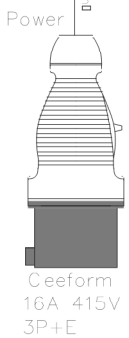
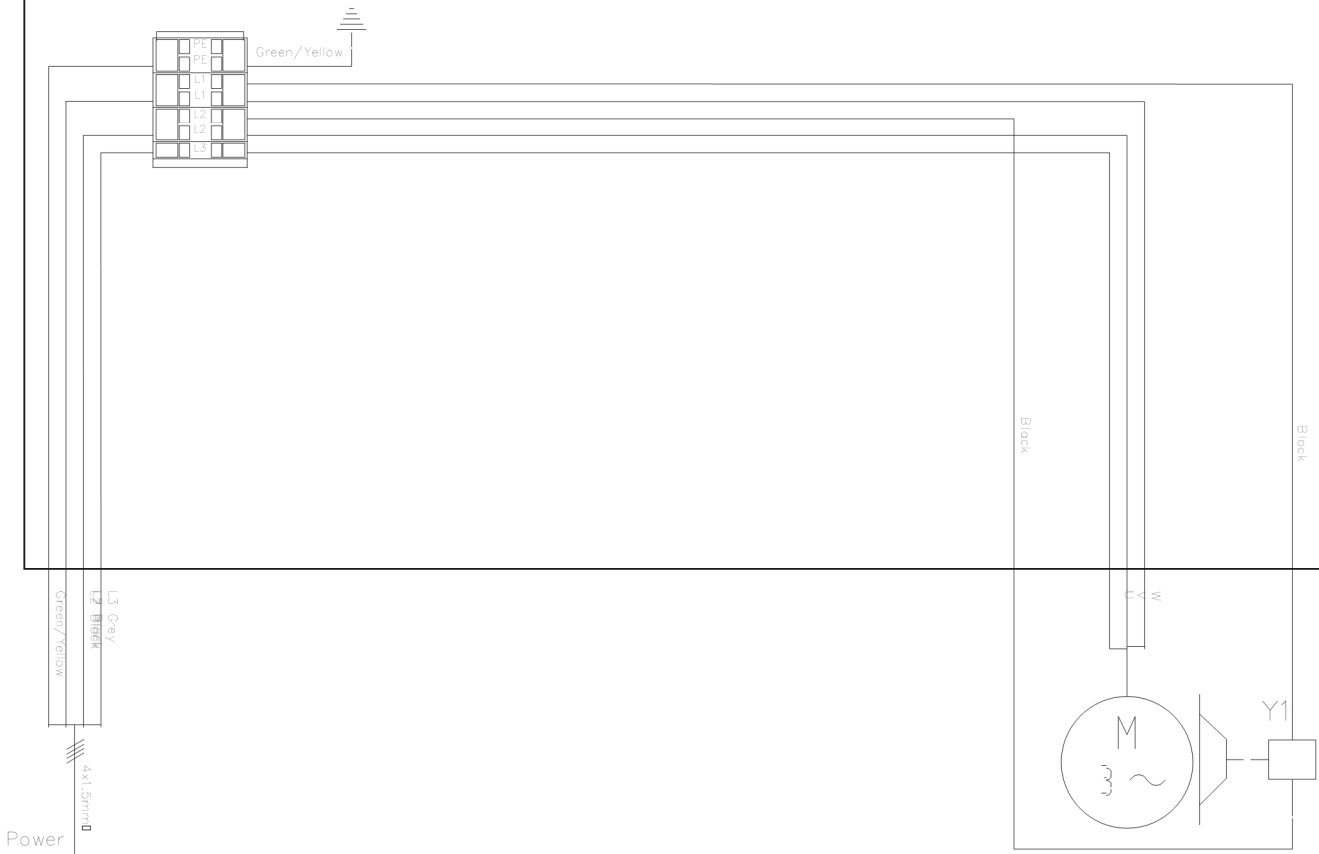


## 5.2 Circuit diagrams

Figure 5-1

### Control Assembly

Legend:  
Y1-Brake 1



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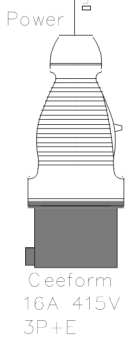
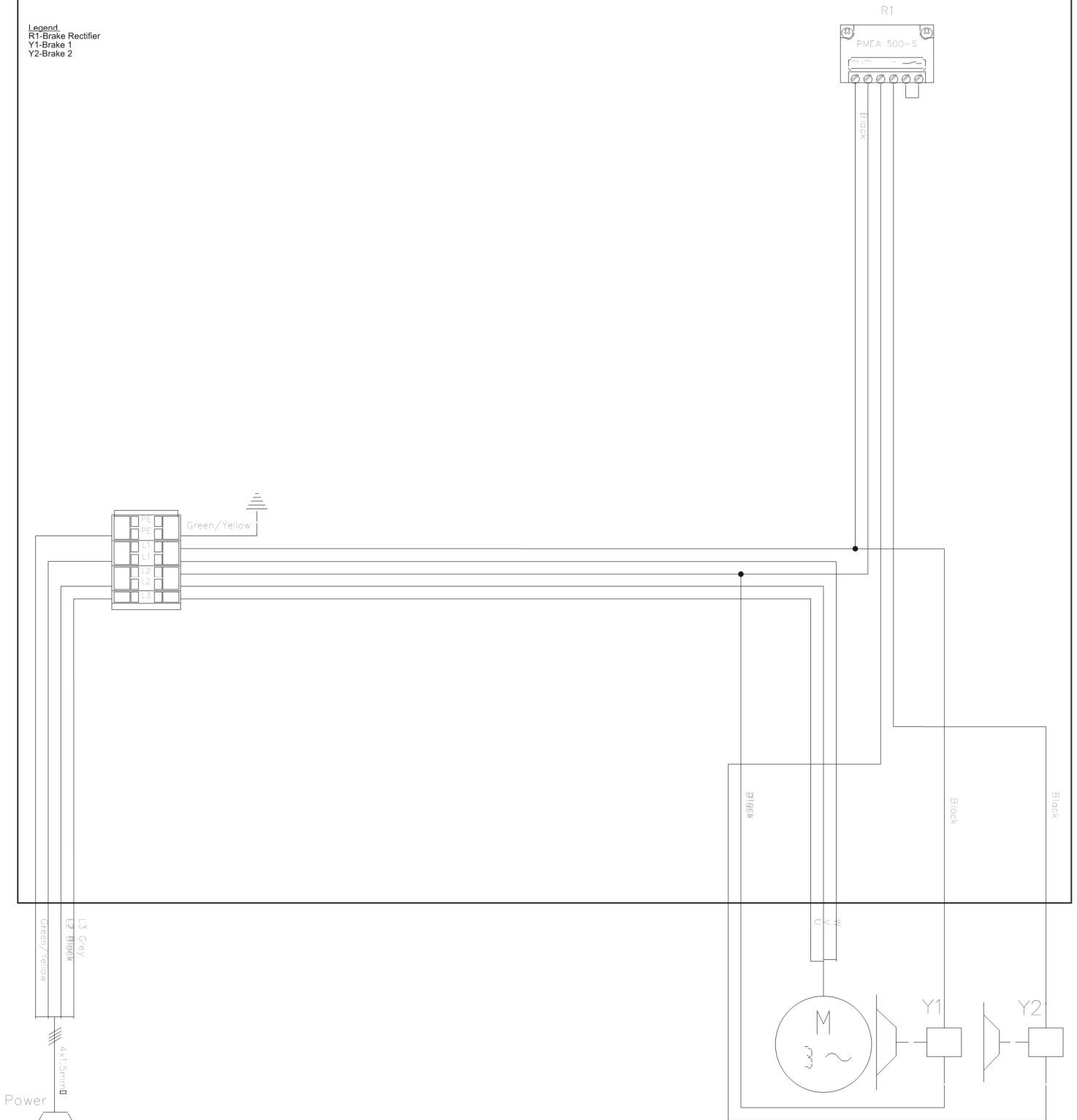


