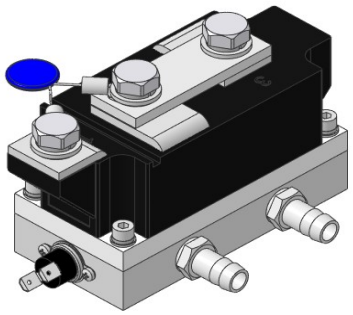
SMx-W1C1240W16xx

SCR water cooled AC regulator

HIGHLIGHTS

- Wide range.
- Reliability.
- Short delivery time.
- Thermostat and varistor options.
- Ready to use.
- Working voltage up to 460 V_{RMS}
- Insulation 3000 V_{RMS} /1 min.



non-contractual image

OVERVIEW

Compact liquid cooled stacks with thyristor-thyristor modules ready to use.

GENERAL SPECIFICATIONS

Symbol	Parameter	Notes / Test conditions	Min	Typ	Max	Units
V_{AC}	Nominal line to line input voltage			400	510	V
$I_{AC\ max}$	Maximum working current (1)	*Water @ 25ºC; 4L/min.*		1240		A
$I_{AC\ nom.}$	Maximum nominal working current (2)	*Water @ 25ºC; 4L/min.*		1200		A

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

SEMICONDUCTOR SPECIFICATIONS

Symbol	Parameter	Notes / Test conditions	Min	Typ	Max	Units
V_{RRM}	SCR repetitive peak voltage			1600		V
I_{TSM}	Peak non-repetitive surge current	*TP =10ms, Tj=125ºC, (50Hz)*		14,5	15.5	kA
I^2t	I^2t capacity for fusing	*TP =10ms, Tj=125ºC, (50Hz)*		1050	1200	kA^2s
di/dt	Maximum rate of rise of on-state current			200	400	A/µs
dv/dt	Critical rate of rise of off-state voltage			500	1000	V/µs
V_{ISO}	Isolation Voltage	*V_{RMS}; 1min @ 50Hz*	3000			V

PROTECTIONS

Symbol	Parameter	Notes / Test conditions	Min	Typ	Max	Units
VDR	Voltage protection	*Nominal value*		510		V
TH_{switch}	Maximum working current (1)	*Cut off temperature*	55	60	65	ºC

LEADS SPECIFICATIONS

Symbol	Parameter	Notes / Test conditions	Min	Typ	Max	Units
L_{POWER}	Module power leads	*M10*	12		13.8	Nm
L_{CTRL}	SCR control leads	*Fast-on 2,8/0,8 (1)*				
L_{TH}	Thermal cut-off leads	*6,35 mm Fast-on*				

240408 Rev.:2

Reserves the right to change limits, test conditions and dimensions given in this data sheet at any time without previous notice.

ENVIRONMENT SPECIFICATIONS

Symbol	Parameter	Notes / Test conditions	Min	Typ	Max	Units
IP	Protection grade	*EN-60529 / UNE-20324*		0		
Hr_{MAX}	Maximum relative humidity	*Without condensation*		80		%
PD	Pollution degree			III		
Visol	Isolation	*V_{AC}/1 minute*		3000		V

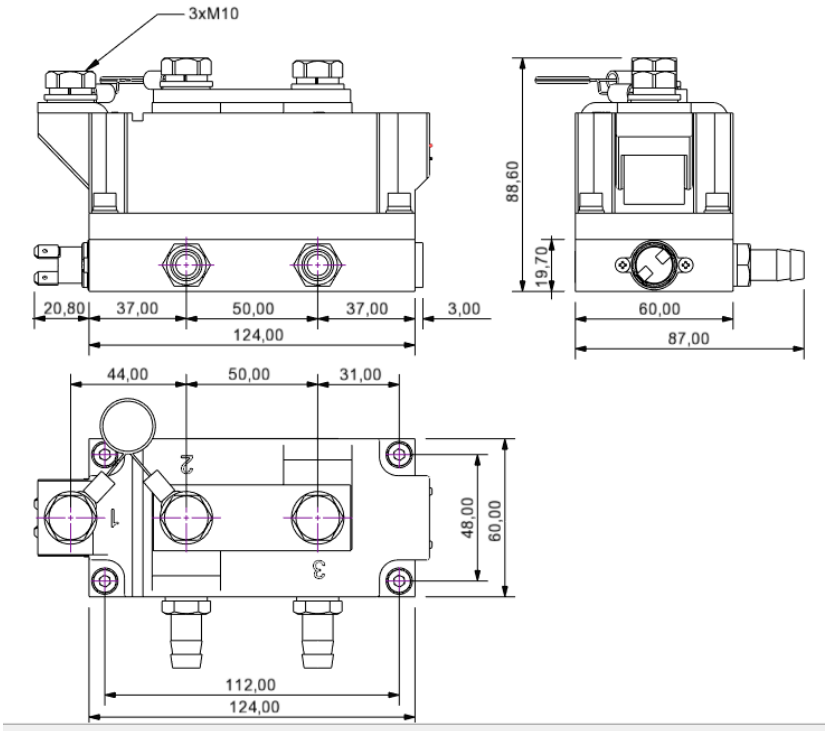
LOSSES

Symbol	Parameter	Notes / Test conditions	Min	Typ	Max	Units
P_{LOSSES}	Power dissipation	*$I_{AC\ nom}$ @ full conduction*		1625		W

