

TiM Integrated Servo Motors

TiM integrated servo motor is a cost effective and flexible solution, ideal for applications with limited control cabinet space and a decentral machine architecture. With its high power density and compact size, TiM enables space-saving machine designs and ultimately cabinet-less machines.

Integrated components reduce cost, space and machine complexity

In a decentral machine architecture, wiring and assembly time can be reduced thus enabling significant cost savings for machine builders. Integrated motors that combine the drive, control and power electronics also free up space and reduce the heat generated inside the cabinet. The TiM integrated servo motor comes with I/Os for easy wiring of distributed signals as well as CANopen and EtherCAT communication ports.



TiM - GT
Wheel Hub Integrated Gear Motors



TiM - SG
Integrated Gear Motors

Configurable motor and gear options to meet specific application requirements.

TiM integrated servo motors offer a wide range of flexible gear and motor configurations. With optional motor holding brakes, compact design with integrated electronics, these energy efficient IP54-rated motors are built to handle high radial and axial forces. With power options ranging from 200-800 W, rated torque of 6.4-64 Nm, and speeds of up to 3000 rpm, they operate at 24-48V and can be customized to meet specific application requirements.

Safe motion: integrated functional safety for safe operation

The TiM and ZED offer built-in safety with two options: the standard Safe Torque Off (STO) function or an optional integrated Safe Motion Module with an extended set of drive-based functions. Both options comply with IEC 61800-5-2 standards. Communication through Safety over EtherCAT (FSoE) reduces complexity by using a single cable, making this solution ideal for mobile robots and other space-constrained applications.

Safe Motion Module supported functions:

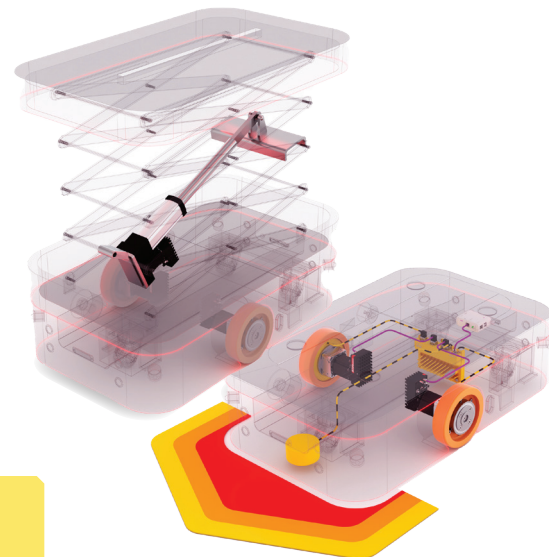
Safe Torque Off (STO) • Safe Stop 1 (SSI-t, time-controlled) • Safe Brake Control (SBC)
Safe Stop 1 (SSI-r, ramp-monitored) • Safe Stop 2 (SS2-r, ramp-monitored) • Safe Operating Stop (SOS) • Safely-limited Speed (SLS) • Safe Brake Test (SBT) • Safe Speed Monitor (SSM)
Safe Direction (SDI)

All functions conform to IEC 61800-5-2, with safety communication through the FSoE protocol, compliant with IEC 61784-3:2021.



Product Highlights

- Frame size: 60 - 80 mm
- 0.64 to 2.55 Nm rated output torque
- 200W to 800W rated output power
- 3 digital inputs, 1 digital output
- Fieldbus: CANopen, EtherCAT
- Feedback: Absolute single turn, Absolute multi turn
- 24VDC / 48VDC bus voltage
- IP54 protection class (IP65 optional)
- Motor holding brake (optional)
- Integrated design minimizes component and wiring requirements
- Integrated Functional Safety - STO or optional Safe Motion Module (Cat 3, PL e)
- CE and cUL certifications



Rating and dimensions

	Frame size (mm)	Bus-Voltage (VDC)	Power (W)	Rated current (Arms)	Rated torque (Nm)	Rated Speed (rpm)
IMI- 60S	60	24 / 48	200	6.50	0.64	3000
IMI- 60M	60	24 / 48	400	12.0	1.27	3000
IMI- 80S	80	48	480	14.60	1.53	3000
IMI - 80M	80	48	800	22.60	2.55	3000

Communication:

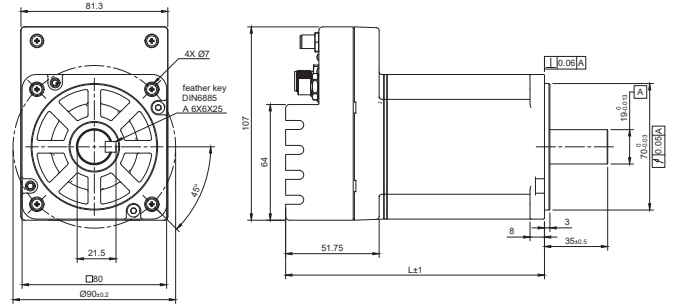
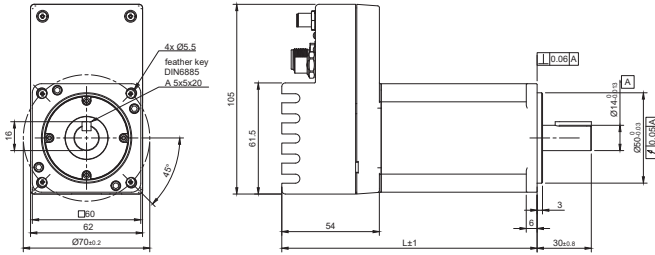
CANopen
EtherCAT

Motor feedback:

Absolut single turn
Absolut multi turn

Digital I/Os:

3 x Input
1 x Output

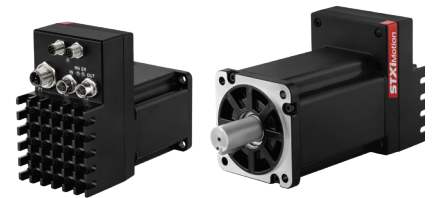


	TIM			
name	IMI1-60SX3X5 XX20000	IMI1-60SX3X5 XX20B00	IMI1-60MX3X5 XX20000	IMI1-60MX3X5 XX20B00
brake	no	yes	no	yes
length (L)	104.3	121.3	124.3	141.3

	TIM			
name	IMI1-80SX3X5 XX20000	IMI1-80SX3X5 XX20B00	IMI1-80MX3X5 XX20000	IMI1-80MX3X5 XX20B00
brake	no	yes	no	yes
length (L)	113.25	143.25	130.25	160.25

Ordering information

	IMI1	-	60S	4	3	2	5	EC	20	0	00
Integrated (Servo) Motor											
Frame Size and Length											
60S											
60M											
80S											
80M											
DC Bus Voltage											
2											
4											
Rated Speed											
3											
Shaft											
0											
2											
Connector and Protection Class											
1											
5											
6											
Communication											
CO											
EC											
ES											
Feedback											
20											
30											
Brake											
0											
B											
Option											
00											



Safety over
EtherCAT

CANopen

EtherCAT
Technology Group



TIM_Flyer_2024_EN_V1