

iDrive®



For harsh environments

iDrive
the inverter solution

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Brammer Inverter range

Brammer supplies inverters for most applications. Experienced and highly competent engineers and technical staff will always provide the right inverter for your application. Through cooperation with several several producers, Brammer keeps a high level of flexibility when assembling components for the best solutions.

Yaskawa.

The worlds largest producer of AC drives, Servo motion products and Robots .

Brammer is the main distributor for Yaskawa frequency converters in the Nordic countries.

Compact.

High performance and accuracy.

High quality.

IP20/00 / IP66

Floor standing IP54.

230V/400V/440V

From 0,1kW to 710kW

Medium Voltage Drives



YASKAWA

iDrive 230V - 690V.

Brammer's solution for applications and wall mounted inverters.

230V IP20/00 from 1,5kW to 260kW

230V IP54 from 1,5kW to 75kW

400V IP20/00 from 1,5kW to 1500kW

400V IP54 from 1,5kW to 132kW

500V IP20/00 from 5,5kW to 900kW

500V IP54 from 1,5kW to 175kW

440V IP20/00 from 1,5kW to 1500kW

440V IP54 from 1,5kW to 150kW

690V IP20/00 from 1,5kW to 3000kW

690V IP54 from 1,5kW to 220kW



iDrive®

Lönne High Capacity Inverters

High Capacity Frequency Inverters. Solutions for high power, and water cooled solutions.

Tailor made for your application.

High power.

Water cooled solutions.

Cabinet types.

400/440/690V

Power ratings up to 5600kW



iDrive, The multi function inverter.

iDrive is an own brand in the Brammer inverter range. The product is designed to meet with the demand of many different applications.

As one of the leading, Nordic suppliers of electrical motors, gears and inverters, we have carefully adapted iDrive to fit in the Nordic market.

A wide voltage range, different control modes, built in functionality, combined with user friendliness, makes the iDrive a flexible solution.

With the different control modes, the iDrive is suitable for most applications. A wide voltage range, and built in functionality, makes the iDrive a flexible and problem solving solution:

— IFD; Inverter Frequency Drive:	Vector modulation function for generic applications (V/F pattern)
— VTC Vector Torque Control:	Vector modulation function for generic applications (V/F pattern)
— FOC Field Oriented Control:	Vector function with encoder for high torque precision and wide speed range
— SYN Synchronous:	Vector function for brushless synchronous motors with permanent magnets characterized by high torque precision joined to high energy efficiency level
— RNG Renenerative:	Active front End, sinusoidal $\cos = 1$, AC/DC supplier function for direct supply of a series of drives



Brammer drive train package.

Brammer offers solutions with inverters and Lönne motors, or the whole drive train package. Get the benefit of one stop shop and an optimized solution. Guaranteed to meet with your requirements.

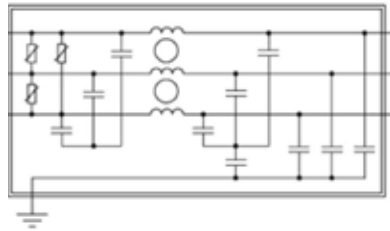


Built in Functionality

iDrive Start up Guide
Guides you through the most significant parameters in a minute.



Built in EMC Filter
Filter is integrated in the whole voltage range.



Multiple Language Display



Active Front End Solutions
Low harmonic distortion, and regenerative solutions.

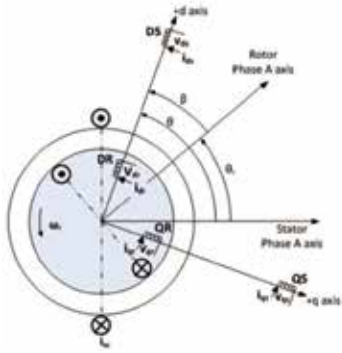


Field Oriented Control
High precision, speed and torque control.

IP54, wallmounted
Protected against dust and moisture, easy to place and connect.

Conformal Coating





Sensorless Vector Control

Precise and accurate control of the motor, without encoder feedback.

Robust Metal Chassis

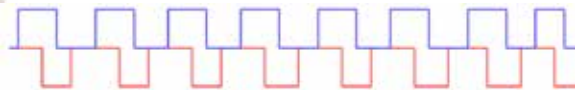
Galvanized metal, and stainless steel screws, ensure mechanical strength and a long lifetime.

FeZn Co3

Fieldbus Connectivity

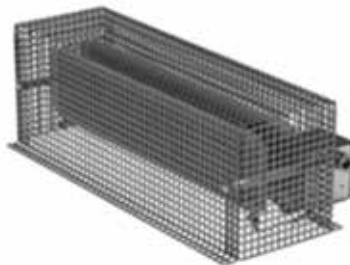


Built in Encoder Input



Built in Brake Chopper

Brake chopper for 100% regen, built in up to size S30.



Local Control

24VDC power supply



Application Table

The iDrive's rating performances can be different according to the admitted rated current and overload (look at LIGHT, STANDARD, HEAVY and STRONG tables).

Every single model of inverter can be applied to 4 different sizes of motor power according to the ratings required by the load. Find your application in this table, and use the rating that fit your application. Then choose the right drive depending on voltage rating.

Applications	ND	Standard 140%	HD	Strong 200%
	Light 120%		Heavy 175%	
Agitator		●		
Atomizer	●			
Bottle washer	●			
Centrifuge		●		
Chipper		●		
Loaded piston compressor			●	
Unloaded piston compressor		●		
Screw Compressor loaded		●		
Screw Compressor unloaded	●			
Conveyor belt		●	●	
Conveyor roller		●		
Conveyor screw			●	
Crusher cone		●		
Crusher jaw			●	
Crusher rotary		●		
Crusher vertical impact		●		
Debarker		●		
Dryer		●	●	
Dust collector	●			
Edger		●		
Damped axial fan	●			
Undamped axial fan	●			
Centrifugal damped fan	●			
High pressure fan	●			
Undamped centrifugal fan	●			
Elevators			●	●
Hoists and cranes			●	
Calenders		●	●	
Screw injection moulding machines		●	●	
Hydraulic power pack		●		
Extruders	●			
Grinder	●			
Hydraulic power pack		●		



If you can not find your application, use the following overload ratings or contact Brammer for advice:

- 120% for 120 sek. Light
- 140% for 120 sek. Standard
- 175% for 120 sek. Heavy
- 200% for 120 sek. Strong



Applications	ND		HD	
	Light 120%	Standard 140%	Heavy 175%	Strong 200%
Mill		●		
Ball Mill			●	
Hammer Mill		●		
Roller Mill		●		
Mixer	●			
Palletiser		●	●	
Planers		●		
Bore pumps			●	
Centrifugal pumps		●		
Positive displacement pumps			●	
Slurry pumps		●		
Piston pump			●	
Pulper		●		
Rotary table		●		
Sander		●	●	
Bandsaw	●			
Circular saw		●		
Separator	●			
Vibrating screen	●			
Shredder	●			
Slicer	●			
Tumbler	●			
Twister/Spinner			●	●
Industrial washers			●	
Looms		●	●	
Mechanical presses		●	●	
Drills			●	
Axe control			●	
Mills			●	
Forming machines		●	●	
Shears		●	●	
Winding Unwinding machines		●	●	
Drawplates		●	●	

Functions

Fire Mode

When the Fire Mode is activated, the iDrive ignores the alarms tripped and comes to a complete stop only when it breaks down



Brake Control

Parameter for pretensioning torque. Positive and negative. Closed brake input.



