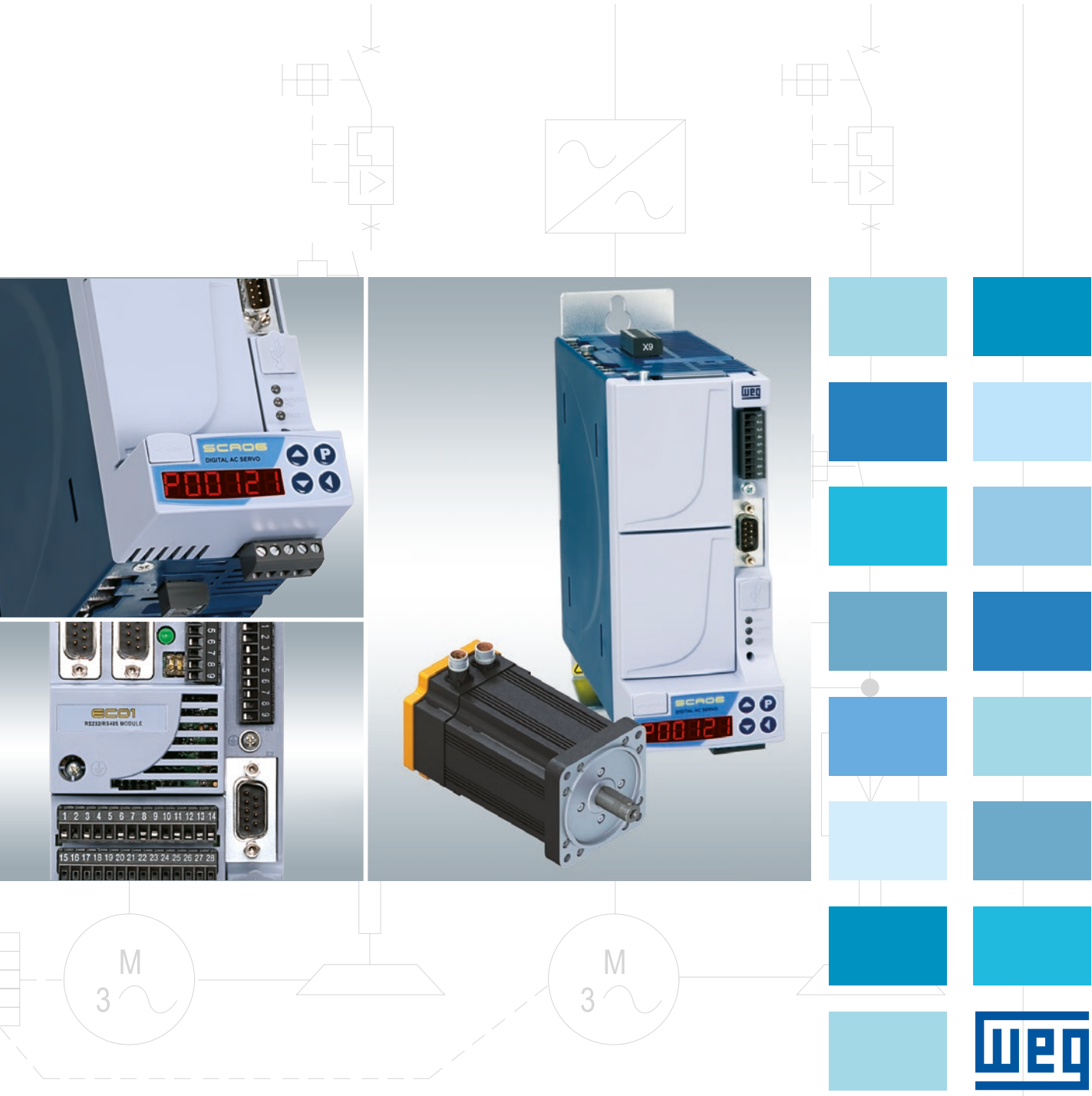


# Automation

## Servo Drive SCA06 Servo Motor SWA



## Servo Drive SCA06

It is a high performance product that allows the speed, torque and position control of three-phase sine-wave alternate current servo motors. Through of Plug & Play concept has 3 slots for accessories, which allows easy and quickly installation. For your setup features an operating interface with LED display with six-digit control, adjustment and view of all parameters. Designed for exclusively industrial or professional use, with PLC function, positioning blocks, free programming software and CANopen communication built-in as standard product that can be used in all kinds of applications.

### Characteristics

- Power supply 220-230 V ac / 380-480 V ac
- High performance
- Precision of motion control
- Operation in closed loop
- Position feedback **by resolver**
- Independent control and power supply
- Flexibility and integration to drive
- Easy operation
- HMI with six-digit LED display
- USB port
- CANopen standard
- Free WLP programming software
- RFI filter (optional)

### Special Functions

- Programmable Logic Controller - PLC, built-in the standard product (ladder programming language - SoftPLC)
- Positioning blocks, built in the standard product
- Safety stop (optional), category 4
- TRACE function (digital oscilloscope) built in the standard product

### Applications

- Packaging machine, dosage dispensers, packers, plastic welding and cutting machines
- Turntables, press feeders, winders
- Positioning systems and robots

### Certifications



# WEG Ladder Programmer / WLP

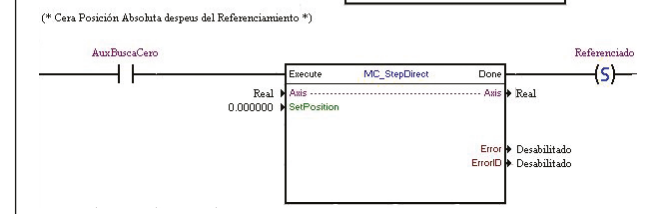
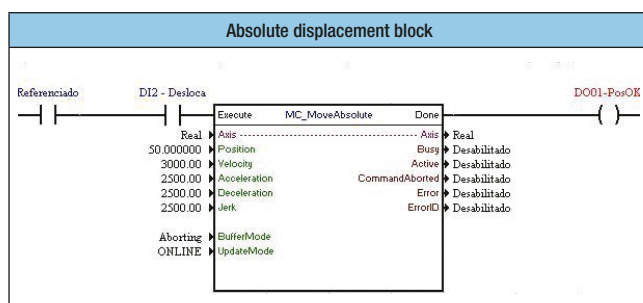
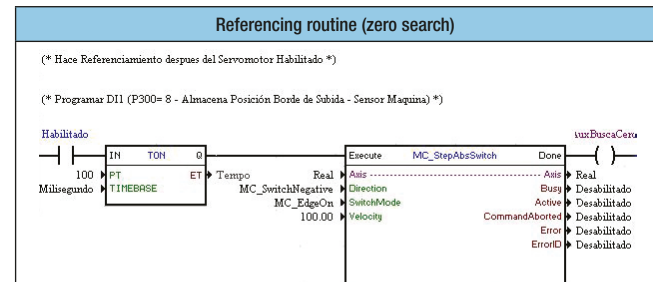
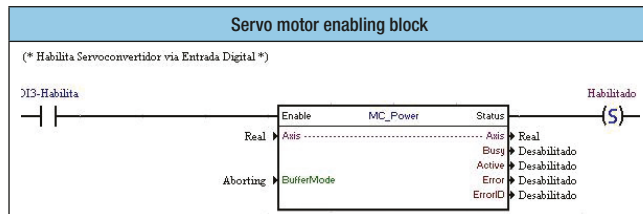
## Technical Characteristics

- Windows Environment (32 bits)
- Capacity of the application program: 64 Kbytes
- Easy Ladder programming with built-in function blocks according to standard IEC 1131-3
- Graphical editing with texts (comments and tags)
- The variables of positioning, speed, acceleration, timing and counters can be configured according to the user's need
- It allows to create macros (user's blocks)
- Transfer and monitoring via USB
- Possibility of parameter and program backup via Memory Stick
- Real-time clock
- Online monitoring
- Online help

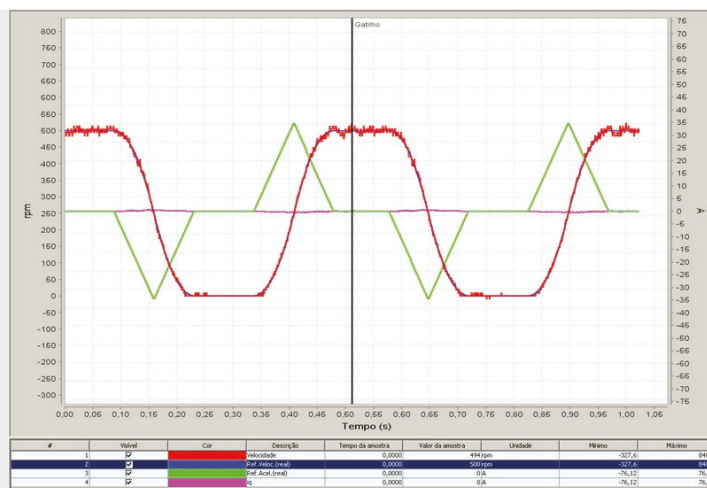
## Main Controls

- Logic: contact normally open and closed, coil, negated coil, set and reset coil, positive and negative transition coil
- Positioning blocks: curves with trapezoidal profile, homing for zero, follower, stop, relative and absolute positioning
- PLC blocks: timer, incremental counter, comparator and arithmetic, PID and filter
- Synchronism blocks: in speed, in position and electronic CAM

