Systeme Helmholz GmbH
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Helmholz
COMPATIBLE WITH YOU

Helmholz TB20 Makros

Bearbeitet am 28. 10. 2015 von (Kürzel) AM

Anzahl der Seiten 70

Inhaltsverzeichnis

Spalte X: eine automatisch erzeugte Seite wurde manuell nachbearbeitet

F06_001

Seite	Seitenbeschreibung	Seitenzusatzfeld	Datum	Bearbeiter	X
1	Deckblatt		23. 10. 2015	AM	X
2	Inhalt		28. 10. 2015	AM	
3	Inhalt		23. 10. 2015	AM	
4	Inhalt		28. 10. 2015	AM	
10	HEL.600-151-1AA11		23. 10. 2015	AM	
11	HEL.600-160-1AA11		23. 10. 2015	AM	
12	HEL.600-170-1AA11		23. 10. 2015	AM	
13	HEL.600-175-1AA11		23. 10. 2015	AM	
14	HEL.600-180-1AA11		23. 10. 2015	AM	
15	HEL.600-185-1AA11		23. 10. 2015	AM	
20	HEL.600-210-0AB01		23. 10. 2015	AM	
21	HEL.600-210-0AD01		23. 10. 2015	AM	
22	HEL.600-210-0AH01		23. 10. 2015	AM	
23	HEL.600-210-0AP21		23. 10. 2015	AM	
24	HEL.600-210-0CC01		23. 10. 2015	AM	
25	HEL.600-210-0CF21		23. 10. 2015	AM	
30	HEL.600-211-0BB01		23. 10. 2015	AM	
31	HEL.600-211-0BD01		23. 10. 2015	AM	
32	HEL.600-211-0BH21		28. 10. 2015	AM	
40	HEL.600-220-0AB01		23. 10. 2015	AM	
41	HEL.600-220-0AD01		23. 10. 2015	AM	
42	HEL.600-220-0AH01		23. 10. 2015	AM	
43	HEL.600-220-0AP21		23. 10. 2015	AM	
44	HEL.600-220-0BB01		23. 10. 2015	AM	
45	HEL.600-220-0BD01		23. 10. 2015	AM	
46	HEL.600-220-7AD01		23. 10. 2015	AM	
47	HEL.600-220-7AH01		23. 10. 2015	AM	
48	HEL.600-220-7AP21		23. 10. 2015	AM	
50	HEL.600-222-0AB01		23. 10. 2015	AM	
51	HEL.600-222-0AD21		23. 10. 2015	AM	
60	HEL.600-230-0AD01		23. 10. 2015	AM	
61	HEL.600-230-0AH01		23. 10. 2015	AM	
62	HEL.600-230-0AP21		23. 10. 2015	AM	

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Gepr.
Bearb. AM
Datum 28. 10. 2015
Änderung Datum Name Norm
Urspr. Ers.f. Ers.d.

Helmholz COMPATIBLE WITH YOU

Inhalt

Helmholz TB20 Makros

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Spalte X: eine automatisch erzeugte Seite wurde manuell nachbearbeitet

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70	HEL.600-250-4AB01		23. 10. 2015	AM	
71	HEL.600-250-4AD01		23. 10. 2015	AM	
72	HEL.600-250-7BB01		23. 10. 2015	AM	
73	HEL.600-250-7BD01		23. 10. 2015	AM	
74	HEL.600-250-7BH21		23. 10. 2015	AM	
80	HEL.600-252-4AB01		23. 10. 2015	AM	
81	HEL.600-252-4AD01		23. 10. 2015	AM	
82	HEL.600-252-4CB01		23. 10. 2015	AM	
83	HEL.600-252-4CD01		23. 10. 2015	AM	
84	HEL.600-252-7BB01		23. 10. 2015	AM	
85	HEL.600-252-7BD01		23. 10. 2015	AM	
86	HEL.600-252-7BH21		23. 10. 2015	AM	
90	HEL.600-253-4AB01		23. 10. 2015	AM	
91	HEL.600-253-4AD01		23. 10. 2015	AM	
100	HEL.600-254-4AB01		23. 10. 2015	AM	
101	HEL.600-254-4AB02		23. 10. 2015	AM	
102	HEL.600-254-4AD01		23. 10. 2015	AM	
103	HEL.600-254-4AD02		23. 10. 2015	AM	
104	HEL.600-254-4AH22		23. 10. 2015	AM	
110	HEL.600-255-7AA21		23. 10. 2015	AM	
111	HEL.600-255-7BA21		23. 10. 2015	AM	
120	HEL.600-260-4AB01		23. 10. 2015	AM	
121	HEL.600-260-4AD01		23. 10. 2015	AM	
130	HEL.600-261-4AB01		23. 10. 2015	AM	
131	HEL.600-261-4AD01		23. 10. 2015	AM	
140	HEL.600-300-7AA01		23. 10. 2015	AM	
150	HEL.600-310-7AA01		23. 10. 2015	AM	
160	HEL.600-320-7AA01		23. 10. 2015	AM	
170	HEL.600-400-7AA31		23. 10. 2015	AM	
180	HEL.600-700-0AA01		23. 10. 2015	AM	
190	HEL.600-710-0AA01		23. 10. 2015	AM	
200	HEL.600-720-0AH01		23. 10. 2015	AM	
201	HEL.600-720-0BH01		23. 10. 2015	AM	

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Bearb.	AM			
Datum	28. 10. 2015			
Änderung	Datum	Name	Norm	
Urspr.		Ers.f.	Ers.d.	

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Helmholz TB20 Makros

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Spalte X: eine automatisch erzeugte Seite wurde manuell nachbearbeitet

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Seite	Seitenbeschreibung	Seitenzusatzfeld	Datum	Bearbeiter	X
202	HEL.600-720-0DH01		23. 10. 2015	AM	
203	HEL.600-720-0CH01		23. 10. 2015	AM	
204	HEL.600-720-0XH01		23. 10. 2015	AM	
210	HEL.600-730-4AD01		23. 10. 2015	AM	

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			Gepr.	
			Bearb.	AM
			Datum	28. 10. 2015
Änderung	Datum	Name	Norm	

Urspr. | Ers.f. | Ers.d.

Helmholz COMPATIBLE WITH YOU

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Helmholz TB20 Makros

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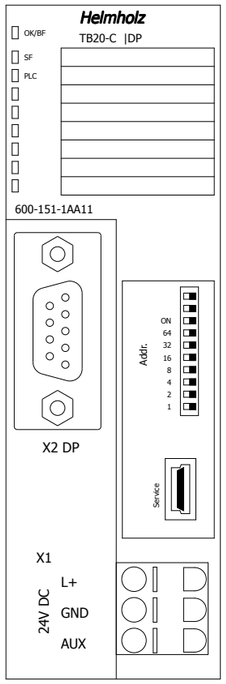
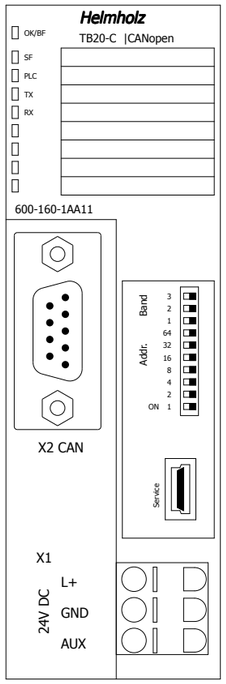


			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-151-1AA11	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 10 von 210 Bl.

-A11



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			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 11 von 210 Bl.

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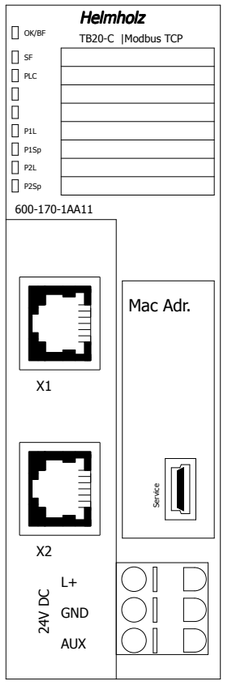

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			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 12 von 210 Bl.

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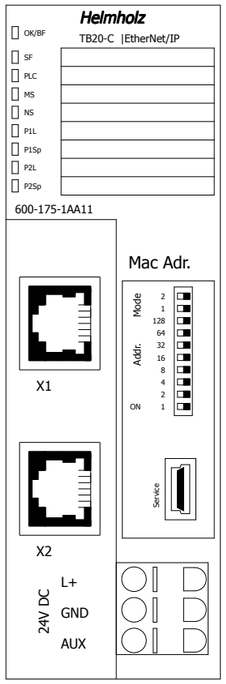

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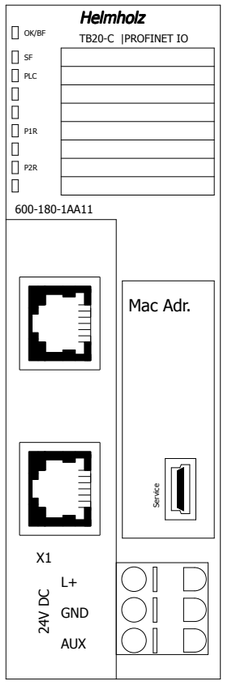
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 13 von 210 Bl.

-A14



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			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 14 von 210 Bl.

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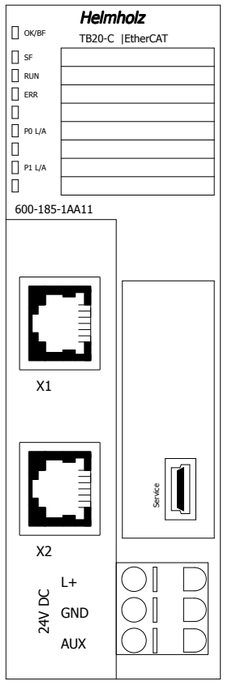

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			Bearb.	AM						
			Datum	28. 10. 2015					Helmholz TB20 Makros	Bl. 15
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.			von 210 Bl.

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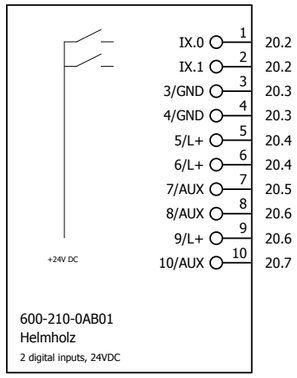

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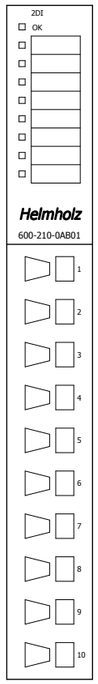
-A20



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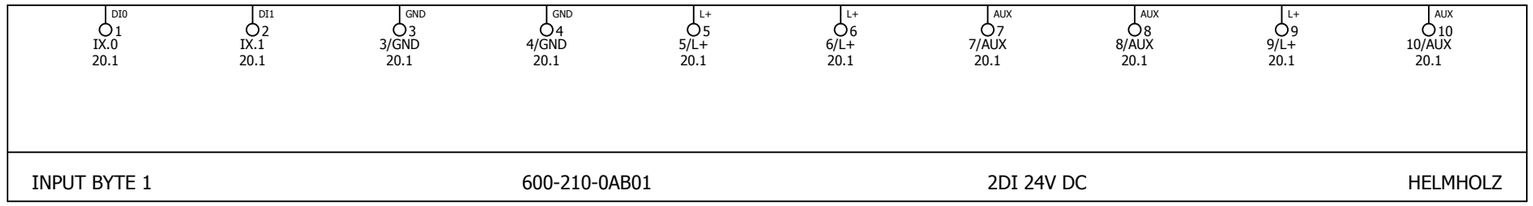

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			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-210-0AB01	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 20 von 210 Bl.

-A21
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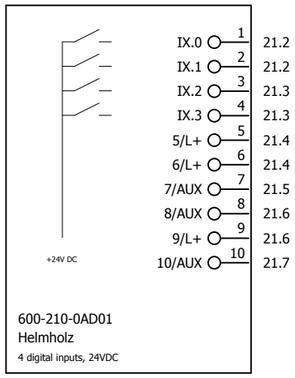

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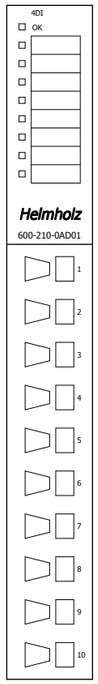
-A21



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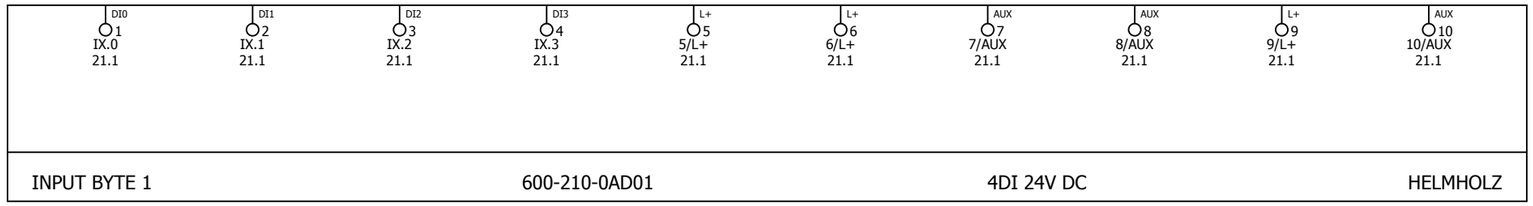

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			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de	Helmholz COMPATIBLE WITH YOU	HEL.600-210-0AD01	+
			Bearb.	AM				
			Datum	28. 10. 2015				Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.	Bl. 21 von 210 Bl.

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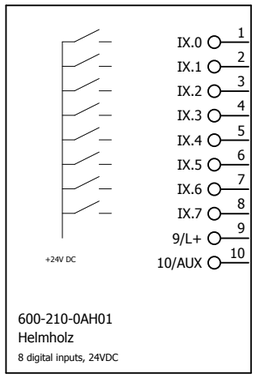
22.6



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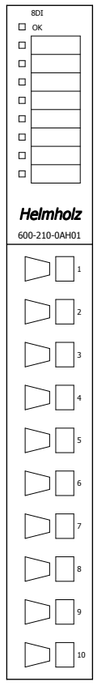

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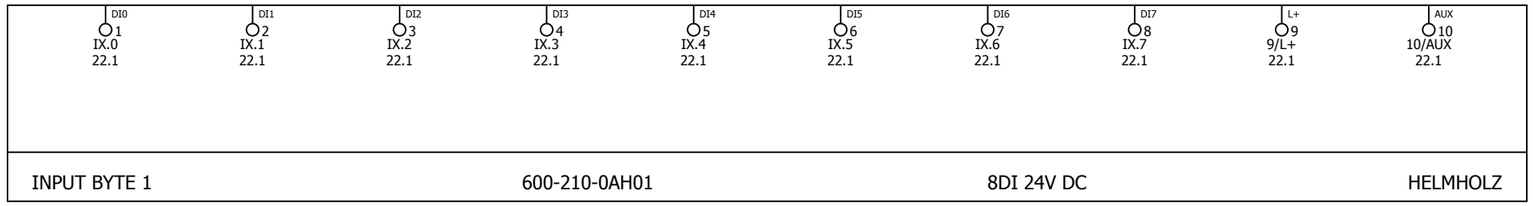

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			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 22 von 210 Bl.

