

# FAGOR MCS / ACSD Series

Servo Drive System



FAGOR AUTOMATION

# FAGOR Servo Drive System- MCS / ACSD series

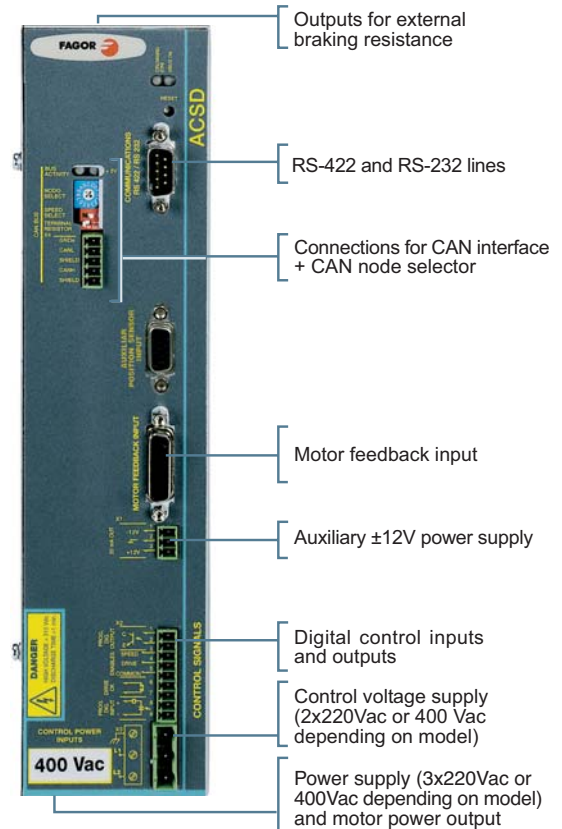
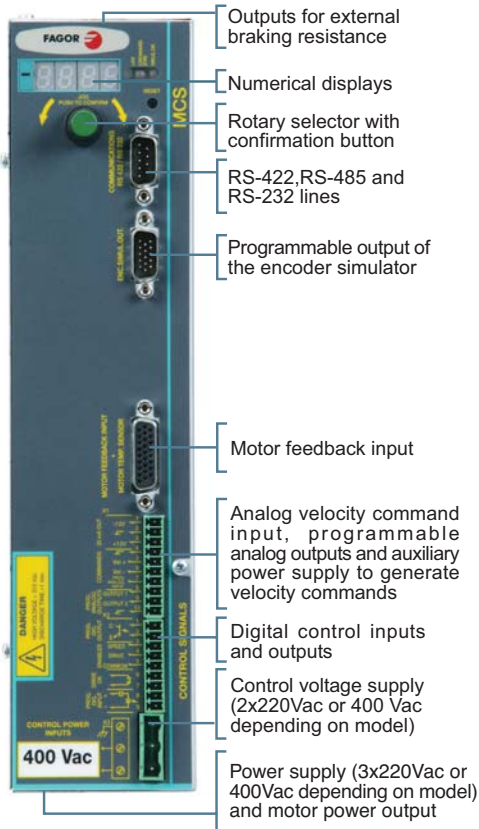
## Configuration

