

# Technical Description

**Slip-on geared motor COMPACTA**



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# Slip-on geared motor COMPACTA

## **Technical description**

### **1. Design**

COMPACTA gear motors from Hein Lanz 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  $\Delta$ .

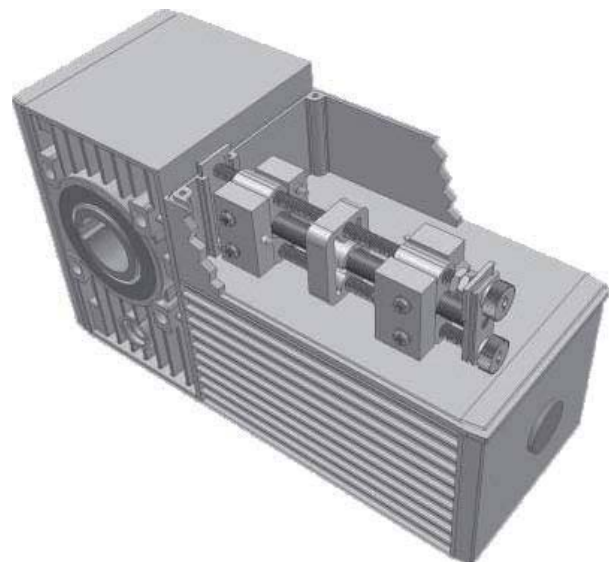
### **4. Duty cycle**

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.

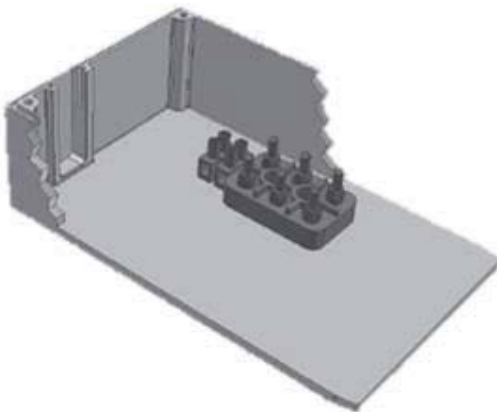
### **5. Limit switches (option)**

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.

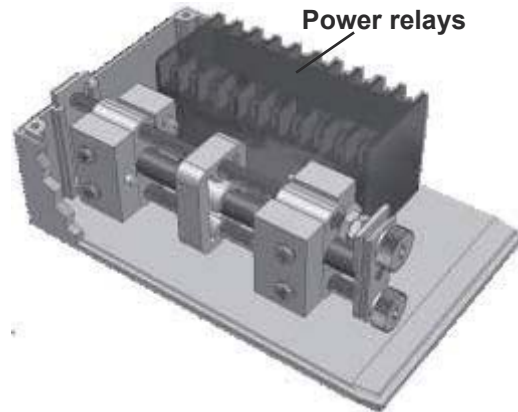


# Slip-on geared motor COMPACTA



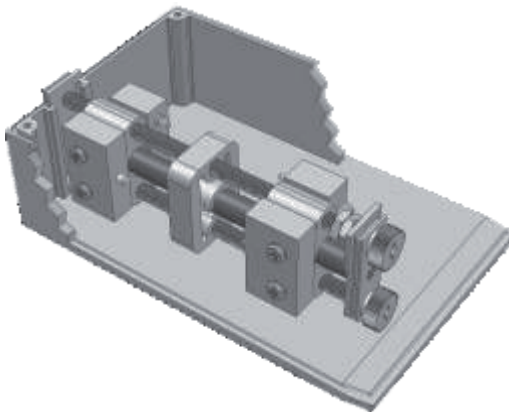
## Version 00

Terminal box (box without switch mechanism)



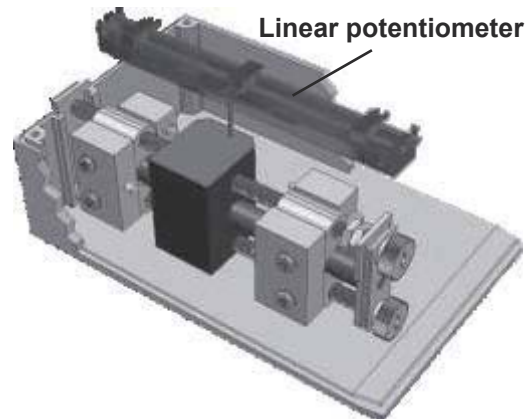
## Limit switch version 1 (not MR6)

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**.



