



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

AIR series reversible 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:

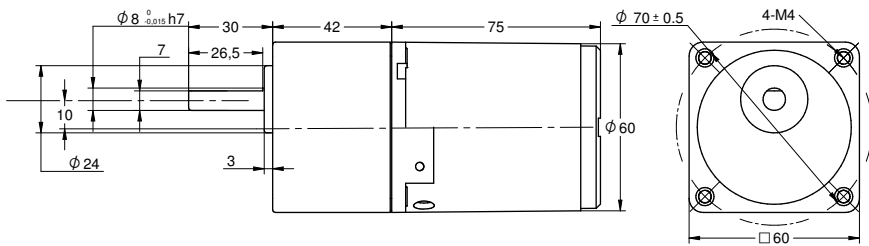
- ✓ Customized harness
- ✓ Shaft configuration
- ✓ Winding configuration
- ✓ And more...

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AIR-006W+S60A	110-380VAC	1-3	50/60	60mm	6	1
AIR-015W+S70A	110-380VAC	1-3	50/60	70mm	15	2
AIR-025W+S80A	110-220VAC	1-3	50/60	80mm	25	3
AIR-040W+S90A	110-220VAC	1-3	50/60	90mm	40	4
AIR-060W+S90A	110-220VAC	1-3	50/60	90mm	60	5
AIR-090W+S90A	110-220VAC	1-3	50/60	90mm	90	6
AIR-120W+S90B	110-220VAC	1-3	50/60	90mm	120	7

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

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: AIR-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																															
Nominal Nm 220 VAC	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.7	0.9	1.1	1.3	1.4	1.8	1.9	2.4	2.9	3.2	3.8	4.8	5.7	6.3							
Nominal Nm 230 VAC																															
120VAC 60Hz 1 phase																															
Nominal rpm 110 VAC	483	403	290	242	193	161	145	116	97	81	73	58	48	40	36	29	24	19	16	15	12	10	8	7							
Nominal rpm 120 VAC																															
Nominal Nm 110 VAC	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.6	0.7	0.9	1.1	1.2	1.5	1.6	2.0	2.4	2.6	3.2	4.0	4.8	5.3							
Nominal Nm 120 VAC																															
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							

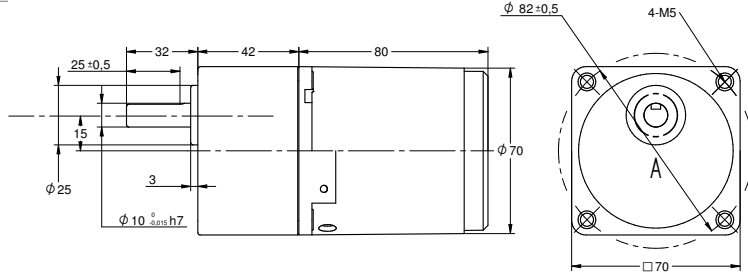
GEAR MOTOR FEATURES	STANDARD	CUSTOMIZATION
Motor type	AC induction	Voltage
Insulation Class	130 (B)	155 (F)
Speed tolerance	± 5%	
Cables 6W-25W 40W-120W	AWG20 AWG-18 300 mm	Harness
Cables wiring	Table at bottom of page	Per request
Housing materials	Aluminium	
Gears and shaft material	40Cr	Shaft dimensions
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	
Nominal speed (rpm) voltage B		1450
Nominal torque mNm voltage A	48	
Nominal torque mNm voltage B		40
Nominal current (A) voltage A	0.15	
Nominal current (A) voltage B		0.20
Stall torque mNm voltage A	55	
Stall torque mNm voltage B		45
Capacitor μF included in delivery	1	2.5
Weight motor Kg	0.8	0.8
Weight gear motor Kg	1.2	1.2

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 AIR-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: **AIR-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**

