

In extension to the tests for non-transmission of an internal ignition documented in BVSPS28304 an enclosure with cables (see Fig. 1 - 3) was submitted to a further test for non-transmission of an internal ignition with propane.

Test specimen:

Z1



Z2



Fig. 1 + 2: total view of the enclosure

Precompression stated in absolute pressure

Legend:

Gas type: testing gas

Conc.(V-%): gas concentration in V-%

Ign. at: location of ignition

Test types: details of test see following list

I: test for non-transmission of an internal ignition

Prec. (bar) pre-compression in bar

TI: transmission of an internal ignition (yes/no)

No.	Gas type	Conc. [vol%]	Test type	Ign. at	Prec. [bar]	TI
1	C2H2	7.5	I	Z1	1.5	No
2	C2H2	7.5	I	Z1	1.5	No
3	C2H2	7.5	I	Z1	1.5	No
4	C2H2	7.5	I	Z1	1.5	No
5	C2H2	7.5	I	Z1	1.5	No
6	H2	27.5	I	Z1	1.5	No
7	H2	27.5	I	Z1	1.5	No
8	H2	27.5	I	Z1	1.5	No
9	H2	27.5	I	Z1	1.5	No
10	H2	27.5	I	Z1	1.5	No
11	C3H8	4.3	I	Z1	1.5	No
12	C3H8	4.2	I	Z1	1.5	No
13	C3H8	4.2	I	Z1	1.5	No
14	C3H8	4.2	I	Z1	1.5	No
15	C3H8	4.2	I	Z1	1.5	No

table 3: test results

The results are only relevant for the above-mentioned test specimen.

Equipment used

Drawing number:

see BVSPS28304

Test for non-transmission of an internal ignition according to IEC60079-1, Ed. 6

in combination with testing instruction PW09-Tb (Rev.01)

in combination with working instruction ABL-03Tb (Rev.02)

in combination with working instruction ABL-06Tb (Rev.01)

in combination with working instruction ABL-04Tb (Rev.01)

An enclosure with cable (see Fig. 1 + 2) was submitted to a test for non-transmission of an internal ignition for Group IIC + C₃H₈.

Test specimen:

Z1



Fig. 1 + 2: view of the enclosure with cable

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No.	Gas type	Conc. [vol%]	Test type	Ign. at	Prec. [bar]	TI
1	C2H2	7.5	I	Z1	1.5	No
2	C2H2	7.6	I	Z1	1.5	No
3	C2H2	7.4	I	Z1	1.5	No
4	C2H2	7.5	I	Z1	1.5	No
5	C2H2	7.5	I	Z1	1.5	No
6	H2	27.3	I	Z1	1.5	No
7	H2	27.5	I	Z1	1.5	No
8	H2	27.5	I	Z1	1.5	No
9	H2	27.5	I	Z1	1.5	No
10	H2	27.5	I	Z1	1.5	No
11	C3H8	4.2	I	Z1	1.5	No
12	C3H8	4.2	I	Z1	1.5	No
13	C3H8	4.2	I	Z1	1.5	No
14	C3H8	4.2	I	Z1	1.5	No
15	C3H8	4.2	I	Z1	1.5	No

table 3: test results

The results are only relevant for the above-mentioned test specimen.