-A23
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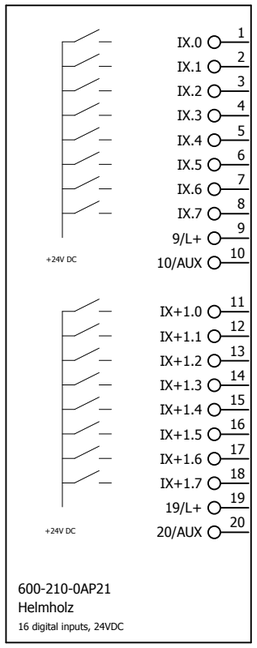

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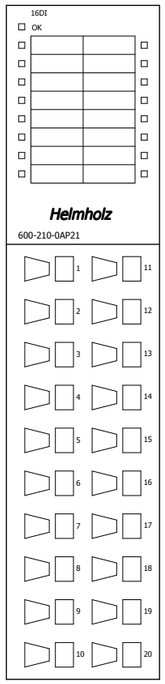

-A23
23.7

DI0	DI1	DI2	DI3	DI4	DI5	DI6	DI7	L+	AUX
1	2	3	4	5	6	7	8	9	10
IX.0	IX.1	IX.2	IX.3	IX.4	IX.5	IX.6	IX.7	9/L+	10/AUX
23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1

INPUT BYTE 1 | 600-210-0AP21 | 16DI 24V DC | HELMHOLZ

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23.7

DI8	DI9	DI10	DI11	DI12	DI13	DI14	DI15	L+	AUX
11	12	13	14	15	16	17	18	19	20
IX+1.0	IX+1.1	IX+1.2	IX+1.3	IX+1.4	IX+1.5	IX+1.6	IX+1.7	19/L+	20/AUX
23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1

INPUT BYTE 2 | 600-210-0AP21 | 16DI 24V DC | HELMHOLZ

Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

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			Bearb.	AM				
			Datum	28. 10. 2015				Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.	Bl. 23 von 210 Bl.

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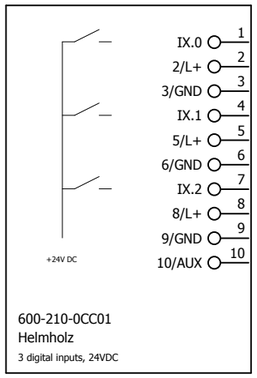

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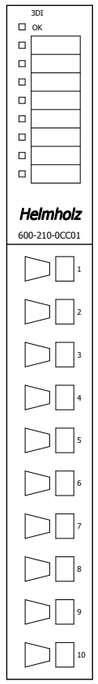
-A24



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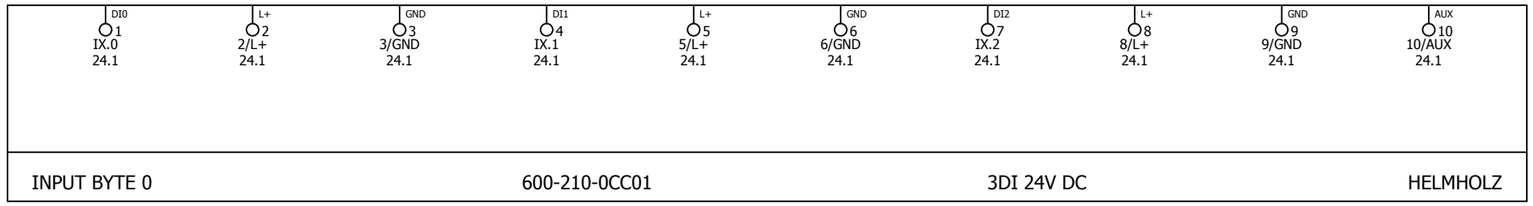

Reserve

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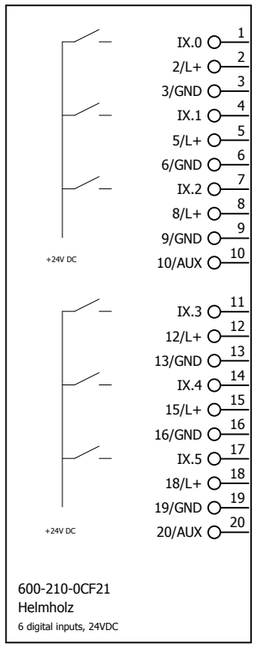
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 24 von 210 Bl.

-A25
25.7



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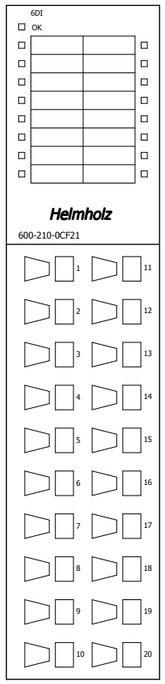

-A25
25.7

DI0	L+	GND	DI1	L+	GND	DI2	L+	GND	AUX
1	2	3	4	5	6	7	8	9	10
IX.0	2/L+	3/GND	IX.1	5/L+	6/GND	IX.2	8/L+	9/GND	10/AUX
25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1

INPUT BYTE 0 | 600-210-0CF21 | 6DI 24V DC | HELMHOLZ

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-A25
25.7

DI3	L+	GND	DI4	L+	GND	DI5	L+	GND	AUX
11	12	13	14	15	16	17	18	19	20
IX.3	12/L+	13/GND	IX.4	15/L+	16/GND	IX.5	18/L+	19/GND	20/AUX
25.1	25.1	25.1	25.1	25.1	16/GND	25.1	25.1	25.1	25.1

INPUT BYTE 1 | 600-210-0CF21 | 6DI 24V DC | HELMHOLZ

Reserve
Reserve
Reserve

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91091 Großenseebach
Ph. +49 9135 7380-0, Fax +49 9135 7380-110
info@helmholz.de, www.helmholz.de

Helmholz COMPATIBLE WITH YOU

HEL.600-210-0CF21

			Gepr.	
			Bearb.	AM
			Datum	28. 10. 2015
Änderung	Datum	Name	Norm	

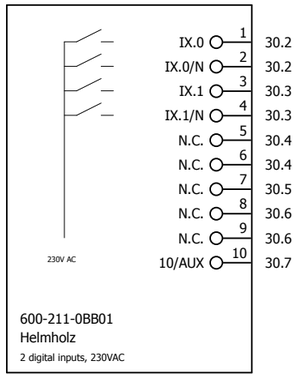
Urspr. | Ers.f. | Ers.d.

+

Helmholz TB20 Makros

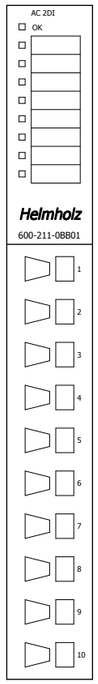
Bl. 25
von 210 Bl.

-A30
30.6

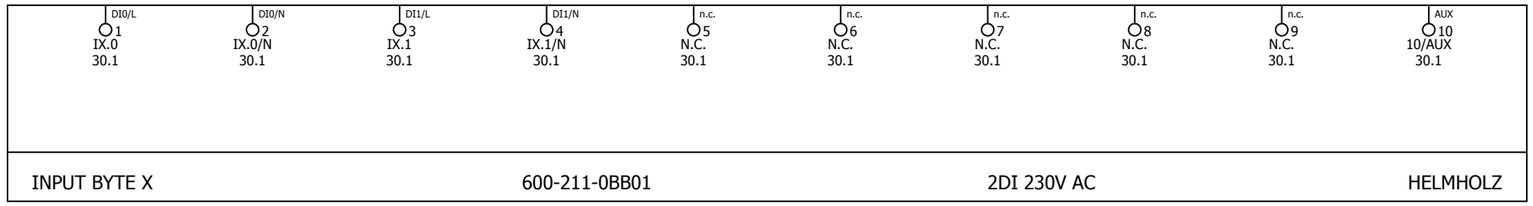


Reserve
Reserve

-A30



-A30
30.6



Reserve Reserve

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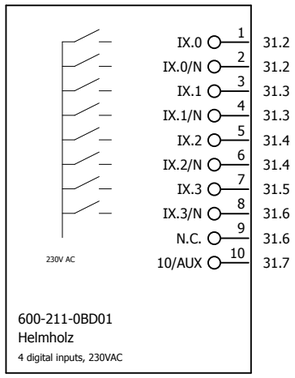
			Bearb.	AM				
			Datum	28. 10. 2015				Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.	Bl. 30 von 210 Bl.

-A31
31.6



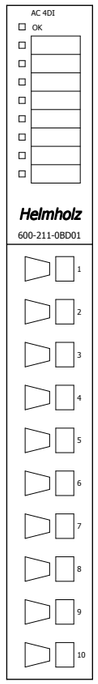
Reserve

Reserve

Reserve

Reserve

-A31



-A31
31.6

DI0/L	DI0/N	DI1/L	DI1/N	DI2/L	DI2/N	DI3/L	DI3/N	n.c.	AUX
1	2	3	4	5	6	7	8	9	10
IX.0	IX.0/N	IX.1	IX.1/N	IX.2	IX.2/N	IX.3	IX.3/N	N.C.	10/AUX
31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1

INPUT BYTE X | 600-211-0BD01 | 4DI 230V AC | HELMHOLZ

Reserve

Reserve

Reserve

Reserve

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			Bearb.	AM				
			Datum	28. 10. 2015				Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.	Bl. 31 von 210 Bl.

-A32
32.7

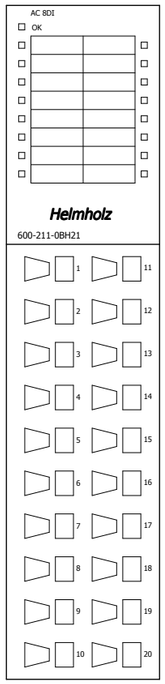
IX.0	1	32.2	Reserve
IX.0/N	2	32.2	
IX.1	3	32.3	Reserve
IX.1/N	4	32.3	
IX.2	5	32.4	Reserve
IX.2/N	6	32.4	
IX.3	7	32.5	Reserve
IX.3/N	8	32.6	
N.C.	9	32.6	
10/AUX	10	32.7	
IX.4	11	32.2	Reserve
IX.4/N	12	32.2	
IX.5	13	32.3	Reserve
IX.5/N	14	32.3	
IX.6	15	32.4	Reserve
IX.6/N	16	32.4	
IX.7	17	32.5	Reserve
IX.7/N	18	32.6	
N.C.	19	32.6	
20/AUX	20	32.7	

230V AC

230V AC

600-211-0BH21
Helmholz
8 digital inputs, 230VAC

-A32



-A32
32.7

DI0/L	DI0/N	DI1/L	DI1/N	DI2/L	DI2/N	DI3/L	DI3/N	n.c.	AUX
1	2	3	4	5	6	7	8	9	10
IX.0	IX.0/N	IX.1	IX.1/N	IX.2	IX.2/N	IX.3	IX.3/N	N.C.	10/AUX
32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1

INPUT BYTE X | 600-211-0BH21 | 8DI 230V AC | HELMHOLZ

Reserve Reserve Reserve Reserve

-A32
32.7

DI4/L	DI4/N	DI5/L	DI5/N	DI6/L	DI6/N	DI7/L	DI7/N	n.c.	AUX
11	12	13	14	15	16	17	18	19	20
IX.4	IX.4/N	IX.5	IX.5/N	IX.6	IX.6/N	IX.7	IX.7/N	N.C.	20/AUX
32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1

INPUT BYTE X | 600-211-0BH21 | 8DI 230V AC | HELMHOLZ

Reserve Reserve Reserve Reserve

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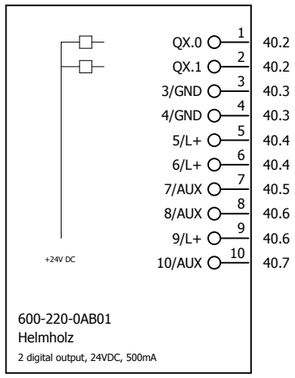
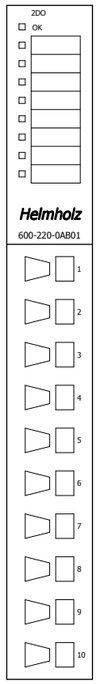
			Bearb.	AM				
			Datum	28. 10. 2015				Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.	Bl. 32 von 210 Bl.

-A40



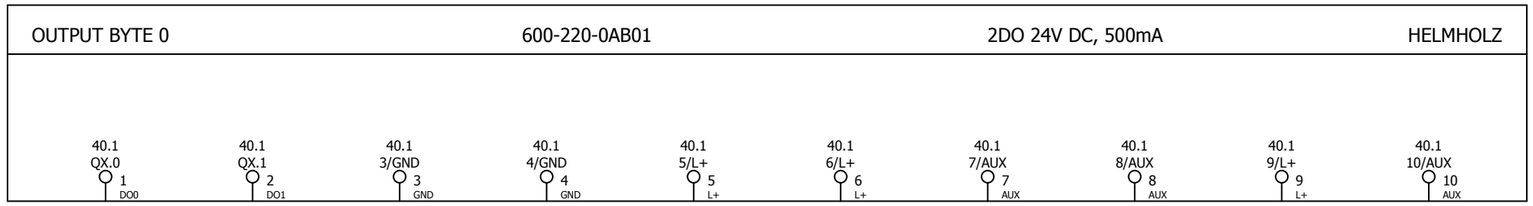
Reserve
Reserve

-A40



Reserve Reserve

-A40
40.6



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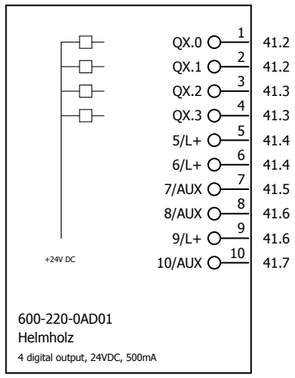
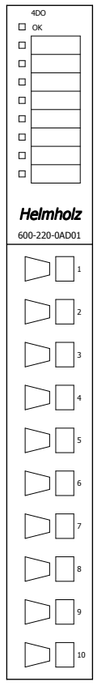
			Bearb.	AM					
			Datum	28. 10. 2015					Bl. 40
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Helmholz TB20 Makros / von 210 Bl.

-A41



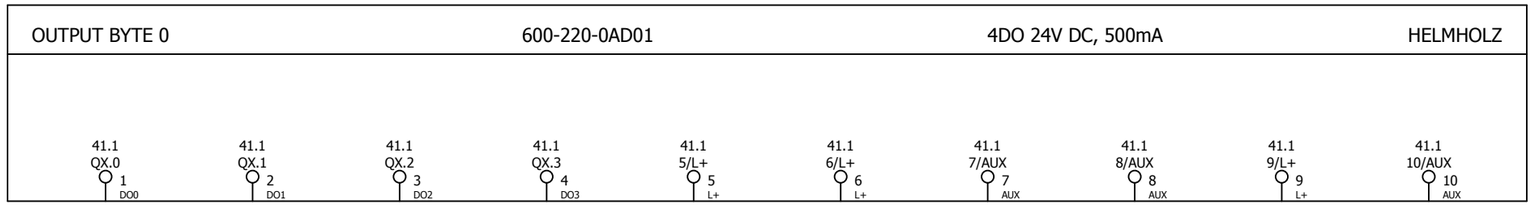
Reserve
Reserve
Reserve
Reserve

-A41



Reserve Reserve Reserve Reserve

-A41
41.6



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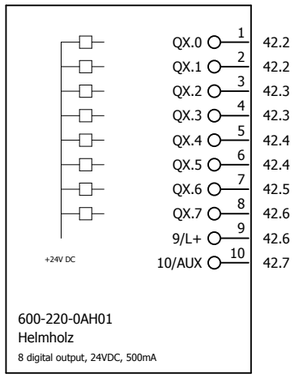
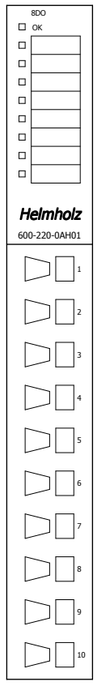
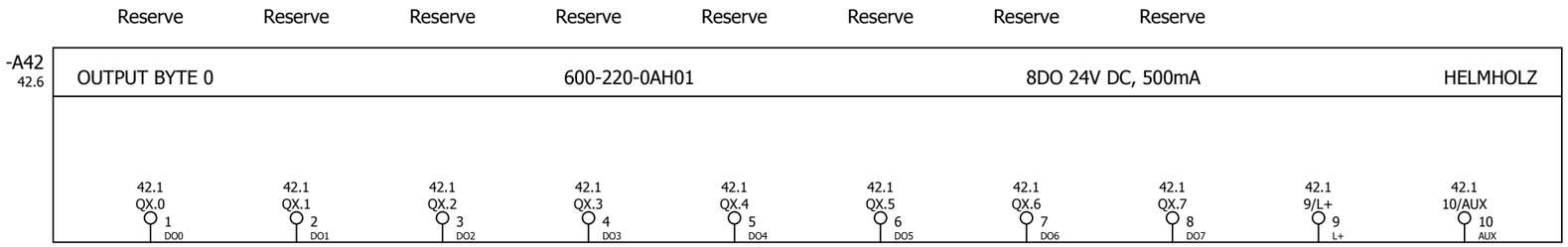
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 41 von 210 Bl.

