

INDUSTRIAL AUTOMATION PRODUCT

RRIA-01

Resolver Interface Module

accurate motor-shaft speed and angular-position feedback

IDENTITY	VERIFIED VALUE
Manufacturer	ABB
System family	ABB ACS800 drive
Part number	3ABD68486408
Country	Sweden
HS code	8537101190

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Technical Specifications

Technical values below are limited to the named ABB product record.

PARAMETER	VALUE
Complete model	RRIA-01
Resolver connection	Analog resolver
Drive option slots	SLOT 1 or SLOT 2
External adapter	AIMA-01
Parallel-bus connector	38-pin
Resolver terminal block	8-pole screw type
Terminal wire size, max.	2.5 mm ²
Resolver cable construction	4 x (2+1) twisted pairs; individual and overall shields
Resolver conductor area	0.5 to 1.0 mm ²
Resolver cable length, max.	100 m
Excitation frequency	10 kHz or 20 kHz

PARAMETER	VALUE
Excitation output, max.	12 Vpp
Resolver input level	8 Vpp
Position feedback resolution	12 bits (0.024%)
Node ID range	16 to 31
Default node ID	16
Pole-pair setting	1, 2, 3 or 4
Degree of protection	IP20
Power consumption	180 mA at 5 V + 80 mA at 24 V
Isolation test voltage	1.5 kV AC for 1 min
Estimated minimum lifetime	100000 h
Diagnostic LEDs	CHA/CHB green; WD/INIT yellow; ERR red

VERIFIED PRODUCT RECORD

DATA GROUP	VERIFIED VALUE
Installed host / carrier	ACS800 RMIO option slot
Companion hardware	AIMA-01 I/O Module Adapter
Field connection	Shielded resolver cable
Primary system function	Interfaces an analog resolver to ACS800 control
Controlled acceptance duty	ACS800 resolver-feedback commissioning

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System Role and Architecture

accurate motor-shaft speed and angular-position feedback

FUNCTION 1

Interfaces an analog resolver to ACS800 control

FUNCTION 2

Returns motor-shaft speed and angle feedback

FUNCTION 3

Supports 10 kHz or 20 kHz resolver excitation

FUNCTION 4

Provides channel, initialization and error diagnostics

Matched system components

- ACS800 RMIO option slot
- AIMA-01 I/O Module Adapter
- Shielded resolver cable
- Compatible analog resolver

SYSTEM INTEGRATION RECORD

INTEGRATION ITEM	DOCUMENTED ROLE
Installed host / carrier	ACS800 RMIO option slot
Companion hardware	AIMA-01 I/O Module Adapter
Field connection	Shielded resolver cable
Primary system function	Interfaces an analog resolver to ACS800 control
Controlled acceptance duty	ACS800 resolver-feedback commissioning

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Applications and Engineering Context

ACS800 resolver-feedback commissioning

Interfaces an analog resolver to ACS800 control

Permanent-magnet motor shaft-position feedback

Returns motor-shaft speed and angle feedback

AIMA-01 remote option-module installation

Supports 10 kHz or 20 kHz resolver excitation

Drive speed-feedback fault tracing

Provides channel, initialization and error diagnostics

TECHNICAL NOTE

Install RRIA-01 only in the documented ACS800 option slot or AIMA-01 adapter position, with resolver pole pairs and excitation frequency preserved. Verify positive feedback direction and review CHA, CHB, WD/INIT and ERR indications during controlled startup.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

CHECK	ACCEPTANCE CONDITION
Identity	RRIA-01 / 3ABD68486408 recorded
Physical interface	ACS800 RMIO option slot
Companion check	AIMA-01 I/O Module Adapter
Functional proof	Interfaces an analog resolver to ACS800 control
Application test	ACS800 resolver-feedback commissioning

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Engineering Precautions

1

Wait at least five minutes after isolating the ACS800 mains before handling RRIA-01.

2

Confirm RRIA-01 is assigned to SLOT 1, SLOT 2 or the documented AIMA-01 node.

3

Set resolver pole pairs and excitation frequency before refitting the enclosure cover.

4

Earth resolver cable shields according to resolver isolation and motor grounding arrangement.

5

Do not route resolver cable parallel to motor or other power cables.

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
INTKM01	ABB interface module	View INTKM01 page
PFTK101A	ABB pressductor interface	View PFTK101A page
DSTD196	ABB connection unit	View DSTD196 page
DSTY101	ABB termination unit	View DSTY101 page
SPA-ZC 402	ABB communication adapter	View SPA-ZC 402 page
SPA-ZC 400	ABB communication adapter	View SPA-ZC 400 page
SDCS-PIN-H51	ABB drive interface board	View SDCS-PIN-H51 page
NTAC-02	ABB pulse encoder interface	View NTAC-02 page

MANUFACTURER SOURCE RECORD

ABB RRIA-01 Resolver Interface Module User's Manual

3AFE68570760 Rev B

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