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TRANE

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DRAWN BY: G.GE/BMA © DATE: 16-APR-2008

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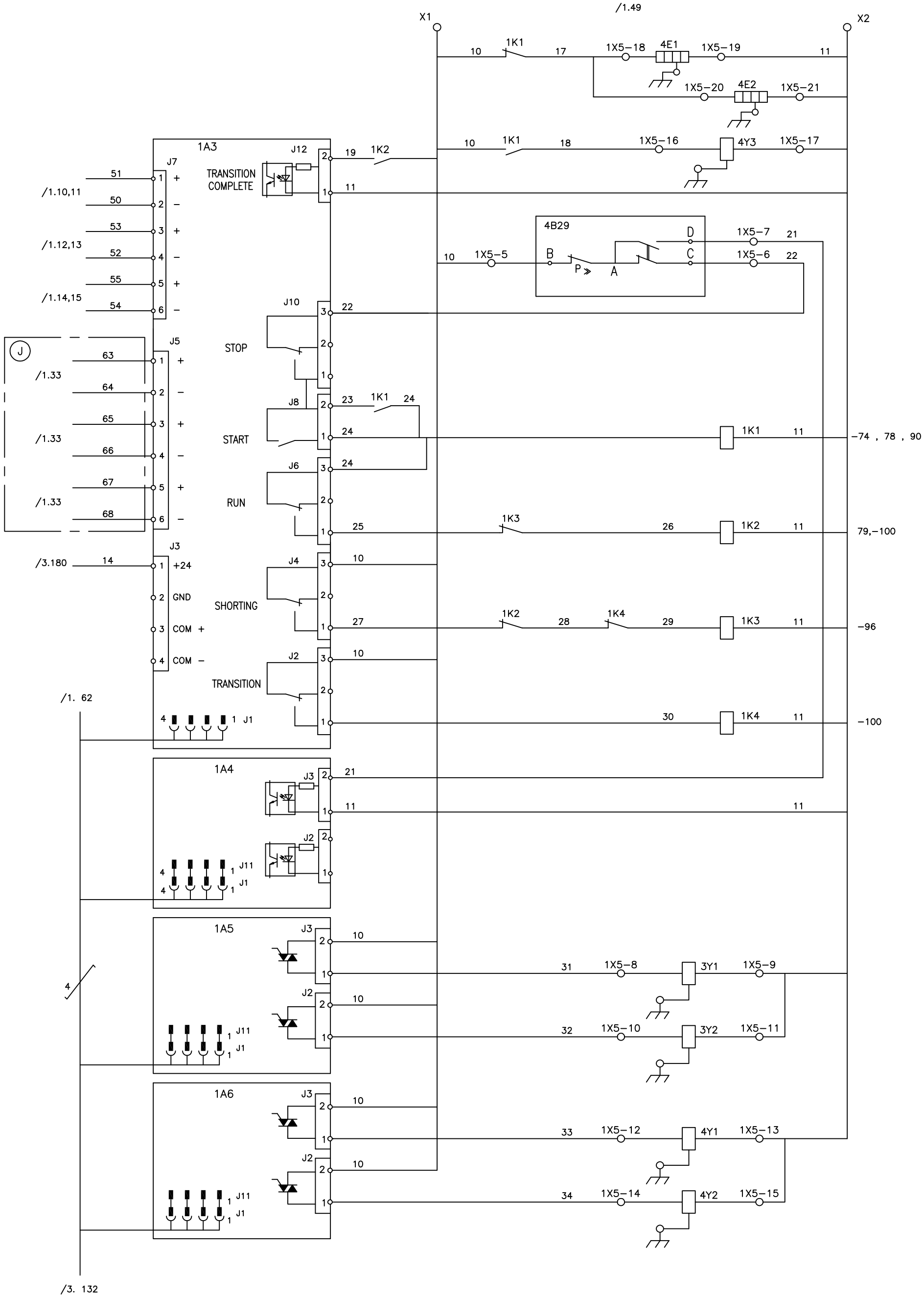
REVISION DATE: 18-MAR-2009

