

JHI, USA

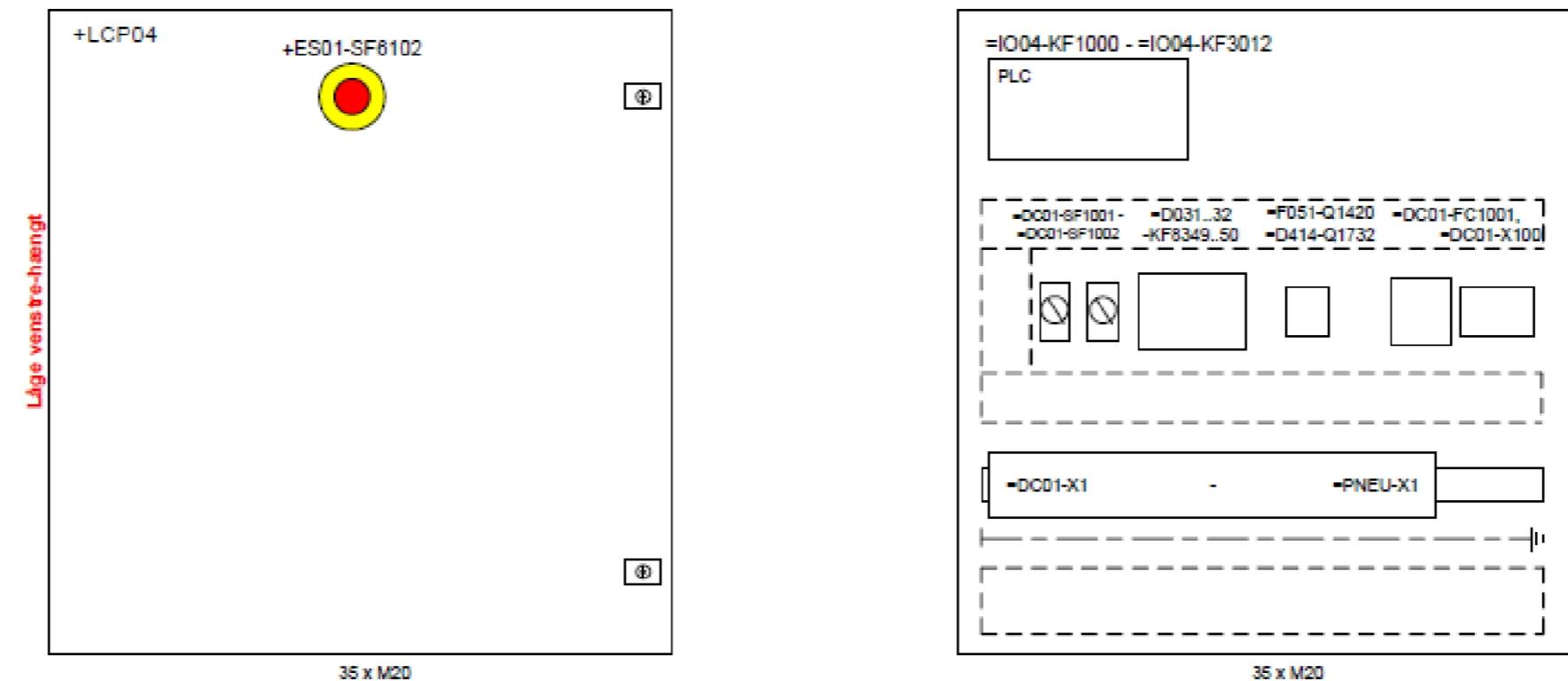
Dan-Web Machinery A/S

+LCP04 Former 0 Area



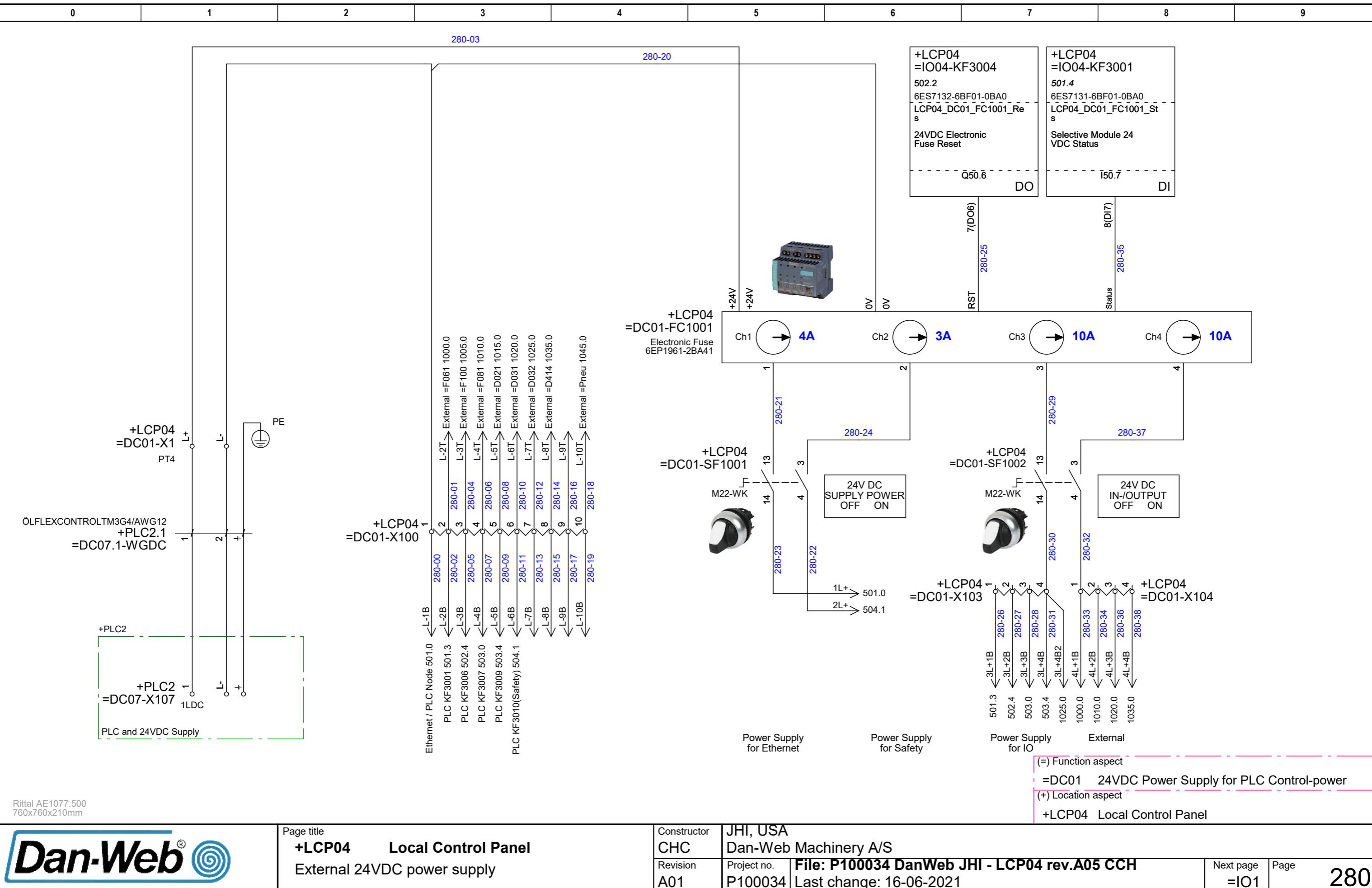
Dan-Web Machinery A/S > Røddikvej 82 > DK-8464 Galten > Tel. +45 87 43 95 00

