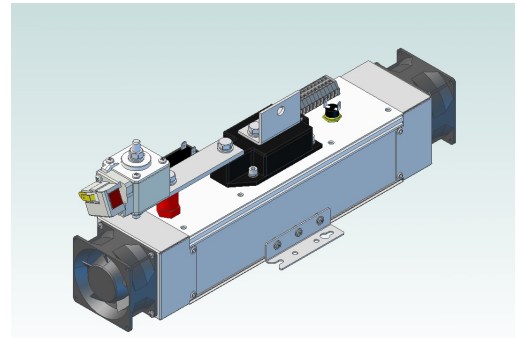


HIGHLIGHTS

- Axial fans.
- Reliability.
- Short delivery time.
- Ultrafast fuse included.
- Thermostat, snubber and varistor included.
- Ready to use.
- Working voltage up to 400 V_{RMS}.
- Insulation 3000 V_{RMS}/1 min.



Non-contractual image

GENERAL SPECIFICATIONS

Nominal line to line input voltage (V _{RMS})	400 V _{AC} ±10%
Repetitive peak reverse voltage (V _{RRM})	1200 V _P
Maximum working current (I _{RMS}) (1)	490 A _{RMS} @ 35°C TA
Maximum nominal working current (I _{RMS}) (2)	380 A _{RMS} @ 35°C TA
Cooling	Forced air, fan 80x80 @ 230V _{RMS}

(1): The maximum non continuous working current

(2): The maximum continuous working current without thermal protection activation

SEMICONDUCTOR SPECIFICATIONS

Peak non-repetitive surge current (I _{TSM})	9200 A @ T _p =10ms, T _j =45°C, (50Hz), sine
	8000 A @ T _p =10ms, T _j =125°C, (50Hz), sine
I ² t capacity for fusing	420 kA ² s @ T _p =10ms, T _j =45°C, (50Hz), sine
	320 kA ² s @ T _p =10ms, T _j =125°C, (50Hz), sine
Maximum rate of rise of on-state current (repetitive) (di _T /dt)	100 A/μs
Maximum rate of rise of on-state current (non-repetitive) (di _T /dt)	500 A/μs
Maximum peak on-state voltage (V _{TM})	1,32 V @ I _{TM} =600A
Critical rate of rise of off-state voltage (dv/dt)	Min. 1000 V/μs @ T _j =125°C, V _D =2/3 V _{RRM}
Gate trigger voltage (V _{GT})	max. 2 V @ T _j =25°C, V _D =6V
	max. 3 V @ T _j =-40°C, V _D =6V
Gate trigger current (I _{GT})	max. 150 mA @ T _j =25°C, V _D =6V
	max. 200 mA @ T _j =-40°C, V _D =6V
Latching current (I _L)	200 mA @ T _j =25°C, t _p =30μs; V _D =6V
Holding current (I _H)	150 mA @ T _j =25°C; V _D =6V

PROTECTION

dv/dt protection (RC)	RC network 0,22μF/56 Ohms
Peak voltage protection (VDR)	460 V _{RMS} varistor
Current protection (Semiconductor fuses) (1)	069UR1S0630B
Microswitch (fuse indicators)	MS 3V1-5N
Thermal protection (Thermostats)	80°C NC

(1): Fuses only for shortcircuit protection. User provide external protection for continuous overloads and cable size.

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TERMINAL SPECIFICATIONS

Input power terminals (AC terminals)	(M8) 11 to 13 Nm
Module power terminals	(M8) 11 to 13 Nm
Output power terminals	1xØ10,5 (M10) 11 to 13 Nm (1)
Control & auxiliary terminals	WAGO series 260 terminal blocks 1,5 mm ² / AWG 16

(1): The press should be performed with two keys, avoiding to transmit lateral efforts at terminal of connection, what would be able to produce the deterioration of the element semiconductor.