Programmable logic blocks

It is possible to program logical functions, use the keypad, or software. perform actions, based on different analog values, or references. Combine digital signals, or use timers, all accessible through the keypad.

Multipump

Control up to 5 pumps.
 Fixed speed slaves
 Variable speed slaves
 Multi master
 MasterRS 485 serial link
 Equalisation of the working hours

Multi Motor Control

Up to 3 different configurations in the iDrive
 Change by digital input.
 Possible to change between control methods.

Power Down

In case of power loss, the motor can have a controlled deceleration, by using the kinetic energy of the motor and the load.

PID

Precise control with the 2 x internal PID controllers. Control your level, pressure, flow, or other with high precision. Monitor and adjust "live".



Digital Inputs; some of the functions you can assign to a digital input

- FIRE MODE
- UP (INCREASE SPEED)
- KEYPAD LOCK
- DC BRAKE
- DOWN (DECREASE SPEED)
- MULTISPEED
- STANDSTILL HEATING
- EXT. ALARM
- SLAVE

A summary of the most significant functions in the iDrive

All modern frequency inverters have a large number of functions and parameters. Here is a listing of some of the functions in iDrive:

PC-compiled software for the programming of more than 20 application functions (require optoon board).

Integrated filters on the full range in compliance with EN61800-3 2nd ed. about RFI emission limits.

STO (Safety Torque Off) function with SIL2 safety level as defined in IEC61508:2000 and Cat.3 as in EN95-1.

Intelligent cooling system.

Integrated braking chopper up to S30
Operating parameters saved to remotable module and possibility of parameter transfer to multiple inverters.

Lower motor noise with carrier frequency up to 16kHz (IFD and LIFT software).

Motor PTC thermal probe control.

Easy commissioning with preset parameters for the most common applications.

Control panel with 12 keys and large back-lit LCD.

Regulation of output frequency from 0 to 1000Hz.

In case of power failure, total control of the motor, down to 0 RPM.

Master-slave function for the operation of several motors connected to the same drive shaft (VTC and FOC).

Automatic calibration for motor parameters' acknowledgement.

200% max torque.

PID Function/ SecondoPID Function / 2-zone PID.

Skip frequency.

Integrated digital potentiometer.

Integrated multifunctional tester.

Trip Log.

Integrated motor thermal protection.

Automatic DC braking.

Programmable multiple acceleration and deceleration ramps.

Programmable logic blocks.

Encoder feedback.

Auxiliary input frequency 5,000-65,000 Hz.

Auxiliary output frequency 5,000-65,000 Hz.

3 programmable analog outputs 0-10 Vdc, 0(4)-20 mA.

Auxiliary voltage 24 Vdc, 10 Vdc.

Serial communication RS485 with MODBUS RTU protocol up to 38.400 Baud.

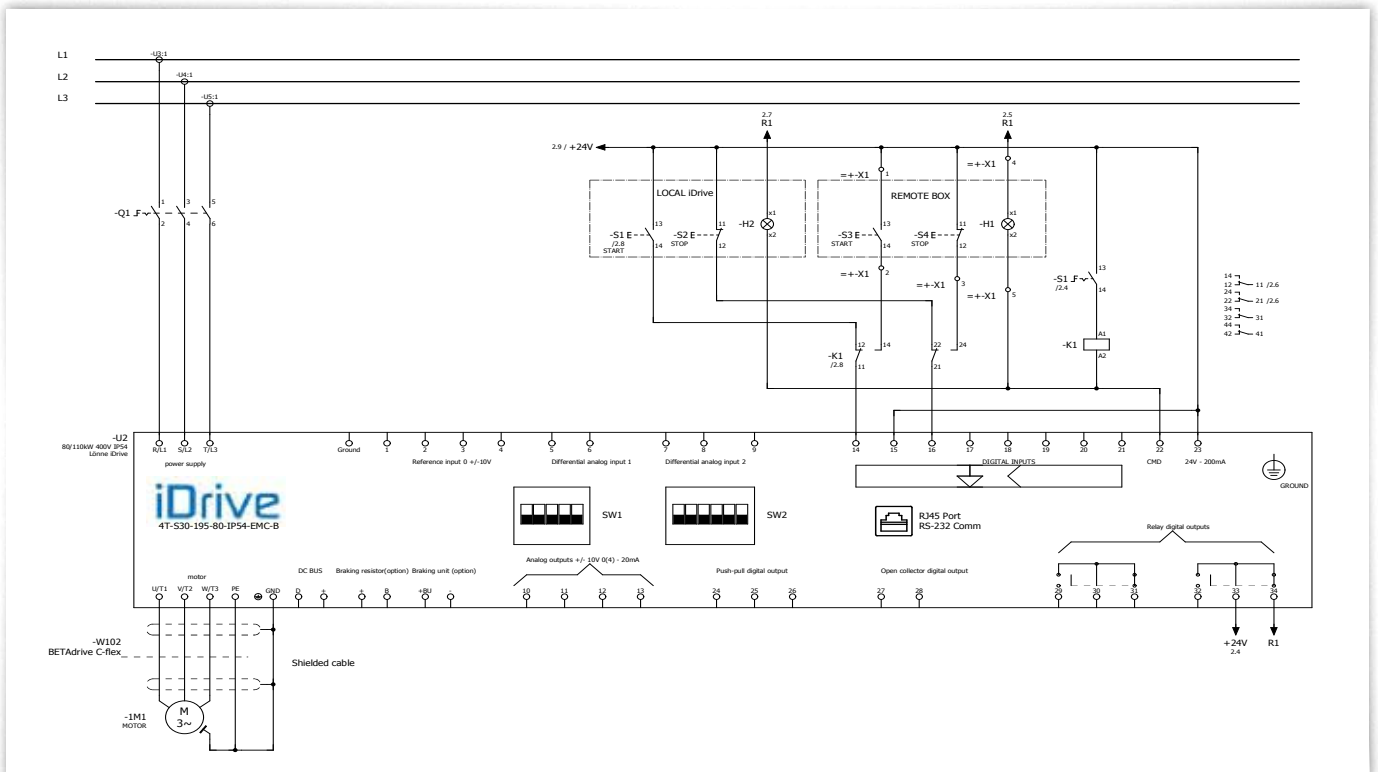
Programmable S ramps.