DEMARRAGE ETOILE TRIANGLE — STERN—DREIECK ANLAUF — WYE—DELTA START

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SHEET 2 OF 6 REV A

RTHD



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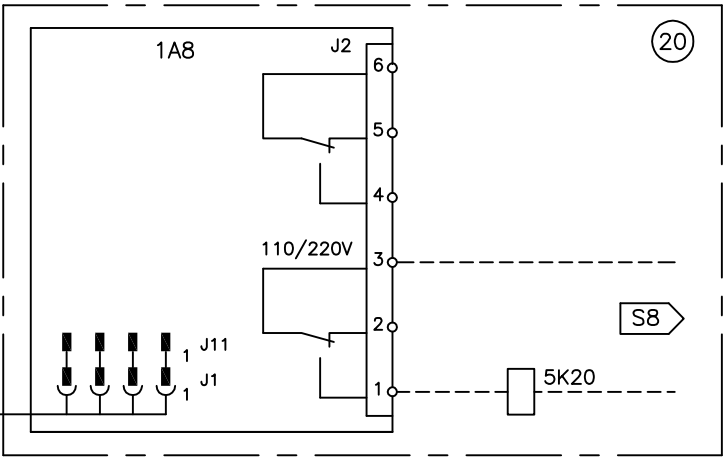
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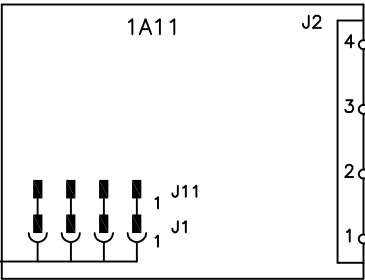
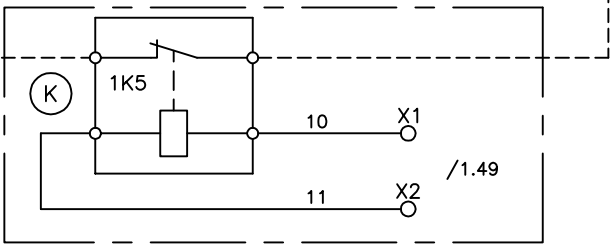
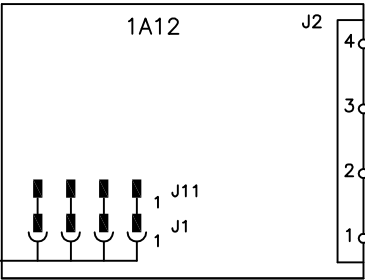
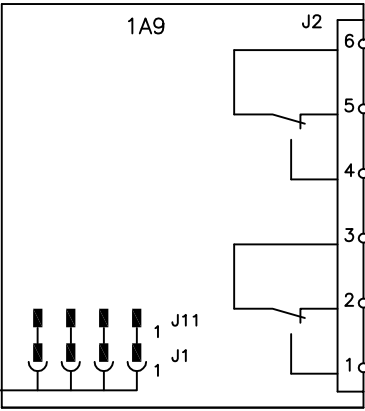
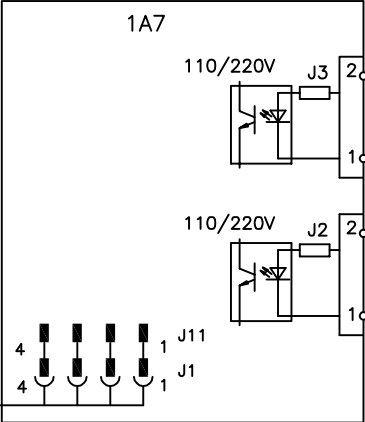
REV A

RTHD

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ALIMENTATION SEPARÉE
STEUERSpannung
SEPARATE SUPPLY

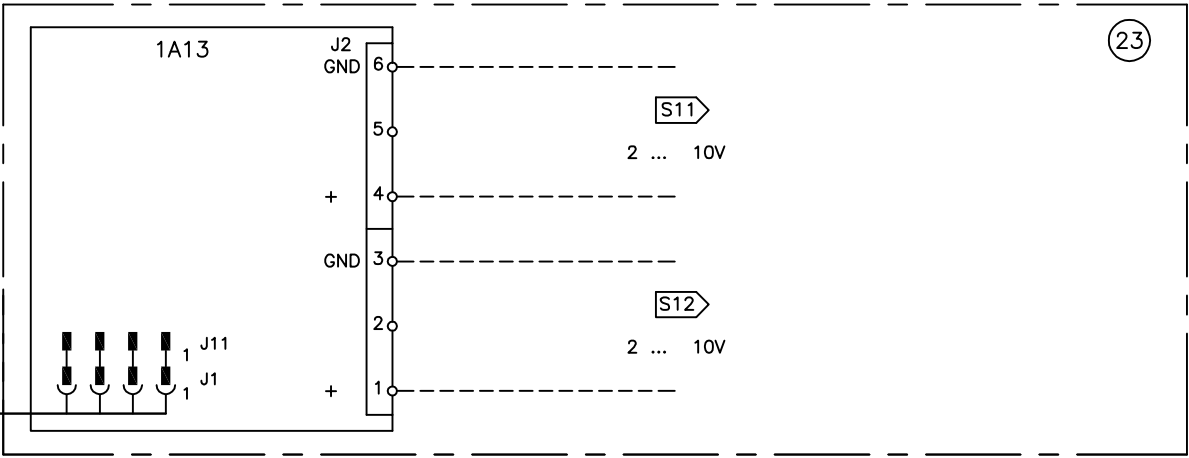
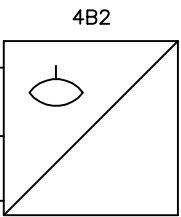


