

Anlage:

HKLS-02 Lüftungszentrale

Tierfreund KG

Firma:

Gebäude- u. Regeltechnik GmbH

SCHALTSCHRANKAUSFÜHRUNG

SCHALTSCHRANKGRÖSSE:

- ```

• 800x1800x400 (BxHxT)
• 800x1800x400 (BxHxT)
• 800x1800x400 (BxHxT)
 200 (H)
RAL 7035
IP54
lt. EVU
nein (BxH)
unten
links-rechts-rechts

```

## VERDRAHTUNGSFARBEN

HAUPTSTROMKREIS 400/230V:

NEUTRALLEITER:

SCHUTZLEITER:

STEUERSPANNUNG 230VAC:

ohne Trafo:

mit Trafo:

STEUERSPANNUNG 0-24VAC:

STEUERSPA  
UND BBO

GND, DDC:  
MEßLEITUNGEN FÜHLER:

MESSLEITUNGEN, FÜHLER:  
POTENTIALFREIE LEITUNGEN:

POTENTIALFREIE  
FREMDSPANNUNG:

— schwarz  
— hellblau  
— gelb/grün

braun/hellblau

rot/rot-weiß

blau/blau-weiß

           blau/blau-weiß

           blau-weiß

\_\_\_\_\_grün

           orange

orange

## BESTELLDATEN:

BESTELL NR. / DATUM:

KUNDE: Gebäude- u. Regeltechnik GmbH

    ! ! A C H T U N G ! !    

Bei Änderungen im Schaltschrank und auch an den externen Geräten die nicht von der Erzeugerfirma durchgeführt werden entfällt Garantie und Haftung. Dadurch entstehende Kosten werden nicht anerkannt. Sollte dies jedoch aus technischer Sicht notwendig sein ist die Erzeugerfirma zu verständigen. Schutzmaßnahmen des Örtlichen EVU's beachten! Motorschutzgeräte nach den tatsächlichen Aufnahme Strom der Motoren einstellen! Vor der Inbetriebnahme der Anlage sind sämtliche Schraub-, Klemm- und Steckverbindungen auf festen Sitz zu prüfen und gegebenenfalls nachzuziehen!

Anlagenbezeichnungen :

|                      |                             |
|----------------------|-----------------------------|
| L01 Sozialräume      | L11 BRA                     |
| L02 Gewürze          | L12 Ablüfter Chemikalien    |
| L03 Konserven        | L13 Ablüfter Kältetechnik   |
| L04 Waschraum        | L14 Ablüfter Werkstatt      |
| L05 Produktion OG    | L15 Ablüfter Triebwerksraum |
| L06 Verpackung Lager | L16 Ablüfter Raucher        |
| L07 Verpackung WS    | L17 Ablüfter Heizraum       |
| L08 APS              | L18 Ablüfter NS-Raum        |
| L09                  |                             |
| L10                  |                             |

