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Technical Description



Subject to technical changes

Framo Morat GmbH & Co. KG
Franz-Morat-Straße 6 • D-79871 Eisenbach

Tel.: +49 (0) 7657 / 88-0
Fax: +49 (0) 7657 / 88-333

www.framo-morat.com
info@framo-morat.com

Technical description

1. Design

COMPACTA gear motors from Framo Morat are, as the name implies, extremely compact dimensioned motors with integrated two, three or four stage gearing to produce the output speed and torque required in an application. Each COMPACTA is manufactured to the precise specifications ordered by the customer from the wide range of motor types, gear ratios and optional features shown in this catalogue. COMPACTA gear motors are used mainly in mechanical handling, automation and special machines where torque requirements may vary from 10 Nm up to 1600 Nm and output speeds from 193 rpm down to 1 rpm.

2. Special features

COMPACTA drive units differ from conventional gear motors in several fundamental areas:

- weight saving of 30-40 % due to all-aluminium vacuum die casting of very rigid design
- very small dimensions - high power density
- integrated limit switches for positioning tasks (option)

3. Motors

A wide range of standard COMPACTA motor voltages and frequencies are available for single-phase and 3-phase AC as well as for 24 DC. With the exception of the DC version, all motors are fitted with a bi-metallic thermal protection (cuts out at 125°C). Standard enclosure rating is IP 54, insulation class B. Depending on the order 3-phase motors can either be connected Y or Δ .

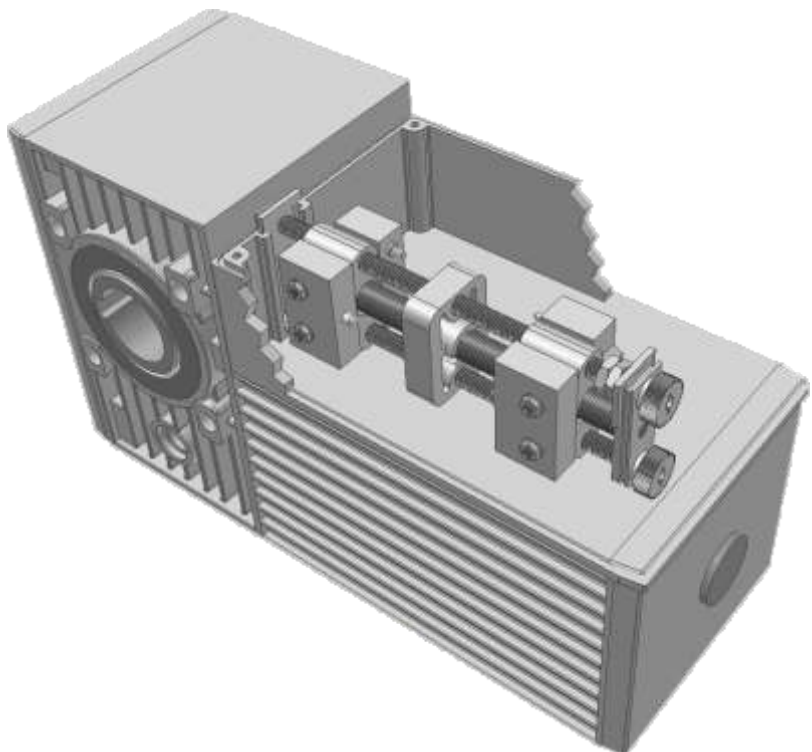
4. Duty cycle

COMPACTA gear motors are typically used for intermittent forward / reverse applications (max. duty rating 60 %) using the internal limit switches and a standard non-ventilated motor. For higher duty cycles there is an optional cooling fan or forced ventilation fan (duty rating 100 %) for type MS12. The duty cycle reference time is 10 minutes in a max. ambient temperature 40°C at an altitude of 1000 meters.

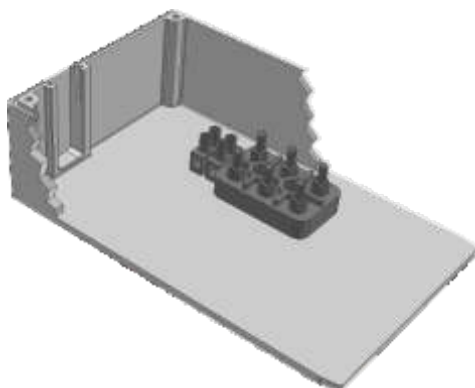
5. Limit switches (option)

Compacta gear motors with integrated limit switches are ideal drives for applications with reversing operation. The easy adjustment of the limit switches, the switch-off accuracy and the small size simplify design and installation.

A detailed description of the available limit switch versions follows. By changing the ratio or spindle-pitch of the limit switch mechanism the desired switch range (for maximum range see performance table) can be pre-selected. The limit switches are adjustable. For on-site fine tuning a screwdriver is all that is necessary.

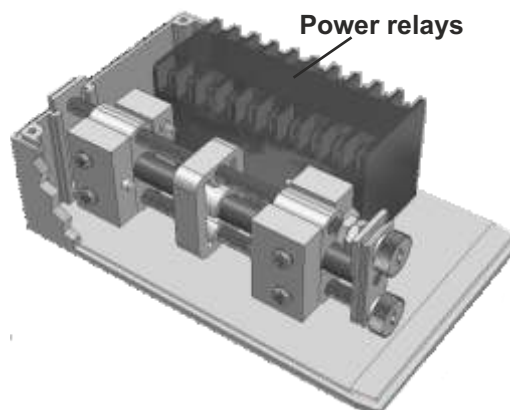


Subject to technical changes



Version 00

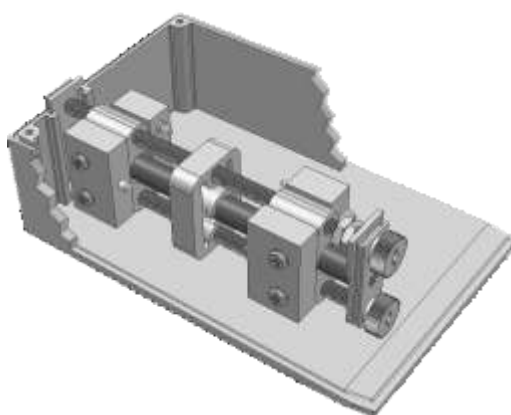
Terminal box (box without switch mechanism)



Power relays

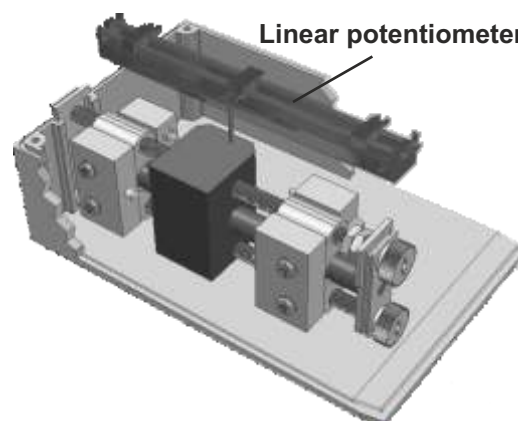
Limit switch version 1 (not MR6)

for applications with defined stops in both directions, protected by 2 safety switches, **with integrated power relays**.



Limit switch version 2 (not MR6)

for applications with defined stops in both directions, protected by 2 safety switches, **without integrated power relays**.



Linear potentiometer

Limit switch version 2P (not MR6)

for applications with defined stops in both directions, protected by 2 safety switches.
Additional potentiometer signal for positioning.

6. Conditions of use

It is a condition of sale that Framo Morat gear motors shall not be used for the movement of loads whereby persons can be directly or indirectly endangered. The use of Compacta rotary actuators in equipment which is intended for the transport of passengers is only permissible after prior written consultation and the agreement of the manufacturer (Framo Morat) or their representatives.

Don't use this drive in explosive environments. Avoid environmental temperatures below 0°C and above 60°C.

We refer users of gear motors to safety rules, regulations and laws governing the protection of staff working in the area of moving equipment. Protective guards or barriers shall be used. Similarly-protective measures are required where suspended loads are involved.

7. Self-locking

Self-locking is affected by lead angle, surface quality, speed, lubrication and temperature. A distinction must be made between dynamic (from motion) and static (standstill) self-locking.

Shocks or vibrations can cancel out self-locking.

Similarly a number of factors associated with lubrication, running speed and loading can favour slip characteristics to such an extent that self-locking is counteracted.

This means that gearing which is self-locking in theory is no substitute for a brake or reverse lock. It is therefore impossible for us to accept warranty obligations in respect to self-locking. If safety is involved, a positive brake should be used.

8. Lifetime

The drive is maintenance-free due to lifetime lubrication. The lifetime of the drive depends on the application (e.g. torque, speed, number of cycles, ambient temperature and other environmental impacts).

Damaged drives must be opened and repaired by Framo Morat, otherwise the warranty is canceled.

9. Options

- Internal limit switches (externally adjustable)
- Linear potentiometer
- Encoder
- Cooling fan or forced ventilation fan (for frequency inverter control) for type MS12
- Hand crank with electrical protection (for emergency operation)
- Spring actuated, electrically released motor brake (for precise positioning)
- Armature cone brake for Type MS 12
- Adjustable slip clutch for Type MS 12
- Paint finish
- Anti-corrosion treatment for rotor/stator
- Drainage holes for condensed water
- Stainless steel hollow shaft (for Type MS12 or MR30)
- Reinforced first stage gear for MS 12 and MR 30 (recommended for high duty cycle reverse drive applications)

MR6



3-phase motors - 3x230/400V-50Hz

Output speed n_2 rpm	Output torque Nm (30% duty cycle)	Transmission ratio	Motor speed n_1 rpm	Motor output kW	Self-locking	Max. limit switch range output rotation
100	10,5	27:1	2700	0,22	So *	275
80	13	34:1	2700	0,22	So *	275
67	15	40:1	2700	0,22	So *	184
54	19	50:1	2700	0,22	So *	184
34	26	80:1	2700	0,22	So *	92
27	33	100:1	2700	0,22	So *	92
17	40	160:1	2700	0,22	Ss *	46
14	50	200:1	2700	0,22	Ss *	46
12	44	224:1	2700	0,22	Sd *	33
10	55	280:1	2700	0,22	Sd *	33
8	60	160:1	1300	0,15	Ss *	46
6	60	224:1	1300	0,15	Sd *	33
4,8	60	280:1	1300	0,15	Sd *	33
3,6	55	360:1	1300	0,15	Sd *	21
2,9	55	450:1	1300	0,15	Sd *	21

Single phase motors - 1x230V-50Hz

Output speed n_2 rpm	Output torque Nm (15% duty cycle) **	Transmission ratio	Motor speed n_1 rpm	Motor output kW	Self-locking
100	6,0	27:1	2700	0,09	So *
80	7,5	34:1	2700	0,09	So *
67	8,5	40:1	2700	0,09	So *
54	10,5	50:1	2700	0,09	So *
34	14,5	80:1	2700	0,09	So *
27	18,0	100:1	2700	0,09	So *
17	21,0	160:1	2700	0,09	Ss *
14	26,5	200:1	2700	0,09	Ss *
12	22,0	224:1	2700	0,09	Sd *
10	27,5	280:1	2700	0,09	Sd *
8	33,5	160:1	1300	0,07	Ss *
6	35,0	224:1	1300	0,07	Sd *
4,8	43,5	280:1	1300	0,07	Sd *
3,6	54,0	360:1	1300	0,07	Sd *
2,9	55,0	450:1	1300	0,07	Sd *

24V DC Permanentmagnet-Motor

Output speed n_2 rpm	Output torque Nm	Self-locking	Transmission ratio
65	7	So *	27 : 1
51,5	8,75	So *	34 : 1
44	10	So *	40 : 1
35	12	So *	50 : 1
22	16,5	So *	80 : 1
17,5	20,5	So *	100 : 1
11	24,5	So *	160 : 1
9	30,5	Ss *	200 : 1
8	25	Sd *	224 : 1
6	31	Sd *	280 : 1
5	38,5	Sd *	360 : 1
4	47,5	Sd *	450 : 1

P = 0,12 kW
 I_N = 10,5 A
 20% Duty cycle

The output speed of Compacta gear motors
 with DC motors varies with the output torque.

