english

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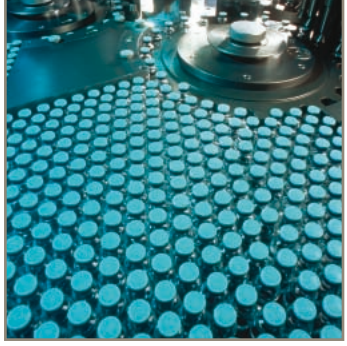

aerospace
climate control
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SLVDN

Brushless Servodrives from 1,25A to 15A

Parker

ENGINEERING YOUR SUCCESS.

SLVDN

Compact Digital Servodrives from 1,25 to 15A

SLVDN is the family of compact digital servodrives for brushless motors which, in addition to positioning applications with trapezoidal profile, electrical shaft, electronic cam, spindle orientation, simulator of stepper motor and torque control, holds a PLC inside able to talk to the most common industrial programming systems, giving a great freedom of use of the inputs and outputs. It also allows the development of additional configurations to the basis features of the drive, such as gains adjustment of the loop in relation to speed or space, monitoring of the torque used for tools usury etc.
The SLVDN range is equipped with a serial interface RS-422/ RS-485 allowing the operator to configure, monitoring, give commands to up to 32 units simultaneously. A CANbus interface is available both in communication mode and in real time mode with SBCCan, DS301, DS402 protocols.
Typical applications: packaging, pick&place, automatic machines in general.

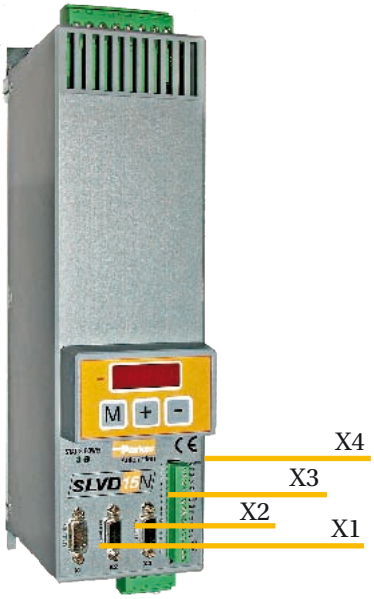
From 1,25 to 15A

TECHNICAL SPECIFICATIONS	
Power Supply	200÷230VAC single/three phase (±10%) 50-60Hz (±5%) - only TT/TN networks
Control supply	24Vdc (-0/+10%)
Overload	200% for 2s
Operation temperature	0÷45°C
Operation humidity	<85% non condensing
Altitude	1000m asl with 1,5% derating every 100m
Protections	IP20
International standard	CE

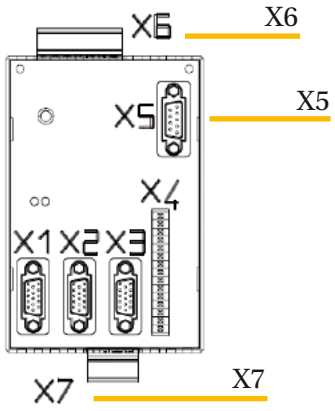
Model	Output Nominal current [A]	Overload current [A]	Size
SLVD1N	1,25	2,5	1
SLVD2N	2,5	5	
SLVD5N	5	10	
SLVD7N	7	14	
SLVD10N	10	20	2
SLVD15N	15	30	

- torque/current/speed control
- positioner
- electric shaft
- electronic cam
- stepper motor simulator
- virtual master
- internal PLC - programming according to IEC 61131 (option)
- configurable feedback
- standard interface: RS422/485, SBCCan
- optional interface: EtherCAT, CANopen (DS301, DS402)
- internal braking resistor
- internal EMC filter for three phase power
- supply

Inputs and outputs

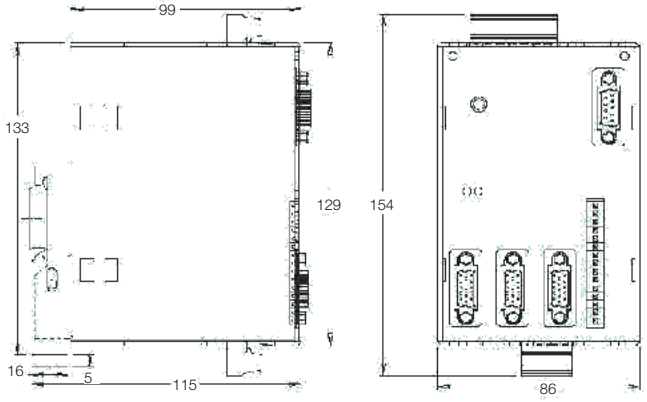


X1	RS422/485 - CAN Interface
X2	Encoder input/output
X3	Resolver/Encoder configurable input
X4	4 digital inputs 0-24V 2 digital outputs 1 Differential analogue reference ±10V 1 Differential aux analog input ±10V 1 Analogue output single ended ±4V
X5	Optional Board connector
X6	Power terminal block
X7	DC Bus terminal block

