

DETAILS

ESCON 70/10, 4-Q Servocontroller for DC/EC motors, 10/30 A, 10 - 70 VDC

Part number 422969



PRICE SCALES	Quantity	Price per unit
Prices excluding VAT and shipping costs	1-4	€351.37
	5-19	€330.37
	20-49	€307.28
	from 50	On request

Start combination

Order quantity

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Specifications	Description	Downloads	Videos
Specifications			
PRODUCT			
Weight	259 g		
MOTOR			
DC motors up to	700 W		
EC motors up to	700 W		
SENSOR			
Without sensor (DC motors)	Yes		
DC tachometer	Yes		
Digital incremental encoder (2-channel, single-ended)	Yes		
Digital incremental encoder (2-channel, differential)	Yes		
Digital incremental encoder (3-channel, differential)	Yes		
Digital Hall sensors (EC Motors)	Yes		
OPERATING MODES			

Current controller	Yes
Speed controller (open loop)	Yes
Speed controller (closed loop)	Yes
ELECTRICAL DATA	
Operating voltage V_{CC} (min.)	10 V
Operating voltage V_{CC} (max.)	70 V
Max. output voltage (factor * V_{CC})	0.95
Max. output current I_{max}	30 A
Max. time of peak output current I_{max}	20 s
Continuous output current I_{cont}	10 A
PWM clock frequency of power stage	53.6 kHz
Sampling rate PI current controller	53.6 kHz
Sampling rate PI speed controller	5.36 kHz
Max. efficiency	98 %
Max. speed (DC)	150000 rpm
Max. speed (EC; 1 pole pair) block commutation	150000 rpm
Built-in motor choke per phase	15 μ H
INPUTS	
Hall sensor signals	H1, H2, H3
Encoder signals	A, A, B, B\
Max. encoder input frequency	1 MHz
Digital inputs	2
Functionality of digital inputs	Enable, enable CW, enable CCW, enable CW+CCW, enable + direction of rotation, stop, PWM set value, RC Servo set value, fixed set value
Analog inputs	2
Resolution, range, circuit	12-bit, -10...+10V, differential
Functionality of analog inputs	Set value, current limit, offset, speed ramp
Potentiometers	2
Functionality of the potentiometers	set value, current limit, offset, speed ramp, gain, IxR factor
OUTPUTS	
Digital outputs	2
Functionality of digital outputs	ready, speed comparator, current comparator, commutation frequency
Analog outputs	2
Resolution, range	12-bit, -4...+4V
Functionality of analog outputs	current monitor, speed monitor, temperature, fixed value
ANALOG OUTPUTS	
Hall sensor supply voltage	+5 VDC, max. 30 mA

Encoder supply voltage	+5 VDC, max. 70 mA
Auxiliary output voltage	+5 VDC, max. 10 mA
INTERFACE	
USB 2.0 (full speed)	Yes
DISPLAY	
Status indicator "Ready"	green LED
Status indicator "Error"	red LED
PROTECTIVE FUNCTIONS	
Protective functions	current limit, overcurrent, excess temperature, undervoltage, overvoltage, voltage transients, short-circuits in the motor cable
AMBIENT CONDITIONS	
Temperature – Operation (min.)	-30 °C
Temperature – Operation (max.)	45 °C
Temperature – Extended Range	+45...+82°C, Derating: -0.27 A/°C
Temperature – Storage (min.)	-40 °C
Temperature – Storage (max.)	85 °C
Humidity (non-condensing) (min.)	5 %
Humidity (non-condensing) (max.)	90 %
MECHANICAL DATA	
Weight	259 g
Dimension (length)	125 mm
Dimension (width)	78.5 mm
Dimension (height)	27 mm
Mounting	Flange for M4 screws
SOFTWARE	
Installation program	ESCON Setup
Graphical User Interface	ESCON Studio
Operating system	Windows 10, 8, 7, Windows XP SP3

Description

The **ESCON 70/10** is a small-sized, powerful 4-quadrant PWM servo controller for the highly efficient control of permanent magnet-activated brushed DC motors or brushless EC motors up to approximately 700 Watts.