## Limit switch version 2P (not MR6)

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

## Slip-on geared motor COMPACTA

### 6. Conditions of use



It is a condition of sale that Hein Lanz gear motors shall not be used for the movement of loads where by 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 (Hein Lanz) or their representatives.

Don't use this drive in explosive environments. A void 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 Hein Lanz, 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)

## Slip-on geared motor COMPACTA

# MR6



## Slip-on geared motor COMPACTA

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

Order code	Output speed n <sub>2</sub> rpm	Motor speed n <sub>1</sub> rpm	Motor output kW	Output torque Nm (30% duty cycle)	Transmission ratio	Self-locking	Max. limit switch range output rotation
CAC-MR6-3F22-1106	100	2700	0,22	10,5	27:1	So *	275
CAC-MR6-3E22-2206	80	2700	0,22	13	34:1	So *	275
CAC-MR6-3D22-3305	67	2700	0,22	15	40:1	So *	184
CAC-MR6-3C22-4405	54	2700	0,22	19	50:1	So *	184
CAC-MR6-3B22-5504	34	2700	0,22	26	80:1	So *	92
CAC-MR6-3A22-6604	27	2700	0,22	33	100:1	So *	92
CAC-MR6-3922-7713	17	2700	0,22	40	160:1	Ss *	46
CAC-MR6-3822-9813	14	2700	0,22	50	200:1	Ss *	46
CAC-MR6-3722-8922	12	2700	0,22	44	224:1	Sd *	33
CAC-MR6-3622-AA22	10	2700	0,22	55	280:1	Sd *	33
CAC-MR6-3511-B713	8	1300	0,15	60	160:1	Ss *	46
CAC-MR6-3411-B922	6	1300	0,15	60	224:1	Sd *	33
CAC-MR6-3311-BA22	4,8	1300	0,15	60	280:1	Sd *	33
CAC-MR6-3211-AB21	3,6	1300	0,15	55	360:1	Sd *	21
CAC-MR6-3111-AC21	2,9	1300	0,15	55	450:1	Sd *	21

Single phase motors - 1x230V-50Hz

Order code	Output speed n <sub>2</sub> rpm	Motor speed n <sub>1</sub> rpm	Motoroutput kW	Output torque Nm (15% duty cycle) **	Transmission ratio	Self-locking
CAC-MR6-1F22-1100	100	2700	0,09	6,0	27:1	So *
CAC-MR6-1E22-2200	80	2700	0,09	7,5	34:1	So *
CAC-MR6-1D22-3300	67	2700	0,09	8,5	40:1	So *
CAC-MR6-1C22-4400	54	2700	0,09	10,5	50:1	So *
CAC-MR6-1B22-5500	34	2700	0,09	14,5	80:1	So *
CAC-MR6-1A22-6600	27	2700	0,09	18,0	100:1	So *
CAC-MR6-1922-7710	17	2700	0,09	21,0	160:1	Ss *
CAC-MR6-1822-9810	14	2700	0,09	26,5	200:1	Ss *
CAC-MR6-1722-8920	12	2700	0,09	22,0	224:1	Sd *
CAC-MR6-1622-AA20	10	2700	0,09	27,5	280:1	Sd *
CAC-MR6-1511-B710	8	1300	0,07	33,5	160:1	Ss *
CAC-MR6-1411-C920	6	1300	0,07	35,0	224:1	Sd *
CAC-MR6-1311-DA20	4,8	1300	0,07	43,5	280:1	Sd *
CAC-MR6-1211-EB20	3,6	1300	0,07	54,0	360:1	Sd *
CAC-MR6-1111-FC20	2,9	1300	0,07	55,0	450:1	Sd *

