

AC7

Powerful AC motor controller solution

The AC7 motor controller family incorporates a combination of superior quality, flexibility, and efficiency for automated guided vehicle (AGV) and autonomous mobile robot (AMR) designers that only settle for the best.

Kollmorgen offers a wide range of capable and flexible AC motor controllers for all types of AGVs and AMRs.

The AC7 motor controllers employ built-in speed and position regulators suitable for controlling steering and traction in AGV and AMR applications.



Features

- The AC7 family relies on modern AC control technologies for improved performance and operating efficiency across a wide range of power outputs.
- Designed for the demanding environment of AGVs and AMRs. A rugged system (IP65) ensures protection against dust, water, and physical damage.
- Integral mounting flanges and an integrated connector ensure simple installation and reliable operation.
- The motor controllers have a direct interface with other Kollmorgen vehicle products via the CAN bus for an easy system setup.
- General I/O is available for application use.
- Digital outputs have a built-in freewheeling diode.
- Digital outputs have built-in current and voltage control.
- Regenerative braking.
- Support for automatic tuning.
- Feedback interface for incremental encoder.



CANopen



Wide voltage range



Powerful

Order information	
AC7-70	16103-01
AC7-180	16103-02
AC7-350	16103-04
AC7-550	16103-05
Connector kit	18452-02

General	
Supply voltage operating range	24-48 VDC
Supply voltage, minimum/maximum	16.8/62 VDC
Motor types	Induction AC
Communication	CANopen
Connector	AMPSEAL 35-pin connector (TE 776164-1)
Feedback interface	Two-channel digital encoder 32 - 160 pulses/rev. (maximum 20 kHz)
Sensor supplies	1x 5 V (maximum 75 mA) 1x 12 V (maximum 75 mA)
Motor temperature sensor	KTY84-130, PT-1000

I/O connections	
Analog inputs	Two analog inputs (12-bit ADC with range 0 to 5 V)
Digital inputs	Nine digital inputs (low < 2 V, high > 10 V): <ul style="list-style-type: none"> • Two inputs are dedicated for CAN node ID selection. • Seven inputs are used for general purpose.
Digital outputs	Six open drain outputs: <ul style="list-style-type: none"> • Three sinking 2.1 A (Continuous) • Three sinking 1.1 A (Continuous) <p>Two outputs can be used for current control. Four outputs can be used for voltage control. Two outputs can be used for All OK. All six outputs can be used for on/off.</p>

Current and output ratings ¹				
Model	Rated current at S2 ² , 2 min ³ (A _{RMS})	Rated current at S2, 1 h ⁴ (A _{RMS})	Rated power at S2, 2 min (kVA)	Rated power at S2, 1 h (kVA)
AC7-70	70	35	4.2	1.9
AC7-180	180	90	11	5
AC7-350	350	175	21	10
AC7-550	550	275	32	16

¹ Values apply at nominal supply voltage of 48 VDC.

² S2 is the characteristics for short-time duty according to IEC 60034-1.

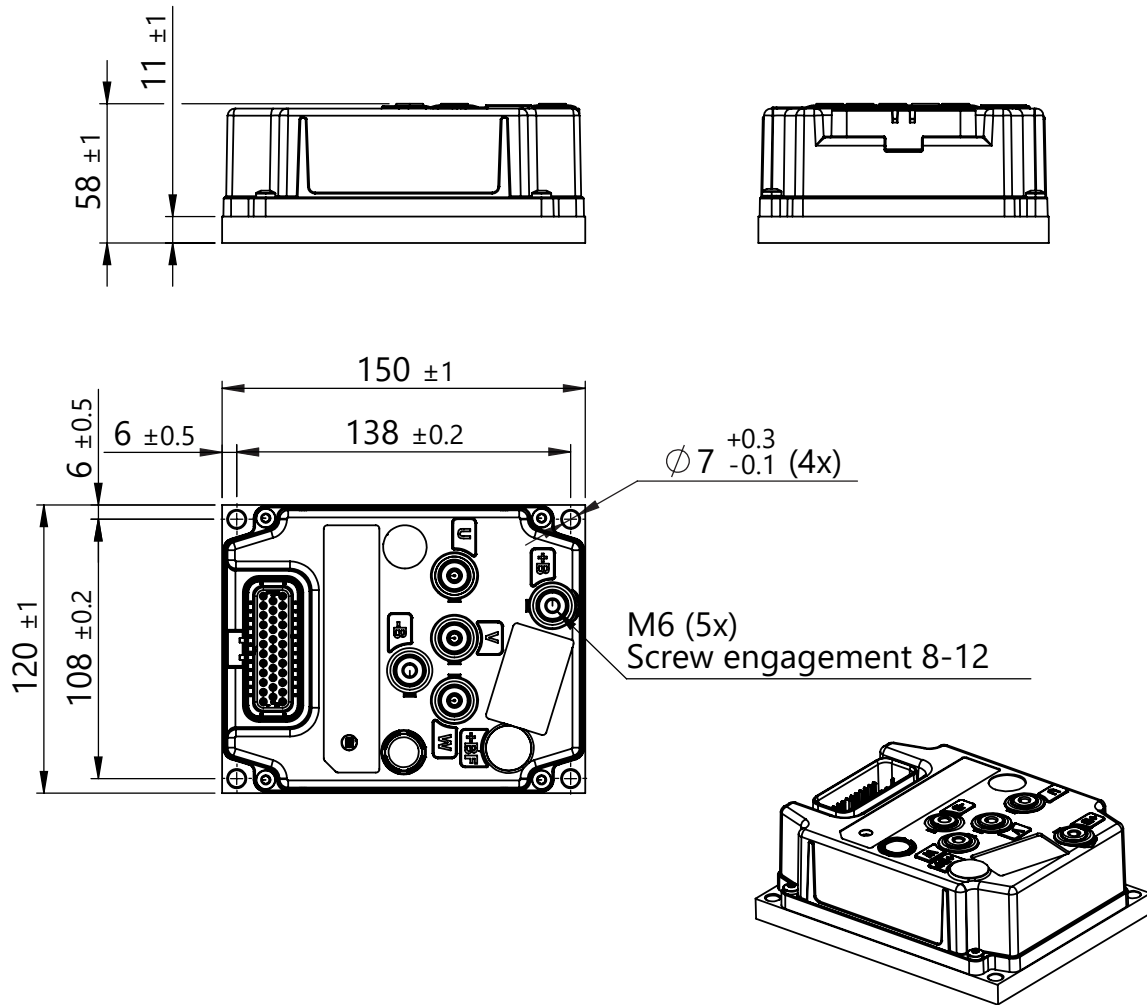
³ Two-minute rating at 8 kHz switching frequency and 25 °C ambient temperature.

⁴ One-hour rating at 8 kHz switching frequency. 40 °C ambient temperature.

Ambient conditions	
Temperature, operation	-40 to +55 °C
Temperature, storage	-40 to +85 °C
Relative humidity, storage	Maximum 85%
Protection class	IP65

Dimensions		
Model	Width x height x depth (mm)	Weight (kg)
AC7-70	120 x 58 x 150	1.0
AC7-180	120 x 58 x 150	1.0
AC7-350	200 x 76 x 150	2.5
AC7-550	200 x 76 x 150	2.5

AC7-70 and AC7-180 dimensions (mm)



AC7-350 and AC7-550 dimensions (mm)