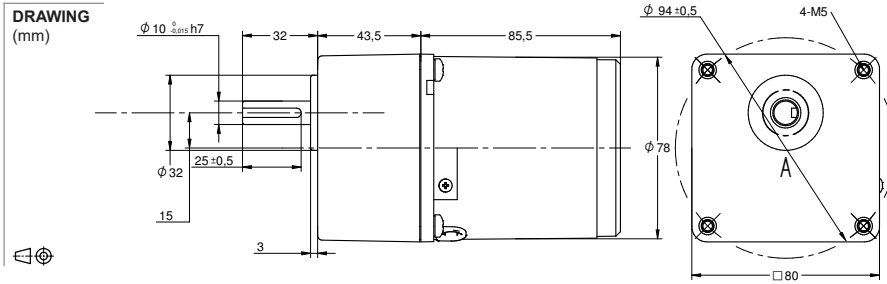
GEAR MOTOR DATA RATIO	3	3,6	5	6	7,5	9	1	12,5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250	300	500	600	750	
230VAC 50Hz 1 phase																														
Nominal rpm 220 VAC	400	333	240	200	160	133	120	96	80	67	60	48	40	33	30	24	20	16	13	12	10	8	7	6	5	4	2	2	2	
Nominal rpm 230 VAC	400	333	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	0.4	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 230 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	
120VAC 60Hz 1 phase																														
Nominal rpm 110 VAC	483	403	290	242	193	161	145	116	97	81	73	58	48	40	36	29	24	19	16	15	12	10	8	7	6	5	3	2	2	
Nominal rpm 120 VAC	483	403	290	242	193	161	145	116	97	81	73	58	48	40	36	29	24	19	16	15	12	10	8	7	6	5	3	2	2	
Nominal Nm 110 VAC	0.3	0.3	0.4	0.5	0.6	0.8	0.9	1.1	1.3	1.5	1.5	1.9	2.3	2.8	3.1	3.8	4.2	5.2	6.2	6.9	8.3	10.4	12.5	13.9	15.5	18.6	31.0	37.2	46.5	
Nominal Nm 120 VAC	0.3	0.3	0.4	0.5	0.6	0.8	0.9	1.1	1.3	1.5	1.5	1.9	2.3	2.8	3.1	3.8	4.2	5.2	6.2	6.9	8.3	10.4	12.5	13.9	15.5	18.6	31.0	37.2	46.5	
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	
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	
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	
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	
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	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)	15	15
Nominal speed (rpm) voltage A	1200	1450
Nominal speed (rpm) voltage B	1200	1450
Nominal torque mNm voltage A	125	105
Nominal torque mNm voltage B	125	105
Nominal current (A) voltage A	0.23	0.43
Nominal current (A) voltage B	0.23	0.42
Stall torque mNm voltage A	110	85
Stall torque mNm voltage B	110	85
Capacitor μF included in delivery	1.5	6
Weight motor Kg	1.15	1.15
Weight gear motor Kg	1.65	1.65

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 AIR-025W ← SOLD SEPARATELY → Gear box model S80A



MODEL NO. DESIGNATION

Motor model - Voltage - S/T C/B S= Single phase / T=Three phase C=Cable / B = Terminal box Example: AIR-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**

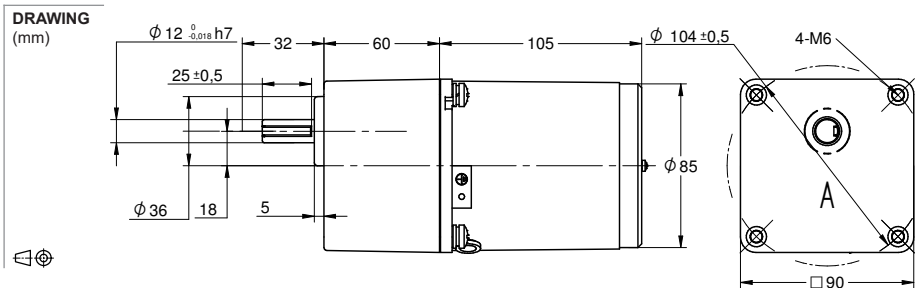
GEAR MOTOR DATA RATIO	3	3,6	5	6	7,5	9	1	12,5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250	300	500	600	750	
230VAC 50Hz 1 phase																														
Nominal rpm 220 VAC	417	347	250	208	167	139	125	100	83	69	63	50	42	35	31	25	21	17	14	13	10	8	7	6	5	4	3	2	2	
Nominal rpm 230 VAC	417	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	0.5	0.6	0.8	1.0	1.2	1.5	1.6	2.0	2.4	2.9	3.2	3.7	4.4	5.3	5.8	7.3	7.9	9.9	11.9	13.2	15.8	19.8	23.8	26.4	29.5	35.4	59.0	70.8	88.5	
Nominal Nm 230 VAC	0.5	0.6	0.8	1.0	1.2	1.5	1.6	2.0	2.4	2.9	3.2	3.7	4.4	5.3	5.8	7.3	7.9	9.9	11.9	13.2	15.8	19.8	23.8	26.4	29.5	35.4	59.0	70.8	88.5	
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	0.4	0.5	0.7	0.8	1.0	1.2	1.3	1.7	2.0	2.4	2.7	3.0	3.6	4.3	4.8	6.0	6.5	8.2	9.8	10.9	13.1	16.3	19.6	21.8	24.3	29.2	48.7	58.4	73.0	
Nominal Nm 120 VAC	0.4	0.5	0.7	0.8	1.0	1.2	1.3	1.7	2.0	2.4	2.7	3.0	3.6	4.3	4.8	6.0	6.5	8.2	9.8	10.9	13.1	16.3	19.6	21.8	24.3	29.2	48.7	58.4	73.0	
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)	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	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	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	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	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)	25	25
Nominal speed (rpm) voltage A	1250	1550
Nominal speed (rpm) voltage B	1250	1550
Nominal torque mNm voltage A	200	165
Nominal torque mNm voltage B	200	165
Nominal current (A) voltage A	0.29	0.45
Nominal current (A) voltage B	0.30	0.50
Stall torque mNm voltage A	140	140
Stall torque mNm voltage B	160	140
Capacitor μF included in delivery	2.2	8
Weight motor Kg	1.65	1.65
Weight gear motor Kg	2.45	2.45

