01 / Identity and work preparation

REXROTH

DKC10.3-012-3-MGP-01VRS

Servo Drive Controller

Installed-axis boundary

Plan the DKC10.3 basic drive, MGP 01VRS firmware, matched motor, feedback and machine control as one axis. This Apter Power guide supports preparation; qualified personnel must use the original Rexroth instructions for the actual installation.

Record
Full marking and release

>

Isolate
Electrical and motion energy

>

Restore
Verified settings and wiring

Before replacement
Record hardware index, firmware release, I/O assignments, motor identity and positioning-block settings.

Machine control
Identify the digital selection, strobe, enable, reset and acknowledgment circuits before disconnecting them.

Marking element	Meaning to preserve
DKC10.3	Basic-device design without master communication
3	300 V nominal DC-bus code; not the AC input voltage
MGP 01VRS	Multi-interface general-purpose firmware, version 01; retain the actual release status

02 / Power, grounding and interfaces

Connection	Purpose	Planning requirement
X1	Mains and control supply	Identify each supply and follow the actual terminal diagram; isolate before connection work.
X2	Additional choke / braking resistor	Preserve the approved choke, resistor and jumper arrangement. An external resistor requires the corresponding drive configuration.
X3	Motor power	Use the correct Rexroth motor cable and connect protective earth.
X5 digital I/O	Command and status signals	Compare each assigned input and output with the machine circuit; defaults are not proof of installed settings.

Grounding continuity

Connect the drive protective earth to the cabinet grounding system and check continuity to the motor. Use an enclosure that maintains the required pollution-degree-2 environment.

Stored energy and axis motion

Qualified personnel must isolate the drive before connector work and follow the manufacturer procedure for stored energy. Secure the axis against unintended movement.

Braking-resistor arrangement

The internal braking resistor reduces the available continuous DC-bus power. An approved external resistor arrangement changes that condition and must be configured in the drive. Preserve the actual resistor, connection and parameter relationship rather than transferring a neighboring drive setup.

Supply identification

The 300 V value in the type-code chart is the nominal DC bus. The applicable UL power-input table uses 200–230 VAC at 50/60 Hz for the 012 design. Do not use the DC-bus code as a mains-connection rating.

03 / Digital configuration and motion blocks

Default DKC10.3 point	Role to compare
IN1–IN4	Positioning-block selection bits
IN5	Positioning-command strobe
IN6 / IN7	Drive enable / reset
OUT1	End position reached; no sequential block pending
OUT2 / OUT3	Positioning-block acknowledgment bits

Configuration parameters

Use S-0-0145 and S-0-0144 for the signal control and status words. Assignments use P-0-0124 and P-0-0125. Save the actual configuration before any replacement or reset.

Motion-profile review

The 64-block MGP mode defines position, velocity, acceleration, deceleration and jerk separately. A positive strobe edge starts the selected DKC10.3 block when the required operating conditions are met.

Braking capability

Set valid acceleration and deceleration for each positioning block. If both are zero, the drive cannot brake to the commanded target; validate the motion profile before release.

Sequential-block behavior

A sequential chain starts with a selected start block and continues through linked blocks. The final block is not defined as a sequential block. Verify the transition conditions and final target, since acknowledgment of a block and completion of the entire sequence are different events.

04 / Installation conditions and acceptance

Environment

The UL-rated ambient limit at nominal data is 40 °C; operation up to 55 °C requires reduced nominal data. Keep the specified cooling clearances unobstructed.

Motor cable

The stated 40 m maximum motor-cable length applies to ready-made Rexroth cable, ambient temperature at or below 40 °C and a maximum switching frequency of 8 kHz. Do not extend this limit to other cable arrangements.

Acceptance stage	Evidence to retain
Before enable	Complete identity, grounding continuity, correct connections and preserved configuration.
Controlled jogging	Correct direction, approved jog velocity and a secured movement area.
Positioning test	Correct block selection, strobe response, travel limits and acknowledgment behavior.
Sequence test	Intended transitions and final stop; no unexpected repeated or skipped block.

Command and status agreement

Compare the selected positioning block with its acknowledgment and the end-position indication. In the default DKC10.3 arrangement, OUT1 represents end position reached with no sequential block pending, and OUT2/OUT3 carry acknowledgment bits. Review the configured mapping before using these observations as acceptance evidence.

Release criterion

Resolve an incorrect direction, unexpected block transition or command/status mismatch before returning the axis to automatic operation. Retain the test results with the final parameter set.

05 / Handover and reference basis

Service record

Keep the exact drive marking, hardware index, firmware release, motor identity, I/O mapping and final motion profiles with the machine record. Obtain manufacturer guidance before a different drive or firmware configuration is substituted.

Lifecycle boundary

The current manufacturer lifecycle phase of DKC10.3-012-3-MGP-01VRS has not been confirmed. Confirm support and replacement guidance separately from Apter Power supply availability.

Reference basis

Bosch Rexroth EcoDrive Cs Drives Instruction Manual, R911320343 Edition 01; EcoDrive Cs MGP 01VRS Functional Description, R911296549 Edition 02.

Apter Power technical summary; not a manufacturer-issued manual. Apply the original instructions for the actual installation.

Related industrial automation products

Navigation only; no substitution or compatibility claim.

Rexroth VT5013-37/R5E

ABB SNAT7261QCP

General Electric 531X133PRUALG1

Discuss your installed configuration

Send the full unit marking and connection details.

sales13@apterpower.com | +86 18030235313