Series DRCS drives for Stepper motors

One-size full digital drives with WLAN system and NFC integrated

- Full digital drive with integrated PLC functions
- Programmable with the Camozzi QSet configuration software
- Feedback by incremental encoder
- NFC (Near Field Communication) system enabled
- 127 programmable positions (setting, acceleration, speed and position)
- Wire configuration by means of USB 2.0 and WLAN BL-BLE
- Can be controlled in frequency (step and direction), digital I/O and serial CANopen protocol

Series DRCS drives, compact and optimised in one size, are capable of controlling all Camozzi Stepper motors with two-phase and micro-stepping feed. The use of the micro-stepping control technology (up to 1/16 of a step) enables the drive to almost replicate a sinusoidal current while considerably reducing the natural resonance of the motor itself.

Series DRCS drives can calculate the normal resonance frequency of the motors and optimise their performance. The availability of eight inputs allows the realisation of a table of 127 commands, for each of which it is possible to set position, speed, acceleration and deceleration.
Each command can be absolute or relative. Through the Step and Direction commands, it is possible to control the drive in frequency mode. The frequency defines the speed, while the number of steps defines the position. The Series DRCS drives are equipped with serial protocols CANopen CiA 301 and CiA 402 through which it is possible to perform motion control and condition monitoring of the drive. To configure the drive, wired USB 2.0 or WLAN connections can be used. Thanks to an innovative system that takes advantage of Near Field Communication (NFC) technology, it is possible to extract production and statistical data on the use of the drive, which are essential parameters for industry 4.0.

GENERAL DATA

SUPPLY VOLTAGE	
Logic	18 ÷ 32 V DC
Power	24 ÷ 60 V DC
CURRENT	
Current	0.1 ÷ 7 A
Holding current	Automatic reduction of the holding current with motor in stop mode, this function can be set according to the holding current or its delay
AMBIENT	
Operating temperature	0 ÷ 40°C (up to 55°C with forced ventilation)
Storage temperature	-20°C ÷ 70°C
Humidity	0 ÷ 90%
Altitude	< 1000 meters
Vibration	1G (10 to 500 Hz)
Protection	Overvoltage, minimum voltage, overtemperature, short-circuit or grounding on the motor
Control method	4 state PWM 20kHz
Amplification type	Dual H-Bridge, 4 Quadrants
Position control encoder	100 to 5000 differential impulses / revolution
DIGITAL I/O	
Input control signal	12 opto-isolated 24 V DC
Output control signal	6 opto-isolated
Input impulse control	Step inlet and frequency direction maximum 10kHz
Output control signal	Electromechanical brake max current 1A
COMMUNICATION INTERFACE	
USB	USB 2.0
WLAN	BL-BLE
RFID	with NFC devices
CANopen	CiA 301 and CiA 402 (interpolated position mode)
Microstep emulation	High resolution by means of microstepping and a detailed synchronization. Reduction of oscillations and of resonance vibrations
Anti-Resonance	Activation of the oscillation system in order to reduce vibrations and obtain a smooth movement, control of speed and a reduction of the time of oscillation
Led status	green led
Configuration	Digital with the Camozzi QSet configuration software
Control methods	Digital inputs Frequency CANopen
MEMORY	
Data retention memory	Flash
Configuration data backup memory	E^2prom
Weight	0.46 kg

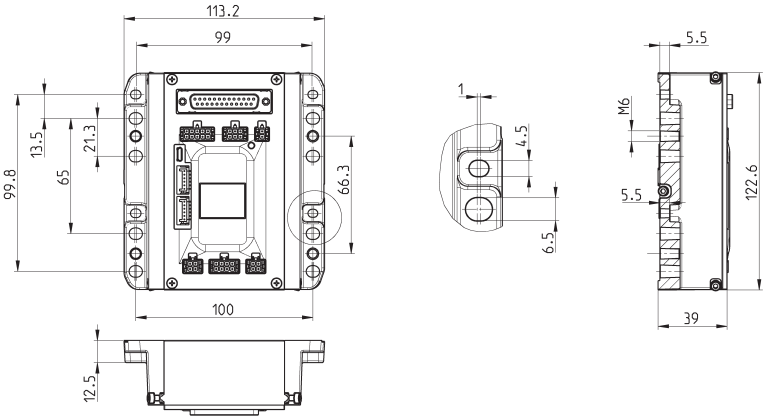
CODING EXAMPLE

DRCS	-	A05	-	8	-	D	-	0	-	A

DRCS	SERIES
A05	SIZE AT MAX CURRENT: A05 = 7A
8	SUPPLY: 8 = 48 V DC
D	COMMUNICATION: D = Digital I/O and impulse frequency C = CANopen, Digital I/O and impulse frequency
0	FEEDBACK: 0 = Feedback
A	VERSIONS: A = standard B = WLAN BL-BLE