0 1 2 3 4 5 6 7 8 9





24VDC Power Supply

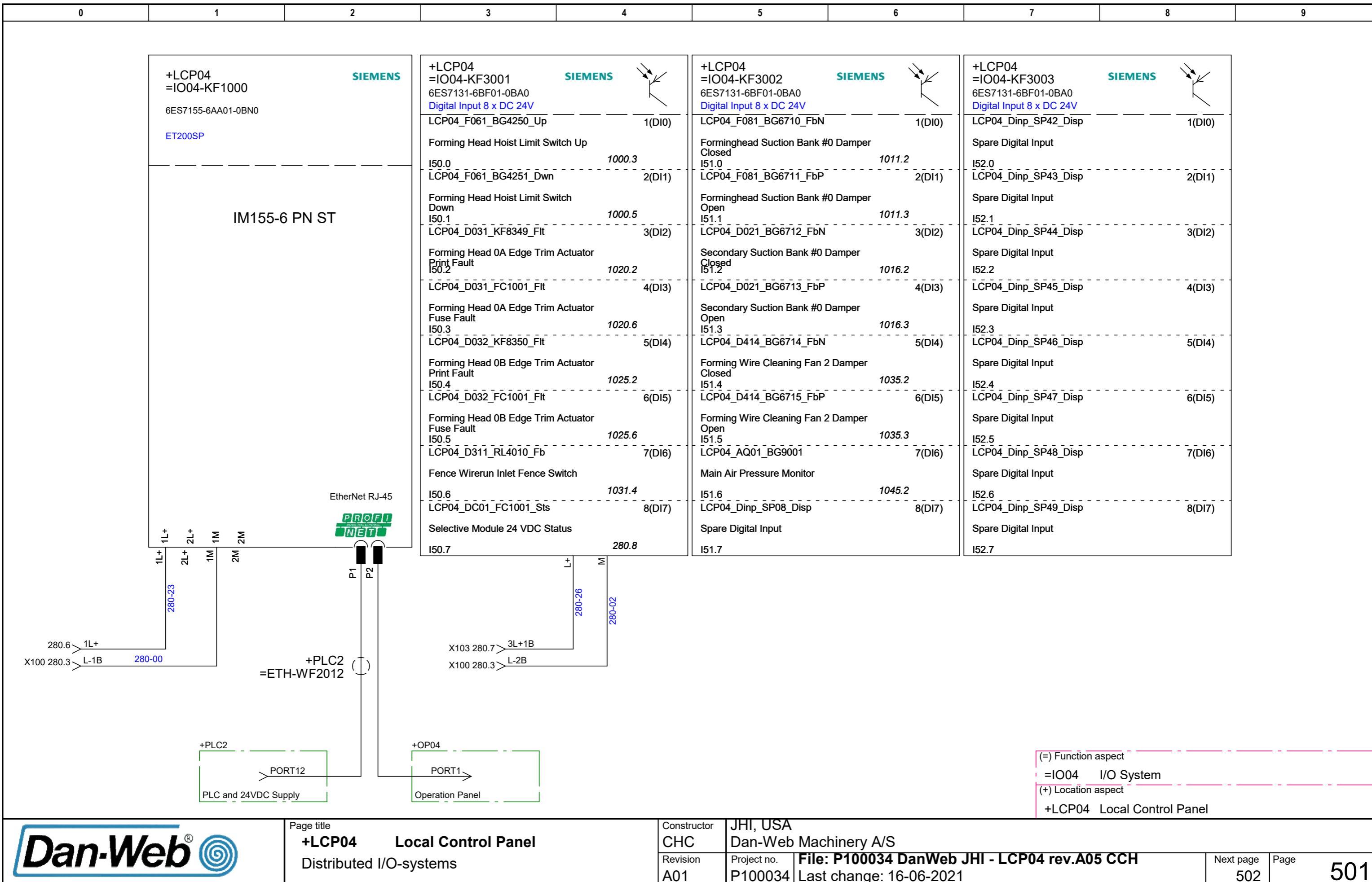


Distributed I/O system



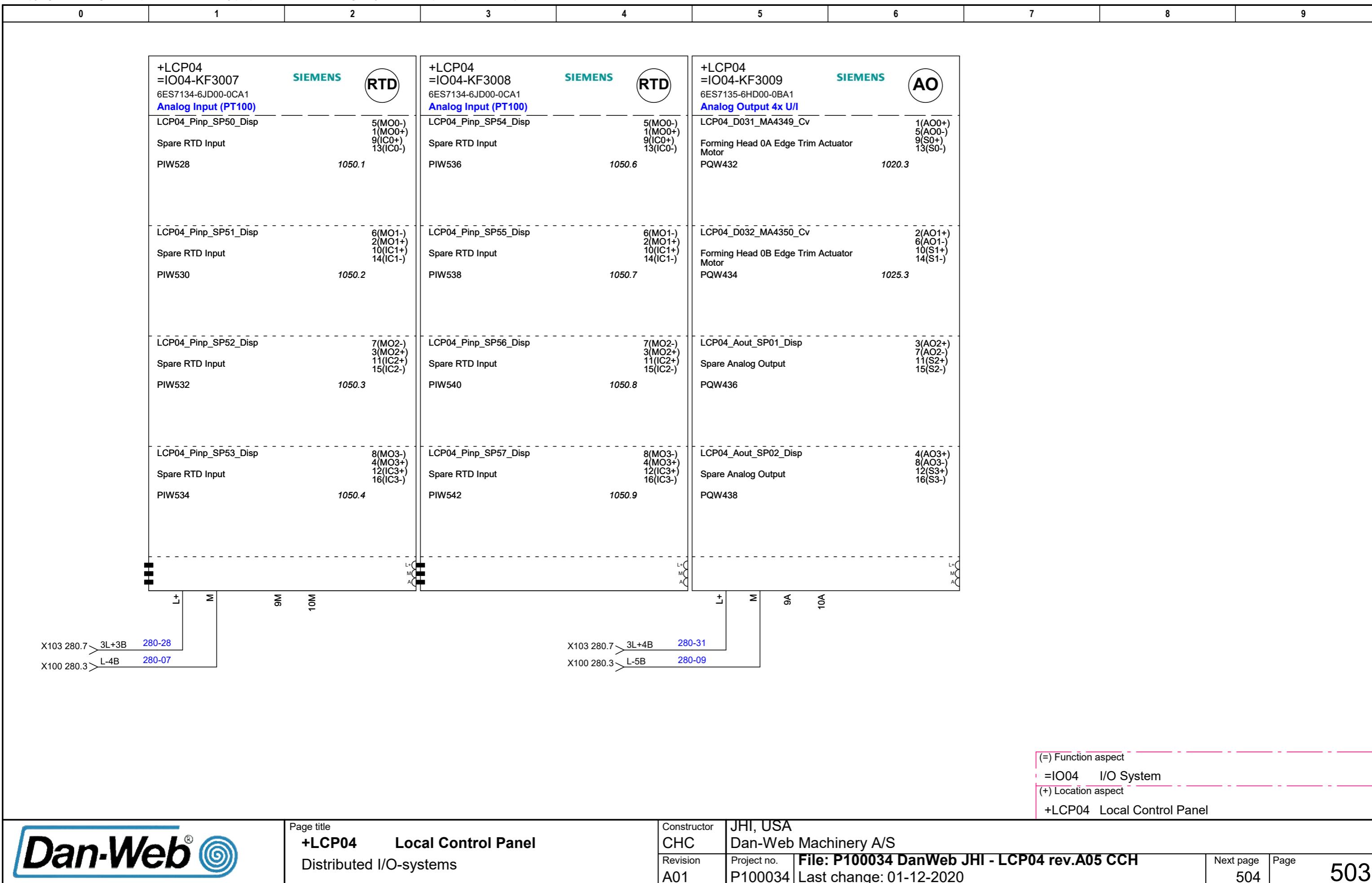


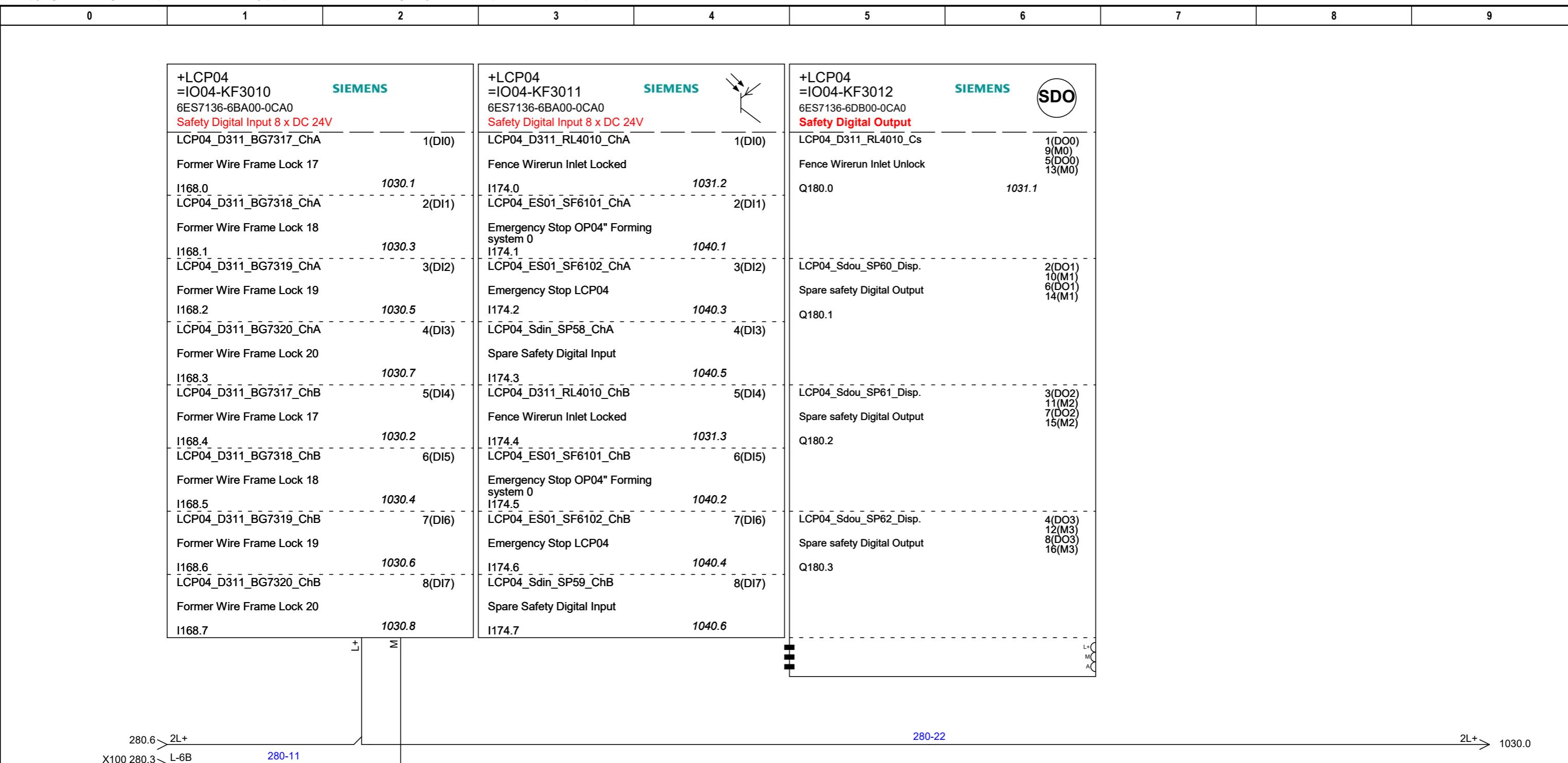
(=) Function aspect
 =I004 I/O System
 (+) Location aspect
 +LCP04 Local Control Panel



0	1	2	3	4	5	6	7	8	9
<p>+LCP04 =IO04-KF3004 6ES7132-6BF01-0BA0 8 Digital Output DC24V/0,5A</p> <p>LCP04_F051_QM1420_Cs 1(DO0) Inlet Roll up/down Solonoid Valve Q50.0 1045.4 LCP04_F052_QM1421_Cs 2(DO1) Outlet Roll up/down Solonoid Valve Q50.1 1045.6 LCP04_D130_QM1351_Cs 3(DO2) Forming Head 0A Edge Trim On/Off Solonoid Valve Q50.2 1046.2 LCP04_D230_QM1352_Cs 4(DO3) Forming Head 0B Edge Trim On/Off Solonoid Valve Q50.3 1046.4 LCP04_D131_QM1354_Cs 5(DO4) Forming Head 0A Edge Trim Damper Solonoid Valve Q50.4 1046.6 LCP04_D231_QM1355_Cs 6(DO5) Forming Head 0B Edge Trim Damper Solonoid Valve Q50.5 1046.8 LCP04_DC01_FC1001_Res 7(DO6) 24VDC Electronic Fuse Reset Q50.6 280.7 LCP04_F081_QM1730_Cs 8(DO7) Forminghead Suction Bank #0 Damper Q50.7 1047.2</p>  	<p>+LCP04 =IO04-KF3005 6ES7132-6BF01-0BA0 8 Digital Output DC24V/0,5A</p> <p>LCP04_D021_QM1731_Cs 1(DO0) Secondary Suction Bank #0 Damper Q51.0 1047.4 LCP04_D414_QM1732_Cs 2(DO1) Forming Wire Cleaning Fan 2 Damper Q51.1 1047.6 LCP04_Dout_SP01_Dis 3(DO2) Spare Digital Output Q51.2 4(DO3) LCP04_Dout_SP02_Dis 5(DO4) Spare Digital Output Q51.3 6(DO5) LCP04_Dout_SP03_Dis 7(DO6) Spare Digital Output Q51.4 8(DO7) LCP04_Dout_SP04_Dis 9(DO8) Spare Digital Output Q51.5 10(DO9) LCP04_Dout_SP05_Dis 11(DO10) Spare Digital Output Q51.6 12(DO11) LCP04_Dout_SP06_Dis 13(DO12) Spare Digital Output Q51.7 14(DO13)</p>  	<p>+LCP04 =IO04-KF3006 6ES7134-6GD01-0BA1 Analog Input (4-20mA)</p> <p>LCP04_F100_BM1970_1_Hum 1005.2 Forming Heads Inlet OS Humidity PIW520 1005.2 1(1I0+) 5(1I0-) 9(UV0+) 13(2I0+) 1M() 5M()</p> <p>LCP04_F100_BM1970_2_Tmp 1005.3 Forming Heads Inlet OS Temperature PIW522 1005.3 2(1I1+) 6(1I1-) 10(UV1+) 14(2I1+) 2M() 6M()</p> <p>LCP04_F081_BP3206_Dif 1010.2 Forminghead Suction Bank #0 Differential Pressure PIW524 1010.2 3(1I2+) 7(1I2-) 11(UV2+) 15(2I2+) 3M() 7M()</p> <p>LCP04_F021_BP3204_Dif 1015.2 Secondary Suction Bank #0 Differential Pressure PIW526 1015.2 4(1I3+) 8(1I3-) 12(UV3+) 16(2I3+) 4M() 8M()</p>  	<p>±</p> <p>X103 280.7 > 3L+2B 280-27 X100 280.3 > L-3B 280-05</p> <p>9M 10M</p>						

(=) Function aspect
=IO04 I/O System
(+) Location aspect
+LCP04 Local Control Panel