# Blattverzeichnis

```

000 Deckblatt
001 Netzanschluß
002 Schrankleuchte, Steuerspannung
003 CLAK-HAWK640
004 Modul 1 - AI - L01,L02
005 Modul 2 - AI - L03,L04
006 Modul 3 - AI - L05
007 Modul 4 - AI - L05,L06
008 Modul 5 - AI - L06,L07,L08
009 Modul 6 - AI - L07,L08
010 Modul 7 - AI - L11-L18
011 Modul 9 - AO - L01,L02
012 Modul 9 - AO - L02,L03,L04
013 Modul 10 - AO - L04,L05
014 Modul 11 - AO - L05,L06,L07
015 Modul 12 - AO - L07,L08
016 Modul 13 - AO - L08
017 Modul 14 - DI - Frostschutz, Filter L01
018 Modul 15 - DI - Filter L02-L05
019 Modul 16 - DI - Filter L05-L08
020 Modul 17 - DI - UWP Störungen, +L08

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021 Modul 18 - DI - Rep-Schalter L01-L05
022 Modul 19 - DI - Rep-Schalter L06-L08, +L12 +L13
023 Modul 20 - DI - Schlüsselschalter, LED-Taster
024 Modul 21 - DO - Schlüsselschalter
025 Modul 22 - DI - BSK - L01,L06,L07,L08
026 Modul 23 - DI - BSK - L012-L18, Reserve
027 Modul 24-DI-BSK Reserve, L13 Gasalarm
028 Reserveblatt Modul 25
029 Modul 26 - DI - Lüfter Störungen L01-L05
030 Modul 27 - DI - Lüfter Störungen L05-L09
031 Modul 28 - DI - Störung L12 L13 L14 +L14
032 Modul 29 - AO - Drehzahl L01-L04
033 Modul 30 - AO - Drehzahl L05-L08
034 Modul 31 - DO - UWP L01-L05
035 Modul 32 - DO - UWP L06-L08, L12,L13
036 Modul 33 - DO - L14,L15,L16,L17,L18
037 Reserveblatt Modul 34
038 Reserveblatt Modul 35
039 BMA, BSK Abschaltung Lüftungen
040 BMA, BSK Abschaltung Lüftungen
041 UWP L01-L05

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042 UWP L06-L08
043 L15, L16, L17, L18
044 L01 Sozialräume
045 L02 Gewürze
046 L03 Konserven
047 L04 Waschraum
048 L04 Waschraum
049 L05 Produktion OG
050 L06 Verpackung Lager
051 L06 Verpackung Lager
052 L07 Verpackung WS
053 L08 APS
054 L08 APS
055 L12 Ablüfter Chemikalien
056 L13 Kälte, Gasalarm, externe Anforderungen
057 L13 Ablüfter Kältetechnik
058 L14 Ablüfter Werkstatt
059 Frostschutzheizung L01-L08
060 Innenbeleuchtung Lüftungsanlagen
061 Reserveabgänge

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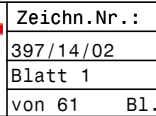
|        |           |
|--------|-----------|
| Datum  | 27.11.14  |
| Bearb. | Hattinger |
| Gepr.  |           |
| Norm   |           |



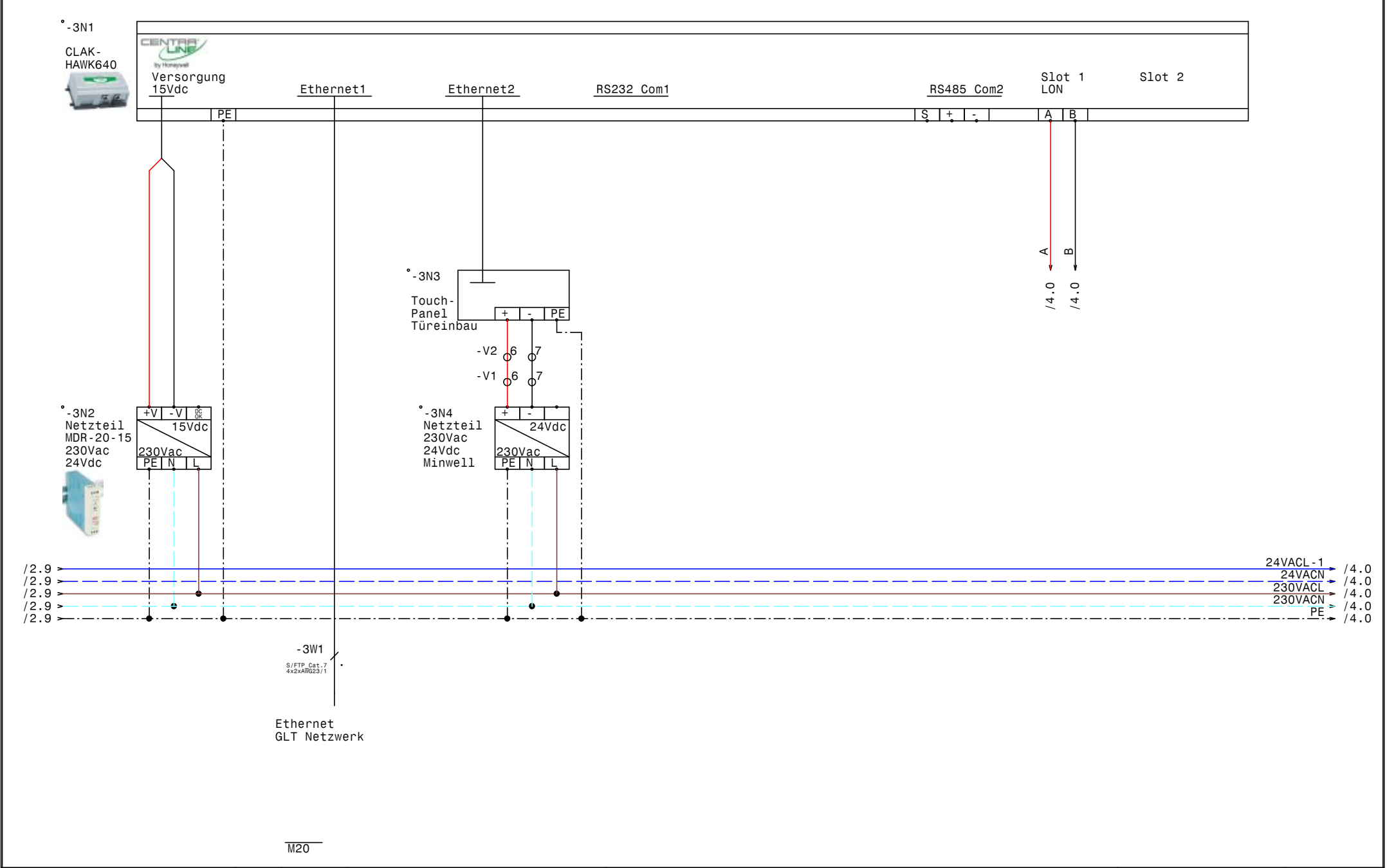
HKLS-02 Lüftungszentrale  
Tierfreund KG  
Deckblatt



|              |           |
|--------------|-----------|
| Zeichn.Nr.:  | 397/14/02 |
| Blatt 0      | von 61 Bl |
| www.elpe.net |           |





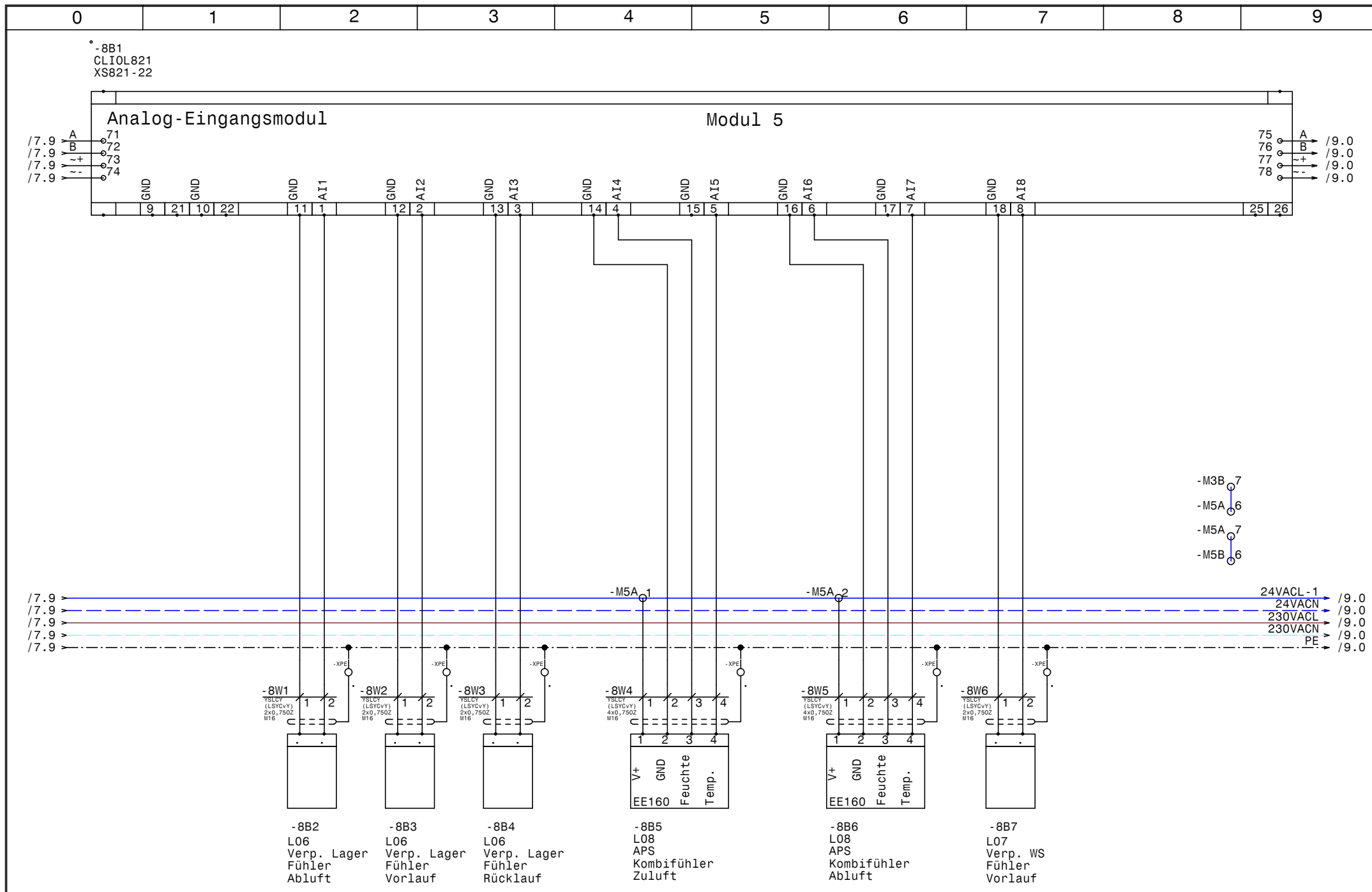


















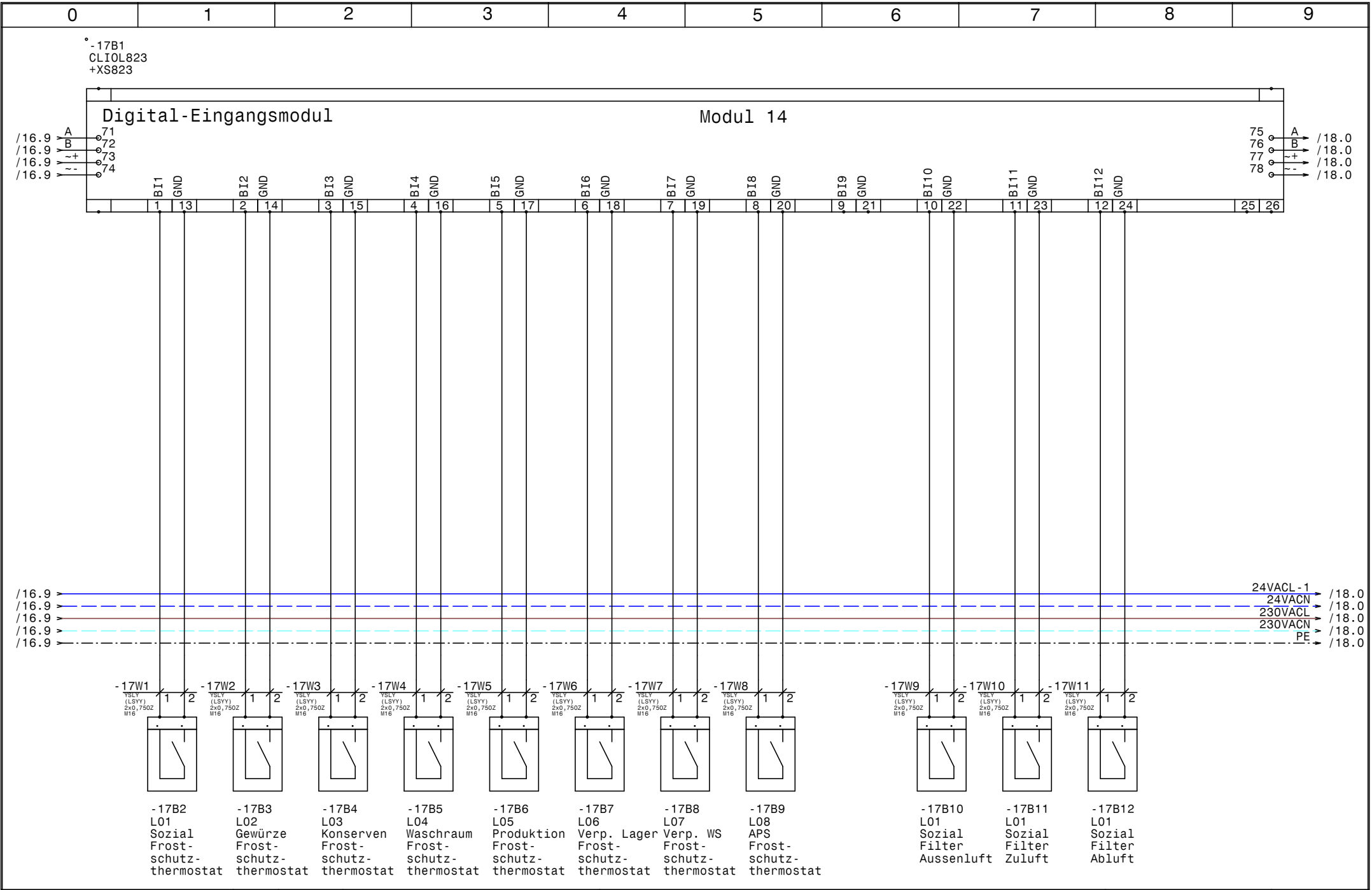


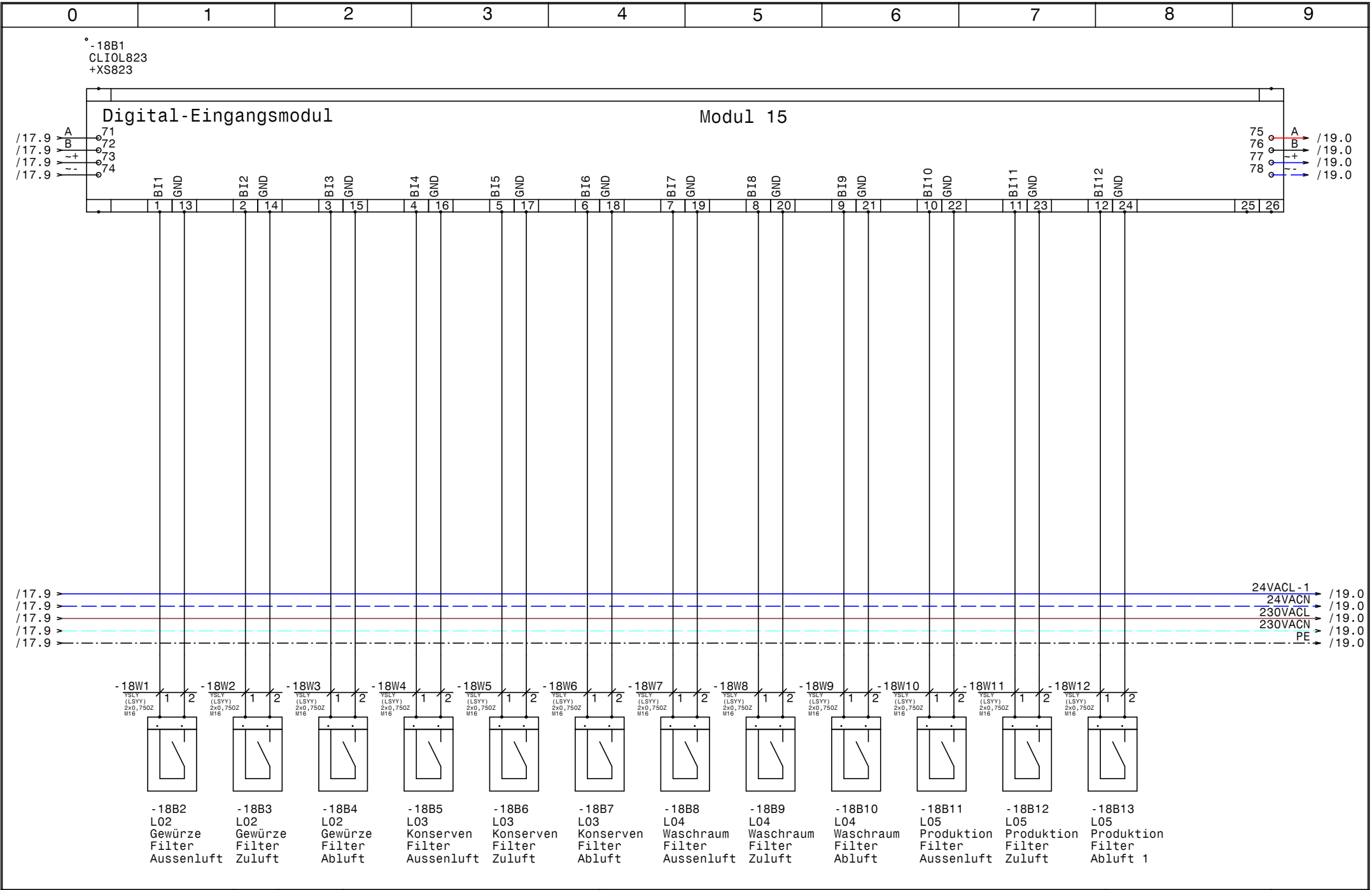








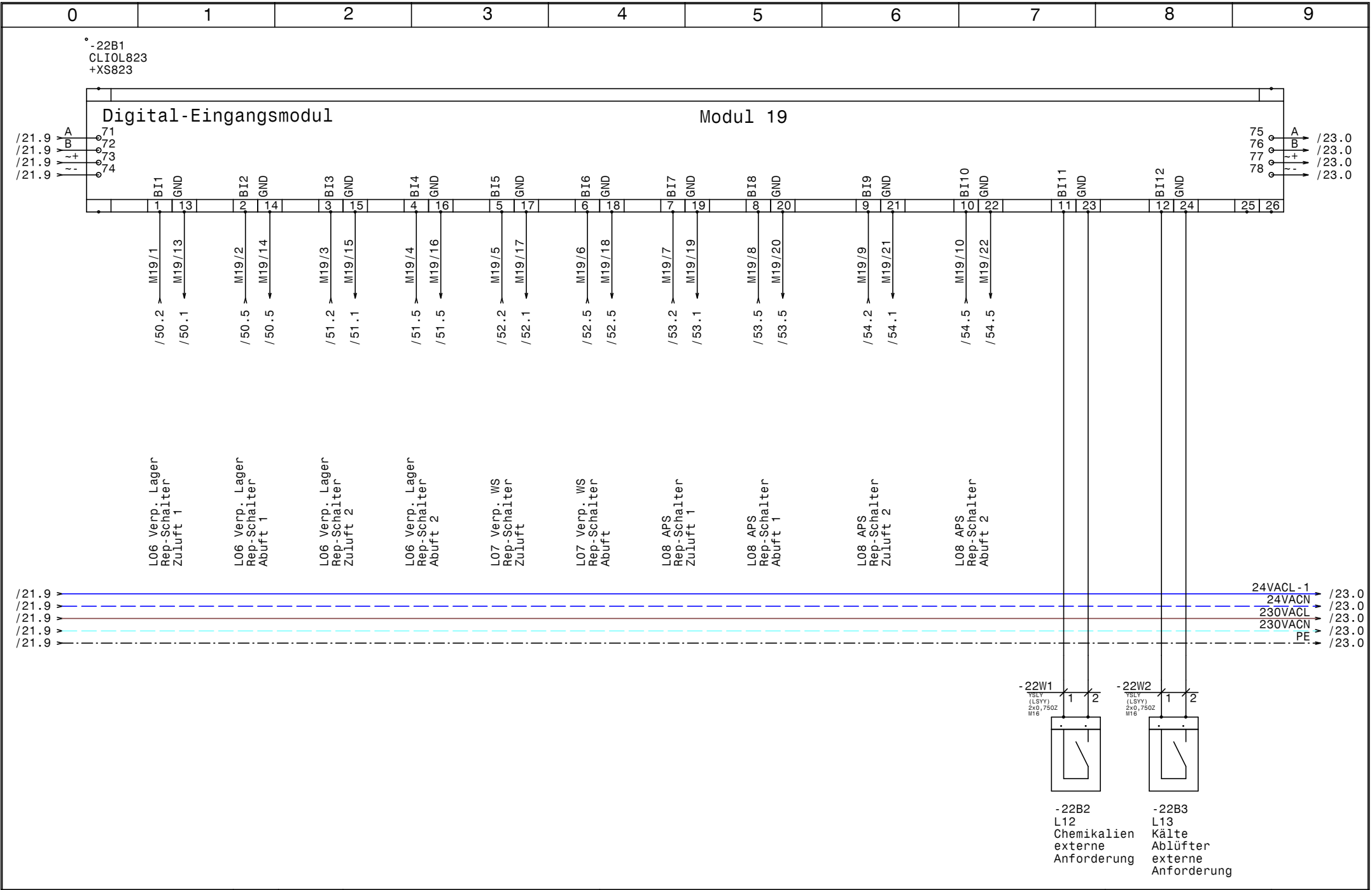








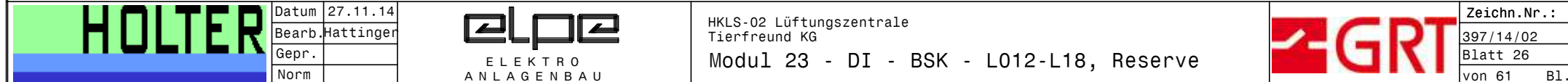










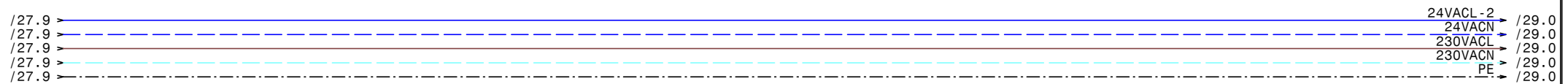




|   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|

Reserveplatz

Modul 25



|        |           |
|--------|-----------|
| Datum  | 27.11.14  |
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| Gepr.  |           |
| Norm   |           |



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Reserveblatt Modul 25

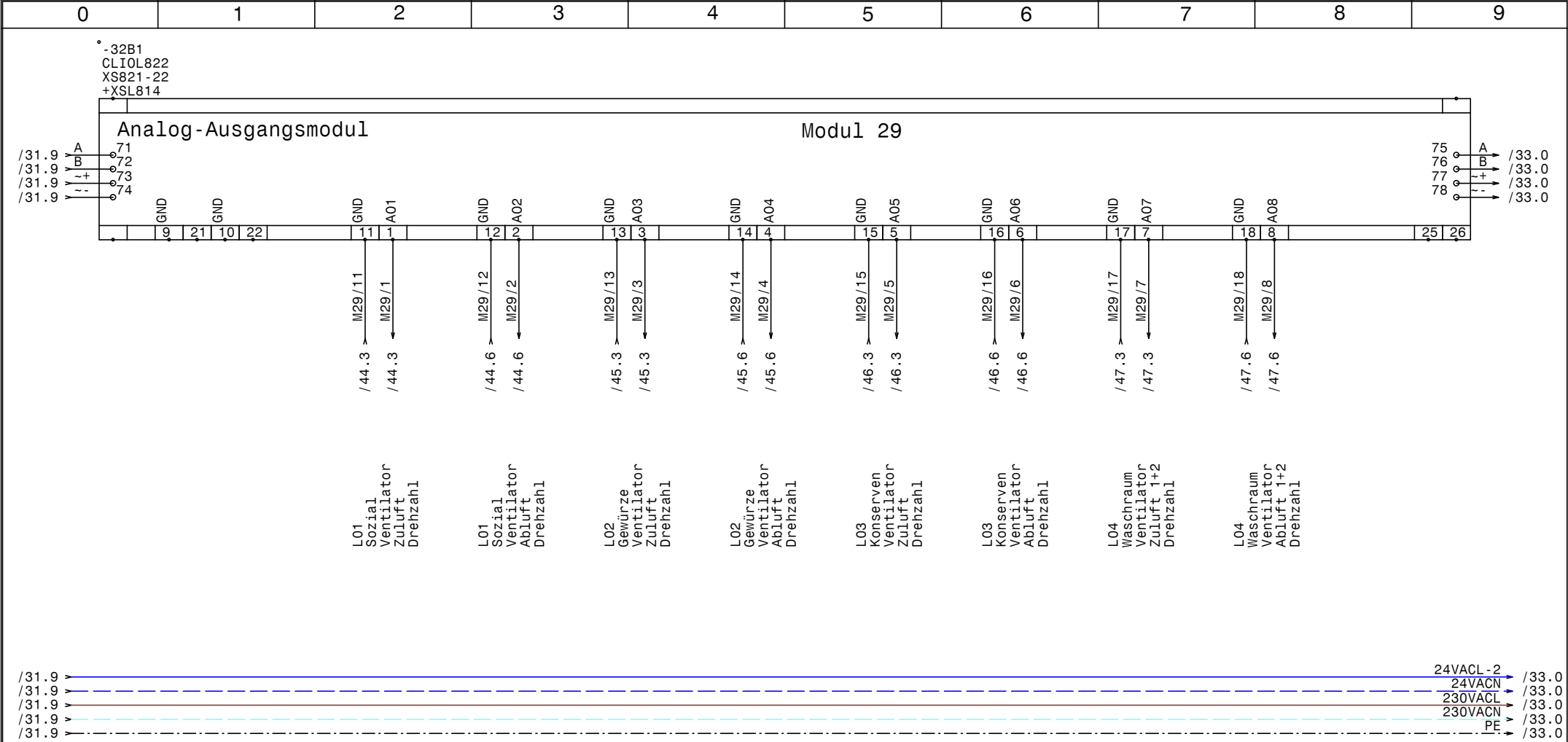


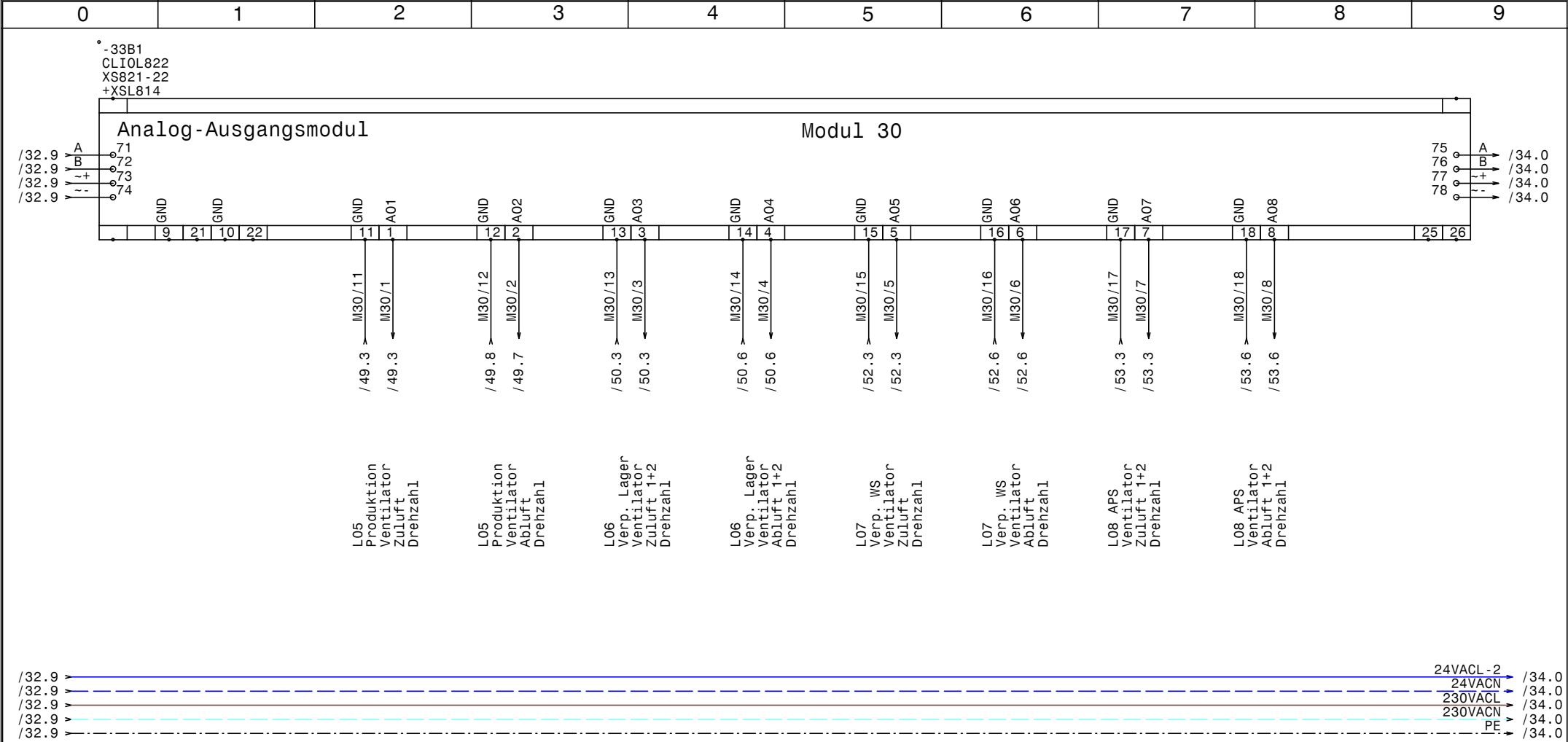
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| Zeichn.Nr.:                                    |
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| von 61 Bl.                                     |
| <a href="http://www.elpe.net">www.elpe.net</a> |













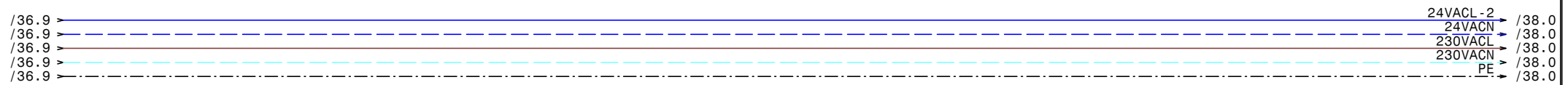




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|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|

Reserveplatz

Modul 34



|        |           |
|--------|-----------|
| Datum  | 27.11.14  |
| Bearb. | Hattinger |
| Gepr.  |           |
| Norm   |           |



HKLS-02 Lüftungszentrale  
Tierfreund KG

Reserveblatt Modul 34

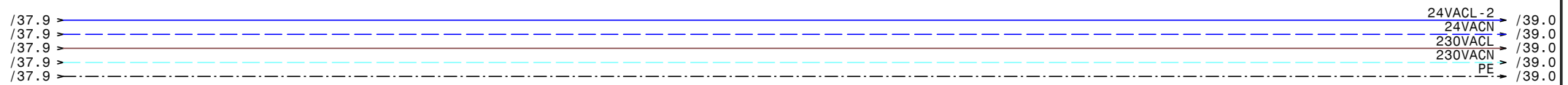


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| Zeichn.Nr.:                                    |
| 397/14/02                                      |
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| von 61 Bl.                                     |
| <a href="http://www.elpe.net">www.elpe.net</a> |

|   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|

Reserveplatz

Modul 35



|        |           |
|--------|-----------|
| Datum  | 27.11.14  |
| Bearb. | Hattinger |
| Gepr.  |           |
| Norm   |           |



HKLS-02 Lüftungszentrale  
Tierfreund KG

Reserveblatt Modul 35



|                                                |
|------------------------------------------------|
| Zeichn.Nr.:                                    |
| 397/14/02                                      |
| Blatt 38                                       |
| von 61 Bl.                                     |
| <a href="http://www.elpe.net">www.elpe.net</a> |





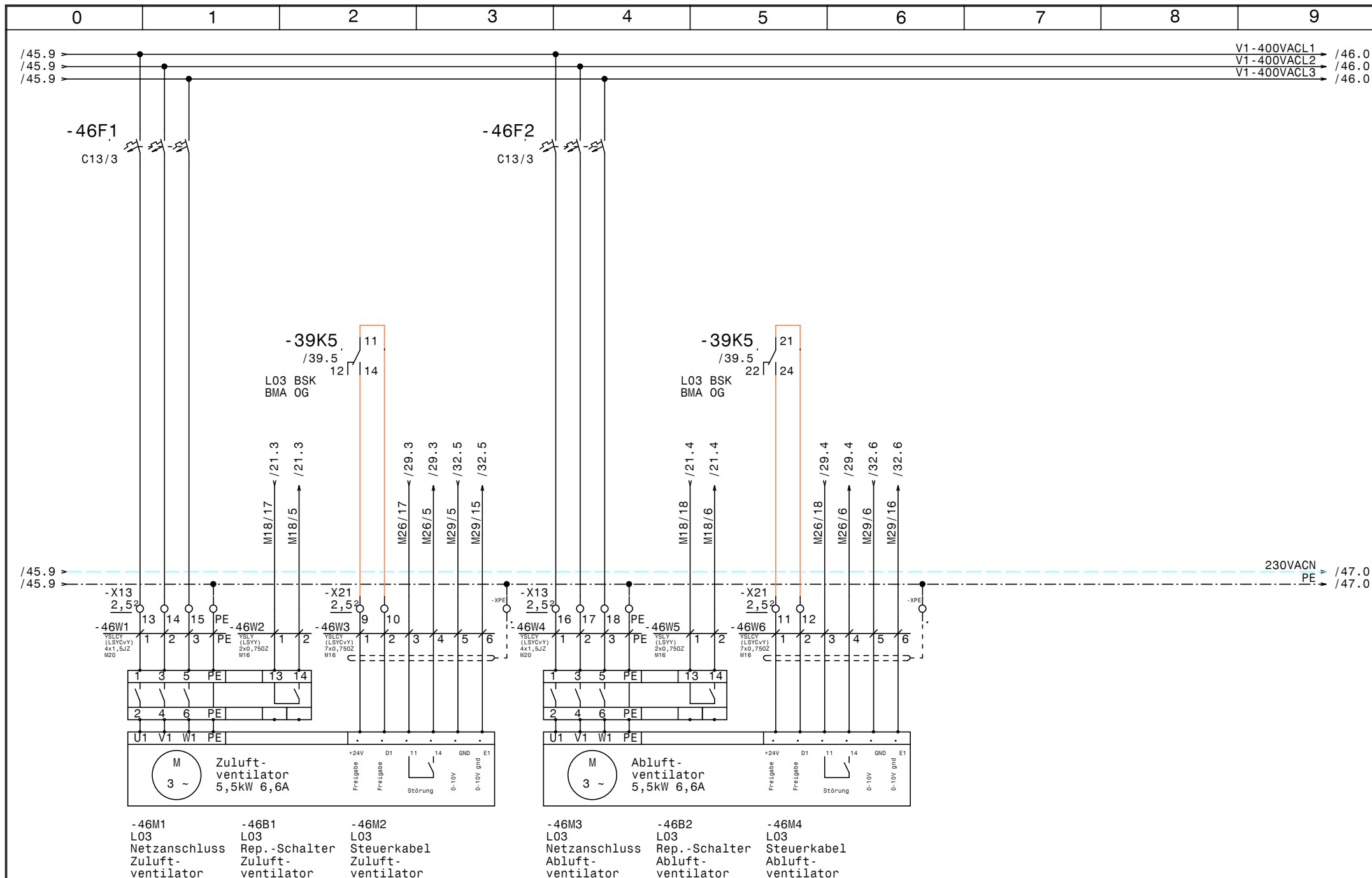












Datum 27.11.14  
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 Gepr.  
 Norm



HKLS-02 Lüftungszentrale  
 Tierfreund KG  
 L03 Konserven



Zeichn.Nr.:  
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 Blatt 46  
 von 61 Bl.































|                                                                                    |        |           |                                                                                                              |                                                            |                                                                                       |             |  |
|------------------------------------------------------------------------------------|--------|-----------|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------|--|
|  | Datum  | 27.11.14  | <br>ELEKTRO<br>ANLAGENBAU | HKLS-02 Lüftungszentrale<br>Tiefreund KG<br><br>Kabelliste |  | Zeichn.Nr.: |  |