-A42



-A42





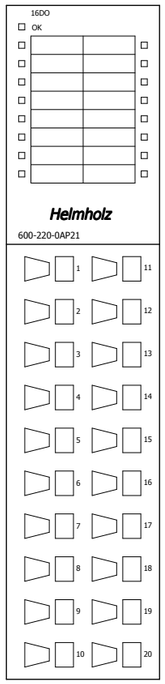
			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-220-0AH01	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 42 von 210 Bl.

-A43

QX.0	1	43.2	Reserve
QX.1	2	43.2	Reserve
QX.2	3	43.3	Reserve
QX.3	4	43.3	Reserve
QX.4	5	43.4	Reserve
QX.5	6	43.4	Reserve
QX.6	7	43.5	Reserve
QX.7	8	43.6	Reserve
9/L+	9	43.6	
+24V DC 10/AUX	10	43.7	
QX+1.0	11	43.2	Reserve
QX+1.1	12	43.2	Reserve
QX+1.2	13	43.3	Reserve
QX+1.3	14	43.3	Reserve
QX+1.4	15	43.4	Reserve
QX+1.5	16	43.4	Reserve
QX+1.6	17	43.5	Reserve
QX+1.7	18	43.6	Reserve
19/L+	19	43.6	
+24V DC 20/AUX	20	43.7	

600-220-0AP21
Helmholz
16 digital output, 24VDC, 500mA

-A43



Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

-A43
43.7

OUTPUT BYTE 0 — 600-220-0AP21 — 16DO 24V DC, 500mA — HELMHOLZ

43.1 QX.0	43.1 QX.1	43.1 QX.2	43.1 QX.3	43.1 QX.4	43.1 QX.5	43.1 QX.6	43.1 QX.7	43.1 9/L+	43.1 10/AUX
1 DO0	2 DO1	3 DO2	4 DO3	5 DO4	6 DO5	7 DO6	8 DO7	9 L+	10 AUX

Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

-A43
43.7

OUTPUT BYTE 1 — 600-220-0AP21 — 16DO 24V DC, 500mA — HELMHOLZ

43.1 QX+1.0	43.1 QX+1.1	43.1 QX+1.2	43.1 QX+1.3	43.1 QX+1.4	43.1 QX+1.5	43.1 QX+1.6	43.1 QX+1.7	43.1 19/L+	43.1 20/AUX
11 DO8	12 DO9	13 DO10	14 DO11	15 DO12	16 DO13	17 DO14	18 DO15	19 L+	20 AUX

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Gepr.				
Bearb.	AM			
Datum	28. 10. 2015			
Änderung	Datum	Name	Norm	

Urspr. | Ers.f. | Ers.d.

Helmholz COMPATIBLE WITH YOU

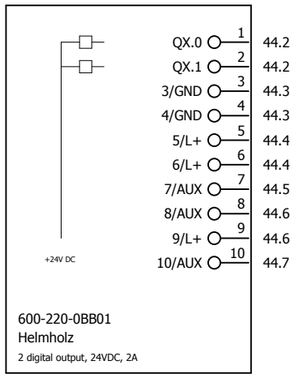
HEL.600-220-0AP21

+

Helmholz TB20 Makros

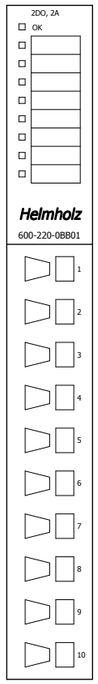
Bl. 43
von 210 Bl.

-A44



Reserve
Reserve

-A44



Reserve Reserve

-A44
44.6

OUTPUT BYTE 0 600-220-0BB01 2DO 24V DC, 2A HELMHOLZ

44.1 QX.0	44.1 QX.1	44.1 3/GND	44.1 4/GND	44.1 5/L+	44.1 6/L+	44.1 7/AUX	44.1 8/AUX	44.1 9/L+	44.1 10/AUX
1 DO0	2 DO1	3 GND	4 GND	5 L+	6 L+	7 AUX	8 AUX	9 L+	10 AUX

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Helmholz COMPATIBLE WITH YOU

HEL.600-220-0BB01

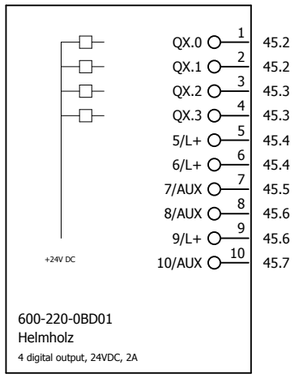
Gepr.				
Bearb.	AM			
Datum	28. 10. 2015			
Änderung	Datum	Name	Norm	
Urspr.		Ers.f.	Ers.d.	

+

Helmholz TB20 Makros

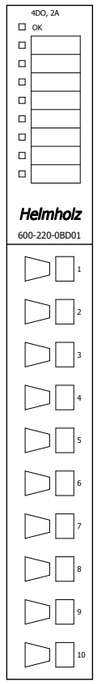
Bl. 44
von 210 Bl.

-A45



Reserve
Reserve
Reserve
Reserve

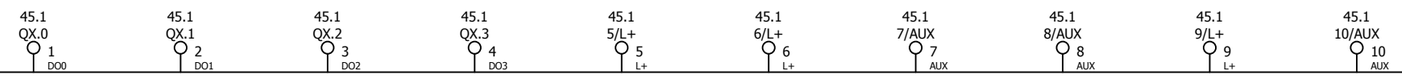
-A45



Reserve Reserve Reserve Reserve

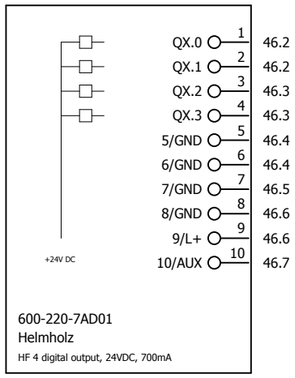
-A45
45.6

OUTPUT BYTE 0 600-220-0BD01 4DO 24V DC, 2A HELMHOLZ



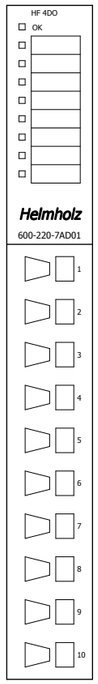
			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-220-0BD01	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 45 von 210 Bl.

-A46



Reserve
Reserve
Reserve
Reserve

-A46



Reserve Reserve Reserve Reserve

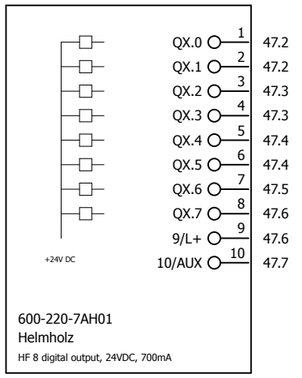
-A46
46.6

OUTPUT BYTE X 600-220-7AD01 HF 4DO 24V DC, 700mA HELMHOLZ

46.1 QX.0	46.1 QX.1	46.1 QX.2	46.1 QX.3	46.1 5/GND	46.1 6/GND	46.1 7/GND	46.1 8/GND	46.1 9/L+	46.1 10/AUX
1 DO0	2 DO1	3 DO2	4 DO3	5 GND	6 GND	7 GND	8 GND	9 L+	10 AUX

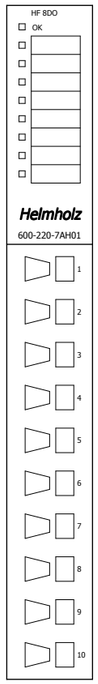
			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de	Helmholz COMPATIBLE WITH YOU	HEL.600-220-7AD01	+
			Bearb.	AM				
			Datum	28. 10. 2015				Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.	Bl. 46 von 210 Bl.

-A47



Reserve
Reserve
Reserve
Reserve
Reserve
Reserve
Reserve
Reserve

-A47



Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

-A47
47.6

OUTPUT BYTE X | 600-220-7AH01 | HF 8DO 24V DC, 700mA | HELMHOLZ

47.1 QX.0 1 DO0	47.1 QX.1 2 DO1	47.1 QX.2 3 DO2	47.1 QX.3 4 DO3	47.1 QX.4 5 DO4	47.1 QX.5 6 DO5	47.1 QX.6 7 DO6	47.1 QX.7 8 DO7	47.1 9/L+ 9 L+	47.1 10/AUX 10 AUX

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			Gepr.	
			Bearb.	AM
			Datum	28. 10. 2015
Änderung	Datum	Name	Norm	

Urspr. | Ers.f. | Ers.d.

HEL.600-220-7AH01

+

Helmholz TB20 Makros

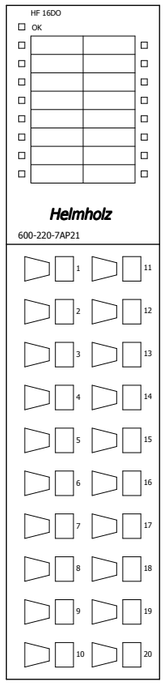
Bl. 47 von 210 Bl.

-A48

QX.0	1	48.2	Reserve
QX.1	2	48.2	Reserve
QX.2	3	48.3	Reserve
QX.3	4	48.3	Reserve
QX.4	5	48.4	Reserve
QX.5	6	48.4	Reserve
QX.6	7	48.5	Reserve
QX.7	8	48.6	Reserve
9/L+	9	48.6	
+24V DC 10/AUX	10	48.7	
QX+1.0	11	48.2	Reserve
QX+1.1	12	48.2	Reserve
QX+1.2	13	48.3	Reserve
QX+1.3	14	48.3	Reserve
QX+1.4	15	48.4	Reserve
QX+1.5	16	48.4	Reserve
QX+1.6	17	48.5	Reserve
QX+1.7	18	48.6	Reserve
19/L+	19	48.6	
+24V DC 20/AUX	20	48.7	

600-220-7AP21
Helmholz
HF 16 digital output, 24VDC, 700mA

-A48



Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

-A48
48.7

OUTPUT BYTE X — 600-220-7AP21 — HF 16DO 24V DC, 700mA — HELMHOLZ

48.1 QX.0	48.1 QX.1	48.1 QX.2	48.1 QX.3	48.1 QX.4	48.1 QX.5	48.1 QX.6	48.1 QX.7	48.1 9/L+	48.1 10/AUX
1 DO0	2 DO1	3 DO2	4 DO3	5 DO4	6 DO5	7 DO6	8 DO7	9 L+	10 AUX

Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

-A48
48.7

OUTPUT BYTE X+1 — 600-220-7AP21 — HF 16DO 24V DC, 700mA — HELMHOLZ

48.1 QX+1.0	48.1 QX+1.1	48.1 QX+1.2	48.1 QX+1.3	48.1 QX+1.4	48.1 QX+1.5	48.1 QX+1.6	48.1 QX+1.7	48.1 19/L+	48.1 20/AUX
11 DO8	12 DO9	13 DO10	14 DO11	15 DO12	16 DO13	17 DO14	18 DO15	19 L+	20 AUX

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Gepr.				
Bearb.	AM			
Datum	28. 10. 2015			
Änderung	Datum	Name	Norm	

Urspr. | Ers.f. | Ers.d.

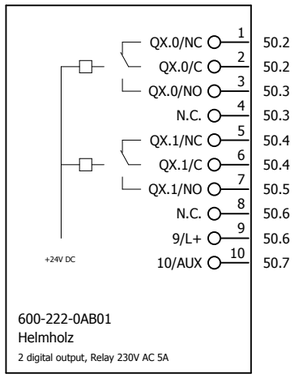
HEL.600-220-7AP21

+

Helmholz TB20 Makros

Bl. 48 von 210 Bl.

-A50



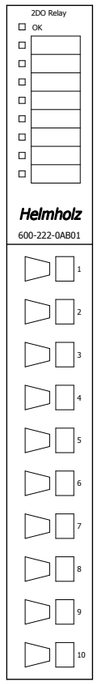
Reserve

Reserve

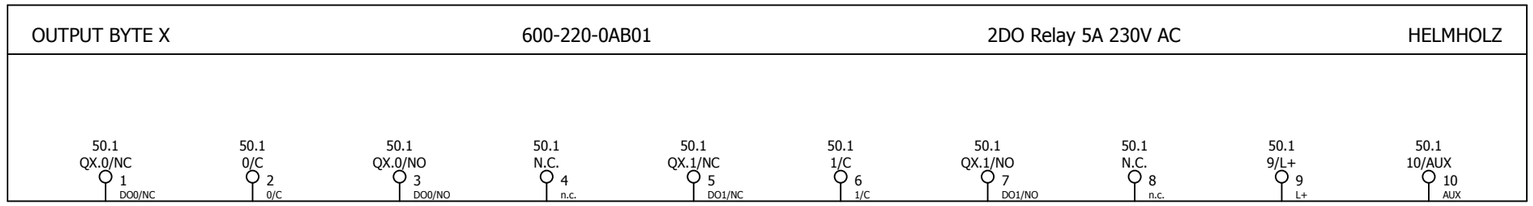
Reserve

Reserve

-A50

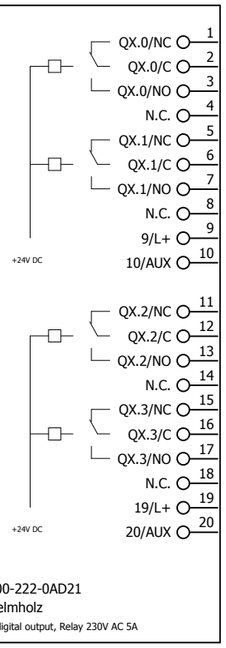


-A50
50.6

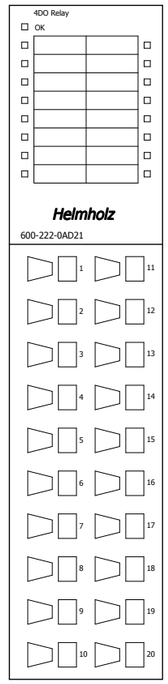


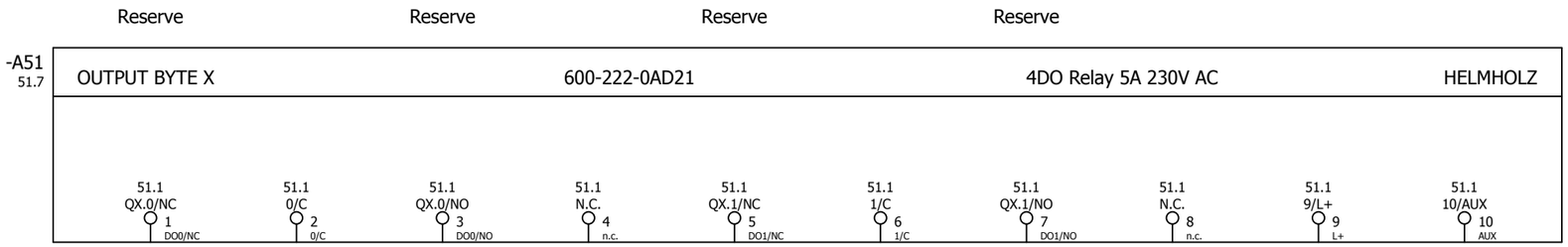
			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-222-0AB01	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 50 von 210 Bl.