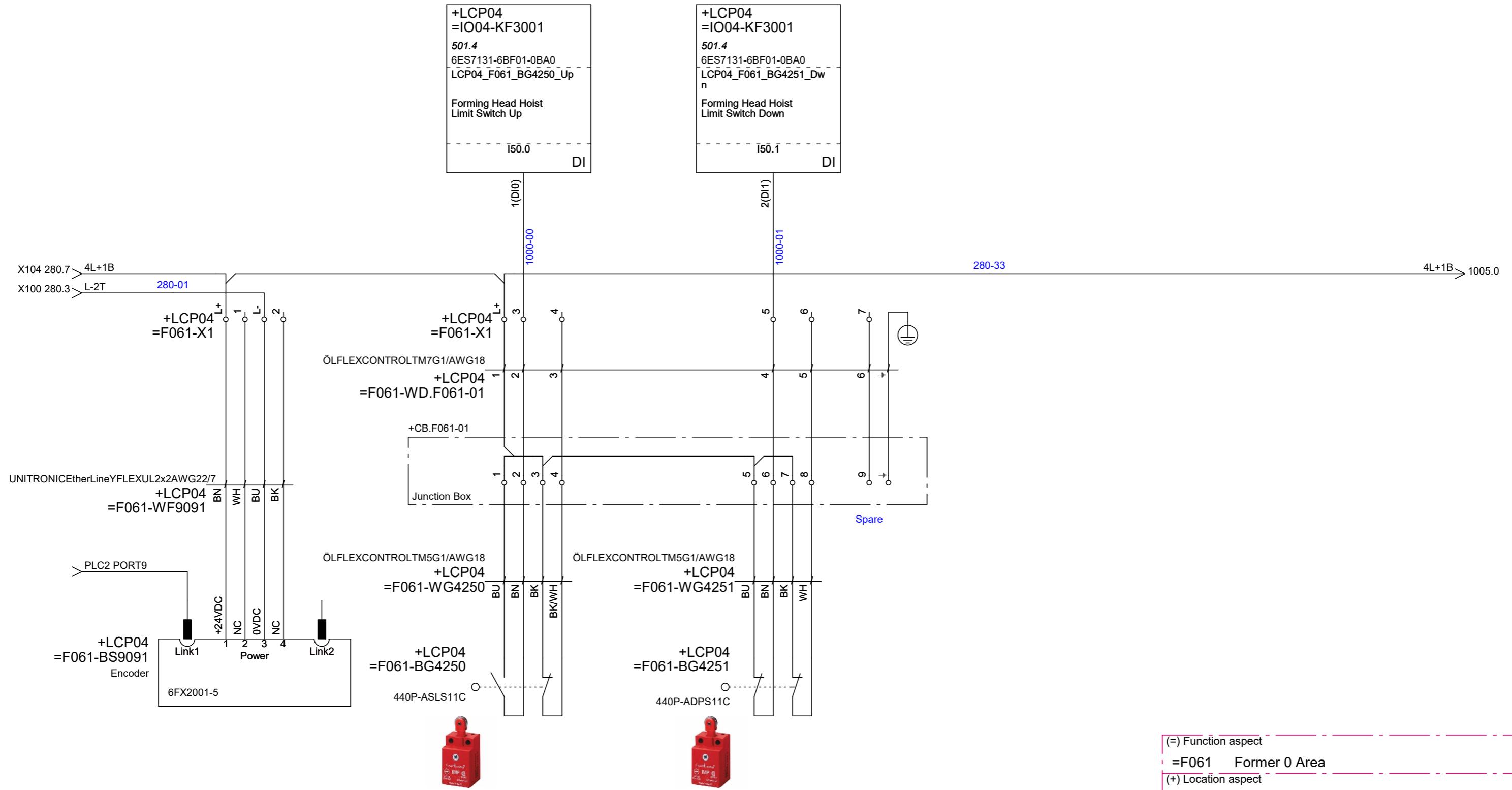


(=) Function aspect
=I004 I/O System
(+) Location aspect
+LCP04 Local Control Panel



Former O Area

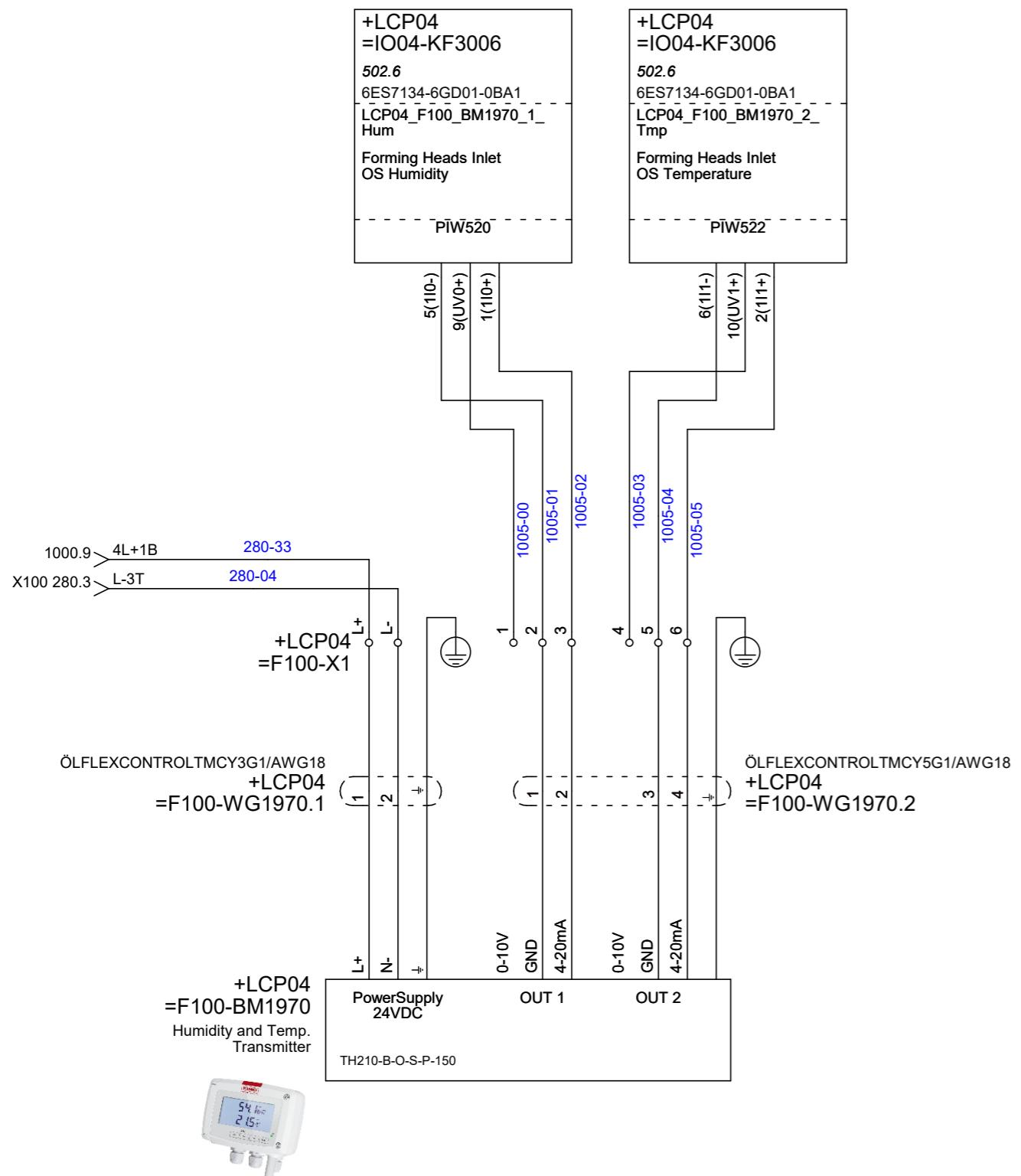
0	1	2	3	4	5	6	7	8	9
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Forming Area Humidity / Temp. Control



0	1	2	3	4	5	6	7	8	9
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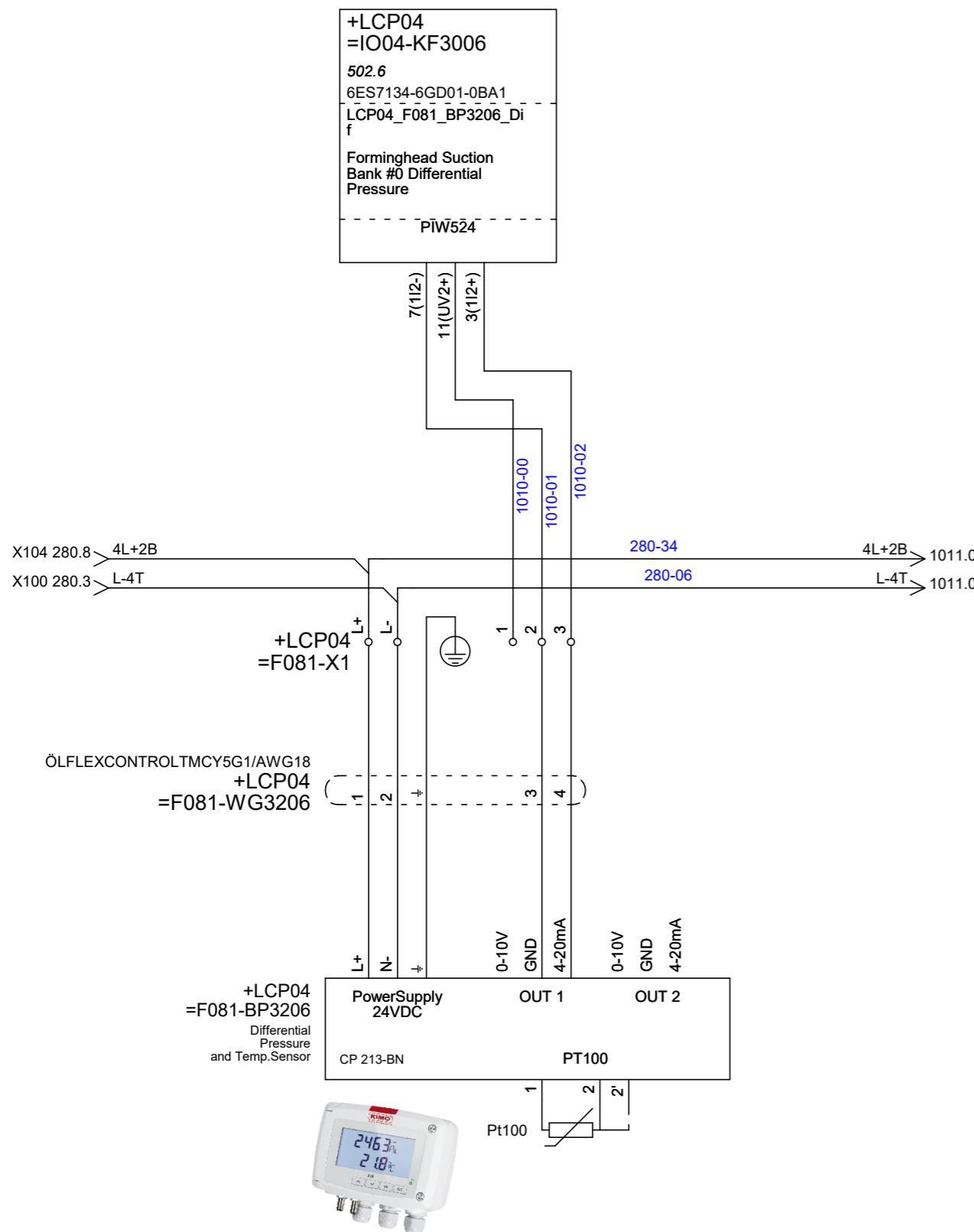