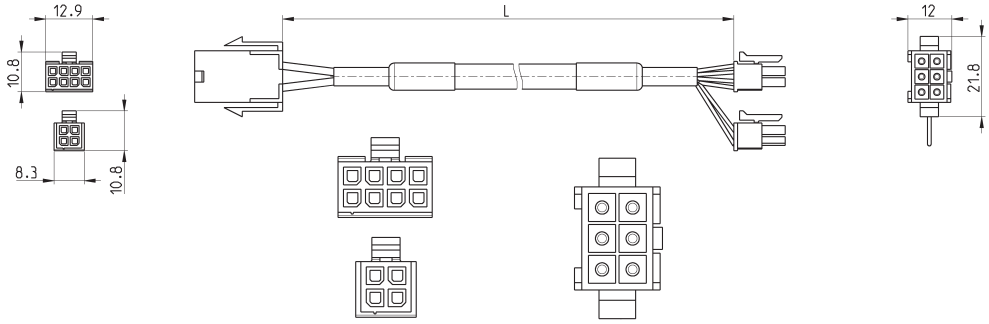
Series DRCS drives

For the Camozzi Stepper motors



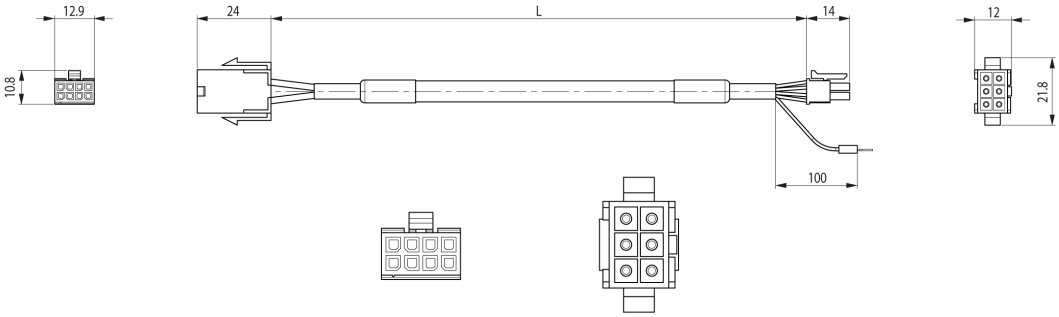
Mod.	Max current	Logic supply	Power supply	Communication	Versions
DRCS-A05-8-D-0-A	7 A	24 V DC	24 ÷ 48 V DC	Digital I/O and impulse frequency	standard
DRCS-A05-8-C-0-A	7 A	24 V DC	24 ÷ 48 V DC	CANopen, Digital I/O and impulse frequency	standard
DRCS-A05-8-D-0-B	7 A	24 V DC	24 ÷ 48 V DC	Digital I/O and impulse frequency	WLAN BL-BLE
DRCS-A05-8-C-0-B	7 A	24 V DC	24 ÷ 48 V DC	CANopen, Digital I/O and impulse frequency	WLAN BL-BLE

Motor cable for Series DRCS drive with brake



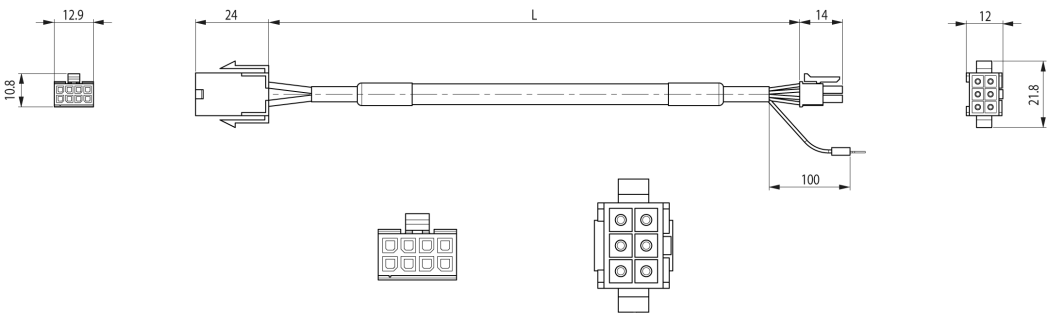
Mod.	Motor	Brake	Pins	L = cable (m)
EC-210A22-B300	Stepper	X	6	3
EC-210A22-B500	Stepper	X	6	5
EC-210A22-BA00	Stepper	X	6	10