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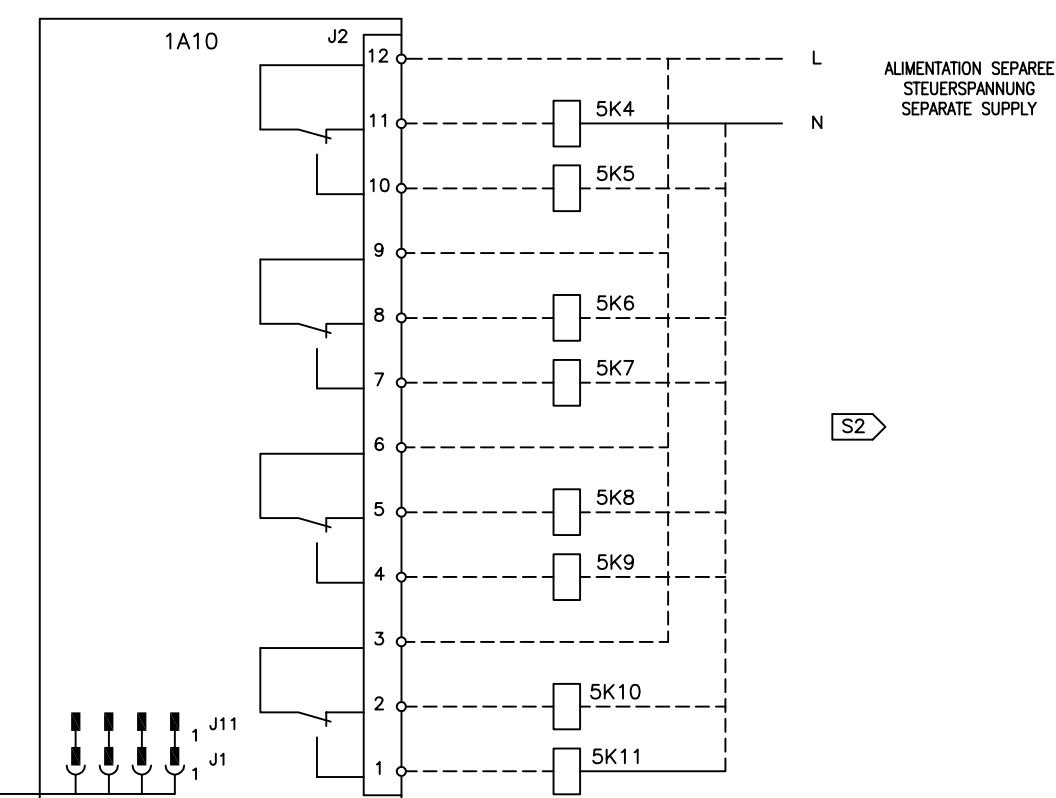
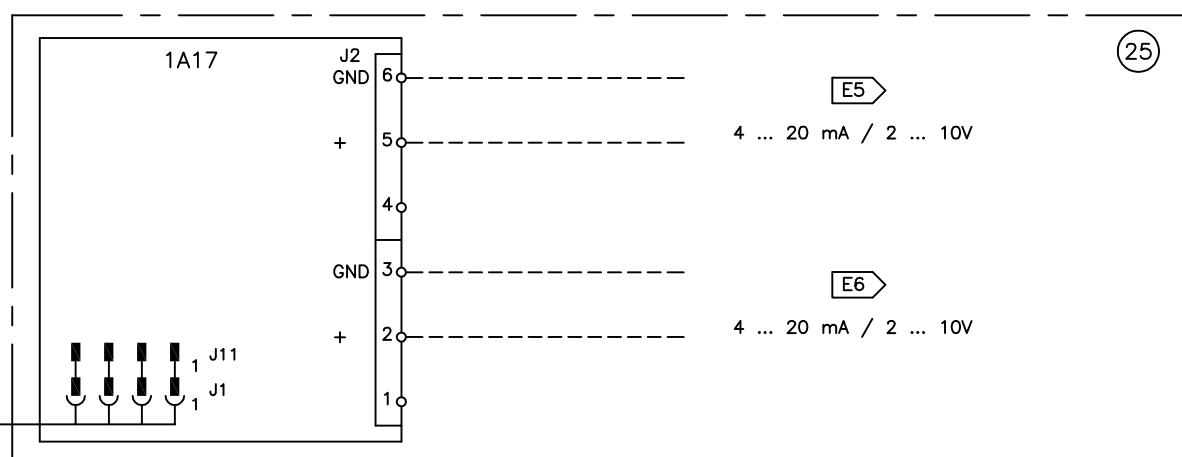