(=) Function aspect
 (=) Location aspect
 +LCP04 Local Control Panel

Forminghead Suction Bank

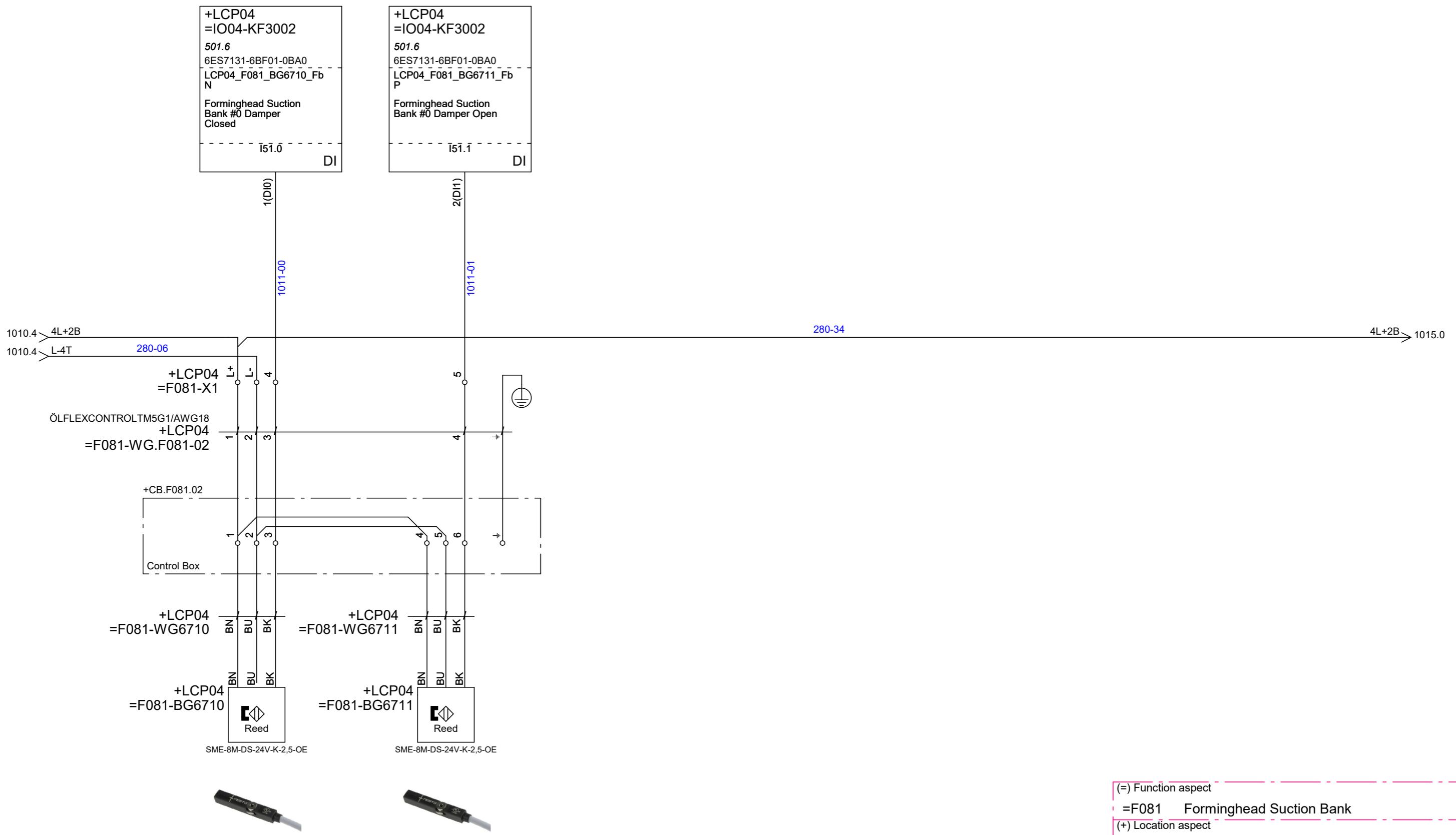


0	1	2	3	4	5	6	7	8	9
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(=) Function aspect
 =F081 Forminghead Suction Bank
 (+) Location aspect
 +LCP04 Local Control Panel

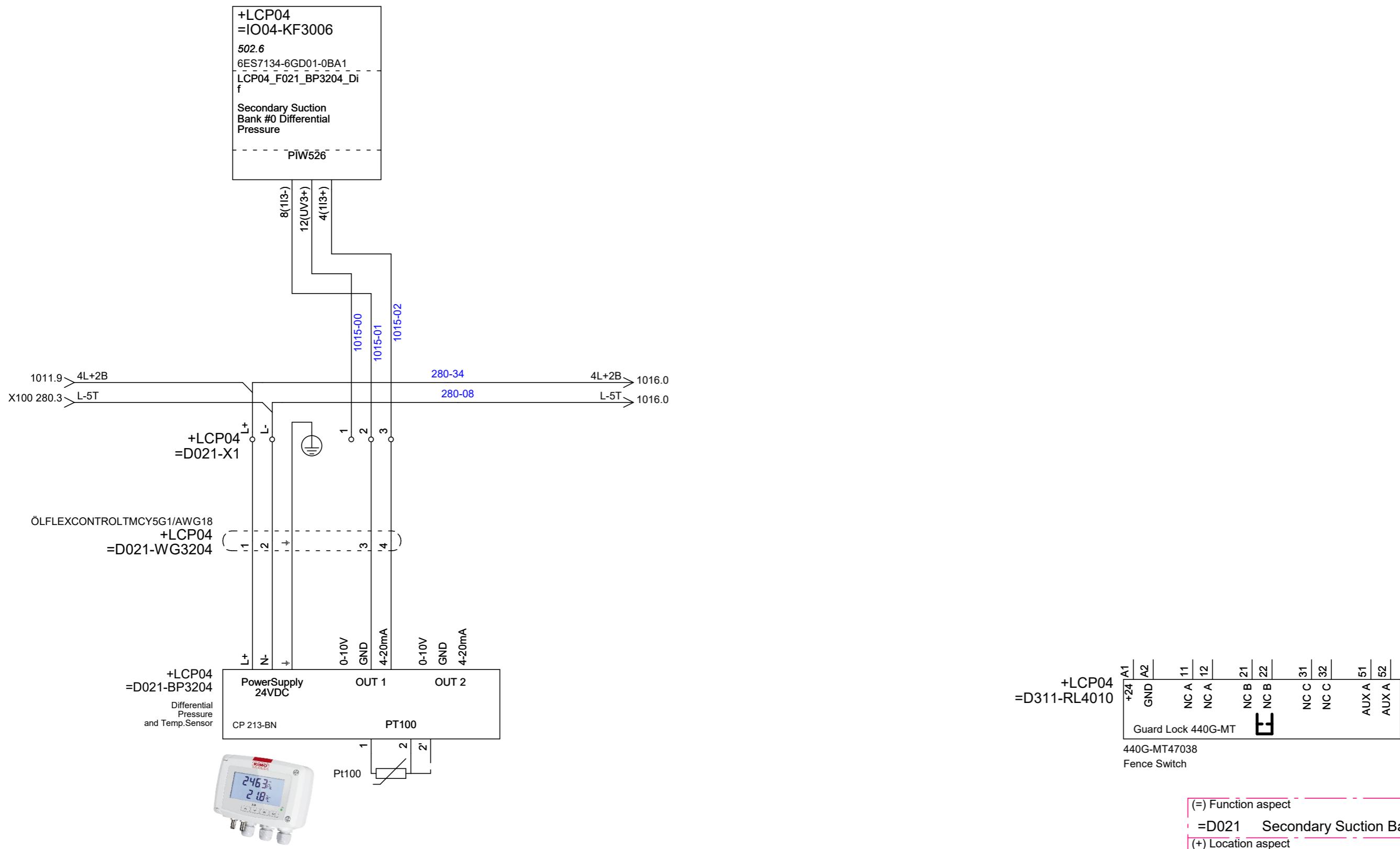
0	1	2	3	4	5	6	7	8	9
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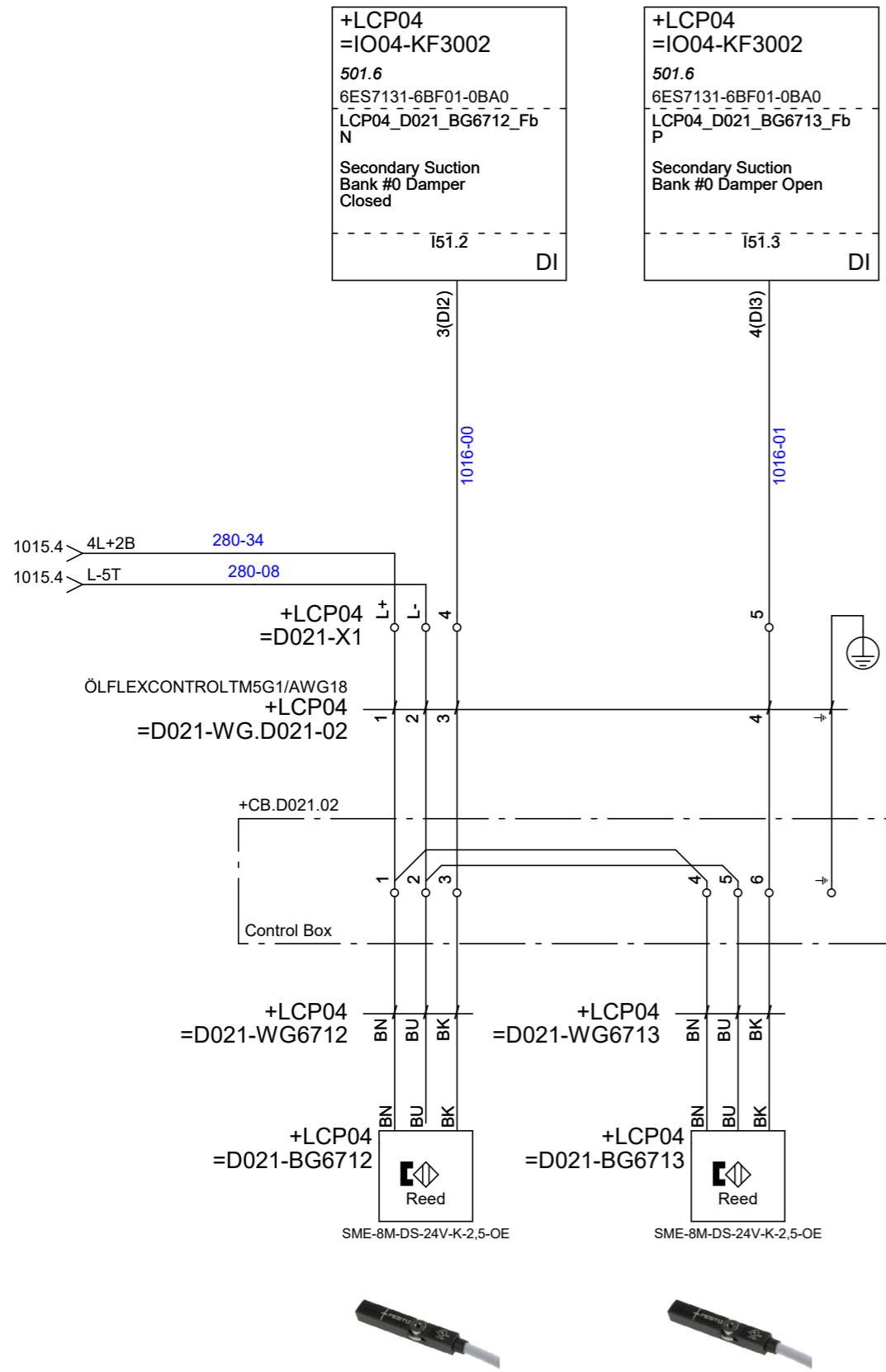
Secondary Suction Bank