Additional output table information:

*So = No self-locking

Ss = Static self-locking

Sd = Dynamic self-locking

** The stated single-phase torques are operational torques. The starting torque, depending on application, is between 30% and 60% of the stated catalog specification. Please contact the manufacturer in case max. torque is required.

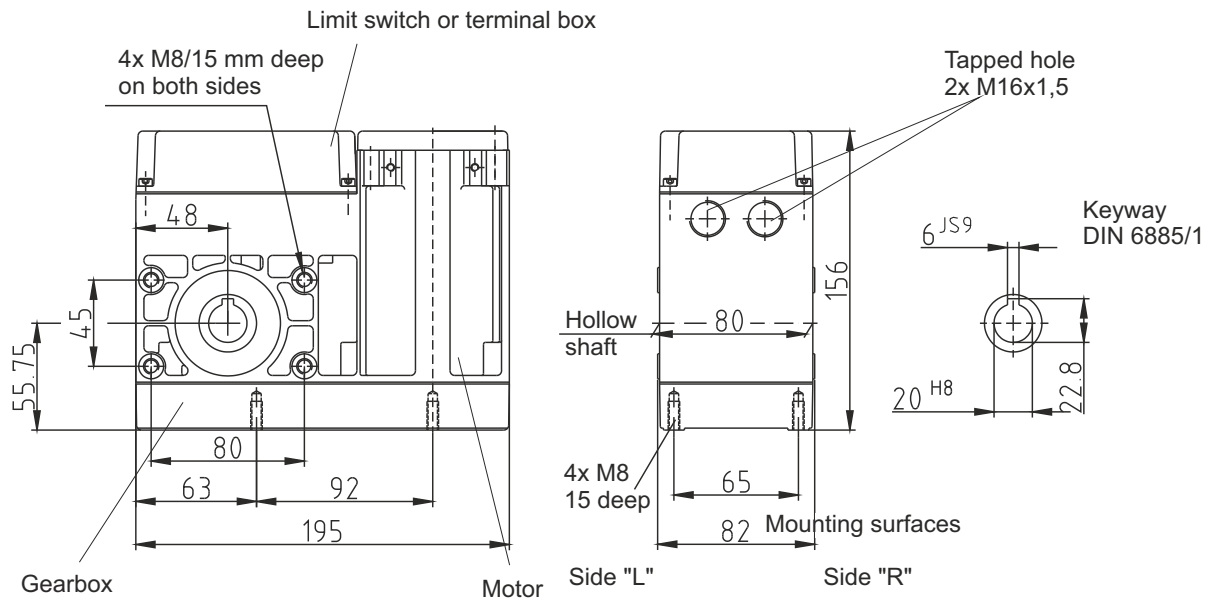
The gear motor can be overloaded by 50% for brief periods. Single-phase AC and DC motors may stall.

Please contact the manufacturer in case of the following operating conditions:

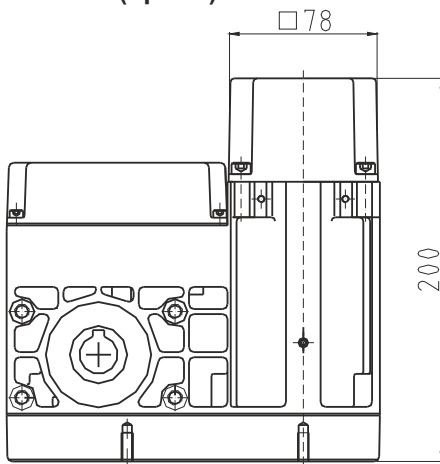
- Temperatures below 0°C (single-phase AC and DC motors: below 10°C)
- Temperatures above 40°C
- Strong vibrations

Dimensions

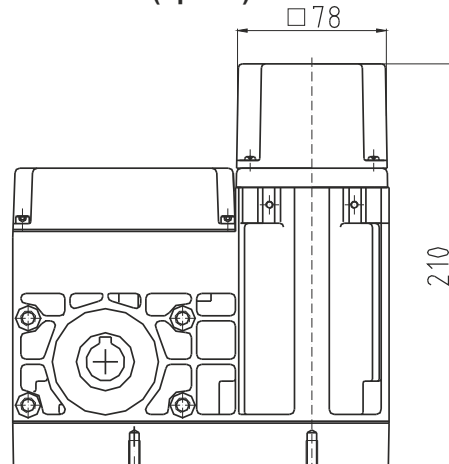
Standard drive with 3-phase and single-phase motors



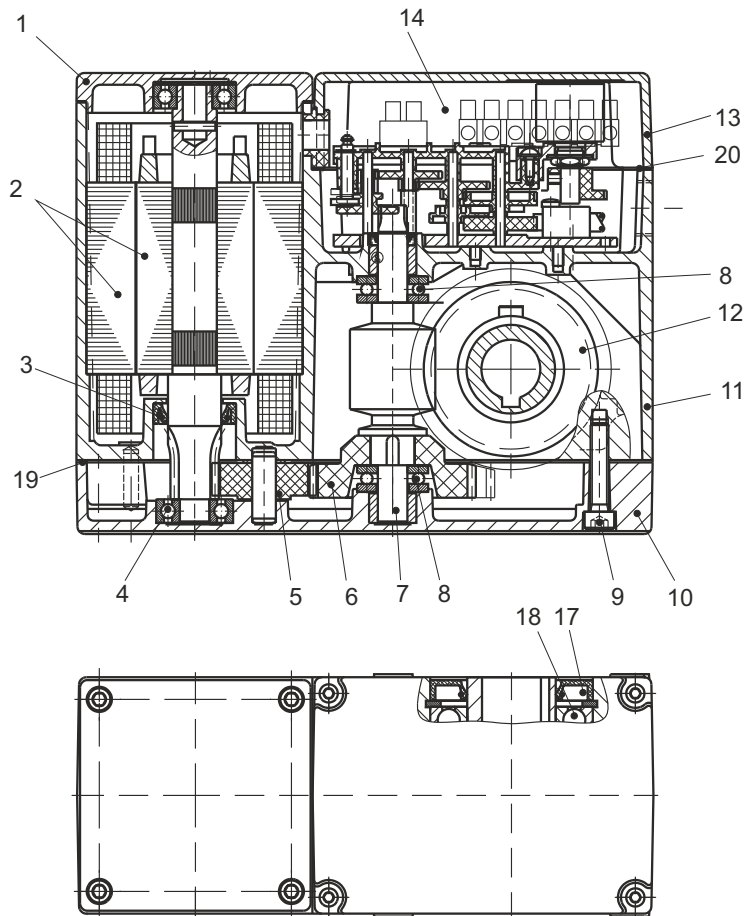
DC-motor (option)



Motor brake (option)



Spare parts



Spare part list

Item	Designation	Article No.
1	Motor cover	6-07-320.01
2	Rotor + stator	Type No.
3	Radial shaft seal	00200101828070
4	Deep-groove ball bearing	00300100600030
5	Idler gear	6-07-01.05
6	Spur gear	6-07-50.01
7	Worm shaft	Type No.
8	Axial bearing	00300055110010
9	Screw	00010200603021
10	Gearbox cover	6-07-01.02
11	Gearbox case	6-07-01.01
12	Worm gear	Type No.
13	Limit switch cover	6-07-01.03
14	Limit switches compl.	Type No.
17	Radial shaft seal	00200103055074
18	Deep-groove-ball bearing	00300101600610
19	Cover seal	6-07-01.06
20	Flat seal	6-07-01.07

Spare parts can only be supplied if the serial number is stated

MS 12



3-phase motors - 3x230/400V-50Hz

Output speed n_2 rpm	Output torque Nm ** at duty cycle			Transmission ratio	Motor speed n_1 rpm	Motor output kW ** at duty cycle			Self- locking	Max. limit switch range; output rotation
	40%	60%	100%			40%	60%	100%		
193	16	12	12	14,2:1	2750	0,4	0,3	0,3	So *	275
137,5	21	15,7	15,7	20:1	2750	0,4	0,3	0,3	So *	275
94,8	30	22,5	22,5	29:1	2750	0,4	0,3	0,3	So *	275
68	39,5	29,5	29,5	40,5:1	2750	0,4	0,3	0,3	So *	275
61	44	33	33	45:1	2750	0,4	0,3	0,3	So *	275
47,6	45,5	34	34	29:1	1380	0,3	0,23	0,23	So *	275
43,6	44	33	33	63:1	2750	0,4	0,3	0,3	So *	275
36,7	47	35	35	75:1	2750	0,4	0,3	0,3	So *	275
32,7	59	44	44	84:1	2750	0,4	0,3	0,3	Ss *	275
30,5	63	47	47	90:1	2750	0,4	0,3	0,3	Ss *	275
24,1	72	54	54	114:1	2750	0,4	0,3	0,3	Ss *	275
21,9	66	49	49	63:1	1380	0,3	0,23	0,23	So *	275
18,3	84	63	63	150:1	2750	0,4	0,3	0,3	Sd *	275
16,4	88	66	66	84:1	1380	0,3	0,23	0,23	Ss *	275
15,3	94,5	71	71	90:1	1380	0,3	0,23	0,23	Ss *	275
12,1	107,5	80,5	80,5	114:1	1380	0,3	0,23	0,23	Ss *	275
9,2	126	94,5	94,5	150:1	1380	0,3	0,23	0,23	Sd *	275
7,7	132	99	99	180:1	1380	0,3	0,23	0,23	Sd *	275
6,1	142	106,5	106,5	225:1	1380	0,3	0,23	0,23	Sd *	275
4,5	88	66	-	150:1	680	0,12	0,09	0,09	Sd *	275
3,8	92	68	-	180:1	680	0,12	0,09	0,09	Sd *	275
3	100	75	-	225:1	680	0,12	0,09	0,09	Sd *	275

Single-phase motors - 1x230V-50Hz

Output speed n_2 rpm	Output torque Nm (20% ED) ***	Transmission ratio	Motor speed n_1 rpm	Motor output kW	Self- locking
193,0	10,0	14,2:1	2750	0,28	So *
137,5	13,0	20,0:1	2750	0,28	So *
94,8	18,0	29,0:1	2750	0,28	So *
68,0	23,9	40,5:1	2750	0,28	So *
61,0	26,0	45,0:1	2750	0,28	So *
47,6	27,0	29,0:1	1380	0,25	So *
43,6	26,0	63,0:1	2750	0,28	So *
36,7	28,0	75,0:1	2750	0,28	So *
32,7	35,0	84,0:1	2750	0,28	Ss *
30,5	38,0	90,0:1	2750	0,28	Ss *
24,1	43,0	114,0:1	2750	0,28	Ss *
21,9	40,0	63,0:1	1380	0,25	So *
18,3	49,8	150,0:1	2750	0,28	Sd *
16,4	53,0	84,0:1	1380	0,25	Ss *
15,3	56,9	90,0:1	1380	0,25	Ss *
12,1	65,0	114,0:1	1380	0,25	Ss *
9,2	75,9	150,0:1	1380	0,25	Sd *
7,7	79,0	180,0:1	1380	0,25	Sd *
6,1	84,9	225,0:1	1380	0,25	Sd *

24V DC Permanentmagnet-Motor

Output speed n_2 rpm	Output torque Nm	Self-locking	Transmission ratio
140	16	So *	14,2 : 1
100	21	So *	20 : 1
69	30	So *	29 : 1
49	40	So *	40,5 : 1
44	45	So *	45 : 1
32	45	So *	63 : 1
27	48	So *	75 : 1
24	60	Ss *	84 : 1
22	65	Ss *	90 : 1
17,5	73	Ss *	114 : 1
13	88	Sd *	150 : 1
11	91	Sd *	180 : 1
8,9	96	Sd *	225 : 1

P = 0,3 kW
 I_N = 25 A
 30% Duty cycle

The output speed of Compacta gear motors
 with DC motors varies with the output torque.

Additional output table information:

*So = No self-locking
 Ss = Static self-locking
 Sd = Dynamic self-locking

** At 100% duty cycle (continuous operation) cooling
 is always required. With cooling, motors rated with
 60% duty can be operated at 100% duty.

*** The stated single-phase torques are operational
 torques. The starting torque, depending on
 application, is between 30% and 60% of the
 stated catalog specification. Please contact the
 manufacturer in case max. torque is required.

The gear motor can be overloaded by 50% for brief
 periods. Single-phase AC and DC motors may stall.

