



SPUR GEAR AC MOTORS | Ø 60 - 90 mm 6 - 120W

AIS series speed adjustable induction type

Transmotec sell a broad range of geared AC motors in standard and customized configurations. These reversible AC motors are designed for applications that require a motor that frequently and rapidly change the direction of rotation. The motors have an internal mechanical permanent friction brake that continuously apply a torque brake to the rotor to enable a speedy change of rotational direction. The duty cycle is thirty percent. Transmotec is the ideal supplier source specially to instrument and apparatus builders. We keep a high number of motors in stock for immediate delivery.

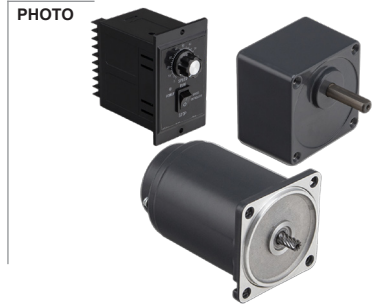
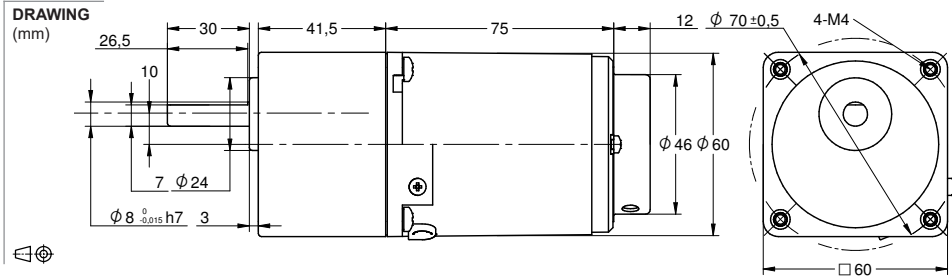
Customizations include:

- ✓ Customized harness
- ✓ Shaft configuration
- ✓ Winding configuration
- ✓ And more...

TABLE OF CONTENTS

Model	Voltage VAC	Number of phases	Frequency Hz	Frame size	Power W	Page
AIS-006W+S60A	110-380	1	50/60	60mm	6	1
AIS-015W+S70A	110-380	1	50/60	70mm	15	2
AIS-025W+S80A	110-220	1	50/60	80mm	25	3
AIS-040W+S90A	110-220	1	50/60	90mm	40	4
AIS-060W+S90A	110-220	1	50/60	90mm	60	5
AIS-090W+S90A	110-220	1	50/60	90mm	90	6
AIS-120W+S90B	110-220	1	50/60	90mm	120	7
DA	230 120	1	50 60		6-120	8

Motor model AIS-006W ← **SOLD** → Gear box model S60A
SEPARATELY



MODEL NO. DESIGNATION

Motor model - Voltage - S/T C/B S= Single phase / T=Three phase C=Cable / B = Terminal box Example: AIS-006W-230-SC (*)

Gear box model - Gear ratio Example: S60A-050 (*)

*** ALL MOTORS AND GEAR BOXES ARE SOLD SEPARATELY. SELECT GEAR BOX FRAME SIZE SAME AS MOTOR FRAME SIZE. ASSEMBLY SCREWS ARE INCLUDED IN DELIVERY**

GEAR MOTOR DATA RATIO	3	3,6	5	6	7,5	9	1	12,5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250	300	500	600	750	
230VAC 50Hz 1 phase																														
Nominal rpm* 220 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6						
Nominal rpm* 230 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6						
Nominal Nm 220 VAC	0,1	0,2	0,2	0,3	0,3	0,4	0,4	0,6	0,7	0,8	0,8	1,0	1,2	1,4	1,6	2,0	2,2	2,7	3,3	3,6	4,4	5,4	6,5	7,3						
Nominal Nm 230 VAC	0,1	0,2	0,2	0,3	0,3	0,4	0,4	0,6	0,7	0,8	0,8	1,0	1,2	1,4	1,6	2,0	2,2	2,7	3,3	3,6	4,4	5,4	6,5	7,3						
120VAC 60Hz 1 phase																														
Nominal rpm* 110 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6						
Nominal rpm* 120 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6						
Nominal Nm 110 VAC	0,1	0,1	0,2	0,2	0,3	0,4	0,4	0,5	0,6	0,7	0,7	0,9	1,1	1,3	1,5	1,8	2,0	2,5	3,0	3,3	4,0	5,0	5,9	6,6						
Nominal Nm 120 VAC	0,1	0,1	0,2	0,2	0,3	0,4	0,4	0,5	0,6	0,7	0,7	0,9	1,1	1,3	1,5	1,8	2,0	2,5	3,0	3,3	4,0	5,0	5,9	6,6						
GEAR HEAD DATA																														
Efficiency (%)	81	81	81	81	81	81	81	81	81	81	73	73	73	73	73	73	66	66	66	66	66	66	66	66						
Max. torque (Nm)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3						
Radial F 20 mm shaft (N)	80	80	80	80	80	80	80	80	80	80	180	180	180	180	180	180	180	180	180	180	180	180	180	180						
Max. thrust load (N)	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30						
Out rotation when in cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	ccw	ccw	ccw	ccw	ccw	ccw	cw	cw	cw	cw	cw	cw	cw	cw						

GEAR MOTOR FEATURES	STANDARD	CUSTOMIZATION
Motor type	AC induction	Voltage
Insulation Class	130 (B)	155 (F)
Speed tolerance	± 5%	
Cables 6W-25W 40W-120W	AWG20 AWG-18 300 mm	Harness
Cables wiring	Table at bottom of page	Per request
Housing materials	Aluminium	
Gears and shaft material	40Cr	Shaft dimensions
Bearings types	Ball bearings	
Operating temperature	-10...+40 °C	-40...+40 °C
Manufacturing quality standards	ISO 9001	
RoHS compliance	Yes	
CE UL label	No No	
IP rating cable terminal box	IP20 IP54	
Insulation Resistance		
100 M Ω or more when 500 VDC megger is applied between the windings and the case after rated operation under normal ambient temperature and humidity.		
Dielectric Strength		
Sufficient to withstand 1.5 kV at 50 Hz or 60 Hz applied between the windings and the case for 1 minute after rated operation under normal ambient temperature and humidity.		
Temperature Rise		
Temperature rise of windings are 176°F (80°C) or less measured by the resistance change method after rated operation under normal ambient temperature and humidity.		