Different standard options are available.

At a low cost, you can customize your iDrive, with different accessories. In addition we can do custom modifications on request.

Some of our available standard options:

- Lockable main switch
- Start/Stop push button with LED light
- Potentiometer
- Man – 0 – Auto Switch
- Local / Remote switch
- Pilot lamps, LED
- Run, Green LED
- Power on, White LED
- Fault, Red LED
- Heating on, Blue LED

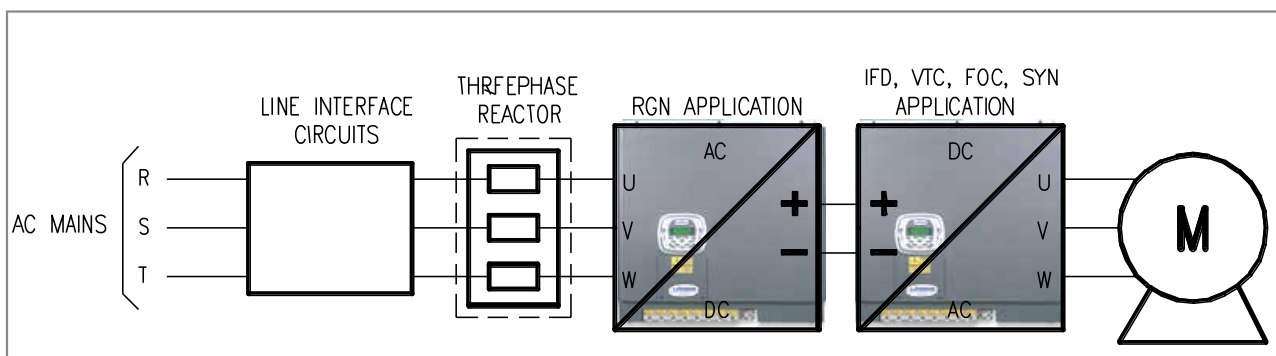


Active Front End Solutions

Regenerative feeder

The iDrive solution is a feeder absorbing or delivering sinusoidal current to the mains with a unity power factor; it is called a regenerative feeder because a bidirectional power flow can be obtained.

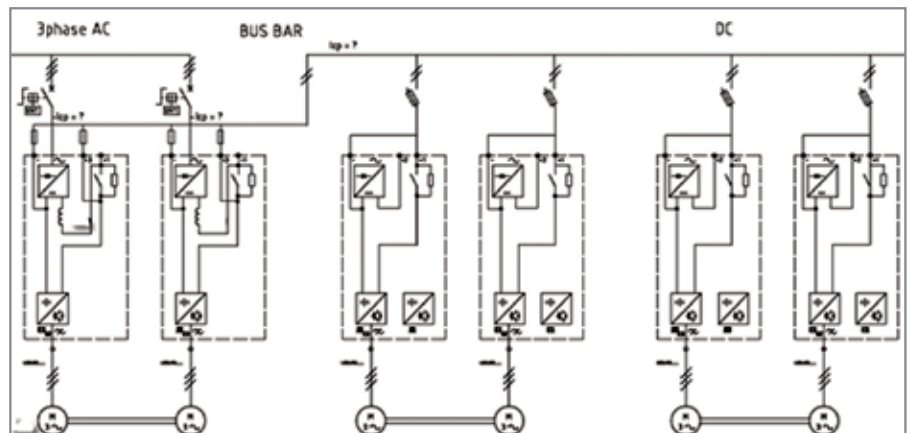
Advantages: Low Total Harmonic Distortion. (THD) No need for brakeresistors. Possible to feed multiple inverters with one RGN unit.



Common DC bus solutions

Interconnectin the DC bus between several inverters, brings the benefit of using regenerated energy as power supply for other inverters.

It is also possible to distribute regenerated power through a common brake chopper.



Marine and Offshore

iDrive is constructed for the most demanding environment. Metal housing, and stainless steel screws, ensures reliable and safe operation. The IP54 version, also have the possibility, to run motors with high accuracy using vector control, both in open and closed loop. IT grid filter is built in.



Technical

Power Supply	Mains: VAC/VDC supply voltage/ tolerance	2T → 200÷240 Vac, 3phase, -15% +10% 2T → 280÷340 Vdc, -15% +10% 4T → 380÷500 Vac, 3phase, -15% +10% 4T → 530÷705 Vdc, -15% +10% 5T → 500÷600 Vac, 3phase, -15% +10% 5T → 705÷845 Vdc, -15% +10% 6T → 575÷690 Vac, 3phase, -15% +10% 6T → 845÷970 Vdc, -15% +10% Supply frequency (Hz)/tolerance 50÷60Hz, ±20% Maximum voltage imbalance: ±3% of the rated supply voltage	
	Operating Temperature	-10° to 50°C ambient temperature. (some dereating may apply with temperatures between 40° and 50°)	
Installation environment	Relative humidity	5 to 95% (non-condensing)	
	Max. operating altitude	Fors installation above 2000 m, please contact Brammer.	
MOTOR CONTROL	Motor control methods	IFD = Voltage/Frequency with symmetrical PWM modulation VTC = Vector Torque Control (Sensorless vector direct torque control) FOC = Field adjustment with field regulation and torque for asynchronous motors SYN = Vector for permanent magnet synchronous motors (PMSM)	
	Frequency / speed setting resolution	Digital reference: 0.1 Hz (IFD control); 1 rpm (VTC control); 0.01 rpm (FOC control) 12-bit Analog reference: 4096 with respect to speed range	
	Speed precision	Open loop: ±0.5% of max. speed Closed loop (with an encoder): < 0.01% of max. speed	
	Overload capacity	Up to 2 times rated current for 120 sec.	
	Starting torque	Up to 200% Cn for 120 secs and 240% Cn for a short duration	
	Torque boost	Programmable for a rated torque increase	
OPERATION	Input signals	Operation method	Operation via terminal board, keypad, MODBUS RTU serial interface, field bus interface
		Reference analog inputs / auxiliary inputs	3 analog inputs to be configured as voltage/current inputs: - 1 single-ended input, max. resolution 12 bits - 2 differential inputs, max resolution 12 bits Analog quantities from keypad, serial interface, field bus
		Digital inputs	8 digital inputs; 3 preset inputs (ENABLE, START, RESET) and 5 configurable inputs
		Multispeed	15 sets of programmable speed values ±32,000 rpm; first 3 sets with resolution 0.01 rpm (FOC control)
	Output signals	Ramps	4 + 4 accel./decel. ramps, 0 to 6,500 secs; possibility to set user-defined patterns.
		Digital outputs	4 configurable digital outputs with possibility to set internal timers for activation/deactivation delay: 1 push-pull output, 20÷48 Vdc, 50 mA max. 1 open collector, NPN/PNP output, 5÷48 Vdc, 50 mA max 2 relay outputs with change-over contacts, 250 Vac, 30 Vdc, 5A
		Auxiliary voltage	24 Vdc ±5%, 200 mA
		Reference voltage for potentiometer	+ 10 Vdc ± 0.8%, 10 mA -10 Vdc ± 0.8%, 10 mA
Analog outputs	3 configurable analog outputs, -10 ÷ 10 Vdc, 0 ÷ 10 Vdc, 0(4) ÷ 20 mA, resolution 9/11 bits		
PROTECTIONS	Alarms	Inverter thermal protection, motor thermal protection, mains failure, overvoltage, undervoltage, overcurrent at constant speed or ground failure, overcurrent while accelerating, overcurrent while decelerating, overcurrent during speed search (IFD SW only), auxiliary trip from digital input, serial communication failure, control board failure, precharge circuit failure, inverter overload conditions for long duration, unconnected motor, encoder (if any) failure, overspeed.	
	Warning	INVERTER OK, INVERTER ALARM, acceleration – constant rpm – deceleration, current/torque limiting, POWER DOWN, SPEED SEARCHING, DC braking, autotune.	
COMMUNICATION DISPLAY	Operating data	Frequency/torque/speed reference, output frequency, motor speed, torque demand, generated torque, current to motor, voltage to motor, DC bus voltage, motor-absorbed power, digital input condition, digital output condition, trip log (last 5 alarms), operating time, auxiliary analog input value, PID reference, PID feedback, PID error value, PID regulator output, PID feedback with programmable multiplying factor.	
	Serial link	Standard incorporated RS485 multidrop 247 drops MODBUS RTU communication protocol	
	Field bus	Profibus-DP®, DeviceNet®, CANopen®, Ethernet (MODBUS® TCP/IP), Interbus®, ControlNet®, Lonworks® with optional internal board	
SAFETY REQUIREMENTS		EN 61800-5-1, EN 61800-5-2, EN 60204-1	
PERFORMANCE AND FUNCTIONALITY		EN 61800-2 and EN 60146-1-1	
Compliance			