Hoist Type	
CONTROL	Direct Control
VERSION	V1
BRAKE	1 x AC
SPEED	1 Speed
CONTACTOR TYPE	N/A
WORKING LIMITS	No
EMERGENCY LIMITS	No

Figure 5-2

**Control Assembly**

**Legend**  
 R1-Brake Rectifier  
 Y1-Brake 1  
 Y2-Brake 2



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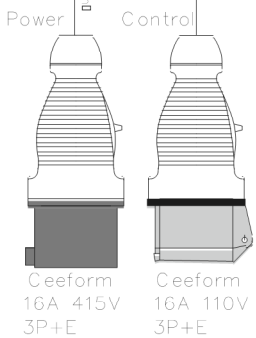
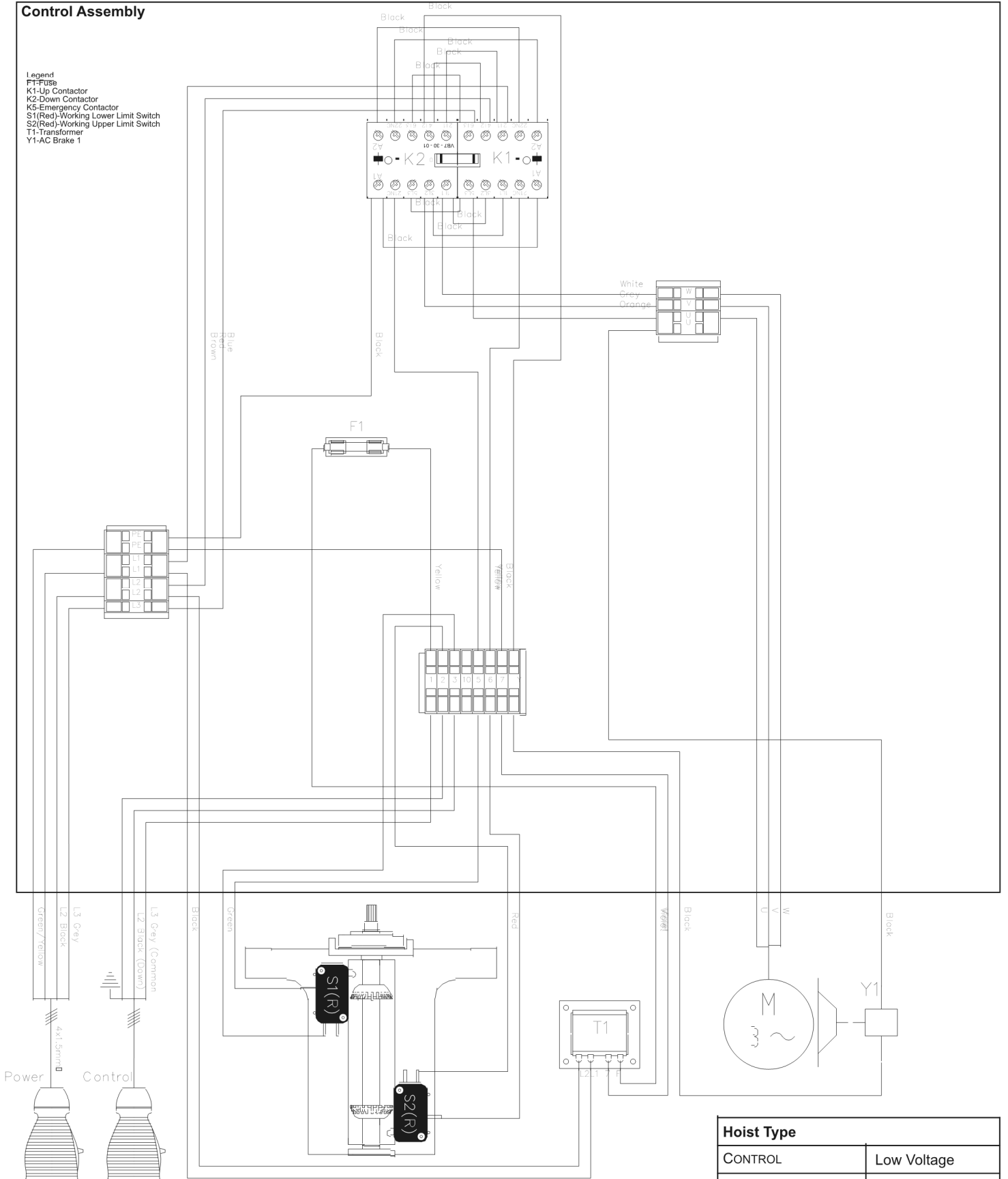


Hoist Type	
CONTROL	Direct Control
VERSION	V1
BRAKE	1 x AC, 1 x DC
SPEED	1 Speed
CONTACTOR TYPE	N/A
WORKING LIMITS	No
EMERGENCY LIMITS	No

Figure 5-3

**Control Assembly**

- Legend**  
 F1-Fuse  
 K1-Up Contactor  
 K2-Down Contactor  
 K5-Emergency Contactor  
 S1(Red)-Working Lower Limit Switch  
 S2(Red)-Working Upper Limit Switch  
 T1-Transformer  
 Y1-AC Brake 1