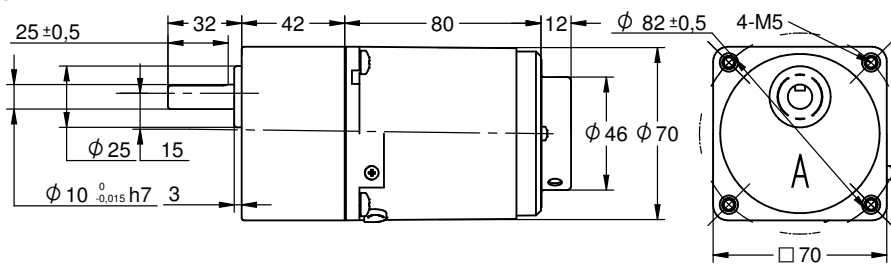
MOTOR DATA		
Base voltage (VAC)	230	120
Nominal voltage (VAC) A	220	110
Nominal voltage (VAC) B	230	120
Phase Frequency Hz	1 50	1 60
Number of poles	4	4
Output (W)	6	6
Nominal speed (rpm*) voltage A	1200	1200
Nominal speed (rpm*) voltage B	1200	1200
Nominal torque mNm voltage A	55	50
Nominal torque mNm voltage B	55	50
Nominal current (A) voltage A	0,13	0,16
Nominal current (A) voltage B	0,11	0,18
Stall torque mNm voltage A	35	30
Stall torque mNm voltage B	35	30
Capacitor μF included in delivery	0,8	2
Weight motor Kg	1,1	1,1
Weight gear motor Kg	1,5	1,5

* Speed rpm motor / gear ratio 90 - 1350 base (voltage 230 VAC) -1650 base (voltage 120 VAC)

ELECTRIC WIRING CONNECTION	
VERSION C 1 PHASE	capacitor white-blue neutral N-red phase-white CW, -blue CWW
VERSION B 1 PHASE	capacitor U2-Z2 neutral N-U1 phase-U2 CW, -Z2 CWW
VERSION C B 3 PHASES	-blue, -red, -white. Swap a pair for inversed rotation

Motor model AIS-015W ← SOLD SEPARATELY → Gear box model S70A

DRAWING (mm)



PHOTO



MODEL NO. DESIGNATION

Motor model - Voltage - S/T C/B S= Single phase / T=Three phase C=Cable / B = Terminal box Example: AIS-006W-230-SC (*)

Gear box model - Gear ratio Example: S60A-050 (*)

*** ALL MOTORS AND GEAR BOXES ARE SOLD SEPARATELY. SELECT GEAR BOX FRAME SIZE SAME AS MOTOR FRAME SIZE. ASSEMBLY SCREWS ARE INCLUDED IN DELIVERY**

GEAR MOTOR DATA RATIO	3	3,6	5	6	7,5	9	1	12,5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250	300	500	600	750	
230VAC 50Hz 1 phase																														
Nominal rpm* 220 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2	
Nominal rpm* 230 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2	
Nominal Nm 220 VAC	0,3	0,3	0,5	0,6	0,7	0,9	1,0	1,2	1,5	1,7	1,8	2,2	2,6	3,2	3,5	4,4	4,8	5,9	7,1	7,9	9,5	11,9	14,3	15,8	17,7	21,2	35,4	42,5	53,1	
Nominal Nm 230 VAC	0,3	0,3	0,5	0,6	0,7	0,9	1,0	1,2	1,5	1,7	1,8	2,2	2,6	3,2	3,5	4,4	4,8	5,9	7,1	7,9	9,5	11,9	14,3	15,8	17,7	21,2	35,4	42,5	53,1	
120VAC 60Hz 1 phase																														
Nominal rpm* 110 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2	
Nominal rpm* 120 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2	
Nominal Nm 110 VAC	0,3	0,4	0,5	0,6	0,8	0,9	1,0	1,3	1,5	1,8	1,8	2,3	2,7	3,3	3,7	4,6	5,0	6,2	7,4	8,3	9,9	12,4	14,9	16,5	18,4	22,1	36,9	44,3	55,3	
Nominal Nm 120 VAC	0,3	0,4	0,5	0,6	0,8	0,9	1,0	1,3	1,5	1,8	1,8	2,3	2,7	3,3	3,7	4,6	5,0	6,2	7,4	8,3	9,9	12,4	14,9	16,5	18,4	22,1	36,9	44,3	55,3	
GEAR HEAD DATA																														
Efficiency (%)	81	81	81	81	81	81	81	81	81	81	73	73	73	73	73	73	66	66	66	66	66	66	66	66	66	59	59	59	59	59
Max. torque (Nm)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Radial F 20 mm shaft (N)	120	120	120	120	120	120	120	120	120	120	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
Max. thrust load (N)	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Out rotation when in cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	ccw	ccw	ccw	ccw	ccw	ccw	cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	ccw	ccw	ccw	ccw