Models and details 2T 230V IP54 iDrive

2T 230V IP54

Itemnr.	Load characteristics				Inom.	Integrated brake chopper	Dimensions				
	Light (ND) kW	Standard kW	Heavy (HD) kW	Strong kW			Frame size	w	h	d	Weight
125911	3	2,2	1,8	1,5	12,5A	Yes	S05	214	577	227	15,7
125912	3,7	3	2,2	1,8	15A	Yes	S05	214	577	227	15,7
125913	4	3,7	3	2,2	17A	Yes	S05	214	577	227	15,7
125914	4,5	4	3,7	3	19A	Yes	S05	214	577	227	15,7
125915	5,5	4,5	4	3,7	23A	Yes	S05	214	577	227	15,7
125916	7,5	5,5	4,5	4	27A	Yes	S05	214	577	227	15,7
125917	9,2	7,5	5,5	4,5	30A	Yes	S05	214	577	227	15,7
125918	11	9,2	7,5	5,5	38A	Yes	S12	250	622	268	23,3
125919	16	16	11	7,5	51A	Yes	S12	250	622	268	23,3
125920	18,5	15	15	11	65A	Yes	S12	250	622	268	23,3
125921	22	15	15	12,5	72A	Yes	S15	288	715	366	40
125922	25	18,5	18,5	20	80A	Yes	S15	288	715	366	40
125923	28	22	22	25	88A	Yes	S20	339	842	366	57
125924	30	30	25	20	103A	Yes	S20	339	842	366	57
125925	37	37	30	22	120A	Yes	S20	339	842	366	57
125926	45	40	32	25	135A	Yes	S20	339	842	366	57
125927	55	45	45	30	180A	Yes	S30	359	1008	460	76
125928	65	55	50	37	195A	Yes	S30	359	1008	460	76
125929	70	65	55	45	215A	Yes	S30	359	1008	460	76
125930	75	75	65	55	240A	Yes	S30	359	1008	460	76

iDrive ON Stock!

Brammer have a wide range of inverters on stock. iDrive is stocked in both IP54 and IP20 in sizes from 1,5kW and up to 250kW.

Pulp and Paper

Precise control in Field Oriented Control mode, providing optimized performance for torque requests and speed precision.

Built in braking chopper, for precise deceleration.

IP54 protection, place the iDrive as close as possible to the machine.

Enables secure handling of high inertia machines, with up to 200% torque at zero speed.

Ask us for the correct iDrive for your pulp and paper application.



Models and details 4T 400V IP20/00 iDrive

4T 400V IP20/00

Itemnr.	Load characteristics				Inom.	Brake Chopper	Dimensions				
	Light kW	Standard kW	Heavy kW	Strong kW			Frame size	w	h	d	Weight
127072	4,5	4	3	2,2	10,5	Yes	S05	170	340	175	7
127073	5,5	4,5	4,5	3	12,5	Yes	S05	170	340	175	7
127074	7,5	5,5	4,5	4	16,5	Yes	S05	170	340	175	7
127075	7,5	7,5	5,5	4,5	16,5	Yes	S05	170	340	175	7
127076	7,5	7,5	7,5	5,5	16,5	Yes	S05	170	340	175	7
127077	11	9,2	9,2	7,5	27	Yes	S12	215	401	225	12,5
127078	15	11	9,2	7,5	30	Yes	S12	215	401	225	12,5
127079	15	15	11	9,2	30	Yes	S12	215	401	225	12,5
127980	22	18,5	15	11	41	Yes	S12	215	401	225	12,5
127981	22	22	18,5	15	41	Yes	S12	215	401	225	12,5
127082	30	25	22	18,5	57	Yes	S12	215	401	225	12,5
127083	30	30	25	22	60	Yes	S12	215	401	225	12,5
127084	37	30	25	22	72	Yes	S15	225	466	331	22,5
127085	45	37	30	25	80	Yes	S15	225	466	331	22,5
127086	50	45	37	30	88	Yes	S20	279	610	332	36
127087	55	55	45	32	103	Yes	S20	279	610	332	36
127088	65	65	50	37	120	Yes	S20	279	610	332	36
127089	75	75	55	45	135	Yes	S20	279	610	332	36
127090	100	90	75	55	180	Yes	S30	302	748	421	51
127091	110	100	80	65	195	Yes	S30	302	748	421	51
127092	120	110	90	75	215	Yes	S30	302	748	421	51
127093	132	132	110	90	240	Yes	S30	302	748	421	51
127094	160	160	132	110	300	No	S41	500	882	409	121
127095	200	200	150	132	345	No	S41	500	882	409	121
127096	220	220	185	150	375	No	S41	500	882	409	121
127097	250	250	200	160	425	No	S41	500	882	409	121
127098	280	280	220	185	480	No	S41	500	882	409	121
127099	315	315	250	200	550	No	S51	578	882	409	141
127100	400	400	315	280	680	No	S51	578	882	409	141
127101	400	400	315	280	720	No	S60	890	1310	530	260
127102	450	400	355	315	800	No	S60	890	1310	530	260
127103	500	500	400	355	900	No	S65	980	1400	560	440
127104	560	500	500	400	1000	No	S65	980	1400	560	440
107105	710	630	560	450	1200	No	S65	980	1400	560	440