Equipment used
Micromanometer: FMM 011-K6 calibrated up to 08/2017

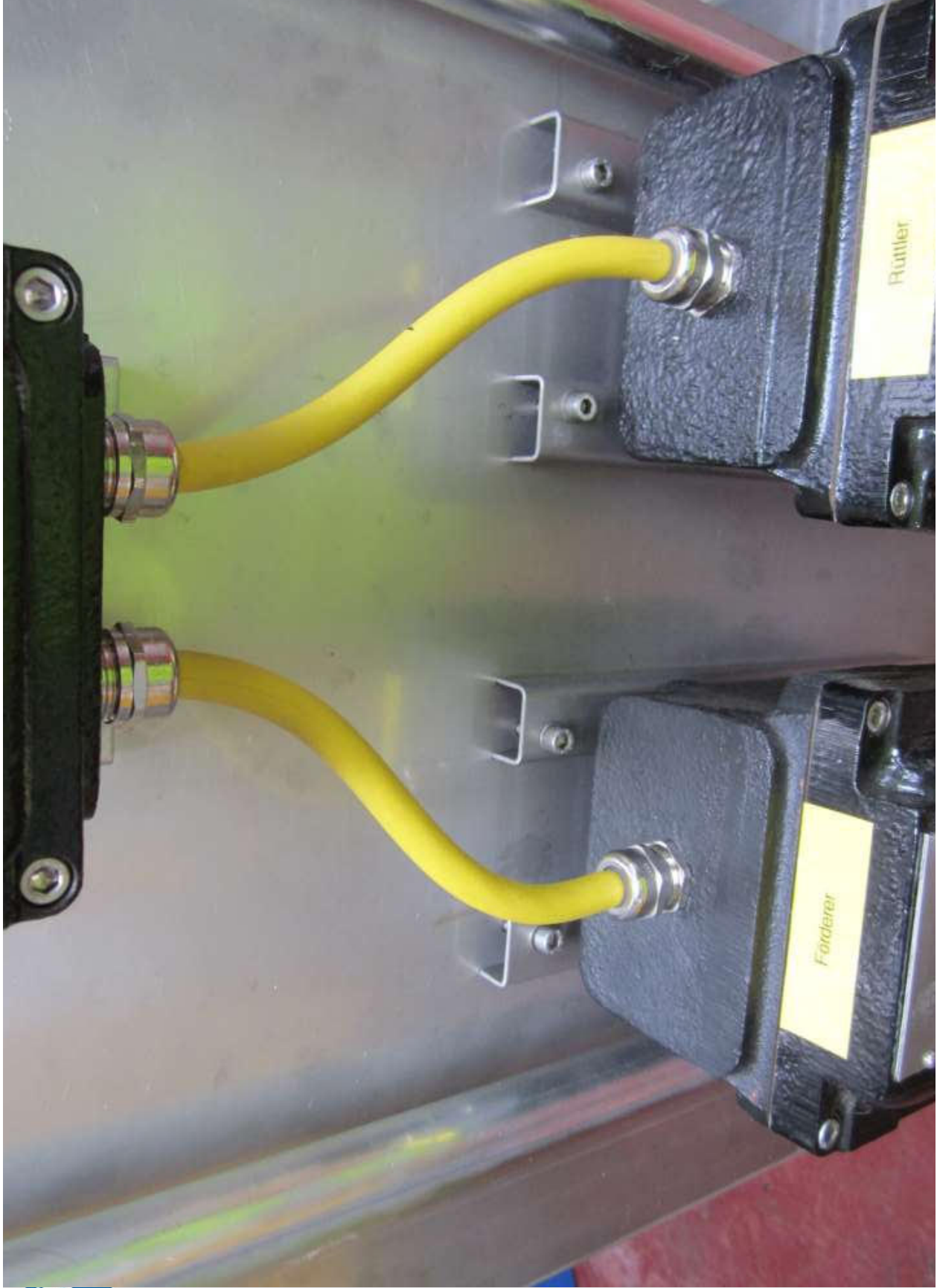
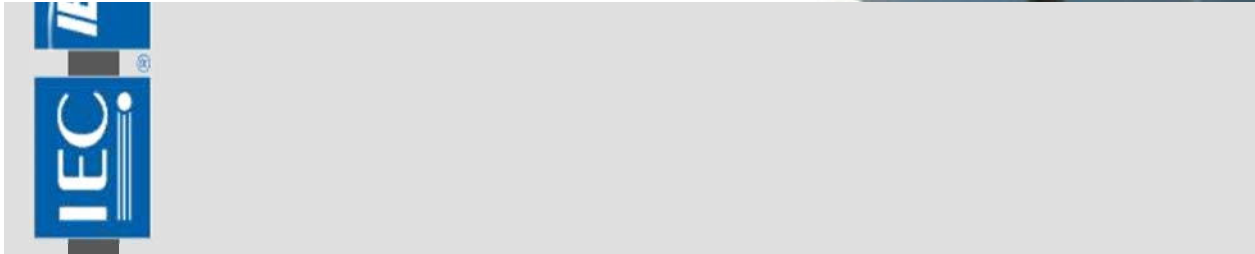
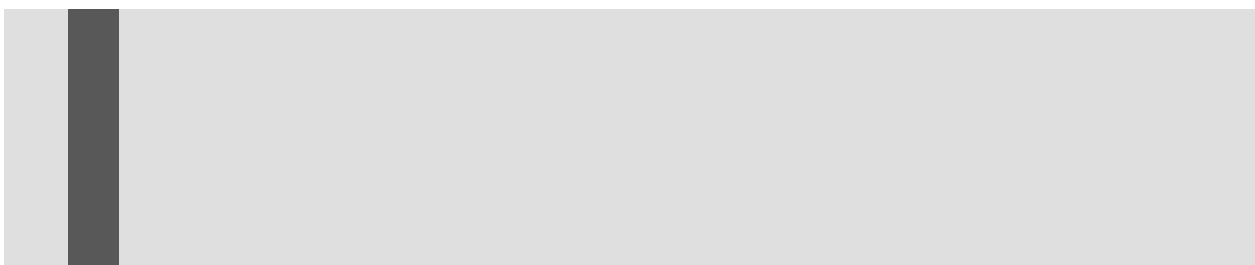