## Examples of WLP Controls



## TRACE Function (Digital Oscilloscope)



Example of the TRACE function reading the speed reference variable, real speed, acceleration reference and real current (Iq)

## Servo Drive Coding

1	2	3	4	5	6	7	8	9
SCA06	B	05P0	D	2	-	-	-	-

### 1 - WEG servo drive

SCA06
-------

### 2 - Size of the servo drive

B	See page 10
C	
D	

### 3 - Rated output current

05P0	5 A (three-phase power supply) or 4 A (single-phase power supply)
05P3	5.3 A (three-phase power supply)
08P0	8 A (three-phase power supply)
14P0	14 A (three-phase power supply)
16P0	16 A (three-phase power supply)
24P0	24 A (three-phase power supply)

### 4 - Number of phases

D	Three-phase power supply and/or single-phase with derating
T	Three-phase power supply

### 5 - Rated voltage

2	220-230 V ac
4	380-480 V ac

### 6 - Internal RFI filter

	(Blank) without internal RFI filter
C3	With internal RFI filter

### 7 - Safety stop module

	(Blank) without safety stop module
Y1	Safety stop module included

### 8 - Internal power supply of the electronics (24 V dc)

	(Blank) without internal power supply
W2	With internal power supply

### 9 - Set of user's manuals

	(Blank) no manuals
P6	With manuals

## Specification

Code	Reference	Supply voltage (V ac)	Rated current (Arms)	Current overload	RFI filter	Internal 24 V dc supply	Safety stop module	User's manual	Size				
220-230 V ac													
11220331	SCA06B05P0D2	Single-phase or three-phase	4 (single-phase) 5 (three-phase)	8	No	No	No	No	B				
11223958	SCA06B05P0D2P6				No	No	No	Yes					
-	SCA06B05P0D2Y1				No	No	Yes	No					
-	SCA06B05P0D2Y1P6				No	No	Yes	Yes					
11854472	SCA06B05P0D2W2				No	Yes	No	No					
11854471	SCA06B05P0D2W2P6				No	Yes	No	Yes					
-	SCA06B05P0D2Y1W2				No	Yes	Yes	No					
-	SCA06B05P0D2Y1W2P6				No	Yes	Yes	Yes					
11400157	SCA06B05P0D2C3				Yes	No	No	No					
11400268	SCA06B05P0D2C3P6				Yes	No	No	Yes					
-	SCA06B05P0D2C3Y1				Yes	No	Yes	No					
-	SCA06B05P0D2C3Y1P6				Yes	No	Yes	Yes					
11854455	SCA06B05P0D2C3W2				Yes	Yes	No	No					
11849860	SCA06B05P0D2C3W2P6				Yes	Yes	No	Yes					
-	SCA06B05P0D2C3Y1W2				Yes	Yes	Yes	No					
-	SCA06B05P0D2C3Y1W2P6				Yes	Yes	Yes	Yes					
11400269	SCA06C08P0T2				Three-phase	8	16	No		No	No	No	C
11400270	SCA06C08P0T2P6							No		No	No	Yes	
-	SCA06C08P0T2Y1	No	No	Yes				No					
-	SCA06C08P0T2Y1P6	No	No	Yes				Yes					
11854799	SCA06C08P0T2W2	No	Yes	No				No					
11854801	SCA06C08P0T2W2P6	No	Yes	No				Yes					
-	SCA06C08P0T2Y1W2	No	Yes	Yes				No					
-	SCA06C08P0T2Y1W2P6	No	Yes	Yes				Yes					
11400272	SCA06C08P0T2C3	Yes	No	No				No					
11400273	SCA06C08P0T2C3P6	Yes	No	No				Yes					
-	SCA06C08P0T2C3Y1	Yes	No	Yes				No					
-	SCA06C08P0T2C3Y1P6	Yes	No	Yes				Yes					
11854802	SCA06C08P0T2C3W2	Yes	Yes	No				No					
11854803	SCA06C08P0T2C3W2P6	Yes	Yes	No				Yes					
-	SCA06C08P0T2C3Y1W2	Yes	Yes	Yes				No					
-	SCA06C08P0T2C3Y1W2P6	Yes	Yes	Yes				Yes					

# Specification

Code	Reference	Supply voltage (V ac)	Rated current (Arms)	Current overload	RFI filter	Internal 24 V dc supply	Safety stop module	User's manual	Size	
<b>220-230 V ac</b>										
11854804	SCA06D16POT2	Three-phase	16	32	No	No	No	No	D	
11854806	SCA06D16POT2P6				No	No	No	Yes		
-	SCA06D16POT2Y1				No	No	Yes	No		
-	SCA06D16POT2Y1P6				No	No	Yes	Yes		
11854851	SCA06D16POT2W2				No	Yes	No	No		
11854853	SCA06D16POT2W2P6				No	Yes	No	Yes		
-	SCA06D16POT2Y1W2				No	Yes	Yes	No		
-	SCA06D16POT2Y1W2P6				No	Yes	Yes	Yes		
11854848	SCA06D16POT2C3				Yes	No	No	No		
11854850	SCA06D16POT2C3P6				Yes	No	No	Yes		
-	SCA06D16POT2C3Y1				Yes	No	Yes	No		
-	SCA06D16POT2C3Y1P6				Yes	No	Yes	Yes		
11854854	SCA06D16POT2C3W2				Yes	Yes	No	No		
11854855	SCA06D16POT2C3W2P6				Yes	Yes	No	Yes		
-	SCA06D16POT2C3Y1W2				Yes	Yes	Yes	No		
-	SCA06D16POT2C3Y1W2P6		Yes	Yes	Yes	Yes				
11542251	SCA06D24POT2		24	48	No	No	No	No		
11542252	SCA06D24POT2P6				No	No	No	Yes		
-	SCA06D24POT2Y1				No	No	Yes	No		
-	SCA06D24POT2Y1P6				No	No	Yes	Yes		
11854857	SCA06D24POT2W2				No	Yes	No	No		
11854868	SCA06D24POT2W2P6				No	Yes	No	Yes		
-	SCA06D24POT2Y1W2				No	Yes	Yes	No		
-	SCA06D24POT2Y1W2P6				No	Yes	Yes	Yes		
11542253	SCA06D24POT2C3				Yes	No	No	No		
11542254	SCA06D24POT2C3P6				Yes	No	No	Yes		
-	SCA06D24POT2C3Y1				Yes	No	Yes	No		
-	SCA06D24POT2C3Y1P6				Yes	No	Yes	Yes		
11854871	SCA06D24POT2C3W2				Yes	Yes	No	No		
11854872	SCA06D24POT2C3W2P6				Yes	Yes	No	Yes		
-	SCA06D24POT2C3Y1W2	Yes			Yes	Yes	No			
-	SCA06D24POT2C3Y1W2P6	Yes	Yes	Yes	Yes					
<b>380-480 V</b>										
11577335	SCA06C05P3T4	Three-phase	5.3	8	No	No	No	No	C	
11577356	SCA06C05P3T4P6				No	No	No	Yes		
-	SCA06C05P3T4Y1				No	No	Yes	No		
-	SCA06C05P3T4Y1P6				No	No	Yes	Yes		
11944502	SCA06C05P3T4W2				No	Yes	No	No		
11943488	SCA06C05P3T4W2P6				No	Yes	No	Yes		
-	SCA06C05P3T4Y1W2				No	Yes	Yes	No		
-	SCA06C05P3T4Y1W2P6				No	Yes	Yes	Yes		
11577359	SCA06C05P3T4C3				Yes	No	No	No		
11577361	SCA06C05P3T4C3P6				Yes	No	No	Yes		
-	SCA06C05P3T4C3Y1				Yes	No	Yes	No		
-	SCA06C05P3T4C3Y1P6				Yes	No	Yes	Yes		
11944503	SCA06C05P3T4C3W2				Yes	Yes	No	No		
11944504	SCA06C05P3T4C3W2P6				Yes	Yes	No	Yes		
-	SCA06C05P3T4C3Y1W2				Yes	Yes	Yes	No		
-	SCA06C05P3T4C3Y1W2P6		Yes	Yes	Yes	Yes				
11577363	SCA06D14POT4		14	28	No	No	No	No		D
11577365	SCA06D14POT4P6				No	No	No	Yes		
-	SCA06D14POT4Y1				No	No	Yes	No		
-	SCA06D14POT4Y1P6				No	No	Yes	Yes		
11944540	SCA06D14POT4W2				No	Yes	No	No		
11943463	SCA06D14POT4W2P6				No	Yes	No	Yes		
-	SCA06D14POT4Y1W2				No	Yes	Yes	No		
-	SCA06D14POT4Y1W2P6				No	Yes	Yes	Yes		
11577378	SCA06D14POT4C3				Yes	No	No	No		
11577380	SCA06D14POT4C3P6				Yes	No	No	Yes		
-	SCA06D14POT4C3Y1				Yes	No	Yes	No		
-	SCA06D14POT4C3Y1P6				Yes	No	Yes	Yes		
11944541	SCA06D14POT4C3W2				Yes	Yes	No	No		
11944542	SCA06D14POT4C3W2P6				Yes	Yes	No	Yes		
-	SCA06D14POT4C3Y1W2	Yes			Yes	Yes	No			
-	SCA06D14POT4C3Y1W2P6	Yes	Yes	Yes	Yes					

## Optional

### RFI Filter

To include the RFI filter, the value “C3” must be added in the position 6 of the code (page 4). It is used to reduce the disturbance conducted from the servo drive to the main power supply in the high frequency band (>150 kHz). It meets the electromagnetic compatibility Standards EN 61800-3 and EN 55011.