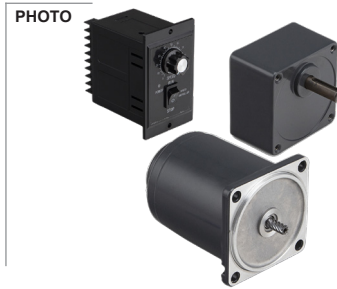
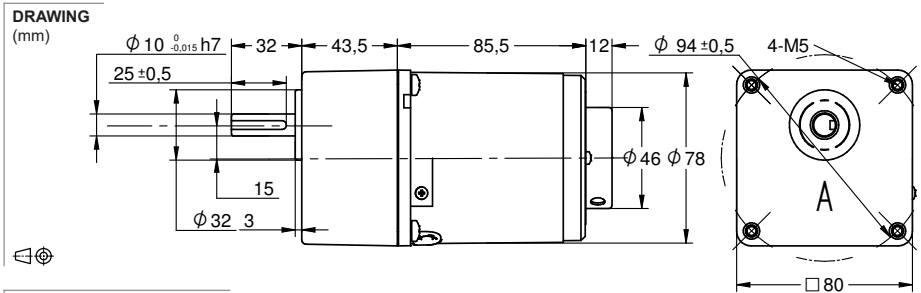
GEAR MOTOR FEATURES	STANDARD	CUSTOMIZATION
Motor type	AC induction	Voltage
Insulation Class	130 (B)	155 (F)
Speed tolerance	± 5%	
Cables 6W-25W 40W-120W	AWG20 AWG-18 300 mm	Harness
Cables wiring	Table at bottom of page	Per request
Housing materials	Aluminium	
Gears and shaft material	40Cr	Shaft dimensions
Bearings types	Ball bearings	
Operating temperature	-10...+40 °C	-40...+40 °C
Manufacturing quality standards	ISO 9001	
RoHS compliance	Yes	
CE UL label	Yes 230 400 (VAC) 120 208	
IP rating cable terminal box	IP20 IP54	
Insulation Resistance		
100 M Ω or more when 500 VDC megger is applied between the windings and the case after rated operation under normal ambient temperature and humidity.		
Dielectric Strength		
Sufficient to withstand 1.5 kV at 50 Hz or 60 Hz applied between the windings and the case for 1 minute after rated operation under normal ambient temperature and humidity.		
Temperature Rise		
Temperature rise of windings are 176°F (80°C) or less measured by the resistance change method after rated operation under normal ambient temperature and humidity.		

MOTOR DATA		
Base voltage (VAC)	230	120
Nominal voltage (VAC) A	220	110
Nominal voltage (VAC) B	230	120
Phase Frequency Hz	1 50	1 60
Number of poles	4	4
Output (W)	15	15
Nominal speed (rpm*) voltage A	1200	1200
Nominal speed (rpm*) voltage B	120	1200
Nominal torque mNm voltage A	120	125
Nominal torque mNm voltage B	120	125
Nominal current (A) voltage A	0,18	0,30
Nominal current (A) voltage B	0,20	0,32
Stall torque mNm voltage A	54	55
Stall torque mNm voltage B	54	55
Capacitor μF included in delivery	1,2	5
Weight motor Kg	1,2	1,2
Weight gear motor Kg	1,7	1,7

* Speed rpm motor / gear ratio 90 - 1350 base (voltage 230 VAC) -1650 base (voltage 120 VAC)

ELECTRIC WIRING CONNECTION	
VERSION C 1 PHASE	capacitor white-blue neutral N-red phase-white CW, -blue CWW
VERSION B 1 PHASE	capacitor U2-Z2 neutral N-U1 phase-U2 CW, -Z2 CWW
VERSION C B 3 PHASES	-blue, -red, -white. Swap a pair for inversed rotation

Motor model AIS-025W ← **SOLD** → Gear box model S80A
SEPARATELY



MODEL NO. DESIGNATION

Motor model - Voltage - S/T C/B S= Single phase / T=Three phase C=Cable / B = Terminal box Example: AIS-006W-230-SC (*)

Gear box model - Gear ratio Example: S60A-050 (*)

*** ALL MOTORS AND GEAR BOXES ARE SOLD SEPARATELY. SELECT GEAR BOX FRAME SIZE SAME AS MOTOR FRAME SIZE. ASSEMBLY SCREWS ARE INCLUDED IN DELIVERY**

GEAR MOTOR DATA RATIO	3	3,6	5	6	7,5	9	1	12,5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250	300	500	600	750		
230VAC 50Hz 1 phase																															
Nominal rpm* 220 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2		
Nominal rpm* 230 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2		
Nominal Nm 220 VAC	0,5	0,6	0,8	0,9	1,2	1,4	1,5	1,9	2,3	2,8	3,1	3,5	4,2	5,0	5,5	6,9	7,5	9,4	11,3	12,5	15,0	18,8	22,6	25,1	28,0	33,6	56,1	67,3	84,1		
Nominal Nm 230 VAC	0,5	0,6	0,8	0,9	1,2	1,4	1,5	1,9	2,3	2,8	3,1	3,5	4,2	5,0	5,5	6,9	7,5	9,4	11,3	12,5	15,0	18,8	22,6	25,1	28,0	33,6	56,1	67,3	84,1		
120VAC 60Hz 1 phase																															
Nominal rpm* 110 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2		
Nominal rpm* 120 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2		
Nominal Nm 110 VAC	0,5	0,6	0,8	0,9	1,2	1,4	1,5	1,9	2,3	2,8	3,1	3,5	4,2	5,0	5,5	6,9	7,5	9,4	11,3	12,5	15,0	18,8	22,6	25,1	28,0	33,6	56,1	67,3	84,1		
Nominal Nm 120 VAC	0,5	0,6	0,8	0,9	1,2	1,4	1,5	1,9	2,3	2,8	3,1	3,5	4,2	5,0	5,5	6,9	7,5	9,4	11,3	12,5	15,0	18,8	22,6	25,1	28,0	33,6	56,1	67,3	84,1		
GEAR HEAD DATA																															
Efficiency (%)	81	81	81	81	81	81	81	81	81	81	81	73	73	73	73	73	66	66	66	66	66	66	66	66	59	59	59	59	59		
Max. torque (Nm)	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8		
Radial F 20 mm shaft (N)	150	150	150	150	150	150	150	150	150	150	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300		
Max. thrust load (N)	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
Out rotation when in cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	ccw	ccw	ccw	ccw	ccw	cw	cw	cw	cw	cw	cw	cw	cw	ccw	ccw	ccw	ccw	ccw		

