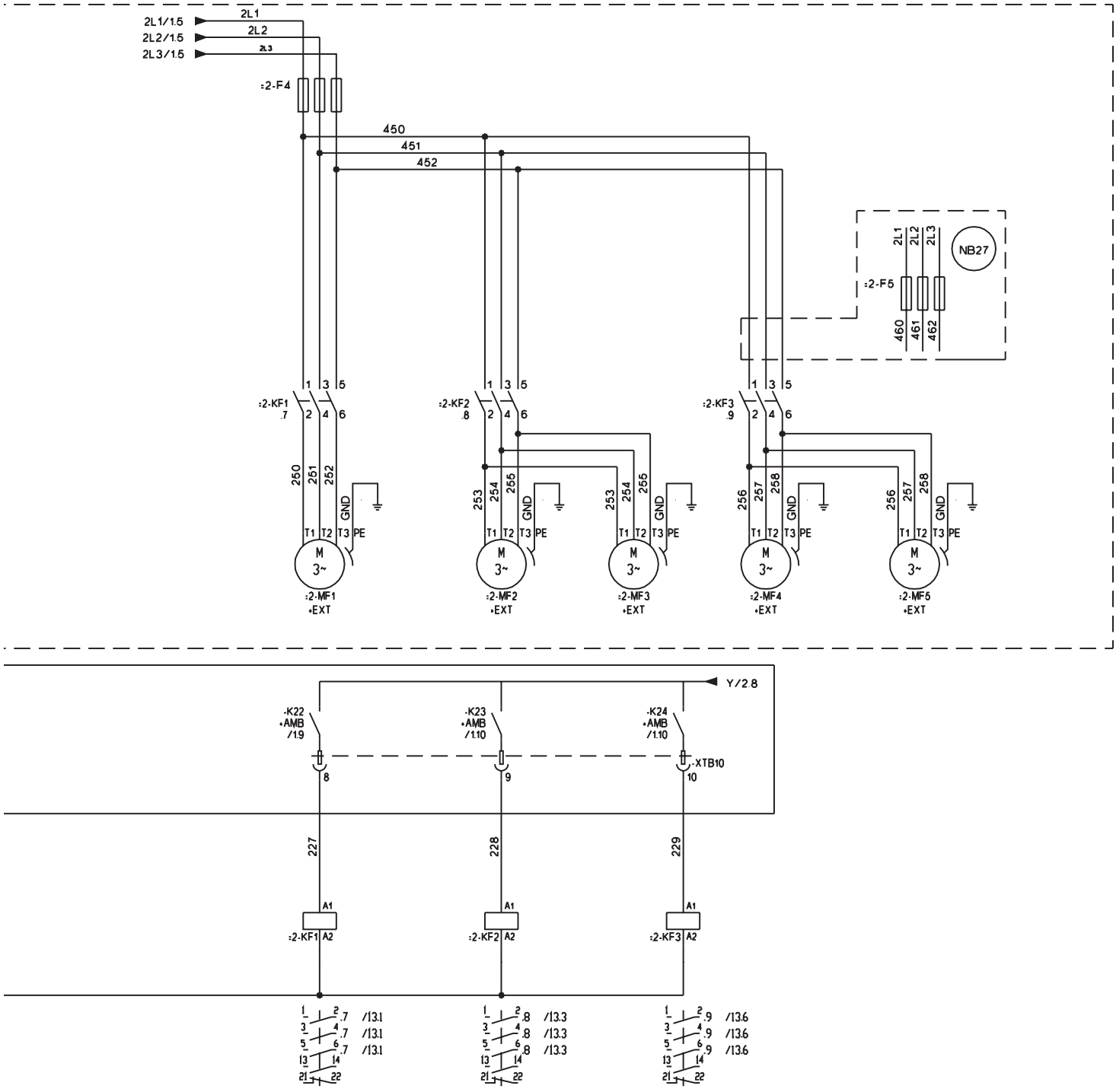
035-21583-104 Rev.C



LD13994

FIG. 21 – ELEMENTARY DIAGRAM

ELEMENTARY DIAGRAM (CON'T)
(YLAA0170-0175)



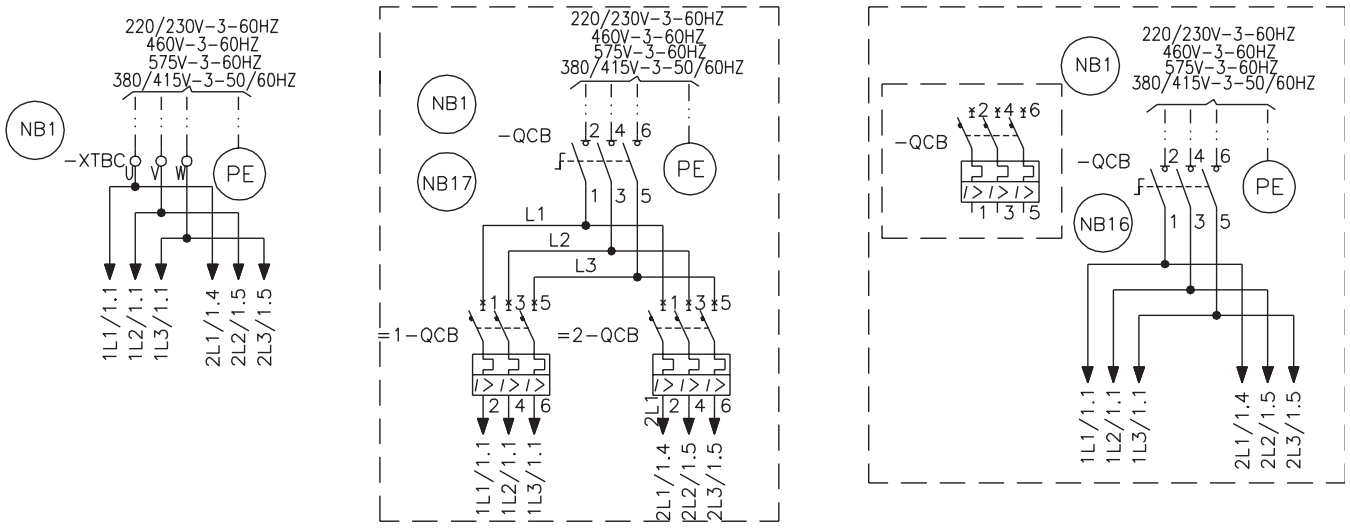
LD13995

FIG. 21 (CON'T) – ELEMENTARY DIAGRAM

3

ELEMENTARY DIAGRAM
(YLAA0170-0175)

