Smart electronics for your drive application

KAG
excellent drives

Intelligence for our drives

Digitalisation, industry 4.0 or predictive maintenance are current keywords with great relevance.

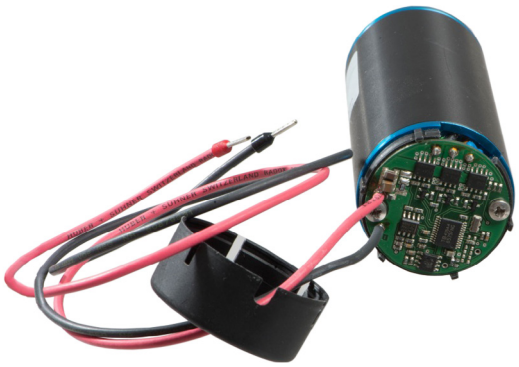
For several years, KAG has already been producing hard- and software solutions for our own EC and DC series, in order to support the customer precisely in those areas. High flexibility and a broad range of possible uses characterise the KAG motor solutions. So does quick implementation of customer-specific adjustments to the firmware. All of our electronic systems permit communication with the CAN-bus via various protocols.

Overview of our electronic systems

Circuit	i42	i42DC	i42LC	i63	i63DC	i75	i80DC
Max. voltage	30 V	30 V	30 V	30 V	30 V	30 V	30 V
Min. voltage	12 V	9 V	9 V	9 V	9 V	9 V	9 V
Max. current	5 A	5 A	2.6 A	10 A	10 A	15 A	20 A
Max. current peak	50 A	50 A	5 A	50 A	50 A	65 A	65 A
Nom. voltage	12 – 24 V	12 – 24 V	12 – 24 V	12 – 24 V	12 – 24 V	12 - 24 V	12 – 24 V
Operation type	4 Q	4 Q	2 Q	4 Q	4 Q	4 Q	4 Q
For motor sizes	ECM42, ECM48	M42, M48	ECM42	ECM63	M63	ECM75	M80
Interface	CAN	CAN	–	CAN	CAN	CAN	CAN
Channels	8 I/O	6 I/O	2 I/O	6 I/O	6 I/O	6 I/O	7 I/O
Analogue inputs	up to 4	up to 4	1	up to 4	up to 4	up to 4	up to 4
Digital inputs	up to 5	up to 2	1	up to 4	up to 4	up to 4	up to 4
Digital outputs	up to 3	up to 2	–	up to 2	up to 2	up to 2	up to 3
Max. Resolution integrated value encoder	360	214	–	214	214	214	214
Control via	bus, analogue or PWM	bus, analogue or PWM	analogue	bus, analogue or PWM	bus, analogue or PWM	bus, analogue or PWM	bus, analogue or PWM
IP protection	IP67 option for motor assembly	IP67 option for motor assembly	IP20 option for motor assembly	IP67 option for motor assembly	IP67 option for motor assembly	IP67 option for motor assembly	IP67 option for motor assembly
Quadcount impulse input for high-frequency signal	yes	yes	–	yes	yes	yes	yes
Incremental encoder output with selectable resolution	yes	yes	–	yes	yes	yes	yes