Models and details 4T 400V IP54 iDrive

4T 400V IP54

Itemnr.	Load characteristics				Inom.	Integrated brake chopper	Dimensions				
	Light (ND) kW	Standard kW	Heavy (HD) kW	Strong kW			Frame size	w	h	d	Weight
125931	4,5	4	3	2,2	10,5A	Yes	S05	214	577	227	15,7
125933	5,5	4,5	4	3	12,5A	Yes	S05	214	577	227	15,7
125935	7,5	5,5	4,5	4	16,5A	Yes	S05	214	577	227	15,7
125937	7,5	7,5	5,5	4,5	16,5A	Yes	S05	214	577	227	15,7
125939	7,5	7,5	7,5	5,5	16,5A	Yes	S05	214	577	227	15,7
125941	11	9,2	9	7,5	27A	Yes	S12	250	622	268	23,3
125943	15	11	9	7,5	30A	Yes	S12	250	622	268	23,3
125945	15	18,5	11	11	30A	Yes	S12	250	622	268	23,3
125947	22	22	15	15	41A	Yes	S12	250	622	268	23,3
125949	22	25	18,5	18,5	41A	Yes	S12	250	622	268	23,3
125951	30	30	22	22	57A	Yes	S12	250	622	268	23,3
125953	30	25	25	22	60A	Yes	S15	250	622	268	23,3
125955	37	30	25	22	72A	Yes	S15	288	715	366	40
125957	45	37	30	25	80A	Yes	S20	288	715	366	40
125959	50	45	37	35	88A	Yes	S20	339	842	366	57
125961	55	55	45	32	103A	Yes	S20	339	842	366	57
125963	65	65	50	37	120A	Yes	S20	339	842	366	57
125965	75	75	55	45	135A	Yes	S30	339	842	366	57
125967	100	90	75	55	180A	Yes	S30	359	1008	460	76
125969	110	100	80	65	195A	Yes	S30	359	1008	460	76
125971	120	110	90	75	215A	Yes	S30	359	1008	460	76
125973	132	132	110	90	240A	Yes	S30	359	1008	460	76

Mining

Save energy, and optimize your pump with the iDrive. Use vector control for precise control, and fine tuned regulation of the flow, pressure or level. H₂S gas resistant, with the coated control board. Built in 24V DC power supply, connect the level, pressure or flow sensor, directly to the iDrive. Mount signallamp and switch on to the inverter. Easy access to fine tune the integrated PID regulators. Internal flow calculations without sensor.



Models and details 5T 500V IP54 iDrive

5T 500V IP54

Itemnr.	Load characteristics				Inom.	Integrated brake chopper	Dimensions				
	Light (ND) kW	Standard kW	Heavy (HD) kW	Strong kW			Frame size	w	h	d	Weight
125932	6,5	5,5	4,5	3,7	10,5A	Yes	S05	214	577	227	15,7
125934	7,5	6,5	5,5	4,5	12,5A	Yes	S05	214	577	227	15,7
125936	9,2	7,5	5,5	5,5	16,5A	Yes	S05	214	577	227	15,7
125938	11	9,2	9,2	7,5	16,5A	Yes	S05	214	577	227	15,7
125940	11	11	11	9,2	16,5A	Yes	S05	214	577	227	15,7
125942	15	15	12,5	11	27A	Yes	S12	250	622	268	23,3
125944	18,5	15	12,5	12,5	30A	Yes	S12	250	622	268	23,3
125946	18,5	18,5	15	12,5	30A	Yes	S12	250	622	268	23,3
125948	22	22	18,5	15	41A	Yes	S12	250	622	268	23,3
125950	25	25	22	18,5	41A	Yes	S12	250	622	268	23,3
125952	37	30	28	22	57A	Yes	S12	250	622	268	23,3
125954	37	37	30	28	60A	Yes	S12	250	622	268	23,3
125956	45	40	30	30	72A	Yes	S15	288	715	366	40
125958	55	45	45	37	80A	Yes	S15	288	715	366	40
125960	65	55	50	45	88A	Yes	S20	339	842	366	57
125962	75	75	55	50	103A	Yes	S20	339	842	366	57
125964	85	75	65	55	120A	Yes	S20	339	842	366	57
125966	90	85	75	65	135A	Yes	S20	339	842	366	57
125968	132	90	90	75	180A	Yes	S30	359	1008	460	76
125970	140	110	110	85	195A	Yes	S30	359	1008	460	76
125972	150	150	132	90	215A	Yes	S30	359	1008	460	76
125974	175	160	140	110	240A	Yes	S30	359	1008	460	76

Water and Wastewater

Save energy, and optimize your pump with the iDrive. Use vector control for precise control, and fine tuned regulation of the flow, pressure or level. Multipump applications are solved in a smooth way, using integrated software. H2S gas resistant, with the coated control board. Built in 24V DC power supply, connect the level, pressure or flow sensor, directly to the iDrive. Mount signallamp and switch on to the inverter. Easy access to fine tune the integrated PID regulators. Internal flow calculations without sensor.



iDrive Energy

iDrive Energy is a dedicated inverter for pumps, HVAC, and compressor applications. In this applications the iDrive energy will contribute to:

Energy saving

Decrease maintenance costs

Full accuracy level of the application, system control

iDrive Energy main features:

Pipe Fill Control: the drive can provide a controlled (closed loop) filling of pipes preventing water hammer, turbulence and breakage of irrigation nozzles.

Pressure Loss Control: detects the presence of leaks or ruptures in the pipes by comparing pump speed with the system pressure.

Dry Run Control: protection against dry running (well empty)

Multi pump software

Sleep/wake up mode: The IRIS BLUE drive is capable of maintaining the pressure reference even when pumping demand is very low and the pump runs at low speed. If this condition persists for a given time, the pump will be powered off. Pumping is resumed when pressure drops below the minimum allowable level.

Speed searching: useful when the drive controls a motor which is already running

Dual ramp (start ramp): The start ramp quickly accelerates the connected motor up to the minimum allowable speed, then the normal ramp is started.

DC Braking: DC current can be injected into the motor to stop it

Counters record the drive's operating history:

Hours run, kWh, number of starts

User-resettable

Thanks to this timers, operation of remote installations such as irrigation pumps can be automatically controlled using the iDrive Energy, operation timers doing away with the need for external control circuits

Multi motor control:

The Multi Motor Control function allows controlling a multi pumping/ventilation/compressor system.

Four fixed speed devices or variable speed devices can be controlled by the drive, both in analog mode and via serial link through the Modbus Master protocol.