035-21583-116 Rev.-



SINGLE POINT WIRING OPTIONS

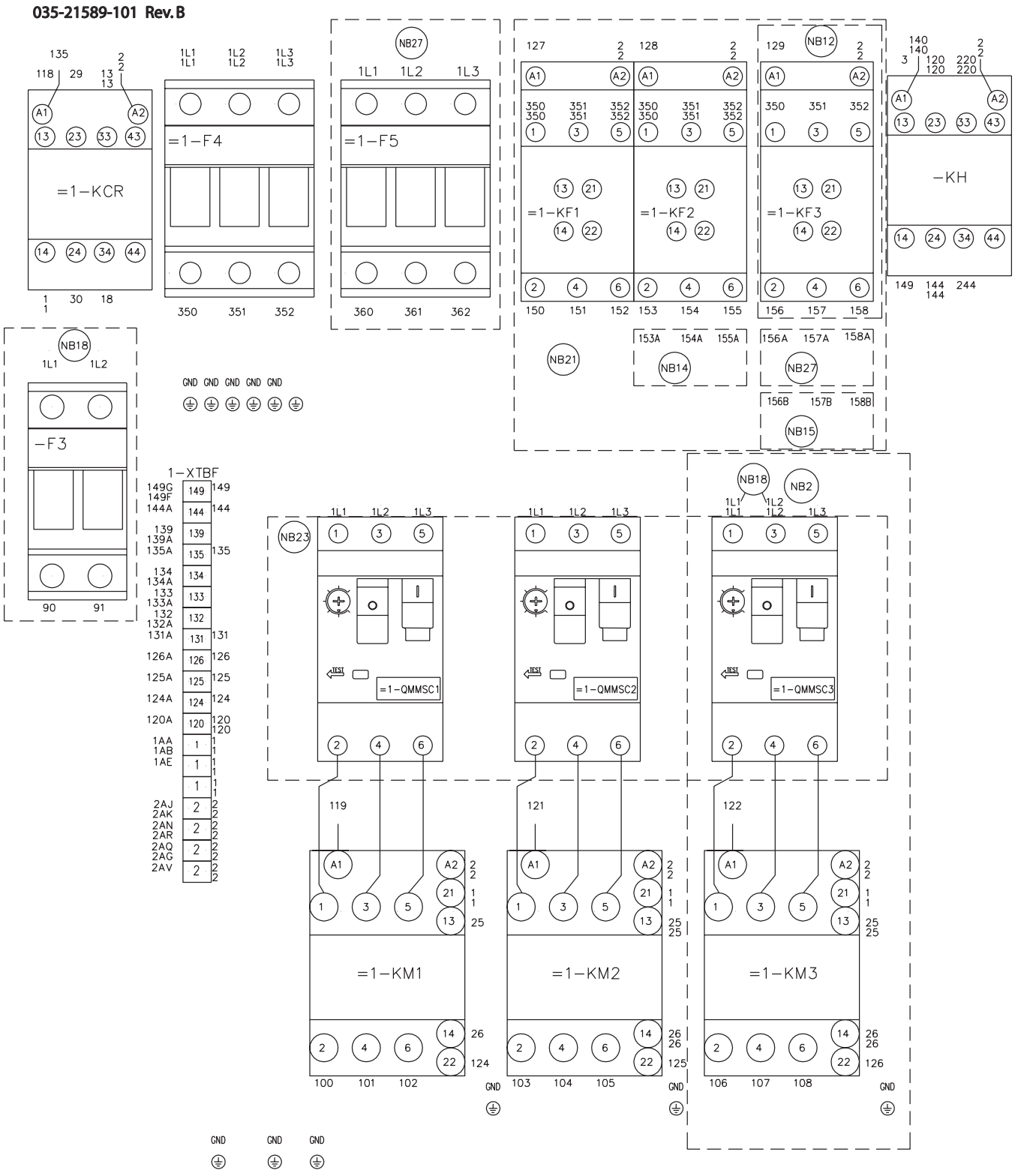
DUAL POINT WIRING OPTION

LD14033

FIG. 22 – ELEMENTARY DIAGRAM

THIS PAGE INTENTIONALLY LEFT BLANK

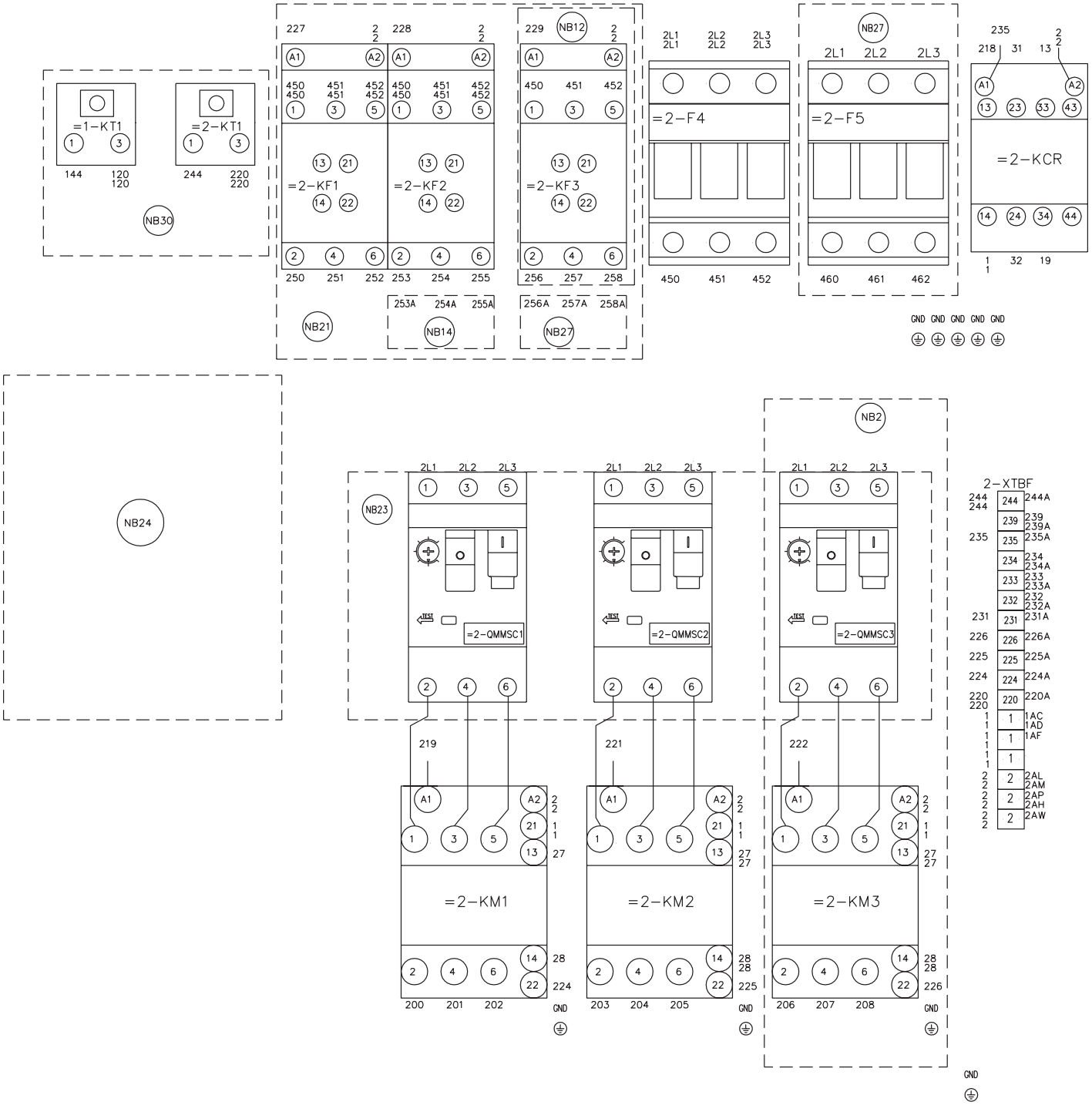
CONNECTION DIAGRAM
(YLAA0170-0175)