Table 3 – Cylindrical threaded joints

Pitch	≥0,7 mm ^a
Thread form and quality of fit	Medium or fine tolerance quality according to ISO 965-1 and ISO 965-3 ^b
Threads engaged	≥5
Depth of engagement	≥5 mm
Volume <100 cm ³	≥8 mm
Volume >100 cm ³	
<p>^a Where the pitch exceeds 2 mm, special manufacturing precautions may be necessary (for example, more threads engaged) to ensure that the electrical apparatus can pass the test for non-transmission of an internal ignition which is prescribed in 15.2.</p> <p>^b Cylindrical threaded joints which do not conform with ISO 965-3 in respect of thread form or quality of fit, are permitted if the test for non-transmission of an internal ignition, prescribed in 15.2, is passed, when the width of the threaded joint specified by the manufacturer is reduced by the amount specified in Table 6.</p>	







14. Additional requirements for type of protection 'd' Flameproof enclosures

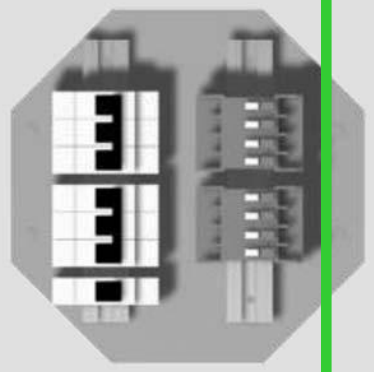
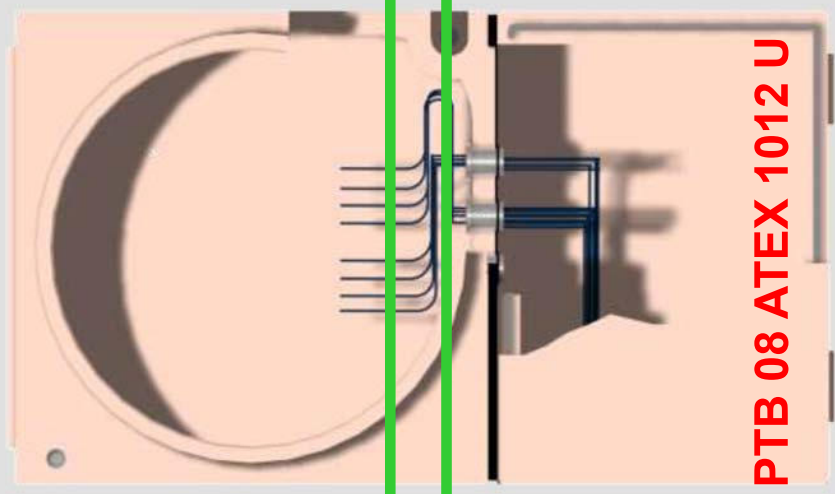


14. General

Flameproof enclosures, with only an Ex component enclosure certificate (marked with a ‘U’), shall not be installed. They shall always have an equipment certificate for the complete assembly.



