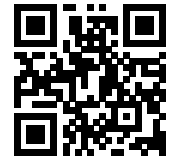


AT2100 | Motor module with integrated NCT functionality, straight, without infeed



i Product status: product announcement | estimated market release 1st quarter 2024

The AT2100 motor modules are elements for building straight XTS line sections with integrated NCT functionality. In combination with electronics mounted on the mover, a power supply and synchronous real-time data communication are available on the mover. This provides the basis for integrating sensors and actuators on the mover. In addition to product transport, active execution of processes is possible directly on the mover – both during mover motion and at standstill.

The hardware required for the transmission technology is fully integrated into the motor module, so that the existing functionalities and compact design are retained. No additional connections or supply lines are required. Simply plugging the motor modules together is enough to establish an electrical connection between them. In addition, there is complete compatibility with the XTS construction kit. This makes combination with the standard motor modules possible, so that line sections can be equipped with NCT, as required.

Product information

Technical data

System data	AT20xx, AT21xx
Magnet pitch	≥ 63 mm
Geometries	any (e. g. rectangle, square, circle, straight, L-, U-, O-, Z- or T-shapes)
Diameter	180° curved segment: 174 mm (clothoid), 45° curved segment: 637 mm, 22.5° curved segment: 1273 mm, -22.5° curved segment: 1273 mm
Alignment	horizontally, vertically or at any angle from 1...179°

	(specifications refer to straight sections)
Continuous force	AT9001-x550 (5-pin): 30 N, AT9001-x775 (7-pin): 45 N, AT9001-xAA0 (10-pin): 75 N (specifications refers to straight sections)
Max. speed	4 m/s
Max. acceleration	10 g
Payload	up to 40 kg, higher loads with reduced dynamics
Absolute accuracy	< ±0.25 mm within a straight module
Repeatability	< ±0.01 mm (standstill unidirectional)
Positioning accuracy	< ±0.15 mm @ 1.5 m/s within a straight module
System size	> 100 m, > 200 movers, larger system limits possible with restrictions
IP protection rating	IP65 (in assembled condition for a closed system, only waterproof for a short time, not corrosion resistant)
Approvals/markings	CE, (UL in preparation)
Vibration/shock resistance	conforms to EN 60068-2-6/EN 60068-2-27
EMC immunity/emission	conforms to EN 61000-6-2/EN 61000-6-4
ETSI EMC standard	conforms to EN 301489-1

Diameter specifications refer to the center point of the motor

Technical data	AT2100
Motor type	long stator linear motor segment
Design form	straight
Motor length	250 mm
Connection method	connectors between the motor modules (daisy chaining)
Length per feed	max. 2 m (voltage supply, EtherCAT)
Cooling	convection
Ambient temperature (operation)	0...+40 °C

Electrical data	AT2100
Rated output	768 W
Operating voltage	48 V DC
Rated current	16 A
Peak current	< 48 A
Control voltage	24 V DC -15/+20 %
Power consumption control voltage	35 W per meter travel distance

Mechanical data	AT2100
-----------------	--------

Length	250 mm
Width	51.7 mm
Height	96 mm
Weight	2.38 kg

NCT power transfer	AT2100
NCT rated output	35 W
NCT peak performance	75 W
Output voltage	24 V DC (regulated)
Power transmission	continuously (also across module limits)

NCT data transfer	AT2100
Communication cycle	250 µs
Communication direction	bidirectional
Time response	µs-precise DC synchronization
Communication participants	no system limits (individual address assignment of the movers possible)
Communication types	cyclic and acyclic
Data transfer	continuously (also across module limits)

Ordering information

Ordering information	XTS motor modules
AT2100-0250	motor module with integrated NCT functionality, straight, 48 V DC/24 V DC, 250 mm x 51.7 mm x 96 mm (L x W x H), 2.38 kg, not UL-certified
AT2100-0250-0002	motor module with integrated NCT functionality, straight (top profile without drilling hole), 48 V DC/24 V DC, 250 mm x 51.7 mm x 96 mm (L x W x H), 2.38 kg, not UL-certified