|                                                                                    | Bearb. | Hattinger |                                                                                                              |                                                            |                                                                                       | 397/14/02   |  |
|                                                                                    | Gepr.  |           |                                                                                                              |                                                            |                                                                                       | Blatt 1     |  |
|                                                                                    | Norm   |           |                                                                                                              |                                                            |                                                                                       | von 7 Bl.   |  |









| 0   |           | 1 |  | 2                        |  | 3 |                             | 4 |  | 5               |  | 6                                    |  | 7 |  | 8 |  | 9 |  |
|-----|-----------|---|--|--------------------------|--|---|-----------------------------|---|--|-----------------|--|--------------------------------------|--|---|--|---|--|---|--|
| Nr. | Feldgerät |   |  | Leitungs-<br>bezeichnung |  |   | Leitungs-<br>typ            |   |  | Anzahl<br>Adern |  | Zielbezeichnung                      |  |   |  |   |  |   |  |
| 201 | -46M2     |   |  | -46W3                    |  |   | YSLCY (LSYCVY) 7x0,750Z M16 |   |  | 6               |  | L03 Steuerkabel Zuluftventilator     |  |   |  |   |  |   |  |
| 202 | -46M3     |   |  | -46W4                    |  |   | YSLCY (LSYCVY) 4x1,5JZ M20  |   |  | 4               |  | L03 Netzanschluss Abluftventilator   |  |   |  |   |  |   |  |
| 203 | -46B2     |   |  | -46W5                    |  |   | YSLY (LSYY) 2x0,750Z M16    |   |  | 2               |  | L03 Rep.-Schalter Abluftventilator   |  |   |  |   |  |   |  |
| 204 | -46M4     |   |  | -46W6                    |  |   | YSLCY (LSYCVY) 7x0,750Z M16 |   |  | 6               |  | L03 Steuerkabel Abluftventilator     |  |   |  |   |  |   |  |
| 205 | -47M1     |   |  | -47W1                    |  |   | YSLCY (LSYCVY) 4x1,5JZ M20  |   |  | 4               |  | L04 Netzanschluss Zuluftventilator 1 |  |   |  |   |  |   |  |
| 206 | -47B1     |   |  | -47W2                    |  |   | YSLY (LSYY) 2x0,750Z M16    |   |  | 2               |  | L04 Rep.-Schalter Zuluftventilator 1 |  |   |  |   |  |   |  |
| 207 | -47M2     |   |  | -47W3                    |  |   | YSLCY (LSYCVY) 7x0,750Z M16 |   |  | 5               |  | L04 Steuerkabel Zuluftventilator 1   |  |   |  |   |  |   |  |
| 208 | -47M3     |   |  | -47W4                    |  |   | YSLCY (LSYCVY) 4x1,5JZ M20  |   |  | 4               |  | L04 Netzanschluss Abluftventilator 1 |  |   |  |   |  |   |  |
| 209 | -47B2     |   |  | -47W5                    |  |   | YSLY (LSYY) 2x0,750Z M16    |   |  | 2               |  | L04 Rep.-Schalter Abluftventilator 1 |  |   |  |   |  |   |  |
| 210 | -47M4     |   |  | -47W6                    |  |   | YSLCY (LSYCVY) 7x0,750Z M16 |   |  | 6               |  | L04 Steuerkabel Abluftventilator 1   |  |   |  |   |  |   |  |
| 211 | -48M1     |   |  | -48W1                    |  |   | YSLCY (LSYCVY) 4x1,5JZ M20  |   |  | 4               |  | L04 Netzanschluss Zuluftventilator 2 |  |   |  |   |  |   |  |
| 212 | -48B1     |   |  | -48W2                    |  |   | YSLY (LSYY) 2x0,750Z M16    |   |  | 2               |  | L04 Rep.-Schalter Zuluftventilator 2 |  |   |  |   |  |   |  |
| 213 | -48M2     |   |  | -48W3                    |  |   | YSLCY (LSYCVY) 7x0,750Z M16 |   |  | 6               |  | L01 Steuerkabel Zuluftventilator 2   |  |   |  |   |  |   |  |
| 214 | -48M3     |   |  | -48W4                    |  |   | YSLCY (LSYCVY) 4x1,5JZ M20  |   |  | 4               |  | L04 Netzanschluss Abluftventilator 2 |  |   |  |   |  |   |  |
| 215 | -48B2     |   |  | -48W5                    |  |   | YSLY (LSYY) 2x0,750Z M16    |   |  | 2               |  | L04 Rep.-Schalter Abluftventilator 2 |  |   |  |   |  |   |  |
| 216 | -48M4     |   |  | -48W6                    |  |   | YSLCY (LSYCVY) 7x0,750Z M16 |   |  | 6               |  | L04 Steuerkabel Abluftventilator 2   |  |   |  |   |  |   |  |
| 217 | -49B1     |   |  | -49W1                    |  |   | YSLY (LSYY) 2x0,750Z M16    |   |  | 2               |  | L05 Revisionssschalter ZULV          |  |   |  |   |  |   |  |
| 218 | -X21      |   |  | -49W2                    |  |   | YSLY (LSYY) 4x0,750Z M16    |   |  | 4               |  | L05 Steuerkabel FU-ZULV              |  |   |  |   |  |   |  |
| 219 |           |   |  | -49W3                    |  |   | YSLY (LSYY) 5x0,75JZ M16    |   |  | 4               |  | L05 Meldekabel FU-ZULV               |  |   |  |   |  |   |  |
| 220 | -49B2     |   |  | -49W4                    |  |   | YSLY (LSYY) 2x0,750Z M16    |   |  | 2               |  | L05 Revisionssschalter ABLV          |  |   |  |   |  |   |  |
| 221 | -X21      |   |  | -49W5                    |  |   | YSLY (LSYY) 4x0,750Z M16    |   |  | 4               |  | L05 Steuerkabel FU-ABLV              |  |   |  |   |  |   |  |
| 222 |           |   |  | -49W6                    |  |   | YSLY (LSYY) 5x0,75JZ M16    |   |  | 4               |  | L05 Meldekabel FU-ABLV               |  |   |  |   |  |   |  |
| 223 | -50M1     |   |  | -50W1                    |  |   | YSLCY (LSYCVY) 4x1,5JZ M20  |   |  | 4               |  | L06 Netzanschluss Zuluftventilator 1 |  |   |  |   |  |   |  |
| 224 | -50B1     |   |  | -50W2                    |  |   | YSLY (LSYY) 2x0,750Z M16    |   |  | 2               |  | L06 Rep.-Schalter Zuluftventilator 1 |  |   |  |   |  |   |  |
| 225 | -50M2     |   |  | -50W3                    |  |   | YSLCY (LSYCVY) 7x0,750Z M16 |   |  | 6               |  | L06 Steuerkabel Zuluftventilator 1   |  |   |  |   |  |   |  |
