

iCE

PROTECTION

MONITORING

&

CONTROLS

RDSY

VECTOR JUMP RELAY

Parallel operation protection

Scope:

The RDSY relay is part of the R series control relays

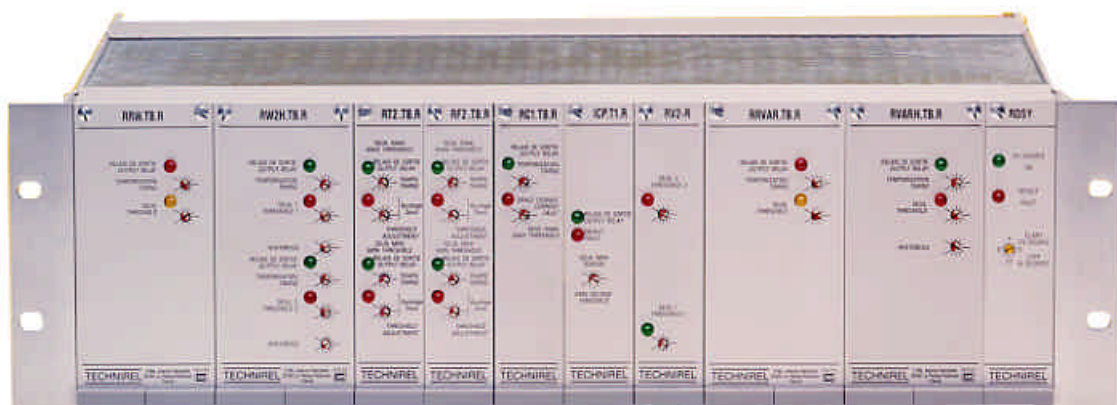
The RDSY relay protects the alternators operated permanently in parallel with the grid by initiating very fast disconnection in case of mains failure.



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CONTENTS

- Scope
- Application
- Operation
- Setting & displays
- Presentation
- Characteristics
- Product identification



APPLICATION

Main failures can be classified in 2 categories :

- short grid interruption : (duration less than 300 m/s)

In this case mains can return & find the alternator in asynchronous phase position.

Consequence of such situation is generation of short circuit type currents & important mechanical destructions.

- Long lasting grid interruption :

In this case, the loads supplied by the alternator can bring him in a short circuit situation.

As described above alternators operating in parallel with grid are extremely endangered, RDSY relay reacts rapidly in case of grid interruption even before generator classical protections

RDSY

OPERATION

- The RDSY relay detects the voltage vector jump of the alternator coupled to the grid that occurs when grid fails.
- This grid interruption produces an instantaneous load variation.
- The RDSY detection is very fast (1 period) whatever was the load initially but it requires a minimum variation of 5% of nominal load value.
- However, if this condition is not fulfilled, RDSY relay will trip upon the next consumer load change.
- To avoid improper tripping a 10s inhibition time follows any connection of the RDSY.

SETTINGS & DISPLAYS

Displays : The operating condition of the RDSY (ON) as well as the detection performed (FAULT) are displayed by illumination of 2 color led's (green and red) on the RDSY front plate.

Settings : The angle value used for vector jump detection is adjusted on the 15 coding positions of the "STEP" wheel located on the RDSY front plate.

Adjustment range : 0 to 15°

Minimum step : 1°

Recommended setting : 3° to 5°

PRESENTATION

The RDSY relay is housed in an aluminium clad enclosure suitable for flush or panel projection mounting.

Size : 6T 3U

Weight : 1 Kg

Fixation : rear fixation : see drawing n°E897B
front fixation : see drawing n°3551/2

Connection : see drawing n°22014

Screw terminals 6 positions



CHARACTERISTICS

Supply : from the voltage sensing

Voltage sensing :

1 input : 100-110V/50 or 60Hz

consumption : 3VA max

Contact output

1 dry contact free of voltage

Single pole, 2 throws type

Breaking rate : DC currents : 30V/8Amps
100V/0,5Amps
300V/0,3 Amps

AC currents : 2000VA/220V

Environmental conditions :