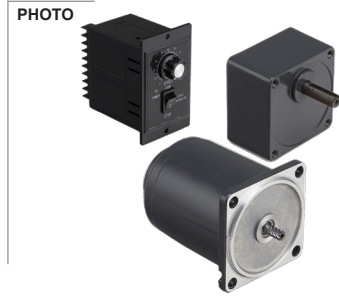
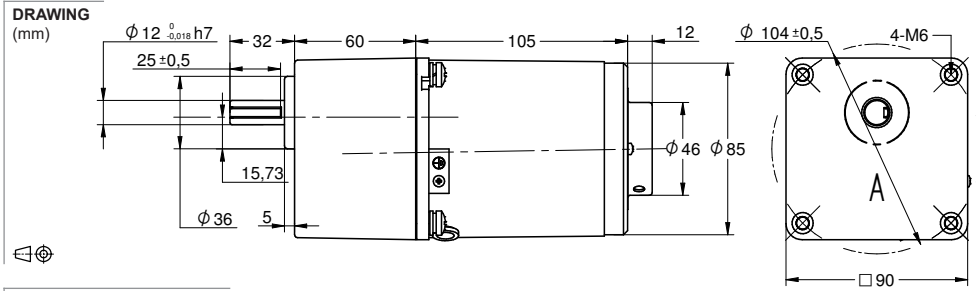
GEAR MOTOR FEATURES	STANDARD	CUSTOMIZATION
Motor type	AC induction	Voltage
Insulation Class	130 (B)	155 (F)
Speed tolerance	± 5%	
Cables 6W-25W 40W-120W	AWG20 AWG-18 300 mm	Harness
Cables wiring	Table at bottom of page	Per request
Housing materials	Aluminium	
Gears and shaft material	40Cr	Shaft dimensions
Bearings types	Ball bearings	
Operating temperature	-10...+40 °C	-40...+40 °C
Manufacturing quality standards	ISO 9001	
RoHS compliance	Yes	
CE UL label	No No	
IP rating cable terminal box	IP20 IP54	
Insulation Resistance 100 M Ω or more when 500 VDC megger is applied between the windings and the case after rated operation under normal ambient temperature and humidity.		
Dielectric Strength Sufficient to withstand 1.5 kV at 50 Hz or 60 Hz applied between the windings and the case for 1 minute after rated operation under normal ambient temperature and humidity.		
Temperature Rise Temperature rise of windings are 176°F (80°C) or less measured by the resistance change method after rated operation under normal ambient temperature and humidity.		

MOTOR DATA		
Base voltage (VAC)	230	120
Nominal voltage (VAC) A	220	110
Nominal voltage (VAC) B	230	120
Phase Frequency Hz	1 50	1 60
Number of poles	4	4
Output (W)	25	25
Nominal speed (rpm*) voltage A	1200	1200
Nominal speed (rpm*) voltage B	1200	1200
Nominal torque mNm voltage A	190	190
Nominal torque mNm voltage B	190	190
Nominal current (A) voltage A	0,25	0,45
Nominal current (A) voltage B	0,23	0,50
Stall torque mNm voltage A	88	105
Stall torque mNm voltage B	88	105
Capacitor μF included in delivery	1,8	7
Weight motor Kg	1,7	1,7
Weight gear motor Kg	2,5	2,5

* Speed rpm motor / gear ratio 90 - 1350 base (voltage 230 VAC) -1650 base (voltage 120 VAC)

ELECTRIC WIRING CONNECTION	
VERSION C 1 PHASE	capacitor white-blue neutral N-red phase-white CW, -blue CWW
VERSION B 1 PHASE	capacitor U2-Z2 neutral N-U1 phase-U2 CW, -Z2 CWW
VERSION C B 3 PHASES	-blue, -red, -white. Swap a pair for inversed rotation

Motor model AIS-040W ← SOLD SEPARATELY → Gear box model S90A



MODEL NO. DESIGNATION

Motor model - Voltage - S/T C/B S= Single phase / T=Three phase C=Cable / B = Terminal box Example: AIS-006W-230-SC (*)

Gear box model - Gear ratio Example: S60A-050 (*)

*** ALL MOTORS AND GEAR BOXES ARE SOLD SEPARATELY. SELECT GEAR BOX FRAME SIZE SAME AS MOTOR FRAME SIZE. ASSEMBLY SCREWS ARE INCLUDED IN DELIVERY**

GEAR MOTOR DATA RATIO	3	3,6	5	6	7,5	9	1	12,5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250	300	500	600	750		
230VAC 50Hz 1 phase																															
Nominal rpm* 220 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2		
Nominal rpm* 230 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2		
Nominal Nm 220 VAC	0,7	0,9	1,2	1,5	1,8	2,2	2,4	3,0	3,6	4,4	4,9	5,5	6,6	7,9	8,8	11,0	11,9	14,9	17,8	19,8	23,8	29,7	35,6	39,6	44,3	53,1	88,5	106	133		
Nominal Nm 230 VAC	0,7	0,9	1,2	1,5	1,8	2,2	2,4	3,0	3,6	4,4	4,9	5,5	6,6	7,9	8,8	11,0	11,9	14,9	17,8	19,8	23,8	29,7	35,6	39,6	44,3	53,1	88,5	106	133		
120VAC 60Hz 1 phase																															
Nominal rpm* 110 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2		
Nominal rpm* 120 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2		
Nominal Nm 110 VAC	0,6	0,8	1,1	1,3	1,6	1,9	2,1	2,6	3,2	3,8	4,2	4,7	5,7	6,8	7,6	9,5	10,3	12,9	15,4	17,2	20,6	25,7	30,9	34,3	38,4	46,0	76,7	92,0	115		
Nominal Nm 120 VAC	0,6	0,8	1,1	1,3	1,6	1,9	2,1	2,6	3,2	3,8	4,2	4,7	5,7	6,8	7,6	9,5	10,3	12,9	15,4	17,2	20,6	25,7	30,9	34,3	38,4	46,0	76,7	92,0	115		
GEAR HEAD DATA																															
Efficiency (%)	81	81	81	81	81	81	81	81	81	81	81	73	73	73	73	73	66	66	66	66	66	66	66	66	66	59	59	59	59	59	
Max. torque (Nm)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
Radial F 20 mm shaft (N)	350	350	350	350	350	350	350	350	350	350	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	
Max. thrust load (N)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Out rotation when in cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	ccw	ccw	ccw	ccw	cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	ccw	ccw	ccw	ccw	ccw

