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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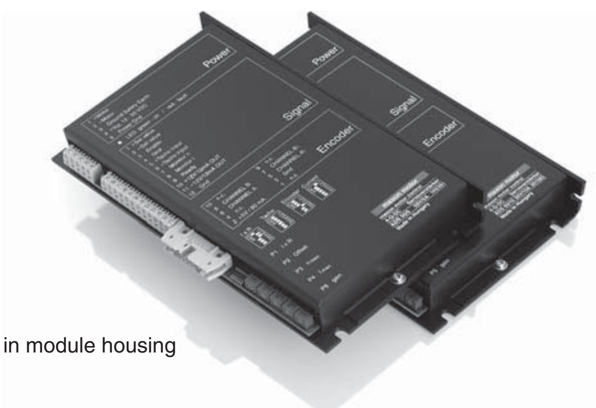
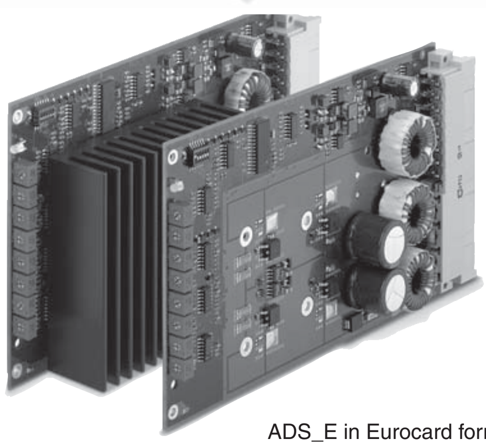
ADS 4-Q-DC Servoamplifier



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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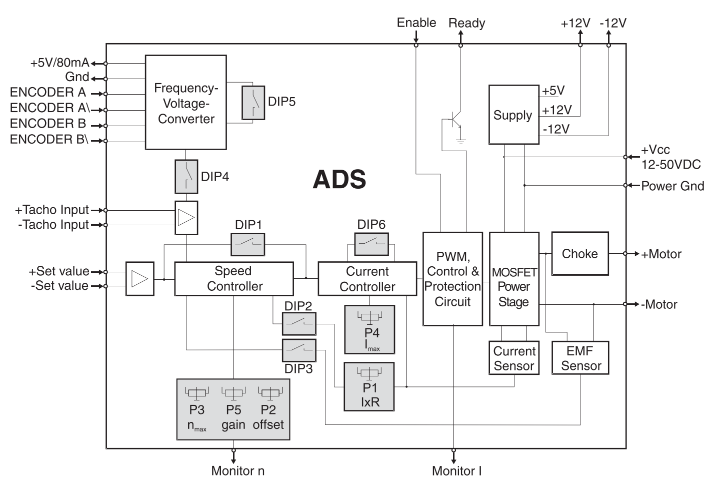

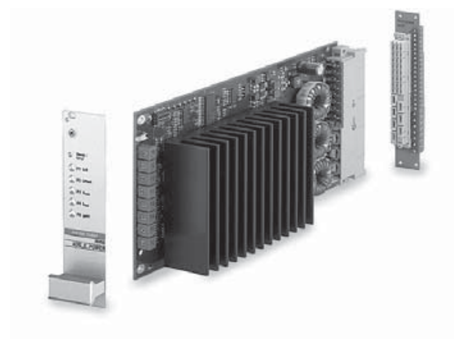

ADS 50/10 4-Q-DC Servoamplifier
Powerful PWM servoamplifier for permanent magnet activated DC motors from 80 to approx. 500 watts output power. Available as Power Version in module housing.

ADS_E 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 racket card (Eurocard) format.

ADS_E 50/10 4-Q-DC Servoamplifier
Powerful PWM servoamplifier for permanent magnet activated DC motors from 80 to approx. 500 watts output power. Available as Power Version in racket card (Eurocard) format.

Operating modes		
IxR compensation, encoder speed control, DC tacho speed control, current control	**IxR compensation, encoder speed control, DC tacho speed control, current control**	**IxR compensation, encoder speed control, DC tacho speed control, current control**
Electrical Data		
12 - 50 VDC	12 - 50 VDC	12 - 50 VDC
0.9 x V_{CC}	0.9 x V_{CC}	0.9 x V_{CC}
20 A	10 A	20 A
10 A	5 A	10 A
50 kHz	50 kHz	50 kHz
95 %	95 %	95 %
75 µH / 10 A	150 µH / 5 A	75 µH / 10 A
Input		
-10 … +10 V	-10 … +10 V	-10 … +10 V
«Enable» +4 … 50 V	«Enable» +4 … 50 V	«Enable» +4 … 50 V
min. 2 VDC, max. 50 VDC	min. 2 VDC, max. 50 VDC	min. 2 VDC, max. 50 VDC
Channel A, A\, B, B\, max. 100 kHz, TTL	Channel A, A\, B, B\, max. 100 kHz, TTL	Channel A, A\, B, B\, max. 100 kHz, TTL
Output		
Open Collector, max. 30 VDC (I_L < 20 mA)	Open Collector max. 30 VDC (I_L < 20 mA)	Open Collector max. 30 VDC (I_L < 20 mA)
-10 … +10 VDC (short circuit protected)	-10 … +10 VDC (short circuit protected)	-10 … +10 VDC (short circuit protected)
-10 … +10 VDC (short circuit protected)	-10 … +10 VDC (short circuit protected)	-10 … +10 VDC (short circuit protected)
Voltage outputs		
+/-12 VDC, max. 12 mA (short circuit protected)	+/-12 VDC, max. 12 mA (short circuit protected)	+/-12 VDC, max. 12 mA (short circuit protected)
+5 VDC, max. 80 mA	+5 VDC, max. 80 mA	+5 VDC, max. 80 mA
IxR compensation, Offset, n_{max}, I_{max}, gain	IxR compensation, Offset, n_{max}, I_{max}, gain	IxR compensation, Offset, n_{max}, I_{max}, gain
Protected against thermal overload, overcurrent and short-circuit of motor cables	Protected against thermal overload, overcurrent and short-circuit of motor cables	Protected against thermal overload, overcurrent and short-circuit of motor cables
Bi-colour LED, green = READY, red = ERROR	Bi-colour LED, green = READY, red = ERROR	Bi-colour LED, green = READY, red = ERROR
Ambient temperature and humidity range		
-10 … +45°C	-10 … +45°C	-10 … +45°C
-40 … +85°C	-40 … +85°C	-40 … +85°C
20 … 80 %	20 … 80 %	20 … 80 %
Mechanical Data		
Approx. 400 g	Approx. 175 g	Approx. 410 g
180 x 103 x 26 mm (see page 284)	160 x 100 x 16 mm (see page 284)	160 x 100 x 30.5 mm (see page 284)
Flange for M4-screws	Rack-Installation	Rack-Installation
See page 284	See page 284	See page 284
Order Number		
201583 ADS 50/10 4-Q-DC Servoamplifier Power Version in module housing	**166143** ADS_E 50/5 4-Q-DC Servoamplifier Standard Version in Eurocard format	**168049** ADS_E 50/10 4-Q-DC Servoamplifier Power Version in Eurocard format
Accessories		
235811 DSR 70/30 Shunt regulator	**167850** Front panel 3HE, 5TE **166873** Backplane with screw type terminal block	**168910** Front panel 3HE, 7TE **166873** Backplane with screw type terminal block