0	1	2	3	4	5	6	7	8	9
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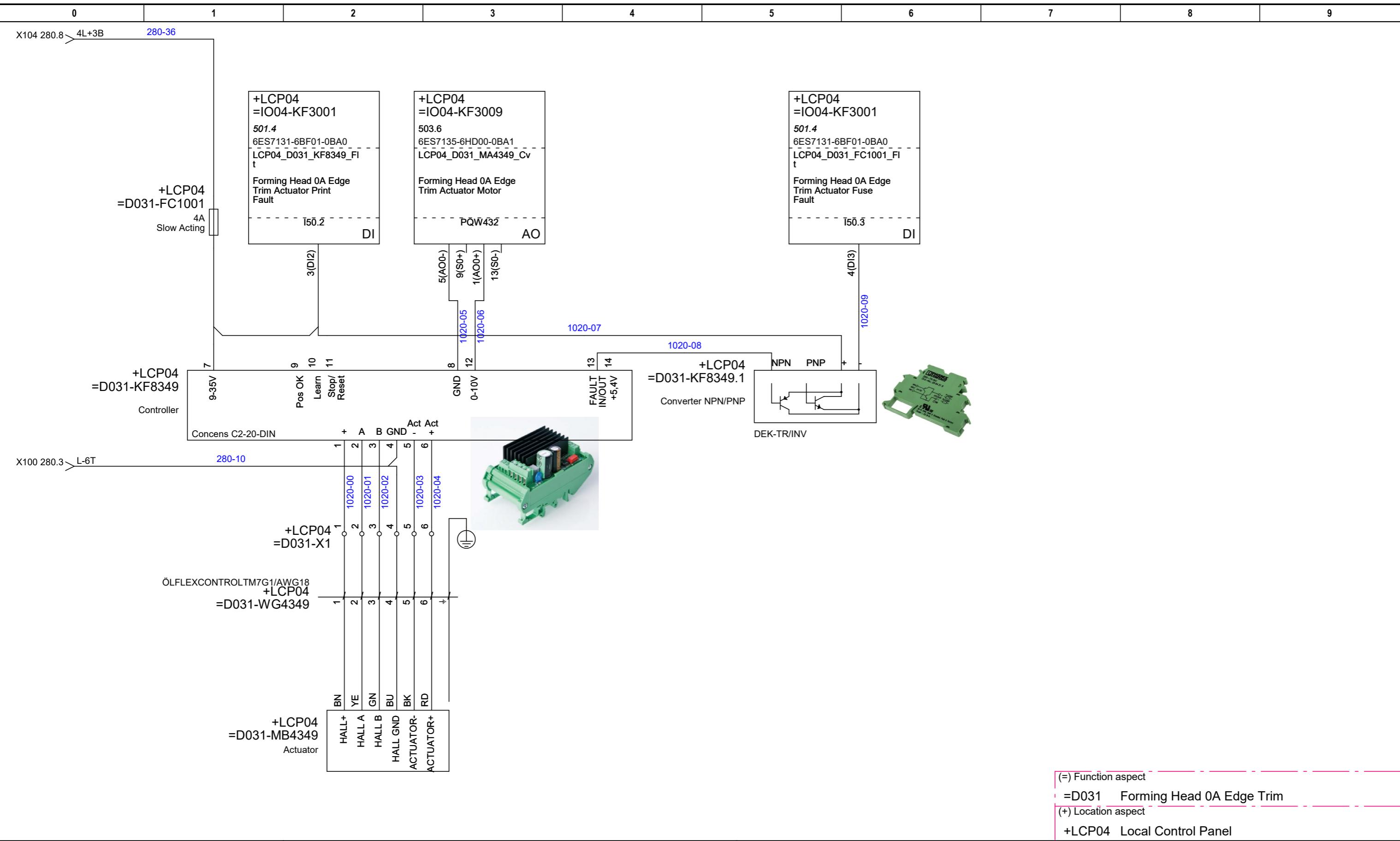
(=) Function aspect
 =D021 Secondary Suction Bank
 (+) Location aspect
 +LCP04 Local Control Panel



- (=) Function aspect
- =D021 Secondary Suction Bank
- (+) Location aspect
- +LCP04 Local Control Panel