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 AIR-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: AIR-006W-230-SC (*)

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

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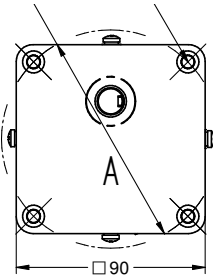
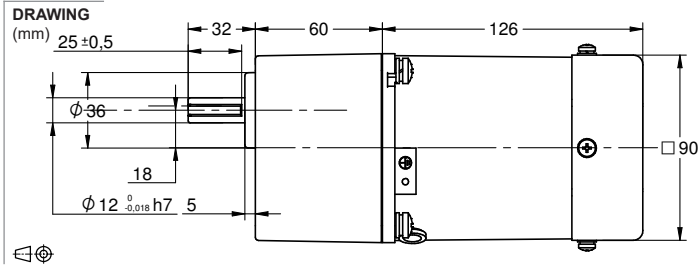
GEAR MOTOR DATA RATIO	3	3,6	5	6	7,5	9	1	12,5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250	300	500	600	750	
230VAC 50Hz 1 phase																														
Nominal rpm 220 VAC	417	347	250	208	167	139	125	100	83	69	63	50	42	35	31	25	21	17	14	13	10	8	7	6	5	4	3	2	2	
Nominal rpm 230 VAC	417	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	0.8	0.9	1.3	1.5	1.9	2.3	2.6	3.2	3.8	4.6	5.1	5.7	6.9	8.3	9.2	11.5	12.5	15.6	18.7	20.8	24.9	31.2	37.4	41.6	46.5	55.8	92.9	112	139	
Nominal Nm 230 VAC	0.8	0.9	1.3	1.5	1.9	2.3	2.6	3.2	3.8	4.6	5.1	5.7	6.9	8.3	9.2	11.5	12.5	15.6	18.7	20.8	24.9	31.2	37.4	41.6	46.5	55.8	92.9	112	139	
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	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	
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)	40	40
Nominal speed (rpm) voltage A	1250	1550
Nominal speed (rpm) voltage B	1250	1550
Nominal torque mNm voltage A	315	260
Nominal torque mNm voltage B	315	260
Nominal current (A) voltage A	0.45	0.79
Nominal current (A) voltage B	0.45	0.80
Stall torque mNm voltage A	270	260
Stall torque mNm voltage B	270	260
Capacitor μF included in delivery	3	12
Weight motor Kg	1.65	1.65
Weight gear motor Kg	3	3

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 AIR-060W ← 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: AIR-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**

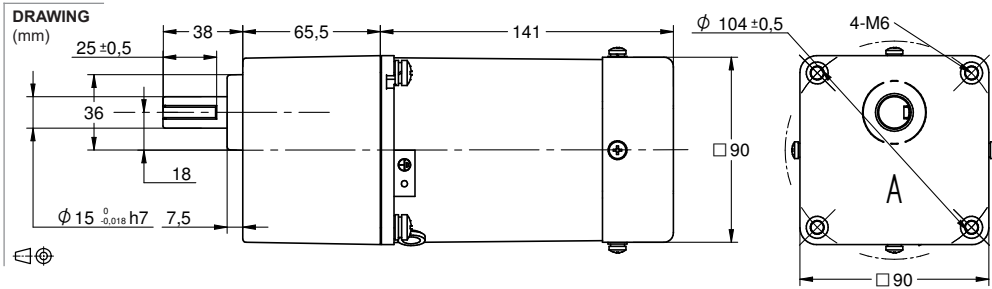
GEAR MOTOR DATA RATIO	3	3,6	5	6	7,5	9	1	12,5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250	300	500	600	750	
230VAC 50Hz 1 phase																														
Nominal rpm 220 VAC	417	347	250	208	167	139	125	100	83	69	63	50	42	35	31	25	21	17	14	13	10	8	7	6	5	4	3	2	2	
Nominal rpm 230 VAC	417	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	1.1	1.4	1.9	2.3	2.9	3.4	3.8	4.8	5.7	6.9	7.6	8.6	10.3	12.4	13.7	17.2	18.6	23.3	27.9	31.0	37.2	46.5	55.8	62.0	69.3	83.2	139	166	208	
Nominal Nm 230 VAC	1.1	1.4	1.9	2.3	2.9	3.4	3.8	4.8	5.7	6.9	7.6	8.6	10.3	12.4	13.7	17.2	18.6	23.3	27.9	31.0	37.2	46.5	55.8	62.0	69.3	83.2	139	166	208	
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	0.9	1.1	1.5	1.8	2.3	2.8	3.1	3.8	4.6	5.5	6.2	6.9	8.3	10.0	11.1	13.9	15.0	18.8	22.6	25.1	30.1	37.6	45.1	50.2	56.1	67.3	112	135	168	
Nominal Nm 120 VAC	0.9	1.1	1.5	1.8	2.3	2.8	3.1	3.8	4.6	5.5	6.2	6.9	8.3	10.0	11.1	13.9	15.0	18.8	22.6	25.1	30.1	37.6	45.1	50.2	56.1	67.3	112	135	168	
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