ENVIRONMENT SPECIFICATIONS

Protection grade (EN-60529 / CEI529 / UNE-20324)	IP-00
Humidity max.	50% RH @ 35°C / 90% RH @ 20°C
Pollution degree	III
Isolation	3000 V _{RMS} / 1 min

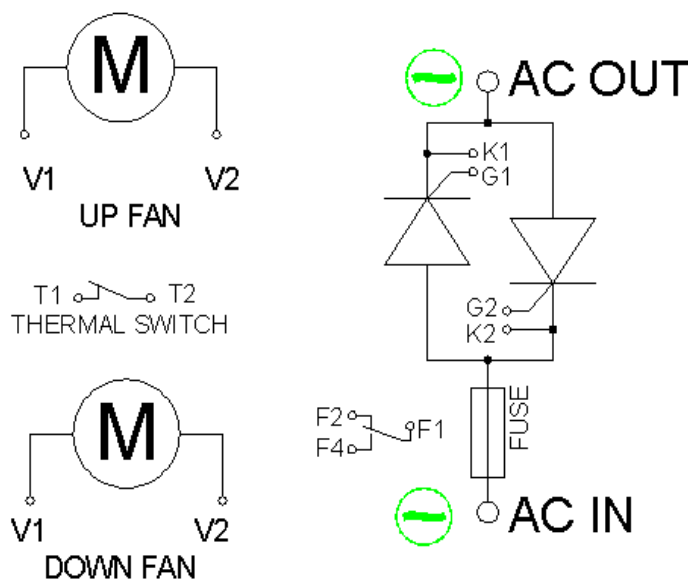
LOSSES

Power dissipation of semiconductors at full charge	Aprox. 417 W
Maximum power dissipation of fuse at full charge	Aprox. 26 W
Maximum total power dissipation at full charge	Aprox. 442 W