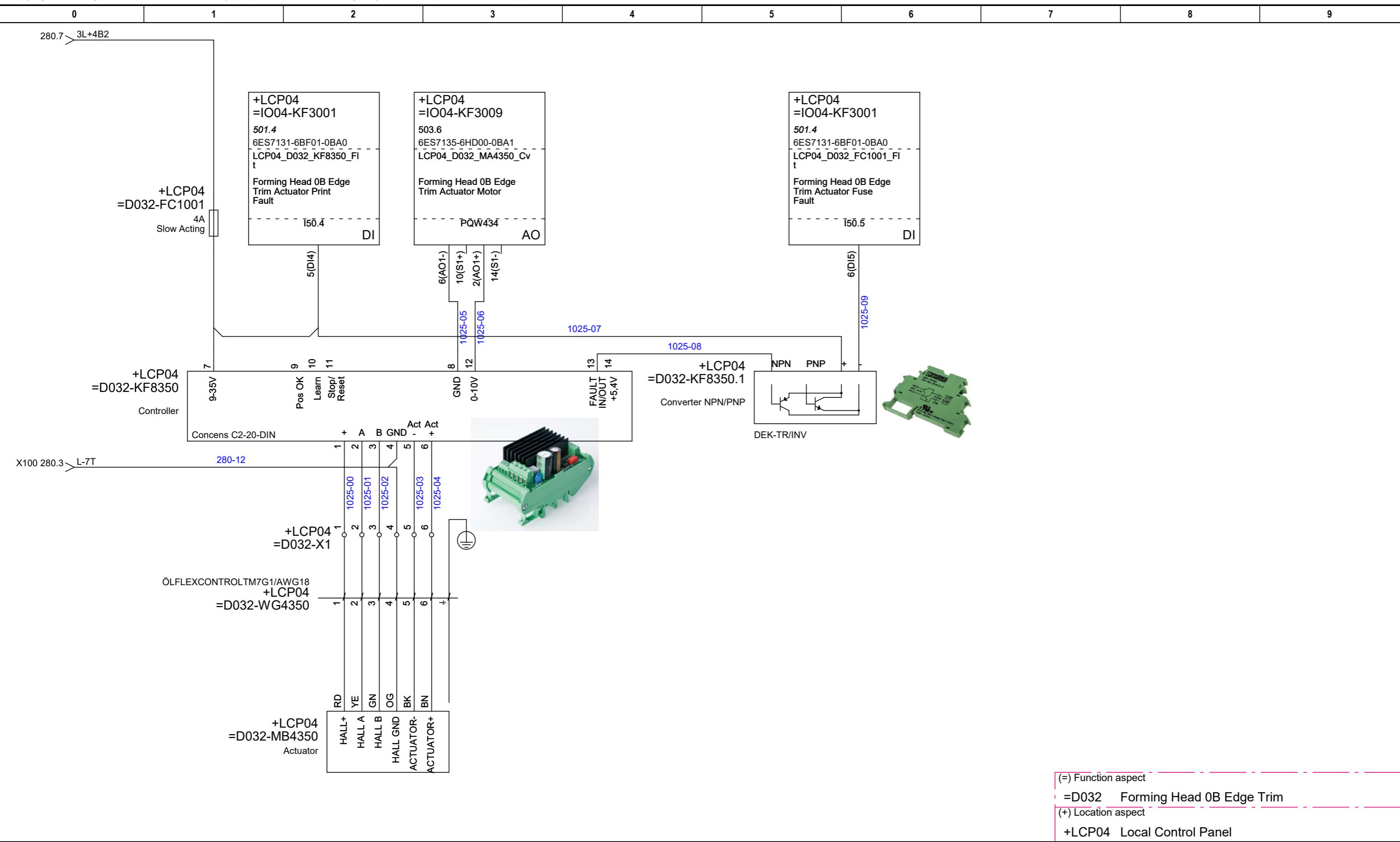
Forming Head OA Edge Trim





Forming Head OB Edge Trim

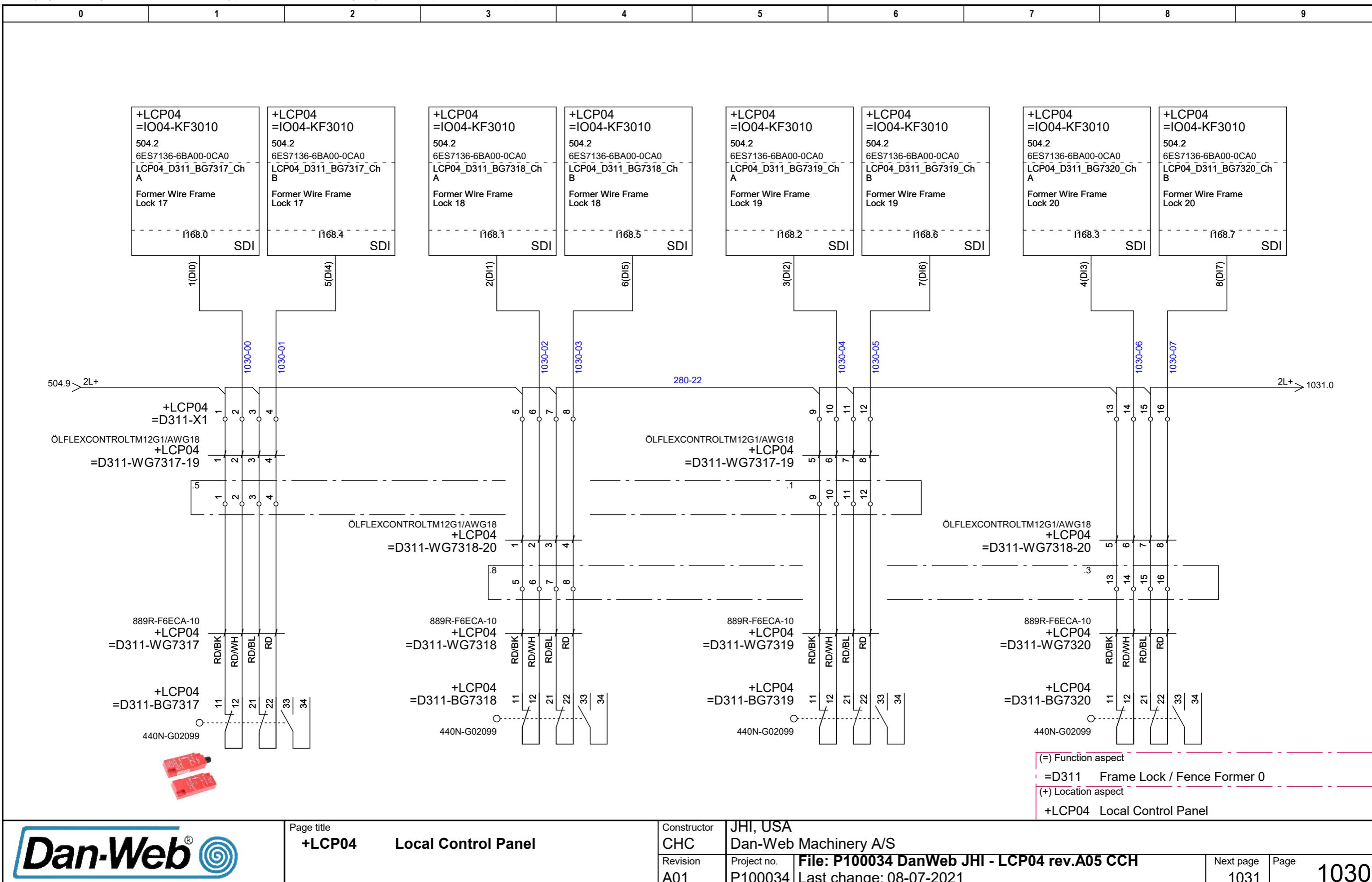


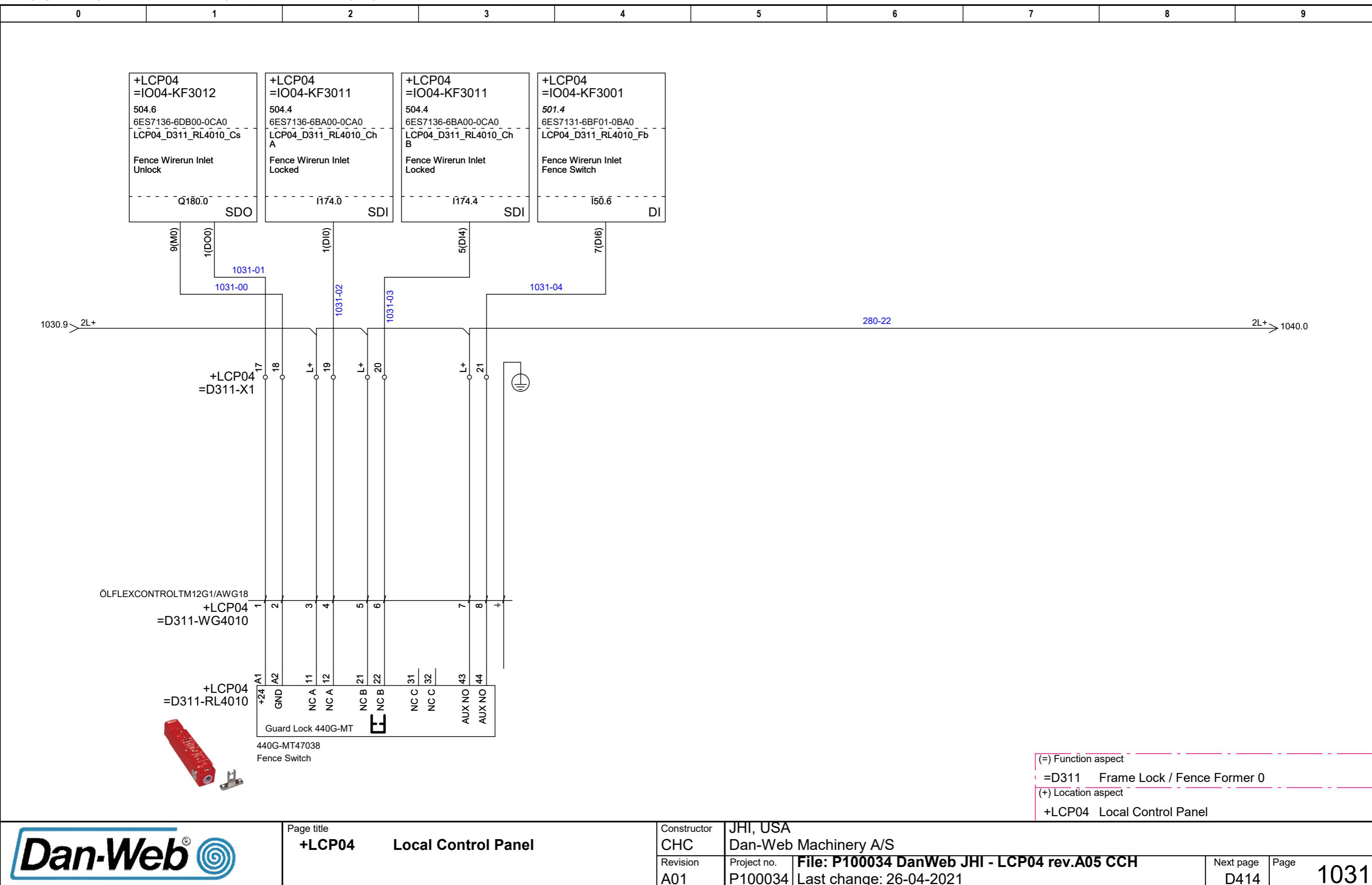


(=) Function aspect
 =D032 Forming Head 0B Edge Trim
 (+) Location aspect
 +LCP04 Local Control Panel



Frame Lock / Fence Former 0

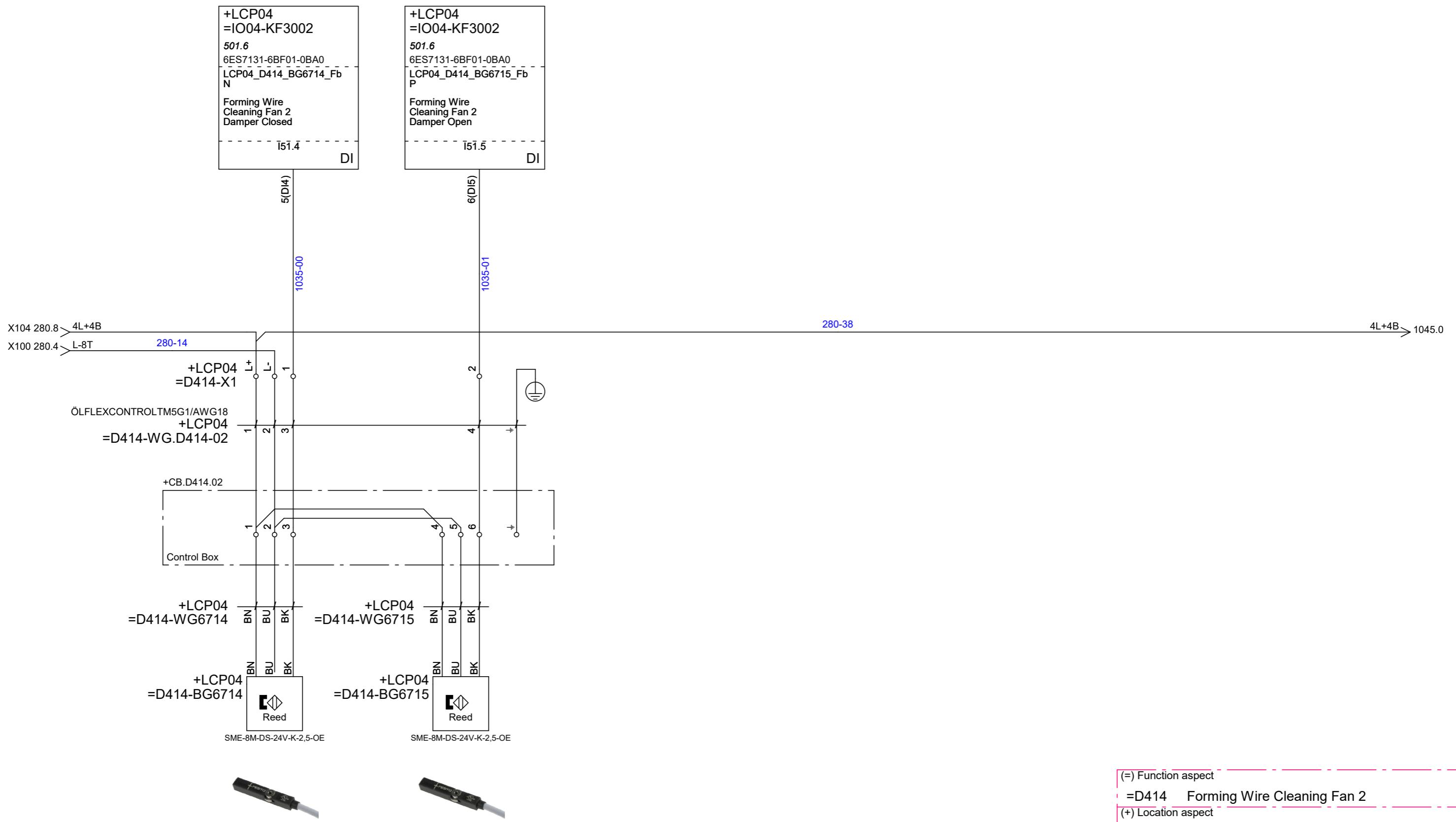




Forming Wire Cleaning Fan 2



0	1	2	3	4	5	6	7	8	9
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Emergency Stop

This diagram illustrates the electrical control circuit for a forming system, showing the connections between an operation panel, two Local Control Panels (LCP04), and three Emergency Stop modules (ES01-X1) to a central control board.

Top Section (Logic Diagram):

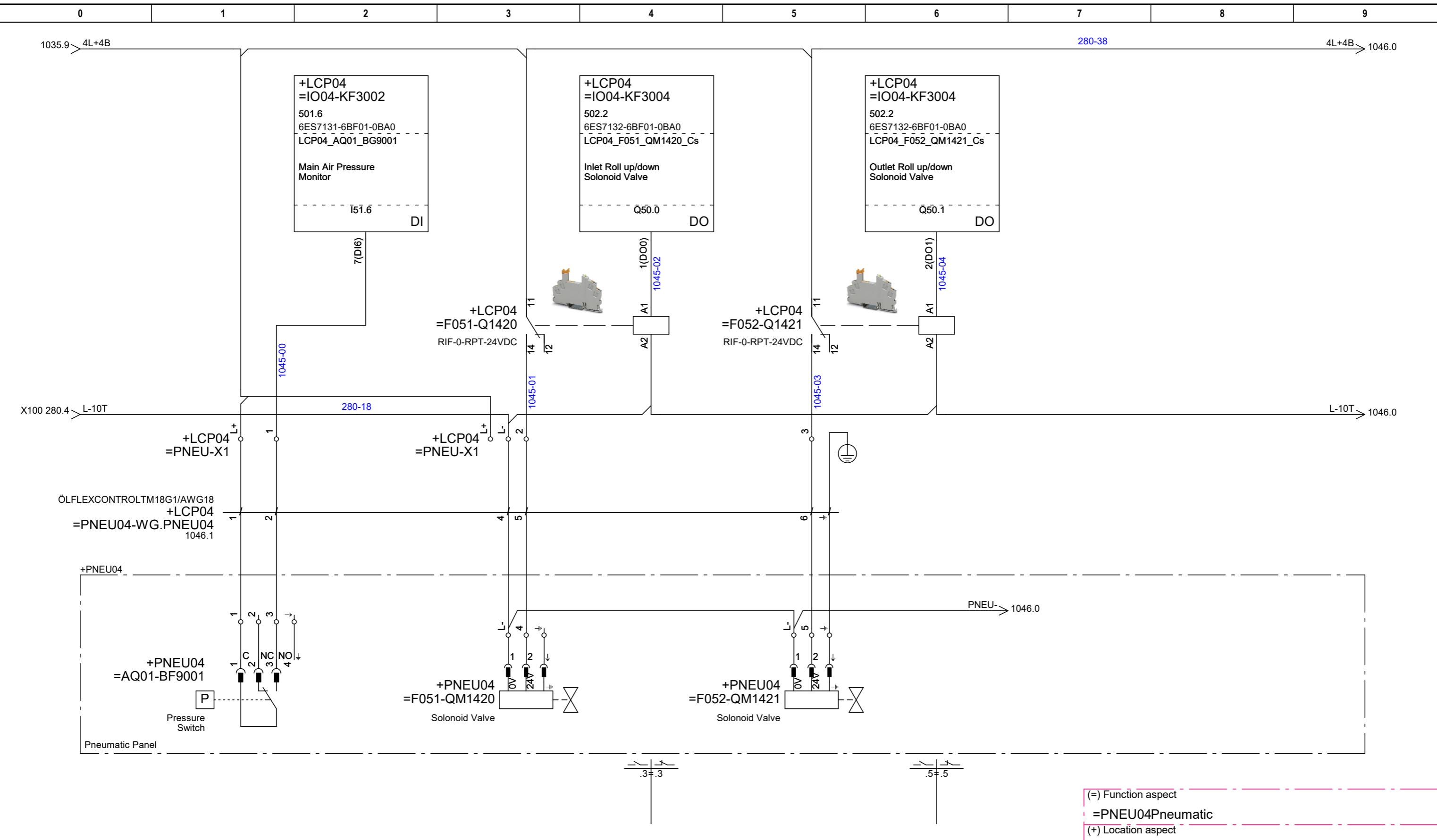
- Inputs:** Emergency Stop OP04" Forming system 0 (labeled 1031.9) connects to the inputs of logic gates 2(D1) and 6(D5).
- Logic Gates:**
 - 2(D1): Input 1040-00, Output connected to the inputs of logic gates 1040-01 and 1040-02.
 - 6(D5): Input 1040-01, Output connected to the inputs of logic gates 1040-02 and 1040-07.
 - 3(D12): Input 1040-02, Output connected to the inputs of logic gates 1040-07 and 1040-08.
 - 7(D6): Input 1040-07, Output connected to the inputs of logic gates 1040-08 and 1040-09.
 - 4(D13): Input 1040-08, Output connected to the inputs of logic gates 1040-09 and 1040-09.
 - 8(D7): Input 1040-09, Output connected to the inputs of logic gates 1040-09 and 1040-09.
- Outputs:** Logic gates 1040-01, 1040-02, 1040-07, 1040-08, and 1040-09 each output to a Safety Digital Input (SDI) labeled I174.1 through I174.7 respectively.

