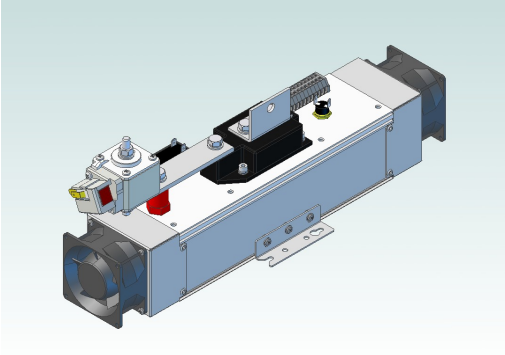
MF-W1C0490F12RCVTF

Single phase AC regulator standard assembly

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} @ 35ºC TA
Maximum nominal working current (I_{RMS}) (2)	380 A_{RMS} @ 35ºC TA
Cooling	Forced air, fan 80x80 @ 230V_{RMS}

(1): The maximum non continuous w orking current

(2): The maximum continuous w orking current w ithout thermal protection activation

SEMICONDUCTOR SPECIFICATIONS	
Peak non-repetitive surge current (I_{TSM})	9200 A @ T_P=10ms, Tj=45ºC, (50Hz), sine
	8000 A @ T_P=10ms, Tj=125ºC, (50Hz), sine
I^2t capacity for fusing	420 kA^2s @ T_P=10ms, Tj=45ºC, (50Hz), sine
	320 kA^2s @ T_P=10ms, Tj=125ºC, (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 @ Tj=125ºC, V_D=2/3 V_{RRM}
Gate trigger voltage (V_{GT})	max. 2 V @ Tj=25ºC, V_D=6V
	max. 3 V @ Tj=-40ºC, V_D=6V
Gate trigger current (I_{GT})	max. 150 mA @ Tj=25ºC, V_D=6V
	max. 200 mA @ Tj=-40ºC, V_D=6V
Latching current (I_L)	200 mA @ Tj=25ºC, t_P=30µs; V_D=6V
Holding current (I_H)	150 mA @ Tj=25ºC; 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)	80ºC 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 mm² / AWG 16

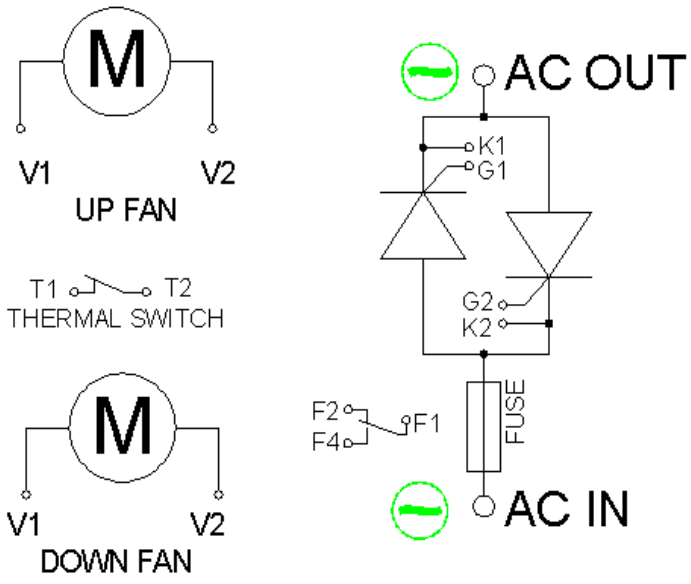
(1):The press should be performed w ith tw o keys, avoiding to transmit lateral efforts al terminal of connection, w hat w ould be able to produce the deterioration of the element semiconductor.

ENVIRONMENT SPECIFICATIONS	
Protection grade (EN-60529 / CEI529 / UNE-20324)	IP-00
Humidity max.	50% RH @ 35ºC / 90% RH @ 20ºC
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 80ºC
Width	136 mm
Depth	192 mm
Height	470 mm
Aprox. Weight	5.5 Kg.