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SOFTWARE/FIRMWARE

CHINESE

ESCON Setup - 版本说明 (chinesisch, PDF 1 MB)	Version 2021 年 8 月
ESCON 固件版本 Readme (chinesisch, PDF 1 MB)	Version 2021 年 8 月
ESCON Setup - Studio 2.2 Rev 5 / Firmware 0160h (ZIP 828 MB)	Version 10
ESCON 70/10 Firmware (ZIP 713 KB)	Version 0160h

GERMAN

ESCON Setup - Release Notes (deutsch, PDF 701 KB)	Version August 2021
ESCON Firmware-Version Readme (deutsch, PDF 997 KB)	Version August 2021
ESCON Setup - Studio 2.2 Rev 5 / Firmware 0160h (ZIP 828 MB)	Version 10
ESCON 70/10 Firmware (ZIP 713 KB)	Version 0160h

ENGLISH

ESCON Setup - Release Notes (english, PDF 698 KB)	Version August 2021
ESCON Firmware Version Readme (english, PDF 993 KB)	Version August 2021
ESCON Setup - Studio 2.2 Rev 5 / Firmware 0160h (ZIP 828 MB)	Version 10
ESCON 70/10 Firmware (ZIP 713 KB)	Version 0160h

SPANISH

ESCON Setup - Notas de publicación (español, PDF 699 KB)	Version Agosto 2021
ESCON Versión de firmware Readme (español, PDF 995 KB)	Version Agosto 2021
ESCON Setup - Studio 2.2 Rev 5 / Firmware 0160h (ZIP 828 MB)	Version 10
ESCON 70/10 Firmware (ZIP 713 KB)	Version 0160h

FRENCH

ESCON Setup - Notes de mise à jour (française, PDF 700 KB)	Version Août 2021
ESCON Readme Version firmware (française, PDF 672 KB)	Version Août 2021
ESCON Setup - Studio 2.2 Rev 5 / Firmware 0160h (ZIP 828 MB)	Version 10
ESCON 70/10 Firmware (ZIP 713 KB)	Version 0160h

ITALIAN

ESCON Setup - Release Notes (italiano, PDF 698 KB)	Version Agosto 2021
ESCON Versione firmware Leggimi (italiano, PDF 993 KB)	Version Agosto 2021
ESCON Setup - Studio 2.2 Rev 5 / Firmware 0160h (ZIP 828 MB)	Version 10
ESCON 70/10 Firmware (ZIP 713 KB)	Version 0160h

JAPANESE

ESCON Setup - リリースノート (日本語, PDF 1 MB)	Version 2021年8月
ESCON ファームウェアバージョン Readme (日本語, PDF 1 MB)	Version 2021年8月
ESCON Setup - Studio 2.2 Rev 5 / Firmware 0160h (ZIP 828 MB)	Version 10
ESCON 70/10 Firmware (ZIP 713 KB)	Version 0160h


 MANUALS

CHINESE

ESCON 功能比较表 (chinesisch, PDF 489 KB)

Version 2021 年 8 月

ESCON 70/10 使用说明书 (chinesisch, PDF 5 MB)

Version 2021 年 8 月

GERMAN

ESCON Funktionalitätstabelle (deutsch, PDF 421 KB)

Version August 2021

ESCON 70/10 Geräte-Referenz (deutsch, PDF 5 MB)

Version August 2021

ENGLISH

ESCON Feature Chart (english, PDF 413 KB)

Version August 2021

ESCON 70/10 Hardware Reference (english, PDF 5 MB)

Version August 2021

SPANISH

ESCON Tabla comparativa de funcionalidades (español, PDF 435 KB)

Version Agosto 2021

ESCON 70/10 Referencia del Dispositivo (español, PDF 5 MB)

Version Agosto 2021

FRENCH

ESCON Tableau fonctionnel (française, PDF 432 KB)

Version Août 2021

ESCON 70/10 Documentation Hardware (française, PDF 5 MB)

Version Août 2021

ITALIAN

ESCON Tabella comparativa di funzionalita (italiano, PDF 431 KB)

Version Agosto 2021

ESCON 70/10 Manuale di riferimento (italiano, PDF 5 MB)

Version Agosto 2021

JAPANESE

ESCON 機能比較表 (日本語, PDF 477 KB)

Version 2021年8月

ESCON 70/10 ハードウェア・リファレンス (日本語, PDF 6 MB)

Version 2021年8月

CATALOG PAGE

目录页 (chinesisch, PDF 2 MB)

Version 2020

Katalogseiten (deutsch, PDF 8 MB)

Version 2020

Catalog page (english, PDF 399 KB)

Version 2021

Catálogo Pagina (español, PDF 268 KB)

Version 2020

Page de catalogue (française, PDF 1 MB)

Version 2020

カタログページ (日本語, PDF 997 KB)

Version 2020

CAD-FILES (DXF, STP,...)

CAD Model ESCON 70/10 (english, ZIP 8 MB)

Version 2012





Regler Tuning – AutoTuning Modus
03:00 min



Regulation Tuning – Expert Tuning Mode
03:44 min



Diagnostics Tool
03:01 min



Firmware Update Tool
03:18 min



Data Recorder Tool
03:55 min



Startup Wizard (EC motor)
05:35 min



Help at your fingertips
05:59 min



ESCON Studio – Startup Wizard (DC Motor)
04:37 min



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Knowledge

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interaction of motor, gearhead,
sensors, and controller.
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