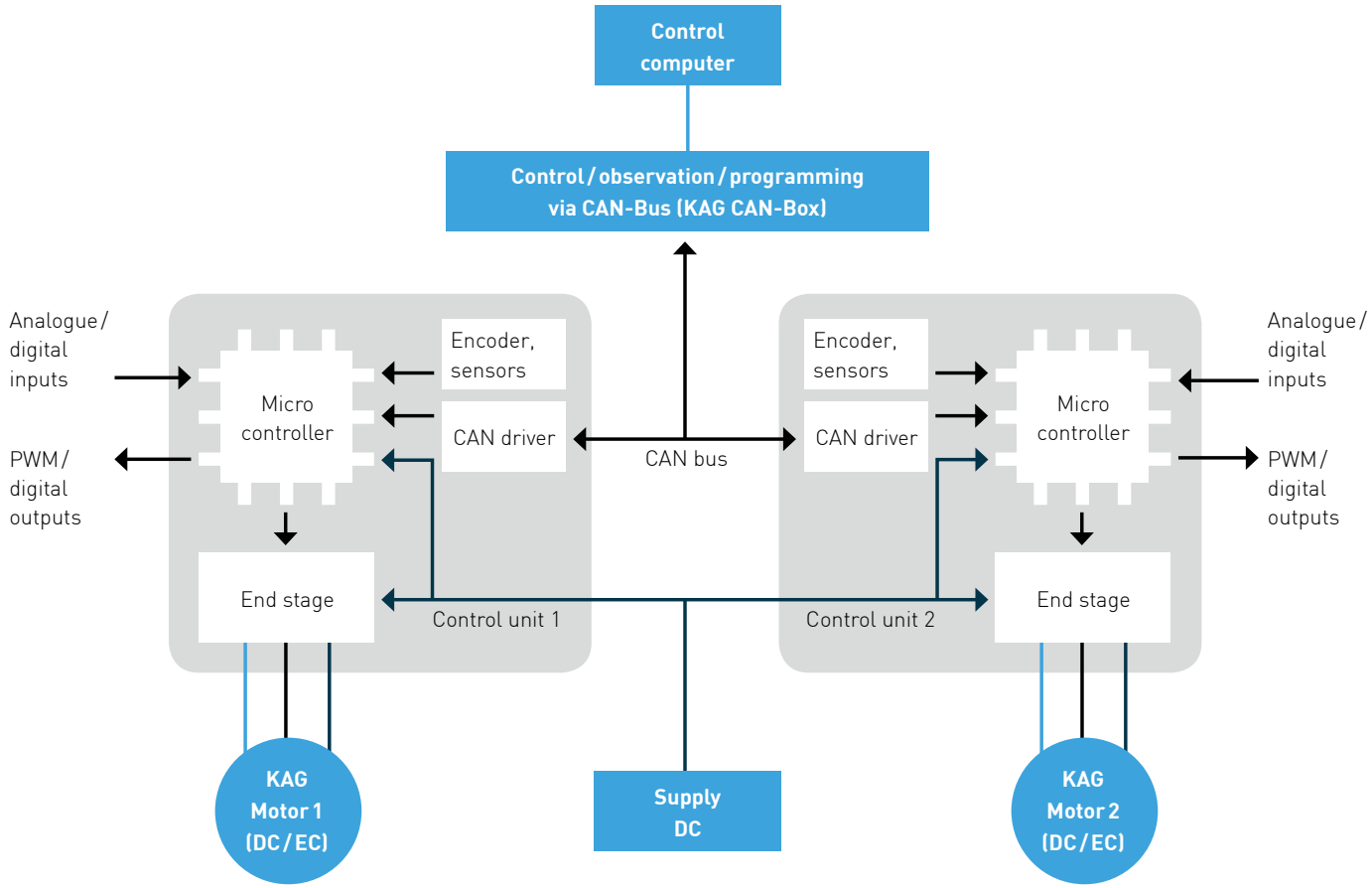
Firmware

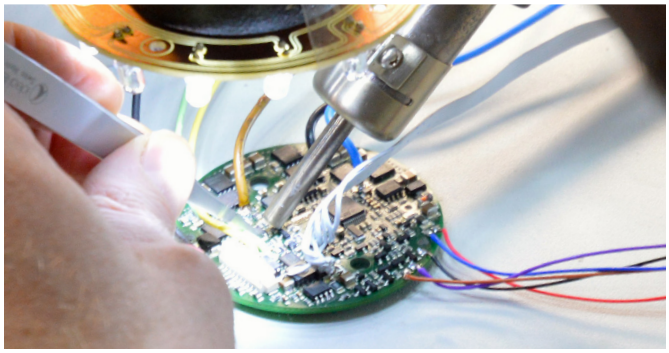
The standard firmware for all electronic systems provides precise control of speed and position. Other requirements can be programmed customer-specifically by KAG.



Examples of implemented customer requirements:

- Motor speed control for single-grain sowing unit
- Valve control actuated via digital inputs
- Automatic door control with temperature monitoring
- Target position generator: Calculation of motor position according to customer-specific framework conditions
- Speed control according to sensor input
- Input of light barrier impulse signals
- Reading a load balance via analogue inputs
- Input of a fill level sensor signal
- Input of an external speed impulse





Your benefits from our electronic systems

- Precise control function (speed and position)
- Large number of protocols possible (CANopen, J1939, customer-specific protocols, etc.)
- Simple plug & play solution
- Compact build
- Electronics for brush-using and brushless motors
- High-performing IO-outputs (up to 1A permanent current)
- Control function can be configured to customers' wishes
- Housing can be configured to customers' wishes (e.g. IP67, special plug or output direction)
- Adjustment of the entire drive system unit to customers' wishes
- optional KAG parametrization software and USB adapter

Our areas of application

For 40 years, KAG has stood for demanding customised and permanently reliable drive solutions for DC motors from 2.5 Watt onwards. We are characterised by speed and flexibility, as well as by high customer orientation.

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