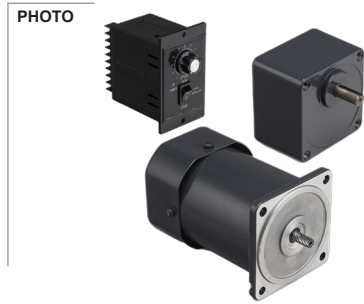
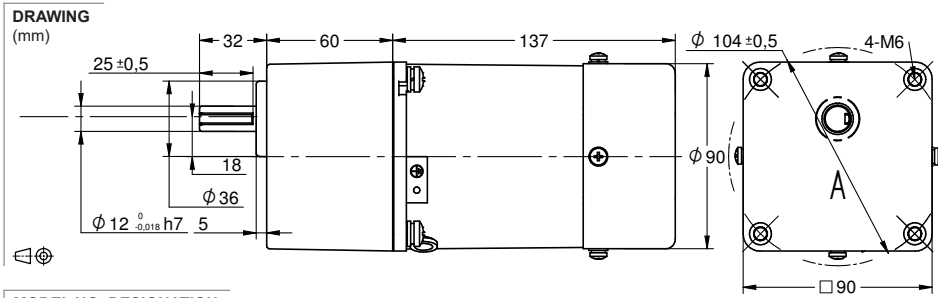
GEAR MOTOR FEATURES	STANDARD	CUSTOMIZATION
Motor type	AC induction	Voltage
Insulation Class	130 (B)	155 (F)
Speed tolerance	± 5%	
Cables 6W-25W 40W-120W	AWG20 AWG-18 300 mm	Harness
Cables wiring	Table at bottom of page	Per request
Housing materials	Aluminium	
Gears and shaft material	40Cr	Shaft dimensions
Bearings types	Ball bearings	
Operating temperature	-10...+40 °C	-40...+40 °C
Manufacturing quality standards	ISO 9001	
RoHS compliance	Yes	
CE UL label	No No	
IP rating cable terminal box	IP20 IP54	
Insulation Resistance 100 M Ω or more when 500 VDC megger is applied between the windings and the case after rated operation under normal ambient temperature and humidity.		
Dielectric Strength Sufficient to withstand 1.5 kV at 50 Hz or 60 Hz applied between the windings and the case for 1 minute after rated operation under normal ambient temperature and humidity.		
Temperature Rise Temperature rise of windings are 176°F (80°C) or less measured by the resistance change method after rated operation under normal ambient temperature and humidity.		

MOTOR DATA		
Base voltage (VAC)	230	120
Nominal voltage (VAC) A	220	110
Nominal voltage (VAC) B	230	120
Phase Frequency Hz	1 50	1 60
Number of poles	4	4
Output (W)	40	40
Nominal speed (rpm*) voltage A	1200	1200
Nominal speed (rpm*) voltage B	1200	1200
Nominal torque mNm voltage A	300	260
Nominal torque mNm voltage B	300	260
Nominal current (A) voltage A	0,35	0,55
Nominal current (A) voltage B	0,40	0,60
Stall torque mNm voltage A	160	180
Stall torque mNm voltage B	160	180
Capacitor μF included in delivery	2,5	8
Weight motor Kg	2,5	2,5
Weight gear motor Kg	3,85	3,85

* Speed rpm motor / gear ratio 90 - 1350 base (voltage 230 VAC) -1650 base (voltage 120 VAC)

ELECTRIC WIRING CONNECTION	
VERSION C 1 PHASE	capacitor white-blue neutral N-red phase-white CW, -blue CWW
VERSION B 1 PHASE	capacitor U2-Z2 neutral N-U1 phase-U2 CW, -Z2 CWW
VERSION C B 3 PHASES	-blue, -red, -white. Swap a pair for inversed rotation

Motor model AIS-060W ← **SOLD** → Gear box model S90A
SEPARATELY



MODEL NO. DESIGNATION

Motor model - Voltage - S/T C/B S= Single phase / T=Three phase C=Cable / B = Terminal box Example: AIS-006W-230-SC (*)

Gear box model - Gear ratio Example: S60A-050 (*)

*** ALL MOTORS AND GEAR BOXES ARE SOLD SEPARATELY. SELECT GEAR BOX FRAME SIZE SAME AS MOTOR FRAME SIZE. ASSEMBLY SCREWS ARE INCLUDED IN DELIVERY**

GEAR MOTOR DATA RATIO	3	3,6	5	6	7,5	9	1	12,5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250	300	500	600	750	
230VAC 50Hz 1 phase																														
Nominal rpm* 220 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2	
Nominal rpm* 230 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2	
Nominal Nm 220 VAC	1,2	1,4	2,0	2,4	3,0	3,6	4,0	5,0	6,0	7,1	7,9	8,9	10,7	12,9	14,3	17,9	19,4	24,3	29,1	32,3	38,8	48,5	58,2	64,7	72,3	86,7	145	173	217	
Nominal Nm 230 VAC	1,2	1,4	2,0	2,4	3,0	3,6	4,0	5,0	6,0	7,1	7,9	8,9	10,7	12,9	14,3	17,9	19,4	24,3	29,1	32,3	38,8	48,5	58,2	64,7	72,3	86,7	145	173	217	
120VAC 60Hz 1 phase																														
Nominal rpm* 110 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2	
Nominal rpm* 120 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2	
Nominal Nm 110 VAC	1,2	1,4	2,0	2,4	3,0	3,6	4,0	5,0	6,0	7,1	7,9	8,9	10,7	12,9	14,3	17,9	19,4	24,3	29,1	32,3	38,8	48,5	58,2	64,7	72,3	86,7	145	173	217	
Nominal Nm 120 VAC	1,2	1,4	2,0	2,4	3,0	3,6	4,0	5,0	6,0	7,1	7,9	8,9	10,7	12,9	14,3	17,9	19,4	24,3	29,1	32,3	38,8	48,5	58,2	64,7	72,3	86,7	145	173	217	
GEAR HEAD DATA																														
Efficiency (%)	81	81	81	81	81	81	81	81	81	81	81	73	73	73	73	73	66	66	66	66	66	66	66	66	66	59	59	59	59	
Max. torque (Nm)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
Radial F 20 mm shaft (N)	350	350	350	350	350	350	350	350	350	350	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	
Max. thrust load (N)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Out rotation when in cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	ccw	ccw	ccw	ccw	cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	ccw	ccw	ccw	ccw