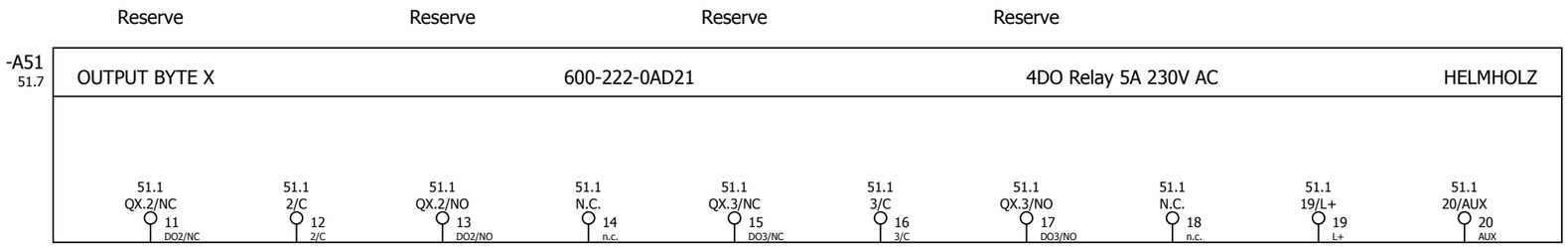
-A51



-A51

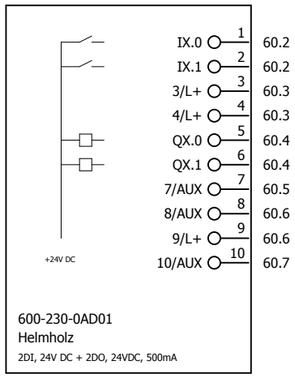




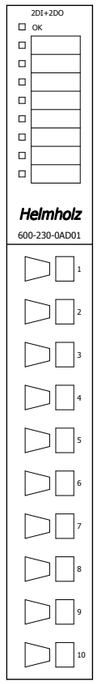


			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de	Helmholz COMPATIBLE WITH YOU	HEL.600-222-0AD21		+
			Bearb.	AM					
			Datum	28. 10. 2015				Helmholz TB20 Makros	Bl. 51
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		von 210 Bl.

-A60



-A60



-A60
60.6

DI0	DI1	L+	L+	DO0	DO1	AUX	AUX	L+	AUX
1	2	3	4	5	6	7	8	9	10
IX.0	IX.1	3/L+	4/L+	QX.0	QX.1	7/AUX	8/AUX	9/L+	10/AUX
60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1

INPUT/OUTPUT BYTE 0 | 600-230-0AD01 | 2DI, 24VDC + 2DO, 24V DC, 500mA | HELMHOLZ

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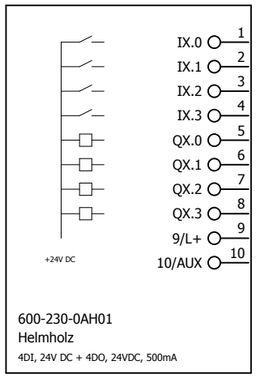
			Bearb.	AM				
			Datum	28. 10. 2015				Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.	Bl. 60 von 210 Bl.

-A61



Reserve
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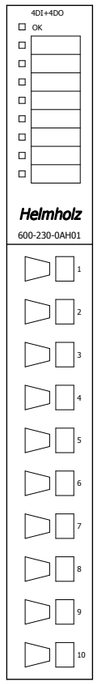
-A61



-A61
61.6

DI0	DI1	DI2	DI3	DO0	DO1	DO2	DO3	L+	AUX
1	2	3	4	5	6	7	8	9	10
IX.0	IX.1	IX.2	IX.3	QX.0	QX.1	QX.2	QX.3	9/L+	10/AUX
61.1	61.1	61.1	61.1	61.1	61.1	61.1	61.1	61.1	61.1

INPUT/OUTPUT BYTE 0 | 600-230-0AH01 | 4DI, 24VDC + 4DO, 24V DC, 500mA | HELMHOLZ

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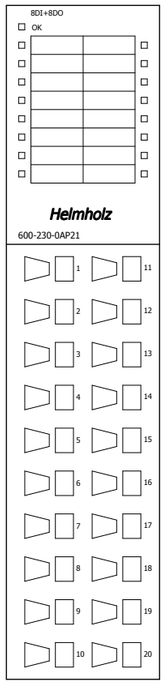
			Bearb.	AM				
			Datum	28. 10. 2015				Helmholz TB20 Makros — Bl. 61 von 210 Bl.
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.	

-A62

QX.0	1	62.2	Reserve
QX.1	2	62.2	Reserve
QX.2	3	62.3	Reserve
QX.3	4	62.3	Reserve
QX.4	5	62.4	Reserve
QX.5	6	62.4	Reserve
QX.6	7	62.5	Reserve
QX.7	8	62.6	Reserve
9/L+	9	62.6	
+24V DC 10/AUX	10	62.7	
IX.0	11	62.2	Reserve
IX.1	12	62.2	Reserve
IX.2	13	62.3	Reserve
IX.3	14	62.4	Reserve
IX.4	15	62.4	Reserve
IX.5	16	62.5	Reserve
IX.6	17	62.5	Reserve
IX.7	18	62.6	Reserve
19/L+	19	62.6	
+24V DC 20/AUX	20	62.7	

600-230-0AP21
Helmholz
8DI, 24V DC + 8DO, 24VDC, 500mA

-A62



Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

-A62
62.7

INPUT/OUTPUT BYTE 0 — 600-230-0AP21 — 8DI, 24VDC + 8DO, 24V DC, 500mA — HELMHOLZ

62.1 QX.0	62.1 QX.1	62.1 QX.2	62.1 QX.3	62.1 QX.4	62.1 QX.5	62.1 QX.6	62.1 QX.7	62.1 9/L+	62.1 10/AUX
1 DO0	2 DO1	3 DO2	4 DO3	5 DO4	6 DO5	7 DO6	8 DO7	9 L+	10 AUX

-A62
62.7

DI0 11	DI1 12	DI2 13	DI3 14	DI4 15	DI5 16	DI6 17	DI7 18	L+ 19	AUX 20
IX.0 62.1	IX.1 62.1	IX.2 62.1	IX.3 62.1	IX.4 62.1	IX.5 62.1	IX.6 62.1	IX.7 62.1	19/L+ 62.1	20/AUX 62.1

INPUT/OUTPUT BYTE 1 — 600-230-0AP21 — 8DI, 24VDC + 8DO, 24V DC, 500mA — HELMHOLZ

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			Gepr.	
			Bearb.	AM
			Datum	28. 10. 2015
Änderung	Datum	Name	Norm	

Urspr. | Ers.f. | Ers.d.

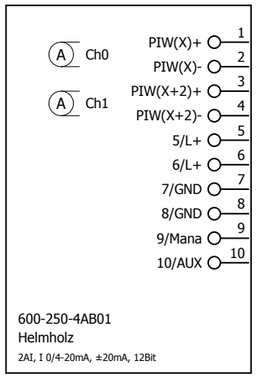
HEL.600-230-0AP21

+

Helmholz TB20 Makros

Bl. 62
von 210 Bl.

-A70



Reserve
Reserve
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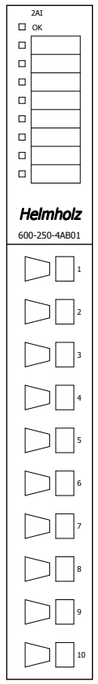
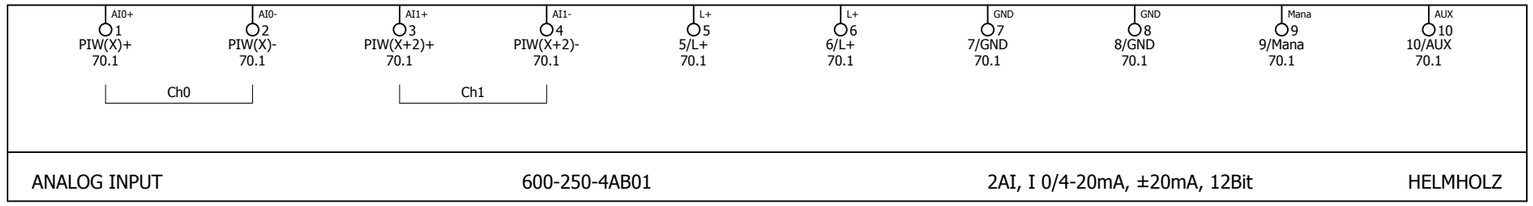
Reserve

-A70



-A70
70.6



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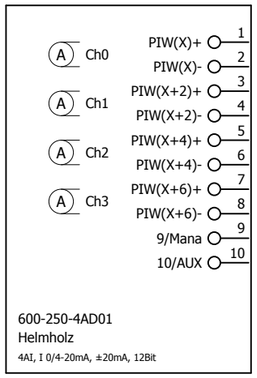
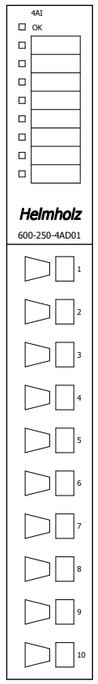
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 70 von 210 Bl.

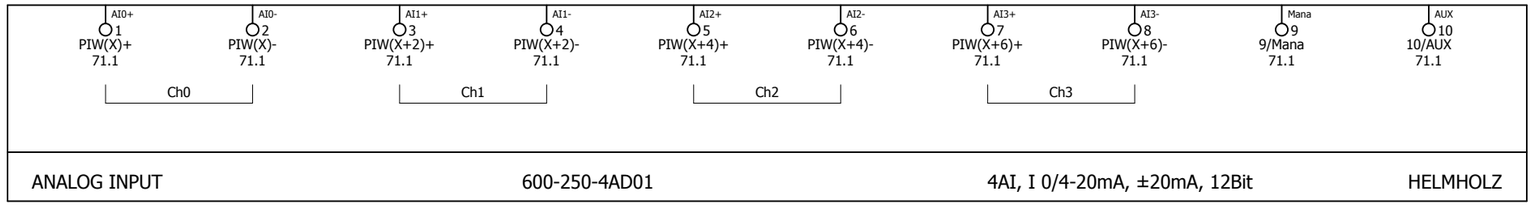
-A71



-A71



-A71
71.6



Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

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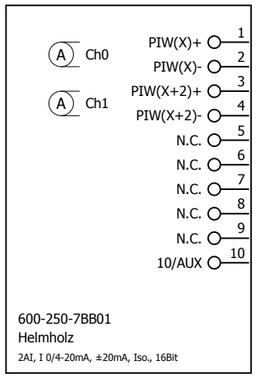
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 71 von 210 Bl.

-A72



Reserve
Reserve
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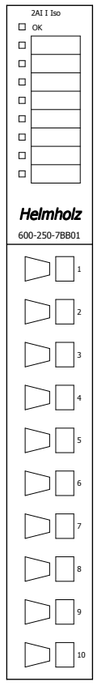
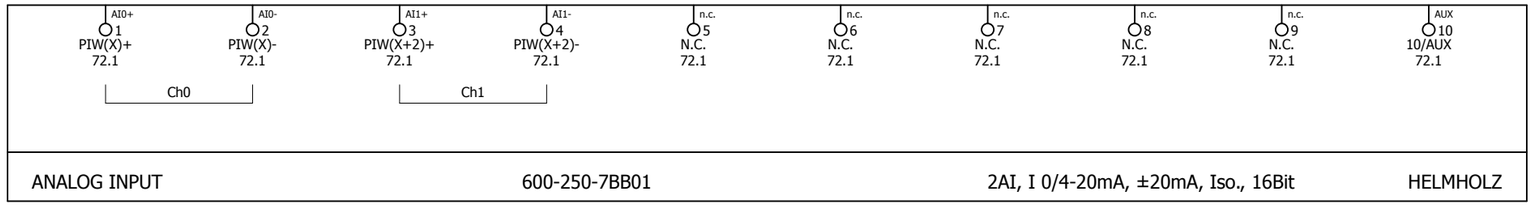
Reserve

-A72



-A72
72.6



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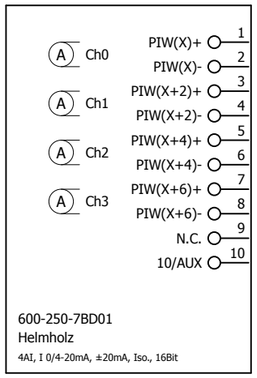
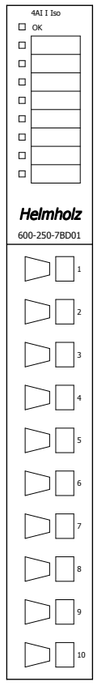
			Bearb.	AM					
			Datum	28. 10. 2015				Helmholz TB20 Makros	Bl. 72
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		von 210 Bl.

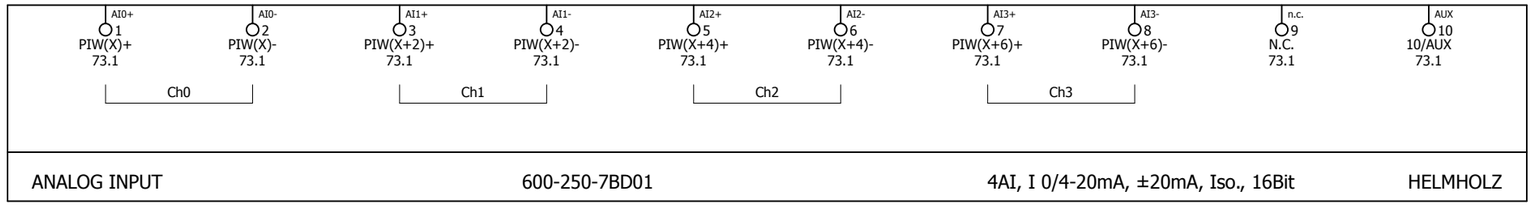
-A73



-A73



-A73
73.6



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			Gepr.	
			Bearb.	AM
			Datum	28. 10. 2015
Änderung	Datum	Name	Norm	

Urspr. | Ers.f. | Ers.d.

HEL.600-250-7BD01

+

Helmholz TB20 Makros

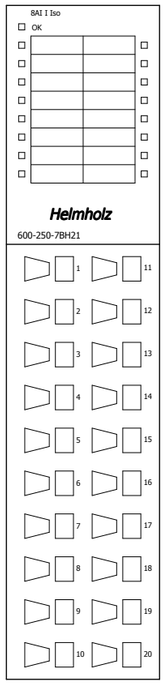
Bl. 73
von 210 Bl.