Advanced equalization of the working hours of the connected devices

Analog or RS485 communication for slaves control

Slaves at fixed speed: speed steps for the slave devices, drive device fine-tuning

Slaves at variable speed: fine-tuning and performance optimization for all the devices controlled by the drive

Multimaster function

Range: Sizes/current

S05 ~ S41 (10.5 ~ 425 A)
 Overload up to 110%
 I_{peak} up to 180%
 I_{start} up to 145% (for 10 s)
 Supply voltage
 2T (200 ~ 240 Vac)
 4T (380 ~ 480 Vac)

Power range/motor voltage

3 ~ 132kW - 200÷240 Vac
 4.5 ~ 250kW - 380÷415 Vac
 5.5 ~ 280kW - 440÷460 Vac
 6.5 ~ 300kW - 480 Vac



Models and details 4T 440V IP20 iDrive Marine

4T 440V IP20/00

Itemnr.	Load characteristics				Inom.	Brake Chopper	Frame size	Dimensions			
	Light kW	Standard kW	Heavy kW	Strong kW				w	h	d	Weight
127120	5,5	4,5	3,7	3,7	10,5	Yes	S05	170	340	175	7
127121	7,5	5,5	4,5	3,7	12,5	Yes	S05	170	340	175	7
127122	9,2	7,5	5,5	4,5	16,5	Yes	S05	170	340	175	7
127123	7,5	7,5	5,5	4,5	16,5	Yes	S05	170	340	175	7
127124	9,2	9,2	9,2	7,5	16,5	Yes	S05	170	340	175	7
127125	15	11	11	9,2	27	Yes	S12	215	401	225	12,5
127126	18,5	15	15	11	30	Yes	S12	215	401	225	12,5
127127	22	18,5	18,5	15	41	Yes	S12	215	401	225	12,5
127128	22	22	22	18,5	41	Yes	S12	215	401	225	12,5
127129	30	30	25	22	57	Yes	S12	215	401	225	12,5
127130	37	30	30	25	60	Yes	S12	215	401	225	12,5
127131	50	45	37	30	80	Yes	S15	225	466	331	22,5
127132	55	55	45	37	88	Yes	S20	279	610	332	36
127133	65	65	50	45	103	Yes	S20	279	610	332	36
127134	75	70	55	50	120	Yes	S20	279	610	332	36
127135	90	75	65	55	135	Yes	S20	279	610	332	36
127136	110	90	75	65	180	Yes	S30	302	748	421	51
127137	125	110	90	75	195	Yes	S30	302	748	421	51
127138	132	132	90	90	215	Yes	S30	302	748	421	51
127139	150	150	132	110	240	Yes	S30	302	748	421	51
127140	200	185	160	120	300	No	S41	500	882	409	121
127141	220	220	185	150	345	No	S41	500	882	409	121
127142	260	250	220	185	375	No	S41	500	882	409	121
127143	280	280	260	200	425	No	S41	500	882	409	121
127144	315	315	260	220	480	No	S41	500	882	409	121
127145	375	375	315	250	550	No	S51	578	882	409	141
127146	450	450	400	355	680	No	S51	578	882	409	141



Models and details 4T 440V IP54 iDrive Marine

4T 440V IP54

Itemnr.	Load characteristics				Inom.	Integrated brake chopper	Dimensions				
	Light (ND) kW	Standard kW	Heavy (HD) kW	Strong kW			Frame size	w	h	d	Weight
125932	5,5	4,5	3,7	3	10,5A	Yes	S05	214	577	227	15,7
125934	7,5	5,5	4,5	3,7	12,5A	Yes	S05	214	577	227	15,7
125936	9,2	7,5	5,5	4,5	16,5A	Yes	S05	214	577	227	15,7
125938	9,2	9,2	7,5	5,5	16,5A	Yes	S05	214	577	227	15,7
125940	9,2	9,2	9,2	7,5	16,5A	Yes	S05	214	577	227	15,7
125942	15	11	11	9,2	27A	Yes	S12	250	622	268	23,3
125944	18,5	11	11	9,2	30A	Yes	S12	250	622	268	23,3
125946	18,5	15	15	11	30A	Yes	S12	250	622	268	23,3
125948	22	18,5	18,5	15	41A	Yes	S12	250	622	268	23,3
125950	22	22	22	18,5	41A	Yes	S12	250	622	268	23,3
125952	30	30	25	22	57A	Yes	S12	250	622	268	23,3
125954	37	30	30	25	60A	Yes	S12	250	622	268	23,3
125956	45	30	30	25	72A	Yes	S15	288	715	366	40
125958	50	37	37	30	80A	Yes	S15	288	715	366	40
125960	55	45	45	37	88A	Yes	S20	339	842	366	57
125962	65	55	50	40	103A	Yes	S20	339	842	366	57
125964	75	65	55	45	120A	Yes	S20	339	842	366	57
125966	90	70	65	55	135A	Yes	S20	339	842	366	57
125968	110	75	75	65	180A	Yes	S30	359	1008	460	76
125970	125	90	90	75	195A	Yes	S30	359	1008	460	76
125972	132	110	90	90	215A	Yes	S30	359	1008	460	76
125974	150	132	132	110	240A	Yes	S30	359	1008	460	76



Models and details 6T690V IP20/00 iDrive Marine

6T 690V IP20/00

Itemnr.	Load characteristics				Inom.	Integrated brake chopper	Dimensions				
	Light (ND) kW	Standard kW	Heavy (HD) kW	Strong kW			Frame size	w	h	d	Weight
126001	5,5	4	4	4	8,5A	Yes	S14	265	466	250	20
126002	7,5	7,5	4	4	11A	Yes	S14	265	466	250	20
126003	7,5	7,5	7,5	5,5	13,5A	Yes	S14	265	466	250	20
126004	11	11	7,5	7,5	16A	Yes	S14	265	466	250	20
126005	15	15	11	9,2	21A	Yes	S14	265	466	250	20
126006	15	15	11	9,2	21A	Yes	S14	265	466	250	20
126007	22	22	15	11	25A	Yes	S14	265	466	250	20
126008	30	30	22	18,5	33A	Yes	S14	265	466	250	20
126009	37	37	30	22	40A	Yes	S14	265	466	250	20
126010	45	45	37	30	52A	Yes	S14	265	466	250	20
126011	55	55	37	30	60A	Yes	S22	282,5	813,5	353	52
126012	75	75	55	45	80A	Yes	S22	282,5	813,5	353	52
126013	75	75	55	45	85A	Yes	S22	282,5	813,5	353	52
126014	90	90	75	55	105A	Yes	S22	282,5	813,5	353	52
126015	110	110	90	75	125A	Yes	S32	366,5	881	399	84
126016	132	132	110	90	150A	Yes	S32	366,5	881	399	84
126017	185	185	132	110	190A	Yes	S32	366,5	881	399	84
126018	220	220	185	160	230A	Yes	S32	366,5	881	399	84
126019	55	55	37	30	60A	No	S22	282,5	813,5	353	52
126020	75	75	55	45	80A	No	S22	282,5	813,5	353	52
126021	75	75	55	45	85A	No	S22	282,5	813,5	353	52
126022	90	90	75	55	105A	No	S22	282,5	813,5	353	52
126023	110	110	90	75	125A	No	S32	366,5	881	399	84
126024	132	132	110	90	150A	No	S32	366,5	881	399	84
126025	185	185	132	110	190A	No	S32	366,5	881	399	84
126026	220	220	185	160	230A	No	S32	366,5	881	399	84
126027	250	220	200	160	265A	No	S32	366,5	881	399	84
126028	250	250	220	185	290A	No	S42	500	968	409	136
126029	315	315	250	220	330A	No	S42	500	968	409	136
126030	355	315	315	220	360A	No	S42	500	968	409	136
126031	400	400	355	315	400A	No	S42	500	968	409	136
126032	450	450	400	315	450A	No	S52	578	968	409	160
126033	500	450	450	355	500A	No	S52	578	968	409	160
126034	560	500	500	375	560A	No	S52	578	968	409	160
126035	630	630	560	450	640A	No	S52	578	968	409	160
126036	710	630	560	500	720A	No	S65	980	1400	560	440
126037	800	710	630	560	800A	No	S65	980	1400	560	440
126038	900	900	710	630	900A	No	S65	980	1400	560	440
126039	1000	1000	900	800	1000A	No	S65	980	1400	560	440
126040	1240	1100	1000	900	1200A	No	S70	1230	1400	560	550