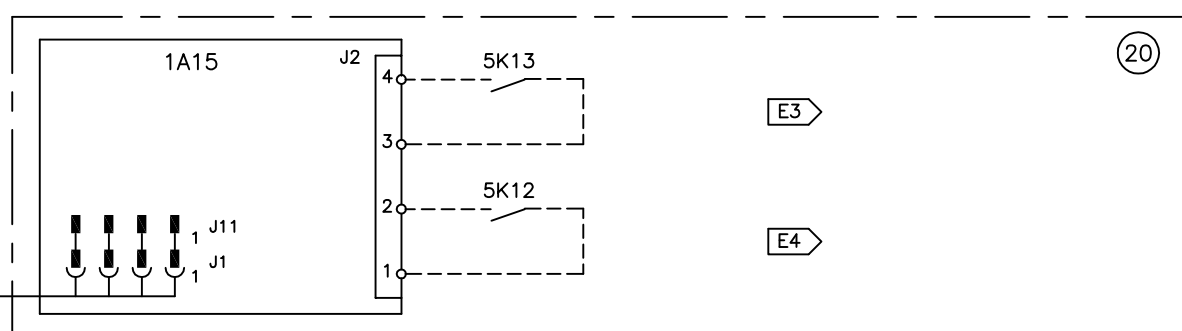
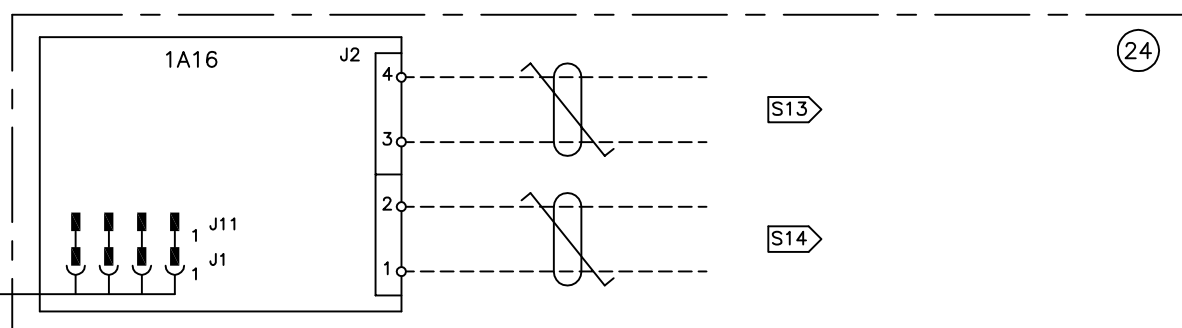
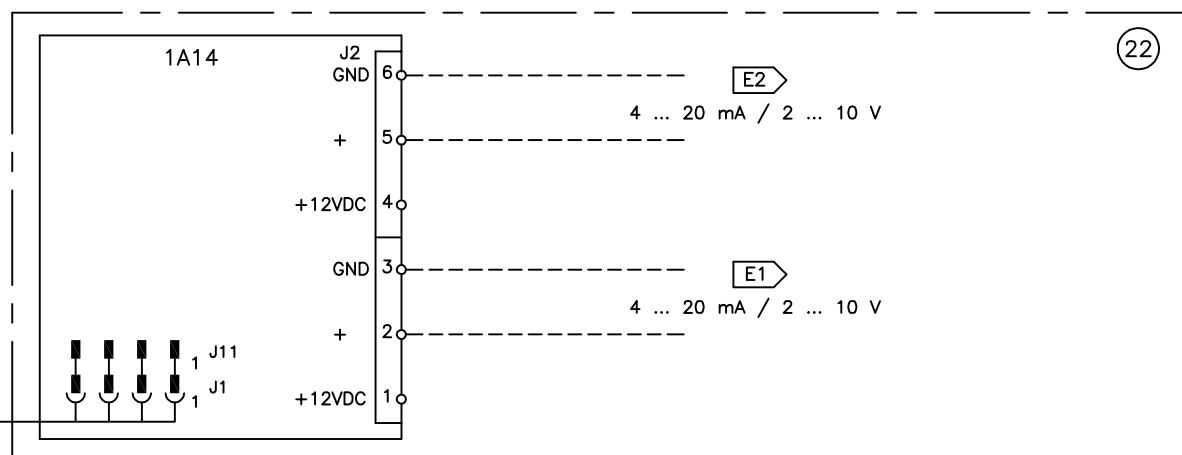
1X5-1 14 (RD)