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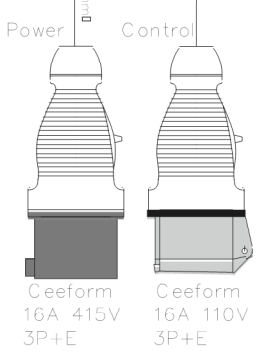
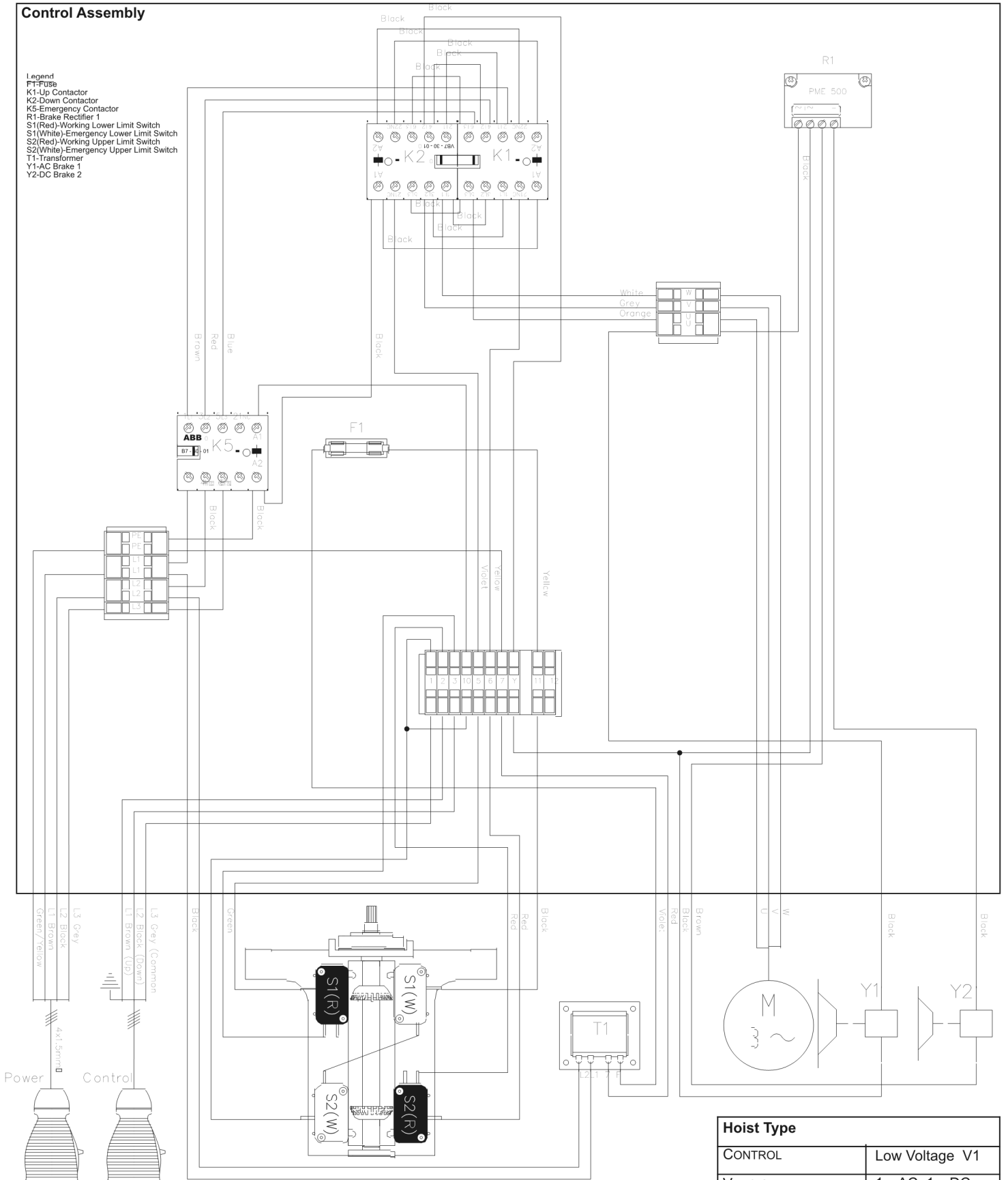
Hoist Type	
CONTROL	Low Voltage
VERSION	V1
BRAKE	1 x AC
SPEED	1 Speed
CONTACTOR TYPE	ABB
WORKING LIMITS	Yes
EMERGENCY LIMITS	No



Figure 5-5

**Control Assembly**

- Legend**  
 F1-Fuse  
 K1-Up Contactor  
 K2-Down Contactor  
 K5-Emergency Contactor  
 R1-Brake Rectifier 1  
 S1(Red)-Working Lower Limit Switch  
 S1(White)-Emergency Lower Limit Switch  
 S2(Red)-Working Upper Limit Switch  
 S2(White)-Emergency Upper Limit Switch  
 T1-Transformer  
 Y1-AC Brake 1  
 Y2-DC Brake 2



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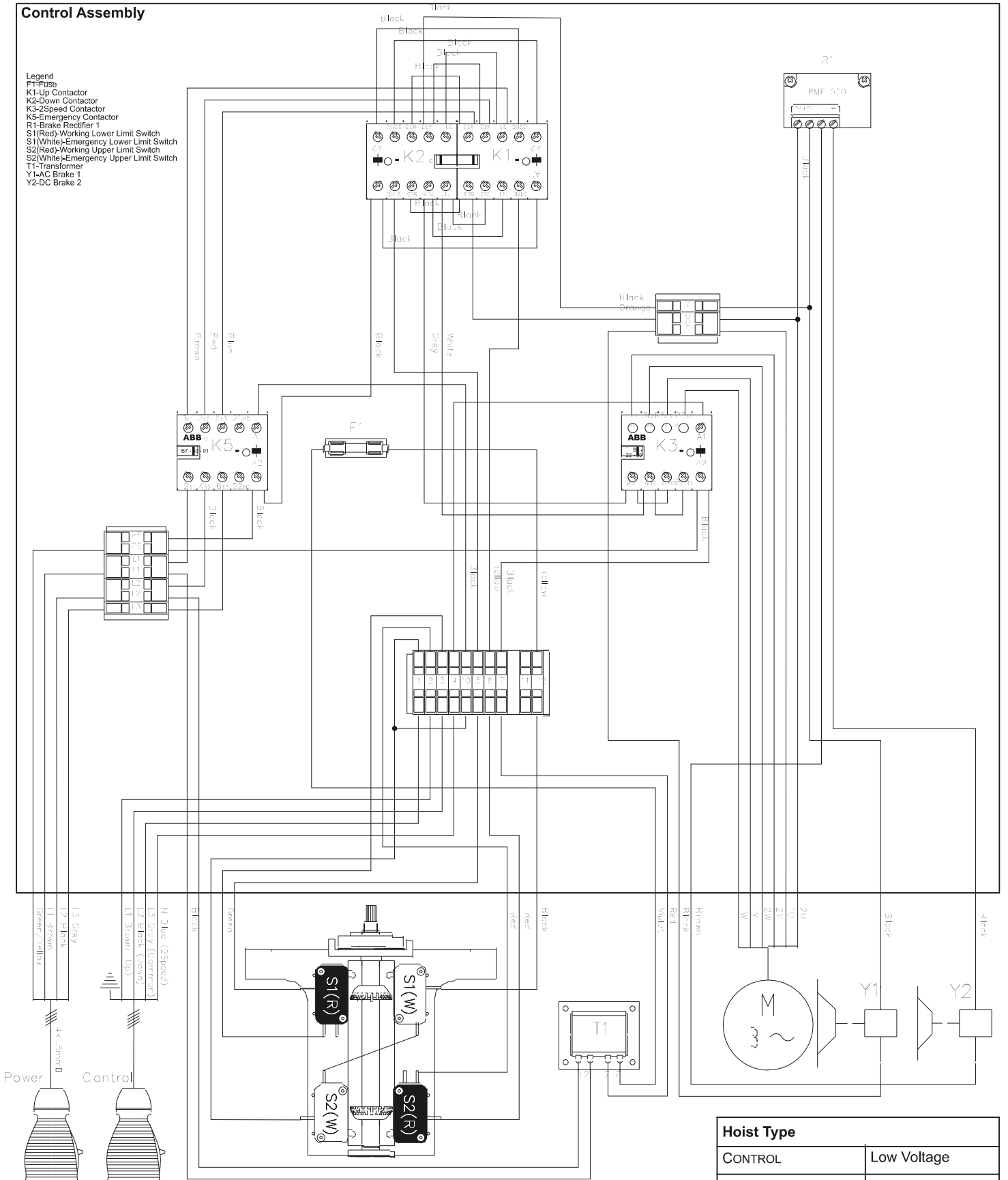


Hoist Type	
CONTROL	Low Voltage V1
VERSION	1 x AC, 1 x DC
BRAKE	
SPEED	1 Speed
CONTACTOR TYPE	ABB
WORKING LIMITS	Yes
EMERGENCY LIMITS	Yes

Figure 5-6

**Control Assembly**

- Legend**  
 F1-Fuse  
 K1-Up Contactor  
 K2-Down Contactor  
 K3-Speed Contactor  
 K5-Emergency Contactor  
 R1-Brake Rectifier  
 S1(Red)-Working Lower Limit Switch  
 S1(White)-Emergency Lower Limit Switch  
 S2(Red)-Working Upper Limit Switch  
 S2(White)-Emergency Upper Limit Switch  
 T1-Transformer  
 Y1-AC Brake 1  
 Y2-DC Brake 2