### Safety Stop Module

To include the safety stop module, the value “Y1” must be added in the position 7 of the code (page 4). The Safety Integrity Level will be SIL3 and it meets category 4, protection level e (PLe), according to EN ISO 13849-1.

### Internal Power Supply of the Electronics

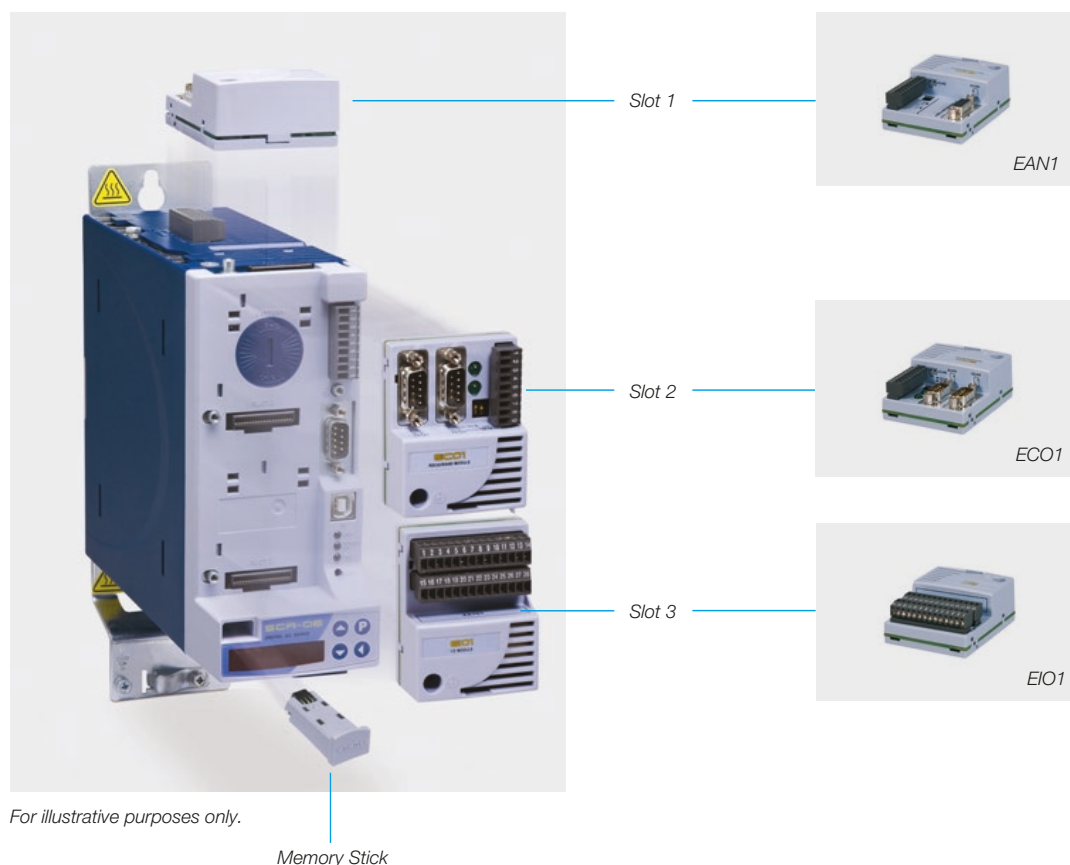
To include the internal 24 V dc power supply of the electronics, the value “W2” must be added in the position 8 of the encoding (page 4).

## Accessories

### Modules


They can be ordered and installed directly on the SCA06.

Code	Reference	Description
<b>Digital / Analog inputs and outputs / Encoder simulator</b>		
11330218	EIO1	Digital expansion module: 12 inputs (24 V dc - PNP/NPN) + 6 outputs (3 relays + 3 transistors)
11330354	EAN1	Analog expansion module: 1 analog input (-10/+10 V dc - 14 bits) + 1 encoder simulator output (5...30 V dc) + 3 digital inputs (24 V dc - PNP/NPN) + 1 transistor output
<b>Encoder auxiliary inputs</b>		
11842413	EEN1	Encoder expansion module: 1 encoder input with 3 differential channels (5...24 V dc)
11849417	EEN2	Encoder expansion module: 2 encoder inputs with 3 differential channels each + repeater (5...24 V dc)
<b>Communication networks</b>		
11330271	ECO1 - Modbus-RTU	Communication expansion module: 1 RS232 port + 1 RS485 port
11842414	ECO3 - Profibus	Communication expansion module: 1 Profibus-DPV1 port
-	ECO4 - Ethercat	Communication expansion Module: 1 Ethercat port



## Accessories

### Resolver Cables


Description	Diameter	Length	Speciality	Figure
SFC-1.5 m-M	9 mm (8 ways - 3 x (2 mm <sup>2</sup> x 0.14 mm <sup>2</sup> ) + 2 x (0.5 mm <sup>2</sup> ))	1.5 meters	Shielded handling	
SFC-03 m-M		3 meters		
SFC-06 m-M		6 meters		
SFC-09 m-M		9 meters		
SFC-12 m-M		12 meters		
SFC-15 m-M		15 meters		

### Power Cables

Description	Diameter	Length	Speciality	Figure
SPC-1.5 m-4x0.75-S-M	7 mm (4 ways x 0.75 mm <sup>2</sup> )	1.5 meters	Shielded handling	
SPC-03 m-4x0.75-S-M		3 meters		
SPC-06 m-4x0.75-S-M		6 meters		
SPC-09 m-4x0.75-S-M		9 meters		
SPC-12 m-4x0.75-S-M		12 meters		
SPC-15 m-4x0.75-S-M		15 meters		
SPC-03 m-4x1.5-S-M	10 mm (4 ways x 1.5 mm <sup>2</sup> )	3 meters		
SPC-06 m-4x1.5-S-M		6 meters		
SPC-09 m-4x1.5-S-M		9 meters		
SPC-12 m-4x1.5-S-M		12 meters		
SPC-15 m-4x1.5-S-M		15 meters		
SPC-03 m-4x4.0-S-M	13.1 mm (4 ways x 4.0 mm <sup>2</sup> )	3 meters		
SPC-06 m-4x4.0-S-M		6 meters		
SPC-09 m-4x4.0-S-M		9 meters		
SPC-12 m-4x4.0-S-M		12 meters		
SPC-15 m-4x4.0-S-M		15 meters		


Note: the brake, resolver and power cables are supplied with mounted connectors.

### Brake Cables

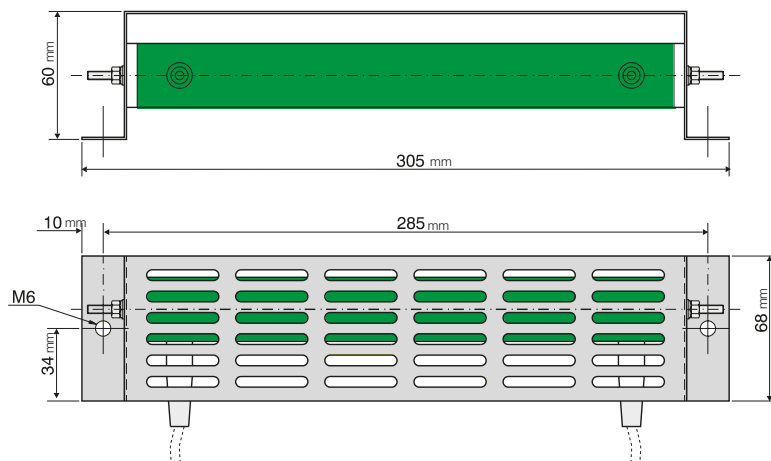
Description	Diameter	Length	Speciality	Figure
SBC-1.5 m-M	10 mm (2 ways x 0.75 mm <sup>2</sup> )	1.5		
SBC-03 m-M		3		
SBC-06 m-M		6		
SBC-09 m-M		9		
SBC-12 m-M		12		
SBC-15 m-M		15		