SCHEMATIC CIRCUIT



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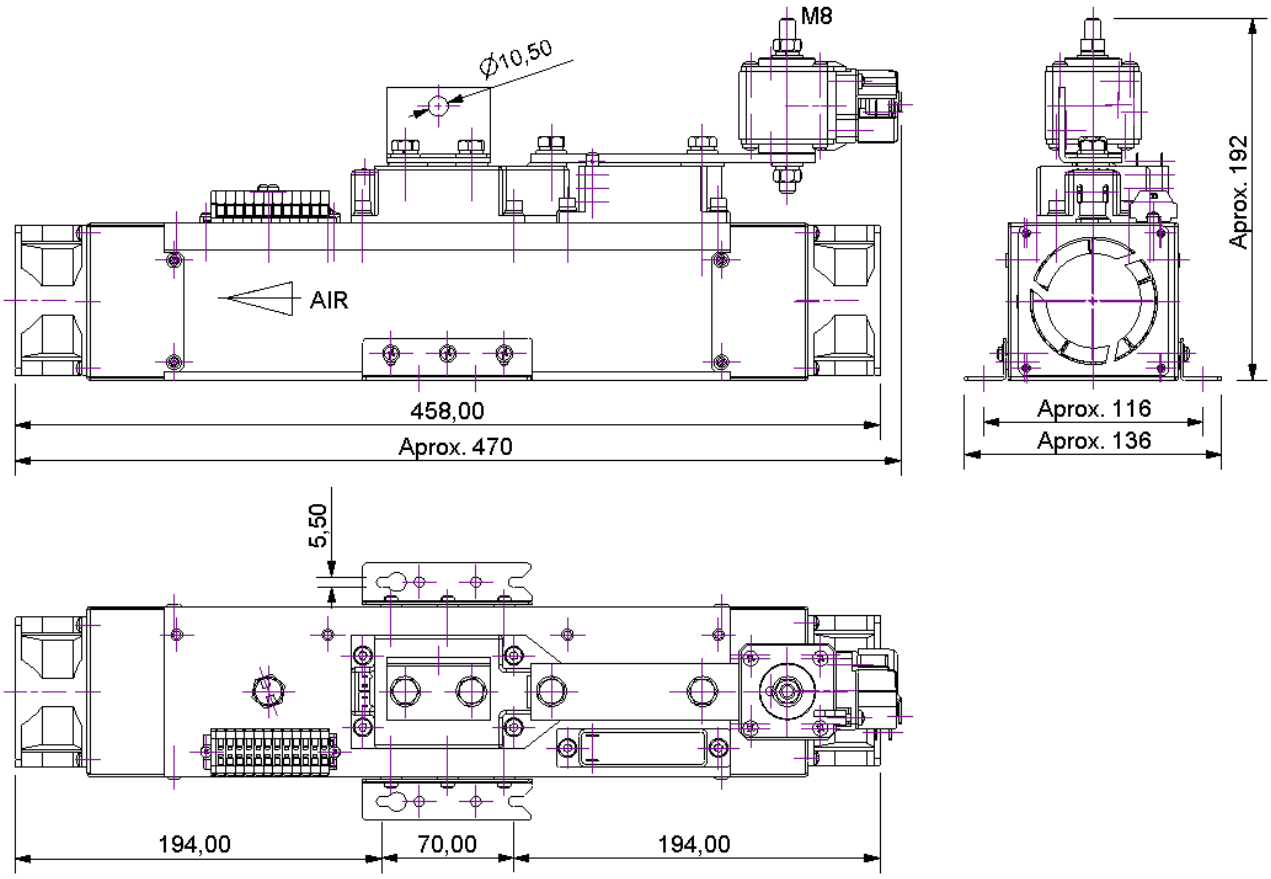
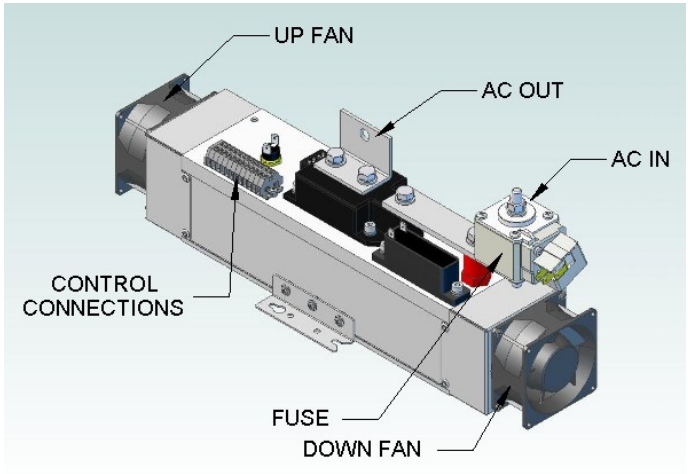
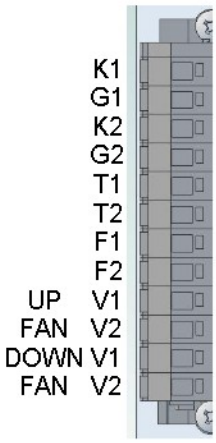
DIMENSIONS







