



Synchros

Corresponding application If it clicks, details will looking-get.

Defence

Favtory

Science

Amusement

Car



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TS4(TX·TR),TS5N2(TX·TR)

Model	TS4E11	TS4E12	TS5N2E11	TS5N2E12
Function	TX·TR		TX·TR	
Input Voltage (V)	100/110	200/220	100/110	200/220
Input Frequency (Hz)	50/60		50/60	
Output Voltage (V)	90 ^{±3}		90 ^{±3}	
Input Current (A Max)	0.23	0.12	0.35	0.17
Torque Grad. (N·m/deg Min)	3.44×10 ⁻⁴ (3.5gf·cm/deg)		8.14×10 ⁻⁴ (8.3gf·cm/deg)	
Receiver Error (deg Max)	±1		±1	
Synchronizing time (sec Max)	5		5	
Temperature Rise (°C Max)	30		30	
Insulation Resistance (M ohm Min)	10(DC500V)		100(DC500V)	
Dielectric Strength (V 1minute)	1,500		1,500	
Mass (g)	390		1,100	

TS20(TX·TR),TS21(TX·TR)

Model	TS20E11	TS20E12	TS21E11	TS21E12
Function	TX·TR		TX·TR	

Input Voltage (V)	100/110	200/220	100/110	200/220
Input Frequency (Hz)	50/60		50/60	
Output Voltage (V)	90 ^{±3}		90 ^{±3}	
Input Current (A Max)	0.26	0.13	0.5	0.25
Torque Grad. (N·m/deg Min)	8.9×10 ⁻⁴ (9gf·cm/deg)		13.8×10 ⁻⁴ (14gf·cm/deg)	
Receiver Error (deg Max)	±1		±1	
Synchronizing time (sec Max)	5		5	
Temperature Rise (°C Max)	30		30	
Insulation Resistance (M ohm Min)	50(DC500V)		10(DC500V)	
Dielectric Strength (V 1minute)	1,500		1,500	
Mass (g)	950		1,400	

TS22(15TX·TR),TS466N50(23TX),TS466N54(23TR),TS831N51(31TX),TS831N55(31TR)

Model	TS22E15	TS466N50E11	TS466N54E11	TS831N51E11	TS831N55E11
Function	TX	TX	TX·TR	TX	TX·TR
Input Voltage (V)	115	100/110		100/110	
Input Frequency (Hz)	400	50/60		50/60	
Transformation Ratio or Output Voltage	0.783 ^{±3%}	90V ^{±3V}		90V ^{±3V}	
Input Current (mA Max)	175	230		420	
Torque Grad. (N·m/deg Min)	0.922×10 ⁻⁴ (9.4gf·cm/deg)	7.36×10 ⁻⁴ (7.5gf·cm/deg)		24.6×10 ⁻⁴ (25gf·cm/deg)	
Electrical Error Receiver Error (minutes Max)	±24	±16	TX±16 TR±60	±16	±48
Friction Torque (N·m Max)	4.9×10 ⁻⁴ (5gf·cm)	24.5×10 ⁻⁴ (25gf·cm)		35.3×10 ⁻⁴ (36gf·cm)	
Temperature Rise (°C Max)	60	60		60	
Insulation Resistance (M ohm Min)	10(DC500V)	10(DC500V)		10(DC500V)	
Dielectric Strength (V 1minute)	1,000	1,000		1,500	
Mass (g)	180	570	610	1,400	1,600

TS14N3(15CX),TS14N7(15CT),TS486N50(23CX),TS486N54(23CT)

Model	TS14N3E15	TS14N7E15	TS486N50E11	TS486N54E11
Function	CX	CT	CX	CT
Input Voltage (V)	115	90	100/110	90
Input Frequency (Hz)	400		50/60	
Transformation Ratio or Output Voltage	0.783 ^{±3%}	0.735 ^{±3%}	90V ^{±3V}	57.3V ^{±3V}
Input Current (mA Max)	85	25	85	20
Torque Grad. (N-m/deg Min)	±18	±16	±16	
Electrical Error (minutes Max)	125	75	100	110
Friction Torque (N-m Max)	4.9×10 ⁻⁴ (5gf-cm)		24.5×10 ⁻⁴ (25gf-cm)	
Temperature Rise (°C Max)	30		30	
Insulation Resistance (M ohm Min)	100(DC500V)		10(DC500V)	
Dielectric Strength (V 1minute)	900		1,000	
Mass (g)	180		570	