## Accessories

### Encoder Simulator Cable

Description	Technical specifications				Figure
	Diameter	Length	Connector	Speciality	
Encoder simulator cable	8.3 mm (8 ways - 6 x 0.2 mm <sup>2</sup> . 2 x 0.5 mm <sup>2</sup> )	2 meters	DB9	Shielded (maximum curvature (radius): static = 33 mm)	

### Braking Resistor RF-200



Technical specifications	Descriptions
Maximum braking power (rms)	200 W
Resistance	30 Ω

Code	Description
11015202	Braking module RF-200



## Network Settings

### CANopen

Standard servo drive SCA06



Master  
CANopen  
Network



PLC300 Programmable Logic Controller



Expansion Unit of Digital I/O

### Modbus-RTU

Servo drive SCA06 + Module ECO1 (RS232/RS485)

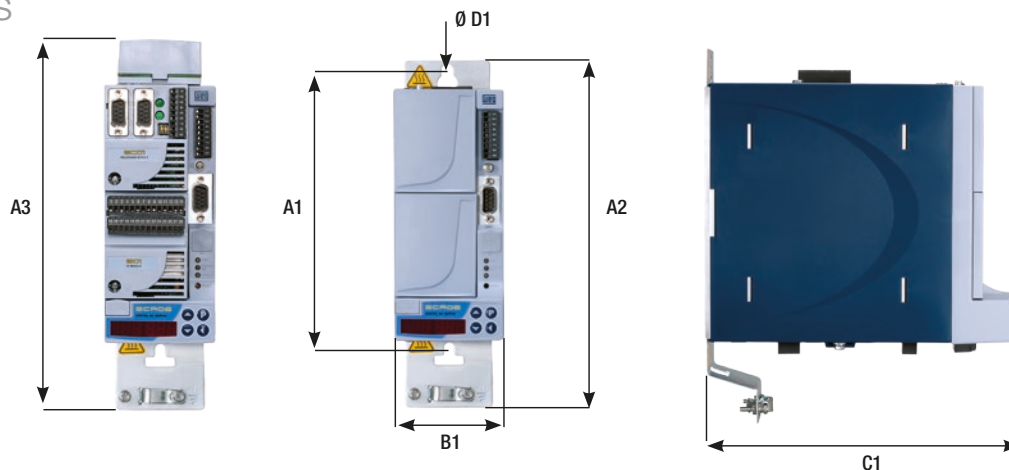


Modbus-RTU  
Network



Graphical HMI PWS 6400  
3.3" Touch Screen Display

## Dimensions



Model	A1	A2	A3	B1	C1	D1	Torque <sup>1)</sup>	Weight
	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	M	N.m (lb.in)	Kg (lb)
Size B	200 (7.87)	247 (9.72)	253 (9.96)	75 (2.95)	206.7 (8.14)	M5	5 (44.2)	1.6 (3.4)
	242 (9.53)	289 (11.38)	296 (11.65)	75 (2.95)	206.7 (8.14)	M5	5 (44.2)	1.9 (4.2)
Size D	288 (11.34)	335 (13.19)	342 (13.46)	102 (4.02)	206.7 (8.14)	M5	5 (44.2)	3.9 (8.6)

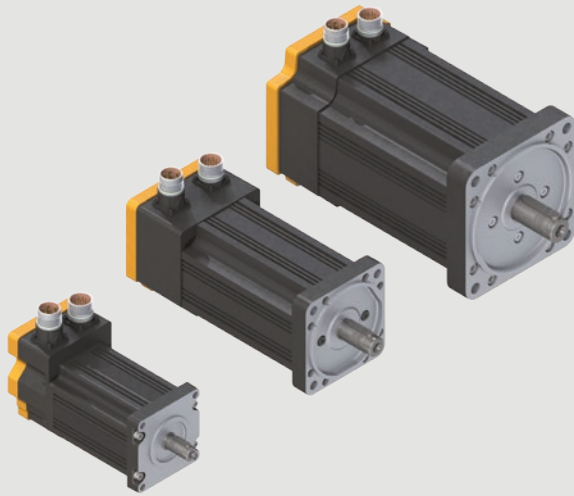
Notes: 1) Recommended torque for fixing the servo drive (valid for D1).  
Tolerance of quotas: ±1 mm (±0.039 in).

## Technical Data

Servo drive SCA06	
Main power supply	Tolerance: -15 % to +10 %
	Frequency: 50/60 Hz (48 Hz to 62 Hz)
	Maximum of 60 connections per hour (one every minute)
	Typical efficiency greater than or equal to 96%
	Typical input power factor: 0.94 for models with three-phase input in the rated condition or 0.70 for models with single-phase input in the rated condition
	Phase imbalance smaller than or equal to 3% of the input voltage of the rated phase to phase
	Overvoltages in accordance with Category III (EN 61010/UL 508C)
	Transient voltages in accordance with Category III
Power supply voltage	Single-phase 220-230 V ac / 4 A
	Three-phase 220-230 V ac / 5-8-16-24 A or 380-480 V ac / 5,3-14 A
Control	Method Vector control feedback PWM 10 kHz Regulators of current, flow and speed in software
	Output frequency 0-400 Hz
	Digital inputs 2 insulated digital inputs, programmable functions, high level ≥18 V, low level ≤3 V, maximum voltage 30 V dc, input current 3.7 mA @ 24 V dc, maximum frequency 500 kHz; 1 insulated digital input, programmable functions, high level ≥18 V, low level ≤3 V, maximum voltage 30 V dc, input current 11 mA @ 24 V dc, maximum delay time: leading edge 10 μs; falling edge 50 μs
	Digital outputs 1 relay output, NO contact, programmable functions, maximum voltage 240 V ac (200 V dc), maximum current 0.5 A
	Analog inputs 1 differential input, signal -10 V dc to +10 V dc, resolution of 12 bits, maximum voltage (-14 V dc, +14 V dc), impedance 400 kΩ, programmable functions
	Power supply External power supply: 24 V dc (-15%, +20%)
	Networks CANopen (master)
	Expansions 3 slots for expansion of digital and analog inputs/outputs, communication networks, encoder inputs and encoder simulator output
Environment	Operating temperature Environment (around the SCA06) 0 °C to 50 °C (it is possible to operate with ambient temperatures around the SCA06 of nearly 60 °C if a 2%-reduction of the output current is applied for each °C above 50 °C)
	Relative humidity 5% to 90% without condensation
	Protection degree IP20
	Altitude Altitude: 1,000 m For applications above 1,000 m up to 4,000 m, the output rated current must be reduced in 1% for each 100 m above 1,000 m
Software	SuperDrive G2 and WLP (free download at the site <a href="http://www.weg.net">www.weg.net</a> ), SoftPLC function (included in the standard product)
Computer connection (desktop or notebook)	USB port built in the standard product, version 2.0 (basic speed), plug type B device
	Shielded USB Interconnection cable (standard host / device shielded USB cable)
Standards	Electromagnetic Compatibility (EMC): EN 61800 (part 3), EN 61000 (parts 4-2, 4-3, 4-4, 4-5, 4-6), CISPR11, EN 55011
	Electrical, mechanical and safety construction: EN 60204-1 <sup>1)</sup> , EN 61800-5-1, UL 508C, UL 840, EN 50178, EN 60146 (IEC 146), EN 61800-2 (part 2), EN 60529, UL 50
HMI - Human Machine Interface	4 keys (parameter, increment, decrement and shift), LED displays with 6 digits, It allows access/change of all parameters

Note: 1) To have a machine in accordance with this standard, the manufacturer of the machine is responsible for the installation of an emergency stop device and a device for disconnecting from the power grid.

## Servo Motors SWA



### Technical Specifications

- Protection degree IP65 <sup>1)</sup>
- Class F insulation
- Feedback by resolver
- Mounting B5 (without feet, fixed by the flange), V1 (without feet, fixed by the flange down) and V3 (without feet, fixed by the flange up)
- Thermal protector (PTC)
- Shaft end with key NBR 6375
- Shaft material: STEEL SAE 1045
- Rare-earth magnets (Neodymium-Iron-Boron)
- Bearings with permanent lubrication
- Retainer for shaft seal
- Maximum operating temperature in permanent duty:  $\Delta T = 100\text{ }^{\circ}\text{C}$

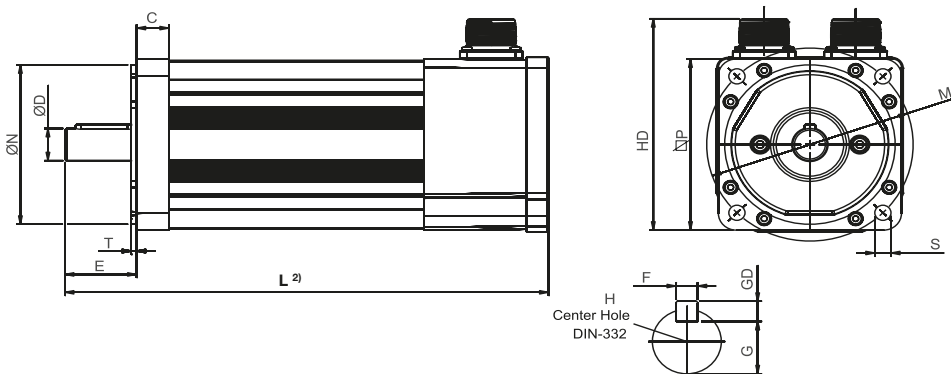
### Technical Features

- Sine-wave counter-electromotive force
- Smooth and uniform rotation at all speeds
- Low noise and vibration
- Wide speed range with constant torque
- Low maintenance (brushless servo motors)
- High overload capacity
- Low inertia
- Quick dynamic response

