



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



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.

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 onto the ACS250 by inserting the row of 11 pins into the terminal connector of the ACS250, ensuring that the terminals are tightened.

- If the Option is being used with Size E1 ACS250, care should be taken to support the Option when the terminal screws of the Option are being tightened or loosened.

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.

WARNING

- The ACS250 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 ACS250 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

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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 **115V- 480V** Variants of the ACS250 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 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, including the specified environmental limitations.

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

STANDARDS CONFORMITY

An ACS250 (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.

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Part No. 3AUA0000135609

Model No. RCR0-01

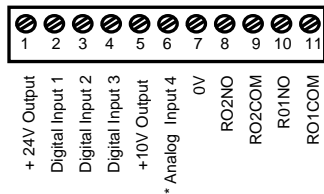
Manual Part No. 82-2ROUT-ABB_V1

EXPLANATION

The Relay Output card option 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.

SPECIFICATIONS

Max Relay switching voltage:	250V AC / 220V DC
Max Relay switching current:	1A
Max Carrying Current:	2A
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 (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 (Running)	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 Ready	
2 : Motor at target speed	
3 : Drive tripped	
4 : Output Frequency >= limit	
5 : Output current >= limit	
6 : Output Frequency < limit	
7 : Output current < limit	

Programming the second relay output

The second relay output is controlled using Optidrive 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 (Running)	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 Ready	
2 : Motor at target speed	
3 : Drive tripped	
4 : Output Frequency >= limit	
5 : Output current >= limit	
6 : Output Frequency < limit	
7 : Output current < limit	

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

NOTES

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