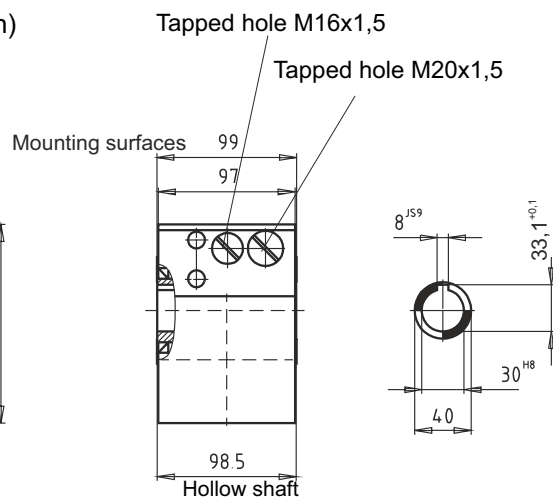
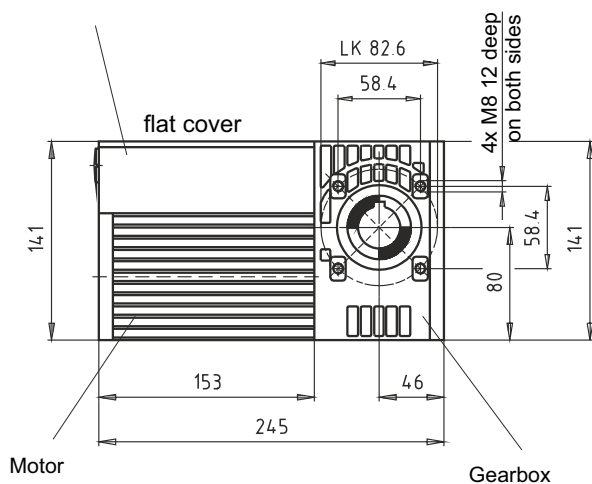
**Please contact the manufacturer in case of the
following operating conditions:**

- Temperatures below 0°C (single-phase AC and DC
motors: below 10°C)
- Temperatures above 40°C
- Strong vibrations

Dimensions

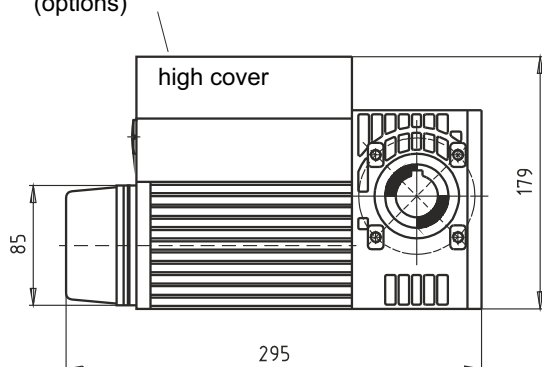
Standard drive with 3-phase or single-phase motor

Limit switch version 2 without power relay (option)
or terminal box (without switch mechanism)

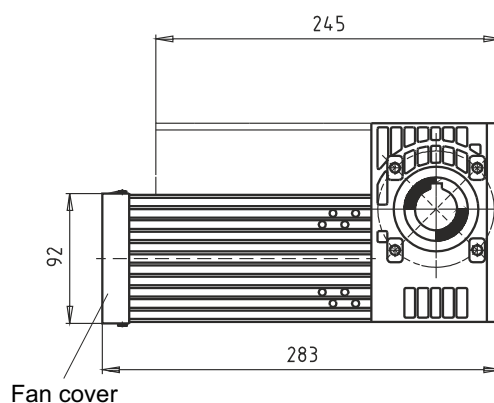


with motor brake
(option)

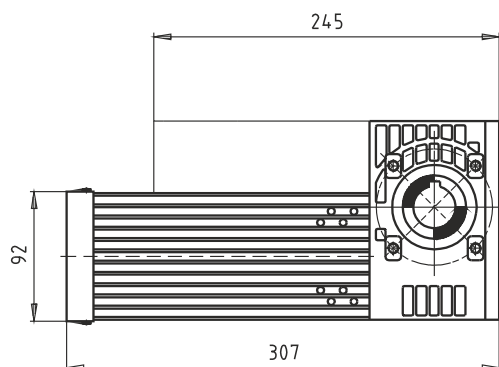
Limit switch version 1 with power relays,
(options)



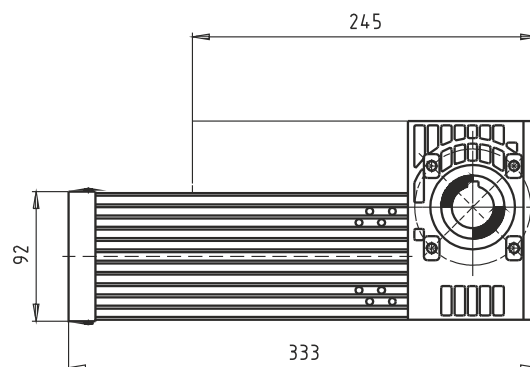
with rotor fan
(option)



**with rotor fan and motor brake or just
motorized fan (option)**



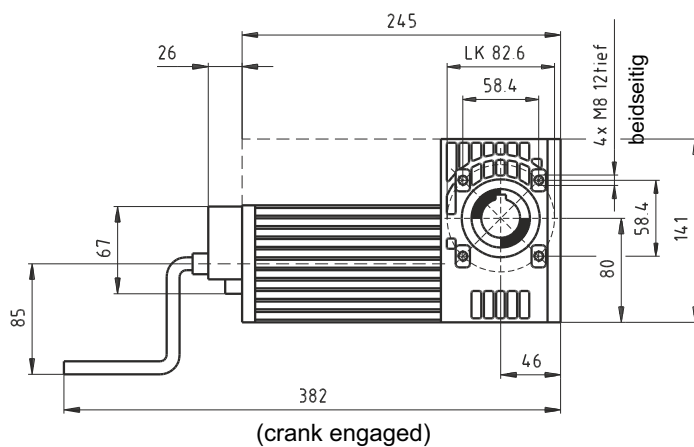
**with motor brake and motorized fan
(option)**



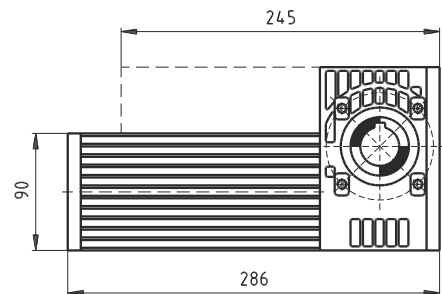
Some options may be combined

Dimensions

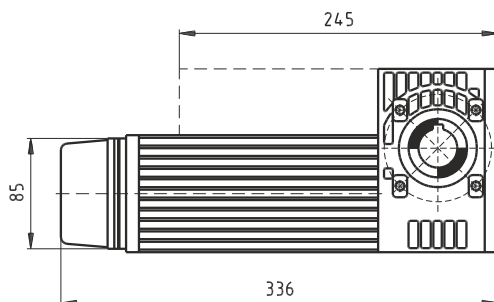
Hand crank with elec. interlock (option)
(removable)



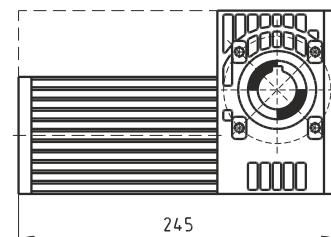
with DC motor
(option)



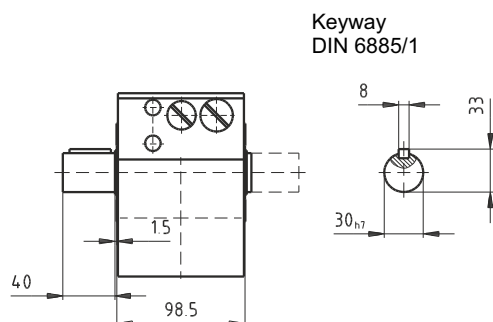
with DC motor and motor brake
(option)



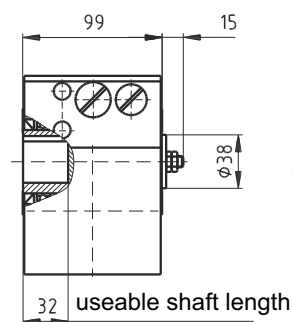
with integrated cone brake
(only with single- and 3-phase AC motor)
(option)



with stub shaft (option)
(left or right)



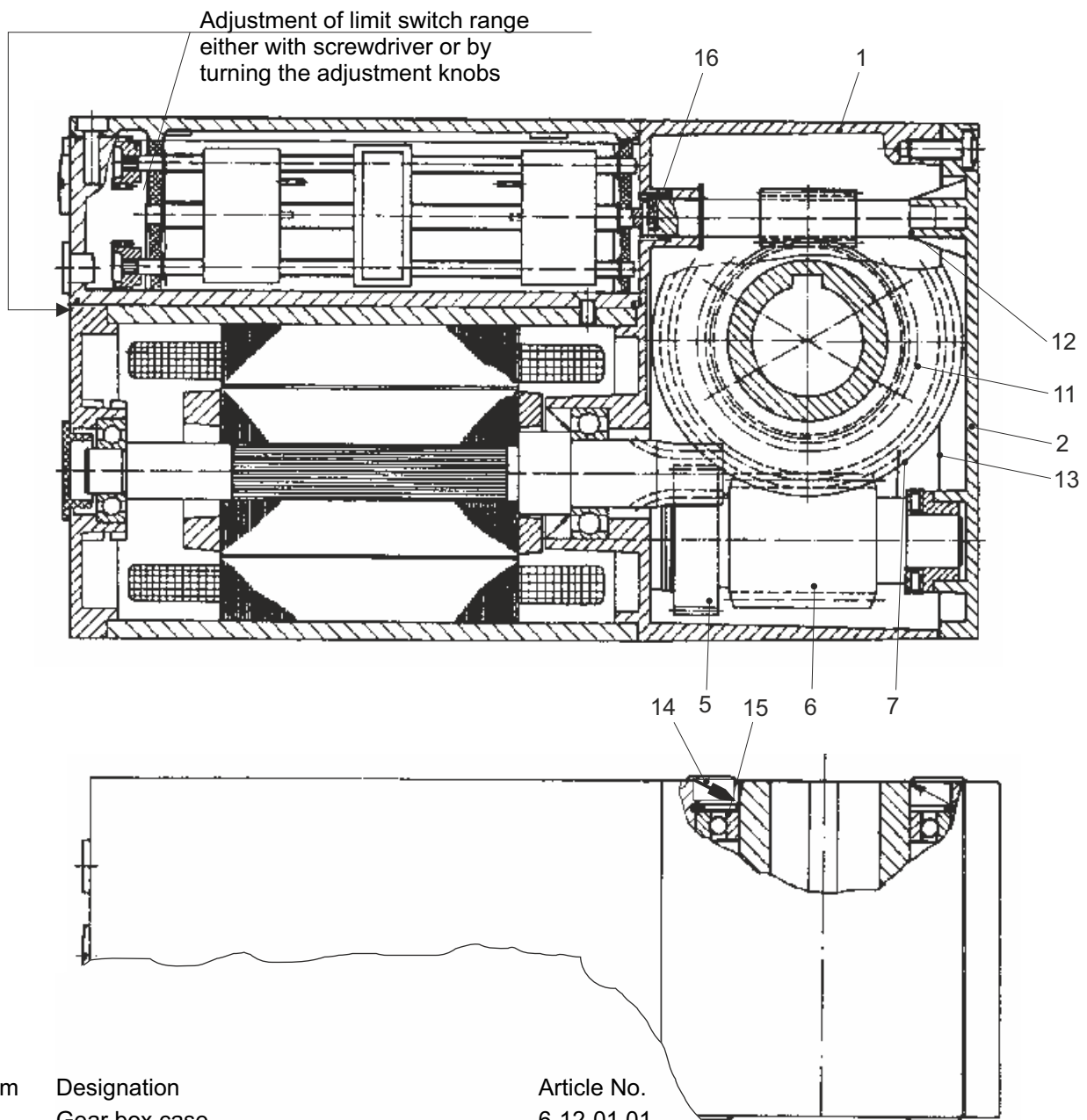
with slip clutch
(option)