14. General



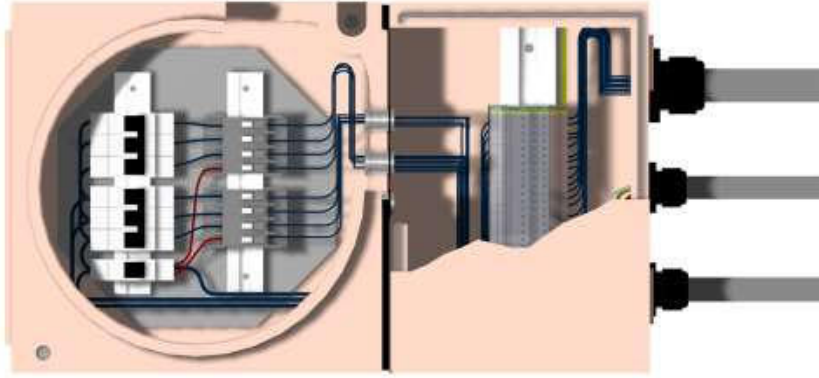
PTB 08 ATEX 1021 X



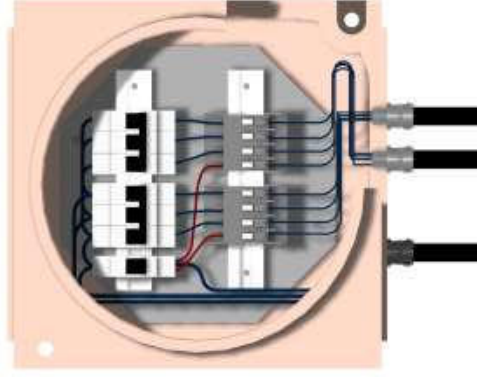
Additional holes shall not be made into an Ex 'd' enclosure by an installer.