1X5-2 15 (BK)

1X5-3 16 (WH)



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TRANE

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SHEET 5 OF 6

REV A

NOMENCLATURE – LEGEND – COMPONENTS DESIGNATION

	CABLAGE TRANE	TRANE VERDRAHTUNG	TRANE WIRING
	CABLAGE CLIENT	VERDRAHTUNG DURCH KUNDEN	CUSTOMER WIRING

CODE COULEUR
FARBMARKIERUNG
COLOUR CODE

BK: NOIR

BN: BRUN

BU: BLEU

GD: OR

GN: VERT

GY: GRIS

OG: ORANGE

PK: ROSE

RD: ROUGE

SR: ARGENT

VT: VIOLET

WH: BLANC

YE: JAUNE

SCHWARZ

BRAUN

BLAU

GOLD

GRUEN

GRAU

ORANGE

ROSE

ROT

SILBER

VIOLETT

WEISS

GELB

BLACK

BROWN

BLUE

GOLD

GREEN

GRAY

ORANGE

PINK

RED

SILVER

PURPLE

WHITE

YELLOW

1K20–1

INDICE

ATTRIBUT

DESIGNATION

EMPLACEMENT

ZAHLENINDEX

ATTRIBUT

BEZEICHNUNG

STELLE

INDEX

ATTRIBUTE

DESIGNATION

LOCATION

EMPLACEMENT

STELLE

LOCATION

1

2

3

4

5

COFFRET UNITE

PAS UTILISE

COMPRESSEUR

MONTE EN USINE

CABLAGE CLIENT

GERATE–SCHALTТАFEL

NITCH BENUTZT

VERDICHTER

AN DER MASCHINE

VERDRAHT. KUNDEN

UNIT PANEL

NOT USED

COMPRESSOR

UNIT MOUNTED

CUSTOMER WIRING

NOTES – BEACHTЕ – NOTES:

1

2

3

4

5

–VOIR DETAIL SI OPTION A, E, OU F MONTÉE

–SEULEMENT POUR COMPRESSEUR C ET AU DESSUS

–SONDE EXTERIEURE INSTALLEE EN USINE

–COUPLE EN 400V EN USINE

–OTER CE PONTAGE QUAND UTILISATION DE CE CONTACT

–SIEHE EINZELHEIT, WENN OPTION A,E ORDER F MONTIERT IST

–NUR FÜR VERDICHTER C UND HORER

–FUEHLER, UMGEBUNGSTEMPERATUR WERKSMONTIERT

–400V VERDRAHTET (WERKSMONTIERT)

–ENTFERNE DIESE BRUECKE, WENN DIESER KONTAKT BELEGT IST

–SEE DETAIL IF OPTION A,E OR F MOUNTED

–ONLY FOR COMPRESSOR C AND OVER

–OUTDOOR AIR TEMP FACTORY INSTALLED LEAD LENGTH EXTENDED BY CUSTOMER

–CONNECTED IN 400V (FACTORY WIRED)

–REMOVE THIS JUMPER WHEN USING THIS CONTACT

ENTREES CARTES POUR RACCORDEMENT CLIENT – MODULEINGANG – CUSTOMER INPUTS:

E1

E2

E3

E4

E5

E6

–POINT DE CONSIGNE EXTERNE D’INTENSITE

–POINT DE CONSIGNE EXTERNE EAU FROIDE

–CONTROLE DE CHARGE EXTERNE

–FONCTIONNEMENT STOCKAGE DE GLACE

–ENTREE CONTROLE DE CHARGE EXTERNE

–ENTREE DETECTEUR DE REFRIGERANT

–SOLLWERT EXT. STROMBEGRENZUNG

–SOLLWERT EXT. KALTWASSERTEMPERATUR

– AKTIVIERUNG EXTERNE GRUNDLAST

–EISSPEICHERBETRIEB

–EINGANG EXTERNER GRUNDLAST–SOLLWERT

–EINGANG KALTEMITTEL–UBERWACHUNG

–EXTERNAL CURRENT LIMIT SETPOINT

–EXTERNAL CHILLED WATER SETPOINT

–EXTERNAL BASE LOAD ENABLE

–ICE BUILDING CONTROL

–EXTERNAL BASELOAD SETPOINT INPUT

–REFRIGERANT MONITOR INPUT

SORTIES CARTES POUR RACCORDEMENT CLIENT – MODULAUSGANG – CUSTOMER OUTPUTS:

S2

S8

S11

S12

S13

S14

–RELAIS PROGRAMMABLES

–FONCTIONNEMENT STOCKAGE DE GLACE

–0–10VDC : INFORMATION % RLA COMPRESSEUR

–0–10VDC : INFORMATION CONTROLE
CONDENSEUR (PRESSION ...)