MECHANICAL SPECIFICATIONS

Mounting position	Any
Storage temperature	-25 to 80°C
Width	136 mm
Depth	192 mm
Height	470 mm
Aprox. Weight	5.5 Kg.

SCHEMATIC CIRCUIT



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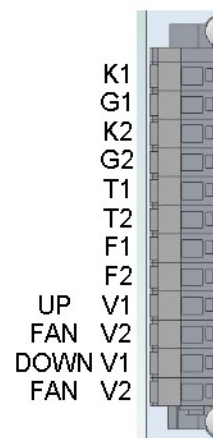
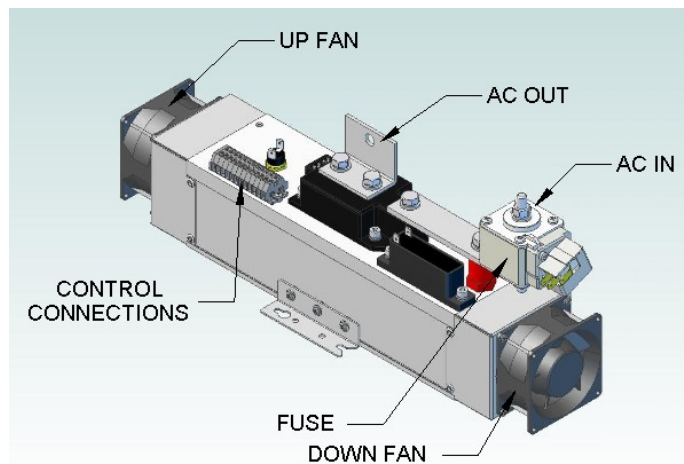
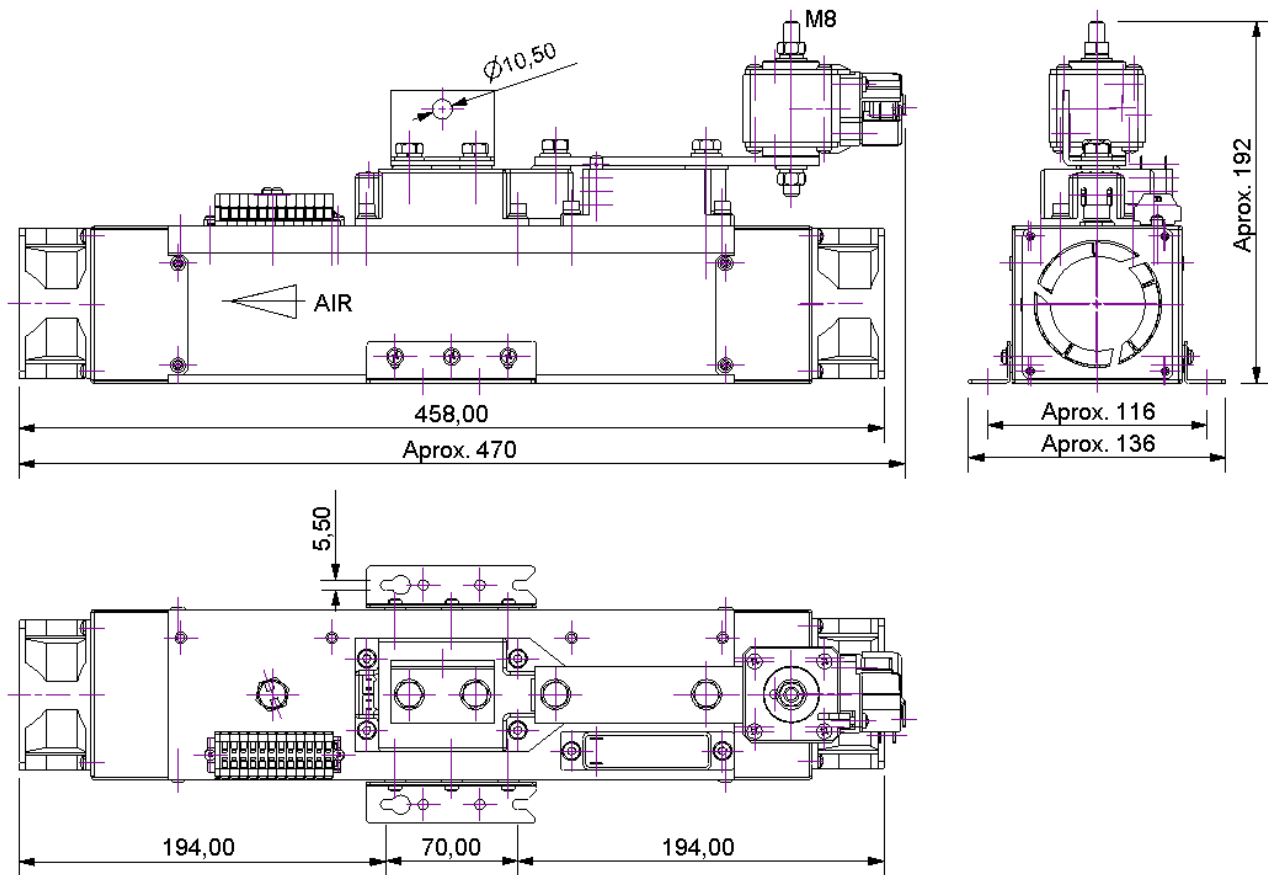
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DIMENSIONS