LD14025

FIG. 23 – CONNECTION DIAGRAM

CONNECTION DIAGRAM (CON'T)
(YLAA0170-0175)



LD14026

FIG. 23 (CON'T) – CONNECTION DIAGRAM

3

CONNECTION DIAGRAM
(YLAA0170-0175)

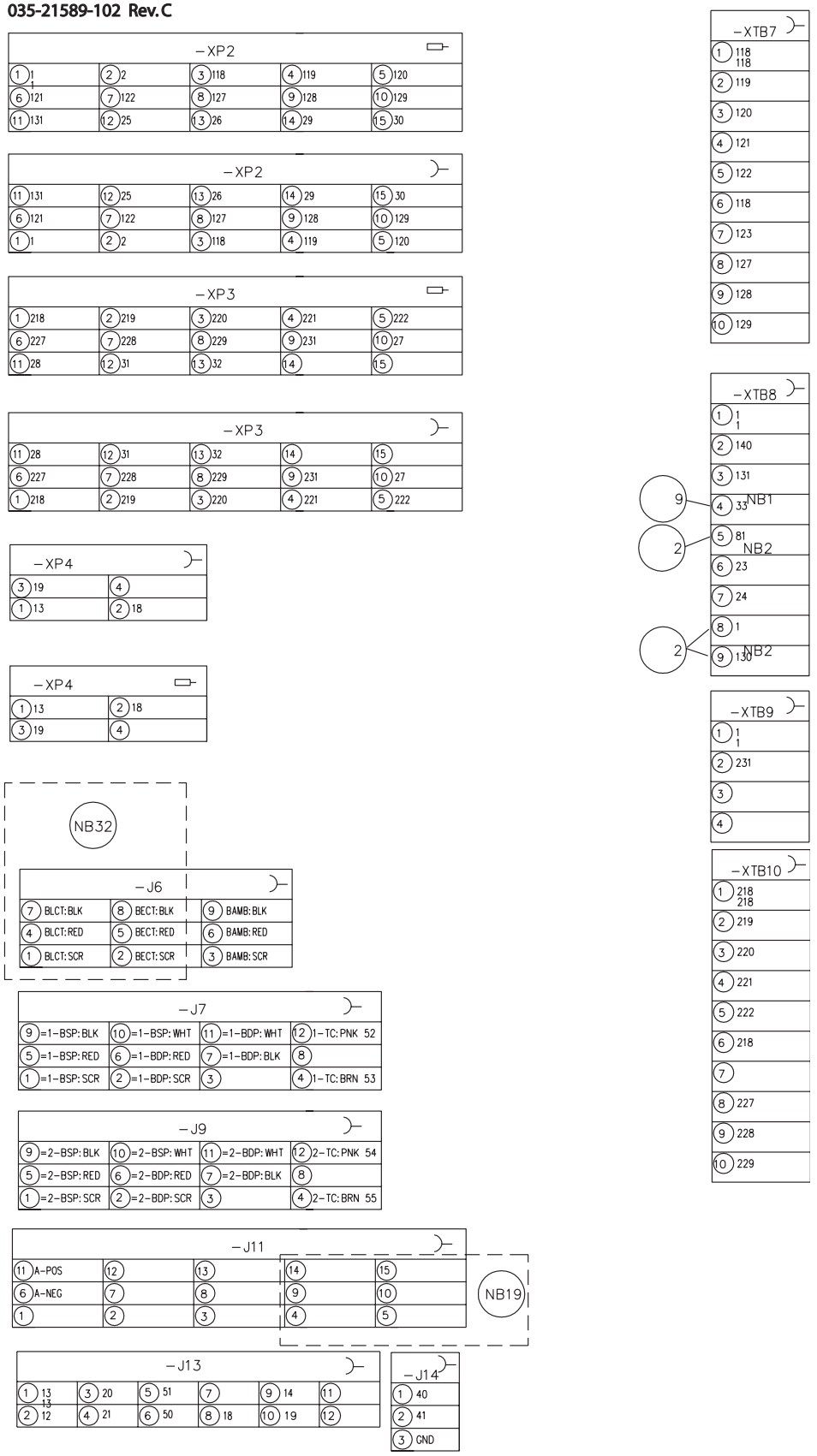
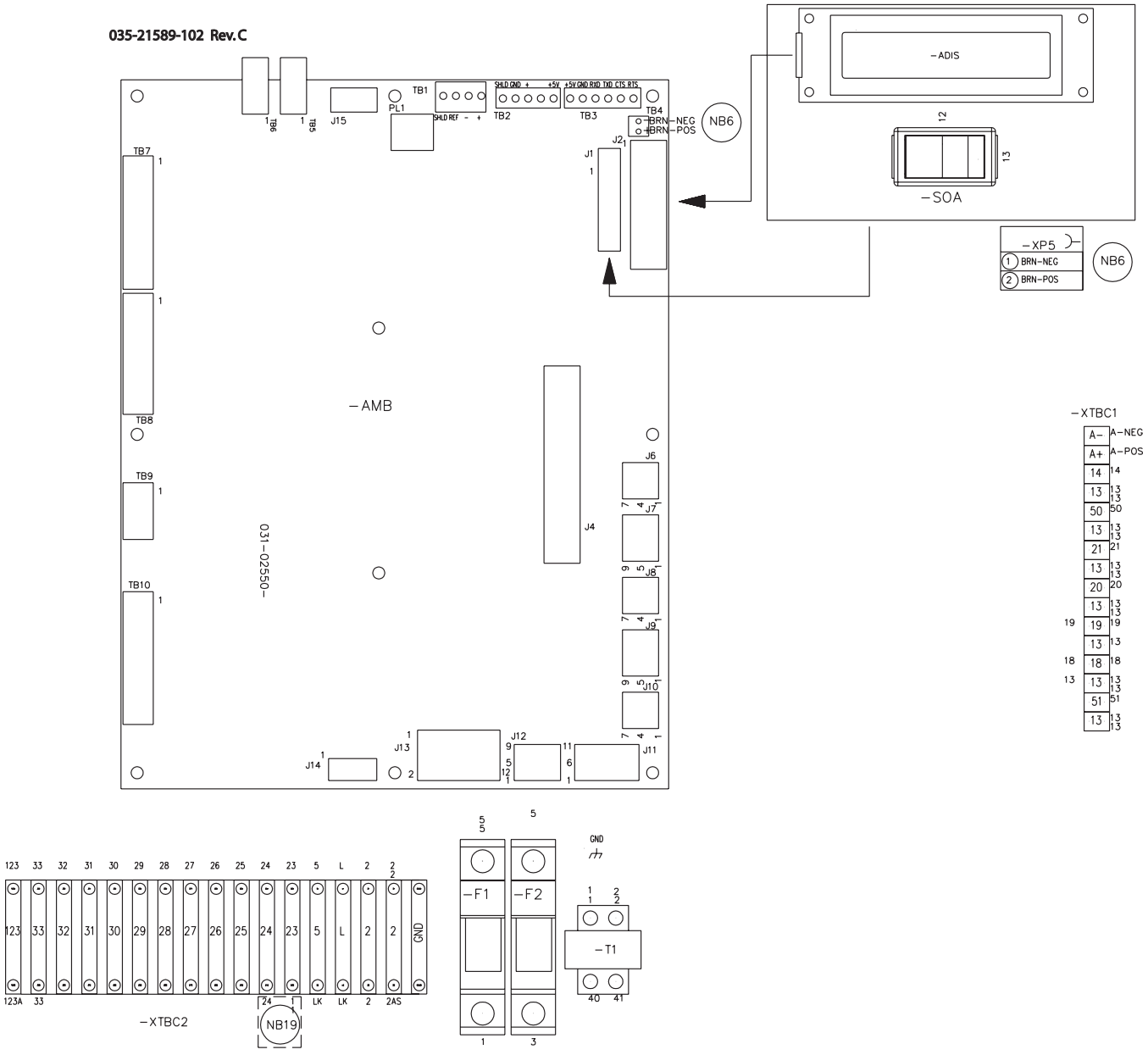