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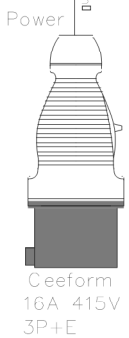
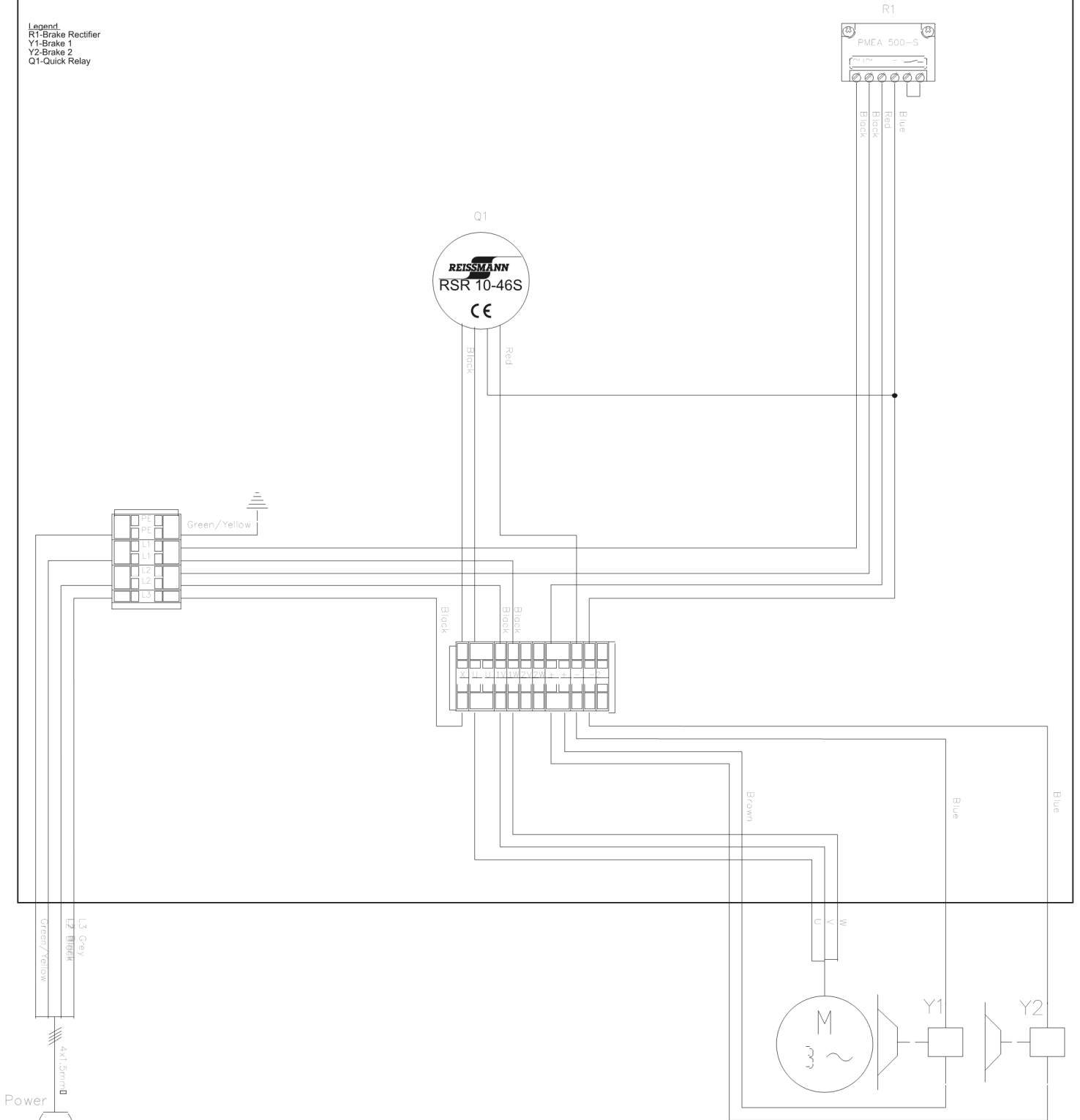
Hoist Type	
CONTROL	Low Voltage
VERSION	V1
BRAKE	1 x AC, 1 x DC
SPEED	2 Speed
CONTACTOR TYPE	ABB
WORKING LIMITS	Yes
EMERGENCY LIMITS	Yes



Figure 5-8

**Control Assembly**

Legend:  
 R1-Brake Rectifier  
 Y1-Brake 1  
 Y2-Brake 2  
 Q1-Quick Relay



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Hoist Type	
CONTROL	Direct Control
VERSION	V2
BRAKE	2 x DC
SPEED	1 Speed
CONTACTOR TYPE	N/A
WORKING LIMITS	No
EMERGENCY LIMITS	No

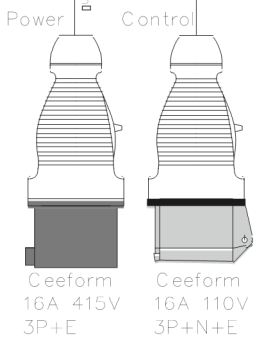
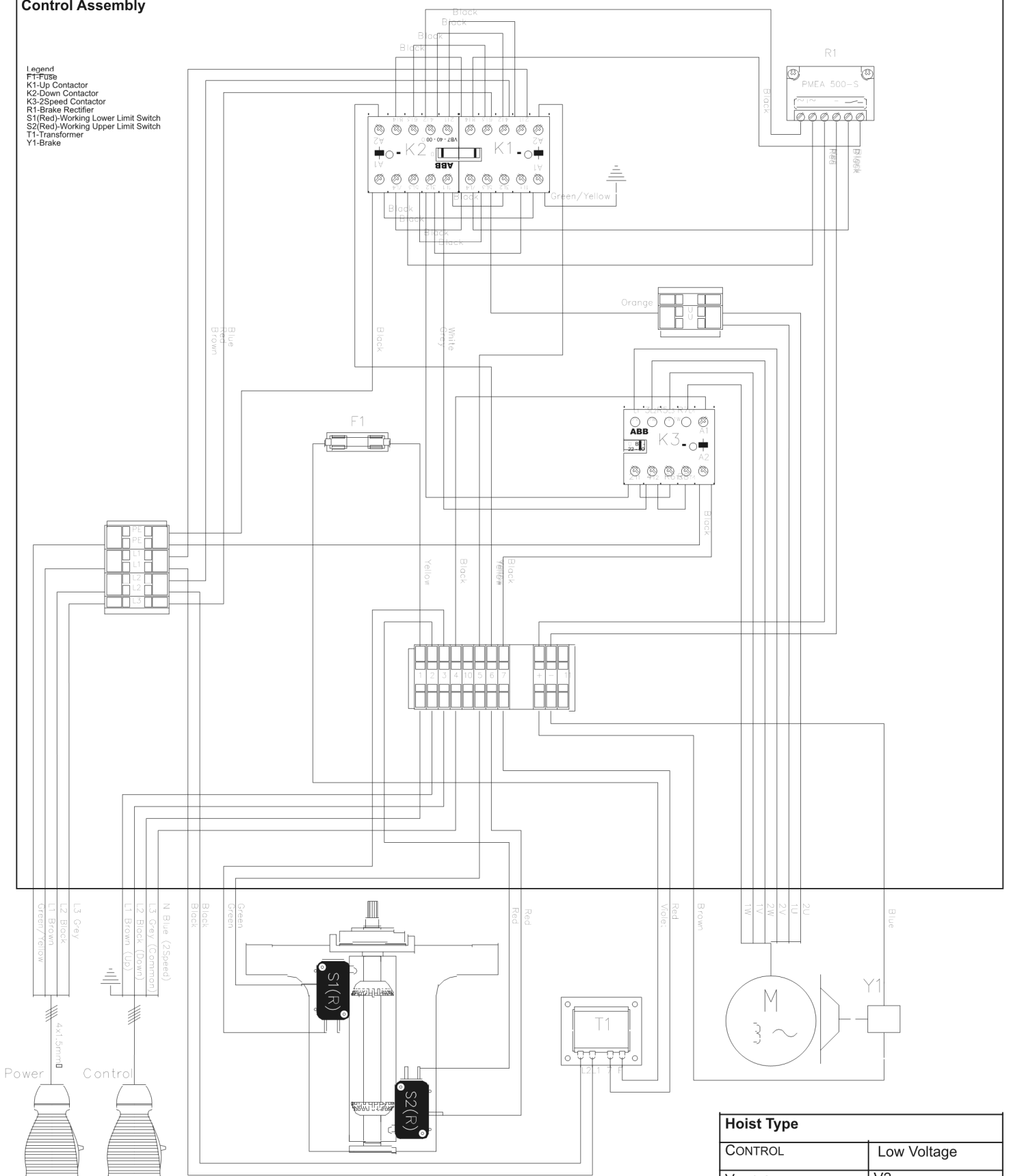