– VERS AUTRE UNITE

– VERS TRACER OU AUTRE UNITE TRANE

–FUNKTION DES RELAIS PROGRAMMIERBAR

–RELAIS EISSPEICHERBETRIEB

– 0–10VDC : INFO NOMINALSTROM VERDICHTER (RLA)

– 0–10VDC : INFO VERFLUESSIGUNSDRUCK
(DRUCK ...)

– ZUE ANDERE UNIT

– NACH TRACER

–PROGRAMMABLE RELAIS

–ICE MAKING ENABLE

– 0–10VDC COMPRESSOR % RLA OUTPUT

– 0–10VDC CONDENSER CONTROL OUTPUT
(CONDENSER PRESSURE , DELTA PRESSURE ...)

–TO NEXT UNIT

–TO TRACER OR OTHER TRANE REMOTE DEVICE

REPERE	OPTIONS	ZUBEHOER	OPTIONS
A	INTERRUPTEUR–SECTIONNEUR	HAUPTSCHALTER	DISCONNECT SWITCH
E	INTERRUPTEUR–SECTIONNEUR + FUSIBLES	HAUPTSCHALTER + SICHERUNG	DISCONNECT SWITCH + FUSES
F	DISJONCTEUR	SCHUTZSCHALTER	CIRCUIT BREAKER
J	TRANSFO. DE SUR/SOUS TENSION	UEBER/UNTERSpannungSTRAFO.	OVER/UNDER VOLTAGE TRANSFO.
K	DEFAULT DE MISE A LA TERRE	ERDUNGSFEHLER RELAIS	GROUND FAULT RELAY
20	FONCTIONNEMENT MACHINE A GLACE	EISSPEICHERBETRIEB	ICE MAKING ENABLE
22	POINTS DE CONSIGNES EXTERNES	EXTERNER SOLLWERT	EXTERNAL SETPOINTS
23	SORTIES COMPRESSEUR / CONDENSEUR	AUSGANG KOMPRESSOR / VERFLUSSIGER	CONDENSER / COMPRESSOR OUTPUT
24	INTERFACE COMM4 OU COMM5	COMM4 ORDER COMM5	COMM4 OR COMM5
25	ENTREE DETECTEUR DE REFRIGERANT ET CONTROLE DE CHARGE EXTERNE	EINGANG KALTEMITTELUberwACHUNG UND SOLLWERT EXTERNE GRUNDLAST	REFRIGERANT MONITOR INPUT & EXTERNAL BASELOAD SETPOINT INPUT