-A74

A Ch0	PIW(X)+	1	74.2	Reserve
	PIW(X)-	2	74.2	Reserve
A Ch1	PIW(X+2)+	3	74.3	Reserve
	PIW(X+2)-	4	74.3	Reserve
A Ch2	PIW(X+4)+	5	74.4	Reserve
	PIW(X+4)-	6	74.4	Reserve
A Ch3	PIW(X+6)+	7	74.5	Reserve
	PIW(X+6)-	8	74.6	Reserve
	N.C.	9	74.6	
	10/AUX	10	74.7	
A Ch4	PIW(X+8)+	11	74.2	Reserve
	PIW(X+8)-	12	74.2	Reserve
A Ch5	PIW(X+10)+	13	74.3	Reserve
	PIW(X+10)-	14	74.3	Reserve
A Ch6	PIW(X+12)+	15	74.4	Reserve
	PIW(X+12)-	16	74.4	Reserve
A Ch7	PIW(X+14)+	17	74.5	Reserve
	PIW(X+14)-	18	74.6	Reserve
	N.C.	19	74.6	
	20/AUX	20	74.7	

600-250-7BH21
Helmholz
8AI, I 0/4-20mA, ±20mA, Iso., 16Bit

-A74



-A74
74.7

AI0+	AI0-	AI1+	AI1-	AI2+	AI2-	AI3+	AI3-	n.c.	AUX
1	2	3	4	5	6	7	8	9	10
PIW(X)+	PIW(X)-	PIW(X+2)+	PIW(X+2)-	PIW(X+4)+	PIW(X+4)-	PIW(X+6)+	PIW(X+6)-	N.C.	10/AUX
74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1
Ch0		Ch1		Ch2		Ch3			

ANALOG INPUT 600-250-7BH21 8AI, I 0/4-20mA, ±20mA, Iso., 16Bit HELMHOLZ

Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

-A74
74.7

AI0+	AI0-	AI1+	AI1-	AI2+	AI2-	AI3+	AI3-	n.c.	AUX
11	12	13	14	15	16	17	18	19	20
PIW(X+8)+	PIW(X+8)-	PIW(X+10)+	PIW(X+10)-	PIW(X+12)+	PIW(X+12)-	PIW(X+14)+	PIW(X+14)-	N.C.	20/AUX
74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1
Ch4		Ch5		Ch6		Ch7			

ANALOG INPUT 600-250-7BH21 8AI, I 0/4-20mA, ±20mA, Iso., 16Bit HELMHOLZ

Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

Systeme Helmholz GmbH
Hannberger Weg 2
91091 Großenseebach
Ph. +49 9135 7380-0, Fax +49 9135 7380-110
info@helmholz.de, www.helmholz.de

			Gepr.	
			Bearb.	AM
			Datum	28. 10. 2015
Änderung	Datum	Name	Norm	

Urspr. Ers.f. Ers.d.

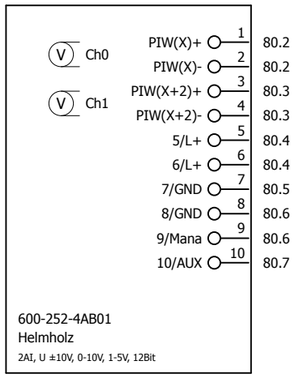
HEL.600-250-7BH21

+

Helmholz TB20 Makros

Bl. 74
von 210 Bl.

-A80



Reserve
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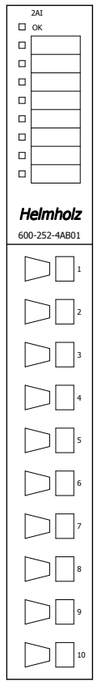
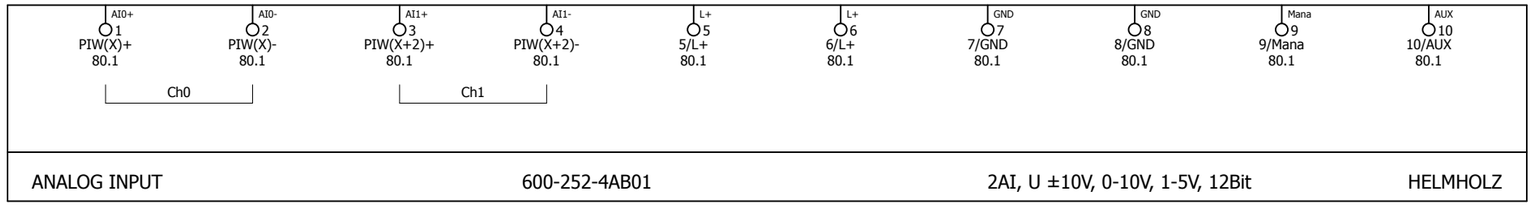
Reserve

-A80



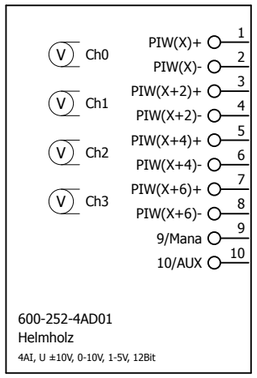
-A80
80.6



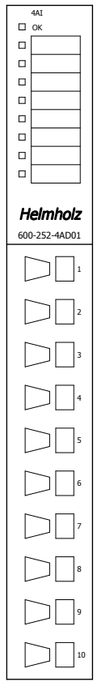
Reserve Reserve Reserve Reserve

			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de	Helmholz COMPATIBLE WITH YOU	HEL.600-252-4AB01		+
			Bearb.	AM					
			Datum	28. 10. 2015				Helmholz TB20 Makros	Bl. 80
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		von 210 Bl.

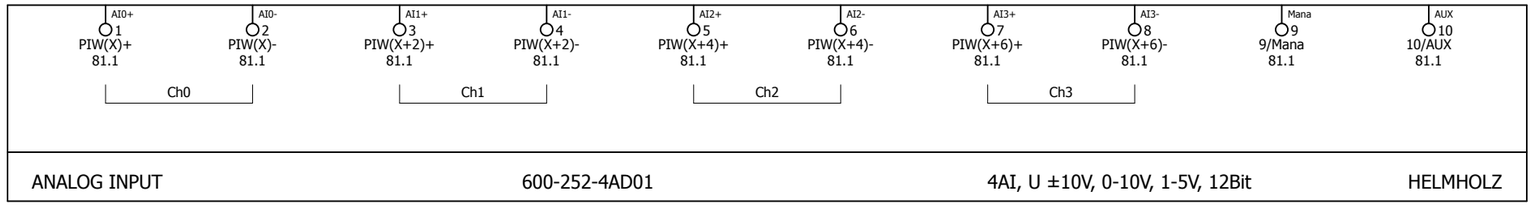
-A81



-A81



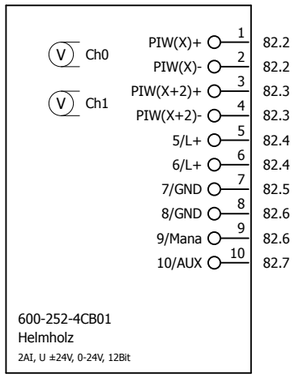
-A81
81.6



Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de	Helmholz COMPATIBLE WITH YOU	HEL.600-252-4AD01		+
			Bearb.	AM					
			Datum	28. 10. 2015				Helmholz TB20 Makros	Bl. 81
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		von 210 Bl.

-A82



Reserve
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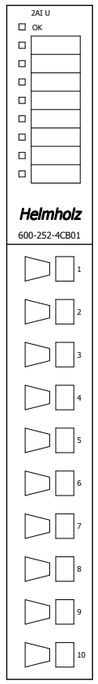
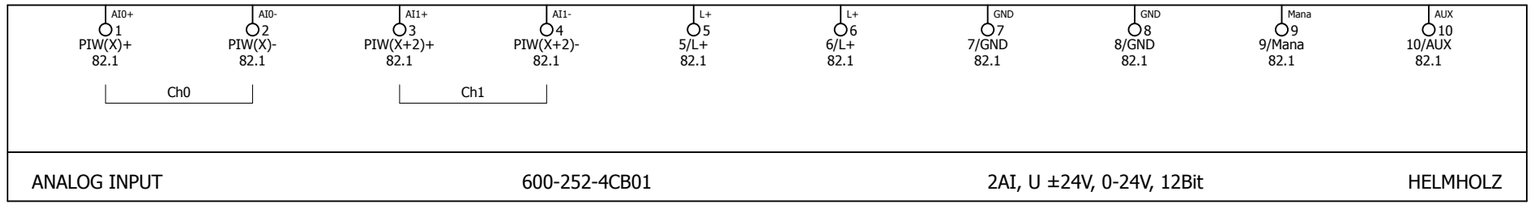
Reserve

-A82



-A82
82.6



Reserve Reserve Reserve Reserve

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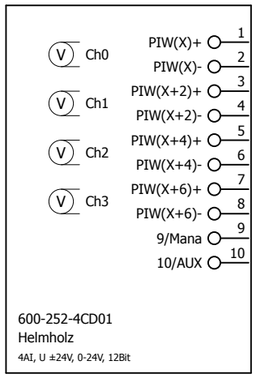
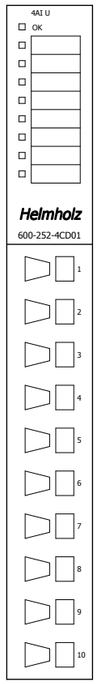
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 82 von 210 Bl.

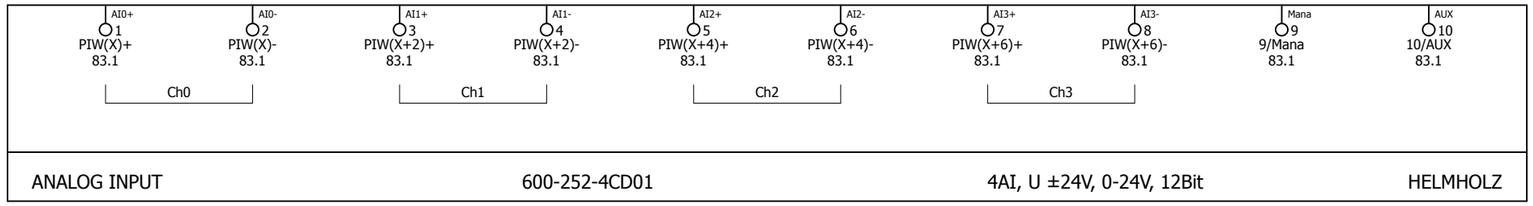
-A83



-A83



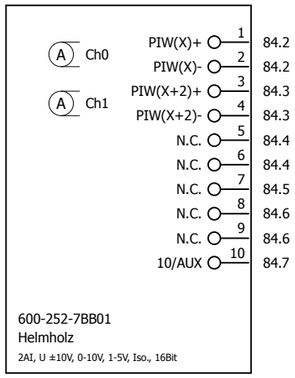
-A83
83.6



Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de	Helmholz COMPATIBLE WITH YOU	HEL.600-252-4CD01		+
			Bearb.	AM					
			Datum	28. 10. 2015				Helmholz TB20 Makros	Bl. 83
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		von 210 Bl.

-A84



Reserve
Reserve
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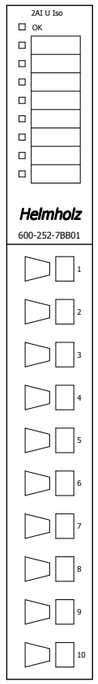
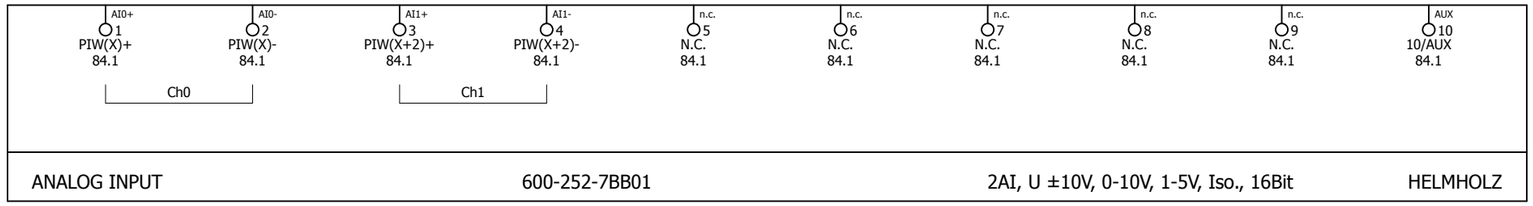
Reserve

-A84



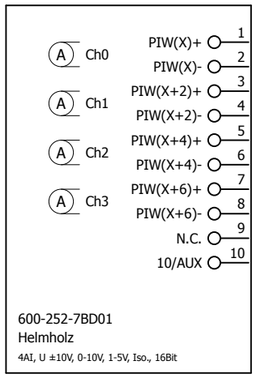
-A84
84.6



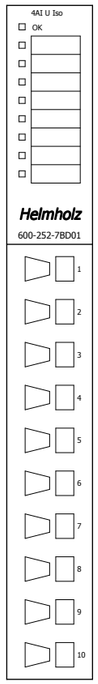
Reserve Reserve Reserve Reserve

			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de	Helmholz COMPATIBLE WITH YOU	HEL.600-252-7BB01		+
			Bearb.	AM					
			Datum	28. 10. 2015				Helmholz TB20 Makros	Bl. 84
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		von 210 Bl.

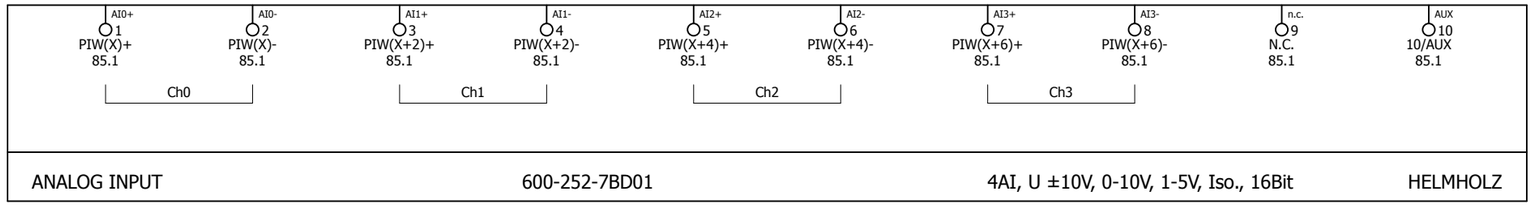
-A85



-A85



-A85
85.6



Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

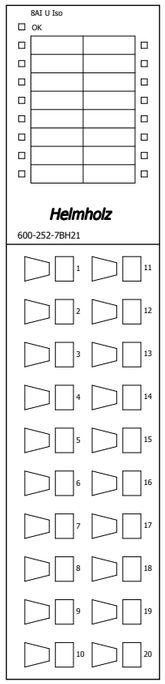
			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de	Helmholz COMPATIBLE WITH YOU	HEL.600-252-7BD01		+
			Bearb.	AM					
			Datum	28. 10. 2015				Helmholz TB20 Makros	Bl. 85
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		von 210 Bl.

-A86

A Ch0	PIW(X)+	1	86.2	Reserve
	PIW(X)-	2	86.2	Reserve
A Ch1	PIW(X+2)+	3	86.3	Reserve
	PIW(X+2)-	4	86.3	Reserve
A Ch2	PIW(X+4)+	5	86.4	Reserve
	PIW(X+4)-	6	86.4	Reserve
A Ch3	PIW(X+6)+	7	86.5	Reserve
	PIW(X+6)-	8	86.6	Reserve
	N.C.	9	86.6	
	10/AUX	10	86.7	
A Ch4	PIW(X+8)+	11	86.2	Reserve
	PIW(X+8)-	12	86.2	Reserve
A Ch5	PIW(X+10)+	13	86.3	Reserve
	PIW(X+10)-	14	86.3	Reserve
A Ch6	PIW(X+12)+	15	86.4	Reserve
	PIW(X+12)-	16	86.4	Reserve
A Ch7	PIW(X+14)+	17	86.5	Reserve
	PIW(X+14)-	18	86.6	Reserve
	N.C.	19	86.6	
	20/AUX	20	86.7	

600-252-7BH21
Helmholz
8AI, U ±10V, 0-10V, 1-5V, Iso., 16Bit

-A86



-A86
86.7

AI0+	AI0-	AI1+	AI1-	AI2+	AI2-	AI3+	AI3-	n.c.	AUX
1	2	3	4	5	6	7	8	9	10
PIW(X)+	PIW(X)-	PIW(X+2)+	PIW(X+2)-	PIW(X+4)+	PIW(X+4)-	PIW(X+6)+	PIW(X+6)-	N.C.	10/AUX
86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1
Ch0		Ch1		Ch2		Ch3			

ANALOG INPUT 600-252-7BH21 8AI, U ±10V, 0-10V, 1-5V, Iso., 16Bit HELMHOLZ

Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

-A86
86.7

AI0+	AI0-	AI1+	AI1-	AI2+	AI2-	AI3+	AI3-	n.c.	AUX
11	12	13	14	15	16	17	18	19	20
PIW(X+8)+	PIW(X+8)-	PIW(X+10)+	PIW(X+10)-	PIW(X+12)+	PIW(X+12)-	PIW(X+14)+	PIW(X+14)-	N.C.	20/AUX
86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1	86.1
Ch4		Ch5		Ch6		Ch7			

ANALOG INPUT 600-252-7BH21 8AI, U ±10V, 0-10V, 1-5V, Iso., 16Bit HELMHOLZ

Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

Systeme Helmholz GmbH
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91091 Großenseebach
Ph. +49 9135 7380-0, Fax +49 9135 7380-110
info@helmholz.de, www.helmholz.de

			Gepr.	
			Bearb.	AM
			Datum	28. 10. 2015
Änderung	Datum	Name	Norm	

Urspr. Ers.f. Ers.d.