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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-Accesories:
RC: Resistance-capacitor (snubber) included
V: Varistor included
T. Thermal switch included
F: Semiconductor fuse protection included. (fuse also includes microswitch)

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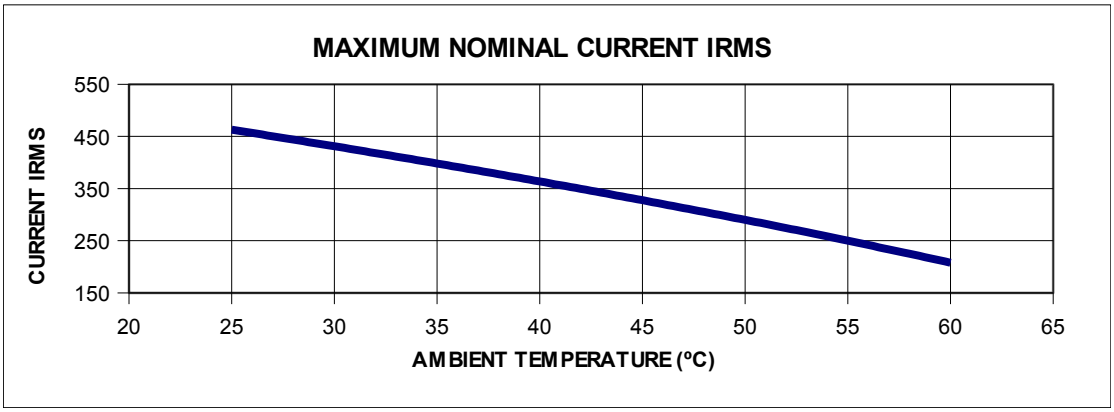
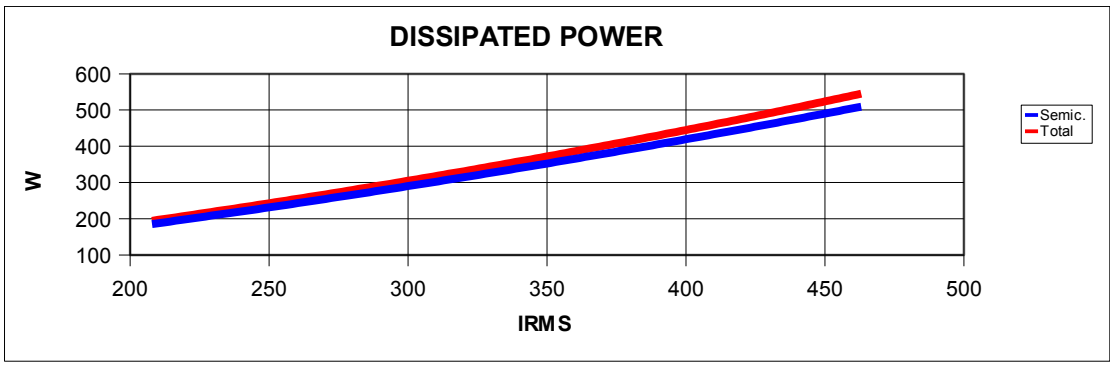
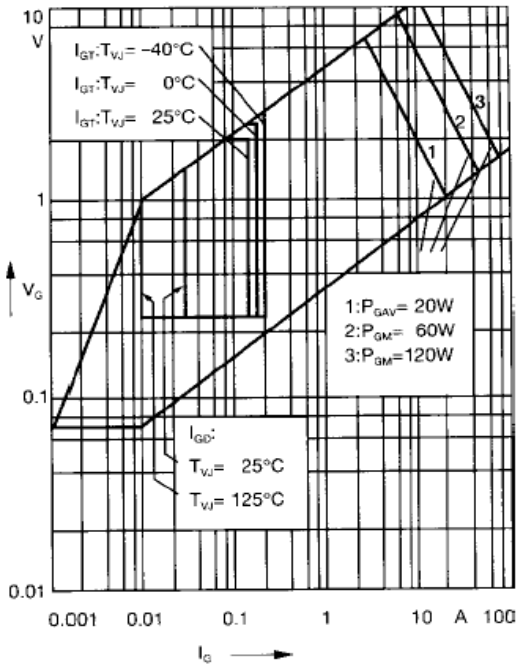
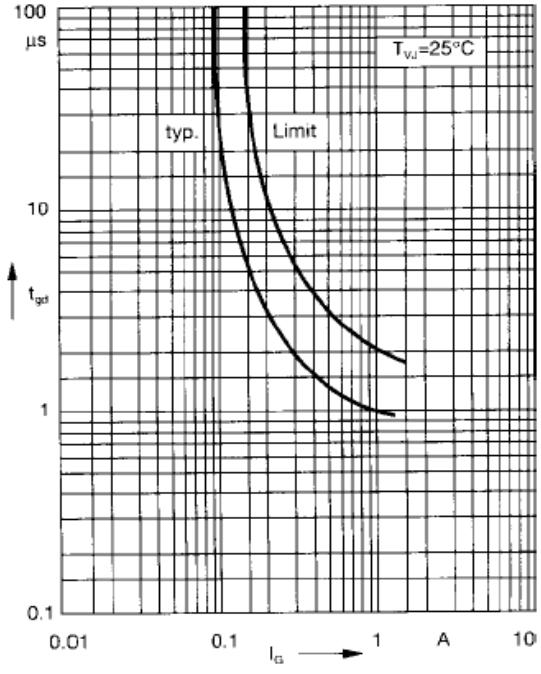
GRAPHICAL INFORMATION