690V and motor issues.

When installing an inverter with 690V, considerations of the motor winding insulations, and bearings is recommended. Ask us about solutions for old or other label motors, or complete package solutions from Brammer, with the right configuration.

Models and details 6T 690V IP54 iDrive Marine

6T 690V IP54

Itemnr.	Load Characteristics				Inom.	Integrated brake chopper	Dimensions				
	Light (ND) kW	Standard kW	Heavy (HD) kW	Strong kW			Frame size	w	h	d	Weight
125975	5,5	4	4	4	8,5A	Yes	S14	310	751	295	30
125976	7,5	7,5	4	4	11A	Yes	S14	310	751	295	30
125977	7,5	7,5	7,5	5,5	13,5A	Yes	S14	310	751	295	30
125978	11	11	7,5	7,5	16A	Yes	S14	310	751	295	30
125979	15	15	11	9,2	21A	Yes	S14	310	751	295	30
125980	15	15	11	9,2	21A	Yes	S14	310	751	295	30
125981	22	22	15	11	25A	Yes	S14	310	751	295	30
125982	30	30	22	18,5	33A	Yes	S14	310	751	295	30,5
125983	37	37	30	22	40A	Yes	S14	310	751	295	30,5
125984	45	45	37	30	52A	Yes	S14	310	751	295	31
125985	55	55	37	30	60A	Yes	S22	345	1075	465	83
125986	75	75	55	45	80A	Yes	S22	345	1075	465	83
125987	75	75	55	45	85A	Yes	S22	345	1075	465	86
125988	90	90	75	55	105A	Yes	S22	345	1075	465	86
125989	110	110	90	75	125A	Yes	S32	431	1160	471	108,5
125990	132	132	110	90	150A	Yes	S32	431	1160	471	108,5
125991	185	185	132	110	190A	Yes	S32	431	1160	471	112,5
125992	220	220	185	160	230A	Yes	S32	431	1160	471	112,5
125993	55	55	37	30	60A	No	S22	345	1075	465	83
125994	75	75	55	45	80A	No	S22	345	1075	465	83
125995	75	75	55	45	85A	No	S22	345	1075	465	86
125996	90	90	75	55	105A	No	S22	345	1075	465	86
125997	110	110	90	75	125A	No	S32	431	1160	471	108,5
125998	132	132	110	90	150A	No	S32	431	1160	471	108,5
125999	185	185	132	110	190A	No	S32	431	1160	471	112,5
126000	220	220	185	160	230A	No	S32	431	1160	471	112,5



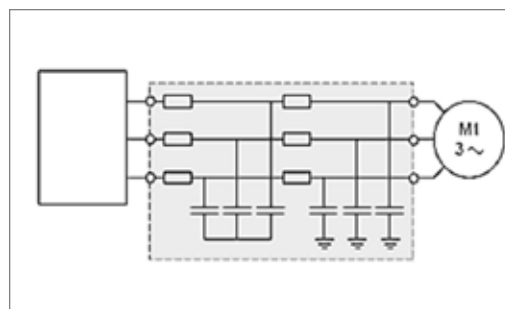
690V and motor issues.

When installing an inverter with 690V, considerations of the motor winding insulations, and bearings is recommended. Ask us about solutions for old or other label motors, or complete package solutions from Brammer, with the right configuration.

Filters and chokes

A wide range of filters and chokes is available for iDrive

Itemnr.	DU/Dt filters		
	IP	Amp	Volt
126198	IP00	6,5A	690V
126204	IP54	6,5A,	690V
126199	IP00	10,5A	690V
126205	IP54	10,5A	690V
126200	IP00	16A	690V
126206	IP00	23A	690V
126201	IP00	23A	690V
126207	IP54	23A	690V
126202	IP00	40A	690V
126208	IP54	40A	690V
126203	IP00	57A	690V
126209	IP54	57A	690V
126272	IP00	95A	690V
126210	IP54	95A	690V
126266	IP00	105A	690V
126279	IP00	1260A?	690V
126273	IP00	140A	690V
126211	IP54	140A	690V
126267	IP00	165A	690V
126274	IP00	210A	690V
126212	IP54	210A	690V
126268	IP00	240A	690V
126275	IP00	325A	690V
126269	IP00	360A	230 - 690V
126276	IP00	415A	690V
126270	IP00	440A	690V
126277	IP00	650A	690V
126271	IP00	700A	230V - 690V
126278	IP00	945A	690V



Using filters and chokes, can reduce the harmonic distortion ,THD, and protect the motor windings. When long cables is applied, the use of filters, will improve the performance of the motor. In the table, you will find a selection of DU/Dt filters, please contact us for a precise adaption of the components, to ensure the best effect.

