

SDCS-IOB-3 3BSE004086R1

Analog Encoder Board

ABB SDCS-IOB-3 3BSE004086R1 is an external analog I/O and pulse-encoder connection board. ABB documents five analog inputs, three analog outputs, an isolated pulse-encoder interface and a current source for temperature devices.

IDENTITY	VERIFIED VALUE
Manufacturer	ABB
Complete model	SDCS-IOB-3 3BSE004086R1
Product role	Analog Encoder Board
System family	DCS Drive Control

Document scope

Exact identity, verified technical data, applications, precautions, model-specific FAQ and controlled acceptance records.

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Technical Specifications

PARAMETER	VERIFIED VALUE
Product identity	SDCS-IOB-3
ABB item	3BSE004086R1
Product type	Analog I/O and pulse-encoder connection board
Analog inputs	5
Analog outputs	3
Encoder interface	Galvanically isolated pulse encoder
Temperature source	PTC 1.5 mA or PT100 5 mA by S5

PARAMETER	VERIFIED VALUE
Current input	0/4 to 20 mA through 500 ohm selection
Encoder supply	5 V, 12 V or 24 V by S4
Mounting	External conductive mounting supports bonded to ground
Standard cable	1.7 m maximum
Screened D6/D7 cable	4 m maximum
X1-X3 cable	0.5 m maximum

Engineering boundary

Preserve the complete SDCS-IOB-3 3BSE004086R1 identity and every jumper setting. Record analog ranges, encoder supply, temperature-device mode, shielding, grounding and cable lengths before replacement.

Functions and Applications

Five analog inputs Receives the documented analog field and reference signals.	Three analog outputs Provides the documented analog output connection paths.
Isolated encoder interface Connects the pulse encoder through a galvanically isolated interface.	Temperature-device excitation Supplies the documented PTC or PT100 current selected by S5.

Common Applications

APPLICATION	ENGINEERING CONTEXT
DCS drive analog I/O	Connects analog signals to the documented DCS drive-control hardware.
Pulse-encoder feedback	Receives isolated pulse-encoder signals with the approved supply selection.
Temperature monitoring	Excites PTC or PT100 devices using the documented current-source mode.
External board replacement	Restores jumper, shielding, grounding and cable records for an exact board.

Controlled acceptance duty

Confirm identity, interfaces, configured values and functional response against the installed-system record before release.

Engineering Precautions

NO.	PRECAUTION
1	Verify ABB SDCS-IOB-3 3BSE004086R1 before work.
2	Place the drive and all affected analog circuits in the approved maintenance state.
3	Record every analog range and jumper setting before removal.
4	Record the S4 encoder supply and S5 temperature-device selection.
5	Maintain conductive mounting-support grounding and documented shielding.
6	Do not exceed the ABB cable-length limits.
7	Confirm encoder characteristics and current-input selection before energization.
8	Test all analog channels, encoder feedback and temperature input before release.

Model-Specific FAQ - Part 1

QUESTION	ANSWER
What is ABB SDCS-IOB-3 3BSE004086R1?	It is an external analog I/O and pulse-encoder connection board for ABB DCS drive-control systems.
How many inputs does ABB SDCS-IOB-3 3BSE004086R1 provide?	ABB documents five analog inputs.
How many outputs does ABB SDCS-IOB-3 3BSE004086R1 provide?	ABB documents three analog outputs.
Which encoder supplies can ABB SDCS-IOB-3 3BSE004086R1 use?	S4 selects the documented 5 V, 12 V or 24 V encoder supply.

Related Products

MODEL	APTER POWER PAGE
ABB 086364-001	View ABB 086364-001
ABB 0G0010-00-090	View ABB 0G0010-00-090
ABB 1HSB495663-3	View ABB 1HSB495663-3

Model-Specific FAQ - Part 2

QUESTION	ANSWER
Which temperature modes can ABB SDCS-IOB-3 3BSE004086R1 use?	S5 selects 1.5 mA for PTC or 5 mA for PT100 service.
How does ABB SDCS-IOB-3 3BSE004086R1 accept 0/4-20 mA?	ABB documents current-input selection through a 500 ohm path.
What cable limits apply to ABB SDCS-IOB-3 3BSE004086R1?	ABB specifies 1.7 m standard, 4 m for screened D6/D7 and 0.5 m for X1-X3 in the documented arrangement.
What confirms ABB SDCS-IOB-3 3BSE004086R1 commissioning?	Analog channels, encoder feedback, temperature input, jumpers, grounding and shielding must all pass controlled checks.

Related Products and Release

MODEL	APTER POWER PAGE
ABB P4LR 1KHL015107R0001	View ABB P4LR 1KHL015107R0001
ABB G4AI 1KHL015623R0001	View ABB G4AI 1KHL015623R0001
ABB G4AK 1KHL016009R0001	View ABB G4AK 1KHL016009R0001

MANUFACTURER SOURCE RECORDS

1. ABB DCS800 Hardware Manual 3ADW000194
2. ABB DCS500B/DCS600 Service Manual 3ADW000093

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