B&R 8LSO Series Service Manual

8LSO93.ee013ffgg-3

1. Description

8LSO three-phase synchronous servo motor (special variant). Permanent-magnet, electronically commutated synchronous motor designed for high dynamics and positioning precision with compact size and reduced weight, featuring large overload capacity and optimized torque rippling.

2. Technical Parameters

Parameter	Value
Nominal speed nN [rpm]	1300
Number of pole pairs	4
Nominal torque Mn [Nm]	110
Nominal power PN [W]	14975
Nominal current IN [A]	30
Stall torque M0 [Nm]	140
Stall current I0 [A]	38
Maximum torque Mmax [Nm]	407
Maximum current Imax [A]	138
Maximum speed nmax [rpm]	3000
Torque constant KT [Nm/A]	3.64
Voltage constant KE [V/1000rpm]	219.91
Stator resistance R2ph [Ohm]	0.194
Stator inductance L2ph [mH]	5.39
Electrical time constant tel [ms]	28
Thermal time constant ttherm [min]	63
Moment of inertia J [kg·cm2]	290
Mass m (without brake) [kg]	118
Holding torque of brake MBr [Nm]	
Brake mass [kg]	0
Moment of inertia of brake JBr [kg·cm2]	0
Cable cross-section [mm2]	10
Connector size/type	Terminal box
Recommended servo drive (ACOPOS)	0440

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3. Product Information

Order number: 8LSO93.ee013ffgg-3

Additional information from the manufacturer's manual:

Compliance: NOT C-UR-US listed; conforms to LVD 2014/35/EU, EMC 2014/30/EU and RoHS 2011/65/EU; standards EN 60034-1/7/11/14. Life-cycle status not stated in the manual.

Rating & cooling: EN 60034-1 S1 continuous; insulation class F; cooling self-cooled, free-circulation surface cooling IC4A0A0; thermal protection max winding temp 155 degC; vibration severity A1 per EN 60034-14; bearing life per DIN ISO 281; coating water-based RAL 9005.

Mounting per EN 60034-7 (IM): IM 3001 / IM 3011 / IM 3031. Shaft end DIN 748 Form E; key DIN 6885-1 Form A.

Environment: operating -15..+40 degC (max +55 degC); max. elevation 2000 m; max. flange temp 65 degC; IP64 per EN 60034-5 (IP65 with oil seal); storage/transport -20..+60 degC, humidity max. 90% non-condensing.

Shaft loads: permissible radial/axial forces are speed-dependent (Fr/Fa diagrams per model). Noise: no motor-body sound level given in the manual.

Feedback: resolver or EnDat encoder (inductive/optical, incl. safety-related variants); 32-line single-/multi-turn; built-in plug-in connectors; single-cable (hybrid) solution available.

Safety: encoders for functional safety available; STO implemented by ACOPOS servo drive (not motor-embedded in the manual).