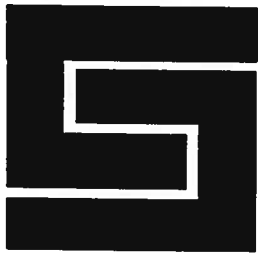
TECHNICAL NOTICE SMAD

SMAD-8 Modules
SMAD-18 modules

NTAD-0321

Vizimax, 2284 de la Province Street
Longueuil (Quebec), Canada, J4G 1G1
Tél: (450) 679-0003 Fax: (450) 679-9051 www.vizimax.com



TECHNICAL NOTICE

DIODE SWITCHING

AUXILIARY MODULE

SMAD

NTAD-321 REV. 0

Snemo ltée/Ltd, 3605 Isabelle, Brossard (Québec), Canada, J4Y-2R2
Tél. : (514)-444-3001, Mtl : (514)-861-7102, Fax : (514)-444-3009

Diode switching auxiliary module SMAD

General information

AUTHOR :	Robert Desvigne	93-03-01
VERIFIED :		96-12-19
APPROVED :		97-1-10

Revision history

DATE	REV.	DESCRIPTION	AUTHOR	VERIFIED	APP.
96-12-19	**0**	**First release**	R.D.		

SMAD
Diode Switching auxiliary module

Application

These modules which are compatible with other protective and auxiliary relay functions and withdrawable within the VERSA rack system, are mainly used for :

* blocking, switching or multiplying as needed control signals which initiate relay trip functions;

* protecting control and protection devices against the most extreme transient overvoltages.

Caracteristics and advantages

Allows the systemic and economic integration of protection diodes within the VERSA rack system.

Simple and reliable installation.

Standard and easily procured components are used; field proven over many years and installations (diodes 1.5KE200A).

Large transient energy dissapation capability, approximately 9000 Watts per diode (more than 350% security margin).

Design foresees diode short-circuit in the event of diode failure.

Single seat module design.

Key-coded interlocks prevent erroneous insertion in the rack.

Module insertion mecanism ensures optimal electrical connections.

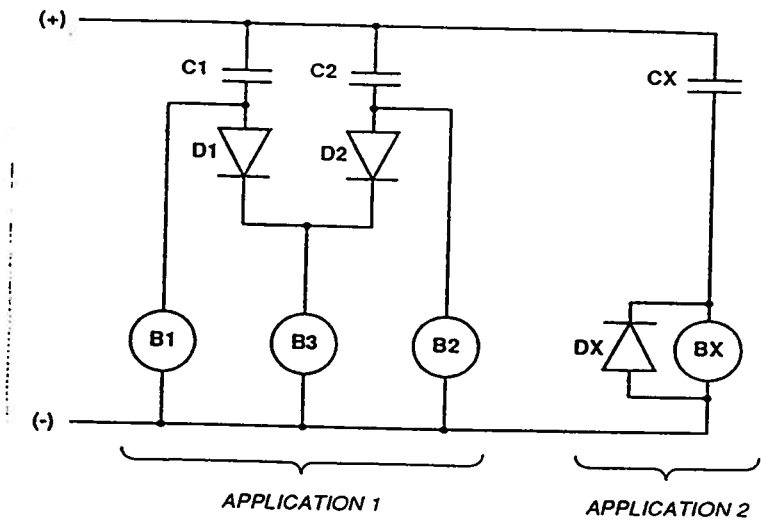
Principle of operation

The diagram below explains both the switching(1) and transient energy elimanation(2) principles.

1. Coil B3 can be activated by contact C1 or C2 closure, either via diodes D1 or D2.

SMAD
Diode Switching auxiliary module

2. We know that a very large voltage can produce an electric arc across contact CX, if diode DX were not present. The latter short-circuits the transient current generated by the BX coil. The stored energy in the magnetic field of BX is then dissipated in the diode and the resistance of the coil. The voltage across BX is limited to the diode voltage, that is a few volts at most, resulting in no disturbance.



Diode

Type:	Zener 1.5KE200A (reference number JEDEC 1N60303A)
Number:	8 or 18 (other configurations upon request)
Maximum voltage:	Maximum permanent voltage 171Vdc
Avalanch voltage:	Nominal voltage at 1 mA 200Vdc
	Maximum voltage, at 1 mA 210 Vdc
Avalanch power:	T=1ms at 50% 1500W
Leakagencurrent :	at 171Vdc 5 uA

External

Temperature:	Storage between-25 and +70°C
	Operation between-25 and +55°C
Humidify:	Storages between <90%
	Operation between 5 and 98%
Insulation:	Dielectric withsand 1500V rms
	Resistance between diodes >1000M

SMAD

Diode Switching auxiliary module

Mechanical:

Module dimension:	Width 41,5mm Height 177mm Depth 297mm
Module weights:	SMAD-8 534mm SMAD-18 583mm
Exterior Finish:	Front panel: anodized aluminium ; epoxy silk sreened-printing; thermoplastic Ink.

