Allen-Bradley 80190-560-02-R

01 Function and selected configuration

Product function

Allen-Bradley 80190-560-02-R supports the analog feedback path of a non-18-pulse PowerFlex 7000 drive. Startup self-tests and conversion diagnostics help distinguish input offsets from data-transfer faults.

Selected configuration

The non-18-pulse selection separates this ACB from the 80190-560-01-R board used for 18-pulse drives. A shared board-family name does not establish interchangeability. Analog input wiring, converter topology and control revision must correspond to the installed PowerFlex 7000 configuration.

Functional path

Process/drive feedback	IFM and wiring	ACB conversion	DPM master/slave

Converter selection	Non-18-pulse PowerFlex 7000
Analog path	Feedback conversion with processor data transfer
Startup checks	Inverter and rectifier analog self-tests

At startup, inverter analog self-test fault 186 identifies excessive DC offset through diagnostic parameters P96 and P251. Rectifier analog self-test fault 128 uses P473, P474 and P494 to identify affected feedback channels. The diagnostic words localize the channel before the associated feedback circuit is examined.

80190-560-02-R / Technical operating envelope

02 Technical operating envelope

Drive converter configuration	Non-18-pulse
Board coating	Conformal coating
Inverter analog self-test fault	186; diagnostic parameters P96 and P251
Rectifier analog self-test fault	128; diagnostic parameters P473, P474 and P494

Inverter conversion fault	189; ACB-to-slave-processor data transfer
Rectifier conversion fault	131; ACB-to-master-processor data transfer
Rectifier conversion sequence fault	133
Supported process-feedback path	4-20 mA or 0-10 V through the configured IFM

Signal and diagnostic values are conditional PowerFlex 7000 system data. No standalone ACB supply, input count or conversion resolution is inferred from the drive family.

Offset versus transfer

A self-test evaluates channel offset at startup. A transfer fault concerns timely delivery of converted data to a processor. The different mechanisms require different checks even when both alarms involve the analog control assembly.

Input-chain boundary

A 4-20 mA or 0-10 V process signal reaches the control system through its configured interface. Input type alone does not prove terminal compatibility; the IFM, wiring and actual converter arrangement remain part of the engineering selection.

80190-560-02-R / System integration and applications

03 System integration and applications

Feedback restoration

Restore analog conversion in the intended converter topology after the field sensor and wiring have been checked.

Startup offset diagnosis

Use P96/P251 or P473/P474/P494 to identify the feedback group that fails its startup self-test.

Process-variable loops

Trace a configured 4-20 mA or 0-10 V process signal from sensor through IFM to the ACB.

Conversion-path service

Distinguish a conversion sequence error from a failure to transfer converted data to the master or slave processor.

System and supply context

Use this board only in its matching non-18-pulse PowerFlex 7000 control arrangement. Sensors, IFM modules and the DPM remain separate elements of the feedback chain.

Application boundary

Applications below concern drive feedback integration and diagnosis. Signal ranges refer to the configured system input path and do not redefine every ACB connector as a universal analog input.

Which feedback words help diagnose fault 186 with Allen-Bradley 80190-560-02-R?

Use InvAnlg SelfTst1 P96 and InvAnlg SelfTst2 P251 to identify inverter feedback channels with excessive DC offset.

80190-560-02-R / Engineering selection decisions

04 Engineering selection decisions

Can Allen-Bradley 80190-560-02-R replace the 18-pulse ACB?

No interchangeability should be assumed. This part is the non-18-pulse selection; the 18-pulse ACB has a different part reference.

How is the rectifier self-test localized on Allen-Bradley 80190-560-02-R?

For fault 128, inspect RecAnlg SelfTst1 P473, SelfTst2 P474 and SelfTst3 P494 before examining the corresponding feedback circuit.

Should a process-variable loss immediately condemn Allen-Bradley 80190-560-02-R?

No. Check the configured sensor signal, IFM wiring and IFM-to-ACB connection first. A fault upstream of the board can produce the same missing feedback.

Why retain the fault sequence before servicing Allen-Bradley 80190-560-02-R?

An offset self-test, conversion-sequence error and incomplete data transfer describe different failure mechanisms. Their order helps separate a sensor, ACB or processor-path issue.

Retain diagnostics	Capture self-test words and the complete fault sequence before clearing alarms.
Protect analog circuits	Use ESD handling and inspect connector alignment without modifying calibration components.

80190-560-02-R / Configuration boundary and references

05 Configuration boundary and references

Lifecycle and support

The current manufacturer lifecycle phase for this exact part number is unconfirmed. Production and repair availability require model-specific confirmation.

Replacement assessment

Retain the non-18-pulse converter selection and compatible control revision. An 18-pulse ACB is not an assumed substitute.

Document roles

Use the original manufacturer excerpt for its preserved technical tables and drawings. This product brief explains configuration and selection boundaries. The independent installation guide organizes preparation, connection, testing and handover. It does not replace the applicable manufacturer installation instructions.

Technical basis

Rockwell Automation PowerFlex 7000 Troubleshooting Guide, 7000-TG002L-EN-P.

Related product navigation

- Allen-Bradley 80190-580-01-R
- Allen-Bradley 80190-478-51
- Allen-Bradley 80190-320-02-R

These are related references, not confirmed substitutes or an automatically approved assembly.

Product enquiries