### MCS

Analog command servo drive

### ACSD

Digital command servo drive



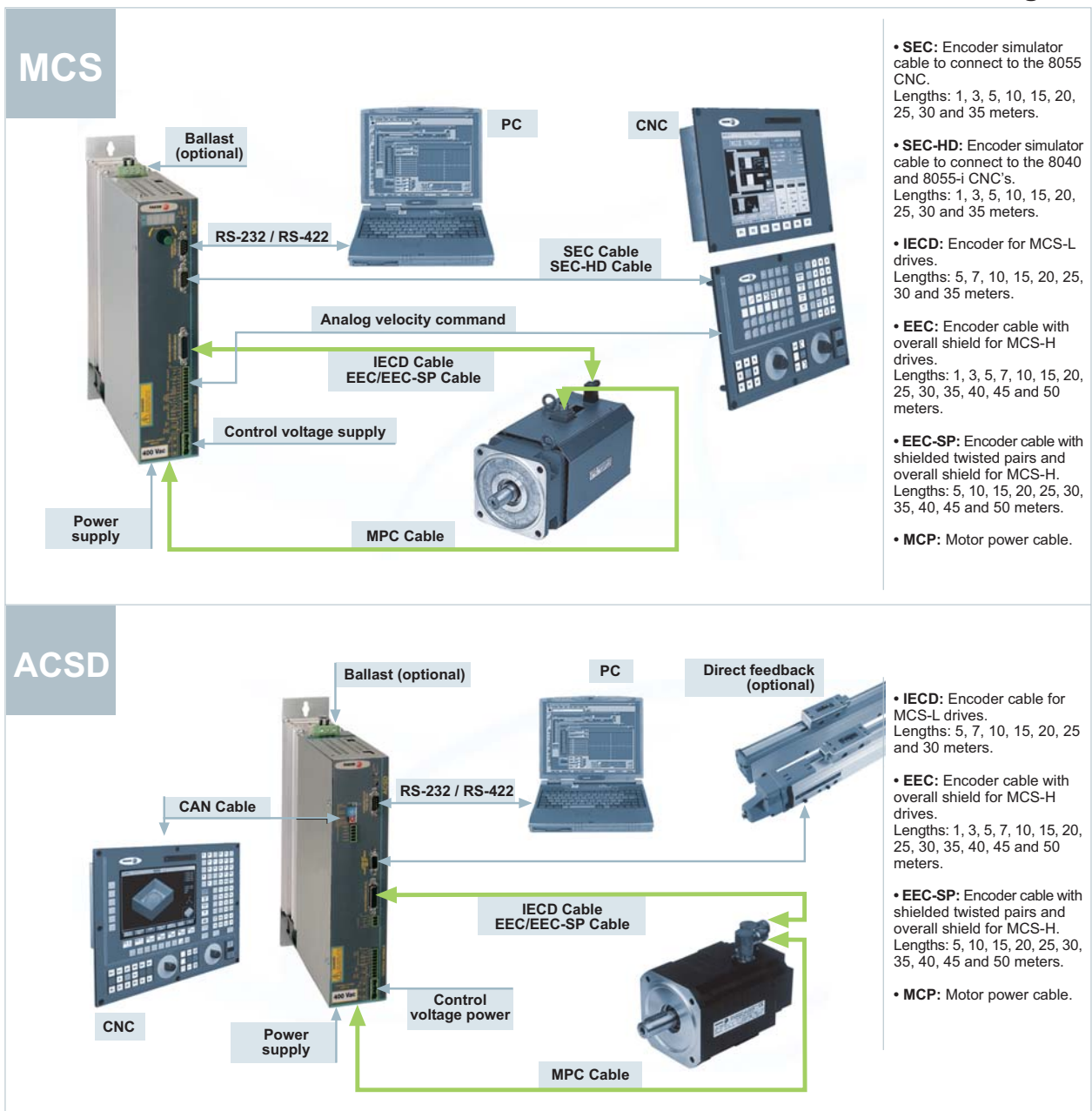
## Features of MCS / ACSD Servo drives

● Standard --- Not available

	MCS	ACSD
Tools for easier configuration and friendly programming of the drives	●	●
Integrated programming module	●	---
Feedback input for the motor incremental encoder (2500 TTL or 1 Vpp sinusoidal)	●	●
Independent power supply for power and control	●	●
Protections against power outage, overtemperature, etc.	●	●
One programmable logic output	●	---
Two programmable analog outputs and one programmable input.	●	---
One programmable logic input	●	---
16-bit analog velocity command input	●	---
Two programmable analog outputs and one programmable analog input	●	●
Eight outputs and sixteen inputs, all digital (24V), optocoupled, protected against short-circuits.	---	●
Communication interfaces: RS-232, RS-422 and RS-485	●	---
Communications protocols: DNC and MODBUS (RTU and ASCII)	●	---
CANopen field bus	---	●
ON-LINE parameter editing	●	●
Encoder simulation output (programmable number of pulses)	●	---
Dynamic braking in case of mains outage.	●	●

FAGOR MCS / ACSD Servo Drives	220 V (L)				400 V (H)		
	MCS - 05 ACSD - 05	MCS - 10 ACSD - 10	MCS - 20 ACSD - 20	MCS - 30 ACSD - 30	MCS - 04 ACSD - 04	MCS - 08 ACSD - 08	MCS - 16 ACSD - 16
Output Rated Current (Amp)	2.5	5	10	15	2	4	8
Peak Current-0.5 Sec (Amp)	5	10	20	30	4	8	16
Power Supply	Three-phase 50/60 Hz mains with a voltage range between 220Vac-15% and 240Vac+10%				Three-phase 50/60 Hz mains with a voltage range between 400Vac-15% and 460Vac+10%		
Consumption (Amp-rms)	5.6	11.1	22.2	33.3	4.4	8.9	16.7
Overvoltage Protection	430 Vdc				803 Vdc		
Internal Ballast (Ohms)	112	56	28	18	132	132	66
Power Of Internal Ballast	150 W						
Ballast Trigger	416 Vdc				780 Vdc		
Heat-sink Thermal Protection	90°C (194° F)						
Operating Temperature	5°C / 45°C (41°F / 113°F)						
Storage Temperature	(-)20°C / 60°C (-4°F / 140°F)						
Degree Of Protection	IP20						
Module Dimensions	67 x 280 x 245 mm (2.48 x 11.8 x 9.05 inches)						
Module Weight	3.85 Kg (8.5 lbs)						