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ANOTACIONES EN LA HOJA DE ESPECIFICACIONES:

RECTIFICADORES GUASCH, S.A. utiliza la siguiente anotación para identificar el estado del producto, en el lado izquierdo de la primera página:

PRELIMINARY TECHNICAL INFORMATION: El producto se encuentra en proceso de diseño y desarrollo. La información presenta los datos del producto pero algunas características pueden cambiar.

ADVANCED TECHNICAL INFORMATION: El producto se encuentra totalmente diseñado y las características se refieren a la fabricación en serie.

Sin anotación: Los parámetros del producto están fijados y se suministra de acuerdo con las especificaciones publicadas.

DATASHEET ANNOTATIONS:

RECTIFICADORES GUASCH, S.A. annotate datasheets in the left corner of the front page, to indicate product status:

PRELIMINARY TECHNICAL INFORMATION: The product is in design and development. The datasheet represents the product as it is understood but details may change.

ADVANCED TECHNICAL INFORMATION: The product design is complete and final characterisation for volume production is well in hand.

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

DATASHEET ANNOTATIONS:

RECTIFICADORES GUASCH, S.A. Indiqué dans la notice technique a la part inferieur à gouche le suivant pour vous informer de la situation du produits

PRELIMINARY TECHNICAL INFORMATION: Le produit est dans la conception et le développement. La notice technique représente le produit comme il a été conçu mais les détails peuvent changer.

ADVANCED TECHNICAL INFORMATION: La conception de produit est fini et la notice technique est comme il a été conçu pour la fabrication.

Sans annotation: La notice technique indique que le produit est selon la même

Your Needs, Our Solutions

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