Operating temperature : -10° to +55°C

Storage temperature : -20° +70°C

Relative humidity : 0-92°C non condensing

Compliance to standards : IEC 92504/S3

IEC 68-2-6/FC

IEC 801-3

IEC 801-4

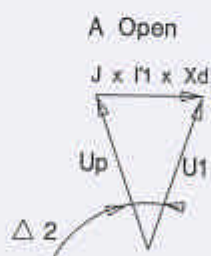
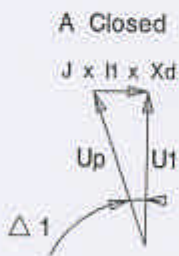
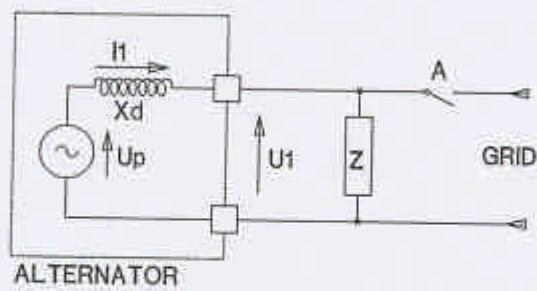
IEC 801-5

Date of Edition : 24/07/1995

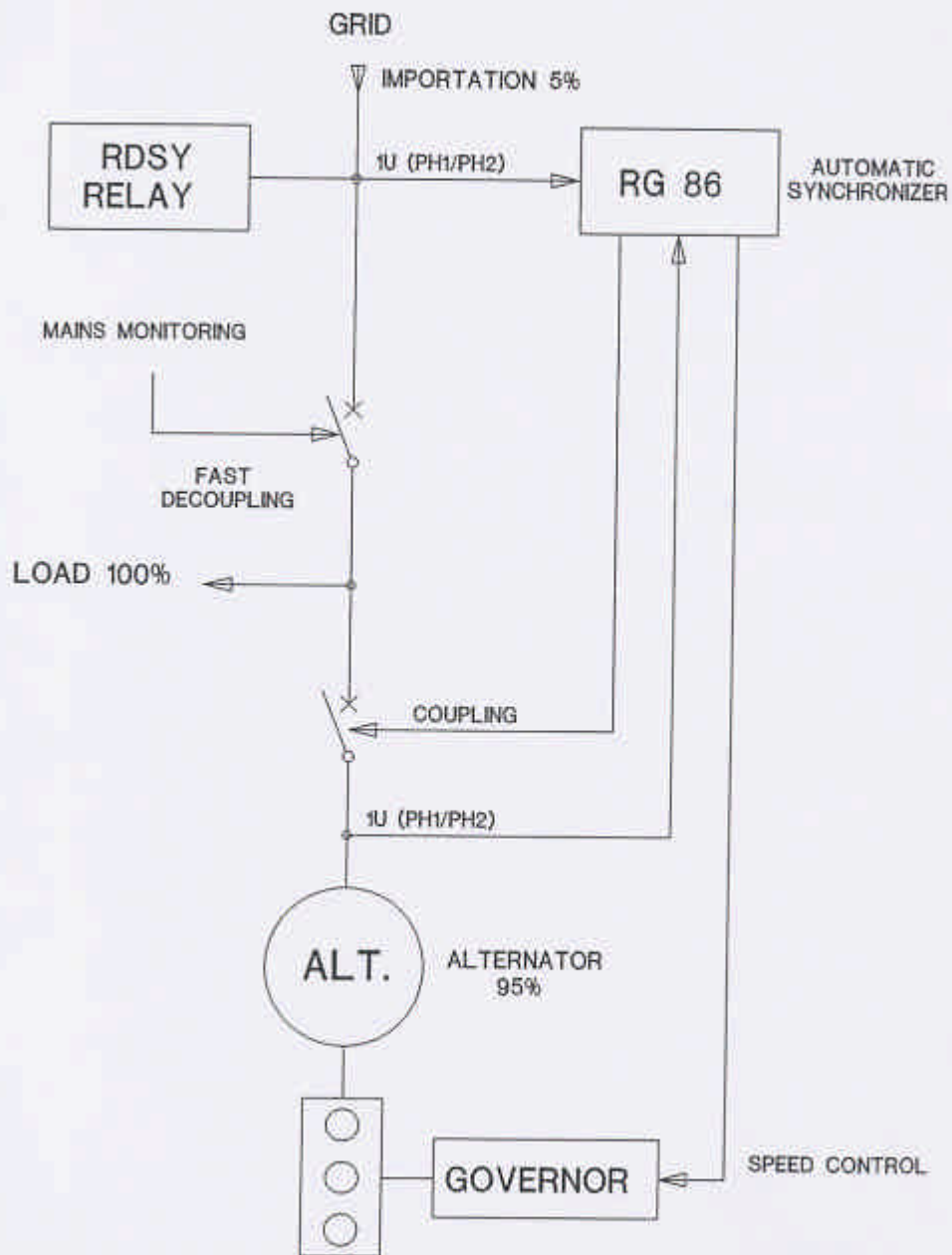
Leaflet n°5061/A

PRODUCT IDENTIFICATION _____

Type	V voltage (V)	F Frequency (Hz)	I Installation
↓			
RDSY	↓		
	100 — or — — 110	↓	
		50 — or — 60	↓
			R : flush mounting — or — S : rear fixation



		MISE A JOUR LE 07/11/95	ENGLISH EDITION
IND	DATE	MODIFICATION	N° SC 116
TECHNIREL		RELAY RDSY VECTOR JUMP PRINCIPLE	
TECHNIQUES DE LA REGULATION ELECTRIQUE	GRUPE EPE		Dessiné par G.Y.