FIG. 24 – CONNECTION DIAGRAM

CONNECTION DIAGRAM (CON'T)
(YLAA0170-0175)

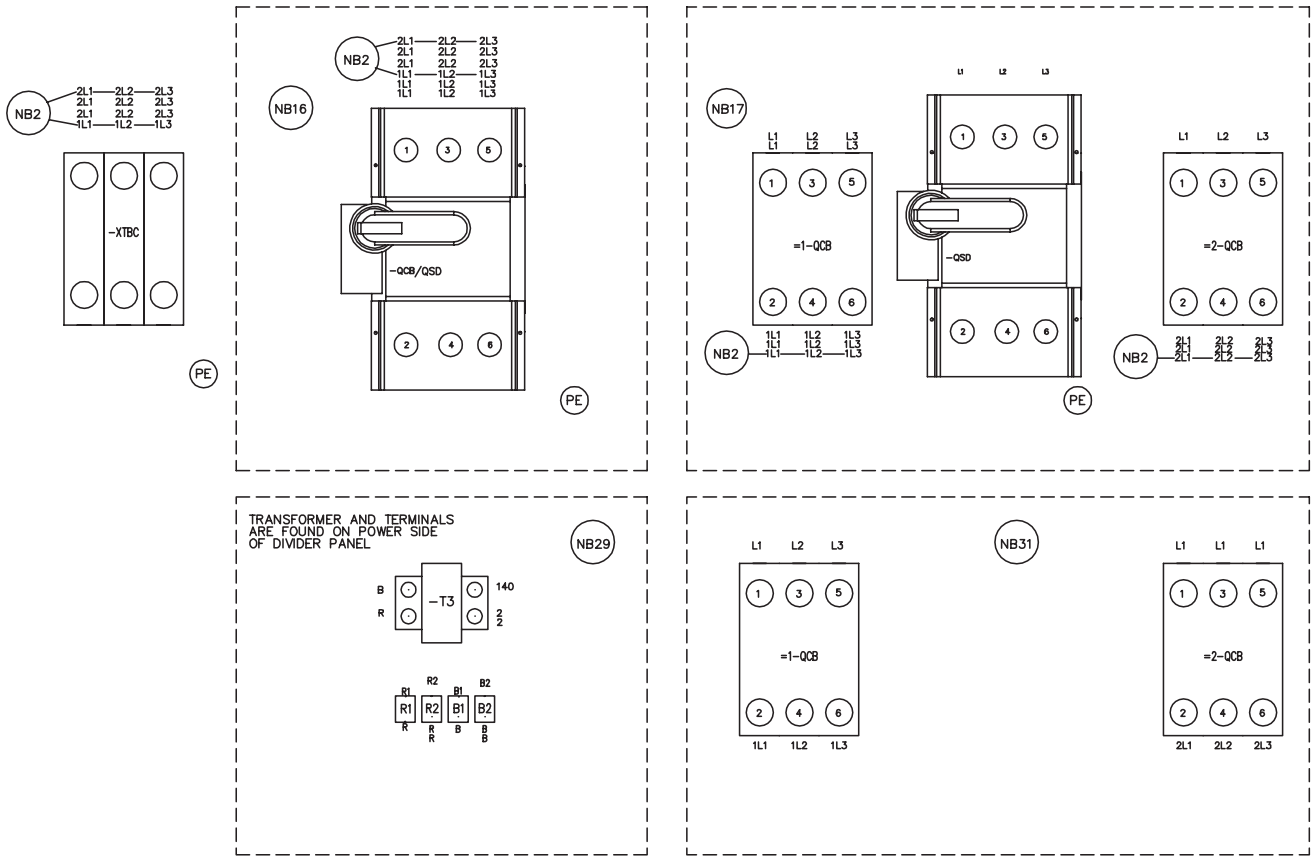


LD14028

FIG. 24 (CON'T) – CONNECTION DIAGRAM

CONNECTION DIAGRAM
(YLAA0170-0175)