### Optional

- Electromagnetic brake
- Flange for ROD-type incremental encoder
- Other electrical/mechanical special features, on request

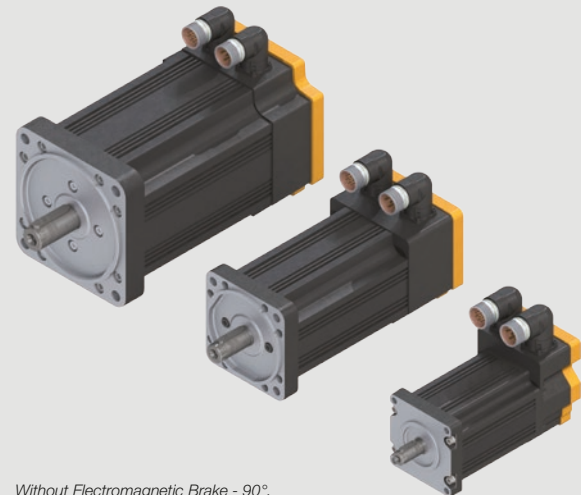
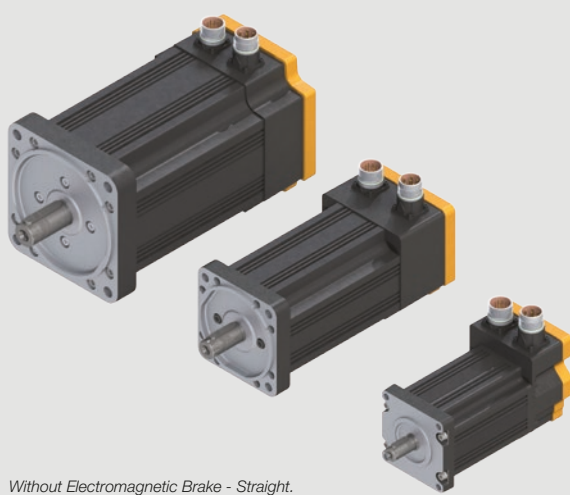
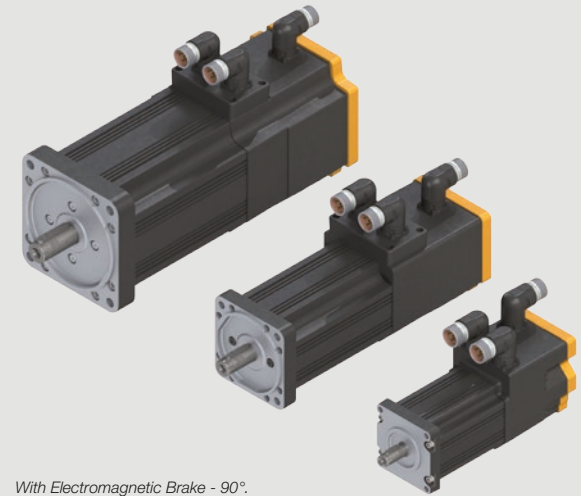
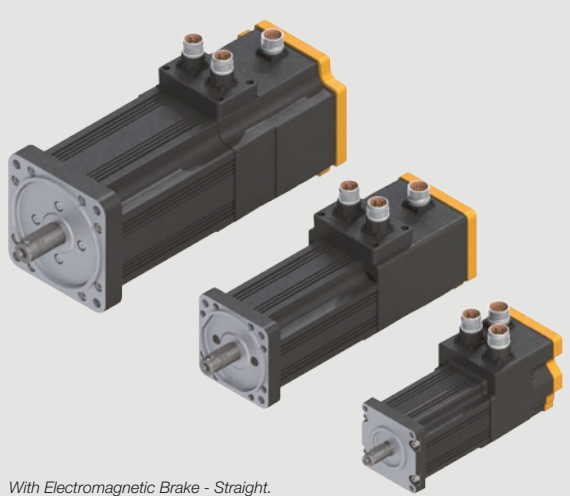
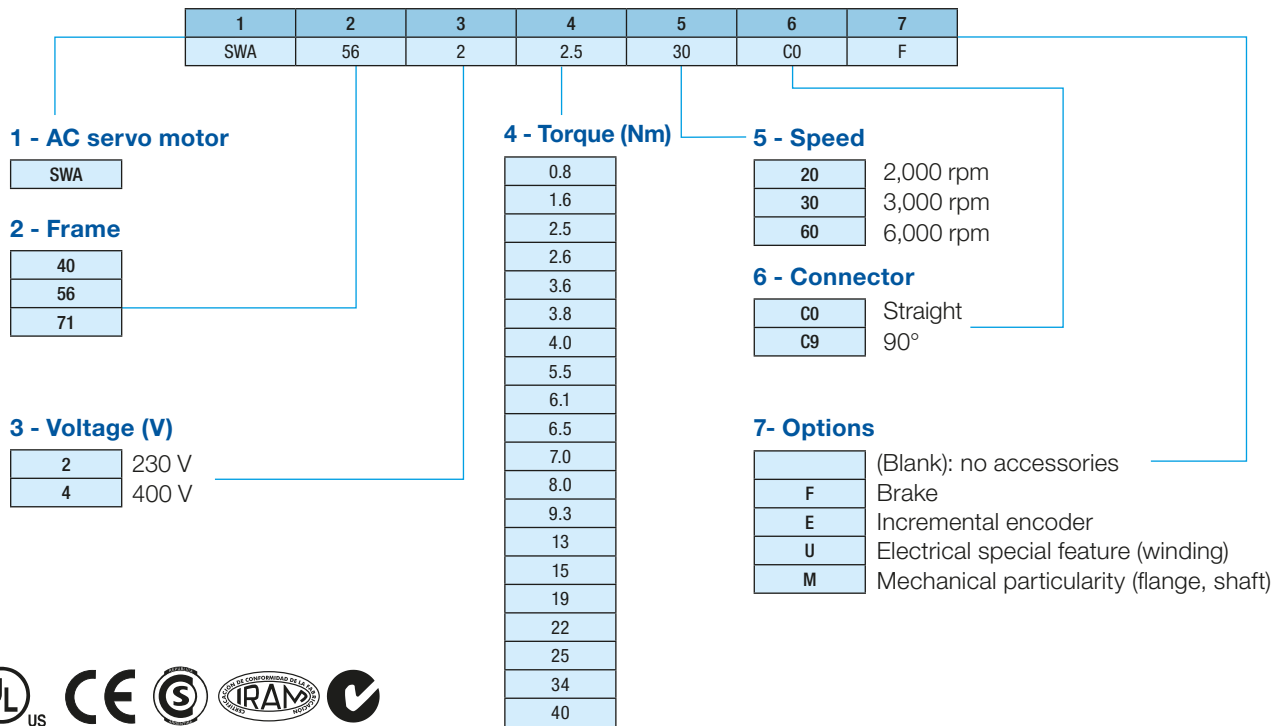
## Standard Servo Motors



Frame	HD (mm)	∅P (mm)	Flange					Shaft end (mm)					
			∅M	∅N	∅S	C	T	∅D	E	F	G	GD	H
40	110	80	95	50j6	6.5	14	2	14j6	29.5	5n9	11	5	M5x1x12
56	127	102	115	95j6	9	18	3	19j6	40	6n9	15.5	6	M6x1x16
71	166	142	165	130j6	11	25	3.5	24j6	50	8n9	20	7	M8x1.25x19
								32j6 <sup>3)</sup>	57 <sup>3)</sup>	10n9 <sup>3)</sup>	27 <sup>3)</sup>	8 <sup>3)</sup>	M8x1.25x19

Notes: 1) Servo motor with brake features protection degree.  
 2) Length "L" on pages 13 and 14, Table of Technical Specifications. IP54.  
 3) Valid for servo motors SWA-74-40-20 and SWA-74-34-30.