Figure 5-10

**Control Assembly**

- Legend**  
 F1-Fuse  
 K1-Up Contactor  
 K2-Down Contactor  
 K3-Speed Contactor  
 R1-Brake Rectifier  
 S1(Red)-Working Lower Limit Switch  
 S2(Red)-Working Upper Limit Switch  
 T1-Transformer  
 Y1-Brake



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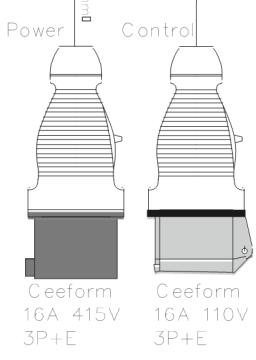
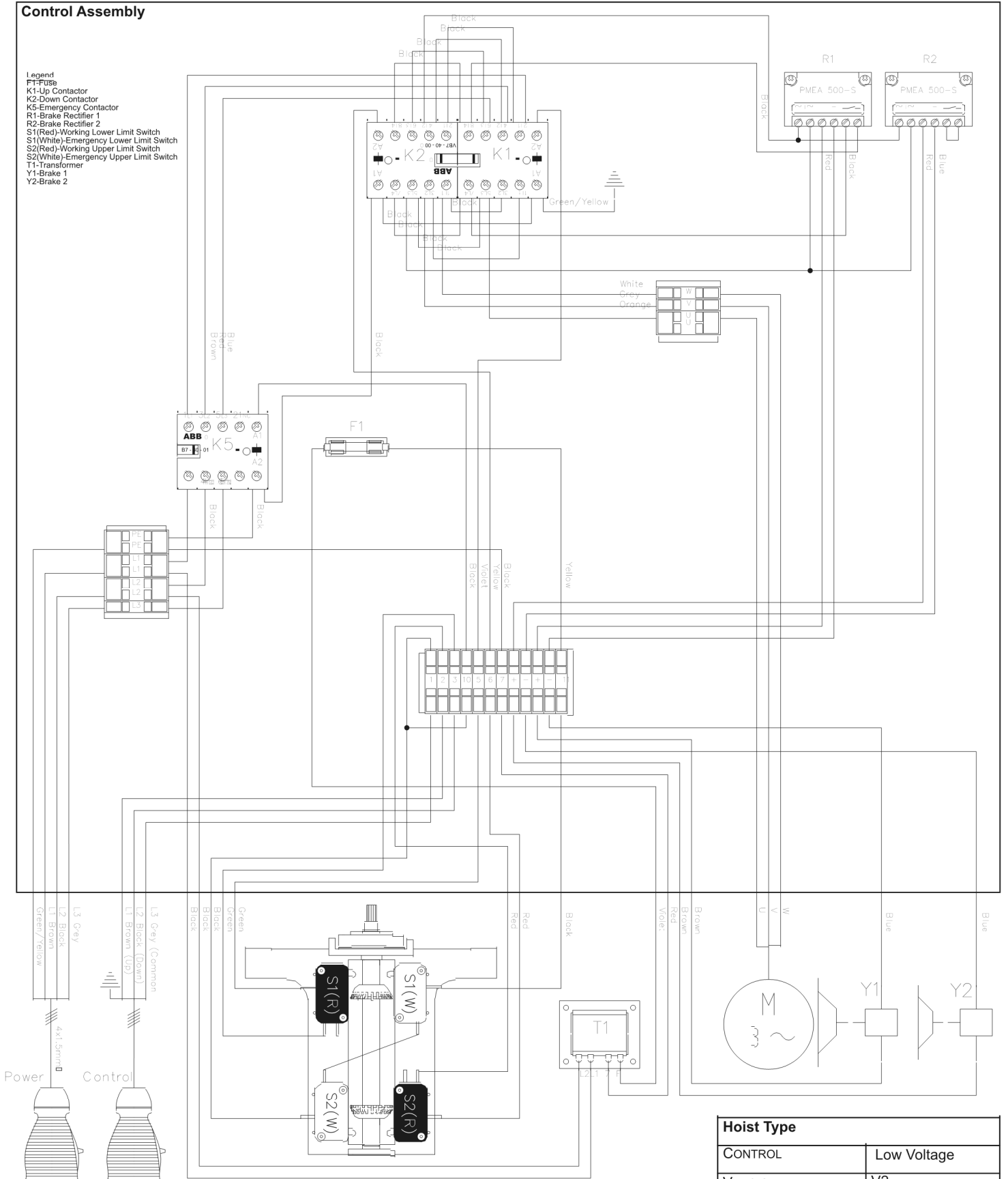


Hoist Type	
CONTROL	Low Voltage
VERSION	V2
BRAKE	1 x DC
SPEED	2 Speed
CONTACTOR TYPE	ABB
WORKING LIMITS	Yes
EMERGENCY LIMITS	No

Figure 5-11

**Control Assembly**

- Legend**  
 F1-Fuse  
 K1-Up Contactor  
 K2-Down Contactor  
 K5-Emergency Contactor  
 R1-Brake Rectifier 1  
 R2-Brake Rectifier 2  
 S1(Red)-Working Lower Limit Switch  
 S1(White)-Emergency Lower Limit Switch  
 S2(Red)-Working Upper Limit Switch  
 S2(White)-Emergency Upper Limit Switch  
 T1-Transformer  
 Y1-Brake 1  
 Y2-Brake 2



