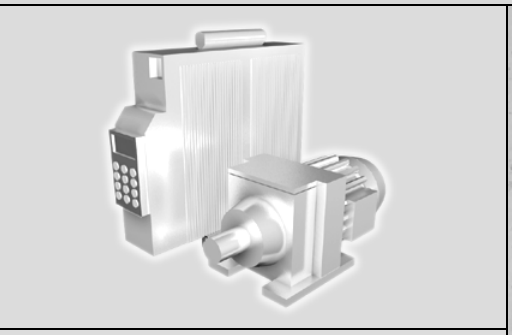
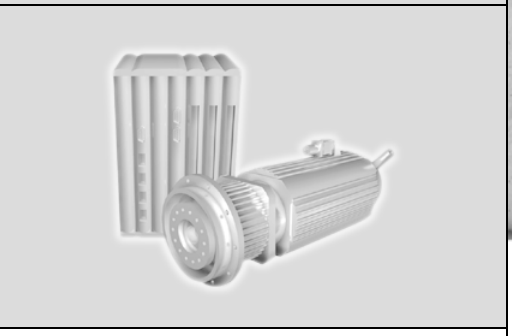
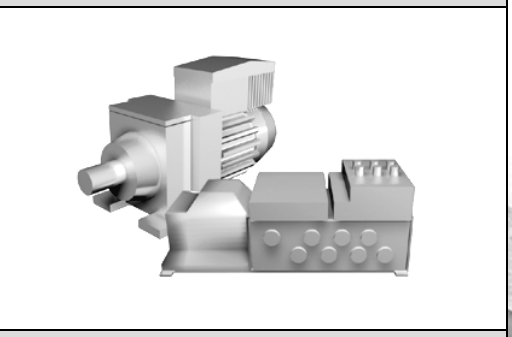
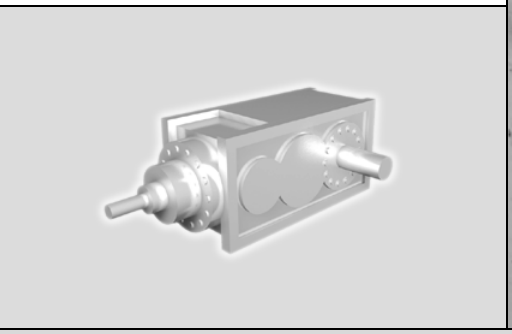
SEW EURODRIVE











MOVIMOT® for Energy Efficient Motors

Edition 05/2007

11641819 / EN

Operating Instructions

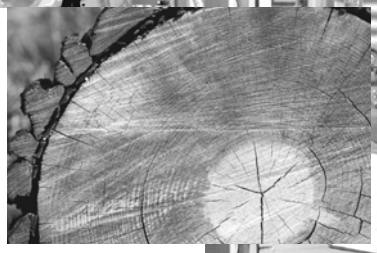














SEW EURODRIVE

1 General notes

1.1 Structure of the safety notes

The safety notes in these operating instructions are designed as follows:

Pictogram	SIGNAL WORD!
	Type and source of danger. Possible consequence(s) if the safety notes are disregarded. • Measure(s) to prevent the danger.

Pictogram	Signal word	Meaning	Consequences in case of disregard
Example:  General danger  Specific danger, e.g. electric shock	**DANGER!**	Imminent danger	Severe or fatal injuries
	WARNING!	Possible dangerous situation	Severe or fatal injuries
	CAUTION!	Possible dangerous situation	Minor injuries
	**STOP!**	Possible damage to property	Damage to the drive system or its environment
	**NOTE**	Useful information or a tip Simplifies the handling of the drive system	

1.2 Right to claim under warranty

A requirement of fault-free operation and fulfillment of any rights to claim under limited warranty is that you adhere to the information in the MOVIMOT® documentation. Consequently, read the operating instructions before you start working with the unit!

