

PacDrive™ Servo Drive MC-4

The digital Servo Drive MC-4 is characterised by its compact and autonomous structure suitable for wall mounting as well as its leading-edge technology. The innovative MC-4 has the mains supply unit, end stage and software regulator for one axis integrated in a compact casing.

As it communicates with the PacDrive Controller only via fibre optical cable, it is also suitable for a decentralized structure. It requires no user program, comes with single- and multi-turn processing features as standard and configures itself with the help of the electronic name plate in the SM/SH servo motor.

The technical data at a glance:

- World-wide voltage range
- Integrated mains supply unit
- Max. power 34,5 / 69 kVA
- Automatic motor recognition
- Minimum size
- Safety input Inverter Enable
- 250 % overload
- Integrated SERCOS interface



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This Technical Data Sheet does not replace the Operating manual.

For a complete description of the PacDrive MC-4 see the Operating manual PacDrive MC-4

For planning and project activities see the PacDrive Projecting manual

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Technical Data

**NOTE**

The PacDrive MC-4 supports motors with firmware up to V00.20.XX with a rotary speed up to 6000 min⁻¹.

On firmware versions V00.22.XX, the rated speed is supported up to 12000 min⁻¹.

In case of ambient temperatures >45 °C, for additional exchange of cooling air provide external fan in the switching cabinet.

**NOTE**

The MC-4 is not suitable for fault current protection by means of a commercially available fault circuit-breaker with 30 mA trigger limit.

The device leakage current can trigger the fault circuit-breaker. The following solutions are possible:

Use a default circuit-breaker (RCD, type B) with a trigger limit of 500 mA.

**NOTE**

The PacDrive MC-4 / 1,5 A is adequate only when using firmware versions as from V00.22.XX, in connection with the SH Motor 055.

If a motor used with a differing power class, the error message „138 invalid motor“ will appear.

Servo drive MC-4 / 1.5A

	Parameter	Value
Product configuration	Product name	MC-4 / 11 / 01 / 400 V
	Order number	13 13 02 44
Power supply	- rated connection voltage	3 AC 380 V (-10%) to 480 V (+10%) - min. 3 AC 380 V (-10%) - max. 3 AC 480 V (+10%)
	- mains frequency	48 ... 62 Hz
	- control voltage/current	DC 24 V (-15% / +25%) / 1 A
DC circuit	- DC-circuit voltage	DC 530 V to 680 V
	- capacity	165 μ F
	- U _{Bleeder ON}	DC 820 V
	- U _{Bleeder OFF}	DC 800 V
	- excess voltage	DC 860 V
	- bleeder resistance	120 Ohm
	- bleeder - permanent power	50 W
	- bleeder - peak power	5 kW
Motor connection	- rated power 8 kHz	1.5 Aeff
	- peak current 1 s	3.75 Aeff
	- rated power	1.1 kVA
Stray power	- electronics supply	approx. 12 W
	- bleeder (internal)	0 ... 50 W (depending on the application)
	- power part	approx. 15 W / A
I/Os	Inputs	
	- inputs voltage / current - ie-input - input filter	DC 20 ... 30 V / 5 mA DC 20 ... 30 V / 30 mA [5 ms]
	Outputs	
	- relay outputs	DC 20 ... 30 V / 2 A
Environment	Product size	see chapter Dimensions
	Box size	width: 100 mm height: 400 mm depth: 320 mm
	Product weight	3.1 kg
	Boxed weight	4.0 kg
	Ventilation	natural convection
	Ambient conditions	
Protection class		
- casing	IP20	
- installation location	IP54, if the safety wiring is used with Inverter Enable	
- ambient temperature during operation	+5 ... +45 °C (+55 °C with reduced power) -2% per K at I _{NC} and I _{SC})	
- for storage and transport	-25 ... +70 °C	
-insulation	degree of pollution 2 ..., dewing prohibited	
- excess voltage category	K III, T2 (DIN VDE 0110)	
- excess voltage proofness	class 1 (DIN VDE 0160)	
- degree of radio distortion	class A EN 55011 / EN 61800 - 3	
rel. humidity	5% - 85% climatic category 3K3 EN 60 721	
Approval	Approvals	CE, UL, cUL

Table 2-1: Technical data of the MC-4 Servo drive / 01

Servo drive MC-4 / 3 A

Parameter	Value
Product name	MC-4 / 11 / 03 / 400 V
Order number	13 13 02 45
- rated connection voltage	3 AC 380 V (-10%) to 480 V (+10%)
- mains frequency	- min. 3 AC 380 V (-10%) - max. 3 AC 480 V (+10%)
- control voltage/current	48 ... 62 Hz DC 24 V (-15% / +25%) / 1 A
- DC-circuit voltage	DC 530 V to 680 V
- capacity	165 μ F
- U _{Bleeder ON}	DC 820 V
- U _{Bleeder OFF}	DC 800 V
- excess voltage	DC 860 V
- bleeder resistance	120 Ohm
- bleeder - permanent power	50 W
- bleeder - peak power	5 kW
- rated power 8 kHz	3 A _{eff}
- peak current 1 s	7.5 A _{eff}
- rated power	2.1 kVA
- electronics supply	approx. 12 W
- bleeder (internal)	0 ... 50 W (depending on the application)
- power part	approx. 15 W / A
Inputs	
- inputs voltage / current	DC 20 ... 30 V / 5 mA
- ie-input	DC 20 ... 30 V / 30 mA
- input filter	[5 ms
Outputs	
- relay outputs	DC 20 ... 30 V / 2 A
Product size	see chapter Dimensions
Box size	width: 100 mm height: 400 mm depth: 320 mm
Product weight	3.1 kg
Boxed weight	4.0 kg
Ventilation	natural convection
Ambient conditions	
Protection class	
- casing	IP20
- installation location	IP54, if the safety wiring is used with Inverter Enable
- ambient temperature during operation	+5 ... +45 °C (+55 °C with reduced power)
- for storage and transport	-2% per K at I _{NC} and I _{SC})
- insulation	-25 ... +70 °C degree of pollution 2 ..., dewing prohibited
- excess voltage category	K III, T2 (DIN VDE 0110)
- excess voltage proofness	class 1 (DIN VDE 0160)
- degree of radio distortion	class A EN 55011 / EN 61800 - 3
rel. humidity	5% - 85% climatic category 3K3 EN 60 721
Approvals	CE, UL, cUL

Table 2-2: Technical data of the MC-4 Servo drive / 03

Product ID Code

Type key

MC-4 / 11 / 10 / 400

Variant
11

Rated current
e.g. 03 = 3 A

Rated voltage
230 = 230 V
400 = 400 V (3 external ducts)