Motor cable for Series DRCS drive without brake



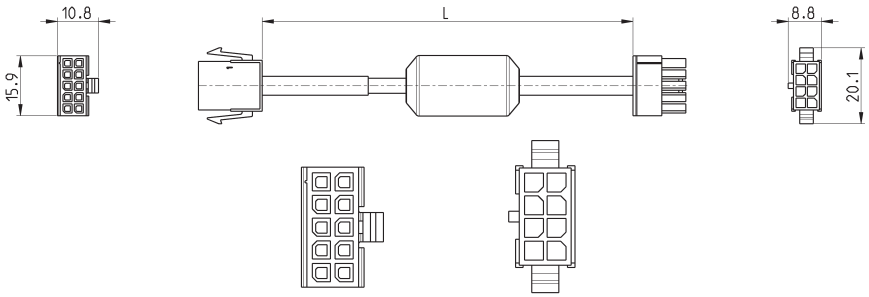
Mod.	Motor	Brake	Pins	L = cable (m)
EC-200A22-B300	Stepper	-	4	3
EC-200A22-B500	Stepper	-	4	5
EC-200A22-BA00	Stepper	-	4	10

Motor cable for Series DRCS drive without brake (Nema 34 only)



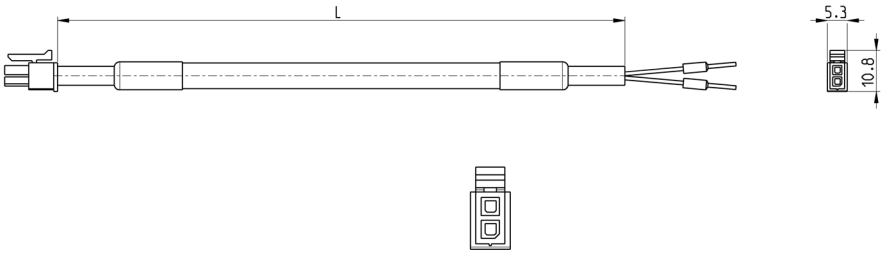
Mod.	Motor	Brake	Pins	L = cable (m)
EC-200522-B300	Stepper	-	5	3
EC-200522-B500	Stepper	-	5	5
EC-200522-BA00	Stepper	-	5	10

Encoder cable for Series DRCS drive



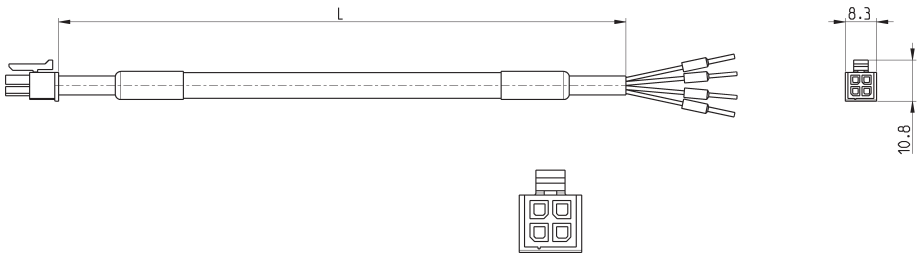
Mod.	Motor	Brake	Pins	L = cable (m)
EC-220A22-B300	Stepper	-	8	3
EC-220A22-B500	Stepper	-	8	5
EC-220A22-BA00	Stepper	-	8	10

Cable for Series DRCS drive logic supply



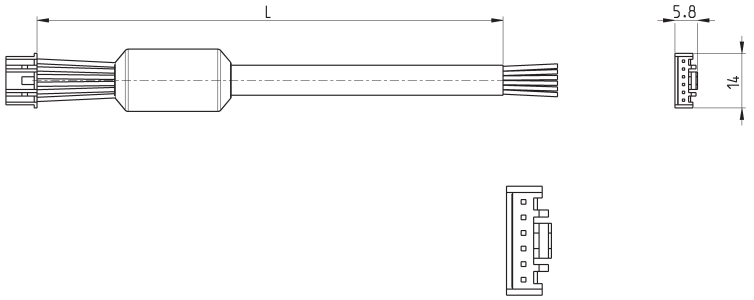
Mod.	Motor	Brake	Pins	L = cable (m)
EC-140222-A200	-	-	2	2