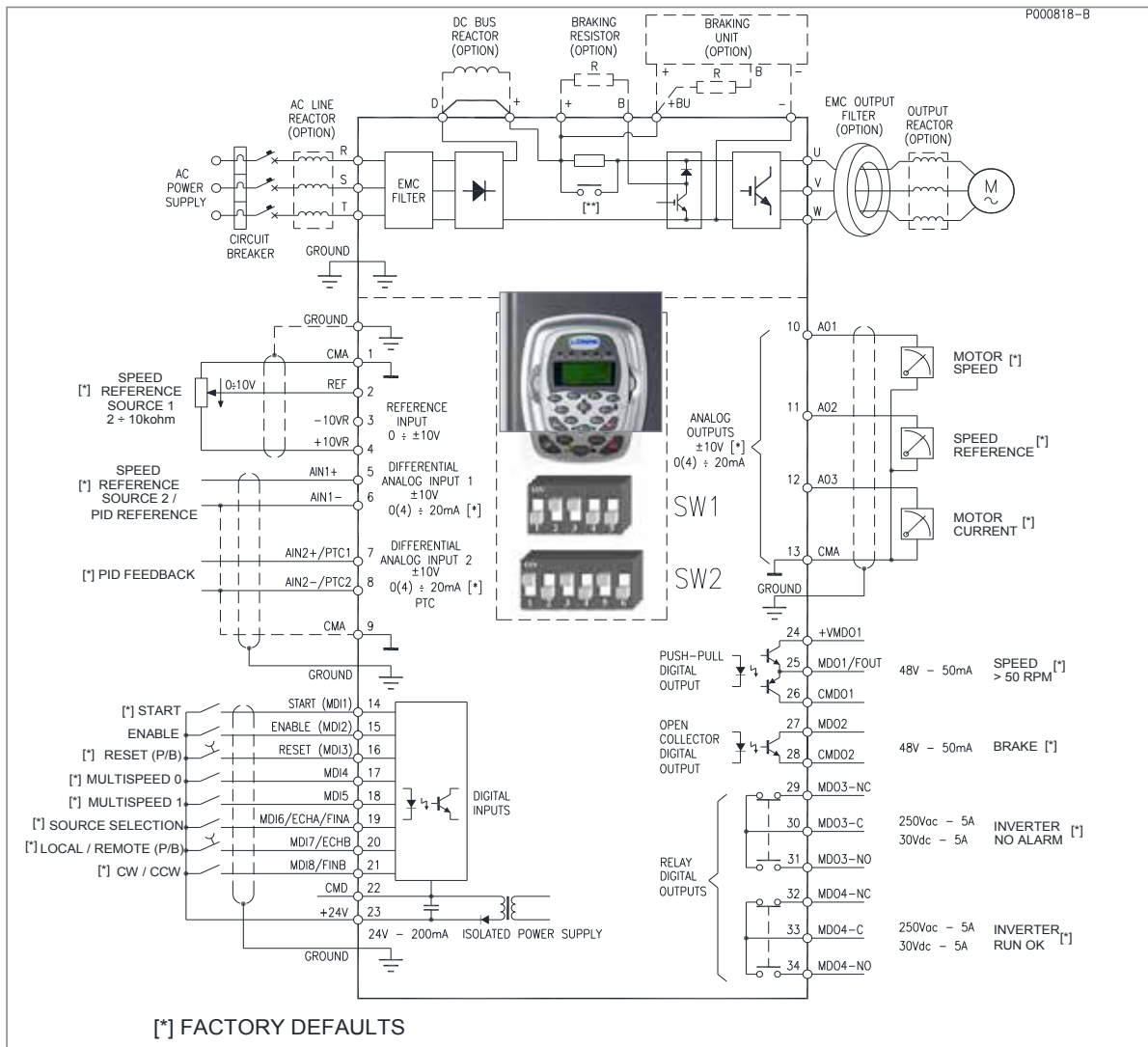
Option Cards

iDrive have 3 slots for optioncards, A,B and C..

Model	Description
ES836	Multifunction encoder interface
ES860	Sin/Cos card incremental/absolute encoder card
ES913	Line driver card
ES822	RS232/485 isolated interface.
ES851	Multifunction communications: RS232/485, Ethernet, PSTN/GSM/GPRS modem with data logger and WEB server.
ES919	Carrier Board Protoessor.
HMS	ProfibusDP / DeviceNet / CANopen / EthernetIP / ControlNet / Interbus / Lonworks.
ES847/1	Card 8 Digital Inputs + 6 Transistor Outputs, 4 PT100 inputs up to 260°C, 1 Analog Voltage input, 1 Analog current input 0-20mA, for multipump application and ADE Energy counter for regenerative application.
ES861	Encoder/resolver interface with repeated encoder.
ES870	Relay outputs.
ES950	EnDat/BiSS B encoder interface.
ES966	Interface/SSI/BiSS C encoder interface.
ES848	Power Supply Unit 100W - 24Vdc - IP00, 300-800Vdc input
ES846	Resolver\Encoder card with repeated Encoder + 3 digital inputs/outputs
ES917	Card for use with Regen SW
ES870	8 Digital Inputs + 6 Relay Outputs for multipump and Regenerative application
ES851	Data Logger Card, REMOTE DRIVE wireless connection -RS232 Full modem - GSM - Local Ethernet - RS485 multidrop for the connection of up to 15 inverters
ES851	Real Time Clock



Connections, Inputs and Outputs



3 Analog inputs

One single-ended input (REF) and two differential inputs (AIN1 and AIN2) programmable as voltage or current inputs with DIP-switch SW1. Possible PTC connection.

3 Analog Outputs

Programmable as voltage or current outputs with DIP-switch SW2.

8 MDI multifunction digital inputs

Including three “quick acquisition” inputs acquiring frequency or encoder signals (MDI6, MDI7 and MDI8).

MDI6 may be used to acquire a frequency signal called FINA or coupled with MDI7 to acquire a push-pull encoder signal called Encoder A. MDI8 may be used to acquire a frequency input called FINB (this avoids acquiring encoder B with option board).

4 MDO multifunction

Digital outputs, including Push-Pull MDO1, Open Collector MDO2 and relays MDO3-4.

Solutions

Engineering of complete solutions, motors, gear boxes, inverters, mechanical parts, and control systems.

Brammer competence.

Brammer competence, secure the correct configuration of your drive system. With inhouse engineering, or together with trusted partners, we make solutions of high quality, and performance.

Brammer Total Supplier

With multiple choices and different brands on stock in Brammer Central Warehouse, Brammer engineers can choose the best components for your specific solution.

Cabinet solutions

Cabinets with multiple inverters, AFE solutions, filters. Possible HMI in front, customizable



Brammer Group plc

Brammer is the leading European supplier of quality industrial maintenance, repair and overhaul products ("MRO")

We employ more than 4000 people, including more than 1,000 technical specialists.

and are present in more than 20 countries across Europe, with more than 350 branches, serving more than 100,000 customers.

Brammer is highly specialized in analyzing the customers' manufacturing processes and to find areas for significant cost savings.

Customized Solutions

Brammer AS solutions department is a specialist within drive solutions for rotating machinery. For decades we have built a strong, global reputation as an internationally experienced supplier of products solutions and services. Today we are proud to call ourselves one of the leading European Suppliers within the field,

As a Brammer Group Customer, you will benefit from Brammer's pan-European distribution network and product scale. Established in 1920, Brammer draws on a rich heritage of industrial and mechanical knowledge. Listed on the London Stock Exchange, the business has grown both organically and through targeted acquisitions, building value for both its customers and shareholders.



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