035-21589-103 Rev. B

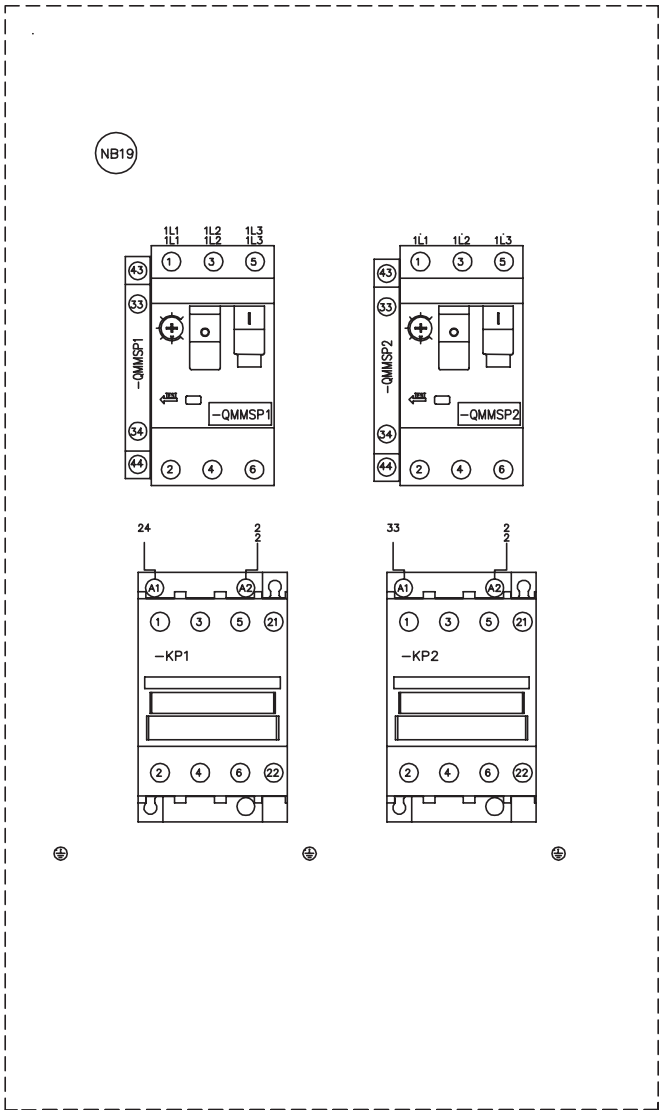


LD14029

FIG. 25 – CONNECTION DIAGRAM

CONNECTION DIAGRAM (CON'T)
(YLAA0170-0175)

035-21589-103 Rev. B

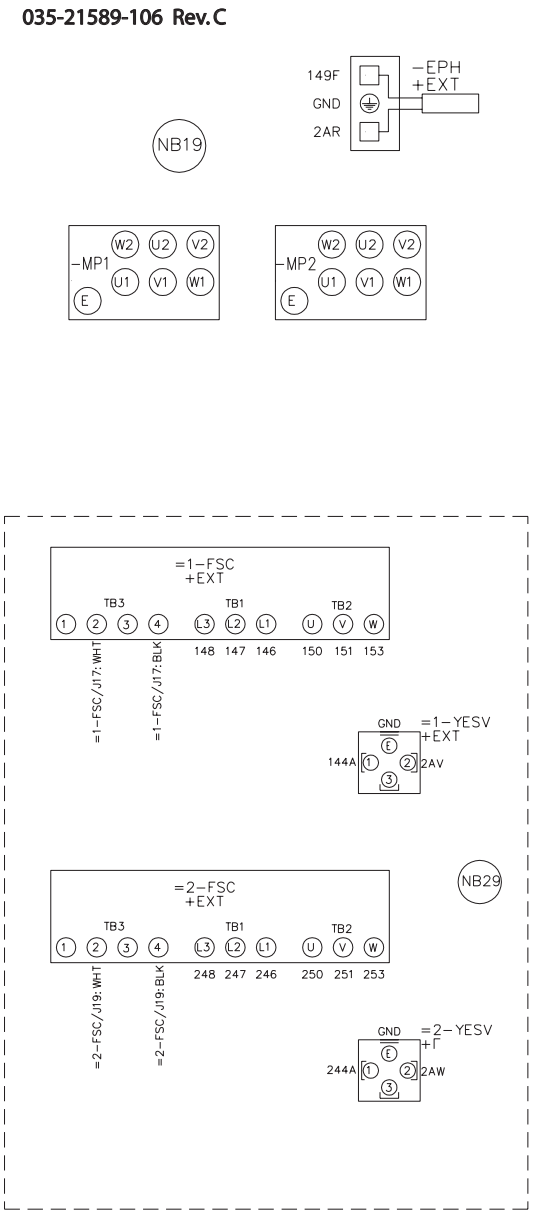


LD14030

FIG. 25 (CON'T) – CONNECTION DIAGRAM

3

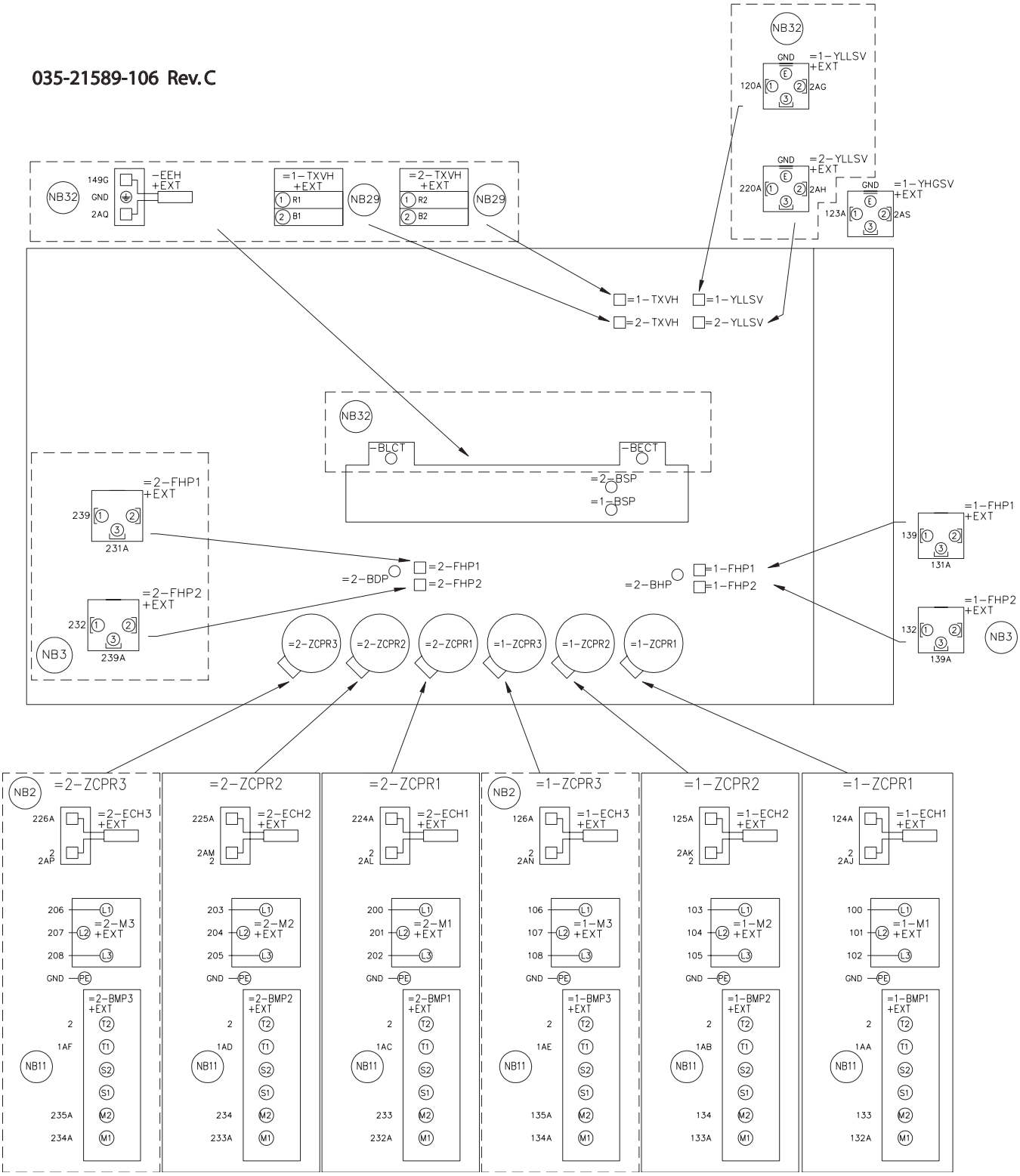
CONNECTION DIAGRAM
(YLAA0170-0175)