Make sure that the operating instructions are available to persons responsible for the plant and its operation, as well as to person who work independently on the unit. You must also ensure that the documentation is legible.

1.3 Exclusion of liability

You must comply with the information contained in the MOVIMOT® documentation to ensure safe operation of MOVIMOT® and to achieve the specified product characteristics and performance requirements. SEW-EURODRIVE assumes no liability for injury to persons or damage to equipment or property resulting from non-observance of these operating instructions. In such cases, any liability for defects is excluded.

1.4 Other applicable documentation

- This information does not replace the detailed operating instructions!
- Only electrical specialists are allowed to perform installation and startup observing applicable accident prevention regulations and the "MOVIMOT® MM..C" operating instructions.

2 Description of functions

2.1 Changes compared to the standard MOVIMOT® MM..C

- This design is exclusively intended for operation with energy efficient DTE/DVE or DRE motors (230 V/400 V m/W).

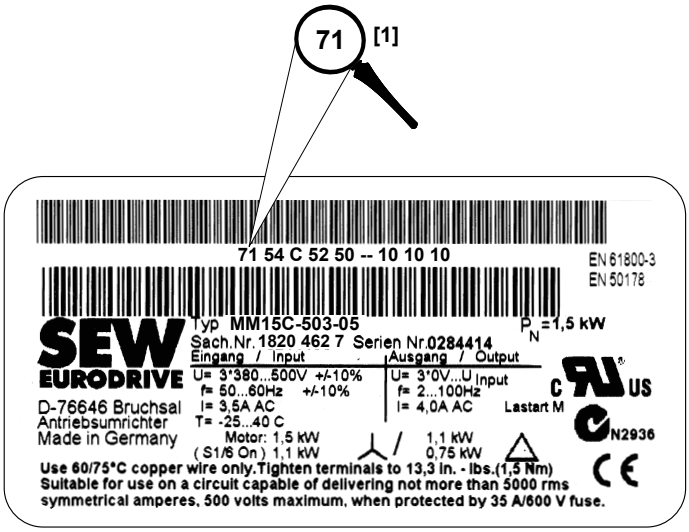
  These energy efficient motors meet the requirements of efficiency category EFF1.
- Modified MOVIMOT® combinations, see page 6.
- Modified DIP switch setting (S2/1), see page 9.

2.2 Sample unit designation

MM 15 C – 503 – 05

- **Type 05** — **for DTE/DVE motors; for DRE motors (as of firmware status 71)**
- Connection type (3 = 3-phase)
- Connection voltage (50 = 380...500 V_{AC})
- Version C
- Motor power (15 = 1.5 kW)
- MOVIMOT® series

Inverter name-plate (example)