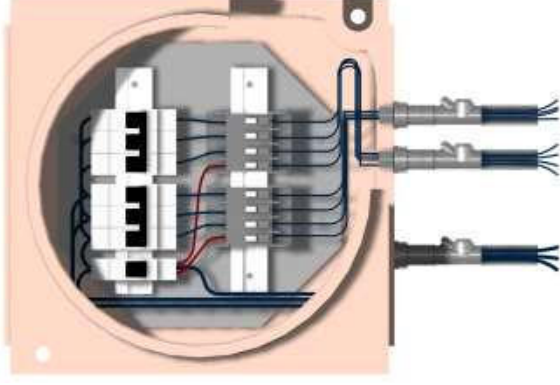
14. Installation



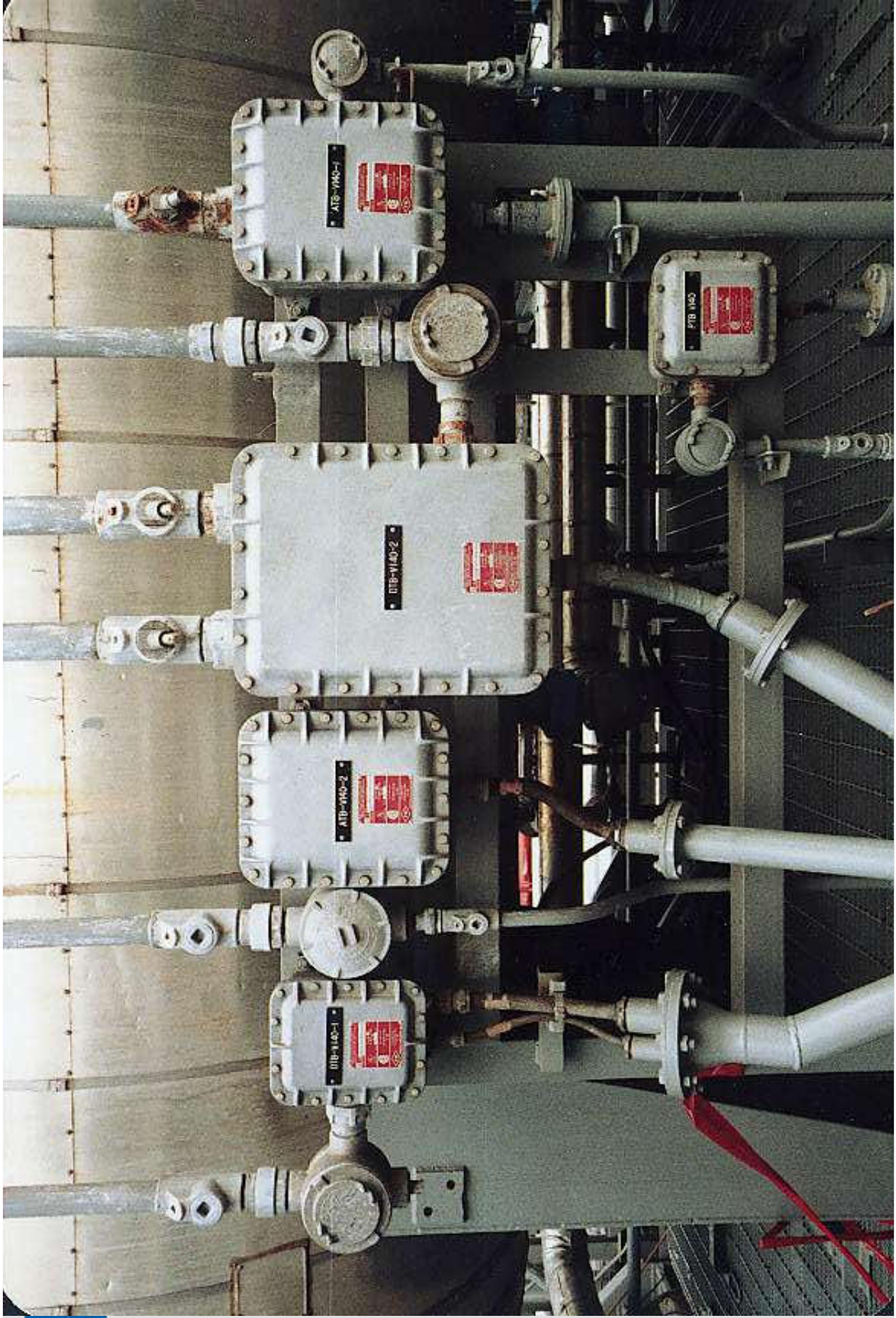
Indirect



Direct



Conduit entries





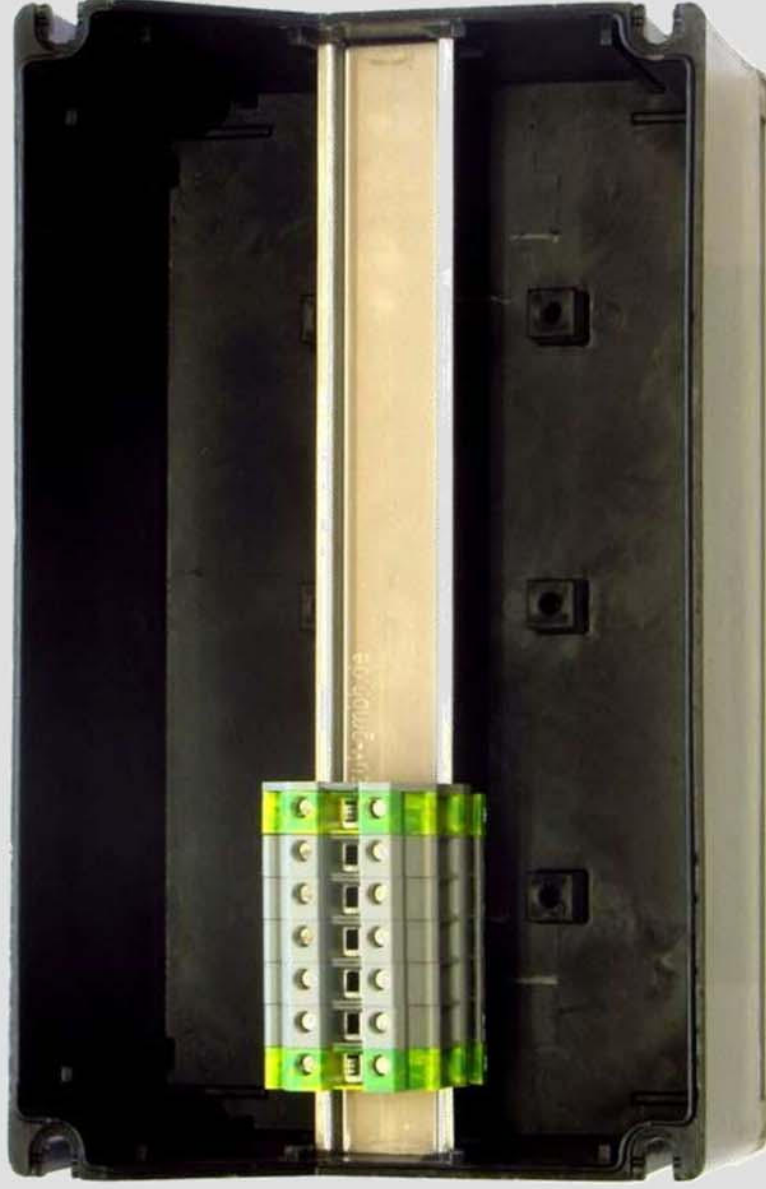
15. Additional requirements for type of protection 'e' – Increased safety