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MOUNTING CONSIDERATIONS

It's necessary a minimum distance of 100 mm with regard to the envelope. The free air circulation should be guaranteed. Avoiding the heat sources of nearby to assembly.

In the real applications it is important to consider a safety margin with regarding the working current, we recommend a margin of the 20%.

For critical cases (24 hours work, repetitive overloads...), margins of the 30% to 50% are used.

For redundant application apply a -10% current data.

ORDER CODES & OPTIONS

MF- W1C 0490 F 12 RCVTF
(1) (2) (3) (4) (5) (6)

1- MF, Series identifier

2- W1C, Circuit identifier

3- 0490; Maximum current identifier

4-F, Refrigeration identifier (N:Natural; F: Forced)

5-12; $V_{RRM}/10$ identifier

6-Accessories:

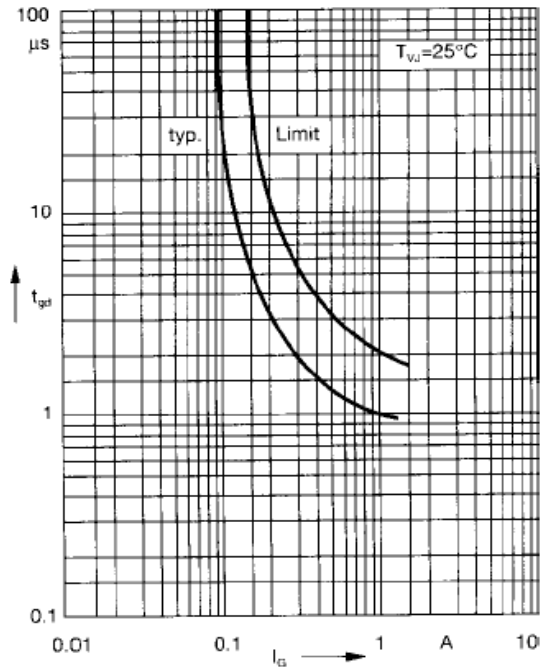
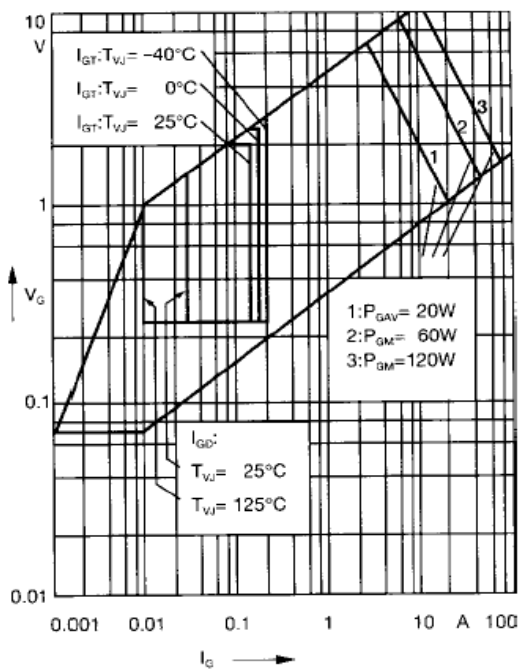
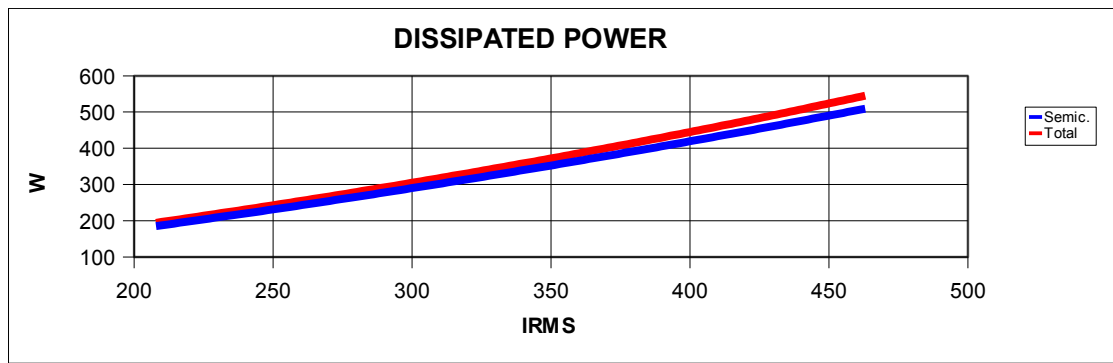
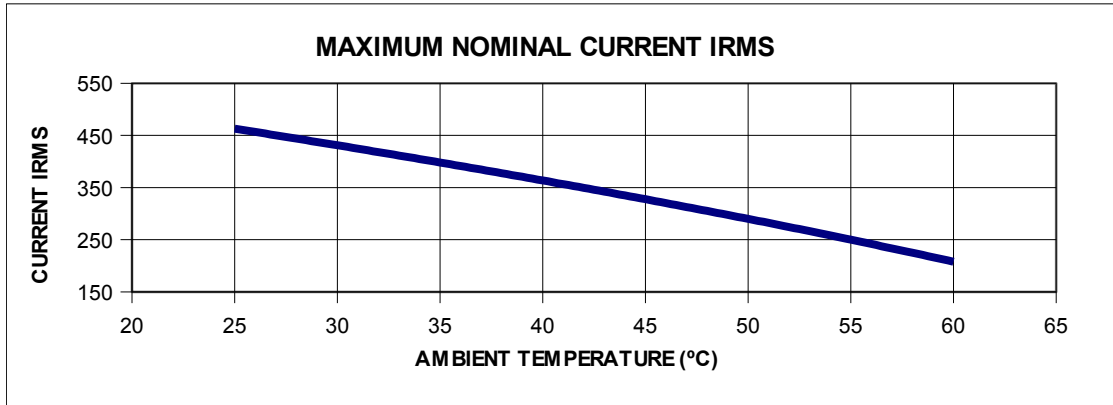
RC: Resistance-capacitor (snubber) included

V: Varistor included

T. Thermal switch included

F: Semiconductor fuse protection included. (fuse also includes microswitch)

GRAPHICAL INFORMATION



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No Annotation: The product parameters are fixed and the product is available to datasheet specification.

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