Adjustment of
slipping torque
up to max. 90 Nm



Some options may be combined

Spare parts gearbox


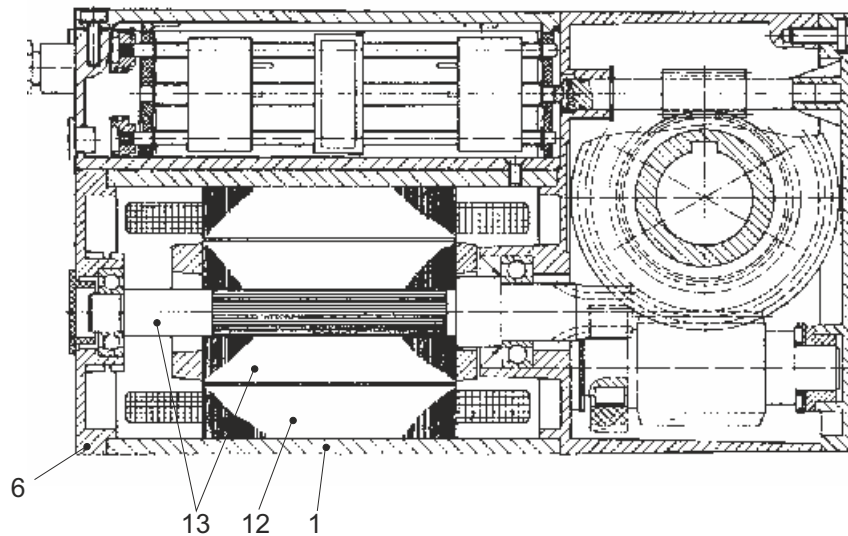
Item	Designation	Article No.
1	Gear box case	6-12-01.01
2	Gear box cover	6-12-01.02
5	1st stage gear	Serial No.
6	Worm shaft A53	Serial No.
7	Worm wheel A53	Serial No.
11	Spur wheel	Serial No.
12	Control shaft	Serial No.
13	Cover seal	6-12-01.03A
14	Radial seal A40x68x7	00200104068079
15	Deep-groove ball bearing 16008	00300101600810
16	Coupling	6-12-36.03

Spare parts can only be supplied if the serial number is stated

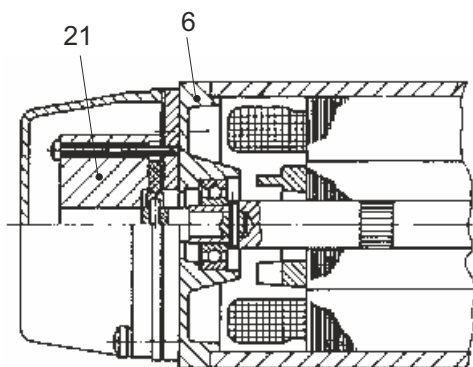
Some options may be combined

Spare parts motor

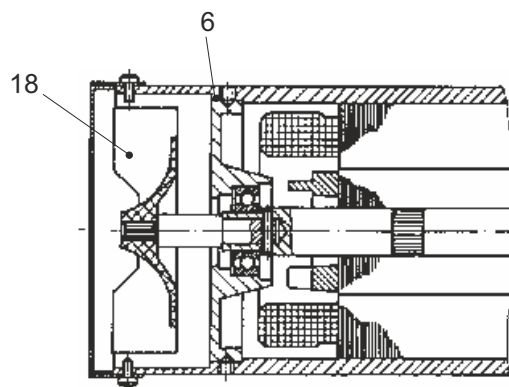
Motor - Standard version (without fan)



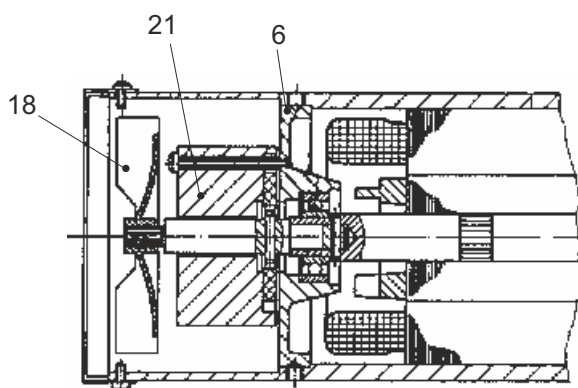
Motor with brake
(without fan)



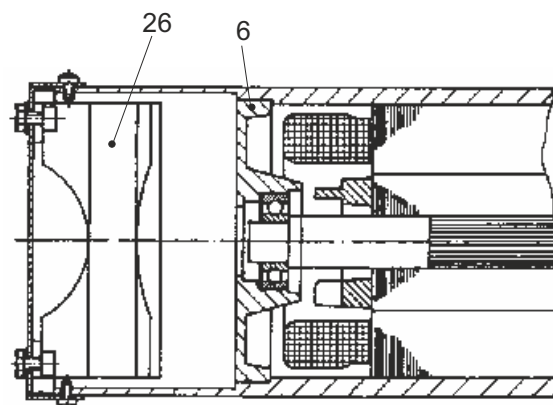
Motor with rotor fan



Motor with brake and rotor fan

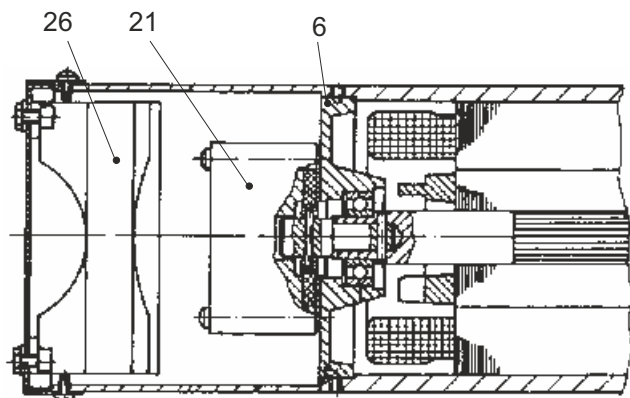


Motor with motorized fan

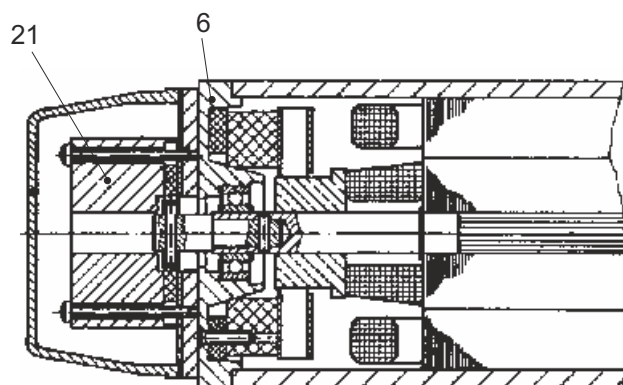


Spare parts motor

Motor with brake and motorized fan



DC motor (shunt wound) with brake



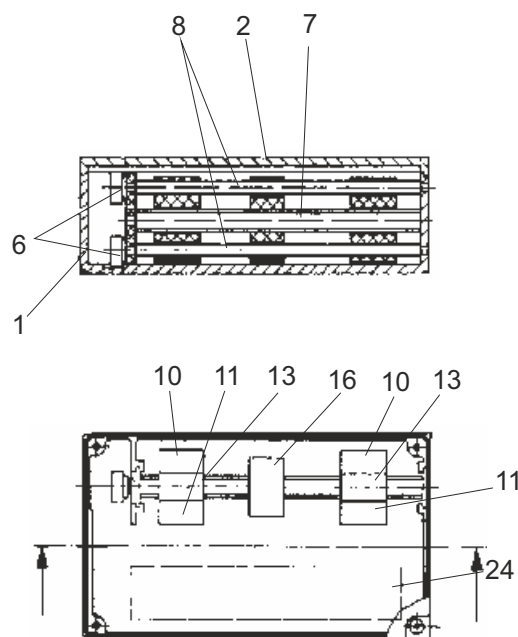
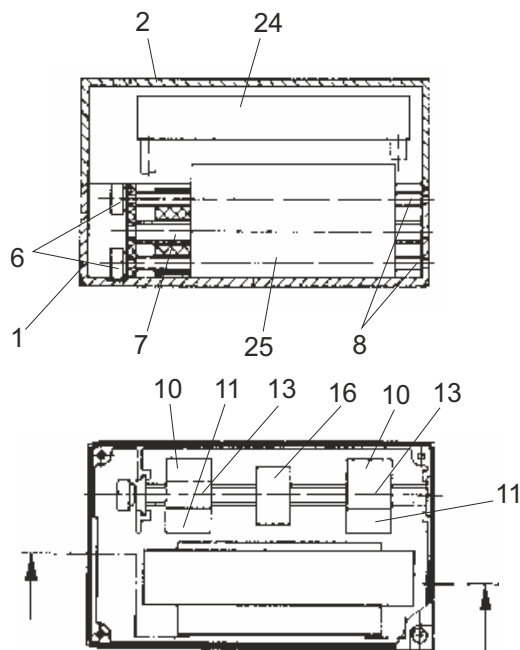
Item	Designation	Article No.
1	Motor casing N (standard motor)	Serial-No.
6	Motor cover	Serial-No.
12	Stator	Serial-No.
13	Rotor cpl.	Serial-No.
18	Fan blade	6-10-119.03
21	Motor brake	Serial-No.
26	Motorized fan	02901100007000

Spare parts can only be supplied if the serial number is stated

Spare parts limit switches

Version 1

Version 2



Item	Designation	Article-No.
1	Limit switch housing	Serial-Nr.
2	Cover	Serial-Nr.
6	Adjustment knob	6-10-36.14
7	Control spindle	Serial-Nr.
8	Adjustment spindle	6-10-36.13
9	Adjustment spindle	6-10-600.13
10	Safety limit switch S4 / S5	02450100000250
11	Limit switch S6 / S7	02450100000050
13	Switch holder	6-10-36.21
16	Switching nut	Serial-Nr.
24	Terminal strip	02000102000000
25	Reversing contactor	Serial-Nr.
no No.	Clutch	6-12-36.03

Spare parts can only be supplied if the serial number is stated

MR30



3-phase motors - 3x230/400V-50Hz

Output speed n_2 rpm	Output torque Nm	Transmission ratio	Motor speed n_1 rpm	Motor output kW	Self- locking	Limit switch range Output rotation	
	duty cycle 60%			duty cycle 60%		normal	lang
123,4	60	22,7:1	2800	1,1	So *	260	430
61,6	112	45,4:1	2800	1,1	So *	130	215
39	165	71,8:1	2800	1,1	So *	85	135
30,8	125	45,4:1	1400	0,6	So *	130	215
28,4	187	98,3:1	2800	1,1	So *	60	100
21,8	220	128,5:1	2800	1,1	Ss *	47	77
19,5	180	71,8:1	1400	0,6	Ss *	85	135
15,4	240	181,4:1	2800	1,1	Ss *	32	55
14,2	206	98,3:1	1400	0,6	So *	60	100
11,8	270	238,1:1	2800	1,1	Sd *	25	42
10,6	250	264,6:1	2800	1,1	Sd *	23	38
7,7	267	181,4:1	1400	0,6	Ss *	32	55
5,9	300	238,1:1	1400	0,6	Sd *	25	42
5,3	278	264,6:1	1400	0,6	Sd *	23	38
3,8	148 (40%)	181,4:1	700	0,15 (40%)	Ss *	32	55
2,9	170 (40%)	238,1:1	700	0,15 (40%)	Sd *	25	42
2,6	160 (40%)	264,6:1	700	0,15 (40%)	Sd *	23	38

Single-phase motors - 1x230V-50Hz

Output speed n_2 rpm	Output torque Nm (40% duty cycle) **	Transmission ratio	Motor speed n_1 rpm	Motor output kW	Self- locking
123,4	36,0	22,7:1	2800	0,66	So *
61,6	67,2	45,4:1	2800	0,66	So *
39,0	99,0	71,8:1	2800	0,66	So *
30,8	73,3	45,4:1	1400	0,36	So *
28,4	112,2	98,3:1	2800	0,66	So *
21,8	132,0	128,5:1	2800	0,66	Ss *
19,5	108,0	71,8:1	1400	0,36	So *
15,4	144,0	181,4:1	2800	0,66	Ss *
14,1	122,3	98,3:1	1400	0,36	So *
11,8	162,0	238,1:1	2800	0,66	Sd *
10,9	144,0	128,5:1	1400	0,36	Ss *
10,6	150,0	264,6:1	2800	0,66	Sd *
7,7	157,1	181,4:1	1400	0,36	Ss *
5,9	176,7	238,1:1	1400	0,36	Sd *
5,3	163,4	264,6:1	1400	0,36	Sd *

24V DC shunt-wound motor

Output speed n_2 rpm	Output torque Nm	Self-locking	Transmission ratio
66	52	So *	22,7 : 1
33	97	So *	45,4 : 1
21	141	So *	71,8 : 1
15	162	So *	98,3 : 1
11,5	190	Ss *	128,5 : 1
8	205	Ss *	181,4 : 1
6,5	220	Sd *	238,1 : 1
5,5	200	Sd *	264,6 : 1

Additional output table information:

*So = No self-locking
 Ss = Static self-locking
 Sd = Dynamic self-locking

** The stated single-phase torques are operational torques. The starting torque, depending on application, is between 30% and 60% of the stated catalog specification. Please contact the manufacturer in case max. torque is required.