TS15N11(15CDX),TS820N58(23CDX),TS820N50(23TDX),TS820N54(23TDR)

Model	TS15N11E15	TS820N58E11	TS820N50E11	TS820N54E11
Function	CDX		TDX	TDR
Input Voltage (V)	90		90	
Input Frequency (Hz)	400	50/60	50/60	
Transformation Ratio	1.154 ^{±3%}		1.154 ^{±3%}	
Input Current (mA Max)	100		200	
Electrical Error Receiver Error (minutes Max)	±16		±16	TDX±16 TDR±90
Torque Grad. (N-m/deg Min)	-		2.0×10 ⁻⁴ (2gf-cm/deg)	
Null Voltage (mV Max)	125	185	-	
Temperature Rise (°C Max)	30		60	
Insulation Resistance (M ohm Min)	100(DC500V)	10(DC500V)	10(DC500V)	
Dielectric Strength (V 1minute)	900	1,000	1,000	
Friction Torque (N-m Max)	6.8×10 ⁻⁴ (7gf-cm)	24.5×10 ⁻⁴ (25gf-cm)	24.5×10 ⁻⁴ (25gf-cm)	-
Mass (g)	180	570	570	610

TS472(5G),TS472N6(5M),TS453(6G),TS453N6(6M)

Model	TS472E11	TS472N6E11	TS453E11	TS453N6E11
Function	5G	5M	6G	6M
Input Voltage (V)	100/110		100/110	
Input Frequency (Hz)	50/60		50/60	
Output Voltage (V)	90 ^{±3}		90 ^{±3}	
Input Current (A Max)	0.6		1.2	
Input Current (N·m/deg Min)	29.5×10 ⁻⁴ (30gf·cm/deg)		88.3×10 ⁻⁴ (90gf·cm/deg)	
Electrical Error Receiver Error (deg Max)	±0.5	±2.0	±0.5	±1.0
Temperature Rise (°C Max)	30		30	
Insulation Resistance (M ohm Min)	10(DC500V)		10(DC500V)	
Dielectric Strength (V 1minute)	1,500		1,500	
Mass (g)	2,400	2,600	4,500	4,800

TS866(6DG),TS866N6(6DM),TS473(5DG),TS473N6(5DM)

Model	TS866E11	TS866N6E11	TS473E11	TS473N6E11
Function	6DG	6DM	5DG	5DM
Input Voltage (V)	90		90	
Input Frequency (Hz)	50/60		50/60	
Output Voltage (V)	90 ^{±3}		90 ^{±3}	
Input Current (A Max)	2.0		1.0	
Torque Grad. (N·m/deg Min)	6.87×10 ⁻³ (70gf·cm/deg)		1.57×10 ⁻³ (16gf·cm/deg)	
Electrical Error Receiver Error (deg Max)	±0.5	±1.5	±0.5	±1.5
Temperature Rise (°C Max)	30		30	
Insulation Resistance (M ohm Min)	10(DC500V)		10(DC500V)	
Dielectric Strength (V 1minute)	1,500		1,500	
Mass (g)	4,800	5,200	2,600	2,900

RUGGEDIZED,TS801N5(TX),TS806N5(CX)
WATER-PROOF-DUST-PROOF ,TS808(TX),TS808N3(TX),TS809(DG),TS809N3(DG)

Model	TS801N5E11	TS806N5E11	TS808E11 TS808N3E11	TS809E11 TS809N3E11
Function	TX	CX	TX	DG
Input Voltage (V)	100/110		100/110	90
Input Frequency (Hz)	50/60		50/60	
Output Voltage (V)	90 ^{±3}		90 ^{±3}	
Input Current (A Max)	0.5		0.6	1.0
Electrical Error (minutes Max)	±60	±30	±60	±60
Torque Grad. (N·m/deg Min)	1.38×10 ⁻³ (14gf·cm/deg)	-	2.95×10 ⁻³ (30gf·cm/deg)	1.77×10 ⁻³ (18gf·cm/deg)
Null Voltage (mV Max)	-	200	150	-
Temperature Rise (°C Max)	30		30	
Friction Torque (N·m Max)	4.90×10 ⁻³ (50gf·cm)		78.4×10 ⁻³ (800gf·cm)	
Insulation Resistance (M ohm Min)	10(DC500V)		100(DC500V)	
Dielectric Strength (V 1minute)	1,500		1,500	
Mass(g)	3,000		11,000(11kg)	



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