

Energizing Productivity Church Organ

Situation:

The organ engine is to be operated with controlled electric drive technology.

Problem:

The organ engine must be reliably braked at 1,400 rpm.

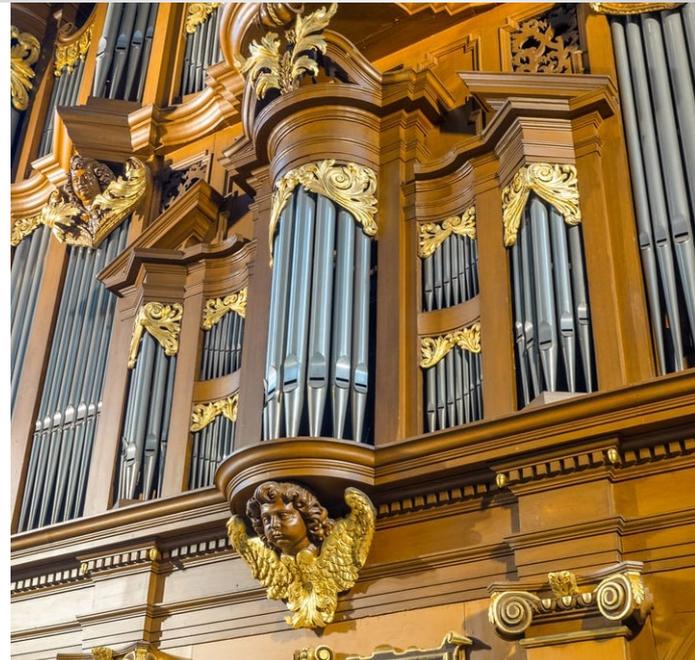
Goal:

High intrinsic safety and noiseless operation

in compact design.

Solution:

- > 1 braking resistor [BWD600220](#) with 240 Watt and 220 Ohm in protection class IP 65 can dissipate the braking energy safely.



Advantages:

1. the organ engine is reliably braked down from the high speed range
2. the braking takes place without any disturbing noise development of the brake resistor
3. the high intrinsic safety of the braking resistor prevents e.g. in case of a fault of the inverter a damage due to overheating or fire at the expensive instrument



Managing
braking energy

Further information:

[Church Organ](#)

We look forward to hearing from you!

Brake resistor BWx600

Short-circuit proof, „intrinsically safe“² resistor for use in inverters (brake transistors) in an anodized aluminum case, IP65¹ protection class.

Rated power (W)

240 (600 with duty cycle
ED = 35%, $\vartheta_A = 20^\circ\text{C}$)

Resistance (Ohm)

5, 10, 14, 18, 22, 27, 33, 47, 72,
80, 100, 150, 200, 220, 300

Dimensions (mm)

Enclosure: 216 x 80 x 30
Wiring: length 510±40
Ø AWG14 or 2.5 mm²
PTFE isolated,
UL Style 1659



Versions



BWD600



BWG600



BWS600



BWT600
without CSA and UL approval

¹ Test conditions: Water jet from nozzle 6.3 mm inside diameter, flow rate 12.5 l / min +/- 5%, water pressure according to volume flow, distance 2.5-3m, test duration 3min.

² With fourfold type power and free convection. 1. no short-circuit, 2. no fault to frame, 3. self-extinguishing, 4. no melting of casing. Type power always corresponds to 35% duty cycle of the respective resistor type.

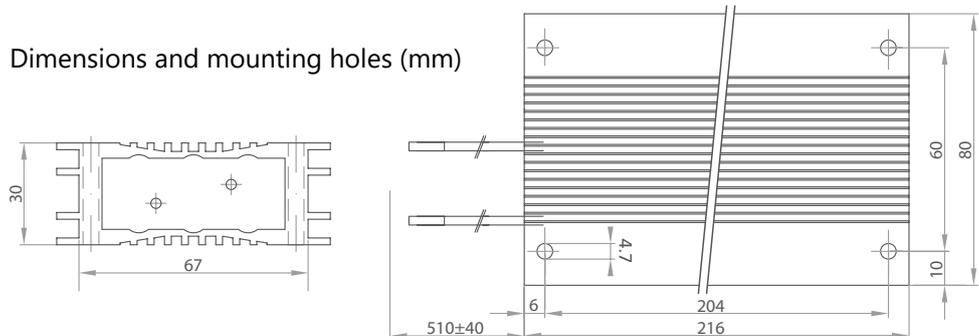


Technical specifications

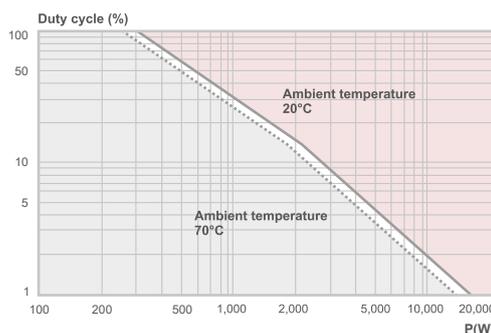
($\vartheta_A = 20^\circ\text{C}$, unless otherwise specified)

Parameter	Symbol	Value	Unit	Conditions
Tolerance (resistance)		± 5	%	Room temperature
Temperature coefficient	TK	20 ... 100	10 ⁻⁶ /K	
Insulation resistance	R _{ISO}	≥ 100	MΩ	U _{mess} = 1,000 VDC
Inductance	L	≤ 30	μH	f = 300 kHz, U _{mess} = 50 mV
Capacity against enclosure	C	≤ 300	pF	f = 300 kHz, U _{mess} = 50 mV
Thermal time constant	τ	approx. 600	s	
Weight	m	1,050	g	
Certifications	cCSAus			Standard CSA-C22.2 and UL508
	cURus			Standard CSA-C22.2 and UL508
Energy absorption	Q	13	kJ	with 1.2 s (1% duty cycle)
		26	kJ	with 7.2 s (6% duty cycle)
Maximum permissible operating voltage	U _B	≤ 700 AC	V	Taking into consideration the „intrinsic safety“ ²
		≤ 1,000 DC	V	according to CSA and UL
		≤ 600 AC	V	
		≤ 848 DC	V	
Isolation voltage	U _{ISO}	≥ 4,000 AC	V	f = 50 Hz; t = 1 s
Max. permissible case temp.	ϑ_C	≤ 250	°C	unobstructed convection
Storage temperature	ϑ_S	-25 ... +85	°C	

Dimensions and mounting holes (mm)

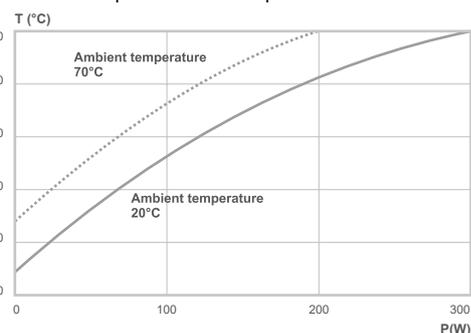


Pulse loading capacity Brake resistor BWx600



Case temperature

Brake resistor BWx600
With duty cycle ED = 100%
Maximum permissible temperature T = 250 °C



We look forward to hearing from you!



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