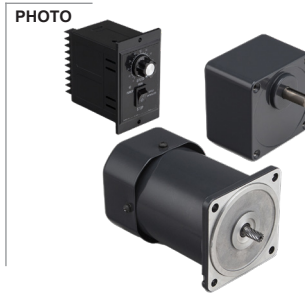
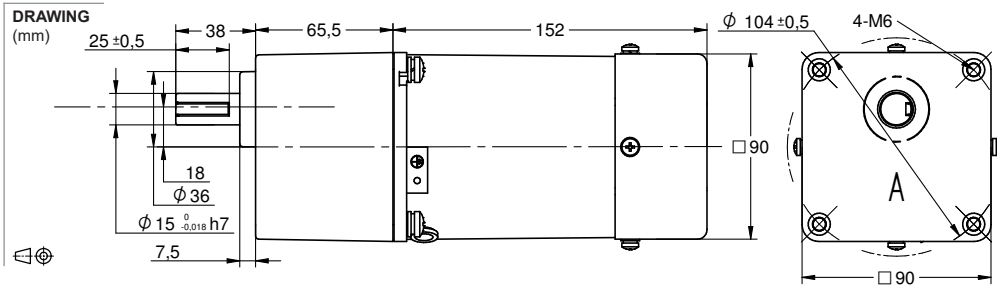
GEAR MOTOR FEATURES	STANDARD	CUSTOMIZATION
Motor type	AC induction	Voltage
Insulation Class	130 (B)	155 (F)
Speed tolerance	± 5%	
Cables 6W-25W 40W-120W	AWG20 AWG-18 300 mm	Harness
Cables wiring	Table at bottom of page	Per request
Housing materials	Aluminium	
Gears and shaft material	40Cr	Shaft dimensions
Bearings types	Ball bearings	
Operating temperature	-10...+40 °C	-40...+40 °C
Manufacturing quality standards	ISO 9001	
RoHS compliance	Yes	
CE UL label	No No	
IP rating cable terminal box	IP20 IP54	
Insulation Resistance 100 M Ω or more when 500 VDC megger is applied between the windings and the case after rated operation under normal ambient temperature and humidity.		
Dielectric Strength Sufficient to withstand 1.5 kV at 50 Hz or 60 Hz applied between the windings and the case for 1 minute after rated operation under normal ambient temperature and humidity.		
Temperature Rise Temperature rise of windings are 176°F (80°C) or less measured by the resistance change method after rated operation under normal ambient temperature and humidity.		

MOTOR DATA		
Base voltage (VAC)	230	120
Nominal voltage (VAC) A	220	110
Nominal voltage (VAC) B	230	120
Phase Frequency Hz	1 50	1 60
Number of poles	4	4
Output (W)	60	60
Nominal speed (rpm*) voltage A	1200	1200
Nominal speed (rpm*) voltage B	1200	1200
Nominal torque mNm voltage A	490	490
Nominal torque mNm voltage B	490	490
Nominal current (A) voltage A	0,50	0,80
Nominal current (A) voltage B	0,55	0,85
Stall torque mNm voltage A	265	265
Stall torque mNm voltage B	265	265
Capacitor μF included in delivery	4	12
Weight motor Kg	2,8	2,8
Weight gear motor Kg	4,15	4,15

* Speed rpm motor / gear ratio 90 - 1350 base (voltage 230 VAC) -1650 base (voltage 120 VAC)

ELECTRIC WIRING CONNECTION	
VERSION C 1 PHASE	capacitor white-blue neutral N-red phase-white CW, -blue CWW
VERSION B 1 PHASE	capacitor U2-Z2 neutral N-U1 phase-U2 CW, -Z2 CWW
VERSION C B 3 PHASES	-blue, -red, -white. Swap a pair for inversed rotation

Motor model AIS-090W ← **SOLD** → Gear box model S90B
SEPARATELY



MODEL NO. DESIGNATION

Motor model - Voltage - S/T C/B S= Single phase / T=Three phase C=Cable / B = Terminal box Example: AIS-006W-230-SC (*)

Gear box model - Gear ratio Example: S60A-050 (*)

*** ALL MOTORS AND GEAR BOXES ARE SOLD SEPARATELY. SELECT GEAR BOX FRAME SIZE SAME AS MOTOR FRAME SIZE. ASSEMBLY SCREWS ARE INCLUDED IN DELIVERY**

GEAR MOTOR DATA RATIO	3	3,6	5	6	7,5	9	1	12,5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250	300	500	600	750		
230VAC 50Hz 1 phase																															
Nominal rpm* 220 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2		
Nominal rpm* 230 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2		
Nominal Nm 220 VAC	1,8	2,2	3,0	3,6	4,6	5,5	6,1	7,6	9,1	10,9	12,2	13,7	16,4	19,7	21,9	27,4	29,7	37,1	44,6	49,5	59,4	74,3	89	99	111	133	221	266	332		
Nominal Nm 230 VAC	1,8	2,2	3,0	3,6	4,6	5,5	6,1	7,6	9,1	10,9	12,2	13,7	16,4	19,7	21,9	27,4	29,7	37,1	44,6	49,5	59,4	74,3	89	99	111	133	221	266	332		
120VAC 60Hz 1 phase																															
Nominal rpm* 110 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2		
Nominal rpm* 120 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2		
Nominal Nm 110 VAC	1,8	2,2	3,0	3,6	4,6	5,5	6,1	7,6	9,1	10,9	12,2	13,7	16,4	19,7	21,9	27,4	29,7	37,1	44,6	49,5	59,4	74,3	89,1	99,0	111	133	221	266	332		
Nominal Nm 120 VAC	1,8	2,2	3,0	3,6	4,6	5,5	6,1	7,6	9,1	10,9	12,2	13,7	16,4	19,7	21,9	27,4	29,7	37,1	44,6	49,5	59,4	74,3	89,1	99,0	111	133	221	266	332		
GEAR HEAD DATA																															
Efficiency (%)	81	81	81	81	81	81	81	81	81	81	81	73	73	73	73	73	66	66	66	66	66	66	66	66	59	59	59	59	59		
Max. torque (Nm)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10		
Radial F 20 mm shaft (N)	350	350	350	350	350	350	350	350	350	350	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450		
Max. thrust load (N)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
Out rotation when in cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	ccw	ccw	ccw	ccw	cw	cw	cw	cw	cw	cw	cw	cw	cw	cw	ccw	ccw	ccw	ccw		