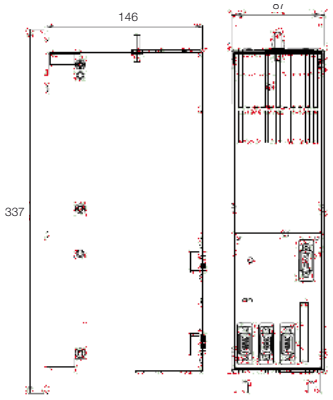


Dimensions and weights

SLVDN 1-2-5-7



SLVDN 10-15



Model	H	W	D	Weight
SLVDN 1-2-5-7	154	86	115	1,1
SLVDN 10-15	337	87	146	3,1

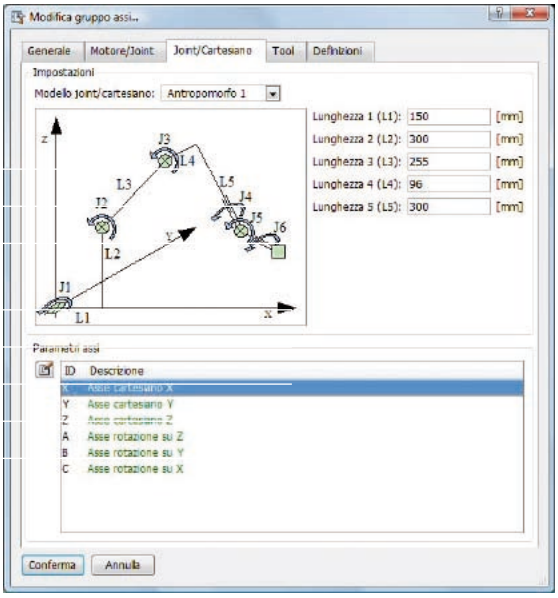
mm for dimensions, kg for weight

Applications

Sector: Painting robots

Snake Robot

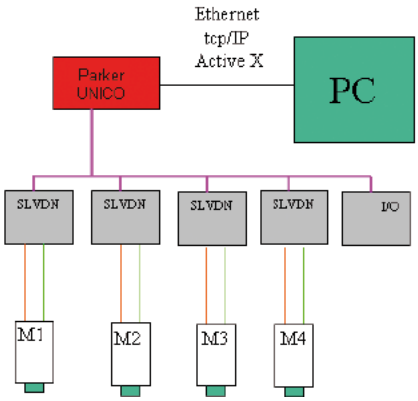
Antropomorphous painting robot (6/7 axes).
It installs SLVDN servo-drives.
The control of the machine is entrusted to the Parker UNICO.
The remote I/O is controlled with CANopen protocol.
The machine cycle was programmed with the RDE tool using the motion functions of the programming language R3 (structured text).The HMI is an industrial PC communicating in real time with the Parker UNICO through the activeX library.



Sector: Glass industry

Machining Centre

It is a 4 axis machine (x,y,z,mandrel) executing the following operations: drilling, threading and linear milling on materials of different type.
The system is made of 4 SLVDN and 4 SMB motors.
The control of the machine is entrusted to the Parker UNICO motion controller.
The remote I/O is controlled with CANopen protocol.
The machine cycle was programmed with the RDE tool using the LD language and the motion functions of the function block RPE.
A VB application software generates the ISO files which are loaded onto the CN and then executed.
The HMI is an industrial PC communicating real time through the activeX library.



Applications

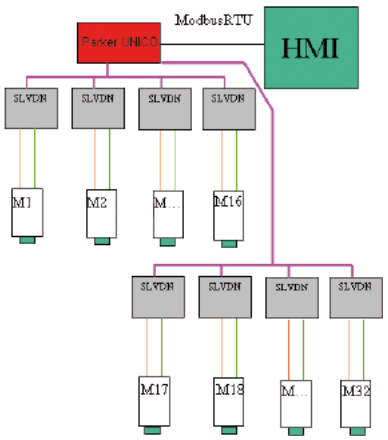
Sector: Beverage

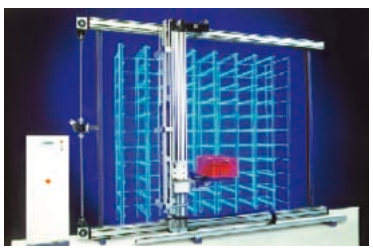
Multi-head bottle capper (powered axis Z)

A Multi-head machine able to cap bottles of different format.
Each head, in order to reduce setup time, installs 2 SLVDNs, one dedicated to the vertical movement of the head depending on the carousel position and the other dedicated to the capping with preset torque.
The machine is made of up to 16 heads with 2 SLVDNs each.
The control of the machine is entrusted to the Parker UNICO motion controller.
The remoted I/O is controlled with CANopen protocol.
The machine cycle was programmed with the RDE tool using the LD language and the motion functions of the programming language R3 (structured text).
It is also interfaced to a proprietary electronics through the MODBUS RTU slave protocol for HMI functions.

