LSC 4-Q-DC Servoamplifier

4-Q operation
Controlled operation for acceleration and braking in both directions.

Linear power stage
Ideally suited for small outputs power, low electromagnetic emission, no motor choke required.

Operating modes
IxR compensation, voltage control, encoder speed control, DC tacho speed control or current control selectable with a switch from outside.

Design
Robust metal housing with variable installation options on assembly plate or 19“ rack.

Set value input
Via external potentiometer, external set value voltage or using internal potentiometer.

Easy start-up procedure
Pluggable screw type terminal block, simple set-up with potentiometer, robust designed PI controller.

Excellent price / performance ratio
Good value 4-Q-DC servoamplifier matched with small permanent magnet activated DC motors.

The LSC 30/2 (Linear Servo Controller) is a linear 4-quadrant Servoamplifier used to control permanent magnet activated DC motors up to approx. 50 watts.

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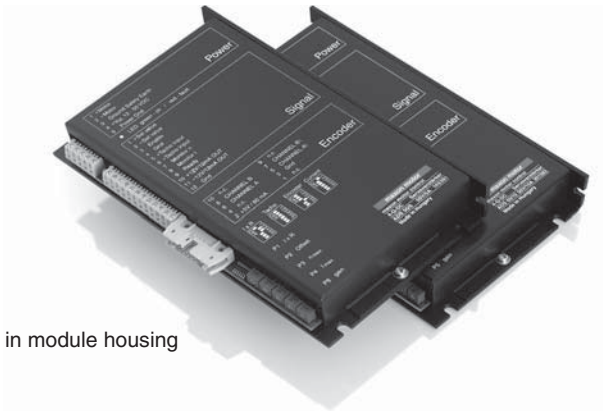
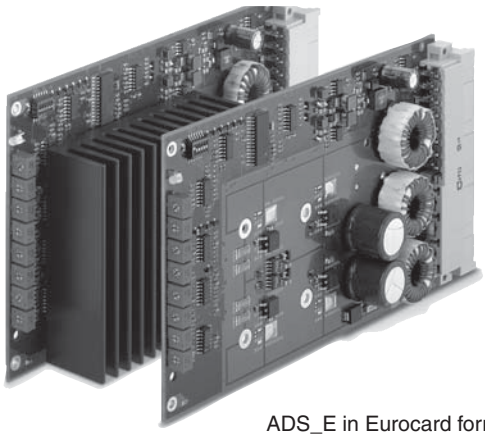
ADS 4-Q-DC Servoamplifier



ADS in module housing



ADS_E in Eurocard format

Pulsed power stage
Suitable for controlling low and high output power. 95% efficiency thanks to state-of-the-art MOSFET technology.

Operating modes
IxR compensation, encoder speed control, DC tacho speed control or current control selectable with a switch from outside.

Design versions
Robust metal housing in module form offers several mounting options. Standardized Eurocard version (with accessories) for the installation in a 19“-Rack or in a plug-in card system.

Excellent control characteristics
Stable speed behaviour when set value and disturbance variable change, fast current controller.

Protection circuit
Protected against overcurrent, thermal overload and short-circuit of motor cable.

Set value input
External potentiometer or external set value voltage.

Excellent price / performance ratio
Modern servoamplifier with many technical features, suitable for permanent magnet activated DC motors up to 500 watts.

The ADS (Analog DC Servoamplifier) is a powerful pulse-width modulated (PWM) servoamplifier for controlling permanent magnet activated DC motors. Standard Version from 10 - 250 watts and Power Version from 80 - 500 watts output power. Available in robust metallic housing and as Eurocard version for installation into a 19“ rack.