62024AXX

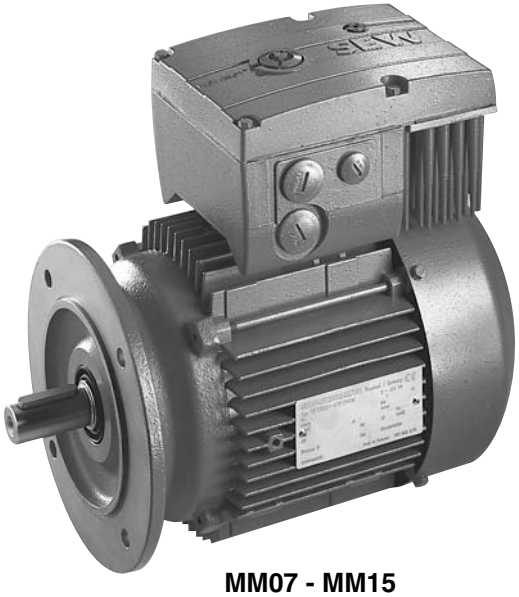
[1] Firmware status

3 Changes compared to the standard MOVIMOT®

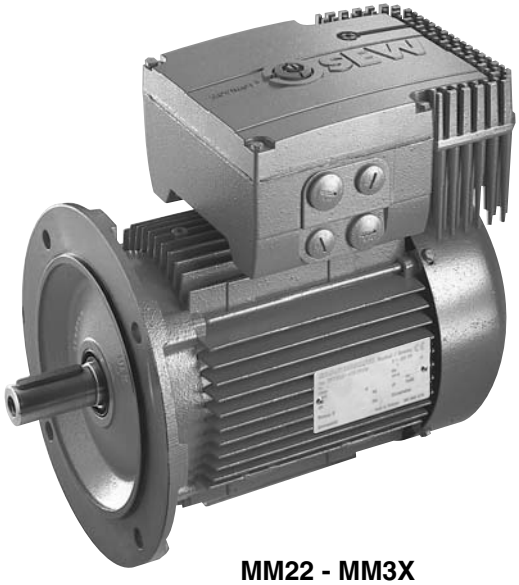
3.1 MOVIMOT® combinations with energy efficient motors

STOP	**STOP!** All combinations not listed in this document will be rejected with error 9 (slowly flashing red status LED on MOVIMOT®).

MOVIMOT® with energy efficient DTE/DVE motors



MM07 - MM15



MM22 - MM3X

57770AXX

280 – 1400 1/min W 3 x 380 – 500 V (400 V) *IEC design*

Type	P_N [kW]	M_n [Nm]	M_a/M_n [Nm]	n_n [1/min]	I_{n1} [A]	cosφ	Brake		M_{Bmax} [Nm]
							Preference	Alternative	
DTE90K4/.../MM07	0.75	5.1	1.5	1400	1.8	0.99	BMG2 230 V	BMG2 400 V	20
DTE90S4/.../MM11	1.1	7.5	1.5	1400	2.4	0.99			20
DTE90L4/.../MM15	1.5	10.2	1.5	1400	3.2	0.99			20
DVE100M4/.../MM22	2.2	15.0	1.5	1400	4.6	0.99	BMG4 110 V	BMG4 230 V	40
DVE100L4/.../MM30	3.0	20.5	1.5	1400	6.2	0.99			40

290 – 2900 1/min m 3 x 380 – 500 V (400 V) *IEC design*

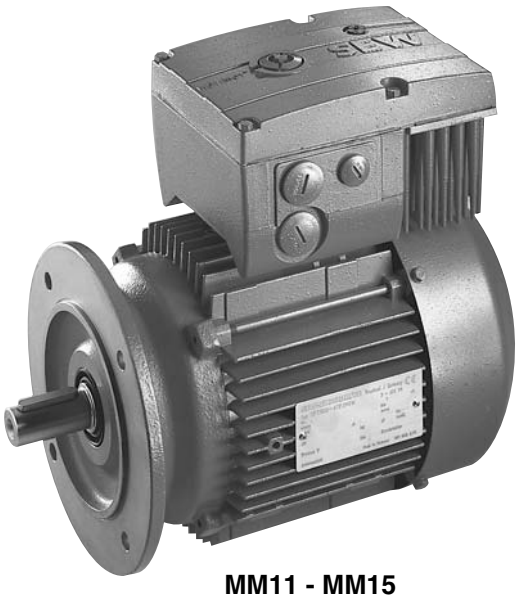
Type	P_N [kW]	M_n [Nm]	M_a/M_n [Nm]	n_n [1/min]	I_{n1} [A]	cosφ	Brake		M_{Bmax} [Nm]
							Preference	Alternative	
DTE90K4/.../MM11	1.1	3.62	2.0	2900	3.1	0.99	BMG2 230 V	BMG2 400 V	20
DTE90S4/.../MM15	1.5	4.95	1.6	2900	4.2	0.99			20
DTE90L4/.../MM22	2.2	7.25	1.6	2900	5.5	0.99	BMG2 110 V	BMG2 230 V	20
DVE100M4/.../MM30	3.0	9.9	1.6	2900	8.0	0.99	BMG4 110 V	BMG4 230 V	40
DVE100L4/.../MM3X	3.0 [1]	9.9	1.6	2900	8.0	0.99			40
	4.0 [2]	13.2	1.2	2900	10.7	0.99			