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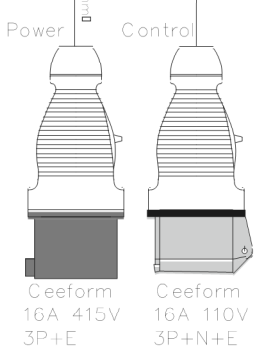
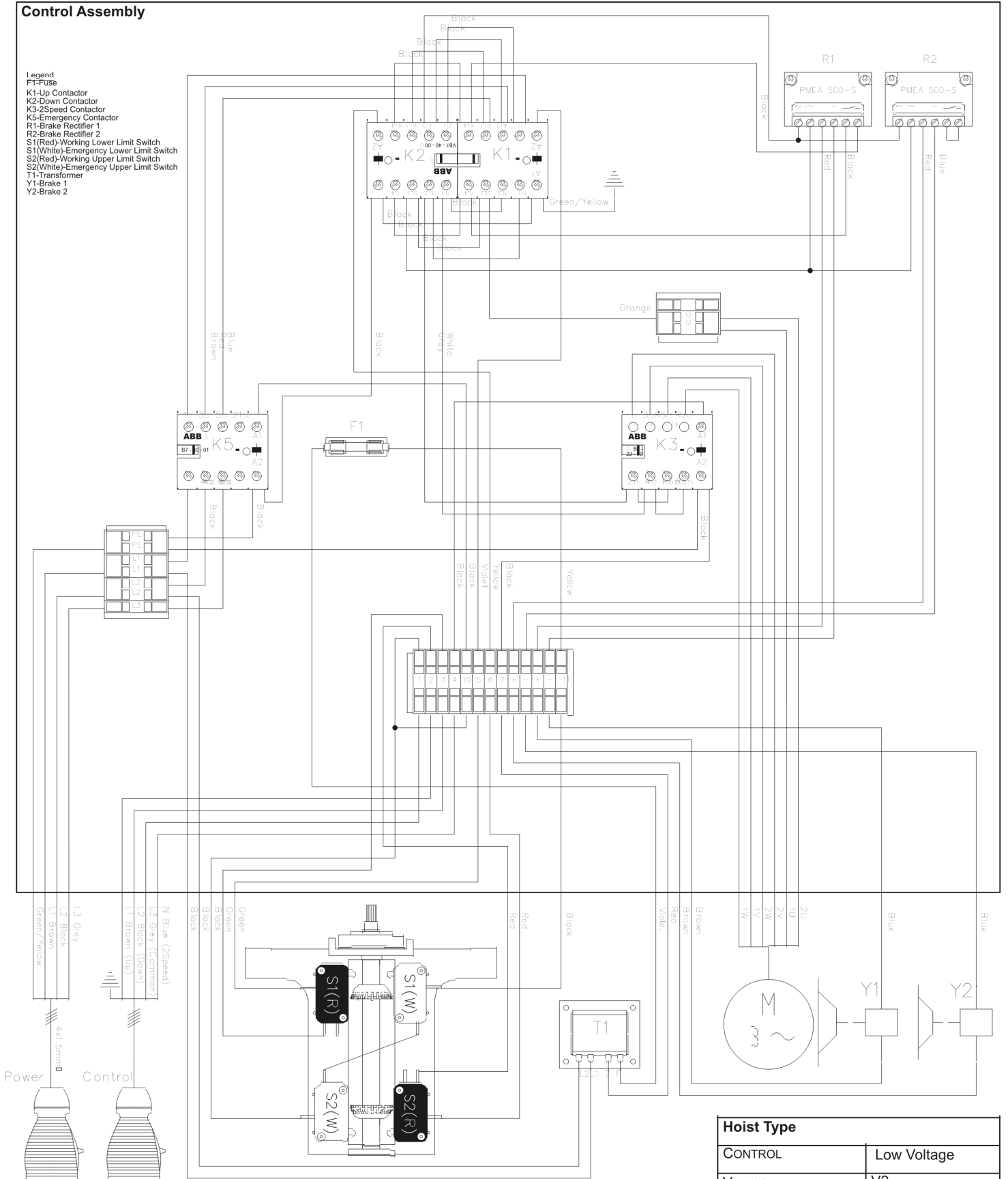


Hoist Type	
CONTROL	Low Voltage
VERSION	V2
BRAKE	2 x DC
SPEED	1 Speed
CONTACTOR TYPE	ABB
WORKING LIMITS	Yes
EMERGENCY LIMITS	Yes

Figure 5-12

**Control Assembly**

- Legend**  
 F1-Fuse  
 K1-Up Contactor  
 K2-Down Contactor  
 K3-Speed Contactor  
 K5-Emergency Contactor  
 R1-Brake Rectifier 1  
 R2-Brake Rectifier 2  
 S1(Red)-Working Lower Limit Switch  
 S1(White)-Emergency Lower Limit Switch  
 S2(Red)-Working Upper Limit Switch  
 S2(White)-Emergency Upper Limit Switch  
 T1-Transformer  
 Y1-Brake 1  
 Y2-Brake 2



Hoist Type	
CONTROL	Low Voltage
VERSION	V2
BRAKE	2 x DC
SPEED	2 Speed
CONTACTOR TYPE	ABB
WORKING LIMITS	Yes
EMERGENCY LIMITS	Yes

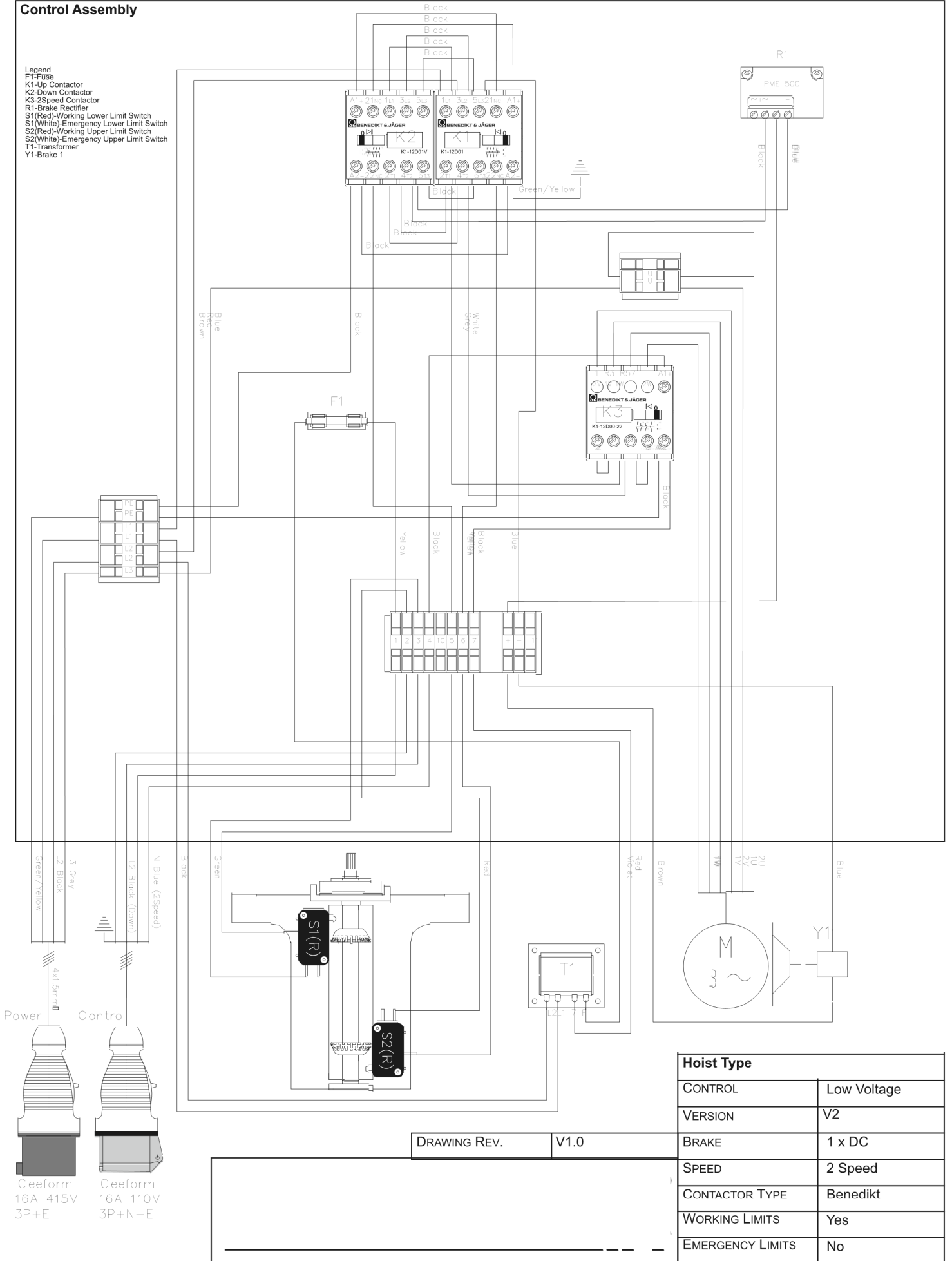
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Figure 5-13

