2098-DSD-010X-DN

Ultra3000 1 kW DeviceNet indexing servo drive

Allen-Bradley 2098-DSD-010X-DN is a 230 V class, 1 kW Ultra3000 digital servo drive with indexing and DeviceNet communication.

Published identity

Field	Value	Selection meaning
Exact model	2098-DSD-010X-DN	Keep every X and DN token
Drive class	230 V / 1 kW Ultra3000	Motor and duty must be matched
Interface	Indexing + DeviceNet	Confirm controller architecture
Condition	New, original product	Offered unit photos and scope on request
Shipping	Swift global dispatch	Quantity and date in quotation

Interface boundary

The -DN card requires network address, selected data rate, cable planning and status review. The non-DN -010X is a separate catalog entry.

Buyer verification path

Before order	Before installation	Before motion
Compare full code, series and offered scope	Confirm line power, motor, feedback and cable set	Read back parameter file and I/O assignment
Ask for offered unit photos and exact connector scope	Apply grounding and isolation procedure	Run restrained non-indexing then indexed test

The published specifications describe the manufacturer rating class and the exact catalog interface. Final compatibility depends on the installed motor, controller program, protective design and software record.

Electrical and I/O profile

Manufacturer rating class and exact variant boundary

Power path

Parameter	Published value
AC input	100–240 V rms nominal, single phase; 47–63 Hz
Nominal AC input current	9 A rms for the 2098-DSD-010 rating class
Continuous power output	1.0 kW at 230 V AC; 0.5 kW at 115 V AC
Continuous output current	5 A, zero-to-peak basis
Intermittent output current	15 A, zero-to-peak basis
DC bus overvoltage	400 V DC in the 230 V class power table
Bus capacitance	1880 µF in the 2098-DSD-010 rating class

Interface and commissioning path

Parameter	Published value
Motor feedback connection	CN2, 15-pin
User I/O connection	CN1, 44-pin
Serial setup connection	CN3, 9-pin; use Ultraware setup procedure
Power wiring	TB1; earth grounding and cable shielding required
Indexing setup	Configure motor, tune, then test non-indexing and indexing moves
DeviceNet interface	Present; connector, node-address and data-rate switches, module and network LEDs
Network rate	125, 250 or 500 kbps; validate topology and drop budget

Rating-class values come from Rockwell 2098-DU003B; connector and variant information is from 2098-IN003E and 2098-IN005C. Check the drive series and motor selection.

Integration map

Four decisions before first production motion

Axis integration questions

Layer	Relevant path	Acceptance question
Supply	AC line, PE and inrush	Does the series-specific duty fit the machine?
Drive	Index program and parameter file	Is the saved motor record correct?
Control	DeviceNet + CN1	Does interface mapping match the controller?
Motor	Power + CN2 feedback	Can direction be proved with the load restrained?

Applications / Compatibility

Indexed positioning axis

Compare move distance, direction, speed and travel limits with the approved machine program before enabling the load.

Motor and feedback retrofit

Confirm motor catalog, feedback connector and cable shielding; read back the tuned motor record and prove rotation at low risk.

Machine I/O integration

Check CN1 input/output assignment and the machine interlock chain before repeating an indexed move.

DeviceNet coordinated axis

Verify node address, data rate, module/network LEDs and controller mapping; record network state before and after the test.

Compare the complete model, installed motor and controller before interpreting shared 2098-DSD-010 rating data as an application match.

Lifecycle and service

Selection boundary, FAQ and related references

Lifecycle Status

2098-DSD-010X-DN status: The exact 2098-DSD-010X-DN was discontinued on 1 July 2022.

Support and replacement: An engineering replacement is listed; select a new drive through a motor, feedback, I/O, network and program review. No drop-in interchangeability is implied.

Apter Power availability: The offered unit quantity and dispatch date are confirmed in the quotation.

Technical FAQ selection

How do I confirm that a 2098-DSD-010X-DN suits the installed axis?

Read the entire 2098-DSD-010X-DN label and series, then compare the motor, feedback, CN1 wiring, supply and saved parameters. Also compare DeviceNet address, rate and controller mapping.

What should I do if 2098-DSD-010X-DN powers up but will not move?

Read the seven-segment status and the saved Ultraware configuration, then check enable/interlocks, motor selection and CN1 signals. Keep the load restrained for a non-indexing test before trying an indexed move.

Why does 2098-DSD-010X-DN require a series check before repeated power cycling?

The 2098-DU003B update gives different inrush limits for Series A/B and Series C. Read the actual series label, apply the corresponding contactor-cycle limit and investigate an abnormal start before cycling again.

More Allen-Bradley catalogue references

These are navigation choices; confirm complete catalog numbers and system fit.

Allen-Bradley 1746-HSCE
SLC 500 counter

Allen-Bradley 1794-IV16
FLEX I/O sourcing input

Allen-Bradley 1398-DDM-009
ULTRA 100 drive

Allen-Bradley 1756-L62
ControlLogix CPU

Allen-Bradley 1756-DNB
DeviceNet bridge

Allen-Bradley 1756-OV32E
Output module