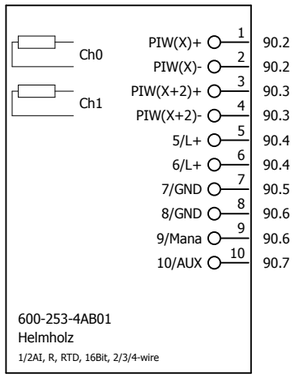
HEL.600-252-7BH21

+

Helmholz TB20 Makros

Bl. 86 von 210 Bl.

-A90



Reserve
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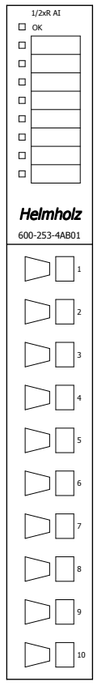
Reserve

-A90



-A90
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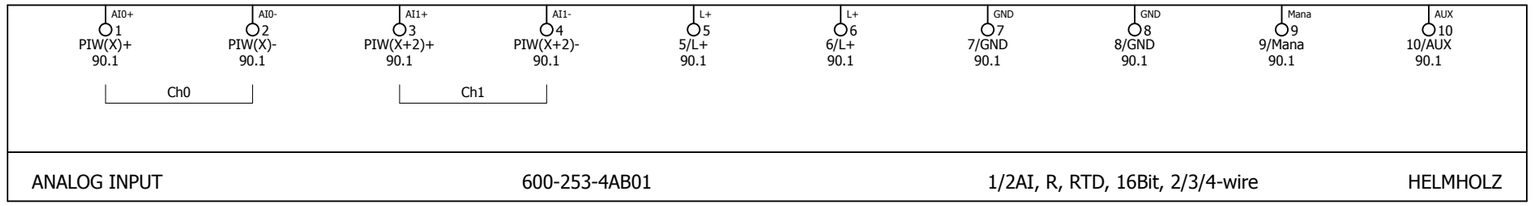


Reserve Reserve Reserve Reserve

Systeme Helmholz GmbH
Hannberger Weg 2
91091 Großenseebach
Ph. +49 9135 7380-0, Fax +49 9135 7380-110
info@helmholz.de, www.helmholz.de

			Gepr.	
			Bearb.	AM
			Datum	28. 10. 2015
Änderung	Datum	Name	Norm	

Urspr. | Ers.f. | Ers.d.

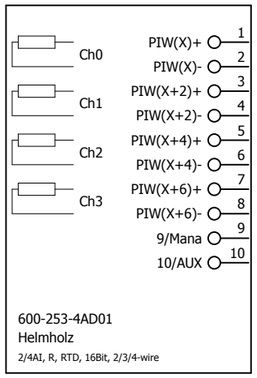
HEL.600-253-4AB01

+

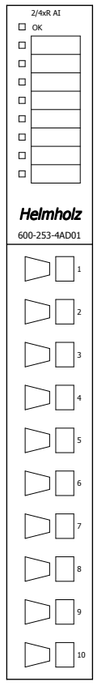
Helmholz TB20 Makros

Bl. 90
von 210 Bl.

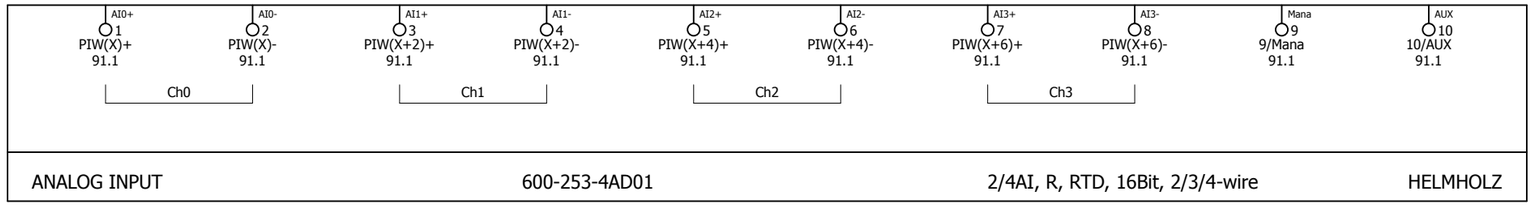
-A91



-A91



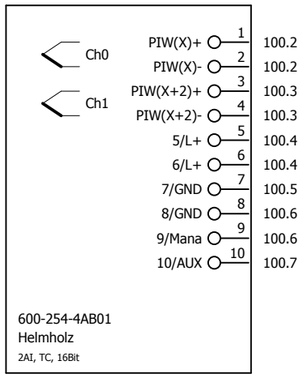
-A91
91.6



Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-253-4AD01	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 91 von 210 Bl.

-A100



Reserve
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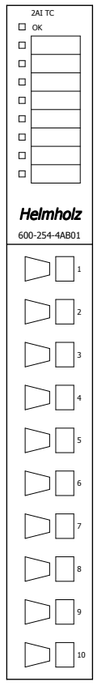
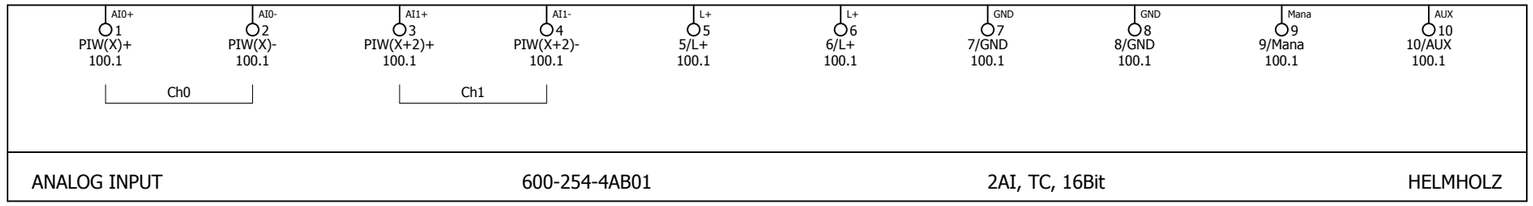
Reserve

-A100



-A100
100.6



Reserve Reserve Reserve Reserve

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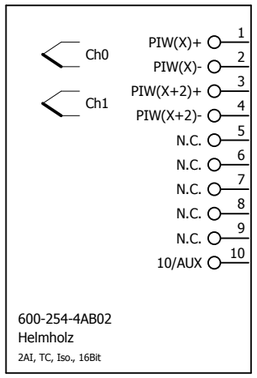
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 100 von 210 Bl.

-A101



Reserve
Reserve
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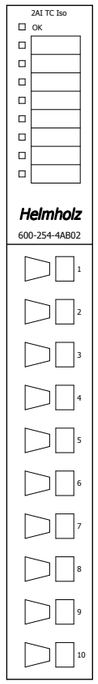
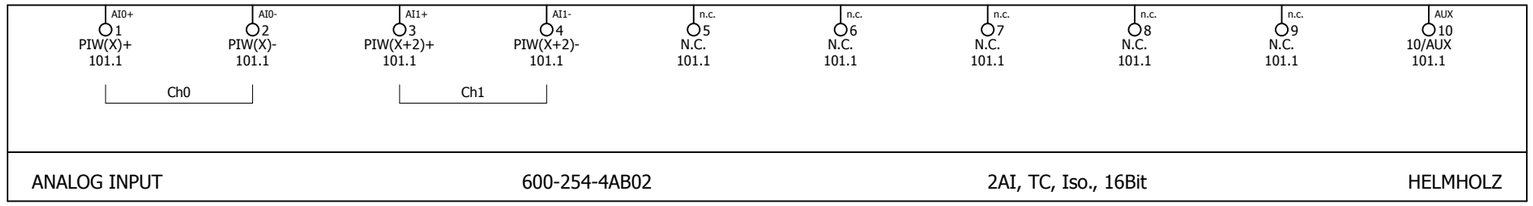
Reserve

-A101



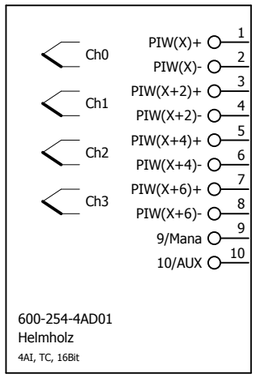
-A101
101.6



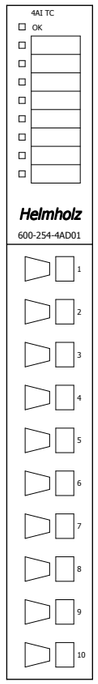
Reserve Reserve Reserve Reserve

			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-254-4AB02	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 101 von 210 Bl.

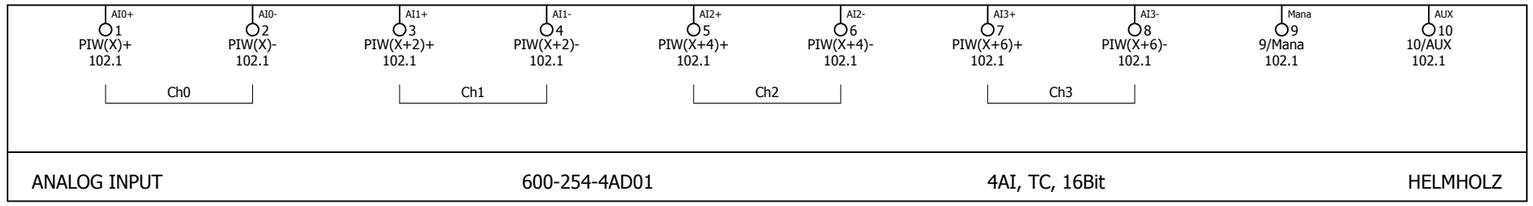
-A102



-A102



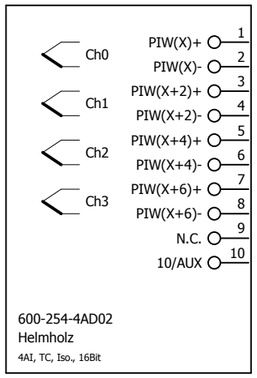
-A102
102.6



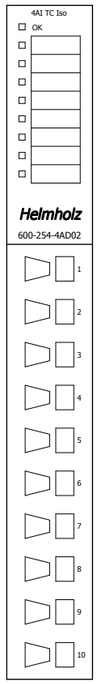
Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-254-4AD01	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 102 von 210 Bl.

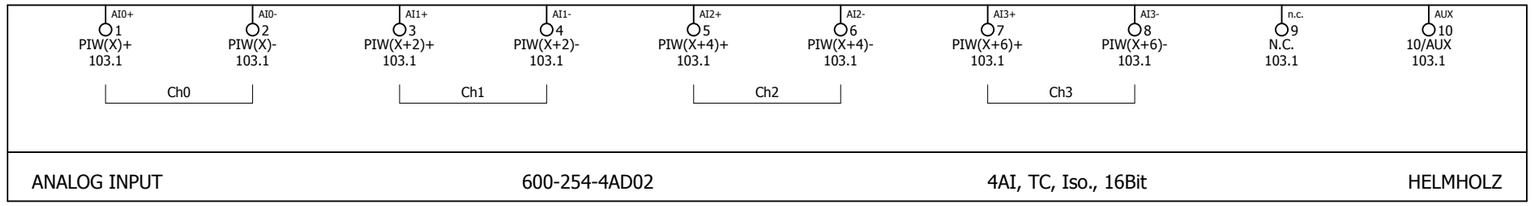
-A103



-A103



-A103
103.6



Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

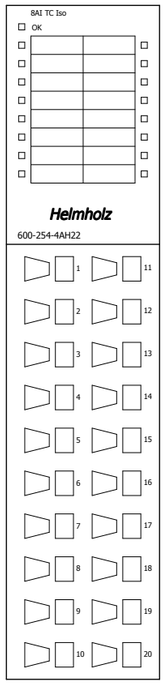
			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de	Helmholz COMPATIBLE WITH YOU	HEL.600-254-4AD02		+
			Bearb.	AM					
			Datum	28. 10. 2015				Helmholz TB20 Makros	Bl. 103
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		von 210 Bl.

-A104

Ch0	PIW(X)+	1	104.2	Reserve
	PIW(X)-	2	104.2	Reserve
Ch1	PIW(X+2)+	3	104.3	Reserve
	PIW(X+2)-	4	104.3	Reserve
Ch2	PIW(X+4)+	5	104.4	Reserve
	PIW(X+4)-	6	104.4	Reserve
Ch3	PIW(X+6)+	7	104.5	Reserve
	PIW(X+6)-	8	104.6	Reserve
	N.C.	9	104.6	
	10/AUX	10	104.7	
Ch4	PIW(X+8)+	11	104.2	Reserve
	PIW(X+8)-	12	104.2	Reserve
Ch5	PIW(X+10)+	13	104.3	Reserve
	PIW(X+10)-	14	104.3	Reserve
Ch6	PIW(X+12)+	15	104.4	Reserve
	PIW(X+12)-	16	104.4	Reserve
Ch7	PIW(X+14)+	17	104.5	Reserve
	PIW(X+14)-	18	104.6	Reserve
	N.C.	19	104.6	
	20/AUX	20	104.7	

600-254-4AH22
Helmholz
8AI, TC, Iso., 16Bit

-A104



-A104
104.7

AI0+	AI0-	AI1+	AI1-	AI2+	AI2-	AI3+	AI3-	n.c.	AUX
1	2	3	4	5	6	7	8	9	10
PIW(X)+	PIW(X)-	PIW(X+2)+	PIW(X+2)-	PIW(X+4)+	PIW(X+4)-	PIW(X+6)+	PIW(X+6)-	N.C.	10/AUX
104.1	104.1	104.1	104.1	104.1	104.1	104.1	104.1	104.1	104.1
Ch0		Ch1		Ch2		Ch3			

ANALOG INPUT 600-254-4AH22 8AI, TC, Iso., 16Bit HELMHOLZ

Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

-A104
104.7

AI4+	AI4-	AI5+	AI5-	AI6+	AI6-	AI7+	AI7-	n.c.	AUX
11	12	13	14	15	16	17	18	19	20
PIW(X+8)+	PIW(X+8)-	PIW(X+10)+	PIW(X+10)-	PIW(X+12)+	PIW(X+12)-	PIW(X+14)+	PIW(X+14)-	N.C.	20/AUX
104.1	104.1	104.1	104.1	104.1	104.1	104.1	104.1	104.1	104.1
Ch4		Ch5		Ch6		Ch7			