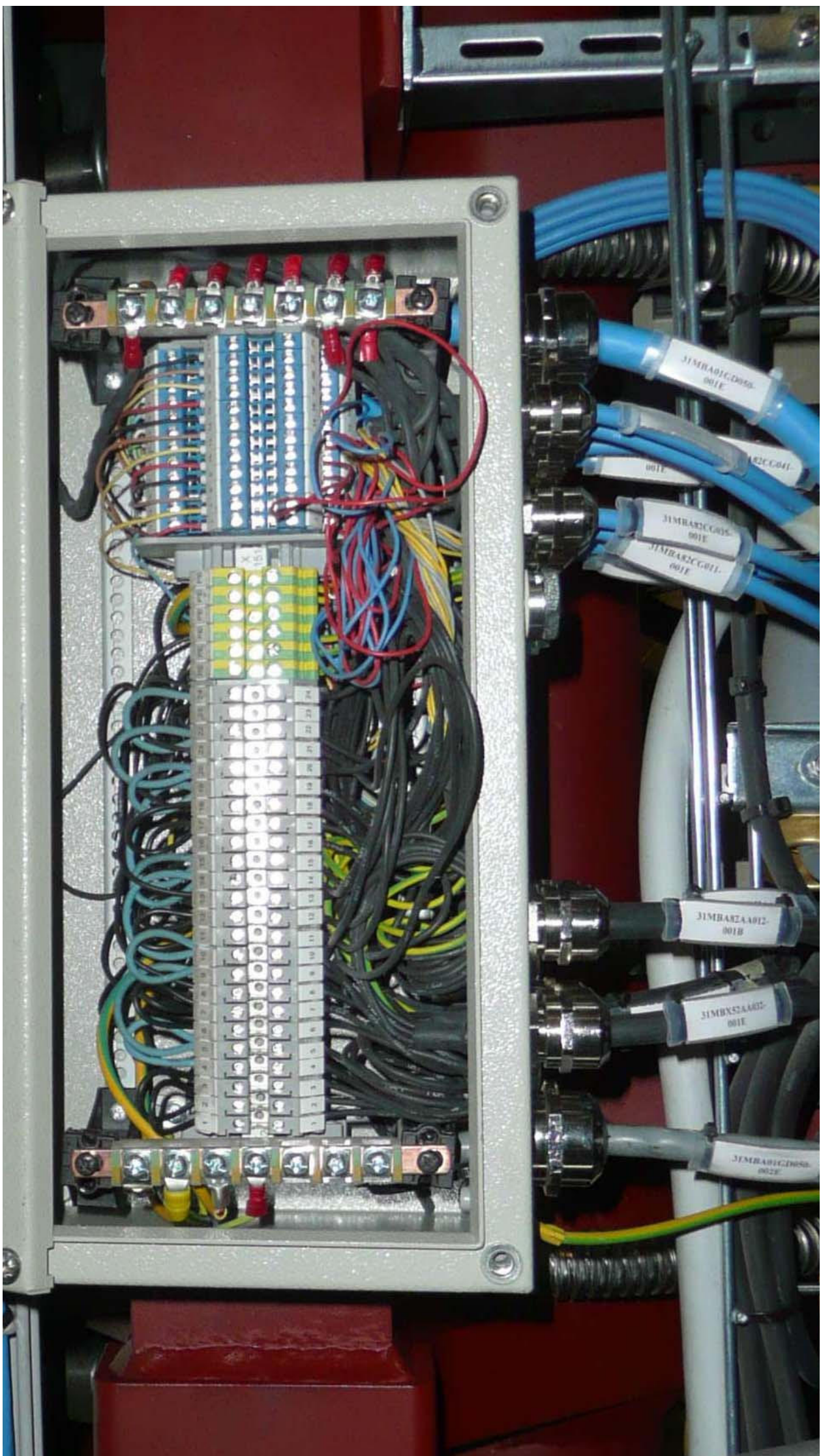
15.2 Maximum dissipated power

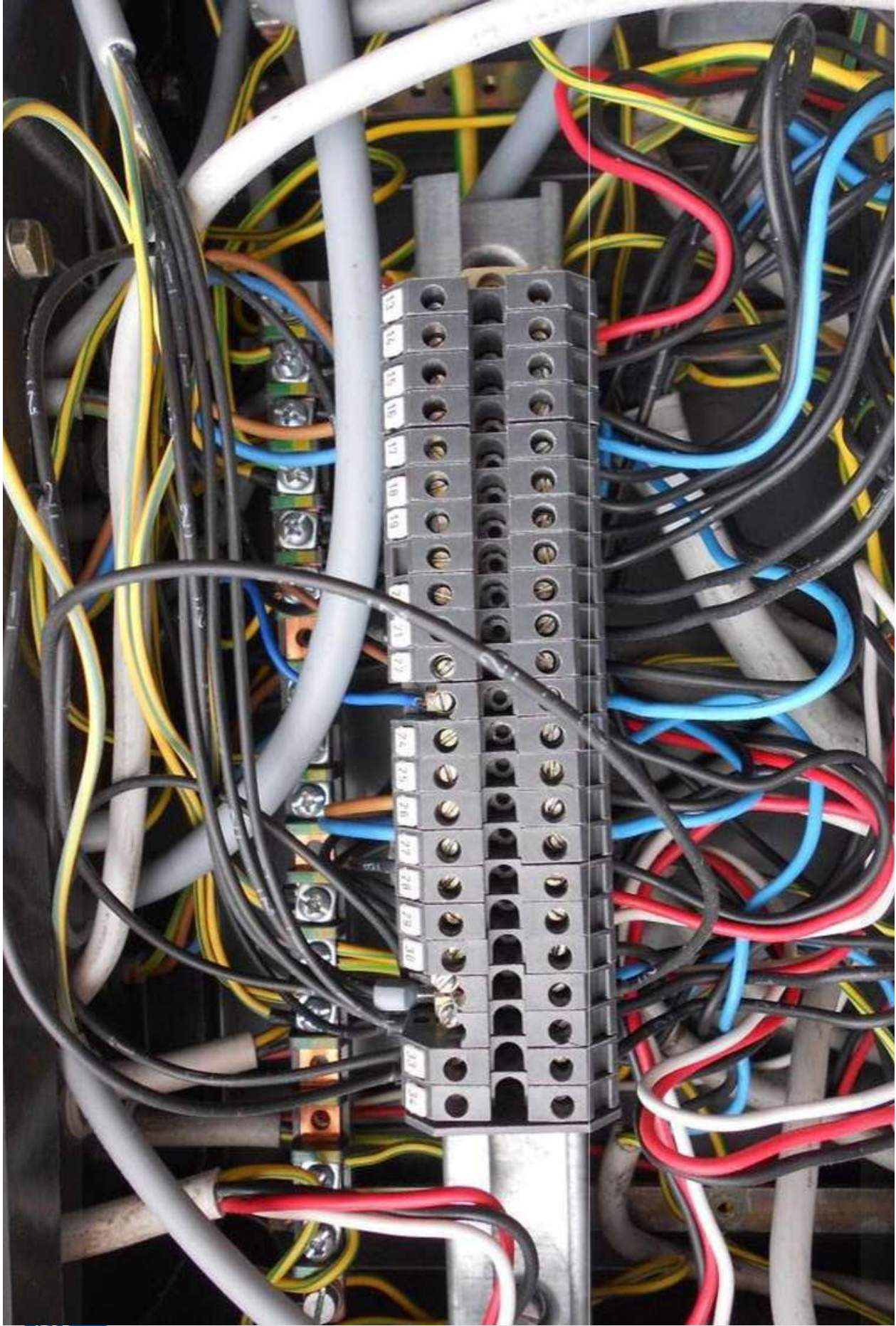
Current	Cross-section in [mm ²]									
[A]	1,5	2,5	4	6	10	16	25	35		
6	102									
10	68	102								
16	23	45	84							
20	9	26	51	64						
25		12	28	24	52					
35			8	5	52	44				
50					10	44				
63						16				
80										
100										
max. number of terminals	51	51	42	32	26	22				