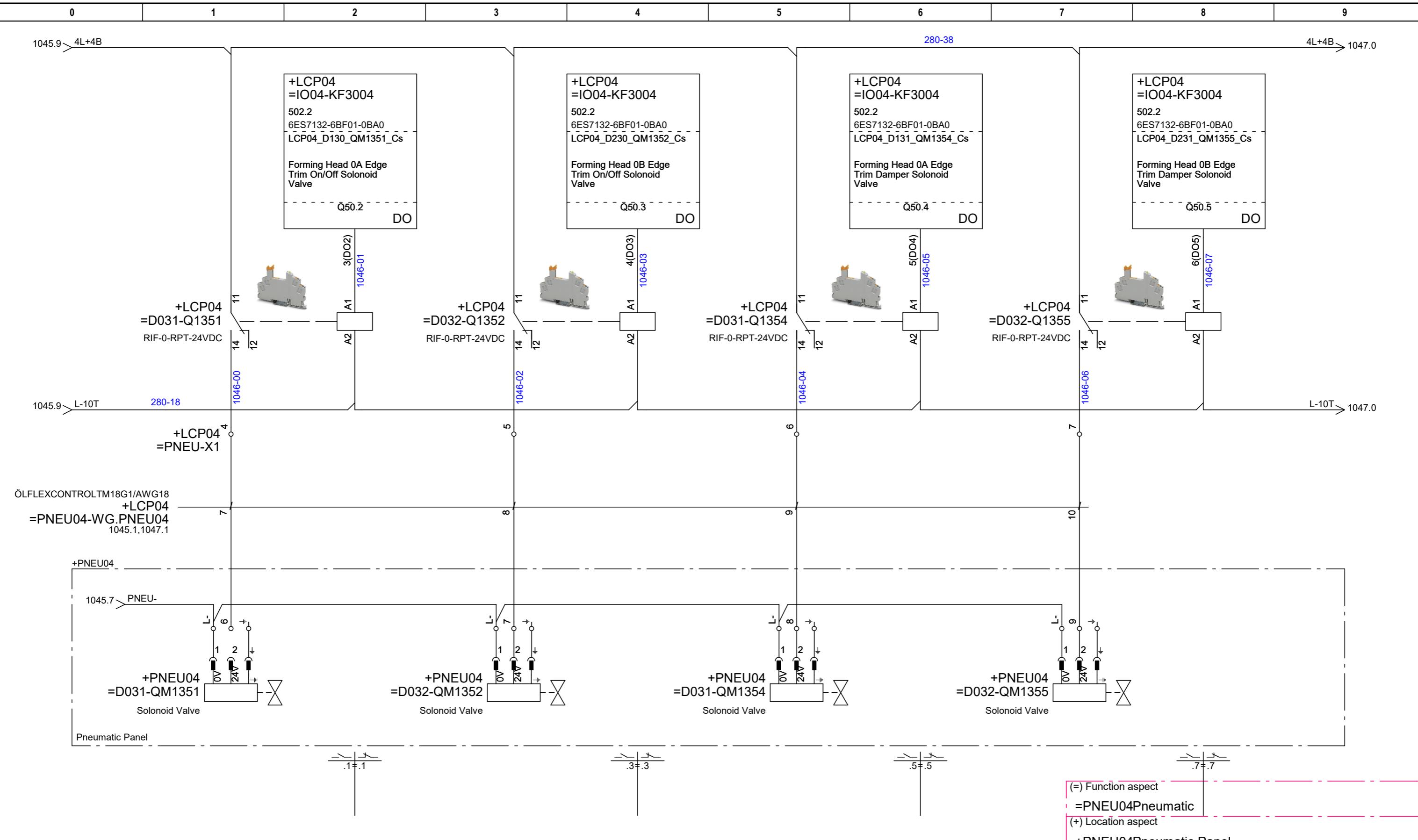
Bottom Section (Wiring and Components):

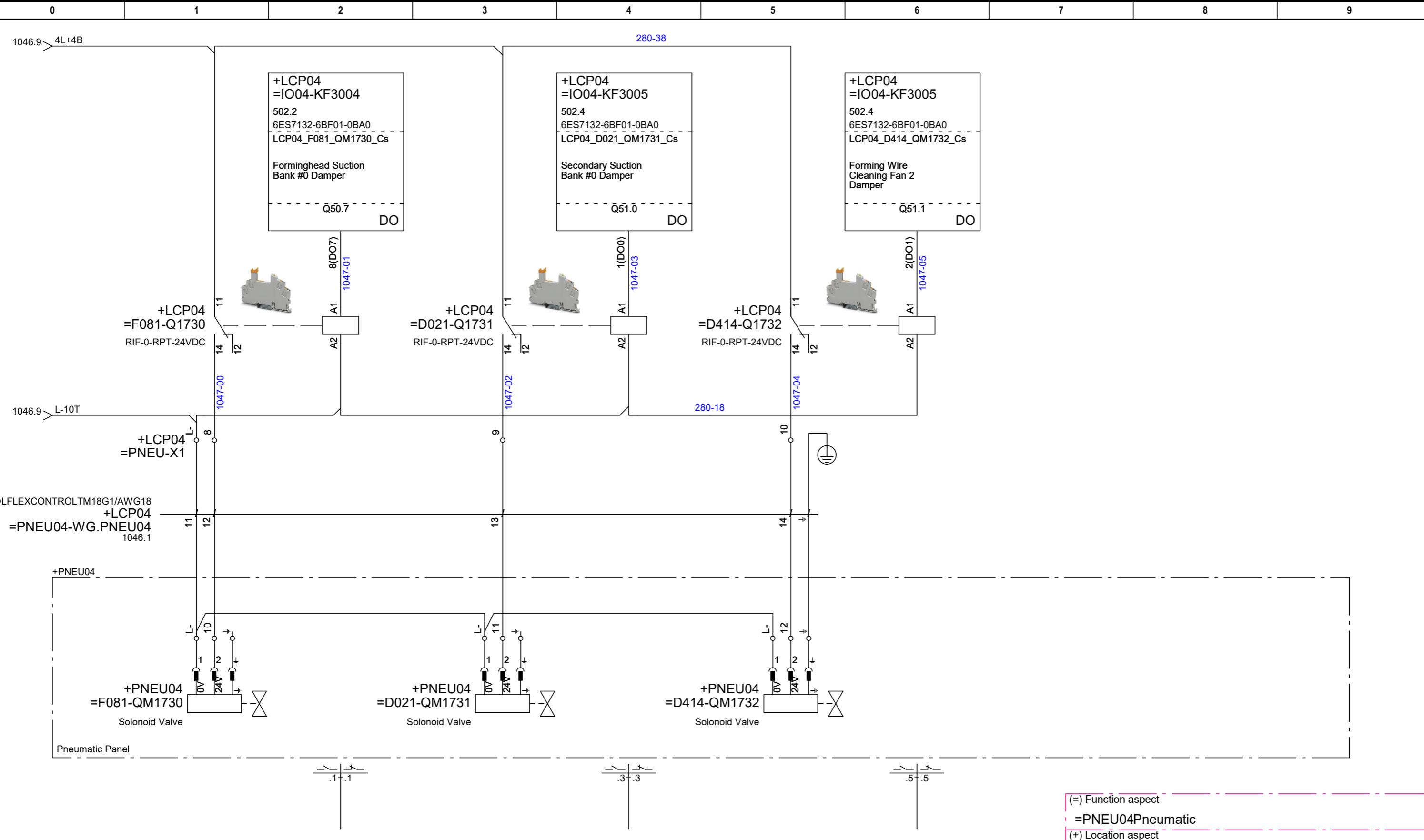
- Operation Panel:** Contains terminals 1-4, labeled +LCP04 =ES01-X1. It also includes an Emergency Stop button labeled "Emergency Stop" and a yellow circular label with "NOT AUS".
- LCP04 Modules:**
 - Left LCP04 (WG6101): Contains terminals 1-4, labeled +LCP04 =ES01-WG6101. It includes an Emergency Stop button labeled "Emergency Stop" and a yellow circular label with "NOT AUS".
 - Middle LCP04 (SF6101): Contains terminals 11-22, labeled +LCP04 =ES01-SF6101. It includes an Emergency Stop button labeled "Emergency Stop" and a yellow circular label with "NOT AUS".
 - Right LCP04 (SF6102): Contains terminals 5-8, labeled +LCP04 =ES01-SF6102. It includes an Emergency Stop button labeled "Emergency Stop" and a yellow circular label with "LCP 04 Front".
- Emergency Stop Modules (ES01-X1):**
 - Left ES01-X1: Contains terminals 2-4, labeled +LCP04 =ES01-X1.
 - Middle ES01-X1: Contains terminals 5-8, labeled +LCP04 =ES01-X1.
 - Right ES01-X1: Contains terminals 9-12, labeled +LCP04 =ES01-X1.
- Central Control Board:** Contains terminals 1031.9, 280-22, and various connection points for the SDI outputs (I174.1-I174.7) and power supplies.
- Legend:**
 - (=) Function aspect
 - =ES01 Safety Zone 1
 - (+) Location aspect
 - +LCP04 Local Control Panel



Pneumatic



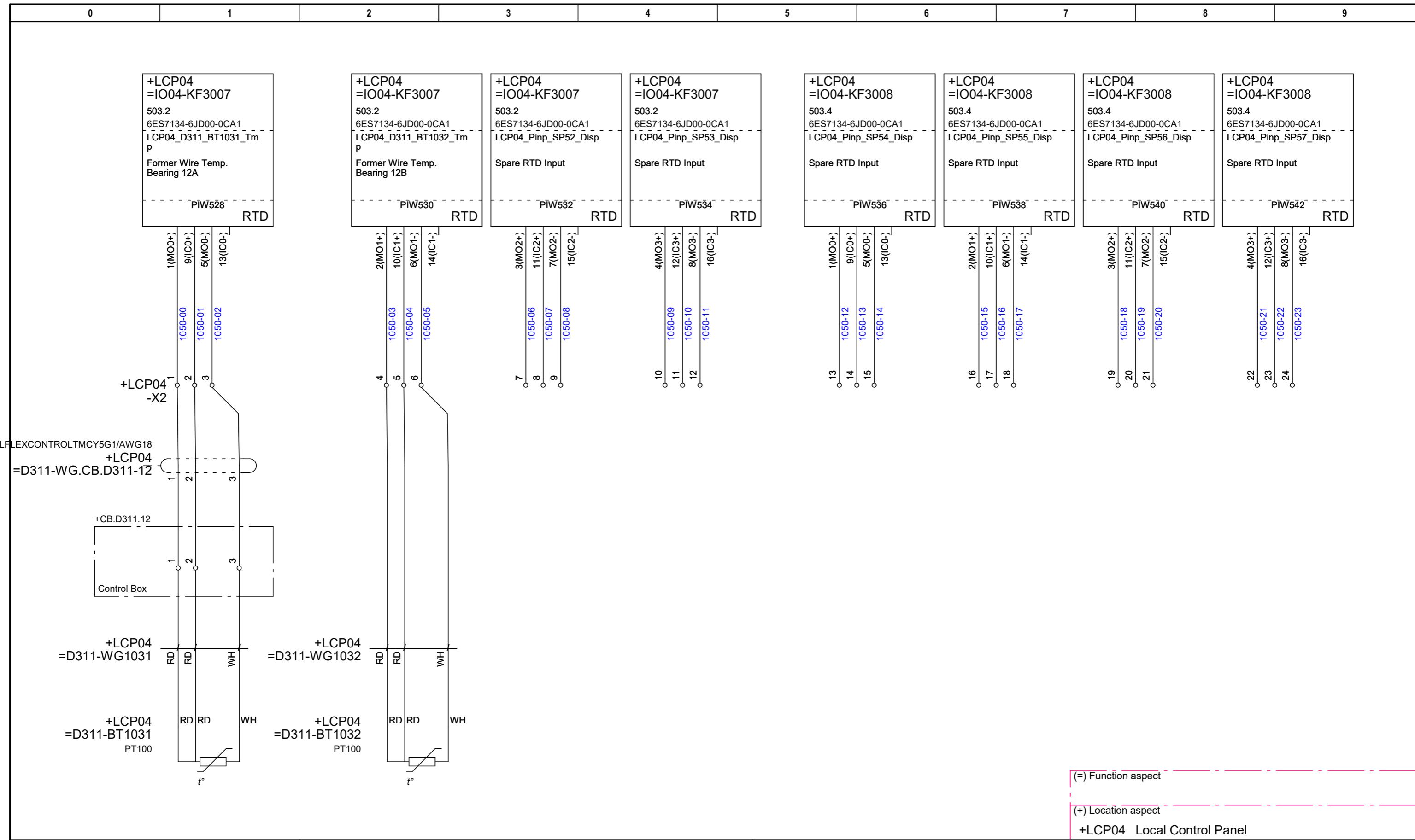




- (=) Function aspect
- =PNEU04Pneumatic
- (+) Location aspect
- +PNEU04Pneumatic Panel