P = 0,5 kW
 I_N = 30 A
 40% duty cycle

The output speed of Compacta gear motors with DC motors varies with the output torque.

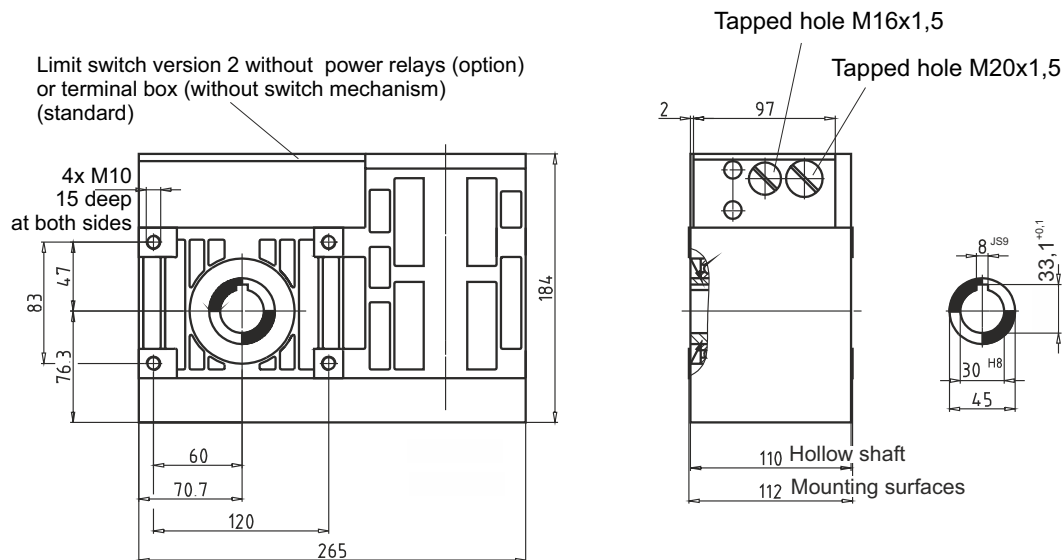
The gear motor can be overloaded by 50% for brief periods. Single-phase AC and DC motors may stall.

Please contact the manufacturer in case of the following operating conditions:

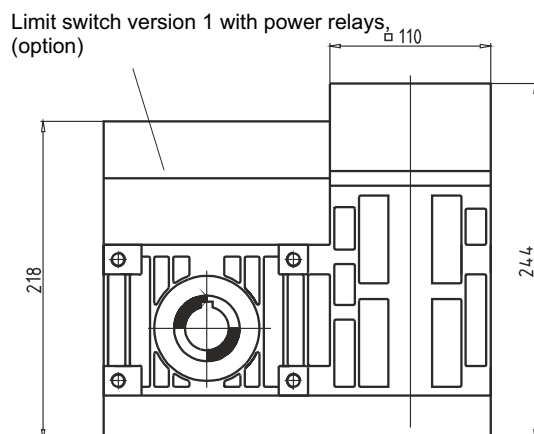
- Temperatures below 0°C (single-phase AC and DC motors: below 10°C)
- Temperatures above 40°C
- Strong vibrations

Dimensions

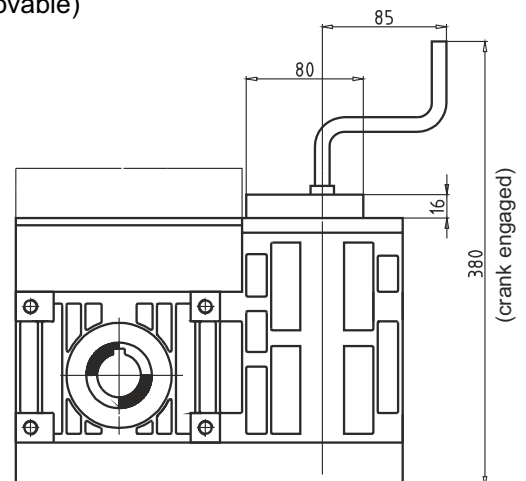
Standard drive with 3-phase or single-phase AC motor



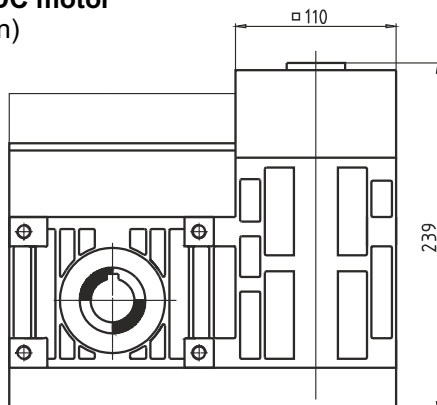
with motor brake (option)



Hand crank with elec. interlock (option) (removable)

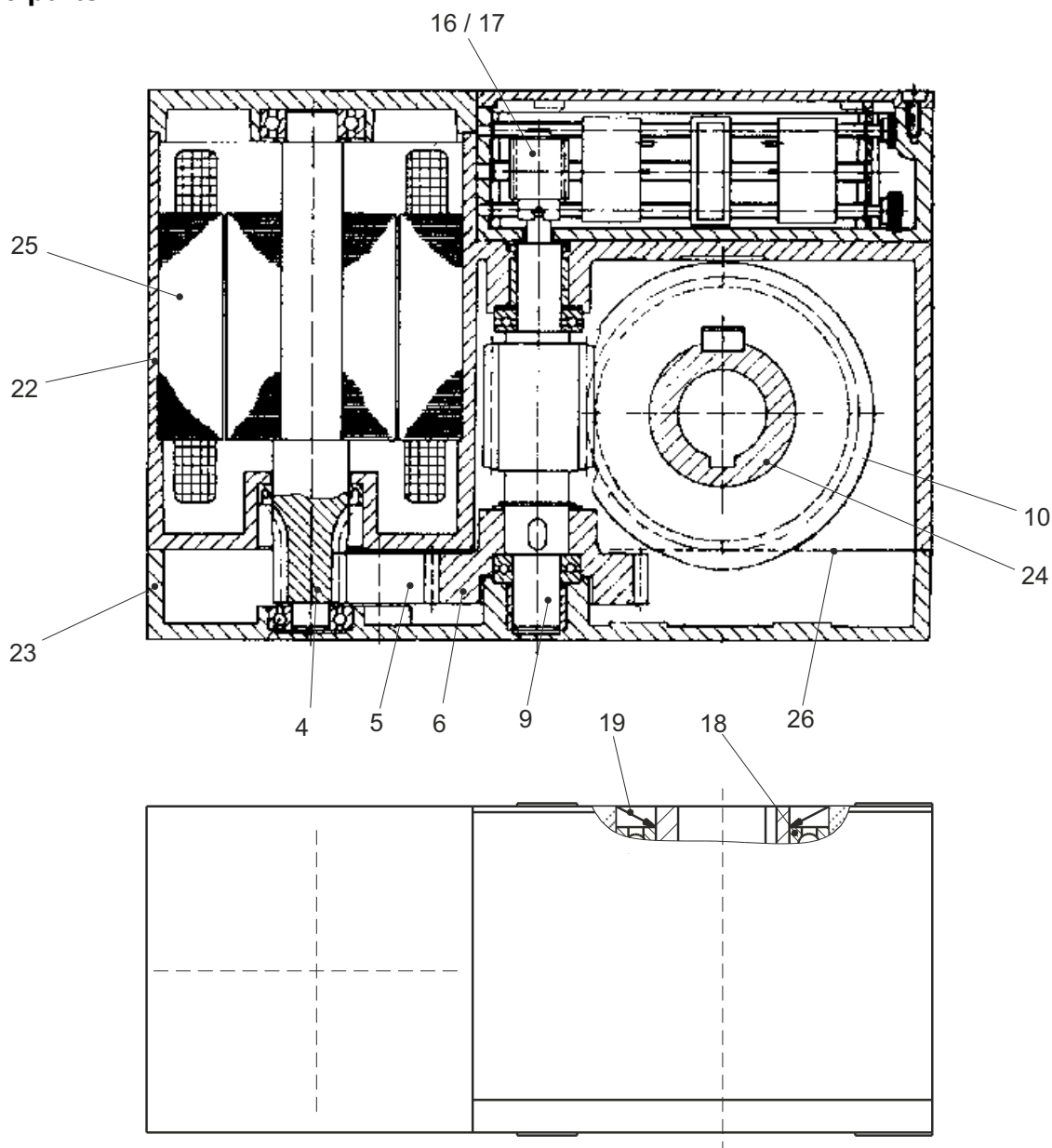


with DC motor (option)



Some options may be combined

Spare parts



Item	Designation	Article No.
4	Rotor shaft complete	Serial No.
5	Idler gear	6-40-50.14
6	Spur gear	6-40-50.16
9	Worm shaft A63	Serial No.
10	Worm wheel A63	Serial No.
16	Control worm	Serial No.
(17)	Helical gear	Serial No.
18	Deep-groove ball bearing	00300101600910
19	Radial shaft seal	00200104575102
22	Gearbox case	6-40-50.01
23	Gearbox cover	6-40-70.01
24	Hollow shaft	6-40-101.01
25	Stator	Serial No.
26	Flat seal	6-40-50.02A

Spare parts can only be supplied if the serial number is stated

AG160



3-phase motors - 3x230/400V-50Hz

Output speed n ₂ rpm	Output torque Nm	Transmission ratio	Motor speed n ₁ rpm	Motor output kW	Self-locking	Limit switch range Output rotation
	ED 60%		ED 60%			
8,30	720	339 : 1	2800	1,10	So	45
5,70	960	490 : 1	2800	1,10	So	45
3,70	1400	764 : 1	2800	1,10	So	45
2,90	1000	490 : 1	1400	0,60	So	45
1,80	1530	764 : 1	1400	0,60	So	45
0,90	1600	3111 : 1	2800	1,10	Sd	45
0,45	1600	3111 : 1	1400	0,60	Sd	45

Additional output table information:

*So = No self-locking

Ss = Static self-locking

Sd = Dynamic self-locking

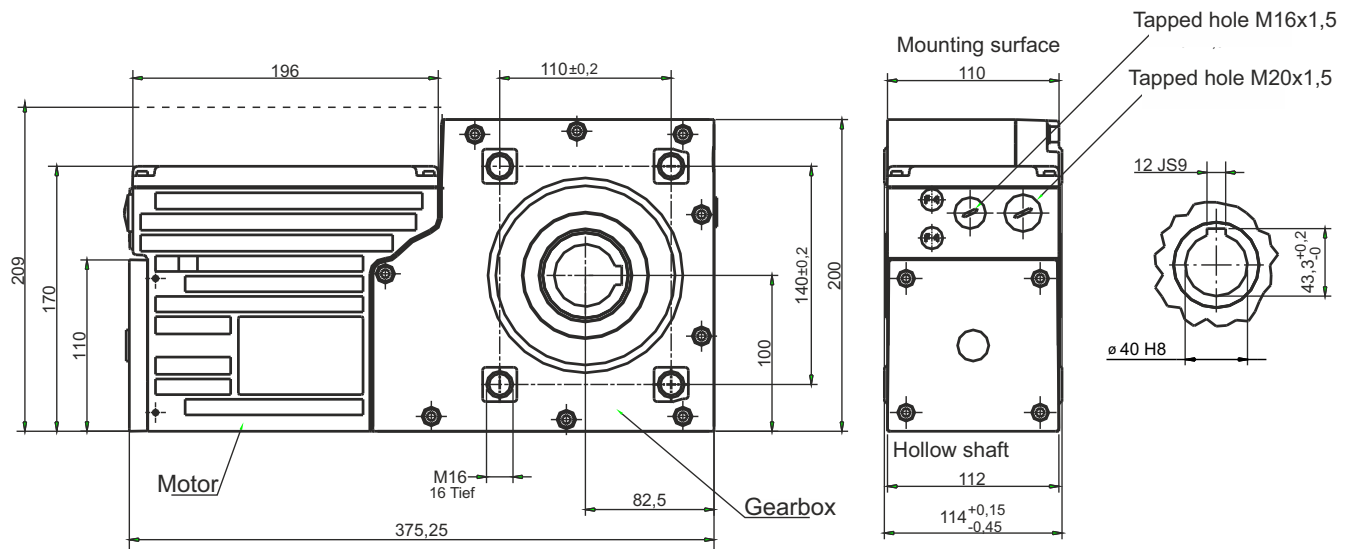
The gear motor can be overloaded by 50% for brief periods.