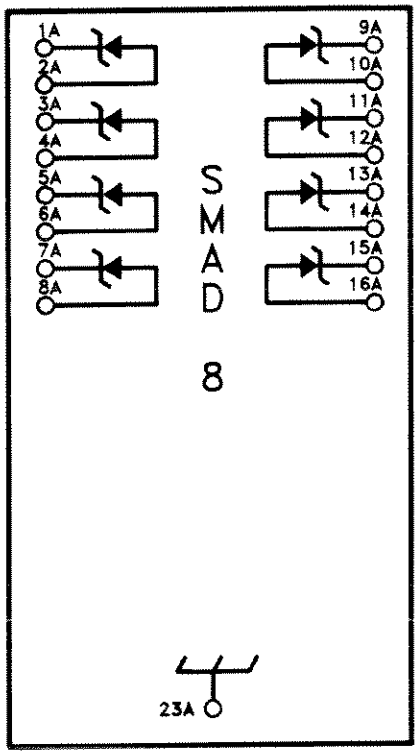
Avail able options

Two standard versions of the module are available and chosen based on the application requirements, SMAD-8 (8 diodes) and SMAD-18 (18 diodes). Other configurations are available upon request. Please consult Snemo for additional information on this product.

Related documents

For further details conerning this product and others related, please consult the following documents:

-SMAD NTAD-133
-Versa FCAP-146



DIODE CHANGEE POUR DIODE ZENER.	B	94-04-06	E.A.
REMPLACE PBAD-139 PAGE 1 DE 2	A	92-01-15	MV TM MMB
REVISIONS	IND.	DATE (AMJ/YMD)	NOM/NAME

SCEAU/SEAL: INGÉNIEUR - ENGINEER, Alain Charette, 106541, QUÉBEC

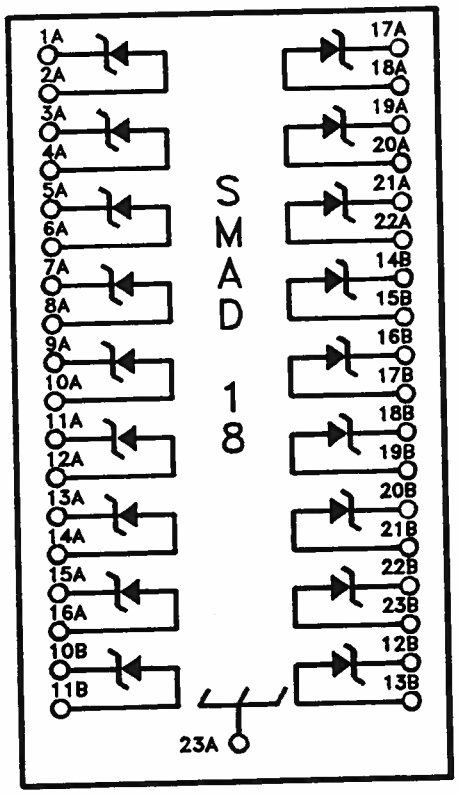
DATE: AMJ/YMD	90-04-11
DESSINE DRAWN	Y. MASSE
PROJETE PROJECTED	M.MONT-BRIANT
VERIFIE CHECKED	Y. GROULX
APPROUVE APPROVED	M.MONT-BRIANT

Snemo Ltee/Ltd

PLAN DE BORNAGE

SMAD 8

FORMAT: A4 | ECHELLE: SCALE: N/A



DIODE CHANGEE POUR DIODE ZENER.	A	94-04-06	E.A.
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SCEAU SEAL

INGÉNIEUR - ENGINEER
Alain Charette
106541
QUÉBEC

DATE: AMJ/YMD	92-01-15
DESSINE DRAWN	M. VOYER
PROJETE PROJECTED	T. MARMOUCH
VERIFIE CHECKED	A. MANGA
APPROUVE APPROVED	M.MONT-BRIANT

Snemo Ltee/Ltd

PLAN DE BORNAGE

SMAD 18

FORMAT:	A4	ECHELLE: SCALE:	N/A