6 bis avenue DESCARTES 92350 LE PLESSIS-ROBINSON		tel : 46 29 97 00	Date: 25/07/95
		fax : 46 32 34 80	telex : 63160F

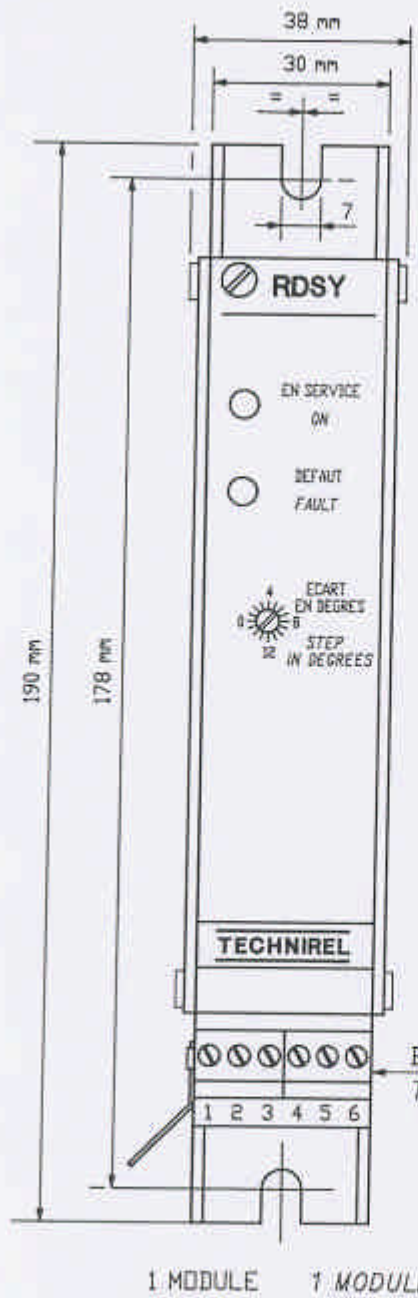


PARALLEL OPERATION
WITH RDSY PROTECTION

ENGLISH EDITION

MISE A JOUR LE 07/11/95

TECHNIREL SC117



BORNES TERMINALS

- 1 - PH1 } 100V
- 2 - PH2 } 100V
- 3 - 0V
- 4 - Commun Commun
- 5 - Repos N.C.
- 6 - Travail N.O.

Relais désexcité en présence de défaut

Not energized relay with failure

BORNIERS
TERMINAL BLOCK

1 MODULE 1 MODULE

IND	DATE	MODIFICATION	N°22014	
TECHNIREL <small>TECHNIQUES DE LA REGULATION ELECTRIQUE</small> <small>GRUPE</small>		RACCORDEMENT RDSY 'BOITIER' RDSY CONNECTION "PROTRUDING CASE"		
6 bis avenue DESCARTES 92350 LE PLESSIS-ROBINSON tél. : 46 29 97 00 fax. : 46 32 34 80 télfax : 631601F				