ANALOG INPUT 600-254-4AH22 8AI, TC, Iso., 16Bit HELMHOLZ

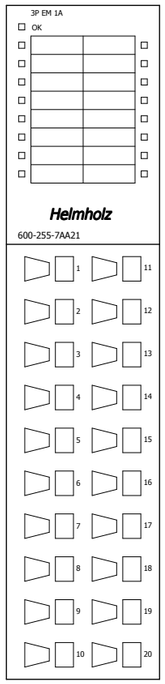
Reserve Reserve Reserve Reserve Reserve Reserve Reserve Reserve

-A110

U1	1	110.2	Reserve
U2	2	110.2	
U3	3	110.3	Reserve
N	4	110.3	
N.C.	5	110.4	Reserve
N.C.	6	110.4	
N.C.	7	110.5	
N.C.	8	110.6	
N.C.	9	110.6	
10/AUX	10	110.7	
I1+	11	110.2	Reserve
I1-	12	110.2	
I2+	13	110.3	Reserve
I2-	14	110.3	
I3+	15	110.4	Reserve
I3-	16	110.4	
N.C.	17	110.5	
N.C.	18	110.6	
N.C.	19	110.6	
20/AUX	20	110.7	

600-255-7AA21
Helmholz
Energy Meter 3P+N 1A

-A110



-A110
110.7

U1	U2	U3	N	n.c.	n.c.	n.c.	n.c.	n.c.	AUX
1	2	3	4	5	6	7	8	9	10
110.1	110.1	110.1	110.1	N.C. 110.1	N.C. 110.1	N.C. 110.1	N.C. 110.1	N.C. 110.1	10/AUX 110.1

Energy Meter 600-255-7AA21 3P+N 1A HELMHOLZ

Reserve

-A110
110.7

I1+	I1-	I2+	I2-	I3+	I3-	n.c.	n.c.	n.c.	AUX
11	12	13	14	15	16	17	18	19	20
I1+ 110.1	I1- 110.1	I2+ 110.1	I2- 110.1	I3+ 110.1	I3- 110.1	N.C. 110.1	N.C. 110.1	N.C. 110.1	20/AUX 110.1

Energy Meter 600-255-7AA21 3P+N 1A HELMHOLZ

Reserve Reserve Reserve

Systeme Helmholz GmbH
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91091 Großenseebach
Ph. +49 9135 7380-0, Fax +49 9135 7380-110
info@helmholz.de, www.helmholz.de

Helmholz COMPATIBLE WITH YOU

HEL.600-255-7AA21

Gepr.				
Bearb.	AM			
Datum	28. 10. 2015			
Änderung	Datum	Name	Norm	

Urspr. Ers.f. Ers.d.

+

Helmholz TB20 Makros

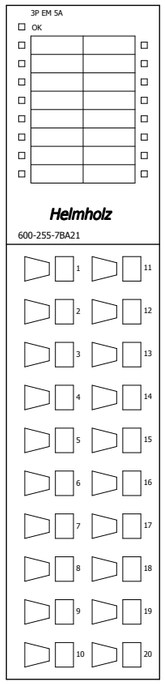
Bl. 110
von 210 Bl.

-A111

U1	1	111.2	Reserve
U2	2	111.2	
U3	3	111.3	Reserve
N	4	111.3	
N.C.	5	111.4	Reserve
N.C.	6	111.4	
N.C.	7	111.5	
N.C.	8	111.6	
N.C.	9	111.6	
10/AUX	10	111.7	
I1+	11	111.2	Reserve
I1-	12	111.2	
I2+	13	111.3	Reserve
I2-	14	111.3	
I3+	15	111.4	Reserve
I3-	16	111.4	
N.C.	17	111.5	
N.C.	18	111.6	
N.C.	19	111.6	
20/AUX	20	111.7	

600-255-7BA21
Helmholz
Energy Meter 3P+N 5A

-A111



-A111
111.7

U1	U2	U3	N	n.c.	n.c.	n.c.	n.c.	n.c.	AUX
1	2	3	4	5	6	7	8	9	10
111.1	111.1	111.1	111.1	N.C. 111.1	N.C. 111.1	N.C. 111.1	N.C. 111.1	N.C. 111.1	10/AUX 111.1

Energy Meter 600-255-7BA21 3P+N 5A HELMHOLZ

Reserve

-A111
111.7

I1+	I1-	I2+	I2-	I3+	I3-	n.c.	n.c.	n.c.	AUX
11	12	13	14	15	16	17	18	19	20
I1+ 111.1	I1- 111.1	I2+ 111.1	I2- 111.1	I3+ 111.1	I3- 111.1	N.C. 111.1	N.C. 111.1	N.C. 111.1	20/AUX 111.1

Energy Meter 600-255-7BA21 3P+N 5A HELMHOLZ

Reserve Reserve Reserve

Systeme Helmholz GmbH
Hannberger Weg 2
91091 Großenseebach
Ph. +49 9135 7380-0, Fax +49 9135 7380-110
info@helmholz.de, www.helmholz.de

			Gepr.	
			Bearb.	AM
			Datum	28. 10. 2015
Änderung	Datum	Name	Norm	

Urspr. Ers.f. Ers.d.

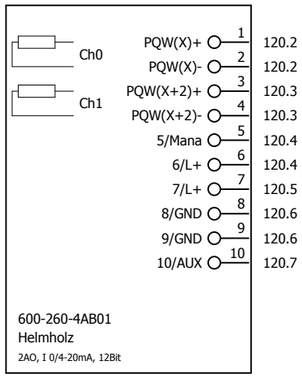
HEL.600-255-7BA21

+

Helmholz TB20 Makros

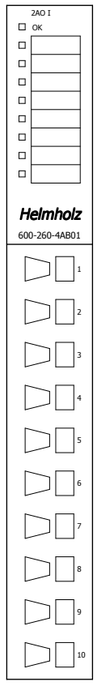
Bl. 111
von 210 Bl.

-A120



Reserve
Reserve
Reserve
Reserve

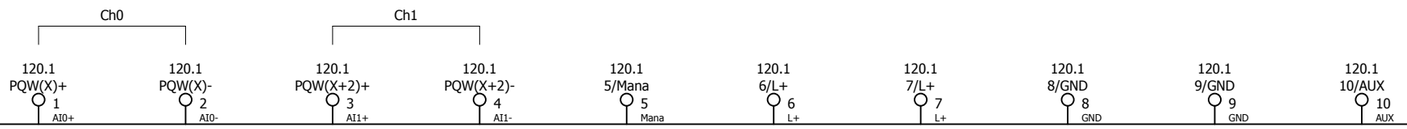
-A120



Reserve Reserve Reserve Reserve

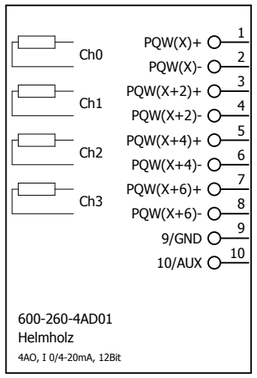
-A120
120.6

ANALOG OUTPUT 600-260-4AB01 2AO, I 0/4-20mA, 12Bit HELMHOLZ

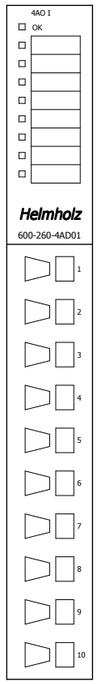


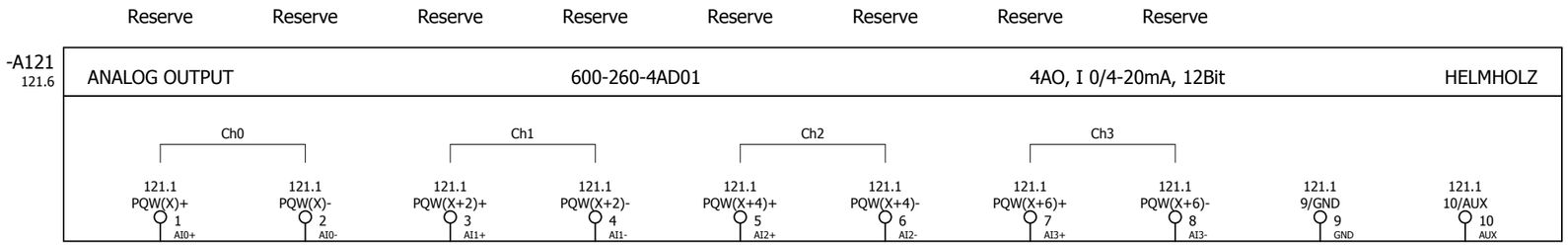
			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-260-4AB01	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 120 von 210 Bl.

-A121



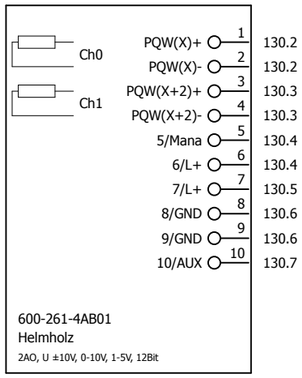
-A121





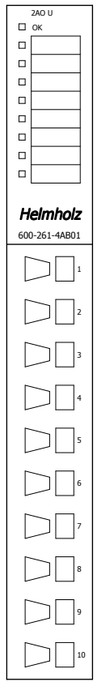
			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-260-4AD01	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 121 von 210 Bl.

-A130



Reserve
Reserve
Reserve
Reserve

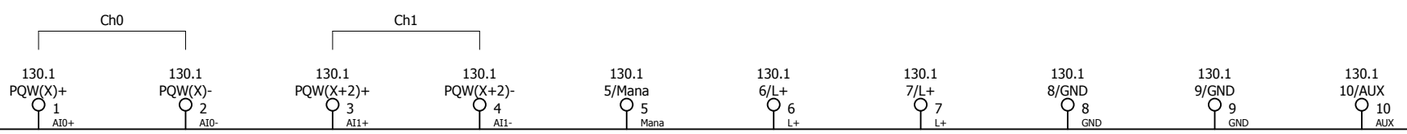
-A130



Reserve Reserve Reserve Reserve

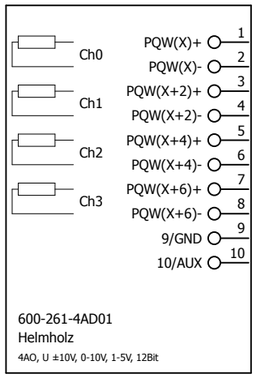
-A130
130.6

ANALOG OUTPUT 600-261-4AB01 2AO, U ±10V, 0-10V, 1-5V, 12Bit HELMHOLZ

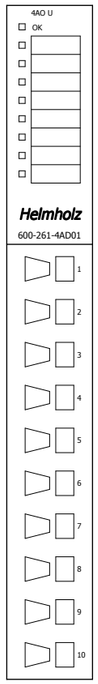


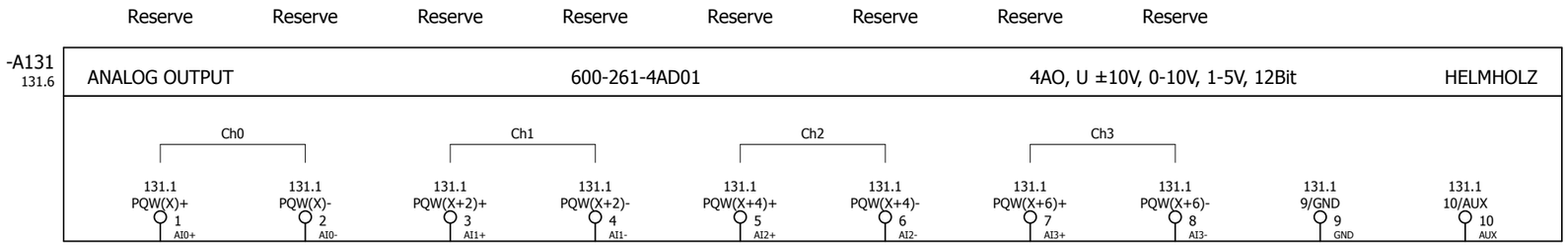
			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-261-4AB01	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 130 von 210 Bl.

-A131



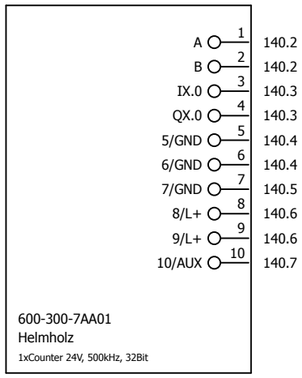
-A131





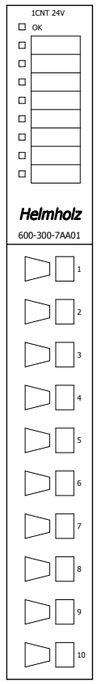
			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-261-4AD01	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 131 von 210 Bl.

-A140

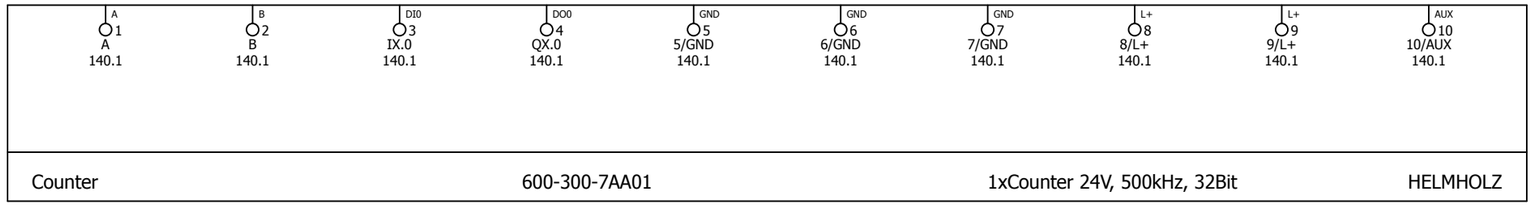


Reserve
Reserve
Reserve
Reserve

-A140



-A140
140.6



Reserve Reserve Reserve Reserve

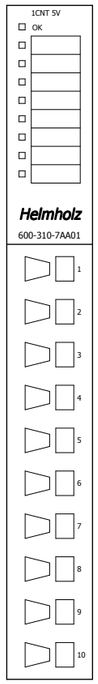
			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-300-7AA01	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 140 von 210 Bl.

-A150

A	1	150.2	Reserve
A-	2	150.2	Reserve
B	3	150.3	Reserve
B-	4	150.3	Reserve
N	5	150.4	Reserve
N-	6	150.4	Reserve
7/DC5V	7	150.5	
8/GND	8	150.6	
9/L+	9	150.6	
10/AUX	10	150.7	

600-310-7AA01
Helmholz
1xCounter 5V, 4MHz, 32Bit

-A150



-A150
150.6

A	A-	B	B-	N	N-	L+	GND	L+	AUX
1	2	3	4	5	6	7	8	9	10
A	A-	B	B-	N	N-	7/DC5V	8/GND	9/L+	10/AUX
150.1	150.1	150.1	150.1	150.1	150.1	150.1	150.1	150.1	150.1

Counter 600-310-7AA01 1xCounter 5V, 4MHz, 32Bit HELMHOLZ

Reserve Reserve Reserve Reserve Reserve Reserve

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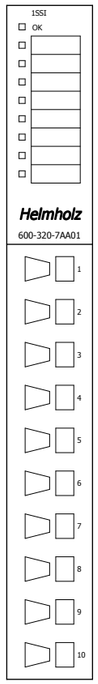
			Bearb.	AM				
			Datum	28. 10. 2015				Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.	Bl. 150 von 210 Bl.