TRANE

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NOMENCLATURE – LEGEND – COMPONENTS DESIGNATION

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SHEET 6 OF 6

REV A

RTHD

LINE #	ITEM	FRANCAIS	DEUTCH	ENGLISH
/	X	BORNE	KLEMMEN	TERMINAL BLOCK
51–57	1A1	INTERFACE UTILISATEUR LOCAL	LOKALE MENSCH/MASCHINE SCHNITTSTEL.	DYNA VIEW DISPLAY AND INTERFACE
61–65	1A2	MODULE ALIMENTATION	MODUL SPANNUNGSEINGANG	POWER SUPPLY MODULE
78–105	1A3	MODULE DEMARREUR	STARTER MODUL	STARTER MODULE
106–113	1A4	MODULE COUPURE PRESSOSTAT HAUTE PRESSION	MODUL MITTELSPANNUNGSEINGANG BINAER	HIGH PRESSURE CUTOUT SWITCH
113–121	1A5	MODULE ELECTROVANNES CHARGE ET DECHARGE	MODUL MIT 2 AUSGAENGEN TRIAC	SLIDE VALVE INLOAD AND LOAD CONTROL SOLENOID VALVE
121–128	1A6	MODULE ELECTROVANNES REMPLISSAGE ET VIDANGE GAS PUMP	MODUL MIT 2 AUSGAENGEN TRIAC	OIL RETURN GAS PUMP DRAIN AND FILL SOLENOID VALVE
149–159	1A7	MODULE CONTROLEUR DE DEBIT EVAPORATEUR ET CONDENSEUR	MODUL MITTELSPANNUNGSEINGANG BINAER	CONDENSER AND CHILLED WATER FLOW SWITCH INTERLOCKS
139–148	1A8	MODULE ETAT MODE STOCKAGE GLACE/ELECTROVANNE D’HUILE	MODUL MIT ZWEI RELAIS AUSGAENGEN	ICE BUILDING STATUS OUTPUT AND MASTER OIL LINE SOLENOID VALVE
160–169	1A9	MODULE DEMARRAGE POMPE EVAPORATEUR ET CONDENSEUR	MODUL MIT ZWEI RELAIS AUSGAENGEN	CONDENSER AND CHILLED WATER PUMP STARTER
234–251	1A10	MODULE SORTIES RELAIS D’INDICATEUR D’ETAT PROGRAMMABLE	MODUL MIT VIER RELAIS AUSGAENGEN	OPERATING STATUS PROGRAMMABLE RELAYS
177–183	1A11	MODULE INDICATEUR PRESENCE D’HUILE	MODUL OELSTANDSKONTROLLE	OIL LOSS LEVEL SENSOR AND UNUSED INPUTS
170–176	1A12	MODULE SORTIES MARCHE/ARRET EXTERNE ET ARRET D’URGENCE	MODUL NIEDERSPANNUNGSEINGANG BINAER	EXTERNAL AUTO/STOP AND EMERGENCY STOP INPUT
185–188	1A13	MODULE SORTIES CONTROLE CONDENSEUR ET SORTIE RLA	ANALOG I/O MODUL MIT 2 I/O ANSCHLUESSEN	CONDENSER CONTROL AND % RLA OUTPUT
197–205	1A14	MODULE SORTIE PNT CONSI. EXT. LIM. COURANT ET EAU GLACEE	ANALOG I/O MODUL MIT 2 I/O ANSCHLUESSEN	EXTERNAL CURRENT LIMIT AND CHILLED WATER
216–222	1A15	MODULE MODE STOCKAGE GLACE/CONTROLE CHARGE EXTERNE	MODUL NIEDERSPANNUNGSEINGANG BINAER	ICE BUILDING CONTROL AND EXTERNAL BASE LOADING ENABLE
208–214	1A16	INTERFACE COMM4 OU LCI–C (COMM5)	COMM4 ORDER COMM5	COMM 4 OR LCI–C (COMM 5)
224–233	1A17	MODULE ENTREE DETECTEUR RFGT/CONTROLE CHARGE EXTERNE	ANALOG I/O MODUL MIT 2 I/O ANSCHLUESSEN	REFRIGERANT MONITOR INPUT AND EXTERNAL BASE LOADING SETPOINT
12	1F10	FUSIBLE COMPRESSEUR	SICHERUNG, VERDICHTER	COMPRESSOR FUSE
36...44	1K1	CONTACTEUR LIGNE COMPRESSEUR	SCHUETZ, BETRIEB VERDICHTER	COMPRESSOR LINE CONTACTOR
38...46	1K2	CONTACTEUR TRIANGLE COMPR.	SCHUETZ DREIECK VERDICHTER	DELTE COMPRESSOR CONTACTOR
38...46	1K3	CONTACTEUR ETOILE COMPRESSEUR	SCHUETZ STERN VERDICHTER	STAR COMPRESSOR CONTACTOR
37...45	1K4	CONTACTEUR TRANSITION COMPR.	SCHUETZ, UEBERGANG VERDICHTER	COMPRESSOR TRANSITION CONTACTOR
5,6,174	1K5	RELAIS PROTECTION	RELAIS STOERUNG	PROTECTION RELAY
23/45	1Q2/3/4	DISJONCTEUR MAGNETOTHERMIQUE	UBERSTROMREL. MAGNET THERMIQUE	MAGNETOTHERMIC OVERLOAD RELAY
11	1Q10	INTERRUPTEUR SECTIONNEUR UNITE	TRENNER MASCHINE	UNIT DISCONNECT SWITCH
11	1Q11	DISJONCTEUR UNITE	UBERSTROMREL. MASCHINE	UNIT CIRCUIT BREAKER