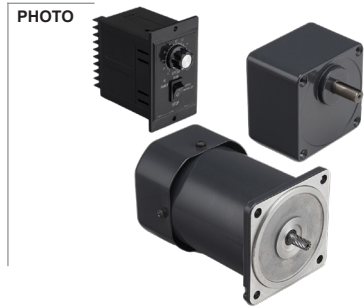
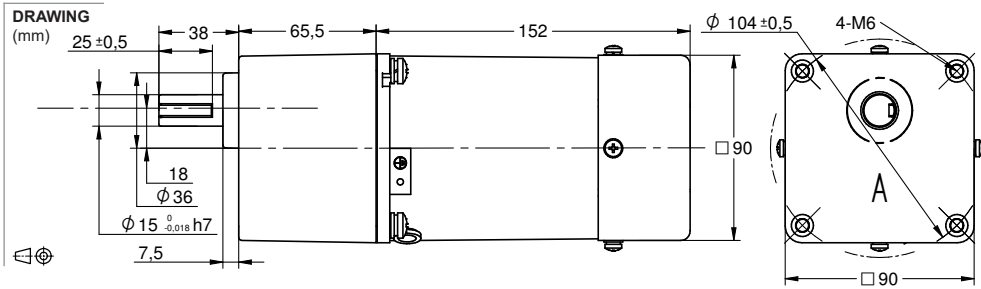
GEAR MOTOR FEATURES	STANDARD	CUSTOMIZATION
Motor type	AC induction	Voltage
Insulation Class	130 (B)	155 (F)
Speed tolerance	± 5%	
Cables 6W-25W 40W-120W	AWG20 AWG-18 300 mm	Harness
Cables wiring	Table at bottom of page	Per request
Housing materials	Aluminium	
Gears and shaft material	40Cr	Shaft dimensions
Bearings types	Ball bearings	
Operating temperature	-10...+40 °C	-40...+40 °C
Manufacturing quality standards	ISO 9001	
RoHS compliance	Yes	
CE UL label	No No	
IP rating cable terminal box	IP20 IP54	
Insulation Resistance 100 M Ω or more when 500 VDC megger is applied between the windings and the case after rated operation under normal ambient temperature and humidity.		
Dielectric Strength Sufficient to withstand 1.5 kV at 50 Hz or 60 Hz applied between the windings and the case for 1 minute after rated operation under normal ambient temperature and humidity.		
Temperature Rise Temperature rise of windings are 176°F (80°C) or less measured by the resistance change method after rated operation under normal ambient temperature and humidity.		

MOTOR DATA		
Base voltage (VAC)	230	120
Nominal voltage (VAC) A	220	110
Nominal voltage (VAC) B	230	120
Phase Frequency Hz	1 50	1 60
Number of poles	4	4
Output (W)	120	120
Nominal speed (rpm*) voltage A	1200	1200
Nominal speed (rpm*) voltage B	1200	1200
Nominal torque mNm voltage A	750	750
Nominal torque mNm voltage B	750	750
Nominal current (A) voltage A	1,00	1,65
Nominal current (A) voltage B	0,95	1,80
Stall torque mNm voltage A	530	530
Stall torque mNm voltage B	530	530
Capacitor μF included in delivery	7	25
Weight motor Kg	3,5	3,5
Weight gear motor Kg	5	5

* Speed rpm motor / gear ratio 90 - 1350 base (voltage 230 VAC) -1650 base (voltage 120 VAC)

ELECTRIC WIRING CONNECTION	
VERSION C 1 PHASE	capacitor white-blue neutral N-red phase-white CW, -blue CWW
VERSION B 1 PHASE	capacitor U2-Z2 neutral N-U1 phase-U2 CW, -Z2 CWW
VERSION C B 3 PHASES	-blue, -red, -white. Swap a pair for inversed rotation

Motor model AIS-120W ← **SOLD SEPARATELY** → Gear box model S90B



MODEL NO. DESIGNATION

Motor model - Voltage - S/T C/B S= Single phase / T=Three phase C=Cable / B = Terminal box Example: AIS-006W-230-SC (*)

Gear box model - Gear ratio Example: S60A-050 (*)

*** ALL MOTORS AND GEAR BOXES ARE SOLD SEPARATELY. SELECT GEAR BOX FRAME SIZE SAME AS MOTOR FRAME SIZE. ASSEMBLY SCREWS ARE INCLUDED IN DELIVERY**

