Allen-Bradley 2090-CSBM1DE-18AF11

Engineering Installation, Diagnostic and Acceptance Guide

Factory-terminated continuous-flex motor cable integrating power, DSL feedback and brake wiring for a Kinetix axis.

01 Work package

Complete model	2090-CSBM1DE-18AF11
Product type	Kinetix single-motor continuous-flex cable
Manufacturer	Allen-Bradley
Technical source	Rockwell Automation Kinetix 2090 Single Motor Cables Installation Instructions, 2090-IN051F-EN-P

Field decisions

1 Establish identity

Capture the full marking, installed companion components and baseline before disconnection.

2 Inspect interfaces

Verify mounting, cable, connector, armor, approval and environmental boundaries.

3 Fit the exact chain

Preserve the documented probe-cable-Proximitor or sensor-monitor relationship.

4 Prove response

Use the approved stopped-machine and operating acceptance procedure.

5 Record as left

Save markings, configuration, test values and operating observations.

Pre-work evidence

Installed drawing	Record the approved cabinet, rail, slot, terminal, cable and system references that govern 2090-CSBM1DE-18AF11.
Complete marking	Capture the complete order identity and every revision or approval marking on the delivered item.
Mechanical reference	Record mounting position, fasteners, connector orientation, access clearance and support points.
Electrical interfaces	Confirm supply, signal, bus, terminal and protective-conductor assignments against the installed drawing.
Configuration state	Record jumpers, switches, addresses, firmware or project settings that apply to this hardware.

Selected order-code snapshot

Single-cable path	Combines motor power, DSL feedback and brake conductors in one continuous-flex assembly.
Selected length	11 m catalog length with 18 AWG conductors and a 15 mm nominal outside diameter.
Connector set	Single SpeedTec DIN motor end and prewired drive-end DSL connector kit.

Evidence boundary

The technical values apply to the exact 18 AWG, continuous-flex, 11 m catalog selection in the Rockwell Automation cable instructions.

Initial quality controls

Traceability	Each value is tied to 2090-CSBM1DE-18AF11, the asset location, test state, instrument and date.
Repeatability	The same approved method and comparable operating state are used for before-and-after readings.
Resolution	Recorded precision does not exceed the capability of the instrument or source document.
Reference state	Stopped, energized, loaded and process-running observations are clearly distinguished.

02 Interface and configuration map

Cable application	Kinetix 5700 single-cable motor connection
Conductor size	18 AWG
Cable construction	TPE continuous-flex
Cable length	11 m
Voltage rating	1000 V
Core count	8
Nominal outside diameter	15 mm
Continuous bend radius	10 x cable diameter
Maximum conductor temperature	105 deg C
Conductor material	Tinned copper
Motor-end interface	Single SpeedTec DIN connector
Drive-end interface	Prewired DSL connector kit
Integrated circuits	Motor power, feedback and brake conductors

Application checks

Kinetix 5700 motor axis

Connect a compatible motor to the drive with one cable for power, DSL feedback and brake wiring.

Continuous-flex route

Use where the approved machine path requires repeated flexing within the documented bend radius.

Brake-equipped motor

Preserve the dedicated brake conductors and their drive-side termination in the connector kit.

Installed-cable replacement

Match the complete 18AF11 identity, connector orientation, route and 11 m length before removal.

Interpretation boundaries

Product boundary	Apply the listed facts to 2090-CSBM1DE-18AF11 and the documented Kinetix 5700 single-cable motor connection context only.
Interface boundary	Connector, terminal, bus, cable and companion-device assignments must match the installed drawing.
Electrical boundary	Use exact-model values only; system-level ratings remain conditional on the complete installed configuration.
Configuration boundary	Switches, jumpers, addresses, firmware and project settings must be reconciled before energization.
Diagnostic boundary	Interpret indicators and fault states together with measured inputs, outputs and host-system status.
Acceptance rule	Use the approved system baseline and maintenance procedure for the final as-left decision.

