



ACS250/ACS255 (115V-480V Variants) RELAY OUTPUT OPTION CARD



SAFETY NOTICES

WARNING is given where there is a hazard that could lead to injury or death of personnel.

CAUTION is given where there is a hazard that could lead to damage to equipment.

It is the responsibility of the installer to ensure that the equipment or system into which the product is incorporated complies with the EMC legislation of the country of use. Within the European Union, equipment into which this product is incorporated must comply with 89/336/EEC, Electromagnetic Compatibility.

WARNING

Within the European Union, all machinery in which this product is used must comply with the Machinery Directive 2006/42/EC, Safety of Machinery. In particular, the equipment should comply with EN60204-1.

CAUTION

- Store the Option in its box until required. It should be stored in a clean and dry environment. Temperature range -40°C to $+60^{\circ}\text{C}$.
- Install the Option by inserting the row of 11 pins into the terminal connector of the ACS250/ACS255 ensuring that the terminals are tightened.
- If the Option is being used with Size E1, care should be taken to support the Option when the terminal screws of the Option are being tightened or loosened.

WARNING

- The ACS250/ACS255 and the Options should be installed only by qualified electrical persons and in accordance with local and national regulations and codes of practice.

- **Electric shock hazard!** Disconnect and **ISOLATE** the drive before attempting any work on it. High voltages are present at the terminals and within the drive for up to 10 minutes after disconnection of the electrical supply.

- Where the electrical supply to the drive is through a plug and socket connector, do not disconnect until 10 minutes have elapsed after turning off the supply.

User Guide

All rights reserved. No part of this User Guide may be reproduced or transmitted in any form or by any means, electrical or mechanical including photocopying, recording or by any information storage or retrieval system without permission in writing from the publisher.

© 2013 ABB Oy, ALL Rights Reserved

The manufacturer accepts no liability for any consequences resulting from inappropriate, negligent or incorrect installation.

The contents of this User Guide are believed to be correct at the time of printing. In the interests of a commitment to a policy of continuous improvement, the manufacturer reserves the right to change the specification of the product or its performance or the contents of the User Guide without notice.

SAFETY

This option is specifically designed to be used with the ACS250/ACS255 variable speed drive product and is intended for professional incorporation into complete equipment or systems. If installed incorrectly it may present a safety hazard. The ACS250/ACS255 uses high voltages and currents, carries a high level of stored electrical energy, and is used to control mechanical plant that may cause injury. Close attention is required to system design and electrical installation to avoid hazards in either normal operation or in the event of equipment malfunction.

System design, installation, commissioning and maintenance must be carried out only by personnel who have the necessary training and experience. They must read carefully this safety information and the instructions in this Guide and follow all information regarding transport, storage, installation and use of the Option module, including the specified environmental limitations.

Please read the IMPORTANT SAFETY INFORMATION below, and all Warning and Caution boxes elsewhere.

STANDARDS CONFORMITY

An ACS250/ACS255 (115V-480V Variant) fitted with this Option complies with the Following standards:

- CE-marked for Low Voltage Directive.
- IEC 664-1 Insulation Coordination within Low Voltage Systems.
- UL 840 Insulation Coordination for electrical equipment.
- EN50081-2 EMC Generic Emissions Standard, Industrial Level.
- EN50082-2 EMC Generic Immunity Standard, Industrial Level.
- Enclosure ingress protection, EN60529 IP00, NEMA 250.
- Flammability rating according to UL 94.

ABB Oy

AC Drives
P.O. Box 184
FI-00381 HELSINKI
FINLAND
UK

www.abb.com/drives

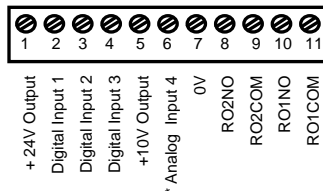
Part No.	3AUA0000135609
Model No.	RCRO-01
Document No.	3AXD10000706812
Literature Fulfilment Part No.	ACS255-PNMU03U-EN_REVA

EXPLANATION

The Relay Output Module can be used in applications where the analog/digital output from the drive is converted to a relay output. Typical applications are where two relay outputs are required. The functions of the relays are programmable in the drive and can be any of the following:

- Drive enabled
- Drive healthy
- Drive at set speed
- Drive at zero speed
- Drive at max speed
- Motor in overload

OPTION CONTROL TERMINALS



* Analog inputs should be connected to terminals 6 & 7.

Note :

The second relay output contacts are available on terminals 8 and 9. This relay utilises the drive's analog/digital output for operation - therefore the analog output is not available when this module is fitted.

NOTES

SPECIFICATIONS

Max Relay switching voltage:	250V AC / 220V DC
Max Relay switching current:	1A
Max input voltage :	+/- 50V DC
Environmental :	-10°C ... +50°C
Conformity :	IP00, UL94V-0

OPERATION

Programming the first relay output

Since the first relay output (fitted within the ACS250/ACS255 (115V-480V Variant) is programmed using parameter 1401 in the drive, two completely independent relay outputs are available. The following options are supported for relay 1 :

1401	Relay 1 output function select (RO1)
0 : Drive enabled	Defines the function of the user relay 1, when the operating conditions are met. Disabled : Contacts open Enabled : Contacts closed Options 4 to 7: the Relay output is enabled using the level set in parameter 3200
1 : Drive healthy	
2 : Motor at target speed	
3 : Drive tripped	
4 : Motor speed >= limit	
5 : Motor current >= limit	
6 : Motor speed < limit	
7 : Motor current < limit	

Programming the second relay output

The second relay output is controlled using parameter 1501. This can be set to any of the choices 0-7 as described below:

1501	Relay 2 output function select (RO2)
0 : Drive enabled	Defines the function of the user relay 2, when the operating conditions are met. Disabled : Contacts open Enabled : Contacts closed Options 4 to 7 : the Digital output is enabled using the level set in Parameter 3200.
1 : Drive healthy	
2 : Motor at target speed	
3 : Drive tripped	
4 : Motor speed >= limit	
5 : Motor current >= limit	
6 : Motor speed < limit	
7 : Motor current < limit	

Note : Parameters 1401, 1501, and 3200 are located in the Long parameter group, group navigation is detailed in the drive manual.



82-2ROUT-ABB_V2