**Control Assembly**

- Legend**  
 F1-Fuse  
 K1-Up Contactor  
 K2-Down Contactor  
 K3-Speed Contactor  
 R1-Brake Rectifier  
 S1(Red)-Working Lower Limit Switch  
 S1(White)-Emergency Lower Limit Switch  
 S2(Red)-Working Upper Limit Switch  
 S2(White)-Emergency Upper Limit Switch  
 T1-Transformer  
 Y1-Brake 1



Hoist Type	
CONTROL	Low Voltage
VERSION	V2
BRAKE	1 x DC
SPEED	2 Speed
CONTACTOR TYPE	Benedikt
WORKING LIMITS	Yes
EMERGENCY LIMITS	No

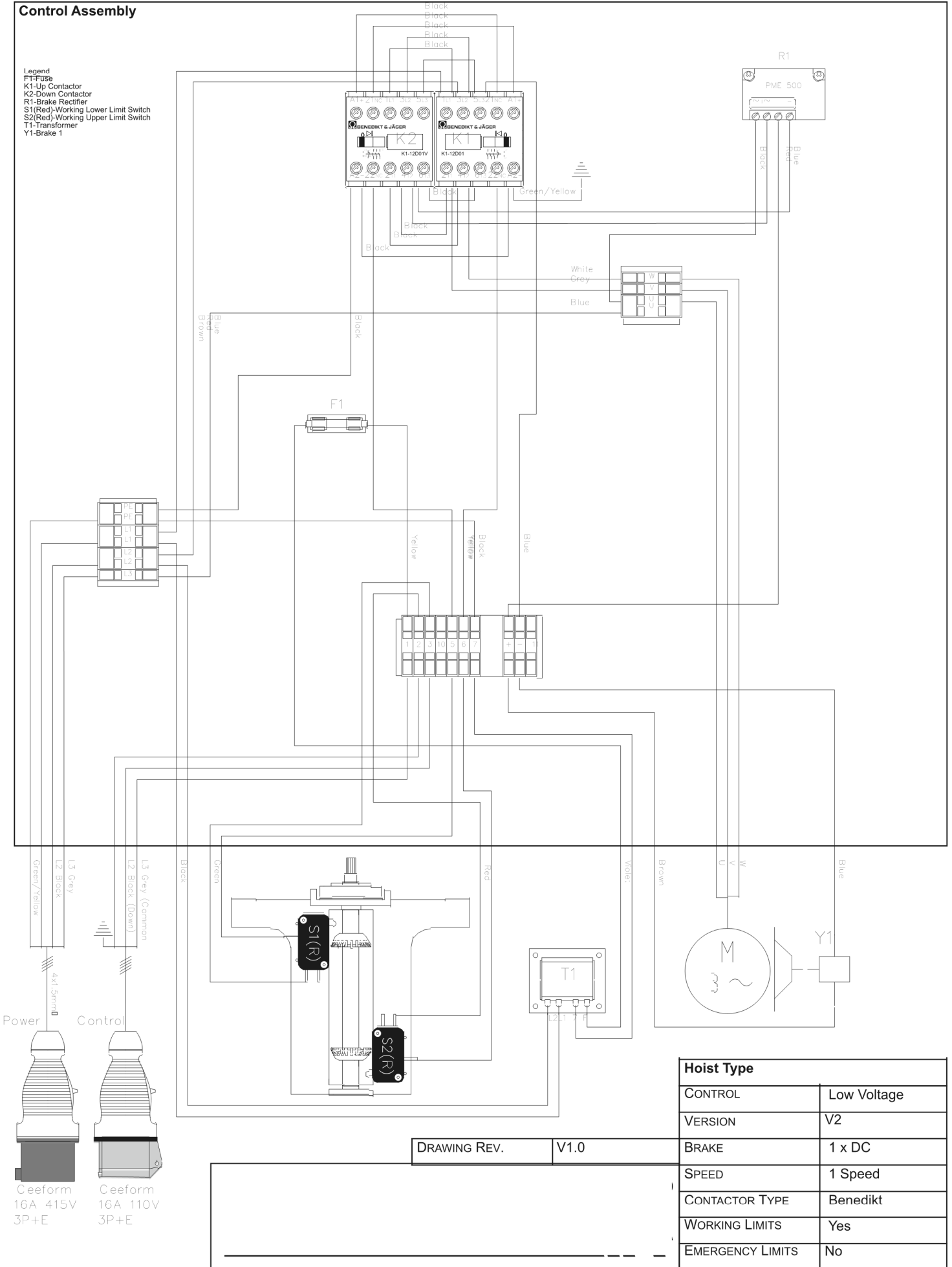
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Ceeform 16A 415V 3P+E  
 Ceeform 16A 110V 3P+N+E

Figure 5-14

**Control Assembly**

- Legend**  
 F1-Fuse  
 K1-Up Contactor  
 K2-Down Contactor  
 R1-Brake Rectifier  
 S1(Red)-Working Lower Limit Switch  
 S2(Red)-Working Upper Limit Switch  
 T1-Transformer  
 Y1-Brake 1