Please contact the manufacturer in case of the following operating conditions:

- Temperatures below 0°C
- Temperatures above 40°C
- Strong vibrations

Dimensions

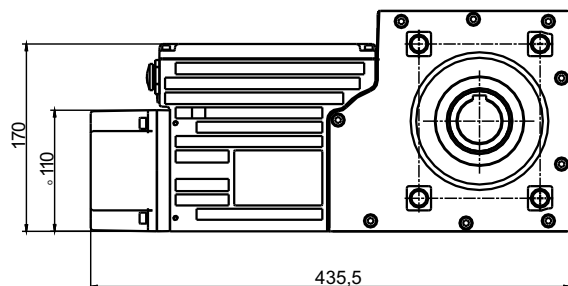
Standard drive with 3-phase motor



with solenoid brake

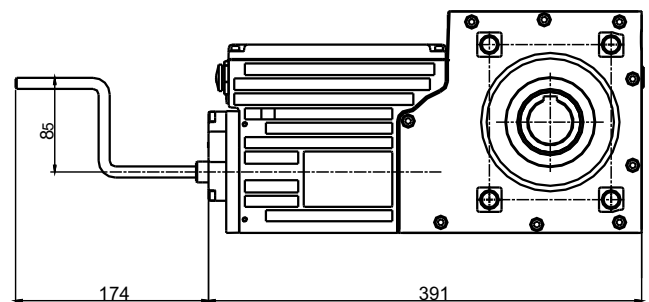
(option)

Limit switch version 2 without power relays (option)
or terminal box (without switch mechanism)
(Standard)



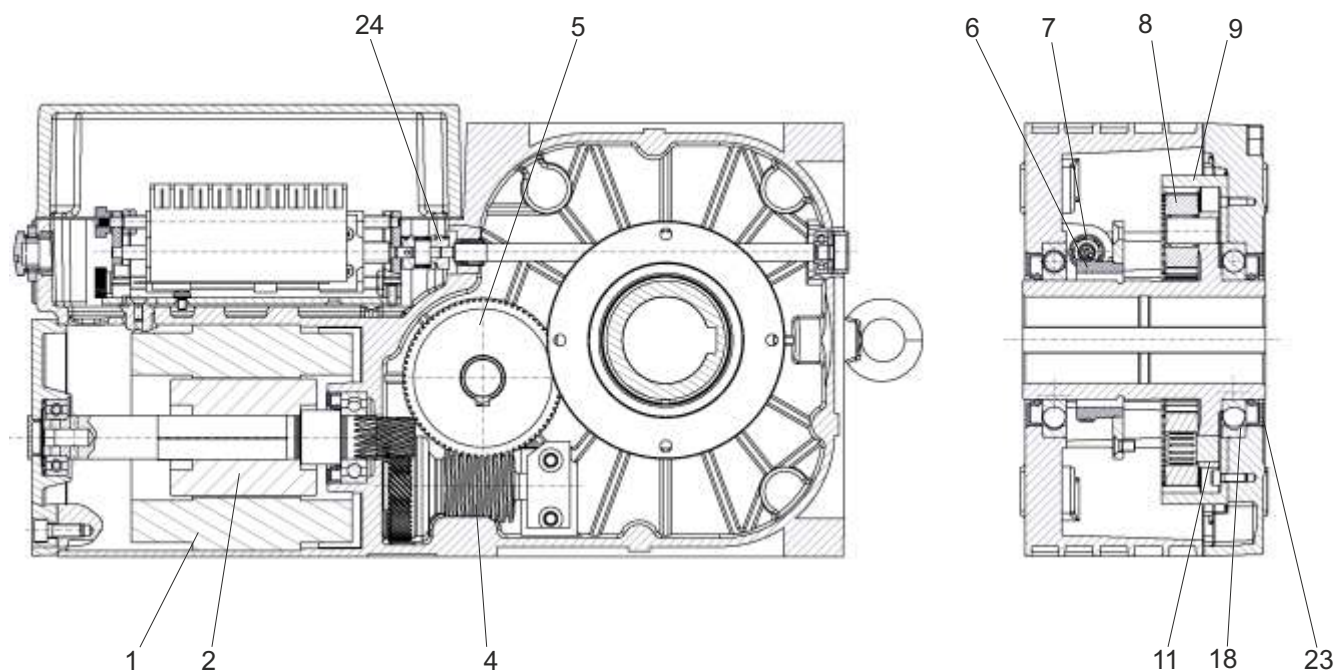
Hand crank with elec. interlock (option)

(removable)



Some options may be combined

Spare parts



Item	Designation	Article No.
1	Stator	Serial No.
2	Rotor shaft complete	Serial No.
4	Worm shaft	Serial No.
5	Worm wheel	Serial No.
6	Control wheel	Serial No.
7	Control shaft	Serial No.
8	Planetary gear	6-160-01.06
9	Crown gear	6-160-01.03
11	Carrier disk	6-160-01.04
18	Deep-groove ball bearing	00300101601010
23	Radial shaft seal	00200105580082
24	Clutch	Serial No.

Spare parts can only be supplied if the serial number is stated

Circuit diagrams



MR6

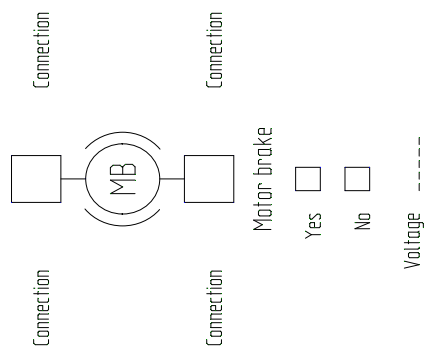
The relays used must be interlocked

XS6 = terminal strip 6 pole

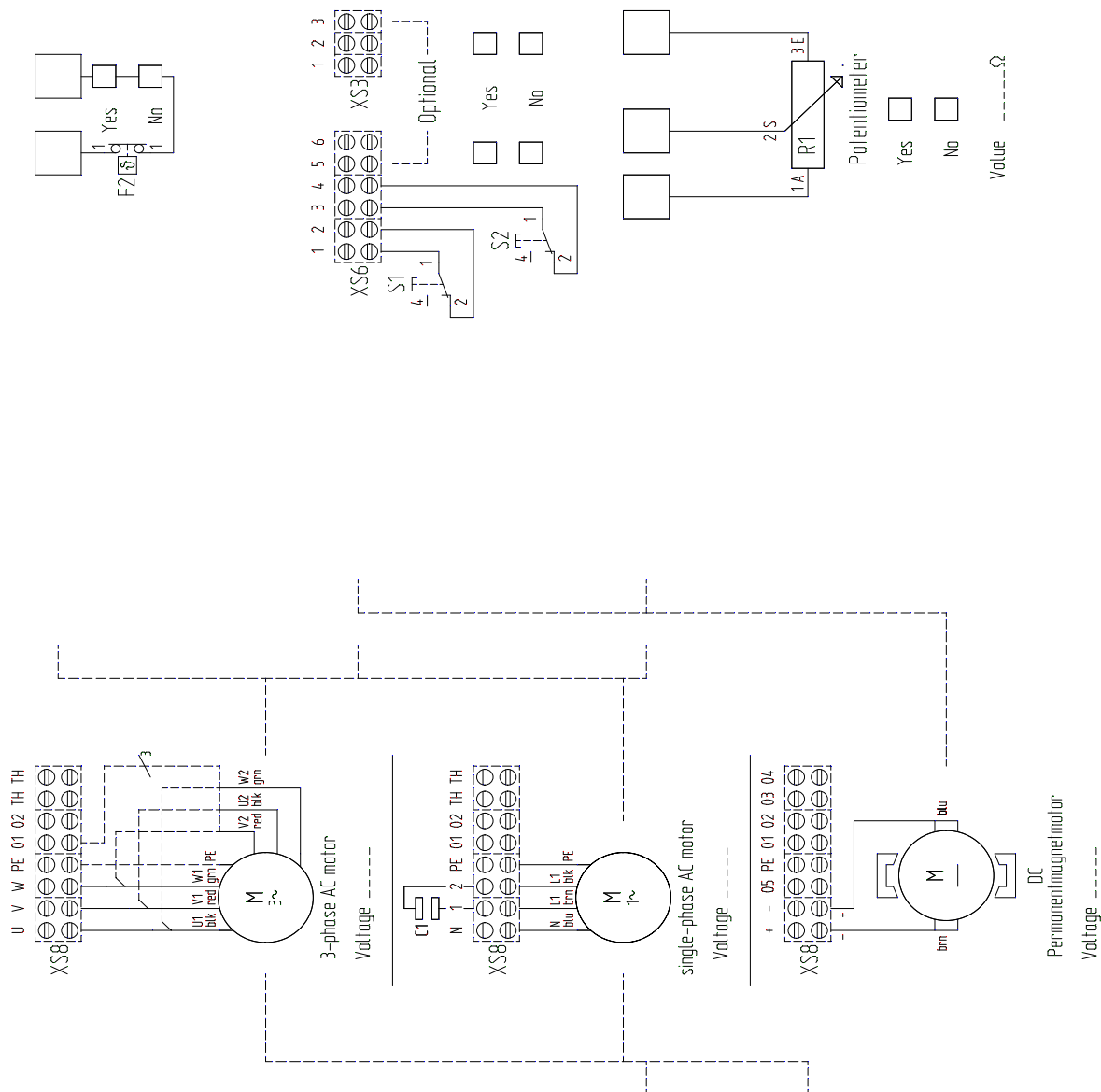
Options:

- Motor brake 24 Volt/DC + 230 Volt/AC + 400 Volt/AC

- Potentiometer for actual value / different values on request



Subject to technical changes



Built-in limit switches - version 1

Connection plan with internal wiring

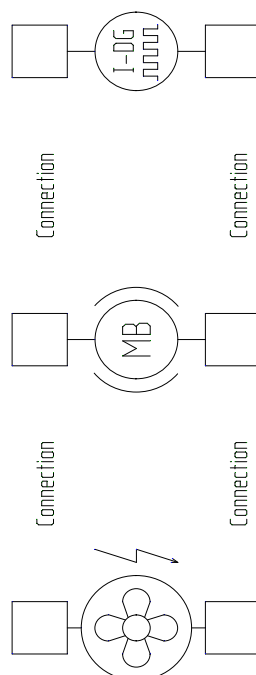
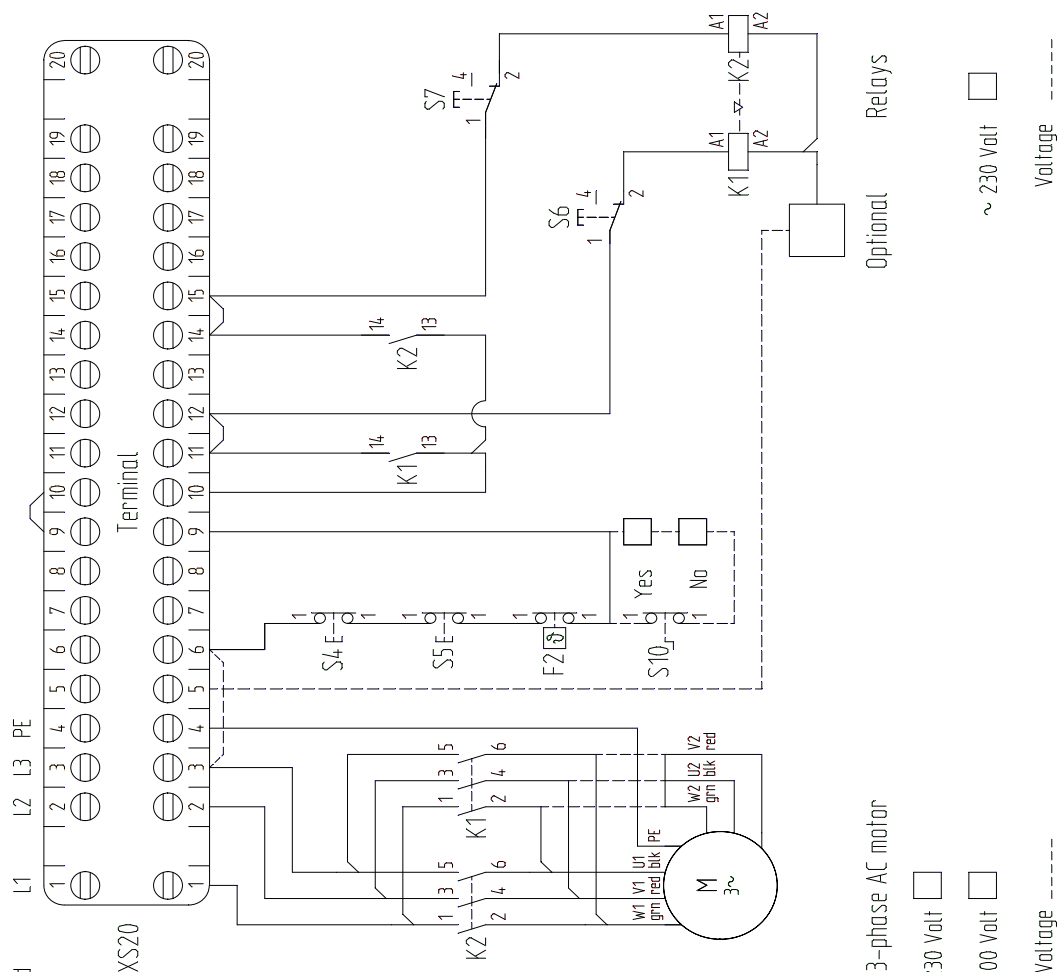
Attention !

The relays are mechanical interlocked
The control unit as standard is locked
Remove jumpers between N° 11 + 12 and 14 + 15 for inching mode
If an Emergency Stop or a Stop button is installed, the jumpers between N° 9-10 must be removed
External pushbuttons are to be wired between N° 10 + 12 or 10 + 15

K1 = relay for end position S6
K2 = relay for end position S7
F2 = Thermal switch inside motor winding
S4 = Safety limit switch for end position S6
S5 = Safety limit switch for end position S7
S6 = limit switch
S7 = limit switch
S10 = Safety isolator switch for emergency hand crank

Options:

- S10 emergency hand crank with push-in isolator switch
- Motor brake 24 Volt/DC + 230 Volt/AC + 400 Volt/AC
- External ventilator with axial fan 230 Volt/AC for Compacta MS12
- Incremental-Encoder / different resolutions on request



External ventilation 3-phase AC motor

Yes ☐ ☐
No ☐ ☐

Voltage ----- Resolutions -----

Connection data refer to supplement

Motor brake

Yes ☐ ☐
No ☐ ☐

Voltage -----

Incremental-Encoder

Yes ☐ ☐
No ☐ ☐

Resolutions -----

3-phase AC motor

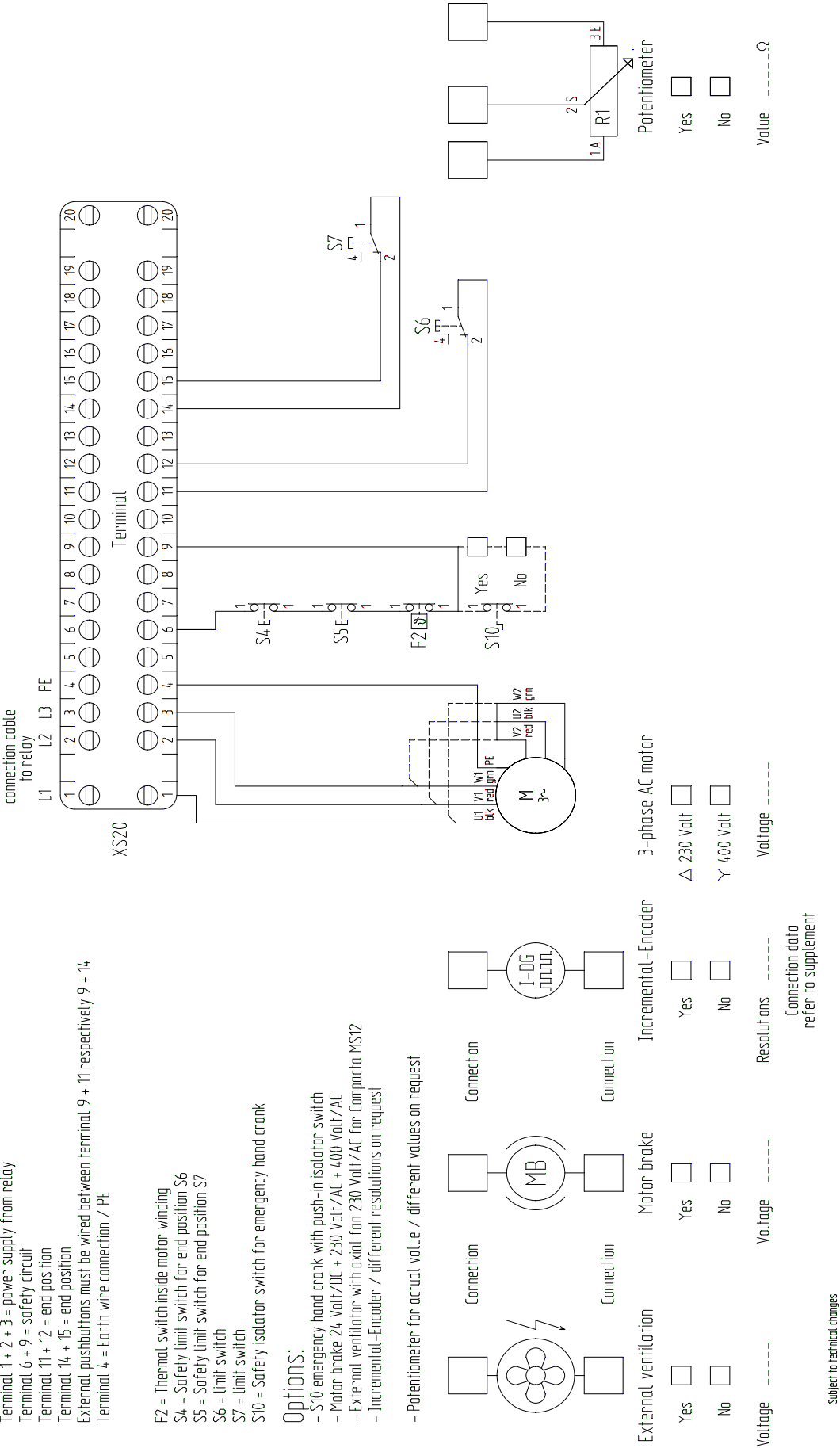
Δ 230 Volt ☐
 Y 400 Volt ☐

Voltage -----

Optional Relays

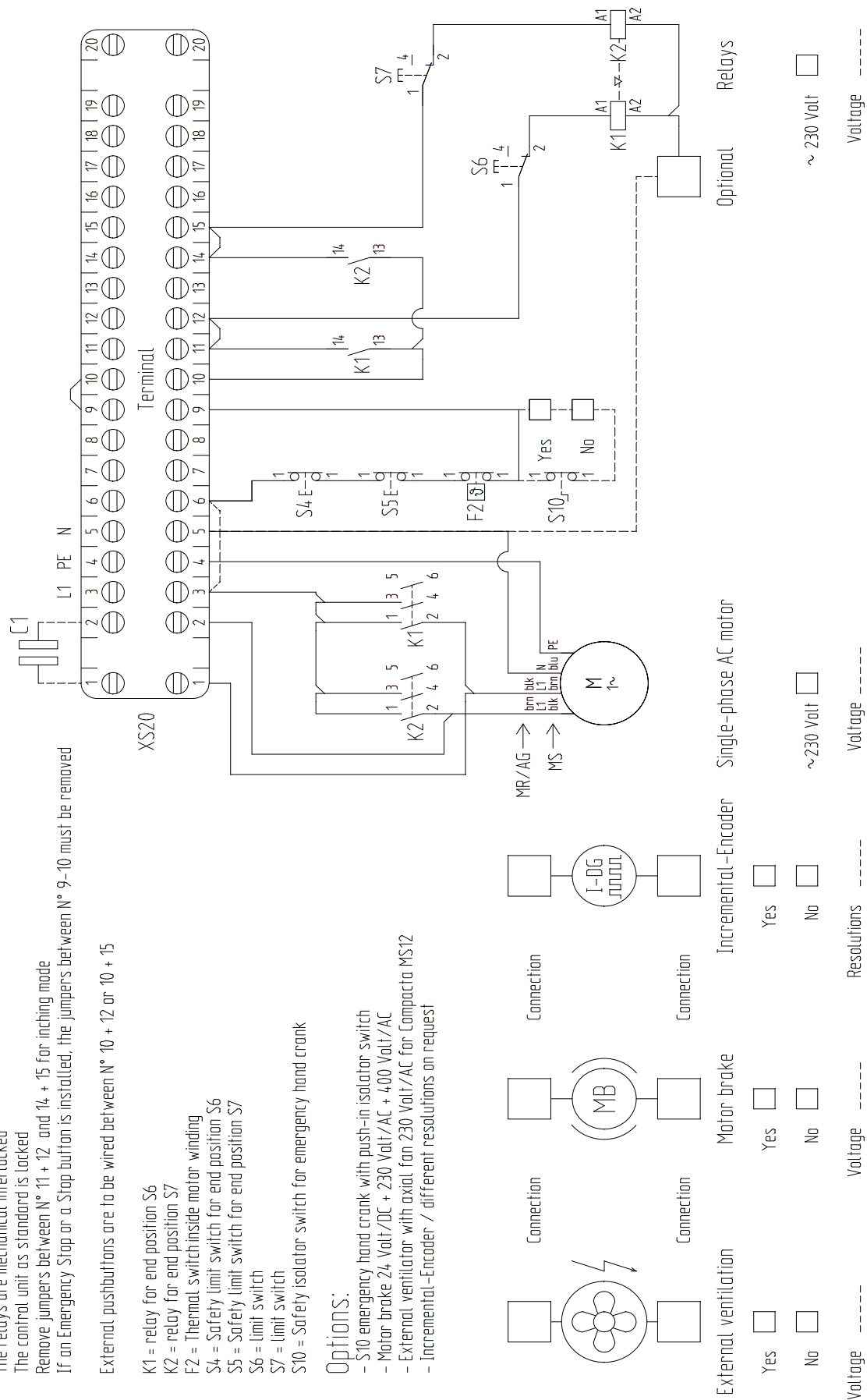
☐ ☐
~ 230 Volt Voltage -----

Built-in limit switches - version 2
Connection plan with internal wiring



Built-in limit switches - version 11

Connection plan with internal wiring



Subject to technical changes

Built-in limit switches - version 22

Connection plan with internal wiring

Attention !