## Basic interconnection diagram





# Synchronous Brushless AC motors - FKM series

## for 220V

MODEL	Stall torque (Nm)	Peak torque (Nm)	Speed (rpm)	Torque constant Kt (Nm/Arms)	Inertia (Kg.cm <sup>2</sup> )	Weight (Kg)	Peak torque depending on servo drive (Nm)		
							10 L	20 L	30 L
FKM 21.60 F	1.7	7	6000	0.36	1.6	4.2	3.6	7	
FKM 22.30 F	3.2	13	3000	0.74	2.9	5.3	7.4	13	
FKM 22.50 F	3.2	13	5000	0.45	2.9	5.3	3.6	9	13
FKM 42.30 F	6.3	25	3000	0.74	8.5	7.8		14.8	22.2
FKM 42.45 F	6.3	25	4500	0.51	8.5	7.8		18.2	25
FKM 44.30 F	11.6	47	3000	0.74	16.7	11.7			22.2
FKM 62.30 F	8.9	35	3000	0.68	16	11.9			20.4

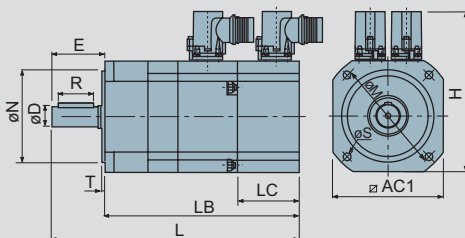
## for 400V

MODEL	Stall torque	Peak torque (Nm)	Speed (rpm)	Torque constant Kt (Nm/Arms)	Inertia (Kg.cm <sup>2</sup> )	Weight (Kg)	Peak torque depending on servo drive (Nm)	
							8 H	16 H
FKM 21.60 A	1.7	7	6000	0.62	1.6	4.2	5	7
FKM 22.30 A	3.2	13	3000	1.28	2.9	5.3	10.2	13
FKM 22.50 A	3.2	13	5000	0.84	2.9	5.3	6.7	13
FKM 42.30 A	6.3	25	3000	1.34	8.5	7.8		21.9
FKM 42.45 A	6.3	25	4500	0.91	8.5	7.8		14.6
FKM 44.30 A	11.6	47	3000	1.41	16.7	11.7		22.6
FKM 44.40 A	11.6	47	4000	1.08	16.7	11.7		17.3
FKM 62.30 A	8.9	35	3000	1.25	16	11.9		20
FKM 62.40 A	8.9	35	4000	0.96	16	11.9		15.4
FKM 64.30 A	16.5	66	3000	1.36	29.5	17.1		21.8

## General characteristics

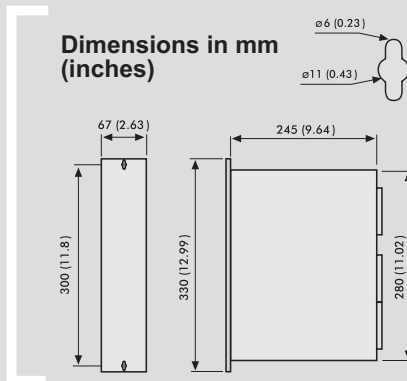
Temperature sensor	▪ Thermistor PTC KTY-84
Balancing (halfkey)	▪ Standard: Class N ▪ Optional: Class R
Mounting	▪ Front flange ▪ B5 - V1 - V3
Electrical isolation	▪ Class F (150°C-302°F)
Degree of protection	▪ Standard: IP64 ▪ Optional: IP65 with seal
Brake	▪ Optional on all models
Feedback	▪ Sinusoidal encoder or resolver

## Dimensions in mm



MODEL	L	E	LB	LC	T	AC1	M	N	H	S	D	GA	GD	F	R	ST
FKM 21	208	40	168	54	3	97	100	80 j6	139.5	7	19 j6	21.5	6	6	30	M6x16
FKM 22	232		192													
FKM 42	247	50	197	3.5	126	130	110 j6	168.5	9	24 j6	27	7	8	40	M8x19	
FKM 44	289		239													
FKM 62	260	58	202	3.5	158	165	130 j6	200.5	12	32 k6	35	8	10	50	M10x22	
FKM 64	296		238													

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FAGOR AUTOMATION

Worldwide reliability



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