SERIES

TETRA 115

HOW TO ORDER A BRUSHLESS SERVOMOTOR SERIES TETRA 115

TETRA	115	SR	3	E	L	01	001	A	00.02
SERIES	TYPE	WAVEFORM	NOMINAL STALL TORQUE	TRANSDUCER TYPE	MOMENT OF INERTIA	WINDING TYPE	TRANSDUCER MODEL	CONNECTION POSITION	MODEL LIST
TETRA	**115**	**SR** = sinewave **TR** = squarewave	**3** **5.2** **7** **9.2** **11**	**E** = Encoder **R** = Resolver **H** = Hall Sensor	**L** = Low **H** = High	See Data Sheet	**101** = Encoder ∅48 6p 2000 ppr **102** = Encoder ∅48 6p 1000 ppr **501** = Resolver 2p size 19 **107** = Hall Sensor 6p	**A** = Std. **B** = On req. **C** = On req. **D** = On req.	**00** = No prearranged **01** = External Encoder prearranged **02** = With brake **04** = Double connector on terminal box **16** = Double cable gland on terminal box **18** = Connector + cable gland on terminal box

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BRUSHLESS SERVOMOTORS

SERIES

TETRA 115SR5.2

TORQUE

5.2 Nm

	SINEWAVE FORM	SYMBOLS	UNITS	TYPE OF WINDING							
				09	12	14	15	16	17	18	19
MOTOR rpm	Vn drive 3phase 45 V ac		[rpm]		1400						
	Vn drive 3phase 95 V ac		[rpm]	4000	3000	2000	1300				
	Vn drive 3phase 145 V ac		[rpm]	6100	4500	3000	2000	1500	1150		
	Vn drive 3phase 220 V ac		[rpm]			4600	3000	2300	1700	1150	
	Vn drive 3phase 380 V ac		[rpm]				5200	4000	3000	2000	1200
SERVOMOTOR	WINDING DATA										
	Poles number	P		6							
	Continuos stall torque (*1)	Cn0	[Nm]	5.20							
	Voltage constant ± 5%	Ke	[V_{rms}/K_{rpm}]	18.0	24.0	36.0	55.0	72.5	96.7	145.0	241.7
	Torque constant ± 5%	Kt	[Nm/A_{rms}]	0.30	0.40	0.60	0.91	1.20	1.60	2.40	4.00
	Stall current	In0	[Arms]	17.46	13.10	8.73	5.72	4.34	3.25	2.17	1.30
	Peak torque	Cmax	[Nm]	15.60							
	Peak current	I cmax	[Arms]	52.4	39.3	26.2	17.1	13.0	9.8	6.5	3.9
	Max current	I max	[Arms]	61.1	45.8	30.6	20.0	15.2	11.4	7.6	4.6
	Ph/ph resistance ±10% at 25°C	Rff	[Ohm]	0.25	0.37	0.93	2.09	3.43	7.14	13.45	39.98
	Phase / phase inductance	Lff	[mH]	0.67	1.00	2.40	6.05	10.17	18.33	40.67	113.62
	Electrical time constant	Te	[ms]	2.73	2.68	2.58	2.89	2.96	2.57	3.02	2.84
	Thermal time constant	Tt	[min]	25							
	Operating temperature	Tr	[°C]	0 + 40							
	Protection degree	IP		65 (*)							
	Insulation class			F							
	MECHANICAL DATA										
	Moment of inertia h/l	Jm	[Kg cm^2]	10.6/6.8							
	Max theorethical acceleration	αmax	[rad/s^2]	14716/22941							
	Mechanical time constant h/l	Tm	[ms]	2.8/4.3	2.4/3.7	2.6/4.1	2.5/4	2.4/3.8	2.8/4.4	2.3/3.7	3.8/5.9
	Cogging torque	Tcog	[Nm]	0.156							
	Damping constant at 1000 rpm	Td	[Nm]	0.055							
	Max radial load (at 3000 rpm)	Fr	[N]	600 (applied on the shaft's middle)							
	Max axial load	Fa	[N]	180 (applied on the shaft's middle)							
	Weight	M	[Kg]	6.2							
THERMAL P.	Type of thermal cut - off			N C : normally closed							
	Rated voltage	Vn	[V ac]	250							
	Rated current	In	[A]	2.5							
	Operative temperature	Tn	[°C]	140 °C ± 5%							
	Resetting temperature	Tr	[°C]	100 °C ± 15°C							
	Operative time	[ms]		1							
	Insulation class			F							
BRAKE	Type			STD 9							
	Static torque	Co	[Nm]	9							
	Rated voltage	Vn	[V]	24 Vcc +6% -10% Stabilized							
	Rated current	In	[A]	0.75							
	Input power	Pn	[W]	18							
	Engaging time	Tr	[ms]	7							
	Release time	Tl	[ms]	40							

(*) with oil seal mounted on the flange (*1) Output continuous ratings with 350 x 350 x20 mm metallic heat sink flange coupling)

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