# Servo Motor Coding



# Standard Servo Motors SWA

## Without Electromagnetic Brake - 220-230 V

Speed	Model of the servo motor	Rotor torque bloq. mo (N.m)	Current Io (A) (RMS)	Rated power (kW)	Mass (kg)	Inertia x 10 <sup>-3</sup> (kg.m <sup>2</sup> )	Ke (rms) (V/krpm)	Length "L" (mm)	Recommended servo drive				Cables between SWA and SCA-06	
									SCA06B05P05	SCA06C08P0	SCA06D16P0	SCA06D24P0	Power cable	Resolver cable (feedback)
2,000 rpm	SWA 562-2.5-20-XX	2.5	2.5	0.36	4.6	0.22	75	250	D2				SPC-...m-4x0.75-S-M	SFC-...m-M
	SWA 562-3.8-20-XX	3.8	3.8	0.70	5.6	0.31	73	270	D2					
	SWA 562-6.1-20-XX	6.1	5.2	1.10	7.5	0.50	73	310		T2			SPC-...m-4x1.5-S-M	
	SWA 562-8.0-20-XX	8.0	6.5	1.32	9.3	0.68	80	350		T2				
	SWA 712-9.3-20-XX	9.3	8.0	1.60	12.0	1.63	77	270		T2				
	SWA 712-13-20-XX	13.0	11.8	2.30	15.0	2.35	74	300			T2			
	SWA 712-15-20-XX	15.0	13.0	2.50	17.0	3.06	77	330			T2			
	SWA 712-19-20-XX	19.0	15.1	2.90	20.0	3.78	83	360				T2		
3,000 rpm	SWA 712-22-20-XX	22.0	18.5	3.40	22.0	4.50	83	390				T2		
	SWA 712-25-20-XX	25.0	21.5	3.40	27.0	5.94	79	450				T2		
	SWA 402-0.8-30-XX	0.8	1.0	0.20	2.0	0.044	56	190	D2					
	SWA 402-1.6-30-XX	1.6	2.0	0.45	2.8	0.084	57	216	D2					
	SWA 402-2.6-30-XX	2.6	3.2	0.70	3.5	0.12	57	236	D2					
	SWA 562-2.5-30-XX	2.5	3.8	0.66	4.6	0.22	47	250	D2					
	SWA 562-4.0-30-XX	4.0	5.7	0.88	5.6	0.31	49	270		T2				
	SWA 562-6.1-30-XX	6.1	8.5	1.30	7.5	0.50	48	310		T2				
6,000 rpm	SWA 562-7.0-30-XX	7.0	9.0	1.50	9.3	0.68	50	350			T2			
	SWA 712-9.3-30-XX	9.3	12.0	2.05	12.0	1.63	60	270			T2			
	SWA 712-13-30-XX	13.0	18.0	2.85	15.0	2.35	55	300				T2		
	SWA 712-15-30-XX	15.0	20.0	3.30	17.0	3.06	52	330				T2		
	SWA 712-19-30-XX	19.0	23.0	4.20	20.0	3.78	55	360				T2		
	SWA 402-1.6-60-XX	1.6	4.0	0.70	2.8	0.084	28	216	D2				SPC-...m-4x0.75-S-M	
	SWA 402-2.6-60-XX	2.6	6.2	1.13	3.5	0.12	28	236		T2			SPC-...m-4x1.5-S-M	
	SWA 562-2.5-60-XX	2.5	7.5	1.13	4.6	0.22	25	250		T2				
6,000 rpm	SWA 562-3.6-60-XX	3.6	10.3	1.60	5.6	0.31	27	270			T2			
	SWA 562-5.5-60-XX	5.5	15.5	2.40	7.5	0.50	28	310				T2		
	SWA 562-6.5-60-XX	6.5	16.3	2.50	9.3	0.68	27	350				T2		

## With Electromagnetic Brake - 220-230 V

Speed	Model of the servo motor	Rotor torque bloq. mo (N.m)	Current Io (A) (RMS)	Rated power (kW)	Mass (kg)	Inertia x 10 <sup>-3</sup> (kg.m <sup>2</sup> )	Ke (rms) (V/krpm)	Length "L" (mm)	Recommended servo drive				Cables between SWA and SCA-06		
									SCA06B05P05	SCA06C08P0	SCA06D16P0	SCA06D24P0	Power cable	Resolver cable (feedback)	Brake cable
2,000 rpm	SWA 562-2.5-20-XXF	2.5	2.5	0.36	6.5	0.35	75	323	D2				SPC-...m-4x0.75-S-M	SFC-...m-M	SBC-...m-M
	SWA 562-3.8-20-XXF	3.8	3.8	0.70	7.5	0.44	73	343	D2						
	SWA 562-6.1-20-XXF	6.1	5.2	1.10	9.4	0.63	73	383		T2			SPC-...m-4x1.5-S-M		
	SWA 562-8.0-20-XXF	8.0	6.5	1.32	11.2	0.81	80	423		T2					
	SWA 712-9.3-20-XXF	9.3	8.0	1.60	16.1	2.10	77	367			T2				
	SWA 712-13-20-XXF	13.0	11.8	2.30	19.1	2.84	74	397			T2				
	SWA 712-15-20-XXF	15.0	13.0	2.50	21.1	3.55	77	427			T2				
	SWA 712-19-20-XXF	19.0	15.1	2.90	24.1	4.27	83	457				T2			
3,000 rpm	SWA 712-22-20-XXF	22.0	18.5	3.40	26.1	4.99	83	487				T2			
	SWA 712-25-20-XXF	25.0	21.5	3.40	31.1	6.43	79	547				T2			
	SWA 402-0.8-30-XXF	0.8	1.0	0.20	2.9	0.164	56	242	D2						
	SWA 402-1.6-30-XXF	1.6	2.0	0.45	3.7	0.204	57	269	D2						
	SWA 402-2.6-30-XXF	2.6	3.2	0.70	4.4	0.24	57	289	D2						
	SWA 562-2.5-30-XXF	2.5	3.8	0.66	6.5	0.35	47	323	D2						
	SWA 562-4.0-30-XXF	4.0	5.7	0.88	7.5	0.44	49	343		T2					
	SWA 562-6.1-30-XXF	6.1	8.5	1.30	9.4	0.63	48	383		T2					
6,000 rpm	SWA 562-7.0-30-XXF	7.0	9.0	1.50	11.2	0.81	50	423			T2				
	SWA 712-9.3-30-XXF	9.3	12.0	2.05	16.1	2.10	60	367			T2				
	SWA 712-13-30-XXF	13.0	18.0	2.85	19.1	2.84	55	397				T2			
	SWA 712-15-30-XXF	15.0	20.0	3.30	21.1	3.55	52	427				T2			
	SWA 712-19-30-XXF	19.0	23.0	4.20	24.1	4.27	55	457				T2			
	SWA 402-1.6-60-XXF	1.6	4.0	0.70	3.7	0.204	28	269	D2				SPC-...m-4x0.75-S-M		
	SWA 402-2.6-60-XXF	2.6	6.2	1.13	4.4	0.24	28	289		T2			SPC-...m-4x1.5-S-M		
	SWA 562-2.5-60-XXF	2.5	7.5	1.13	6.5	0.35	25	323		T2					
6,000 rpm	SWA 562-3.6-60-XXF	3.6	10.3	1.60	7.5	0.44	27	343			T2				
	SWA 562-5.5-60-XXF	5.5	15.5	2.40	9.4	0.63	28	383				T2			
	SWA 562-6.5-60-XXF	6.5	16.3	2.50	11.2	0.81	27	423				T2			

Notes: XX = Describe the kind of connector requested:

- For C0 - Straight connector.
- For C9 - 90° connector.

To release the brake, it is necessary to feed it with an external source of 24 V dc with the following capacity: 0.48 A (11.5 W) for servo motors of frame 40, 0.84 A (20 W) for servo motors of frame 56 and 1.05 A (25 W) for servo motors of frame 71. To supply brakes, check cables on page 7.

The electromagnetic brake must be driven with a stopped servo motor (parked). It features the following rated torques: 2 N.m for the servo motors of frame 40, 6 N.m for the servo motors of frame 56 and 12 N.m for the servo motors of frame 71.

D2 - Power supply: single/three-phase 220/230 V ac.  
T2 - Power supply: three-phase 220/230 V ac.

