



Figure similar

Data sheet for SIMOTICS S-1FT7

Article No. : 1FT7082-5WF70-1KG1

Client order no. :
Order no. :
Offer no. :
Remarks :

Item no. :
Consignment no. :
Project :

Engineering data	
Rated speed	3,000 rpm
Number of poles	10
Rated torque (100 K)	20.5 Nm
Rated current	16.00 A
Static torque (60 K)	17.5 Nm
Static torque (100 K)	21.0 Nm
Stall current (60 K)	13.40 A
Stall current (100 K)	16.00 A
Rotor moment of inertia	28.90 kgcm ²
Efficiency	94.0 %

Physical constants	
Torque constant	1.31 Nm/A
Voltage constant at 20° C	82.5 V/1000*min ⁻¹
Winding resistance at 20° C	0.28 Ω
Rotary field inductance	4.2 mH
Electrical time constant	15.00 ms
Mechanical time constant	1.40 ms
Thermal time constant	2 min
Shaft torsional stiffness	108,000 Nm/rad
Net weight of the motor	20.7 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	80
Cooling	Water cooling
Radial runout tolerance	0.050 mm
Concentricity tolerance	0.100 mm
Axial runout tolerance	0.100 mm
Vibration severity grade	Grade A
Degree of protection	IP65
Design acc. to Code I	IM B5 (new flange design)
Temperature monitoring	Pt1000 temperature sensor
Color of the housing	Standard (pearl dark gray similar to RAL 9023)
Shaft end type	Plain shaft
Sensor design	Encoder AS24DQI: Absolute encoder Singleturn 24 bit - with signal connection via M17 rotary plug
Electrical connection	Connector turnable
Connector size	1.5

Optimum operating point	
Optimum speed	3,000 rpm
Optimum power	6.4 kW

Limiting data	
Max. permissible speed (mech.)	8,000 rpm
Max. permissible speed (inverter)	7,000 rpm
Maximum torque	55.0 Nm
Maximum current	54.00 A

Recommended Motor Module	
Rated inverter current	18.00 A
Maximum inverter current	54.00 A
Maximum torque	55.0 Nm