

ZED ready-to-connect low voltage servo drive

ZED is a ready-to-connect low voltage servo drive with an output current of up to 23A. Its small footprint enables space-saving and near-motor mounting, fitting easily within the tight space constraints of applications such as electronics assembly, medical devices, and AGVs/AMRs.



Connectivity to PLC or modular safety controller

STO according to STO SIL3/PL e can be connected to a master motion PLC controller or to a modular safety controller. Two motor encoder signals A quad B RS422 can be daisy chained to the modular safety controller for Safe Motion monitoring, minimizing design complexity.

Master/slave communication

ZED to ZED real-time data exchange allows higher levels of axis synchronization and safer modes of operation.

Application examples

ZED drive is suited to stationary and mobile low voltage applications in the following industries:

- Intralogistics incl. AGV, AMR
- Medical Equipment
- Laboratory Automation
- Printing Machines
- Electronic Assembly & Semiconductor Equipment

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.

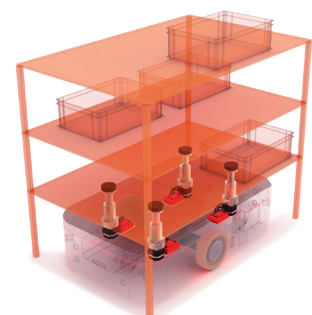
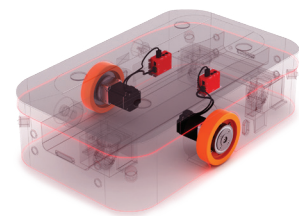
Safe Motion Module supported functions:

- 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

- High power density in a small footprint
- Ready-to-connect. No need for pin soldering or cable adaptors
- 4 digital input, 2 digital output
- Fieldbus: CANopen, EtherCAT
- Supports AqB encoder, Hall sensors and SSI-encoders
- Integrated Functional Safety - STO or optional Safe Motion Module (Cat 3, PL e)
- Near-motor mounting for tight space constraints applications
- Simple commissioning GUI with comprehensive parameterization options
- CE and cUL certifications



Model	Fieldbus	Bus-Voltage (VDC)	Input logic (VDC)	Cont. current (Arms)	Cont. current with heat sink (Arms)	Peak current (Arms)	Dimensions L x W x H (mm)
SD01-015	CANopen	24	24	12	14.4	40	106 x 70 x 34.75
SD01-025	CANopen	48	24	18	20	63	106 x 70 x 40
SD01-030	CANopen	24	24	20	23	70	106 x 70 x 40
SD02-065	CANopen / EtherCAT	48	24	45	45	135	125 x 85 x 49.8

Communications:

CANopen
EtherCAT
USB

Motor Feedback:

Incremental AqB + Hall
Absolute single turn
Absolute multi turn

Digital I/Os:

4 x Input
2 x Output
1 x Analog IN

Ordering Information

SD0X - 015		1D	AB	CA - 000
ZED SD0X Single-Axis Servo Drive				
Rating – Cont. Current, Peak Current				
SD01-015	12/14.4(*) Arms, 40 Arms peak, nom. 24 VDC			
SD01-025	18/20(*) Arms, 63 Arms peak, nom. 48 VDC			
SD01-030	20/23(*) Arms, 70 Arms peak, nom. 24 VDC			
SD02-065	45 Arms, 135 Arms peak, nom. 48 VDC			
Power				
1D	Bus 20-60 VDC, Logic 24 VDC optional			
Feedback				
AB	SD01: Incremental AB quadrature, index, Halls, 12 bit RS422			
	SD02: Incremental AB quadrature, index, Halls, 12 bit RS422 Absolute single turn / - Multi turn			
AS	SD01: Absolute SSI			
Communication				
CA	SD01: CANopen			
EC	SD02: CANopen, EtherCAT			
ES	SD02: FSoE FailSafe over EtherCAT (coming soon)			
Options				
000	Standard			

SD02



SD01



ZED_Flyer_2024_EN_V1

*With heat sink