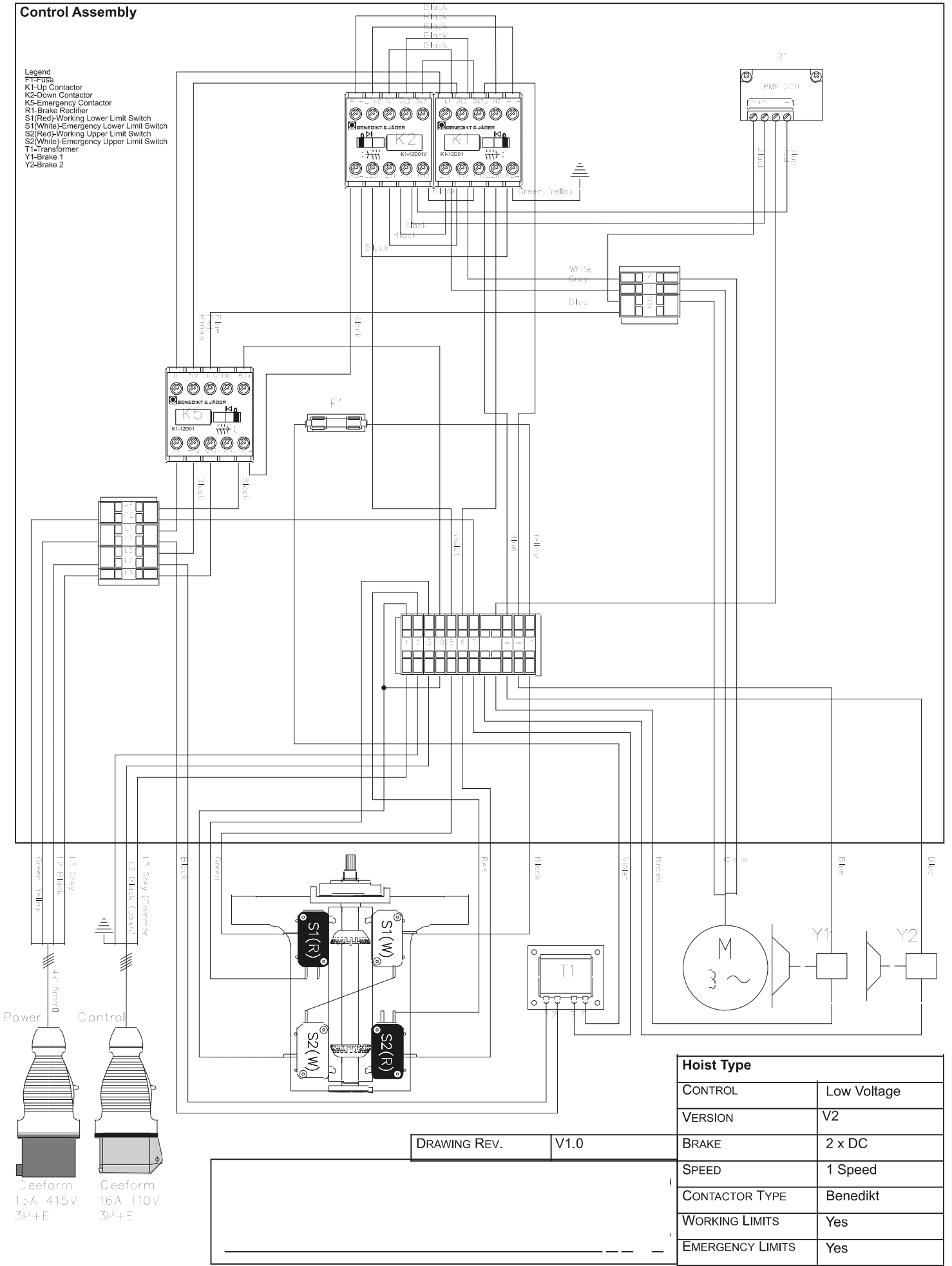
Hoist Type	
CONTROL	Low Voltage
VERSION	V2
BRAKE	1 x DC
SPEED	1 Speed
CONTACTOR TYPE	Benedikt
WORKING LIMITS	Yes
EMERGENCY LIMITS	No

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Figure 5-15

**Control Assembly**

- Legend**  
 F1-Fuse  
 K1-Up Contactor  
 K2-Down Contactor  
 K5-Emergency Contactor  
 R1-Brake Rectifier  
 S1(White)-Working Lower Limit Switch  
 S1(White)-Emergency Lower Limit Switch  
 S2(White)-Working Upper Limit Switch  
 S2(White)-Emergency Upper Limit Switch  
 T1-Transformer  
 Y1-Brake 1  
 Y2-Brake 2



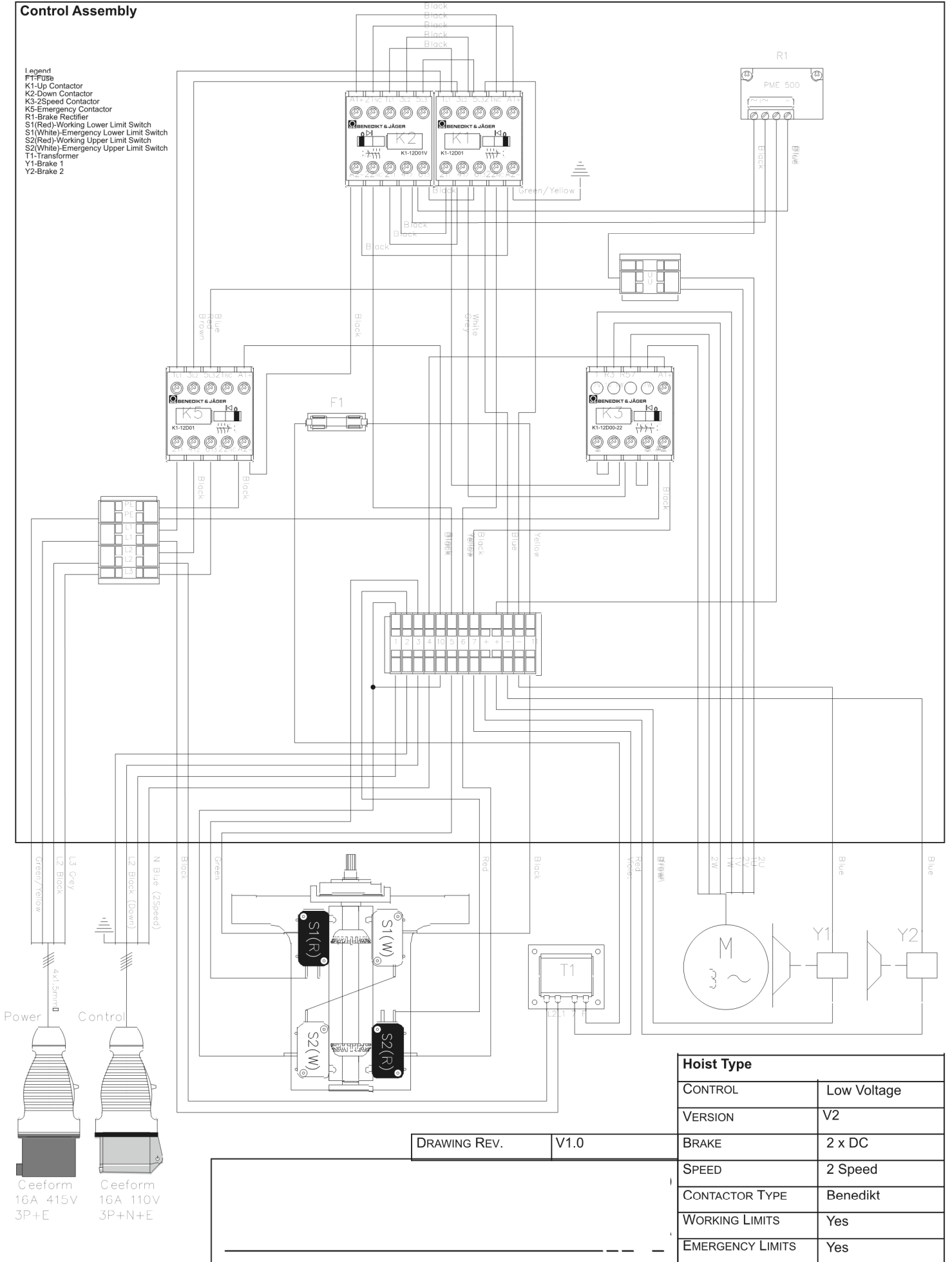
Hoist Type	
CONTROL	Low Voltage
VERSION	V2
BRAKE	2 x DC
SPEED	1 Speed
CONTACTOR TYPE	Benedikt
WORKING LIMITS	Yes
EMERGENCY LIMITS	Yes

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Figure 5-16

**Control Assembly**

- Legend**  
 F1-Fuse  
 K1-Up Contactor  
 K2-Down Contactor  
 K3-Speed Contactor  
 K5-Emergency Contactor  
 R1-Brake Rectifier  
 S1(Red)-Working Lower Limit Switch  
 S1(White)-Emergency Lower Limit Switch  
 S2(Red)-Working Upper Limit Switch  
 S2(White)-Emergency Upper Limit Switch  
 T1-Transformer  
 Y1-Brake 1  
 Y2-Brake 2



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Hoist Type	
CONTROL	Low Voltage
VERSION	V2
BRAKE	2 x DC
SPEED	2 Speed
CONTACTOR TYPE	Benedikt
WORKING LIMITS	Yes
EMERGENCY LIMITS	Yes