System verification controls

Traceability	Each value is tied to 2090-CSBM1DE-18AF11, the asset location, test state, instrument and date.
Repeatability	The same approved method and comparable operating state are used for before-and-after readings.
Resolution	Recorded precision does not exceed the capability of the instrument or source document.
Reference state	Stopped, energized, loaded and process-running observations are clearly distinguished.

Technical notes

Mechanical limit	Continuous flexing requires the documented 10 x diameter bend radius and independent strain relief.
Interface limit	Both the Single SpeedTec DIN and prewired DSL kit must match the installed motor-drive pair.
Commissioning focus	Verify brake operation, DSL feedback recognition and absence of cable-related drive faults.

03 Installation workflow

Protect the DSL connector

Do not pull, twist or use the prewired connector kit as a lifting point.

Maintain bend radius

Keep the continuous-flex route at or above ten times the 15 mm cable diameter.

Separate from sharp edges

Use approved supports and guards so the TPE jacket is not cut or crushed.

Verify motor interface

Match the Single SpeedTec DIN connector and motor catalog before connection.

Verify brake conductors

Confirm brake-wire identity and termination against the drive and motor drawings.

Prove feedback

After energization, confirm DSL feedback recognition and the absence of motor or cable faults.

Controlled sequence

01 Isolate	Place the monitored machine and channel in the approved maintenance state; prove the required isolation.
02 Photograph	Capture 2090-CSBM1DE-18AF11, the installed datum, connector, route and companion-component markings.
03 Measure	Record mechanical position and the applicable stopped-machine electrical reading before removal.
04 Compare	Check delivered identity, interfaces and evidence against the approved drawing and spare-parts record.
05 Install	Fit without twisting the lead; preserve thread engagement, target clearance, bend radius and strain relief.
06 Set point	Establish the operating gap or datum only with the approved stopped-machine procedure.
07 Prove	Compare local reading, monitor indication and controlled operating response with the accepted baseline.
08 Handover	Record as-left values, photographs, deviations, responsible technician and release approval.

Release review

Mechanical limit	Continuous flexing requires the documented 10 x diameter bend radius and independent strain relief.
Interface limit	Both the Single SpeedTec DIN and prewired DSL kit must match the installed motor-drive pair.
Commissioning focus	Verify brake operation, DSL feedback recognition and absence of cable-related drive faults.

Installation evidence package

Nameplate evidence	Overall and close photographs showing 2090-CSBM1DE-18AF11, revision, approval and serial details where present.
Installation evidence	Views of the rack position, mechanical datum, terminal assignment, cable route and strain relief.
Configuration evidence	Export or screenshots identifying the approved hardware assignment and parameters without exposing credentials.
Baseline evidence	As-found readings with units, test conditions, machine state and the instrument used.
Inspection evidence	Connector, contact, insulation, fastener, contamination and heat-condition observations.
Functional evidence	As-left readings and the controlled input, output or channel response used for acceptance.
Change evidence	Any wiring, setting, firmware or mechanical change linked to its approved work reference.
Release evidence	Technician, reviewer, date, asset reference and the maintenance-record location for traceability.

04 Diagnostic decision table

What circuits are combined in 2090-CSBM1DE-18AF11?	The assembly combines motor power, digital feedback and brake conductors in one Kinetix single-motor cable.
What is the catalog length of 2090-CSBM1DE-18AF11?	The AF11 suffix selects an 11 m cable assembly.
What bend radius applies to 2090-CSBM1DE-18AF11 in continuous flex?	Maintain at least ten times the 15 mm nominal cable diameter along the moving route.
Which connector is fitted at the motor end of 2090-CSBM1DE-18AF11?	The motor end uses a Single SpeedTec DIN connector; confirm the mating motor interface before installation.
What is fitted at the drive end of 2090-CSBM1DE-18AF11?	The cable has a prewired DSL connector kit at the drive end; protect its pin orientation and strain relief.
What conductor temperature limit is published for 2090-CSBM1DE-18AF11?	The published maximum conductor temperature is 105 deg C under the stated cable conditions.
What should be inspected before routing 2090-CSBM1DE-18AF11?	Inspect both connectors, jacket, brake conductors and supports, then measure the route and bend radius.
How should 2090-CSBM1DE-18AF11 be accepted on the axis?	Confirm brake function, DSL feedback recognition, correct motor phasing and fault-free controlled motion.