Spare RTD Inputs







Componentlist

Componentlist

Pos.	Component Page/path	Type Description	Make
1	+LCP04-LCP02 =DC01/280.0	1077500 Rittal enclosure AE 1077 760x760x210 mm	Rittal
2	+LCP04-X2 (12) 1050.8	PTTB2,5 2 level terminal spring	Phoenix Contact
3	+LCP04=D021-Q1731 =PNEU04/1047.4	RIF-0-RPT-24VDC Relæ RIF-0..., mini-effektrelnæ med 1 sluttekontakt	Phoenix Contact
4	+LCP04=D021-X1 (6) =D021/1015.1	PTTB2,5 2 level terminal spring	Phoenix Contact
5	+LCP04=D031-FC1001 =D031/1020.1	PT2,5-TG Terminal spring for fuse	Phoenix Contact
6	+LCP04=D031-KF8349.1 =D031/1020.5	DEK-TR/INV Inverter module NPN-PNP/PNP-NPN	Phoenix Contact
7	+LCP04=D031-Q1351 =PNEU04/1046.2	RIF-0-RPT-24VDC Relæ RIF-0..., mini-effektrelnæ med 1 sluttekontakt	Phoenix Contact
8	+LCP04=D031-Q1354 =PNEU04/1046.6	RIF-0-RPT-24VDC Relæ RIF-0..., mini-effektrelnæ med 1 sluttekontakt	Phoenix Contact
9	+LCP04=D031-X1 (3) =D031/1020.2	PTTB2,5 2 level terminal spring	Phoenix Contact
10	+LCP04=D032-FC1001 =D032/1025.1	PT2,5-TG Terminal spring for fuse	Phoenix Contact
11	+LCP04=D032-KF8350.1 =D032/1025.5	DEK-TR/INV Inverter module NPN-PNP/PNP-NPN	Phoenix Contact
12	+LCP04=D032-Q1352 =PNEU04/1046.4	RIF-0-RPT-24VDC Relæ RIF-0..., mini-effektrelnæ med 1 sluttekontakt	Phoenix Contact
13	+LCP04=D032-Q1355 =PNEU04/1046.8	RIF-0-RPT-24VDC Relæ RIF-0..., mini-effektrelnæ med 1 sluttekontakt	Phoenix Contact
14	+LCP04=D032-X1 (3) =D032/1025.2	PTTB2,5 2 level terminal spring	Phoenix Contact
15	+LCP04=D311-RL4010 =D311/1031.1	440G-MT47038 GUARD LOCKING SWITCHES 440GMTSAFETY CONT	Allen-Bradley
16	+LCP04=D311-X1 (12) =D311/1031.3	PTTB2,5 2 level terminal spring	Phoenix Contact
17	+LCP04=D414-Q1732 =PNEU04/1047.6	RIF-0-RPT-24VDC Relæ RIF-0..., mini-effektrelnæ med 1 sluttekontakt	Phoenix Contact
18	+LCP04=D414-X1 (3) =D414/1035.3	PTTB2,5 2 level terminal spring	Phoenix Contact
19	+LCP04=DC01-FC1001 =DC01/280.5	6EP1961-2BA41 SITOP PSE200U 10A SELECTIVITY MODULE 4CH. 24VDC ADJ.3-10A	Siemens
20	+LCP04=DC01-SF1001 =DC01/280.5	M22-WK Changeover switch w.thumb-grib, momentary 2pos.	Möeller
21	+LCP04=DC01-SF1001 =DC01/280.5	M22-A Fixing adapter 3 contacts	Möeller
22	+LCP04=DC01-SF1001 (2) =DC01/280.5	M22-K10 Contact element 1M, frontfixing	Möeller
23	+LCP04=DC01-SF1001 =DC01/280.5	M22-IVS Adapter for DIN rail	Möeller
24	+LCP04=DC01-SF1002 =DC01/280.7	M22-WK Changeover switch w.thumb-grib, momentary 2pos.	Möeller
25	+LCP04=DC01-SF1002 =DC01/280.7	M22-IVS Adapter for DIN rail	Möeller



JHI, USA
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Rev.: A01
Dcc.: &EPB
Next page : 1101

P100034

Componentlist

Pos.	Component Page/path	Type Description	Make
26	+LCP04=DC01-SF1002 (2) =DC01/280.7	M22-K10 Contact element 1M, frontfixing	Möeller
27	+LCP04=DC01-SF1002 =DC01/280.7	M22-A Fixing adapter 3 contacts	Möeller
28	+LCP04=DC01-X1 (2) =DC01/280.1	PT4 Terminal spring	Phoenix Contact
29	+LCP04=DC01-X100 (10) =DC01/280.4	PT2,5 Terminal spring	Phoenix Contact
30	+LCP04=DC01-X103 (4) =DC01/280.7	PT2,5 Terminal spring	Phoenix Contact
31	+LCP04=DC01-X104 (4) =DC01/280.8	PT2,5 Terminal spring	Phoenix Contact
32	+LCP04=ES01-SF6102 =ES01/1040.3	M22-PVT Emergency stop actuator, turn to release	Möeller
33	+LCP04=ES01-X1 (6) =ES01/1040.2	PTTB2,5 2 level terminal spring	Phoenix Contact
34	+LCP04=F051-Q1420 =PNEU04/1045.4	RIF-0-RPT-24VDC Relæ RIF-0..., mini-effektrelnæ med 1 sluttekontakt	Phoenix Contact
35	+LCP04=F052-Q1421 =PNEU04/1045.6	RIF-0-RPT-24VDC Relæ RIF-0..., mini-effektrelnæ med 1 sluttekontakt	Phoenix Contact
36	+LCP04=F061-X1 (5) =F061/1000.5	PTTB2,5 2 level terminal spring	Phoenix Contact
37	+LCP04=F081-Q1730 =PNEU04/1047.2	RIF-0-RPT-24VDC Relæ RIF-0..., mini-effektrelnæ med 1 sluttekontakt	Phoenix Contact
38	+LCP04=F081-X1 (6) =F081/1010.1	PTTB2,5 2 level terminal spring	Phoenix Contact
39	+LCP04=F100-X1 (4) =F100/1005.2	PTTB2,5 2 level terminal spring	Phoenix Contact
40	+LCP04=IO04-KF1000 =IO04/501.1	6ES7155-6AA01-0BN0 SIMATIC ET 200SP, PROFINET INTERFACE MODULE IM155-6PN STANDARD	Siemens
41	+LCP04=IO04-KF3001 =DC01/280.7	6ES7193-6BP00-0DA0 SIMATIC ET 200SP, BASEUNIT BU15-P16+A0+2D, BU-TYPE A0, PUSH-IN TERM, NEW LOAD	Siemens
42	+LCP04=IO04-KF3001 =DC01/280.7	6ES7131-6BF01-0BA0 SIMATIC ET 200SP, INPUT DI 8X 24VDC STANDARD	Siemens
43	+LCP04=IO04-KF3002 =IO04/501.5	6ES7131-6BF01-0BA0 SIMATIC ET 200SP, INPUT DI 8X 24VDC STANDARD	Siemens
44	+LCP04=IO04-KF3002 =IO04/501.5	6ES7193-6BP00-0BA0 SIMATIC ET 200SP, BASEUNIT BU15-P16+A0+2B, BU-TYPE A0, PUSH-IN TERM, BRIDGED TO	Siemens
45	+LCP04=IO04-KF3003 =IO04/501.7	6ES7131-6BF01-0BA0 SIMATIC ET 200SP, INPUT DI 8X 24VDC STANDARD	Siemens
46	+LCP04=IO04-KF3003 =IO04/501.7	6ES7193-6BP00-0BA0 SIMATIC ET 200SP, BASEUNIT BU15-P16+A0+2B, BU-TYPE A0, PUSH-IN TERM, BRIDGED TO	Siemens
47	+LCP04=IO04-KF3004 =DC01/280.6	6ES7132-6BF01-0BA0 SIMATIC ET 200SP, OUTPUT DQ 8X24VDC/0,5A STANDARD	Siemens
48	+LCP04=IO04-KF3004 =DC01/280.6	6ES7193-6BP00-0BA0 SIMATIC ET 200SP, BASEUNIT BU15-P16+A0+2B, BU-TYPE A0, PUSH-IN TERM, BRIDGED TO	Siemens
49	+LCP04=IO04-KF3005 =IO04/502.3	6ES7193-6BP00-0BA0 SIMATIC ET 200SP, BASEUNIT BU15-P16+A0+2B, BU-TYPE A0, PUSH-IN TERM, BRIDGED TO	Siemens
50	+LCP04=IO04-KF3005 =IO04/502.3	6ES7132-6BF01-0BA0 SIMATIC ET 200SP, OUTPUT DQ 8X24VDC/0,5A STANDARD	Siemens



Componentlist

Pos.	Component Page/path	Type Description	Make
51	+LCP04=IO04-KF3006 =IO04/502.5	6ES7134-6GD01-0BA1 SIMATIC ET 200SP, AI 4XI 2-/4-WIRE STANDARD	Siemens
52	+LCP04=IO04-KF3006 =IO04/502.5	6ES7193-6BP00-0DA0 SIMATIC ET 200SP, BASEUNIT BU15-P16+A0+2D, BU-TYPE A0, PUSH-IN TERM, NEW LOAD	Siemens
53	+LCP04=IO04-KF3007 =IO04/503.1	6ES7134-6JD00-0CA1 SIMATIC ET 200SP, AI 4XRTD/TC HIGH FEATURE, FITS TO BU-TYPE A0, A1, COLOR CODE C	Siemens
54	+LCP04=IO04-KF3007 =IO04/503.1	6ES7193-6BP00-0DA0 SIMATIC ET 200SP, BASEUNIT BU15-P16+A0+2D, BU-TYPE A0, PUSH-IN TERM, NEW LOAD	Siemens
55	+LCP04=IO04-KF3008 =IO04/503.3	6ES7193-6BP00-0BA0 SIMATIC ET 200SP, BASEUNIT BU15-P16+A0+2B, BU-TYPE A0, PUSH-IN TERM, BRIDGED TO	Siemens
56	+LCP04=IO04-KF3008 =IO04/503.3	6ES7134-6JD00-0CA1 SIMATIC ET 200SP, AI 4XRTD/TC HIGH FEATURE, FITS TO BU-TYPE A0, A1, COLOR CODE C	Siemens
57	+LCP04=IO04-KF3009 =IO04/503.5	6ES7135-6HD00-0BA1 SIMATIC ET 200SP, ANALOG OUT AQ 4XU/I STANDARD	Siemens
58	+LCP04=IO04-KF3009 =IO04/503.5	6ES7193-6BP00-0DA0 SIMATIC ET 200SP, BASEUNIT BU15-P16+A0+2D, BU-TYPE A0, PUSH-IN TERM, NEW LOAD	Siemens
59	+LCP04=IO04-KF3010 =IO04/504.1	6ES7136-6BA00-0CA0 SIMATIC ET 200SP, SAFETY F-DI 8X24VDC HF	Siemens
60	+LCP04=IO04-KF3010 =IO04/504.1	6ES7193-6BP00-0DA0 SIMATIC ET 200SP, BASEUNIT BU15-P16+A0+2D, BU-TYPE A0, PUSH-IN TERM, NEW LOAD	Siemens
61	+LCP04=IO04-KF3011 =IO04/504.3	6ES7193-6BP00-0BA0 SIMATIC ET 200SP, BASEUNIT BU15-P16+A0+2B, BU-TYPE A0, PUSH-IN TERM, BRIDGED TO	Siemens
62	+LCP04=IO04-KF3011 (2) =ES01/1040.1	6ES7136-6BA00-0CA0 SIMATIC ET 200SP, SAFETY F-DI 8X24VDC HF	Siemens
63	+LCP04=IO04-KF3012 =IO04/504.5	6ES7193-6BP00-0BA0 SIMATIC ET 200SP, BASEUNIT BU15-P16+A0+2B, BU-TYPE A0, PUSH-IN TERM, BRIDGED TO	Siemens
64	+LCP04=IO04-KF3012 =IO04/504.5	6ES7136-6DB00-0CA0 SIMATIC ET 200SP, SAFETY F-DQ 4XDC 24V/2A	Siemens
65	+LCP04=PNEU-X1 (13) =PNEU04/1047.1	PTTB2,5 2 level terminal spring	Phoenix Contact
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75			



Graphic Cable Plan