MECHANICAL SPECIFICATIONS

Symbol	Parameter	Notes / Test conditions	Min	Typ	Max	Units
M_p	Mounting position	*Any*				
T_{sto}	Storage temperature		-25		80	ºC
W	Width			63		mm
D	Depth	*main body*		65		mm
H	Heigh	*main body*		116		mm
Wt	Weigth		1200	1300		g

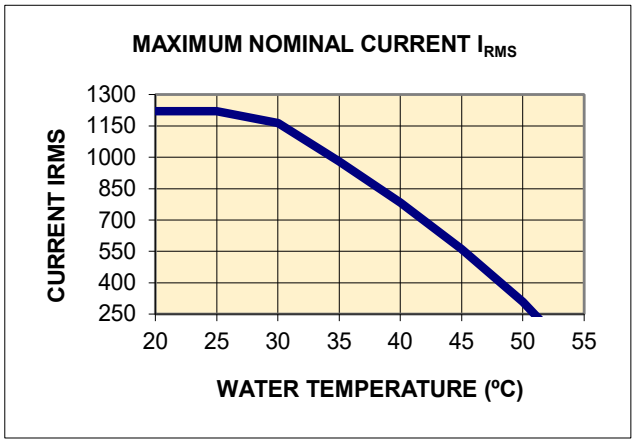
DIMENSIONS

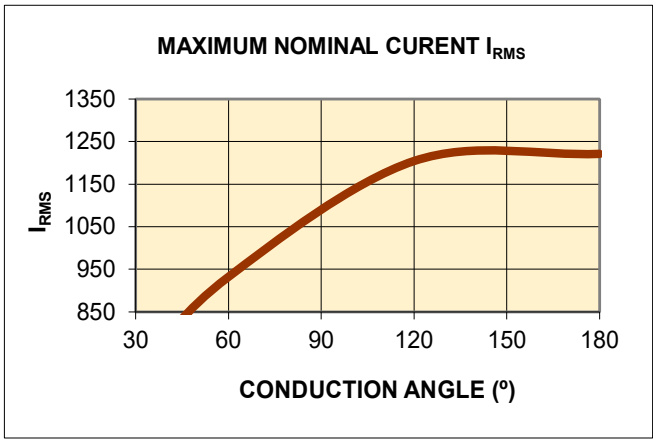


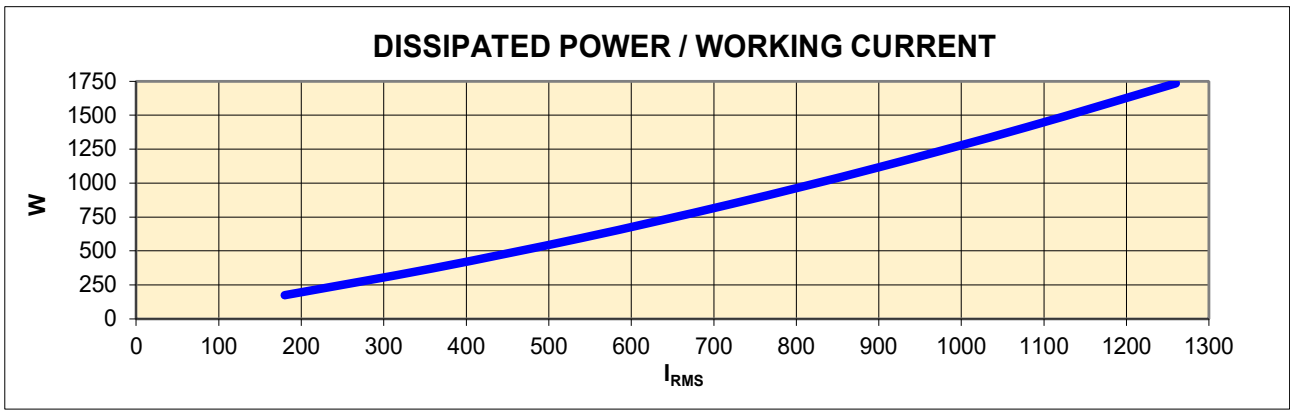
All dimensions in mm

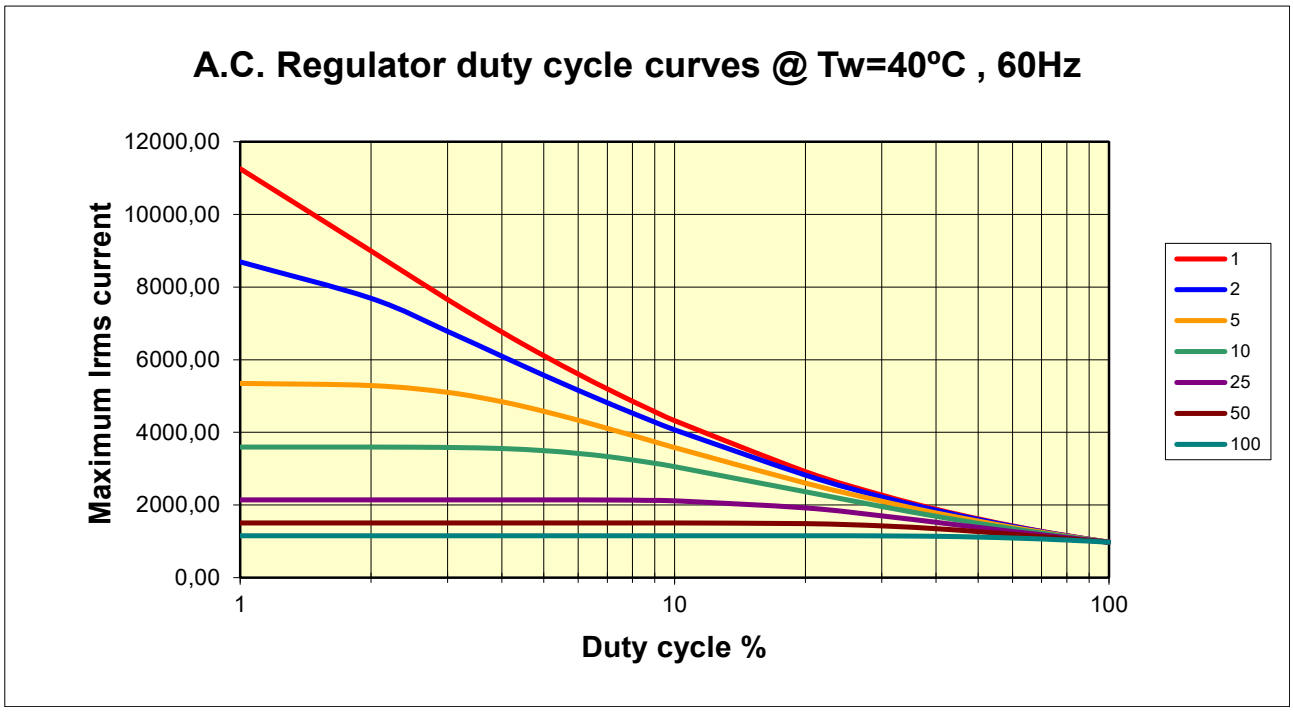
Reserves the right to change limits, test conditions and dimensions given in this data sheet at any time without previous notice.

GRAPHICAL INFORMATION









Reserves the right to change limits, test conditions and dimensions given in this data sheet at any time without previous notice.

ORDER CODES

Example: SM 1 W1C 1200 W 16 VT
1 2 3 4 5 6 7

1- SM, Series general identification
2- Fittings configuration
0.- Without water input-output fittings
1.- Straight water input-output fittings
L.- Down side water input-output fittings
3.- Electrical circuit topology (W1C means anti-parallel thyristors)
4.- Maximum allowable I_{RMS} current
5.- Cooling system (W = water)
6.- Maximum reverse voltage V_{RRM} . (16 = 1600 V)
7.- Accessories and protections included
V.- Varistor.
T.- Thermal switch (NC)

Reserves the right to change limits, test conditions and dimensions given in this data sheet at any time without previous notice.

ANOTACIONES EN LA HOJA DE ESPECIFICACIONES:

RECTIFICADORES GUASCH, S.A.U. 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.
Advance 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.