Multi-head bottle capper

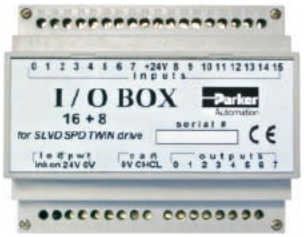
A Multi-head machine able to cap bottles of different format.
Each head installs 1 SLVDN dedicated to cap fastening with torque control.
The machine is made of up to 32 heads with 1 SLVDN each.
The control of the machine is entrusted to the Parker UNICO motion controller.
The remoted I/O is controlled with CANopen protocol.
The machine cycle was programmed with the RDE tool using the functions of the programming language R3 (structured text).
It is also interfaced to a proprietary electronics through the MODBUS RTU slave protocol for HMI functions.





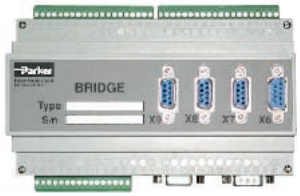
SK158/L Keypad

I/O Module
16In - 8 Out SK135/S



Power and signal cables for resolver, incremental and absolute encoder and SinCos feedback

Bridge - Interface protocol



SK167 PLC-Line Driver interface

E5 - EtherCAT Interface

Code structure SLVDn series

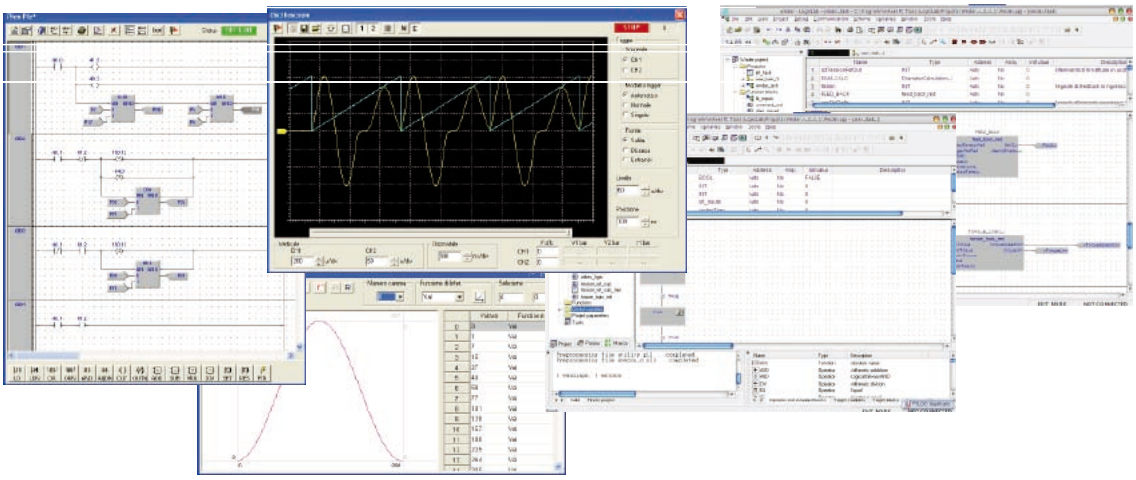
SLVD	1	N	S	E		Z
1	2	3	4	5	6	7

1	Servo family	SLVD: Compact Digital Servodrive
2	Size	1/2/5/7/10/15 Amp
3	Version	N: New version
4	Protocol	S: SBCCan Protocol (standard)
		C: CANopen Protocol (DS301)
		D: CANopen Protocol (DS402)
		E5: EtherCAT Protocol (only with option OP-ETCAT)
5	Encoder input	E: EnDat/incremental/SinCos Encoder Input (from motor feedback)
		H: Incremental Encoder input with Hall sensor (from motor feedback)
		F: SinCos Encoder Input
6	Optional Boards	E5: OP-ETCAT - EtherCAT option
7	Firmware review	Z: Firmware review number (opzion only for special versions up to 3 numbers)

Software

Motion Wiz and LogicLab

The freeMotionWiz configuration software is available to configure the SLVDN system with just a few clicks of the mouse. Motionwiz features an easy and “friendly” interface to speed up installation, optimisation and diagnostics procedures. To simplify configuration, Motionwiz shows a typical Windows ® environment on the monitor with dialogue windows and toolbars.
Motionwiz permits performing operations in both “on line” mode, directly in the mechanism, and in “off line” mode in remote on the PC. In this case, personalised configuration can be sent to the mechanism subsequently.
To simplify the configuration of systems with a large number of axis but with different cuts and the same operating mode, Motionwiz permits maintaining the same mechanism configuration and only changing the type of selected motor. Inside the MotionWiz configurator is a database containing the data of standard Parker motors.
MotionWiz incorporates “picoPLC”, a built-in PLC enviroment programmable with standard language. PicoPLC allows the external word to communicate with the drive and to execute function sequences. Should the custom application require additional computational resources, an option software enviroment can be used, programmable with PLC commands according to IEC 61131-3.



Fieldbus

The SLVDN can be very versatile by using the most common fieldbus. The EtherCAT bus, based on the industrial standard Ethernet, has been implemented within the SLVDN option so to best exploit the industrial PC capacities.

- EtherCAT
- CANopen (DS301, DS402)
- SBCCan (standard)

WARNING — USER RESPONSIBILITY

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Additional information available on:

www.parker-eme.com/slvdn

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