Fact sheet: iC2-Micro

Compact and flexible micro drive

Next-generation
More compact, intelligent, and powerful than its predecessor, the iC2-Micro now succeeds VLT® Micro Drive FC 51. This reliable and durable drive is also even easier to use and install. You can reduce system complexity and cost whilst maintaining full performance.

High performance
This drive gives you excellent motor control and mechanical brake performance. New features include torque open loop control, locked motor detection, permanent magnet motor control, built-in control panel and, of course, connectivity with our MyDrive® Suite digital tools.

Your choice of motor
iC2-Micro is compatible with the motor of your choice, so you can put together the best system for your application.

Highly integrated design
iC2-Micro contains an integrated control panel, potentiometer, RFI filter, brake chopper, and intelligent cooling to reduce the need for external components.

Ease of retrofit
Designed to smoothly replace VLT® Micro Drive FC 51 in established plants.

Feature	Benefit
Spring type I/O terminals	Save installation time, avoid errors
Integrated control panel with LED display & indicators Remote control panel with extra functions *(option)* [1]	Easy programming
RJ45 port	– Easy connection with external control panel, PC tool and off-line configuration tool – RS485 based
Application set-up wizards	Easy commissioning
Off-line configuration tool *(option)* [1]	Fast and easy parameter selection, setting and copying with no mains power connection required
Potentiometer for setting setpoints locally	Cost-effective with no external wiring
Compact design	Save cabinet space
Coated Printed Circuit Boards	Improved reliability in harsh environments
Compatible with IPM and SPM motors	Freedom to choose your preferred motor
Integrated brake chopper and PID controller	Reduced cost
Flexible side-by-side mounting	Save cabinet space and cost
Operates at up to 50 °C without derating	– Reduced cost for external cooling – Improved uptime
2 variants, with and without EMC filter	Choose the best fit for the application
No forced air over PCB for whole power range	Improved reliablity
Removable fan	Easy maintenance
Fan on / off control	Reduce noise and energy saving
Natural cooling up to single-phase 200 V 0.75 kW drives without cooling fan	Reduce noise and eliminate channel blockage risk
Condition based monitoring: motor winding and load envelope monitoring [1]	Improve uptime

[1] *Upcoming feature*

ENGINEERING TOMORROW

This quality general-purpose drive is a perfect match for a wide range of applications. iC2-Micro performs with unsurpassed reliability even in complex applications. It gives you user-friendliness, condensed functionality, and easy commissioning, all in a powerful compact package

Power range
1-phase 200–240 V AC: 0.37–2.2 kW
3-phase 380–480 V AC: 0.37–22 kW

Perfor-mance
that pays off

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PM motor compatibility

iC2-Micro provides highly efficient permanent magnet motor control in open loop under VVC+ in the whole power range

Flexible choice of EMC performance

Available in two versions, with and without RFI filter.

Remote control panel

An optional remote control panel provides extra functionalities:

- 2.0" monochrome display
- Multi-language support
- Parameter copy and download
- Easy connection with RJ45 port
- Remote mounting kit

Digital tools

iC2-Micro is supported by powerful PC tools which help you select and commission the drive easily.

Access these tools

suite.mydrive.danfoss.com

Specifications

Mains supply (L1, L2, L3)	
Supply voltage	200-240 V (-15%/+10%) 380-480 V (-15%/+10%)
Supply frequency	50/60 Hz
Displacement power factor (cos φ)	Near unity (> 0.98)
Switching frequency on input supply L1, L2, L3	Switching maximum 2 times/minute
Output data (U, V, W)	
Output voltage	0 -100% of supply voltage
Switching on output	Unlimited
Ramp times	0.01-3600 s
Frequency range	Induction motor • 0-200 Hz (VVC+ mode) • 0-500 Hz (U/f mode) PM motor • 0-400 Hz(VVC+ mode)
Overload capacity	
Overload torque	150% for 60 s every 10 min
Overload torque at start	200% for 1 s
Programmable digital inputs and outputs	
Digital inputs / digital outputs*	5 / 1
Logic	PNP or NPN
Voltage level	0/24 V DC

**Note: One digital input can be configured as digital output.*

Pulse input and output	
Pulse input / Pulse output**	1 / 1, voltage level 0/24 V DC

***Note: One digital input can be configured as pulse input. Another digital input can be configured as pulse output.*

Programmable analog inputs and output	
Analog inputs	2, voltage or current Voltage level: 0 V to +10 V (scaleable) Current level: 0/4 to 20 mA (scaleable)
Analog output	1 (current range 0/4 to 20 mA)
Programmable relay output	
Programmable relay output	1 (NO/NC 240 VAC, 2 A / 30 VDC, 2 A)

Enclosure size	Voltage type	Power rating [kW]	Height H [mm (in)]	Width W [mm (in)]	Depth D [mm (in)]	Height H1 [mm (in)]	Width W1 [mm (in)]	Weight IP20 [kg]
MA01c	1-phase 200-240 V	0.37	150 (5.9)	70 (2.8)	143 (5.6)	140.4 (5.5)	55 (2.2)	1.0
MA01c		0.75	150 (5.9)	70 (2.8)	143 (5.6)	140.4 (5.5)	55 (2.2)	1.0
MA02c		1.5	176 (6.9)	75 (3.0)	157 (6.2)	150.5 (5.9)	59 (2.3)	1.3
MA02a		2.2	186 (7.3)	75 (3.0)	175 (6.9)	176.4 (6.9)	59 (2.3)	1.6
MA01a	3-phase 380-480 V	0.37	150 (5.9)	70 (2.8)	158 (6.2)	140.4 (5.5)	55 (2.2)	1.1
MA01a		0.75	150 (5.9)	70 (2.8)	158 (6.2)	140.4 (5.5)	55 (2.2)	1.1
MA01a		1.5	150 (5.9)	70 (2.8)	158 (6.2)	140.4 (5.5)	55 (2.2)	1.1
MA02a		2.2	186 (7.3)	75 (3.0)	175 (6.9)	176.4 (6.9)	59 (2.3)	1.6
MA02a		3	186 (7.3)	75 (3.0)	175 (6.9)	176.4 (6.9)	59 (2.3)	1.6
MA02a		4	186 (7.3)	75 (3.0)	175 (6.9)	176.4 (6.9)	59 (2.3)	1.6

The power range for 3-phase 380-480 V drives will be extended to 22 kW in the near future

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