-A160

C0+	1	160.2	Reserve
C0-	2	160.2	
D0+	3	160.3	
D0-	4	160.3	
IX.0	5	160.4	Reserve
6/GND	6	160.4	
7/GND	7	160.5	
8/L+	8	160.6	
9/L+	9	160.6	
10/AUX	10	160.7	

600-320-7AA01
Helmholz
1xSSI Encoder-Interface

-A160



-A160
160.6

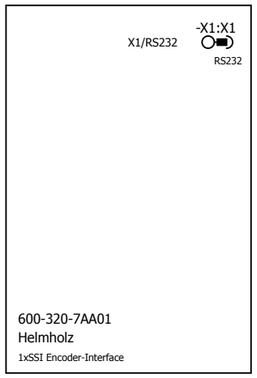
C0+	C0-	D0+	D0-	DI0	GND	GND	L+	L+	AUX
1	2	3	4	5	6	7	8	9	10
C0+	C0-	D0+	D0-	IX.0	6/GND	7/GND	8/L+	9/L+	10/AUX
160.1	160.1	160.1	160.1	160.1	160.1	160.1	160.1	160.1	160.1

Encoder-Interface 600-320-7AA01 1xSSI HELMHOLZ

Reserve Reserve

150 170

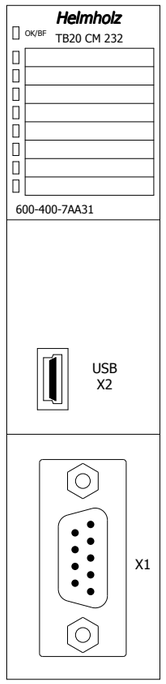
-A170



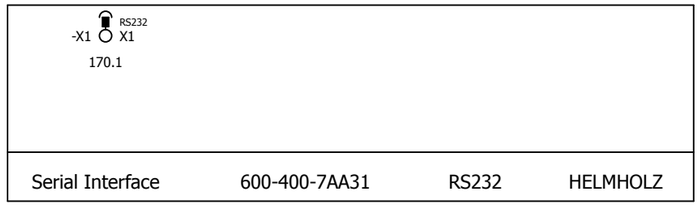
170.2

Reserve

-A170



-A170
170.6



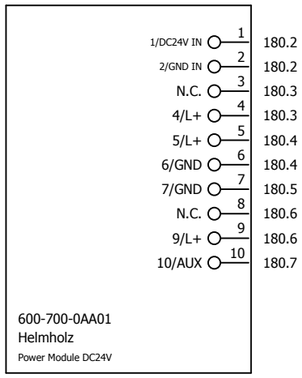
Reserve

160

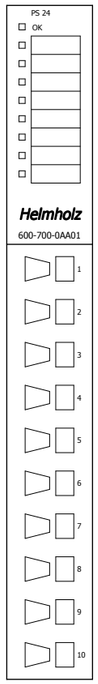
180

			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-400-7AA31	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 170 von 210 Bl.

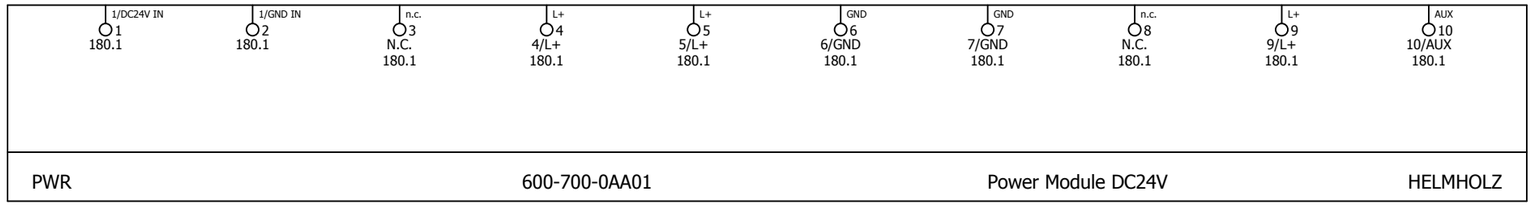
-A180



-A180

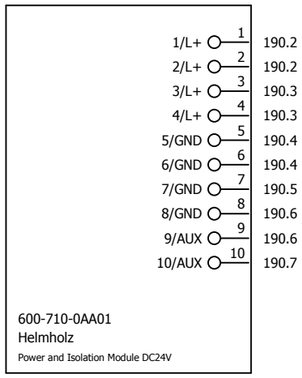


-A180
180.6

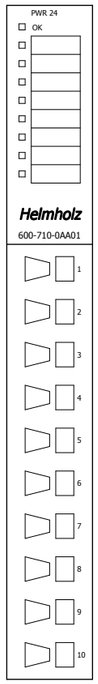


			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-700-0AA01	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 180 von 210 Bl.

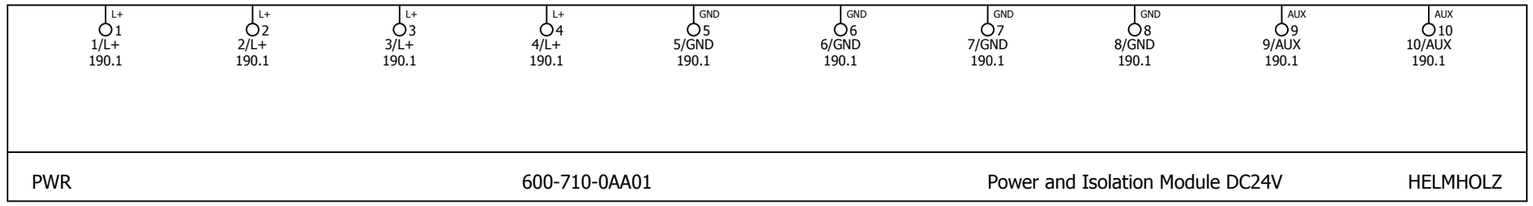
-A190



-A190

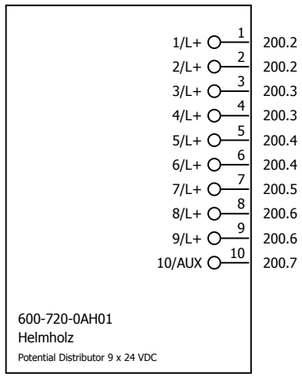


-A190
190.6

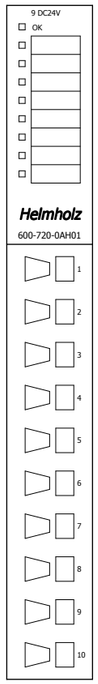


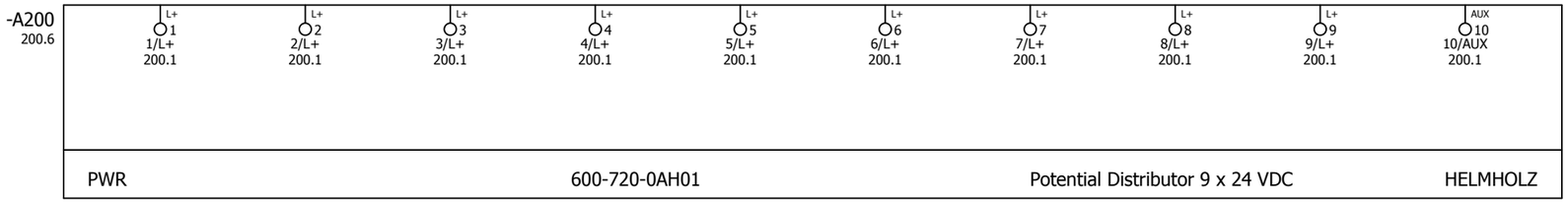
			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-710-0AA01	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 190 von 210 Bl.

-A200



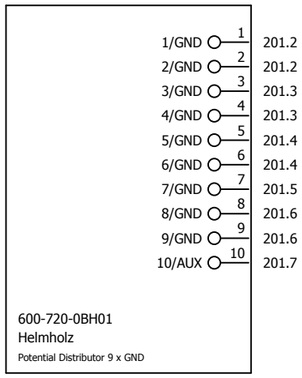
-A200



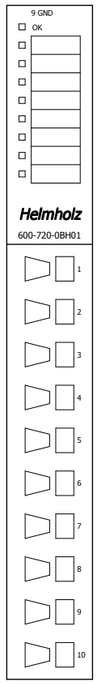


			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-720-0AH01	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 200 von 210 Bl.

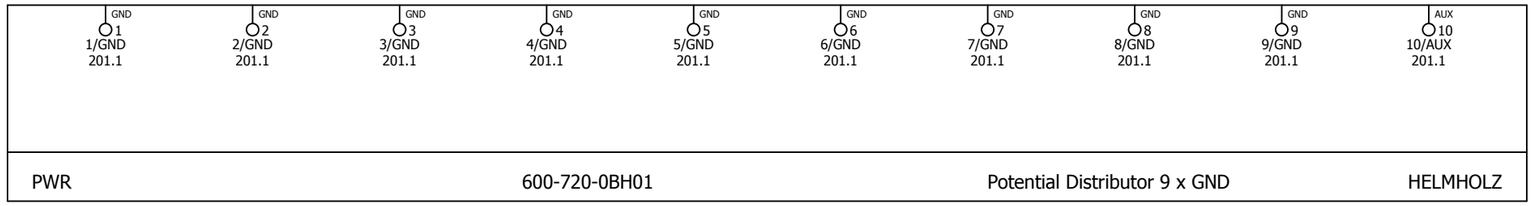
-A201



-A201

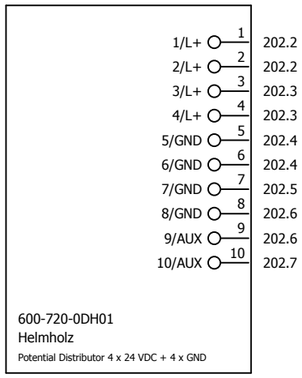


-A201
201.6

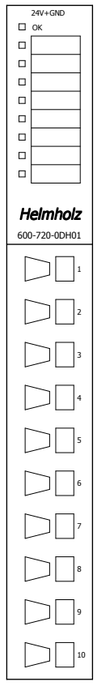


			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-720-0BH01	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 201 von 210 Bl.

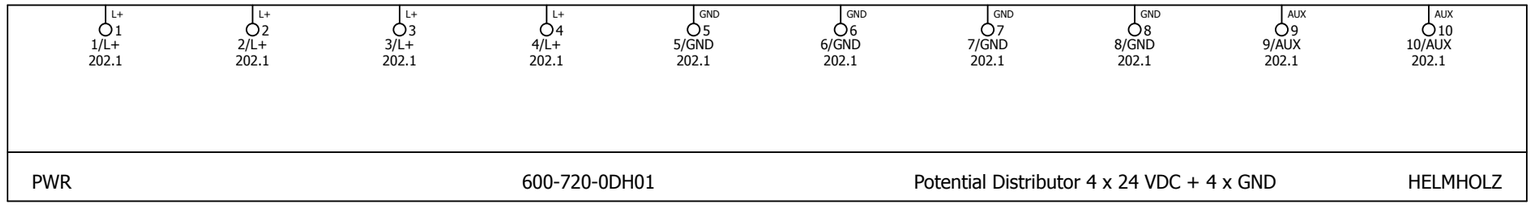
-A202



-A202



-A202
202.6



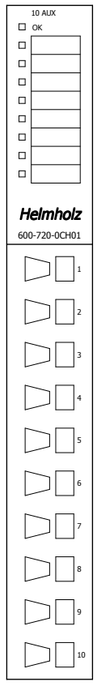
			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-720-0DH01	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 202 von 210 Bl.

-A203

1/AUX	1	203.2
2/AUX	2	203.2
3/AUX	3	203.3
4/AUX	4	203.3
5/AUX	5	203.4
6/AUX	6	203.4
7/AUX	7	203.5
8/AUX	8	203.6
9/AUX	9	203.6
10/AUX	10	203.7

600-720-0CH01
Helmholz
Potential Distributor 10 x AUX

-A203



-A203
203.6

AUX 1	AUX 2	AUX 3	AUX 4	AUX 5	AUX 6	AUX 7	AUX 8	AUX 9	AUX 10
1/AUX	2/AUX	3/AUX	4/AUX	5/AUX	6/AUX	7/AUX	8/AUX	9/AUX	10/AUX
203.1	203.1	203.1	203.1	203.1	203.1	203.1	203.1	203.1	203.1

PWR 600-720-0CH01 Potential Distributor 10 x AUX HELMHOLZ

			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de	Helmholz COMPATIBLE WITH YOU	HEL.600-720-0CH01
			Bearb.	AM			
			Datum	28. 10. 2015			
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.

+

Helmholz TB20 Makros

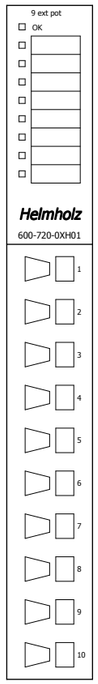
Bl. 203
von 210 Bl.

-A204

1/EXT	1	204.2
2/EXT	2	204.2
3/EXT	3	204.3
4/EXT	4	204.3
5/EXT	5	204.4
6/EXT	6	204.4
7/EXT	7	204.5
8/EXT	8	204.6
9/EXT	9	204.6
10/AUX	10	204.7

600-720-0XH01
Helmholz
Potential Distributor 9 x Free pot.

-A204



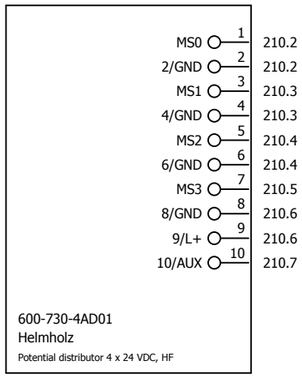
-A204
204.6

EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	EXT	AUX
1	2	3	4	5	6	7	8	9	10
1/EXT	2/EXT	3/EXT	4/EXT	5/EXT	6/EXT	7/EXT	8/EXT	9/EXT	10/AUX
204.1	204.1	204.1	204.1	204.1	204.1	204.1	204.1	204.1	204.1

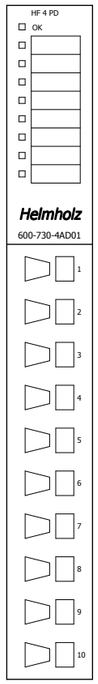
PWR 600-720-0XH01 Potential Distributor 9 x Free pot. HELMHOLZ

			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de	Helmholz COMPATIBLE WITH YOU	HEL.600-720-0XH01	+
			Bearb.	AM				
			Datum	28. 10. 2015				Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.	Bl. 204 von 210 Bl.

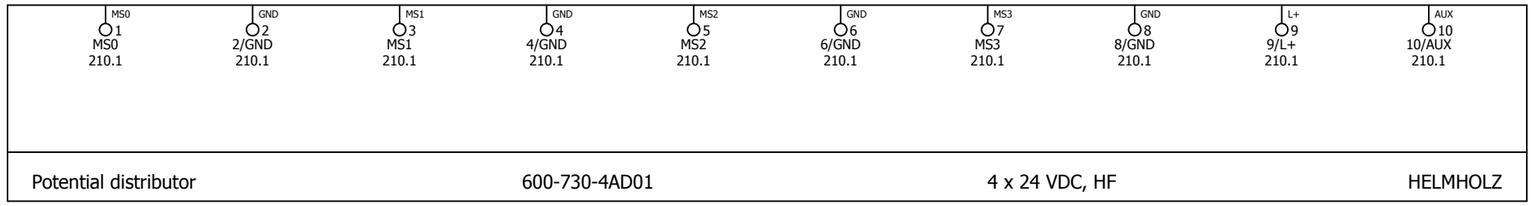
-A210



-A210



-A210
210.6



			Gepr.		Systeme Helmholz GmbH Hannberger Weg 2 91091 Großenseebach Ph. +49 9135 7380-0, Fax +49 9135 7380-110 info@helmholz.de, www.helmholz.de		Helmholz COMPATIBLE WITH YOU	HEL.600-730-4AD01	+
			Bearb.	AM					
			Datum	28. 10. 2015					Helmholz TB20 Makros
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Bl. 210 von 210 Bl.