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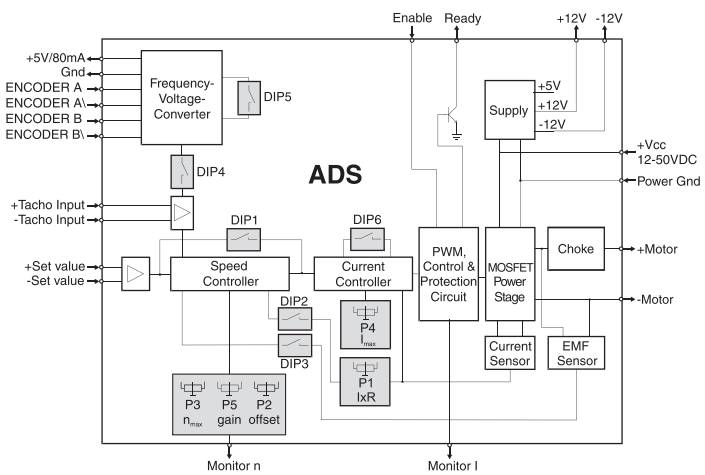

4-Q-DC Servoamplifier Data

LSC 30/2 4-Q-DC Servoamplifier
Linear 4-quadrant servoamplifier for permanent magnet activated DC motors up to approx. 50 watts.

ADS 50/5 4-Q-DC Servoamplifier
Powerful PWM servoamplifier for permanent magnet activated DC motors from 10 to approx. 250 watts output power. Available as Standard Version in module housing.

Operating modes		
	IxR compensation, voltage control, encoder speed control, DC tacho speed control, current control	**IxR compensation, encoder speed control, DC tacho speed control, current control**
Electrical Data		
Operating voltage V_{CC}	12 - 30 VDC	12 - 50 VDC
Max. output voltage	V_{CC} -5 V	0.9 x V_{CC}
Max. output current I_{max}	2 A	10 A
Continuous output current I_{cont}	2 A	5 A
Switching frequency of power stage		50 kHz
Max. efficiency		95 %
Built-in motor choke		150 µH / 5 A
Input		
Set value	Configurable, -10 ... +10 V, -3.9 ... +3.9 V	-10 … +10 V
Enable	«Disable» Disable min. V_{CC} - 1 V, Enable max. GND + 1 V	«Enable» +4 … 50 V
DC tacho	min. 2 VDC, max. 50 VDC	min. 2 VDC, max. 50 VDC
Encoder signals	Channel A and channel B, max. 100 kHz, TTL	Channel A, A\, B, B\, max. 100 kHz, TTL
Output		
Status reading «Ready»	Open Collector, max. 30 VDC (I_L < 20 mA)	Open Collector max. 30 VDC (I_L < 20 mA)
Monitor current «Monitor I»		-10 … +10 VDC (short circuit protected)
Monitor speed «Monitor n»		-10 … +10 VDC (short circuit protected)
Voltage outputs		
Auxiliary voltages	+3.9 VDC, -3.9 VDC, max. 2 mA	+/-12 VDC, max. 12 mA (short circuit protected)
Encoder supply voltage	+5 VDC, max. 80 mA	+5 VDC, max. 80 mA
Trim potentiometer	IxR compensation, Offset, n_{max}, I_{max}, gain	IxR compensation, Offset, n_{max}, I_{max}, gain
Protective functions	Protected against thermal overload	Protected against thermal overload, overcurrent and short-circuit of motor cables
Indicator	Green LED = READY, red LED = ERROR	Bi-colour LED, green = READY, red = ERROR
Ambient temperature and humidity range		
Operation	0 … +45°C	-10 … +45°C
Storage	-40 … +85°C	-40 … +85°C
No condensation	20 … 80 %	20 … 80 %
Mechanical Data		
Weight	Approx. 330 g	Approx. 400 g
Dimensions (L x W x H)	103 x 100 x 34 mm (see page 284)	180 x 103 x 26 mm (see page 284)
Mounting threads	Flange for M4-screws	Flange for M4-screws
Connections	See page 284	See page 284
Order Number		
	250521 LSC 30/2, 4-Q-DC Servoamplifier in module housing	**145391** ADS 50/5, 4-Q-DC Servoamplifier Standard Version in module housing
Accessories		
		235811 DSR 70/30 Shunt regulator