# Standard Servo Motors SWA

## Without Electromagnetic Brake - 380-480 V

Speed	Model of the servo motor	Rotor torque bloq. mo (N.m)	Current Io (A) (RMS)	Rated power (kW)	Mass (kg)	Inertia x 10 <sup>-3</sup> (kg.m <sup>2</sup> )	Ke (rms) (V/krpm)	Length "L" (mm)	Recommended servo drive			Cables between SWA and SCA-06		
									SCA06C05P3	SCA06D14P0	SCA050030 <sup>1)</sup>	Power cable	Resolver cable (feedback)	
2,000 rpm	SWA 564-6.1-20-XX	6.1	3.0	1.10	9.4	0.50	138	383	T4			SPC-...m-4x1.5-S-M	SFC-...m-M	
	SWA 564-8.0-20-XX	8.0	4.0	1.32	11.2	0.68	139	423	T4					
	SWA 714-9.3-20-XX	9.3	4.7	1.60	16.1	1.63	142	367	T4					
	SWA 714-13-20-XX	13.0	6.6	2.30	19.1	2.35	143	397		T4				SPC-...m-4x4.0-S-M
	SWA 714-15-20-XX	15.0	7.6	2.50	21.1	3.07	141	427		T4				
	SWA 714-19-20-XX	19.0	9.2	2.90	24.1	3.79	142	457		T4				
	SWA 714-22-20-XX	22.0	11.9	3.40	26.1	4.50	136	487		T4				
SWA 714-25-20-XX	25.0	12.5	3.40	31.1	5.94	142	547		T4					
SWA 714-40-20-XX	40.0	19.0	5.00	32.0	7.40	140	510			T4	SPC-...-4x6.0-S-M			
3,000 rpm	SWA 564-4.0-30-XX	4.0	3.2	0.88	7.5	0.31	93	343	T4			SPC-...m-4x1.5-S-M		
	SWA 564-6.1-30-XX	6.1	5.0	1.30	9.4	0.50	94	383	T4					
	SWA 564-7.0-30-XX	7.0	5.1	1.50	11.2	0.68	94	423	T4					
	SWA 714-9.3-30-XX	9.3	6.8	2.05	16.1	1.63	94	367		T4		SPC-...m-4x4.0-S-M		
	SWA 714-13-30-XX	13.0	10.3	2.58	19.1	2.35	93	397		T4				
	SWA 714-15-30-XX	15.0	11.3	3.30	21.1	3.07	95	427		T4				
	SWA 714-19-30-XX	19.0	13.4	4.20	24.1	3.79	97	457		T4				
SWA 714-34-30-XX	34.0	25.0	4.30	27.0	5.94	92	450			T4	SPC-...-4x6.0-S-M			
6,000 rpm	SWA 404-2.6-60-XX	2.6	3.8	1.13	4.4	0.12	46	289	T4			SPC-...m-4x1.5-S-M		
	SWA 564-2.5-60-XX	2.5	4.2	1.13	6.5	0.22	47	323	T4					
	SWA 564-3.6-60-XX	3.6	5.7	1.60	7.5	0.31	47	343		T4		SPC-...m-4x4.0-S-M		
	SWA 564-5.5-60-XX	5.5	8.8	2.40	9.4	0.50	47	383		T4				
	SWA 564-6.5-60-XX	6.5	9.6	2.50	11.2	0.68	48	423		T4				

## With Electromagnetic Brake - 380-480 V

Speed	Model of the servo motor	Rotor torque bloq. mo (N.m)	Current Io (A) (RMS)	Rated power (kW)	Mass (kg)	Inertia x 10 <sup>-3</sup> (kg.m <sup>2</sup> )	Ke (rms) (V/krpm)	Length "L" (mm)	Recommended servo drive			Cables between SWA and SCA-06			
									SCA06C05P3	SCA06D14P0	SCA050030*	Power cable	Resolver cable (feedback)	Brake cable	
2,000 rpm	SWA 564-6.1-20-XXF	6.1	3.0	1.10	9.4	0.63	138	383	T4			SPC-...m-4x1.5-S-M	SFC-...m-M	SBC-...m-M	
	SWA 564-8.0-20-XXF	8.0	4.0	1.32	11.2	0.81	139	423	T4						
	SWA 714-9.3-20-XXF	9.3	4.7	1.60	16.1	2.10	142	367	T4						
	SWA 714-13-20-XXF	13.0	6.6	2.30	19.1	2.84	143	397		T4					SPC-...m-4x4.0-S-M
	SWA 714-15-20-XXF	15.0	7.6	2.50	21.1	3.55	141	427		T4					
	SWA 714-19-20-XXF	19.0	9.2	2.90	24.1	4.27	142	457		T4					
	SWA 714-22-20-XXF	22.0	11.9	3.40	26.1	4.99	136	487		T4					
SWA 714-25-20-XXF	25.0	12.5	3.40	31.1	6.43	142	547		T4						
3,000 rpm	SWA 564-4.0-30-XXF	4.0	3.2	0.88	7.5	0.44	93	343	T4			SPC-...m-4x1.5-S-M			
	SWA 564-6.1-30-XXF	6.1	5.0	1.30	9.4	0.63	94	383	T4						
	SWA 564-7.0-30-XXF	7.0	5.1	1.50	11.2	0.81	94	423	T4						
	SWA 714-9.3-30-XXF	9.3	6.8	2.05	16.1	2.10	94	367		T4		SPC-...m-4x4.0-S-M			
	SWA 714-13-30-XXF	13.0	10.3	2.58	19.1	2.84	93	397		T4					
	SWA 714-15-30-XXF	15.0	11.3	3.30	21.1	3.55	95	427		T4					
	SWA 714-19-30-XXF	19.0	13.4	4.20	24.1	4.27	97	457		T4					
6,000 rpm	SWA 404-2.6-60-XXF	2.6	3.8	1.13	4.4	0.24	46	289	T4			SPC-...m-4x1.5-S-M			
	SWA 564-2.5-60-XXF	2.5	4.2	1.13	6.5	0.35	47	323	T4						
	SWA 564-3.6-60-XXF	3.6	5.7	1.60	7.5	0.44	47	343		T4		SPC-...m-4x4.0-S-M			
	SWA 564-5.5-60-XXF	5.5	8.8	2.40	9.4	0.63	47	383		T4					
	SWA 564-6.5-60-XXF	6.5	9.6	2.50	11.2	0.81	48	423		T4					

Notes: 1) *Lauching in 2014.*

XX = Describe the kind of connector requested:

- For C0 - Straight connector.
- For C9 - 90° connector.

To release the brake, it is necessary to feed it with an external source of 24 V dc with the following capacity: 0.48 A (11.5 W) for servo motors of frame 40, 0.84 A (20 W) for servo motors of frame 56 and 1.05 A (25 W) for servo motors of frame 71. To supply brakes, check cables on page 7.

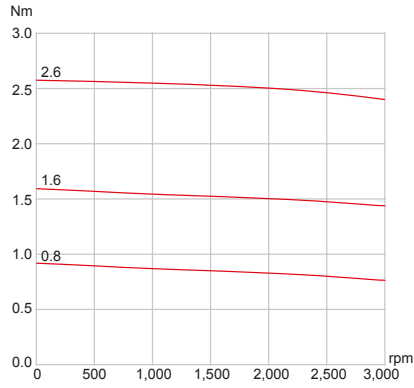
The electromagnetic brake must be driven with a stopped servo motor (parked). It features the following rated torques: 2 N.m for the servo motors of frame 40, 6 N.m for the servo motors of frame 56 and 12 N.m for the servo motors of frame 71.

T4 - Power supply: three-phase 380/480 V ac.

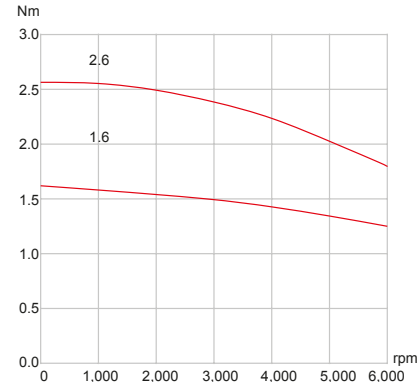
# Characteristic Curves of the Servo Motors SWA

## SWA 40

Servo Motors SWA 40-...-30

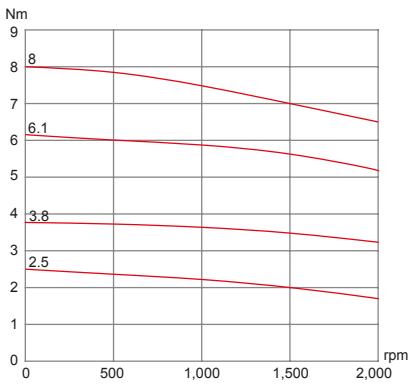


Servo Motors SWA 40-...-60

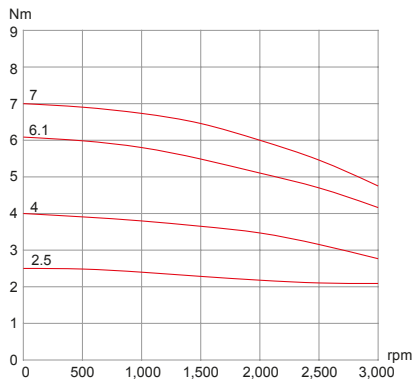


## SWA 56

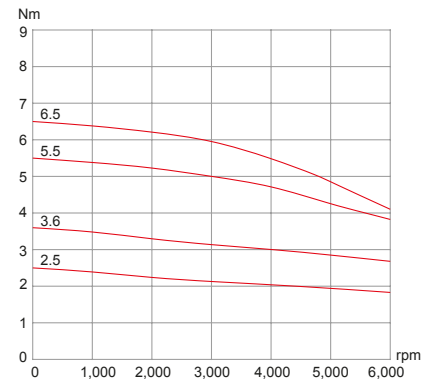
Servo Motors SWA 56-...-20



Servo Motors SWA 56-...-30

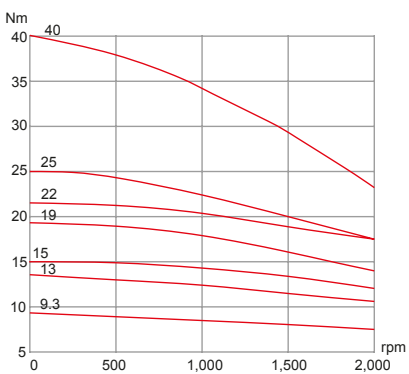


Servo Motors SWA 56-...-60

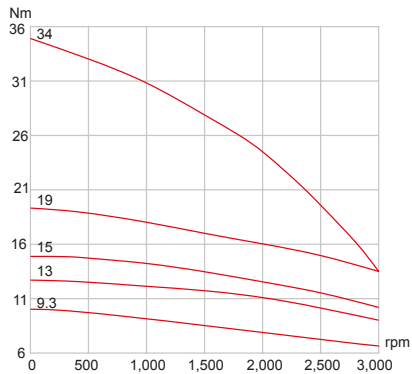


## SWA 71

Servo Motors SWA 71-...-20



Servo Motors SWA 71-...-30



# WEG Worldwide Operations

## ARGENTINA

WEG EQUIPAMIENTOS  
ELECTRICOS  
San Francisco - Cordoba  
Phone: +54 3564 421 484  
[info-ar@weg.net](mailto:info-ar@weg.net)  
[www.weg.net/ar](http://www.weg.net/ar)