| 226 | -50M3     |   |  | -50W4                    |  |   | YSLCY (LSYCVY) 4x1,5JZ M20  |   |  | 4               |  | L06 Netzanschluss Abluftventilator 1 |  |   |  |   |  |   |  |
| 227 | -50B2     |   |  | -50W5                    |  |   | YSLY (LSYY) 2x0,750Z M16    |   |  | 2               |  | L06 Rep.-Schalter Abluftventilator 1 |  |   |  |   |  |   |  |
| 228 | -50M4     |   |  | -50W6                    |  |   | YSLCY (LSYCVY) 7x0,750Z M16 |   |  | 6               |  | L06 Steuerkabel Abluftventilator 1   |  |   |  |   |  |   |  |
| 229 | -51M1     |   |  | -51W1                    |  |   | YSLCY (LSYCVY) 4x1,5JZ M20  |   |  | 4               |  | L06 Netzanschluss Zuluftventilator 2 |  |   |  |   |  |   |  |
| 230 | -51B1     |   |  | -51W2                    |  |   | YSLY (LSYY) 2x0,750Z M16    |   |  | 2               |  | L06 Rep.-Schalter Zuluftventilator 2 |  |   |  |   |  |   |  |
| 231 | -51M2     |   |  | -51W3                    |  |   | YSLCY (LSYCVY) 7x0,750Z M16 |   |  | 6               |  | L06 Steuerkabel Zuluftventilator 2   |  |   |  |   |  |   |  |
| 232 | -51M3     |   |  | -51W4                    |  |   | YSLCY (LSYCVY) 4x1,5JZ M20  |   |  | 4               |  | L06 Netzanschluss Abluftventilator 2 |  |   |  |   |  |   |  |
| 233 | -51B2     |   |  | -51W5                    |  |   | YSLY (LSYY) 2x0,750Z M16    |   |  | 2               |  | L06 Rep.-Schalter Abluftventilator 2 |  |   |  |   |  |   |  |
| 234 | -51M4     |   |  | -51W6                    |  |   | YSLCY (LSYCVY) 7x0,750Z M16 |   |  | 6               |  | L06 Steuerkabel Abluftventilator 2   |  |   |  |   |  |   |  |
| 235 | -52M1     |   |  | -52W1                    |  |   | YSLCY (LSYCVY) 4x1,5JZ M20  |   |  | 4               |  | L07 Netzanschluss Zuluftventilator   |  |   |  |   |  |   |  |
| 236 | -52B1     |   |  | -52W2                    |  |   | YSLY (LSYY) 2x0,750Z M16    |   |  | 2               |  | L01 Rep.-Schalter Zuluftventilator   |  |   |  |   |  |   |  |
| 237 | -52M2     |   |  | -52W3                    |  |   | YSLCY (LSYCVY) 7x0,750Z M16 |   |  | 6               |  | L01 Steuerkabel Zuluftventilator     |  |   |  |   |  |   |  |
| 238 | -52M3     |   |  | -52W4                    |  |   | YSLCY (LSYCVY) 4x1,5JZ M20  |   |  | 4               |  | L01 Netzanschluss Abluftventilator   |  |   |  |   |  |   |  |
| 239 | -52B2     |   |  | -52W5                    |  |   | YSLY (LSYY) 2x0,750Z M16    |   |  | 2               |  | L01 Rep.-Schalter Abluftventilator   |  |   |  |   |  |   |  |
| 240 | -52M4     |   |  | -52W6                    |  |   | YSLCY (LSYCVY) 7x0,750Z M16 |   |  | 6               |  | L01 Steuerkabel Abluftventilator     |  |   |  |   |  |   |  |



Datum

27.1

|                                                                                    |        |           |                                                                                                              |                                                            |                                                                                       |             |  |
|------------------------------------------------------------------------------------|--------|-----------|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------|--|
|  | Datum  | 27.11.14  | <br>ELEKTRO<br>ANLAGENBAU | HKLS-02 Lüftungszentrale<br>Tiefreund KG<br><br>Kabelliste |  | Zeichn.Nr.: |  |
|                                                                                    | Bearb. | Hattinger |                                                                                                              |                                                            |                                                                                       | 397/14/02   |  |
|                                                                                    | Gepr.  |           |                                                                                                              |                                                            |                                                                                       | Blatt 7     |  |
|                                                                                    | Norm   |           |                                                                                                              |                                                            |                                                                                       | von 7 Bl.   |  |

| 0                                       | 1                      | 2 | 3 | 4                                                                                       | 5 | 6                                                           | 7 | 8                                                                             | 9 |                                      |  |                                                                |  |
|-----------------------------------------|------------------------|---|---|-----------------------------------------------------------------------------------------|---|-------------------------------------------------------------|---|-------------------------------------------------------------------------------|---|--------------------------------------|--|----------------------------------------------------------------|--|
| Stück<br>Zahl                           | Artikel<br>Bezeichnung |   |   | Artikel<br>Beschreibung                                                                 |   | Artikel<br>Bezüge                                           |   |                                                                               |   |                                      |  |                                                                |  |