GEAR MOTOR DATA RATIO	3	3,6	5	6	7,5	9	1	12,5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250	300	500	600	750		
230VAC 50Hz 1 phase																															
Nominal rpm* 220 VAC	417	347	250	208	167	139	125	100	83	69	63	50	42	35	31	25	21	17	14	13	10	8	7	6	5	4	3	2	2		
Nominal rpm* 230 VAC	417	347	250	208	167	139	125	100	83	69	63	50	42	35	31	25	21	17	14	13	10	8	7	6	5	4	3	2	2		
Nominal Nm 220 VAC	2.3	2.7	3.8	4.5	5.6	6.8	7.5	9.4	11.3	13.6	15.1	17.0	20.4	24.4	27.2	33.9	36.8	46.0	55.2	61.4	73.7	92.1	110	123	137	165	274	329	412		
Nominal Nm 230 VAC	2.3	2.7	3.8	4.5	5.6	6.8	7.5	9.4	11.3	13.6	15.1	17.0	20.4	24.4	27.2	33.9	36.8	46.0	55.2	61.4	73.7	92.1	110	123	137	165	274	329	412		
120VAC 60Hz 1 phase																															
Nominal rpm* 110 VAC	517	431	310	258	207	172	155	124	103	86	78	62	52	43	39	31	26	21	17	16	13	10	9	8	6	5	3	3	2		
Nominal rpm* 120 VAC	517	431	310	258	207	172	155	124	103	86	78	62	52	43	39	31	26	21	17	16	13	10	9	8	6	5	3	3	2		
Nominal Nm 110 VAC	1.8	2.2	3.0	3.6	4.6	5.5	6.1	7.6	9.1	10.9	12.2	13.7	16.4	19.7	21.9	27.4	29.7	37.1	44.6	49.5	59.4	74.3	89.1	99.0	111	133	221	266	332		
Nominal Nm 120 VAC	1.8	2.2	3.0	3.6	4.6	5.5	6.1	7.6	9.1	10.9	12.2	13.7	16.4	19.7	21.9	27.4	29.7	37.1	44.6	49.5	59.4	74.3	89.1	99.0	111	133	221	266	332		
GEAR HEAD DATA																															
Efficiency (%)	81	81	81	81	81	81	81	81	81	81	81	73	73	73	73	73	66	66	66	66	66	66	66	66	66	59	59	59	59		
Max. torque (Nm)	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20		
Radial F 20 mm shaft (N)	500	500	500	500	500	500	600	600	600	600	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700		
Max. thrust load (N)	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150		
Out rotation when in cw	cw	cw	cw	cw	cw	cw	ccw	ccw	ccw	ccw	cw	cw	cw	cw	cw	cw	cw	cw	cw	ccw	ccw	ccw	ccw	ccw	ccw	cw	cw	cw	cw		

GEAR MOTOR FEATURES	STANDARD	CUSTOMIZATION
Motor type	AC induction	Voltage
Insulation Class	130 (B)	155 (F)
Speed tolerance	± 5%	
Cables 6W-25W 40W-120W	AWG20 AWG-18 300 mm	Harness
Cables wiring	Table at bottom of page	Per request
Housing materials	Aluminium	
Gears and shaft material	40Cr	Shaft dimensions
Bearings types	Ball bearings	
Operating temperature	-10...+40 °C	-40...+40 °C
Manufacturing quality standards	ISO 9001	
RoHS compliance	Yes	
CE UL label	No No	
IP rating cable terminal box	IP20 IP54	
Insulation Resistance 100 M Ω or more when 500 VDC megger is applied between the windings and the case after rated operation under normal ambient temperature and humidity.		
Dielectric Strength Sufficient to withstand 1.5 kV at 50 Hz or 60 Hz applied between the windings and the case for 1 minute after rated operation under normal ambient temperature and humidity.		
Temperature Rise Temperature rise of windings are 176°F (80°C) or less measured by the resistance change method after rated operation under normal ambient temperature and humidity.		

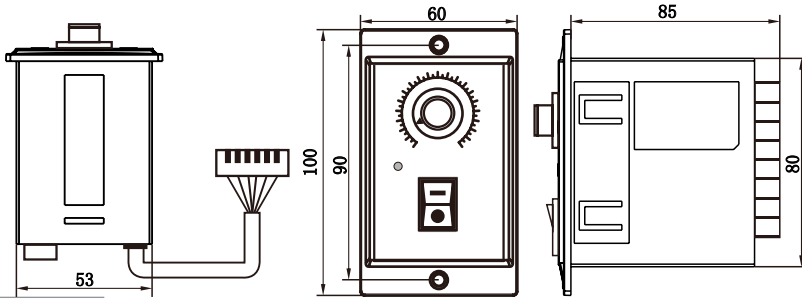
MOTOR DATA		
Base voltage (VAC)	230	120
Nominal voltage (VAC) A	220	110
Nominal voltage (VAC) B	230	120
Phase Frequency Hz	1 50	1 60
Number of poles	4	4
Output (W)	120	120
Nominal speed (rpm*) voltage A	1250	1550
Nominal speed (rpm*) voltage B	1250	1550
Nominal torque mNm voltage A	930	750
Nominal torque mNm voltage B	930	750
Nominal current (A) voltage A	1.15	1.90
Nominal current (A) voltage B	1.15	1.90
Stall torque mNm voltage A	720	650
Stall torque mNm voltage B	720	720
Capacitor μF included in delivery	8	30
Weight motor Kg	3.25	3.25
Weight gear motor Kg	4.75	4.75

* Speed rpm motor / gear ratio 90 - 1350 base (voltage 230 VAC) -1650 base (voltage 120 VAC)

ELECTRIC WIRING CONNECTION	
VERSION C 1 PHASE	capacitor white-blue neutral N-red phase-white CW, -blue CWW
VERSION B 1 PHASE	capacitor U2-Z2 neutral N-U1 phase-U2 CW, -Z2 CWW
VERSION C B 3 PHASES	-blue, -red, -white. Swap a pair for inversed rotation

Speed control DA series for AIS motors

DRAWING
(mm)



PHOTO



MODEL NO. DESIGNATION

Controller model - Voltage - Power Example: DA-230 - 006

SPEED CONTROLLER FEATURES	
Speed controller type	Tacho generator feedback
Model	DA-230 DA-110
Base voltage VAC - Frequency Hz	230 - 50 Hz 110 - 60 Hz
Power W	006 015 025 040 060 090 120
Speed range rpm	90-1350 90-1550
Connector male brand type	Hongxing CH3.96-6Y
Cable length motor mm	900
Operating temperature °C	-10...+40
Weight Kg	0.25

WIRING SCHEMATIC