WEG PINTURAS - Pulverlux  
Buenos Aires  
Phone: +54 11 4299 8000  
[tintas@weg.net](mailto:tintas@weg.net)

## AUSTRALIA

WEG AUSTRALIA  
Victoria  
Phone: +61 3 9765 4600  
[info-au@weg.net](mailto:info-au@weg.net)  
[www.weg.net/au](http://www.weg.net/au)

## AUSTRIA

WATT DRIVE - WEG Group  
Markt Piesting - Vienna  
Phone: +43 2633 404 0  
[watt@wattdrive.com](mailto:watt@wattdrive.com)  
[www.wattdrive.com](http://www.wattdrive.com)

## BELGIUM

WEG BENELUX  
Nivelles - Belgium  
Phone: +32 67 88 84 20  
[info-be@weg.net](mailto:info-be@weg.net)  
[www.weg.net/be](http://www.weg.net/be)

## BRAZIL

WEG EQUIPAMENTOS ELÉTRICOS  
Jaraguá do Sul - Santa Catarina  
Phone: +55 47 3276-4002  
[info-br@weg.net](mailto:info-br@weg.net)  
[www.weg.net/br](http://www.weg.net/br)

## CHILE

WEG CHILE  
Santiago  
Phone: +56 2 784 8900  
[info-cl@weg.net](mailto:info-cl@weg.net)  
[www.weg.net/cl](http://www.weg.net/cl)

## CHINA

WEG NANTONG  
Nantong - Jiangsu  
Phone: +86 0513 8598 9333  
[info-cn@weg.net](mailto:info-cn@weg.net)  
[www.weg.net/cn](http://www.weg.net/cn)

## COLOMBIA

WEG COLOMBIA  
Bogotá  
Phone: +57 1 416 0166  
[info-co@weg.net](mailto:info-co@weg.net)  
[www.weg.net/co](http://www.weg.net/co)

## ECUADOR

WEG ECUADOR  
Quito  
Phone: 5144 339/342/317  
[wegecuador@weg.net](mailto:wegecuador@weg.net)  
[www.weg.net/ec](http://www.weg.net/ec)

## FRANCE

WEG FRANCE  
Saint Quentin Fallavier - Lyon  
Phone: +33 4 74 99 11 35  
[info-fr@weg.net](mailto:info-fr@weg.net)  
[www.weg.net/fr](http://www.weg.net/fr)

## GERMANY

WEG GERMANY  
Kerpen - North Rhine Westphalia  
Phone: +49 2237 9291 0  
[info-de@weg.net](mailto:info-de@weg.net)  
[www.weg.net/de](http://www.weg.net/de)

## GHANA

ZEST ELECTRIC GHANA  
WEG Group  
Accra  
Phone: +233 30 27 664 90  
[info@zestghana.com.gh](mailto:info@zestghana.com.gh)  
[www.zestghana.com.gh](http://www.zestghana.com.gh)

## INDIA

WEG ELECTRIC INDIA  
Bangalore - Karnataka  
Phone: +91 80 4128 2007  
[info-in@weg.net](mailto:info-in@weg.net)  
[www.weg.net/in](http://www.weg.net/in)

## WEG INDUSTRIES INDIA

Hosur - Tamil Nadu  
Phone: +91 4344 301 577  
[info-in@weg.net](mailto:info-in@weg.net)  
[www.weg.net/in](http://www.weg.net/in)

## ITALY

WEG ITALIA  
Cinisello Balsamo - Milano  
Phone: +39 02 6129 3535  
[info-it@weg.net](mailto:info-it@weg.net)  
[www.weg.net/it](http://www.weg.net/it)

## JAPAN

WEG ELECTRIC MOTORS  
JAPAN  
Yokohama City - Kanagawa  
Phone: +81 45 550 3030  
[info-jp@weg.net](mailto:info-jp@weg.net)  
[www.weg.net/jp](http://www.weg.net/jp)

## MALAYSIA

WATT EURO-DRIVE - WEG Group  
Shah Alam, Selangor  
Phone: 603 78591626  
[info@wattdrive.com.my](mailto:info@wattdrive.com.my)  
[www.wattdrive.com](http://www.wattdrive.com)

## MEXICO

WEG MEXICO  
Huehuetoca  
Phone: +52 55 5321 4231  
[info-mx@weg.net](mailto:info-mx@weg.net)  
[www.weg.net/mx](http://www.weg.net/mx)

## VOLTRAN - WEG Group

Tizayuca - Hidalgo  
Phone: +52 77 5350 9354  
[www.voltran.com.mx](http://www.voltran.com.mx)

## NETHERLANDS

WEG NETHERLANDS  
Oldenzaal - Overijssel  
Phone: +31 541 571 080  
[info-nl@weg.net](mailto:info-nl@weg.net)  
[www.weg.net/nl](http://www.weg.net/nl)

## PERU

WEG PERU  
Lima  
Phone: +51 1 209 7600  
[info-pe@weg.net](mailto:info-pe@weg.net)  
[www.weg.net/pe](http://www.weg.net/pe)

## PORTUGAL

WEG EURO  
Maia - Porto  
Phone: +351 22 9477705  
[info-pt@weg.net](mailto:info-pt@weg.net)  
[www.weg.net/pt](http://www.weg.net/pt)

## RUSSIA and CIS

WEG ELECTRIC CIS  
Saint Petersburg  
Phone: +7 812 363 2172  
[info-ru@weg.net](mailto:info-ru@weg.net)  
[www.weg.net/ru](http://www.weg.net/ru)

## SOUTH AFRICA

ZEST ELECTRIC MOTORS  
WEG Group  
Johannesburg  
Phone: +27 11 723 6000  
[info@zest.co.za](mailto:info@zest.co.za)  
[www.zest.co.za](http://www.zest.co.za)

## SPAIN

WEG IBERIA  
Madrid  
Phone: +34 91 655 30 08  
[info-es@weg.net](mailto:info-es@weg.net)  
[www.weg.net/es](http://www.weg.net/es)

## SINGAPORE

WEG SINGAPORE  
Singapore  
Phone: +65 68589081  
[info-sg@weg.net](mailto:info-sg@weg.net)  
[www.weg.net/sg](http://www.weg.net/sg)

## SCANDINAVIA

WEG SCANDINAVIA  
Kungsbacka - Sweden  
Phone: +46 300 73 400  
[info-se@weg.net](mailto:info-se@weg.net)  
[www.weg.net/se](http://www.weg.net/se)

## UK

WEG ELECTRIC MOTORS U.K.  
Redditch - Worcestershire  
Phone: +44 1527 513 800  
[info-uk@weg.net](mailto:info-uk@weg.net)  
[www.weg.net/uk](http://www.weg.net/uk)

## UNITED ARAB EMIRATES

WEG MIDDLE EAST  
Dubai  
Phone: +971 4 813 0800  
[info-ae@weg.net](mailto:info-ae@weg.net)  
[www.weg.net/ae](http://www.weg.net/ae)

## USA

WEG ELECTRIC  
Duluth - Georgia  
Phone: +1 678 249 2000  
[info-us@weg.net](mailto:info-us@weg.net)  
[www.weg.net/us](http://www.weg.net/us)

## ELECTRIC MACHINERY

WEG Group  
Minneapolis - Minnesota  
Phone: +1 612 378 8000  
[www.electricmachinery.com](http://www.electricmachinery.com)

## VENEZUELA

WEG INDUSTRIAS VENEZUELA  
Valencia - Carabobo  
Phone: +58 241 821 0582  
[info-ve@weg.net](mailto:info-ve@weg.net)  
[www.weg.net/ve](http://www.weg.net/ve)

For those countries where there is not a WEG own operation, find our local distributor at [www.weg.net](http://www.weg.net).



WEG Group - Automation Business Unit  
Jaraguá do Sul - SC - Brazil  
Phone: +55 47 3276 4000  
[automacao@weg.net](mailto:automacao@weg.net)  
[www.weg.net](http://www.weg.net)