| 7                                       |                        |   |   | CLIOL821 XS821-22                                                                       |   | -4B1, -5B1, -8B1, -6B1, -7B1, -10B1                         |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -9B1                                                        |   |                                                                               |   |                                      |  |                                                                |  |
| 13                                      |                        |   |   | CLIOL823 +XS823                                                                         |   | -29B1, -30B1, -31B1, -23B1, -17B1                           |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -18B1, -19B1, -20B1, -22B1, -25B1                           |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -26B1, -27B1, -21B1                                         |   |                                                                               |   |                                      |  |                                                                |  |
| 8                                       |                        |   |   | CLIOL822 XS821-22 +XSL814                                                               |   | -32B1, -33B1, -13B1, -14B1, -15B1                           |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -16B1, -12B1, -11B1                                         |   |                                                                               |   |                                      |  |                                                                |  |
| 4                                       |                        |   |   | CLIOL-R 824 +XS824-25                                                                   |   | -34B1, -35B1, -36B1, -24B1                                  |   |                                                                               |   |                                      |  |                                                                |  |
| 7                                       | Tytan R DO 3x35A       |   |   | Reiter-Sicherungslasttrennschalter                                                      |   | -1F4, -1F1, -1F3, -1F5, -1F6, -1F7                          |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -1F2                                                        |   |                                                                               |   |                                      |  |                                                                |  |
| 1                                       | LSFI C13/0,03 G        |   |   | Personenschutzschalter                                                                  |   | -2F1                                                        |   |                                                                               |   |                                      |  |                                                                |  |
| 4                                       | C6/1                   |   |   | Sicherungsautomaten                                                                     |   | -2F2, -43F1, -2F4, -2F3                                     |   |                                                                               |   |                                      |  |                                                                |  |
| 21                                      | C13/1                  |   |   | Sicherungsautomaten                                                                     |   | -42F2, -42F1, -59F3, -42F3, -41F3                           |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -42F4, -41F5, -41F4, -41F2, -59F1                           |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -59F2, -61F3, -41F6, -59F7, -59F5                           |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -59F6, -60F1, -59F8, -41F1, -59F4                           |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -61F4                                                       |   |                                                                               |   |                                      |  |                                                                |  |
| 22                                      | C13/3                  |   |   | Sicherungsautomaten                                                                     |   | -45F1, -50F1, -50F2, -48F1, -61F2                           |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -47F1, -52F2, -52F1, -51F2, -51F1                           |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -47F2, -46F1, -46F2, -44F1, -45F2                           |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -53F1, -53F2, -48F2, -54F2, -44F2                           |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -61F1, -54F1                                                |   |                                                                               |   |                                      |  |                                                                |  |
| 1                                       | PKZMO-6,3              |   |   | Motorschutzschalter                                                                     |   | -55F1                                                       |   |                                                                               |   |                                      |  |                                                                |  |
| 3                                       | NHI-E-11-PKZO          |   |   | Normalhilfsschalter                                                                     |   |                                                             |   |                                                                               |   |                                      |  |                                                                |  |