The relays used must be interlocked

Terminal 1 + 2 + 3 + 4 = power supply to relay

Terminal 6 + 9 = safety circuit

Terminal 11 + 12 = end position

Terminal 14 + 15 = end position

External pushbuttons must be wired between terminal 9 + 11 respectively 9 + 14

F2 = Thermal switch

S4 = Safety limit switch for end position S6

S5 = Safety limit switch for end position S7

S6 = limit switch

S7 = limit switch

S10 = Safety isolator switch for emergency hand crank

Options:

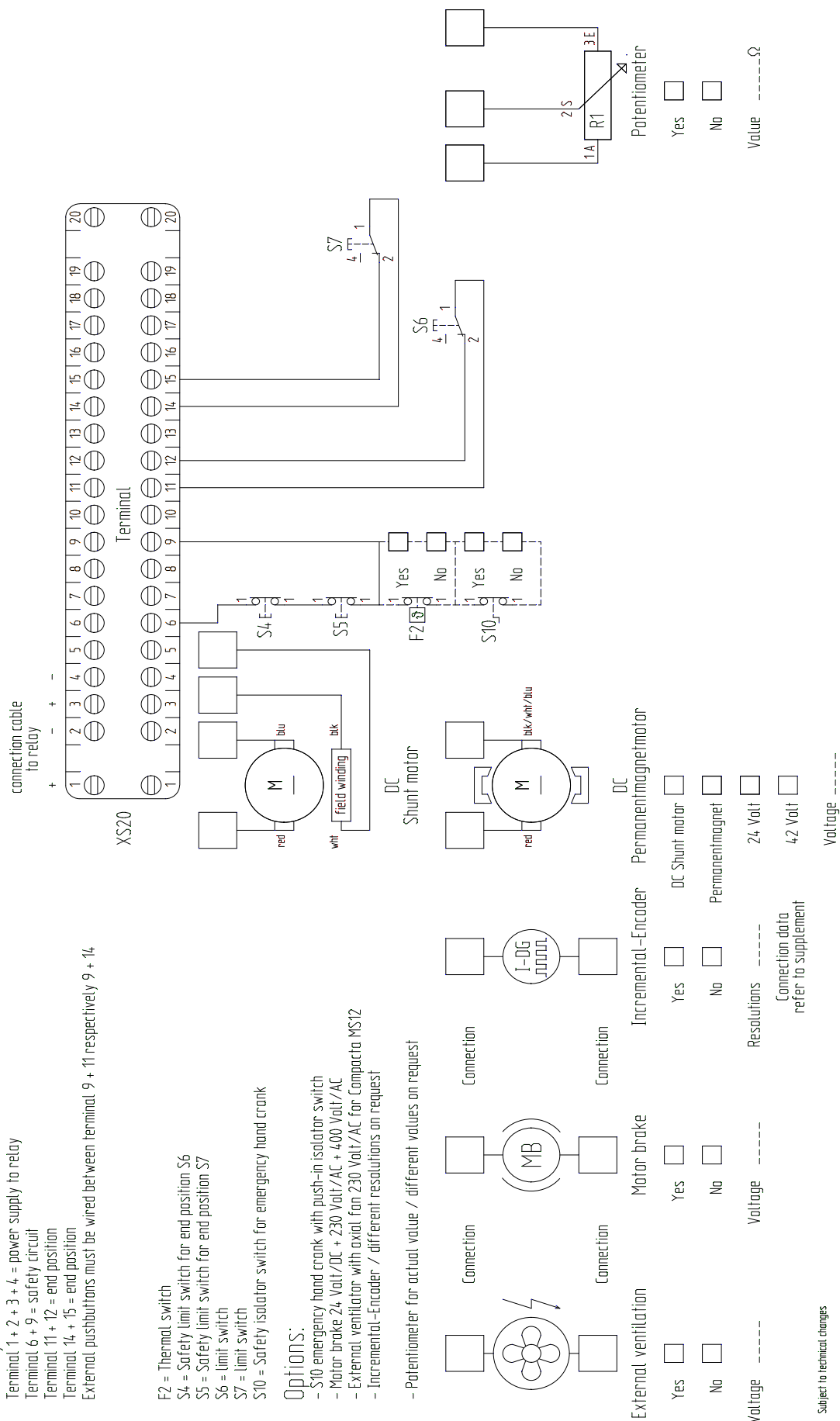
- S10 emergency hand crank with push-in isolator switch

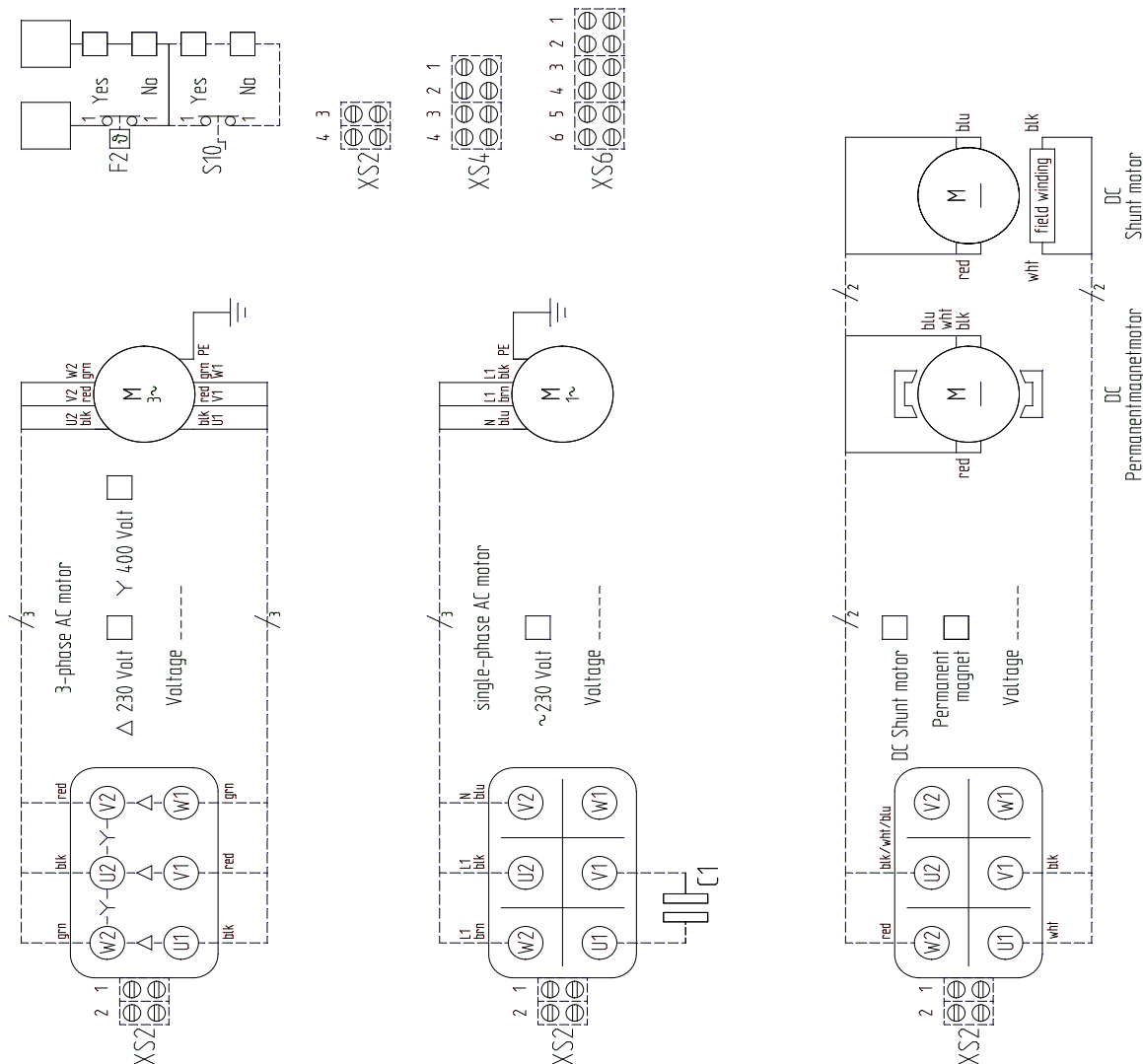
- Motor brake 24 Volt/DC + 230 Volt/AC + 400 Volt/AC

- External ventilator with axial fan 230 Volt/AC for Compacta MS12

- Incremental-Encoder / different resolutions on request

- Potentiometer for actual value / different values on request



Connection diagram with terminal box


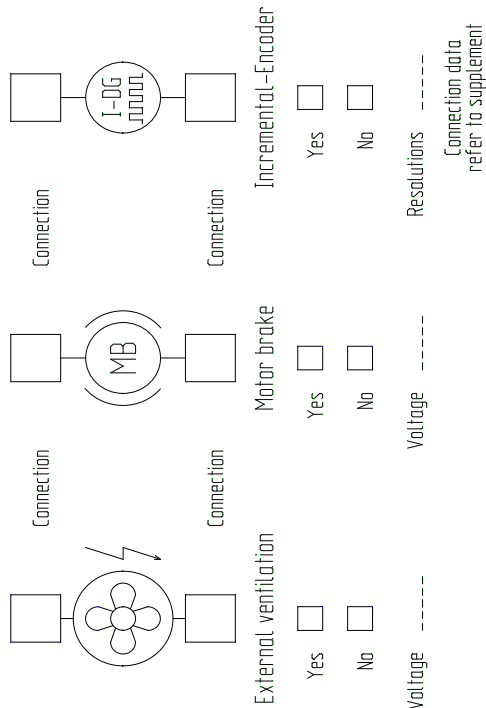
Attention !
The relays used must be interlocked

F2 = Thermal switch
XS2 = Terminal strip 2 pole
XS4 = Terminal strip 4 pole
XS6 = Terminal strip 6 pole

S10 = Safety isolator switch for emergency hand crank

Options:

- S10 emergency hand crank with push-in isolator switch
- Motor brake 24 Volt/DC + 230 Volt/AC + 400 Volt/AC
- External ventilator with axial fan 230 Volt/AC for Compacta MS12
- Incremental-Encoder / different resolutions on request



Subject to technical changes

Technical questionnaire

Company _____

Date _____

Processed by _____

Tel.-No. _____

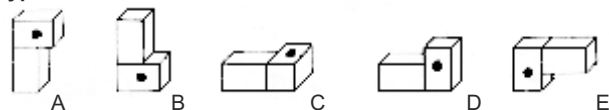
Quantity required _____

Dear customer,

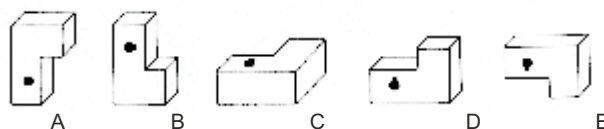
In your own interest, you should answer the questions below as precisely as possible in order to submit a detailed quotation.

1. Application? _____
2. What output speed / torque is required? _____ rpm / _____ Nm
3. Operating voltage (Y or Δ to be stated for three phase A.C. voltage) _____ Volt
4. Mains voltage ☐ Terminal box ☐ Integrated limit switches
5. Switch control version No. _____, number of rev. at output shaft _____
6. Start-up conditions ☐ Easy ☐ Moderately difficult ☐ Difficult
7. Operating mode ☐ Continuous duty (only with motor cooling)
☐ Short operating time
☐ Intermittent service % relative duty _____
Operating time _____ min.
Standstill _____ min.
Number of switching cycles per hour _____
8. Will the drive be subjected to normal ambient temperature? Temperature _____ °C
9. What enclosure is the drive to have? (Enclos. IP 54 is standard) IP _____
10. Automatic interlock (not a safety issue) ☐ necessary ☐ permissible ☐ not perm.
11. Is the motor to be equipped with a brake?
(This is necessary if the transmission is not to have an automatic interlock or if precise positioning is required) ☐ Yes ☐ No
12. Is the motor to be equipped with a slipping clutch? (only with type MS 12) ☐ Yes ☐ No
13. Transmission fixing (only important for type AG) ☐ Cover (recomm. for type AG) ☐ Casing
14. Additional equipment _____
15. Are persons in danger in case of failure of drive? ☐ Yes ☐ No
16. In what position is the drive to be mounted?
Caution! Please specify the installation position drawn or special positions. _____

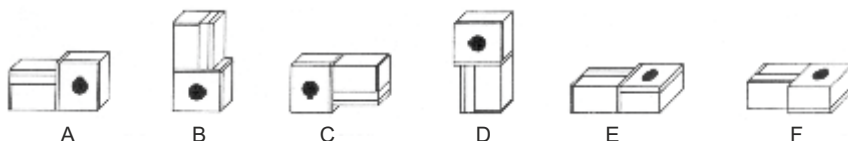
Type MS



Type MR



Type AG



Subject to technical changes