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	1250	1550
Nominal speed (rpm) voltage B	1250	1550
Nominal torque mNm voltage A	470	380
Nominal torque mNm voltage B	470	380
Nominal current (A) voltage A	0.55	1.05
Nominal current (A) voltage B	0.60	1.05
Stall torque mNm voltage A	420	330
Stall torque mNm voltage B	460	380
Capacitor μF included in delivery	4.5	15
Weight motor Kg	2.75	2.75
Weight gear motor Kg	4.1	4.1

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 AIR-090W ← **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: AIR-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**

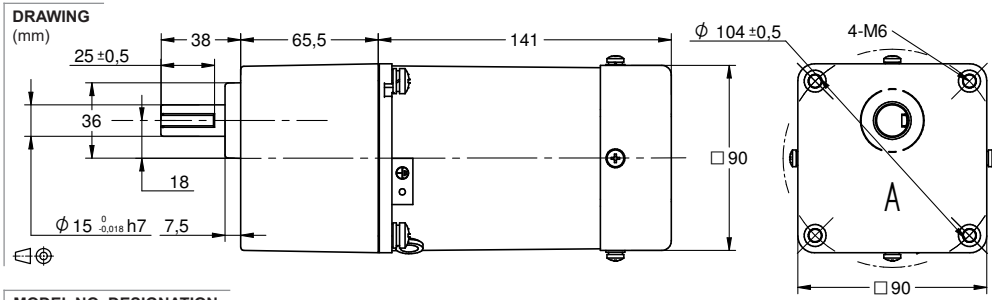
GEAR MOTOR DATA RATIO	3	3,6	5	6	7,5	9	1	12,5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250	300	500	600	750	
230VAC 50Hz 1 phase																														
Nominal rpm 220 VAC	417	347	250	208	167	139	125	100	83	69	63	50	42	35	31	25	21	17	14	13	10	8	7	6	5	4	3	2	2	
Nominal rpm 230 VAC	417	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	1.7	2.0	2.8	3.4	4.3	5.1	5.7	7.1	8.5	10.2	11.3	12.8	15.3	18.4	20.4	25.6	27.7	34.7	41.6	46.2	55.4	69.3	83.2	92.4	103	124	207	248	310	
Nominal Nm 230 VAC	1.7	2.0	2.8	3.4	4.3	5.1	5.7	7.1	8.5	10.2	11.3	12.8	15.3	18.4	20.4	25.6	27.7	34.7	41.6	46.2	55.4	69.3	83.2	92.4	103	124	207	248	310	
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	1.4	1.7	2.3	2.8	3.5	4.2	4.6	5.8	6.9	8.3	9.2	10.4	12.5	15.0	16.6	20.8	22.6	28.2	33.9	37.6	45.1	56.4	67.7	75.2	84.1	101	168	202	252	
Nominal Nm 120 VAC	1.4	1.7	2.3	2.8	3.5	4.2	4.6	5.8	6.9	8.3	9.2	10.4	12.5	15.0	16.6	20.8	22.6	28.2	33.9	37.6	45.1	56.4	67.7	75.2	84.1	101	168	202	252	
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)	90	90
Nominal speed (rpm) voltage A	1250	1550
Nominal speed (rpm) voltage B	1250	1550
Nominal torque mNm voltage A	700	570
Nominal torque mNm voltage B	700	570
Nominal current (A) voltage A	0.82	1.72
Nominal current (A) voltage B	0.81	1.72
Stall torque mNm voltage A	560	550
Stall torque mNm voltage B	560	600
Capacitor μF included in delivery	6	25
Weight motor Kg	3.25	3.25
Weight gear motor Kg	4.75	4.75

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 AIR-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: AIR-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	ccw	cw	cw	cw	cw	cw	cw	cw	cw	cw	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

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