| 2                                       | PKZMO-1,6              |   |   | Motorschutzschalter                                                                     |   | -58F1, -57F1                                                |   |                                                                               |   |                                      |  |                                                                |  |
| 2                                       |                        |   |   | Schrank- leuchte mit Steckdose                                                          |   | -2H1, -2H2                                                  |   |                                                                               |   |                                      |  |                                                                |  |
| 41                                      | Relais2polig24VAC      |   |   | Miniatur - Relais 2polig                                                                |   | -26K9, -26K11, -40K5, -26K4, -39K2                          |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -40K4, -39K5, -26K6, -26K7, -40K3                           |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -26K8, -26K3, -26K10, -26K5, -40K1                          |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -26K12, -27K1, -27K2, -39K9, -39K1                          |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -25K1, -39K3, -39K7, -39K4, -40K2                           |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -25K6, -25K2, -56K4, -25K3, -25K4                           |   |                                                                               |   |                                      |  |                                                                |  |
|                                         |                        |   |   |                                                                                         |   | -25K5, -56K2, -25K7, -56K1, -25K8                           |   |                                                                               |   |                                      |  |                                                                |  |
| <div><div>HOLTER</div><div></div></div> |                        |   |   | <div>Datum27.11.14</div> <div>Bearb.Hattinger F.</div> <div>Gepr.</div> <div>Norm</div> |   | <div><div>elpe</div><div>ELEKTRO<br/>ANLAGENBAU</div></div> |   | <div>HKLS-02 Lüftungszentrale<br/>Tiefreund KG</div> <div>Materialliste</div> |   | <div><div>GRT</div><div></div></div> |  | <div>Zeichn.Nr.:<br/>397/14/02<br/>Blatt 1<br/>von 4 Bl.</div> |  |

| 0             | 1                          | 2 | 3 | 4                                | 5 | 6                                    | 7 | 8 | 9 |
|---------------|----------------------------|---|---|----------------------------------|---|--------------------------------------|---|---|---|
| Stück<br>Zahl | Artikel<br>Bezeichnung     |   |   | Artikel<br>Beschreibung          |   | Artikel<br>Bezüge                    |   |   |   |
|               |                            |   |   |                                  |   | -25K9, -26K2, -40K6, -40K7, -25K10   |   |   |   |
|               |                            |   |   |                                  |   | -26K1                                |   |   |   |
| 3             | Relais4polig24VAC          |   |   | Miniatur - Relais 4polig         |   | -39K6, -39K10, -39K8                 |   |   |   |
| 42            | Sockel 2polig              |   |   | Sockel für Minitur Relais 2polig |   |                                      |   |   |   |
| 3             | Sockel 4polig              |   |   | Sockel für Minitur Relais 4polig |   |                                      |   |   |   |
| 3             | DILM9-10(230V50HZ)         |   |   | Schütz                           |   | -55K1, -57K1, -58K1                  |   |   |   |
| 1             | Relais2polig230VAC         |   |   | Miniatur - Relais 2polig         |   | -56K3                                |   |   |   |
| 1             | DILM32-XHI11               |   |   | Hilfsschalterbaustein            |   |                                      |   |   |   |
| 1             |                            |   |   | vk1                              |   | -M28-X                               |   |   |   |
| 3             | ST 8184 B=800 H=1800 T=400 |   |   | Standschrank IP 55               |   | -ON2, -ON1, -ON3                     |   |   |   |
| 1             |                            |   |   | CLAKHAWK640                      |   | -3N1                                 |   |   |   |
| 1             |                            |   |   | TouchPanel                       |   | -3N3                                 |   |   |   |
| 2             |                            |   |   | Netzteil                         |   | -3N4, -3N2                           |   |   |   |
| 1             | PN2-200                    |   |   | Hauptschalter                    |   | -1Q1                                 |   |   |   |
| 2             |                            |   |   | Trafo 230VAC 24VAC               |   | -2T1, -2T2                           |   |   |   |
| 1             | M50                        |   |   | Kabelverschraubung               |   | -1W1                                 |   |   |   |
| 220           | M16                        |   |   | Kabelverschraubung               |   | -11W2, -14W1, -11W7, -11W8, -11W6    |   |   |   |
|               |                            |   |   |                                  |   | -11W5, -13W10, -11W4, -11W3, -12W4   |   |   |   |
|               |                            |   |   |                                  |   | -14W10, -14W9, -14W8, -14W7, -14W6   |   |   |   |
|               |                            |   |   |                                  |   | -13W11, -14W4, -12W1, -12W3, -12W2   |   |   |   |