1) S1

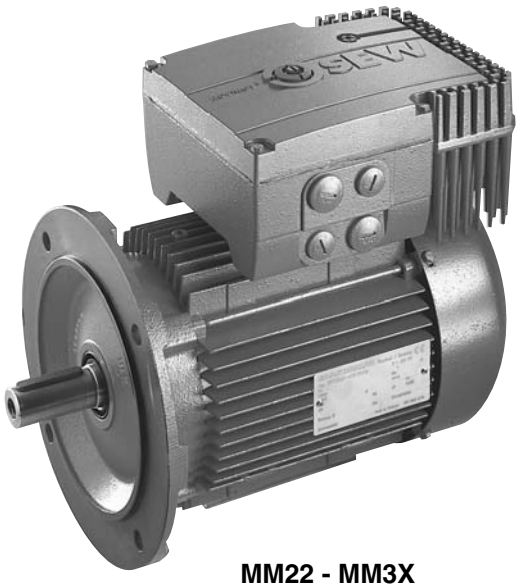
2) S3, 25 % c.d.f.

Thermal classification F as standard

MOVIMOT® with energy efficient DTE/DVE motors and increased short-term torque



MM11 - MM15



MM22 - MM3X

57771AXX

280 – 1400 1/min W 3 x 380 – 500 V (400 V) *IEC design*

Type	P_N [kW]	M_n [Nm]	M_a/M_n [1)] [Nm]	n_n [1/min]	I_{n1} [A]	cosφ	Brake		M_{Bmax} [Nm]
							Preference	Alternative	
DTE90K4/.../MM11	0.75	5.1	2.1	1400	1.8	0.99	BMG2 230 V	BMG2 400 V	20
DTE90S4/.../MM15	1.1	7.5	2.1	1400	2.4	0.99			20
DTE90L4/.../MM22	1.5	10.2	2.1	1400	3.2	0.99	BMG2 110 V	BMG2 230 V	20
DVE100M4/.../MM30	2.2	15.0	2.1	1400	4.6	0.99	BMG4 110 V	BMG4 230 V	40
DVE100L4/.../MM3X	3.0	20.5	2.0	1400	6.2	0.99			40

290 – 2900 1/min m 3 x 380 – 500 V (400 V) *IEC design*

Type	P_N [kW]	M_n [Nm]	M_a/M_n [1)] [Nm]	n_n [1/min]	I_{n1} [A]	cosφ	Brake		M_{Bmax} [Nm]
							Preference	Alternative	
DTE90K4/.../MM15	1.1	3.62	2.5	2900	3.1	0.99	BMG2 230 V	BMG2 400 V	20
DTE90S4/.../MM22	1.5	4.95	2.2	2900	4.2	0.99	BMG2 110 V	BMG2 230 V	20
DTE90L4/.../MM30	2.2	7.25	2.2	2900	5.0	0.99			20
DVE100M4/.../MM3X	3.0	9.9	2.0	2900	8.0	0.99	BMG4 110 V	BMG4 230 V	40

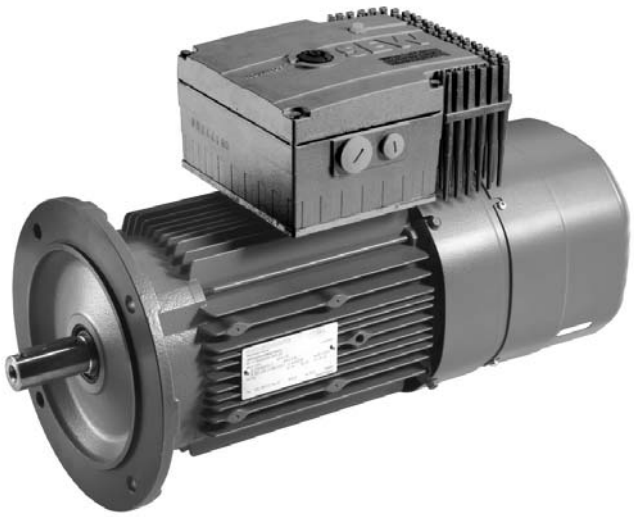
1) Increased short-term torque in S3 operation, 25 % cdf