LD14031

FIG. 26 – CONNECTION DIAGRAM

CONNECTION DIAGRAM (CON'T)
(YLAA0170-0175)



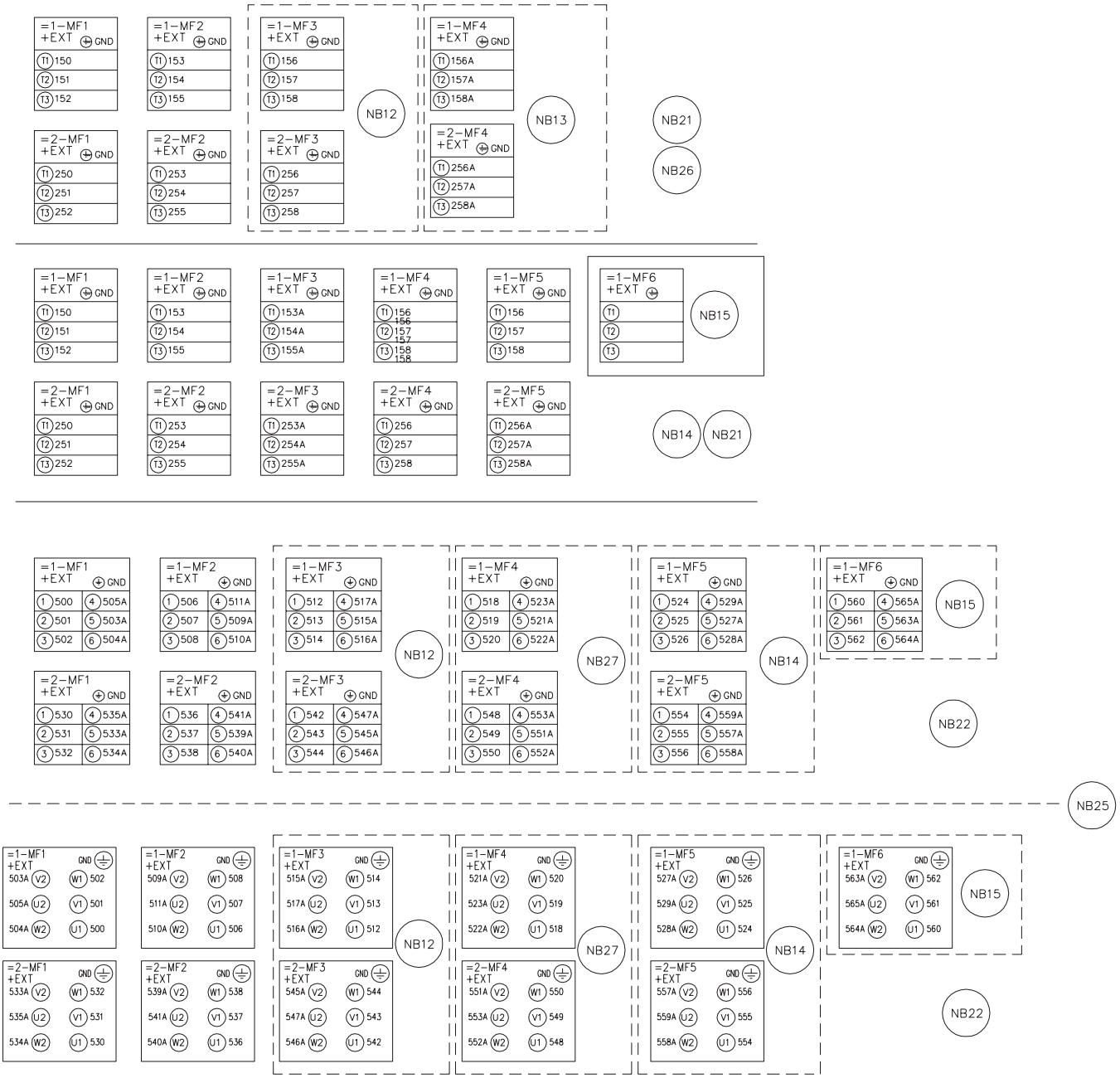
LD14032

FIG. 26 (CON'T) – CONNECTION DIAGRAM

3

CONNECTION DIAGRAM
(YLAA0170-0175)