Escalation triggers

Identity conflict	Stop if the complete marking, suffix, revision or approval identity differs from the approved record.
Host mismatch	Escalate if the rack, carrier, backplane, terminal unit or controller assignment is not documented for 2090-CSBM1DE-18AF11.
Interface damage	Do not energize with bent contacts, damaged insulation, loose retainers, contamination or heat discoloration.
Environmental breach	Review any exposure beyond the documented temperature, vibration, humidity, contamination or enclosure boundary.
Unapproved substitution	Do not transfer ratings or compatibility from an adjacent order code without manufacturer evidence.
Configuration conflict	Stop if hardware settings, firmware, channel assignment or project configuration disagree with the installed record.
Unstable measurement	Investigate noise, drift, intermittent status or inconsistent readings before replacing another component.
Failed functional proof	Keep the asset in the approved maintenance state until the complete acceptance sequence is passed and recorded.

Evidence quality controls

Traceability	Each value is tied to 2090-CSBM1DE-18AF11, the asset location, test state, instrument and date.
Repeatability	The same approved method and comparable operating state are used for before-and-after readings.
Resolution	Recorded precision does not exceed the capability of the instrument or source document.
Reference state	Stopped, energized, loaded and process-running observations are clearly distinguished.
Change control	Every changed setting, connection or mechanical datum has an approved reason and reviewer.
Retention	Evidence remains accessible with the maintenance record for future troubleshooting and replacement review.

05 Acceptance, handover and support

Release the channel only after the exact marking, installed-chain identities, mechanical datum, electrical baseline and controlled operating proof have all been recorded.

As-left verification worksheet

Exact delivered marking	2090-CSBM1DE-18AF11; photograph and record any additional label detail.
Installed asset reference	Machine, bearing, train, channel and drawing identifiers.
Mechanical as found	Reach, lock position, gap reference, cable route and connector support.
Static reading as found	Gap, bias, continuity or channel value appropriate to the installed system.
Companion identities	Extension cable, Proximitor or conditioner and monitor channel markings.
Mechanical as left	Final reach, lock position, target clearance and route protection.
Static reading as left	Final gap, bias, continuity or channel value with test conditions.
Operating proof	Monitor response and machine observation accepted by the responsible authority.
Deviation record	Any difference from drawing or baseline, disposition and approval reference.
Release signatures	Technician, reviewer, operations owner and date.

Lifecycle status

Published lifecycle	Rockwell Automation lists the exact 2090-CSBM1DE-18AF11 catalog as active.
Installed role	The cable is part of the Kinetix 5700 single-cable motor connection and carries three circuit functions.
Replacement boundary	Length, conductor size, flex construction, connectors and brake wiring must all match the installed axis.

Available unit details

Offered assembly	One factory-terminated 11 m continuous-flex single-motor cable.
Integrated conductors	Motor power, DSL feedback and brake wiring in the documented 8-core assembly.
Separate scope	Motor, drive, cable supports and cabinet-side accessories are separate unless itemized.

Verified related product references

Related product	Allen-Bradley 1746-NIO4I
Related product	Allen-Bradley 1734-EP24DC
Related product	Allen-Bradley 2711-T9C1X
Related product	Allen-Bradley 2711-T10C8X

Engineering contact

Discuss the exact marking and installed application with Apter Power.
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