|               |                            |   |   |                                  |   | -14W3, -14W2, -13W8, -13W12, -14W5   |   |   |   |
|               |                            |   |   |                                  |   | -9W4, -10W4, -26W12, -27W1, -10W3    |   |   |   |
|               |                            |   |   |                                  |   | -10W2, -10W1, -26W10, -9W5, -26W9    |   |   |   |
|               |                            |   |   |                                  |   | -27W2, -9W3, -9W2, -13W2, -9W1, -8W6 |   |   |   |
|               |                            |   |   |                                  |   | -9W6, -26W5, -12W5, -13W9, -25W10    |   |   |   |
|               |                            |   |   |                                  |   | -13W7, -26W2, -26W3, -26W11, -13W6   |   |   |   |
|               |                            |   |   |                                  |   | -11W1, -13W5, -13W4, -13W3, -26W6    |   |   |   |
|               |                            |   |   |                                  |   | -26W7, -26W8, -26W4, -18W11, -12W8   |   |   |   |
|               |                            |   |   |                                  |   | -18W4, -18W5, -18W6, -18W7, -18W8    |   |   |   |
|               |                            |   |   |                                  |   | -16W2, -18W10, -16W3, -18W12, -19W1  |   |   |   |
|               |                            |   |   |                                  |   | -19W2, -19W3, -19W4, -16W1, -15W8    |   |   |   |
|               |                            |   |   |                                  |   | -18W9, -16W5, -17W2, -16W7, -17W3    |   |   |   |
|               |                            |   |   |                                  |   | -17W4, -17W5, -17W6, -18W3, -16W6    |   |   |   |

|                                                                                    |        |              |                                                                                                              |                                                                |                                                                                       |             |
|------------------------------------------------------------------------------------|--------|--------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------|
|  | Datum  | 27.11.14     | <br>ELEKTRO<br>ANLAGENBAU | HKLS-02 Lüftungszentrale<br>Tierfreund KG<br><br>Materialliste |  | Zeichn.Nr.: |
|                                                                                    | Bearb. | Hattinger F. |                                                                                                              |                                                                |                                                                                       | 397/14/02   |
|                                                                                    | Gepr.  |              |                                                                                                              |                                                                |                                                                                       | Blatt 2     |
|                                                                                    | Norm   |              |                                                                                                              |                                                                |                                                                                       | von 4 Bl.   |

| 0                                                                                  | 1                      | 2            | 3         | 4                                                                                   | 5 | 6                                                              | 7 | 8            | 9                                                                                     |             |
|------------------------------------------------------------------------------------|------------------------|--------------|-----------|-------------------------------------------------------------------------------------|---|----------------------------------------------------------------|---|--------------|---------------------------------------------------------------------------------------|-------------|
| Stück<br>Zahl                                                                      | Artikel<br>Bezeichnung |              |           | Artikel<br>Beschreibung                                                             |   | Artikel<br>Bezüge                                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -19W7, -17W8, -17W9, -17W10, -16W4                             |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -17W11, -18W1, -18W2, -17W7, -25W5                             |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -23W6, -15W3, -15W2, -15W1, -25W1                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -25W2, -19W5, -25W4, -23W4, -25W6                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -25W7, -25W8, -25W9, -17W1, -26W1                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -12W7, -25W3, -20W1, -12W6, -19W8                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -19W9, -15W7, -8W5, -15W6, -19W10                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -15W4, -19W12, -23W5, -22W1, -22W2                             |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -23W1, -23W2, -15W5, -23W3, -19W6                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -19W11, -45W6, -41W12, -48W6, -48W5                            |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -48W3, -48W2, -47W6, -47W5, -47W3                