Cable for Series DRCS drive power supply



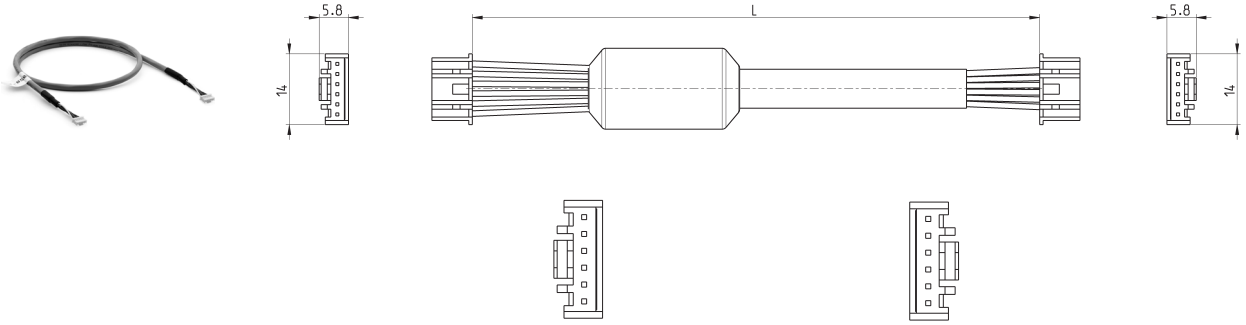
Mod.	Motor	Brake	Pins	L = cable (m)
EC-230422-A200	-	-	4	2

Cable for Series DRCS drive CANopen



Mod.	Motor	Brake	Pins	L = cable (m)
EC-050522-A100	-	-	6	1
EC-050522-A300	-	-	6	3
EC-050522-A500	-	-	6	5

Cable for Series DRCS drive CANopen expansion

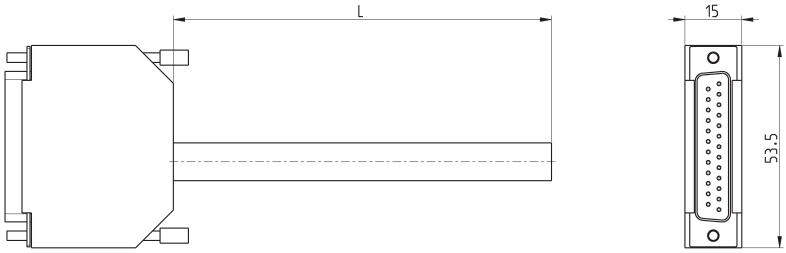


Mod.	Motor	Brake	Pins	L = cable (m)
EC-0130422-A030	-	-	6	0.3

CAN terminating resistor for Series DRCS drives

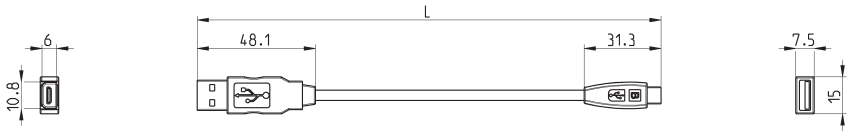
Mod.	Motor	Brake	Pins	L = cable (m)
EC-060623	-	-	6	-

Multipole I/O cable 25P M



Mod.	Motor	Brake	Pins	L = cable (m)
G2W-1	-	-	25	1
G2W-3	-	-	25	3

USB to Micro USB cable Mod. G11W-G12W-2

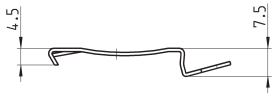


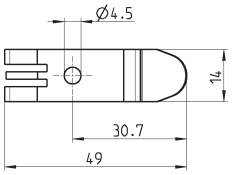
Mod.	description	connections	material for outer sheath	cable length "L" (m)
G11W-G12W-2	black shielded cable 28 AWG	standard USB to Micro USB	PVC	2

Mounting brackets for DIN rail

DIN EN 50022 (mm 7,5 x 35 - width 1)

Supplied with:
2x plates
2x screws M4x6 UNI 5931





Mod.
PCF-E520