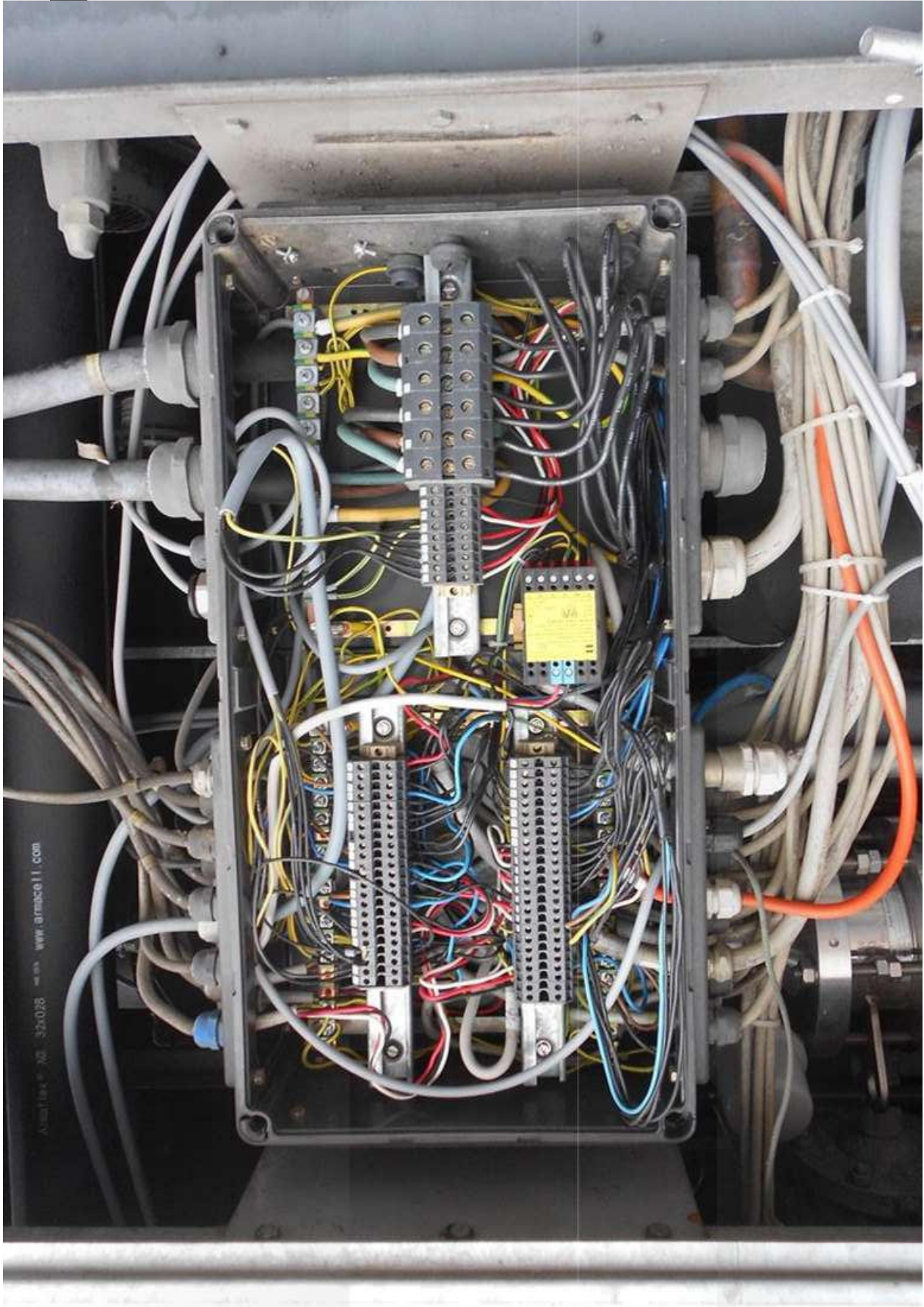


15.2 Maximum dissipated power









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