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -47W2, -46W6, -46W5, -49W2, -46W2                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -49W3, -45W5, -45W3, -45W2, -5W5, -44W6                        |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -8W4, -44W3, -44W2, -42W8, -42W6, -42W4                        |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -42W2, -46W3, -52W3, -56W3, -56W2                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -56W1, -54W6, -54W5, -54W3, -54W2                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -53W6, -53W5, -53W3, -53W2, -49W1                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -52W5, -44W5, -52W2, -51W6, -51W5                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -51W3, -51W2, -50W6, -50W5, -50W3                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -50W2, -49W6, -49W5, -49W4, -52W6                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -39W1, -13W1, -4W1, -4W2, -4W3, -4W4                           |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -4W5, -4W7, -5W1, -5W2, -5W3, -3W1                             |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -5W6, -4W6, -31W1, -5W7, -5W8, -6W1                            |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -6W2, -6W3, -6W4, -7W1, -8W1, -8W2                             |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -8W3, -5W4, -41W8, -41W4, -4W8, -41W6                          |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -41W10, -41W2                                                  |   |              |                                                                                       |             |
| 55                                                                                 | M20                    |              |           | Kabelverschraubung                                                                  |   | -60W7, -53W1, -42W7, -52W4, -59W6                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -43W1, -52W1, -43W2, -51W4, -41W9                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -59W8, -59W1, -58W1, -57W2, -57W1                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -42W1, -60W4, -53W4, -55W1, -60W6                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -59W7, -54W4, -42W3, -41W11, -42W5                             |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -59W5, -54W1, -60W1, -41W1, -46W1                              |   |              |                                                                                       |             |
|                                                                                    |                        |              |           |                                                                                     |   | -46W4, -60W2, -45W4, -47W1, -43W3                              |   |              |                                                                                       |             |
|  |                        | Datum        | 27.11.14  |  |   | HKLS-02 Lüftungszentrale<br>Tierfreund KG<br><br>Materialliste |   |              |  | Zeichn.Nr.: |
| Bearb.                                                                             |                        | Hattinger F. | 397/14/02 |                                                                                     |   |                                                                |   |              |                                                                                       |             |
| Gepr.                                                                              |                        |              | Blatt 3   |                                                                                     |   |                                                                |   |              |                                                                                       |             |
| Norm                                                                               |                        |              | von 4 Bl. |                                                                                     |   |                                                                |   |              |                                                                                       |             |
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|------------------------------------------------------------------------------------|--------|--------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------|--|
|  | Datum  | 27.11.14     | <br>ELEKTRO<br>ANLAGENBAU | HKLS-02 Lüftungszentrale<br>Tierfreund KG<br><br>Materialliste |  | Zeichn.Nr.: |  |
|                                                                                    | Bearb. | Hattinger F. |                                                                                                              |                                                                |                                                                                       | 397/14/02   |  |
|                                                                                    | Gepr.  |              |                                                                                                              |                                                                |                                                                                       | Blatt 4     |  |
|                                                                                    | Norm   |              |                                                                                                              |                                                                |                                                                                       | von 4 Bl.   |  |