RD750

Resolver Interface Module

for Rockwell Automation Powerflex® 750-Series AC Drives

Features

- Single channel resolver interface
- Designed using Rockwell Automation licensed technology
- Simplifies migration from PF700 to PF750 drives
- Compatible with a variety of resolvers
- Field configurable using onboard DIP switches
- Built in hardware diagnostic features
- Compatible with Rockwell software





Product Description

AMCI's RD750 resolver option module plugs into Allen-Bradley's PowerFlex 750 variable frequency drive using licensed technology, and is configured using Rockwell Automation software - nothing new to learn or buy!

The RD750 resolver module is ideal for customers that upgrade to Rockwell Automation's PowerFlex 750 drives, but want to keep their existing motors with resolver feedback. Utilizing advanced resolver to digital conversion technology, the RD750 can interface with a wide variety of transmitter & control transformer type resolvers, including those from AMCI, Moog, and Tamagawa, as well as many others. Additionally, the RD750's resolver settings are field configurable using onboard DIP switches to simplify set-up & installation.

The RD750 offers a single-turn position resolution of up to 65,536 counts per turn and a tracking rate of up to 150,000 RPM. In addition to the single channel resolver interface, the RD750 offers differential A, B, and Z quadrature encoder outputs. These differential drivers are jumper selectable for 5 Vdc or 12 Vdc operations.

Once installed, AMCI's RD750 provides a variety of diagnostic data using two bi-color LEDs. Critical information such as card-to-drive communication, card-to-resolver connection, and parameter faults are all provided visually to optimize performance and simplify troubleshooting. In total over sixteen different status reports are available.





Sensor Type	Excitation Frequency
Resolvers: Transmitter & Control Transformer Types	Programmable from 2 kHz to 20 kHz
Number of Resolver Input Channels One	Excitation Output Current 50 mArms maximum
Installation Locations Slots 4 or 5 of the PowerFlex 750-Series backplane	Sensor Transformation Ratio Programmable from 0.15 to 1.75
Weight 0.167 lbs. (0.076 kg.) with mating connectors	Position Resolution 10, 12, 14, or 16 bits per turn (1,024, 4,096, 16,384, or 65,536 counts over a single turn) Encoder Resolution Set by Resolver Position Resolution setting
Input Power	
All power is drawn from the PowerFlex 750-Series backplane	
Current Draw + 12 Vdc: 145 mA without sensor	,
170 mA with AMCI R11X-J resolver	Encoder Output Type Differential. Jumper selectable to 5 or 12 Vdc
240 mA with reference shorted by 5 ohms	Encoder Output Current
(Fault Condition) - 12 Vdc: 60 mA without sensor	25 mA per channel
90 mA with AMCI R11X-J resolver	Environmental Specifications
160 mA with reference shorted by 5 ohms (Fault Condition)	Ambient Operating Temperature 0° to 50° C (32° to 122° F)
+ 24 Vdc: 10 mA with no load on encoder outputs	Storage Temperature
Measurement Method	-40° to 70° C (-40° to 158° F) Product designed for operation in EN 61800-5-1 Pollution Degree 1 and 2 environments Status LEDs
Ratiometric. Compensates for and eliminates most	
sources of error, including phase shift, voltage drift, electrical noise, and temperature changes.	
Excitation Voltage	Two available on module. One for communication status
Programmable from 4.0 to 15.0 Vrms	and one for module status.
	Connectors
	Mating connectors are included with the RD750

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