Los datos indicados en esta publicación corresponden a especificaciones de producto, queda exlcuida cualquier garantía expresa o implícita sobre sus propiedades o su aplicación, así como cualquier responsabilidad sobre daños directos o indirectos producidos por los materiales o resultantes de su aplicación. La empresa se reserva el derecho de realizar cambios en las especificaciones de los productos sin previo aviso. La información respecto a métodos de uso y aplicaciones se indica sólo como guía y no constituye garantía alguna de funcionamiento satisfactorio en un determinado equipo o aplicación. Es responsabilidad del usuario determinar la idoneidad del producto para su aplicación utilizando la información disponible y asegurarse de que la misma esta actualizada.
Cualquier nombre de producto o marca usada en esta publicación corresponde a marcas depositadas, marcas registradas o nombres protegidos por sus respectivos propietarios.

DATASHEET ANNOTATIONS:

RECTIFICADORES GUASCH, S.A.U. 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.
Advance 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.

The technical data are to specify components, not to guarantee their properties.No warranty or guarantee expressed or implied is made regarding delivery or performance. The Company reserves the right to alter without prior notice the specification of any product. Information concerning possible methods of use is provided as a guide only and does not constitute any guarantee that such methods of use will be satisfactory in a specific piece of equipment. It is the user's responsibility to fully determine the performance and suitability of any equipment using such information and to ensure that any publication or data used is up to date.
All brand names and product names used in this publication are trademarks, registered trademarks or trade names of their respective owners.

© RECTIFICADORES GUASCH, S.A.U.
DOCUMENTACION TECNICA, TECHNICAL DOCUMENTATION
PRODUCIDO EN ESPAÑA, PRODUCED IN SPAIN
PROHIBIDA SU VENTA, NOT FOR SALE

Your Needs, Our Solutions