37...45	1R1	RESISTANCE DE TRANSITION	WIDERSTAND UEBERGANG	TRANSITION RESISTOR
39	1T1	TRANSFORMATEUR	TRANSFORMATOR	TRANSFORMER
10...15	1T2 ...	TRANSFORMATEUR D’INTENSITE	STROMWANDLER	CURRENT TRANSFORMER
30,77..82	1T3 ...	TRANSFO. DE SUR/SOUS TENSION	UEBER/UNTERS PANNUNGSTRAFO.	OVER/UNDER VOLTAGE TRANSFORMER
2	1X1	BORNIER PUISSANCE COMPRESSEUR	KLEMMEN, KRAFTSTROM, VERDICHTER	COMPRESSOR POWER CIRCUIT TERMINAL STRIP
40	3M1	MOTEUR COMPRESSEUR	MOTOR, VERDICHTER	COMPRESSOR MOTOR
116	3Y1	ELECTROVANNE CHARGE COMPRESSEUR	MAGNETVENTIL. LEISTUNGSREGELUNG	COMPRESSOR LOAD SOLENOID VALVE
119	3Y2	ELECTROVANNE DECHARGE COMPRESSEUR	MAGNETVENTIL. LEISTUNGSREGELUNG	COMPRESSOR UNLOAD SOLENOID VALVE
179...183	4B2	DETECTEUR PRESENCE HUILE	OELSTANDSKONTROLLE	OIL LOSS LEVEL SWITCH
48	4B3	CONTROLE NIVEAU REFRIGERANT EVPAPORATEUR	VERD. KAEITEMITTEL NIVEAU SENSOR	EVP. REFRIGERANT LIQUID LEVEL SENSOR
55	4B20	SONDE TEMPERATURE ENTREE D’EAU EVPAPORATEUR	FUEHLER WASSEREINTRITT VERD.	ENTERING EVAPORATOR WATER TEMPERATURE SENSOR
57	4B21	SONDE TEMPERATURE SORTIE EAU EVAPORATEUR	FUEHLER, WASSERAUSSTRIIT VERD.	LEAVING EVAPORATOR WATER TEMPERATURE SENSOR
59	4B22	SONDE TEMPERATURE ENTREE EAU CONDENSEUR	FUEHLER, WASSERAUSSTRIIT VERFL.	ENTERING CONDENSER WATER TEMPERATURE SENSOR
62	4B23	SONDE TEMPERATURE SORTIE EAU CONDENSEUR	FUEHLER, WASSERAUSSTRIIT VERD.	LEAVING CONDENSER WATER TEMPERATURE SENSOR
64	4B24	CAPTEUR DE PRESSION D’HUILE	OELSTANDSKONTROLLE	OIL PRESSURE TRANSDUCER
51	4B25	CONTROLE PRESSION EVAPORATEUR	GEBER VERDAMPFUNGSDRUCK	EVAPORATOR REFRIGERANT PRESSURE TRANSDUCER
53	4B26	CONTROLE PRESSION CONDENSEUR	VERFLUESSIGUNGSDRUCKKONTROLLE	CONDENSOR REFRIGERANT PRESSURE TRANSDUCER
49	4B27	SONDE TEMPERATURE REFOULEMENT	FUEHLER. HEISSGASTEMPERATUR	DISCHARGE TEMPERATURE SENSOR
72	4B29	PRESSOSTAT HAUTE PRESSION	DRUCKSCHALTER,HOCHDRUCK	HIGH PRESSURE CUTOUT SWITCH
74/76	4E1/2	RESISTANCE CARTER HUILE	OELHEITZUNG, VERDICHTER	OIL SUMP HEATERS
121	4Y1	ELECTROVANNE REMPLISSAGE	MAGNETVENTIL FUELLEN	FILL SOLENOID VALVE
126	4Y2	ELECTROVANNE VIDANGE	MAGNETVENTIL ABLASSEN	DRAIN SOLENOID VALVE
78	4Y3	ELECTROVANNE CIRCUIT HUILE	MAGNETVENTIL. OELKREIS	MASTER OIL LINE SOLENOID VALVE
50/53	4Y20–21	VANNE D’ EXPANSION ELECTRONIQUE	ELEKTRONISHES EXPANSIONVENTIL	DUAL PORT EXV ACTUATOR
58	5B28	SONDE TEMPERATURE AIR EXTERIEUR	FUEHLER, UMGEBUNSLUFT	OUTDOOR TEMPERATURE AIR SENSOR
9	5F10	FUSIBLES	SICHERUNG	FUSES
163	5K1	CONTACTEUR POMPE A EAU EVAPORATEUR	SCHUETZ, WASSERPUMPE VERDAMPFER	CHILLED WATER PUMP STARTER
168	5K2	CONTACTEUR POMPE A EAU CONDENSEUR	SCHUETZ, WASSERPUMPE VERFLUESS	CONDENSER WATER PUMP STARTER
236...251	5K4..20	RELAIS	RELAIS	UNIT STATUS RELAYS
219	5K12	FONCTIONNEMENT EN MODE STOCKAGE DE GLACE	EISSEICHERBETRIEB	ICE BUILDING CONTROL
216	5K13	VALIDATION EXTERNE DU CONTROLE DE CHARGE	SOLLWERT " EXTERNAL BASE LOADING "	EXTERNAL BASE LOAD ENABLE
174	5K21	ARRET UNITE	EIN/AUS MASHINE	EXTERNAL STOP
171	5K22	ARRET D’ URGENCE UNITE	NOTSCHALTER–AUS	EXTERNAL EMERGENCY STOP
6	5T10	TRANSFORMATEUR D’ INTENSITE	STROMWANDLER	CURRENT TRANSFORMER
151	5S1	INTERRUPTEUR DEBIT EAU EVP	STROEMUNGSWAECHTER VERD.	EVP WATER FLOW SWITCH
155	5S2	INTERRUPTEUR DEBIT EAU CDS	STROEMUNGSWAECHTER VERFLUESSIGER	CDS WATER FLOW SWITCH