035-21589-107 Rev. A

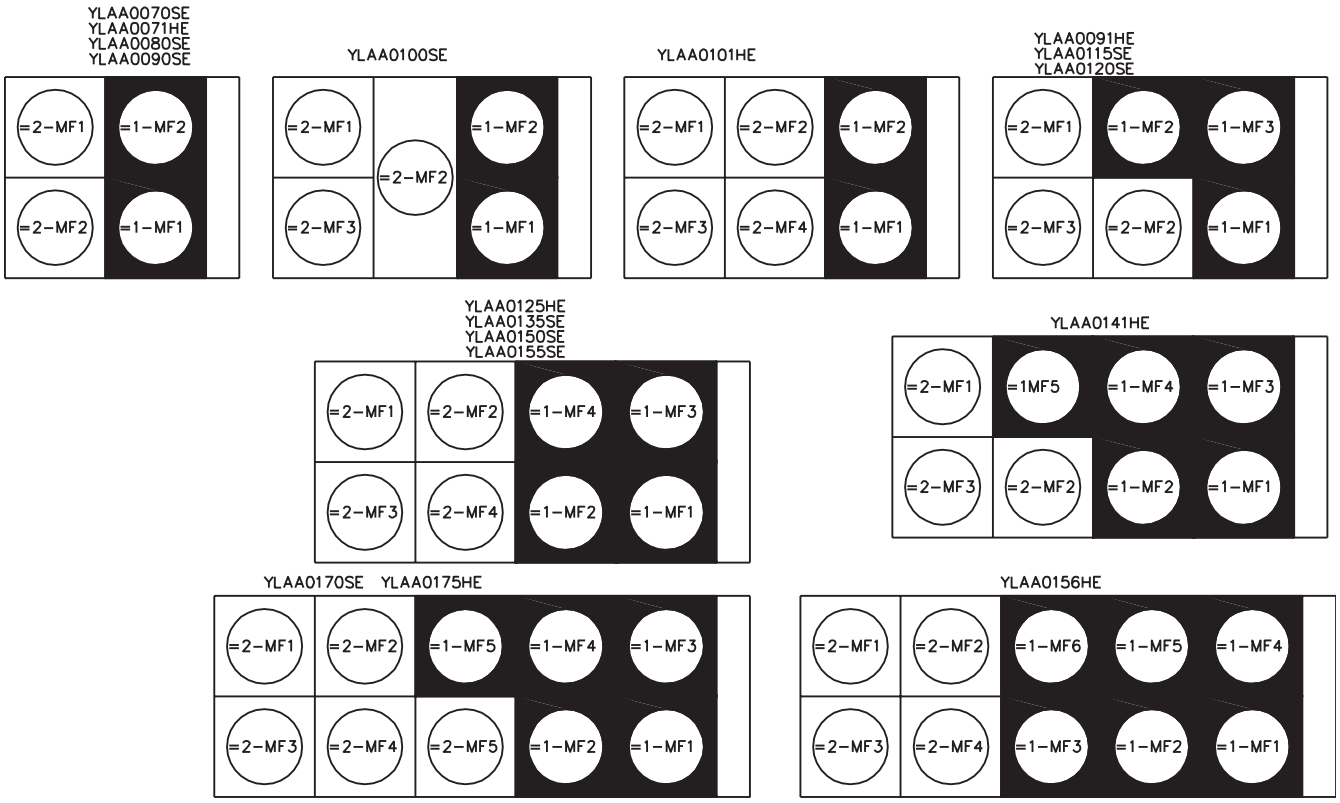


LD14034

FIG. 27 – CONNECTION DIAGRAM

CONNECTION DIAGRAM (CON'T)
(YLAA0170-0175)