Thermal classification F as standard

MOVIMOT® with energy efficient DRE motors



MM07 - MM15



MM22 - MM30

62083AXX

280 – 1400 1/min W 3 x 380 – 500 V (400 V) *IEC design*

Type	P_N [kW]	M_n [Nm]	M_a/M_n [Nm]	n_n [1/min]	I_{n1} [A]	cosφ	Brake	M_{Bmax} [Nm]
DRE80M4/.../MM07	0.75	5.1	1.5	1400	1.8	0.99	BE1 230 V	10
DRE90M4/.../MM11	1.1	7.5	1.5	1400	2.4	0.99	BE2 230 V	20
DRE90L4/.../MM15	1.5	10.2	1.5	1400	3.2	0.99		20
DRE100M4/.../MM22	2.2	15.0	1.5	1400	4.6	0.99	BE5 120 V	50
DRE100LC4/.../MM30	3.0	20.5	1.5	1400	6.2	0.99		50

290 – 2900 1/min m 3 x 380 – 500 V (400 V) *IEC design*

Type	P_N [kW]	M_n [Nm]	M_a/M_n [Nm]	n_n [1/min]	I_{n1} [A]	cosφ	Brake	M_{Bmax} [Nm]
DRE80M4/.../MM11	1.1	3.62	2.0	2900	3.1	0.99	BE1 230 V	10
DRE90M4/.../MM15	1.5	4.95	1.6	2900	4.2	0.99	BE2 230 V	20
DRE90L4/.../MM22	2.2	7.25	1.6	2900	5.5	0.99	BE2 120 V	20
DRE100M4/.../MM30	3.0	9.9	1.6	2900	8.0	0.99	BE5 120 V	50

Thermal classification F as standard

3.2 Modified DIP switch setting

The firmware status 70 only supports energy efficient DTE/DVE motors.

The DIP switch S2/1 can be set to ON or OFF.

As of firmware status 71, energy efficient DTE/DVE and DRE motors are supported.

- If the energy efficient DTE/DVE motors are used, the DIP switch S2/1 must be set to OFF.
- If the energy efficient DRE motors are used, the DIP switch S2/1 must be set to ON.

DIP SWITCH S1:

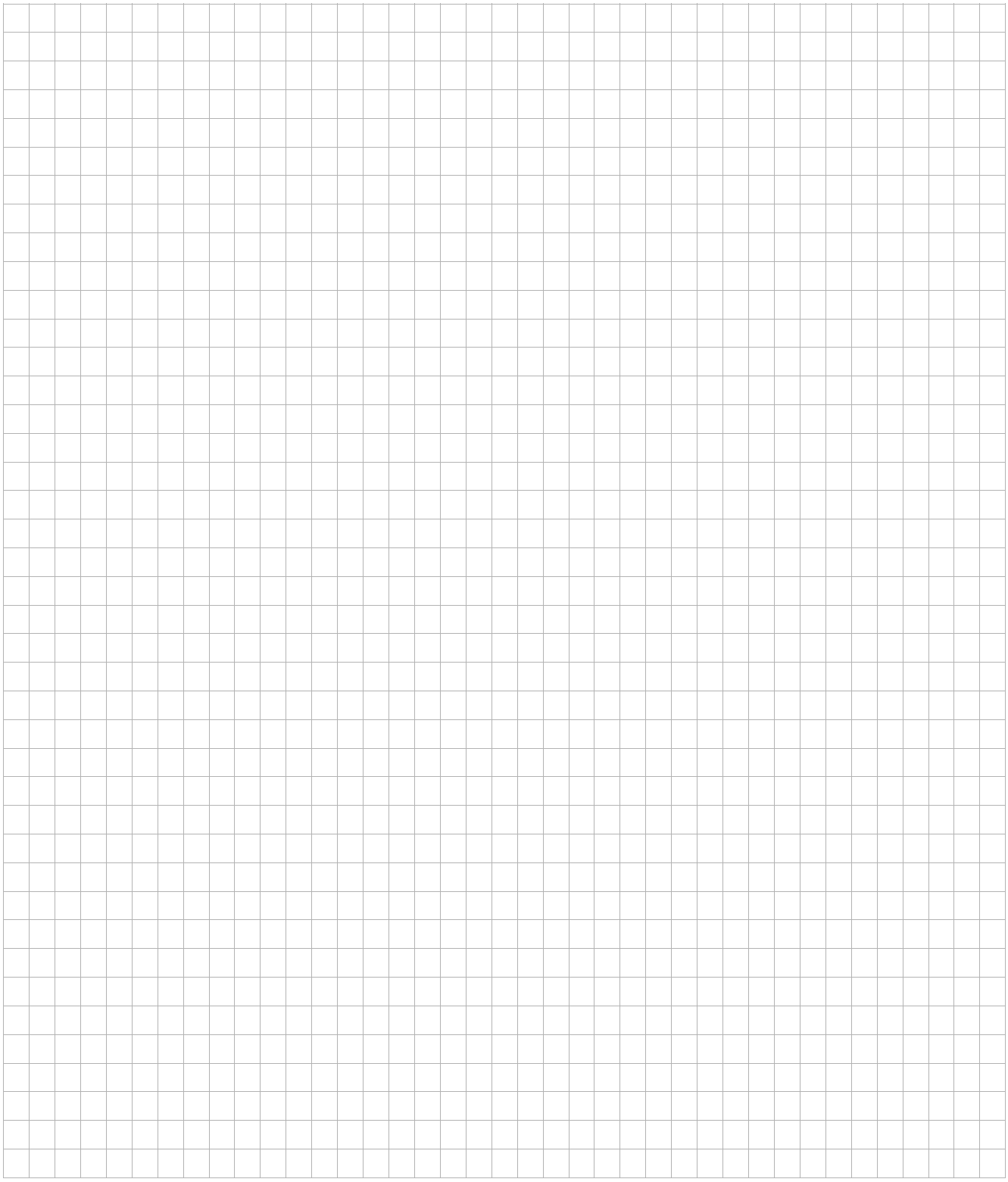
S1	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Meaning	**RS485 address**				**Motor protection**	**Motor power rating**	**PWM frequency**	**No-load damping**
	2^0	**2^1**	**2^2**	**2^3**				
ON	1	1	1	1	Off	Motor one stage smaller	Variable (16, 8, 4 kHz)	On
OFF	**0**	**0**	**0**	**0**	**On**	**Adjusted**	**4 kHz**	**Off**

DIP SWITCH S2:

S2	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Meaning	**Motor type**	**Brake released without enable**	**Control mode**	**Speed monitoring**	**Additional functions**			
					2^0	**2^1**	**2^2**	**2^3**
ON	**DRE-[1] Motor**	On	U/f	On	1	1	1	1
OFF	**DTE/DVE motor**	**Off**	**VFC**	**Off**	**0**	**0**	**0**	**0**

1) only possible as of firmware status 71





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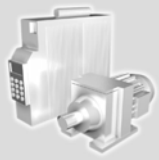


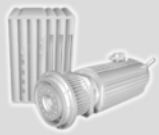
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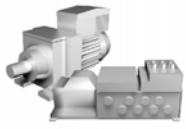
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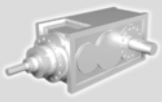
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