035-21589-107 Rev. A



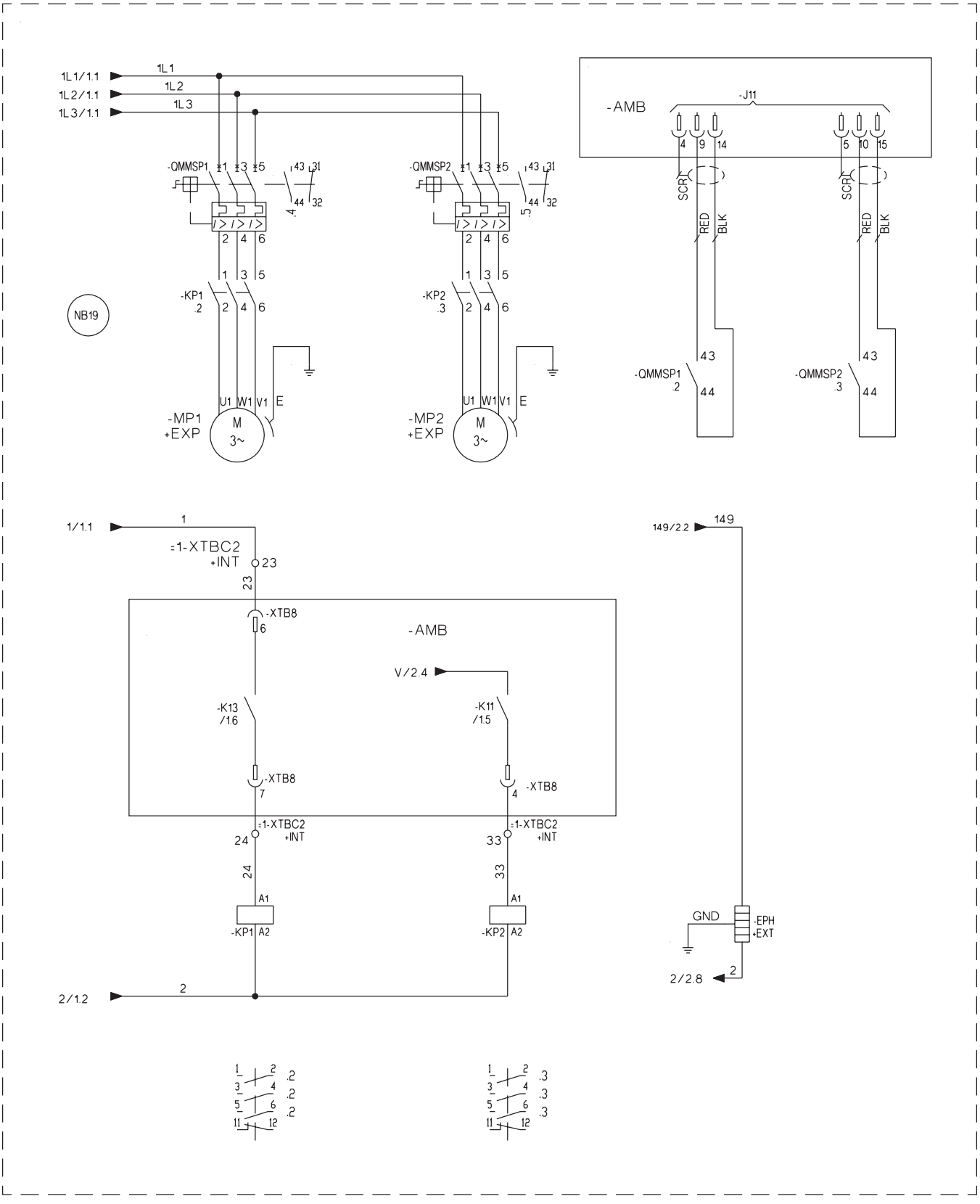
LD14035

FIG. 27 (CON'T) – CONNECTION DIAGRAM

3

PUMP WIRING DIAGRAM

035-21583-105 Rev.B



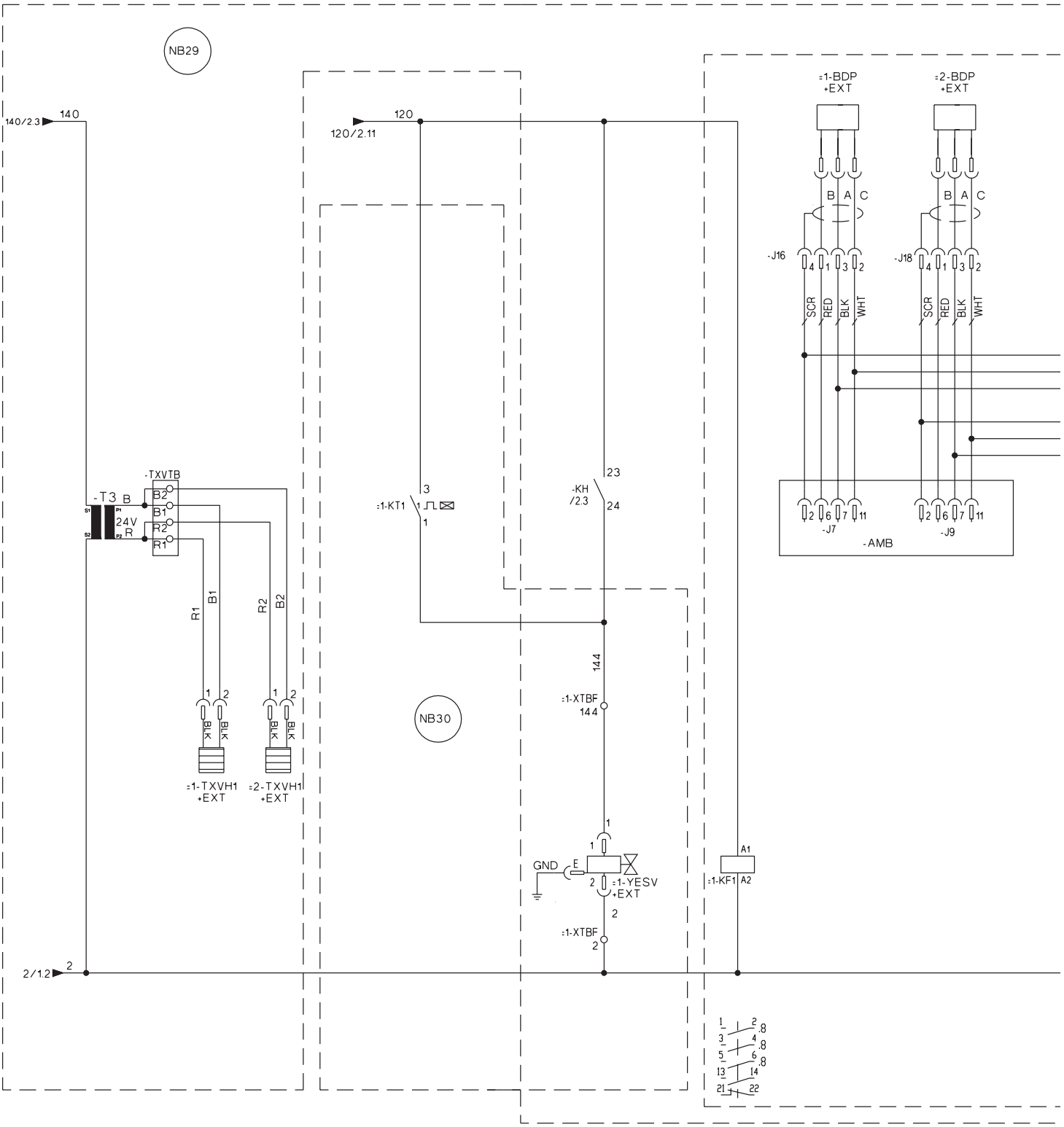
LD14038

FIG. 28 – PUMP WIRING DIAGRAM

THIS PAGE INTENTIONALLY LEFT BLANK

LOW / HIGH AMBIENT WIRING DIAGRAM

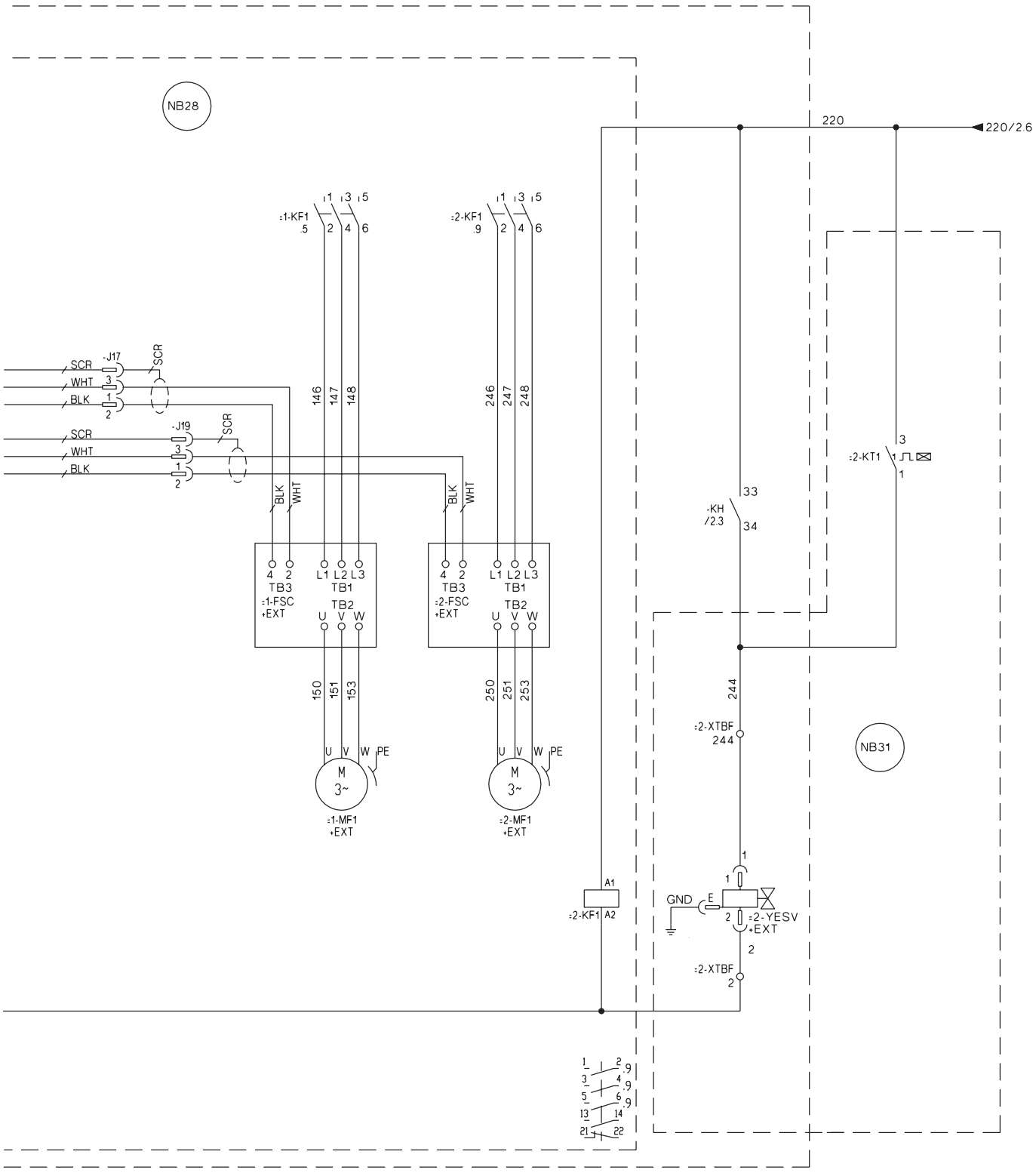
035-21583-114 Rev. C



LD14038

FIG. 29 – LOW / HIGH AMBIENT WIRING DIAGRAM (6OHZ)

LOW / HIGH AMBIENT WIRING DIAGRAM (CON'T)



LD14038

FIG. 29 (CON'T) – LOW / HIGH AMBIENT WIRING DIAGRAM (60HZ)

P.O. Box 423, Milwaukee, WI 53203
www.johnsoncontrols.com

Printed in USA 150.72-W1 (109)
NEW RELEASE