24V DC Permanentmagnet-Motor

Order code	Output speed n <sub>2</sub> rpm	Output torque Nm	Transmission ratio	Self-locking
CDC-MR6-0C00-1100	65	7	27 : 1	So *
CDC-MR6-0B00-2200	51,5	8,75	34 : 1	So *
CDC-MR6-0A00-3300	44	10	40 : 1	So *
CDC-MR6-0900-4400	35	12	50 : 1	So *
CDC-MR6-0800-5500	22	16,5	80 : 1	So *
CDC-MR6-0700-6600	17,5	20,5	100 : 1	So *
CDC-MR6-0600-7700	11	24,5	160 : 1	So *
CDC-MR6-0500-8810	9	30,5	200 : 1	Ss *
CDC-MR6-0400-9920	8	25	224 : 1	Sd *
CDC-MR6-0300-AA20	6	31	280 : 1	Sd *
CDC-MR6-0200-BB20	5	38,5	360 : 1	Sd *
CDC-MR6-0100-CC20	4	47,5	450 : 1	Sd *

P = 0,12 kW  
I<sub>N</sub> = 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.

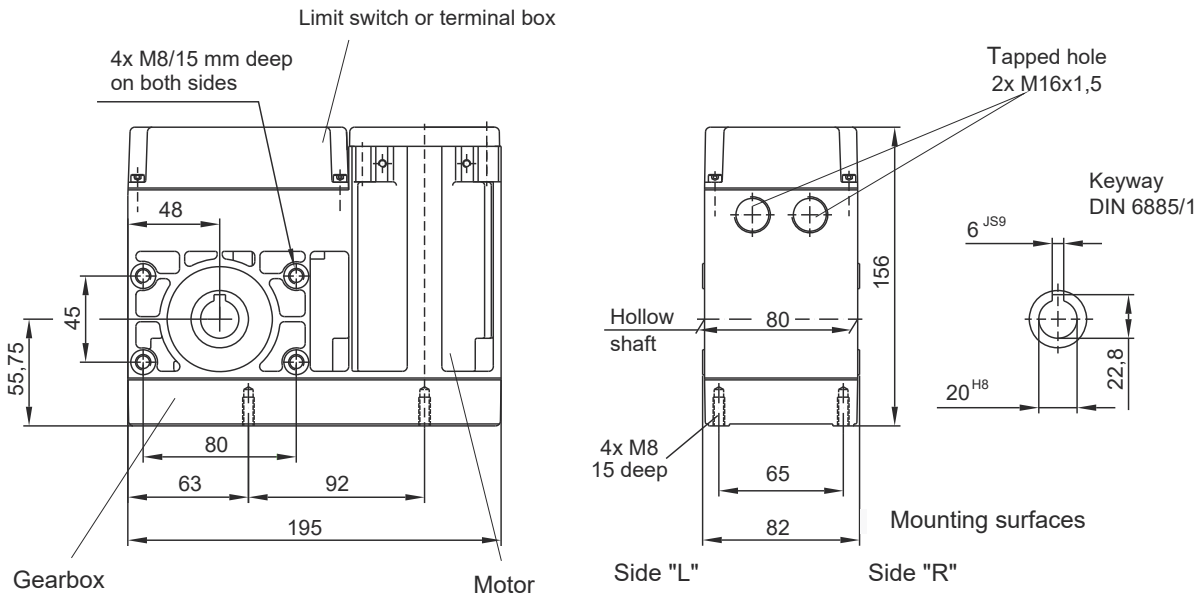
Please contact the manufacturer in case of the following operating conditions:

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

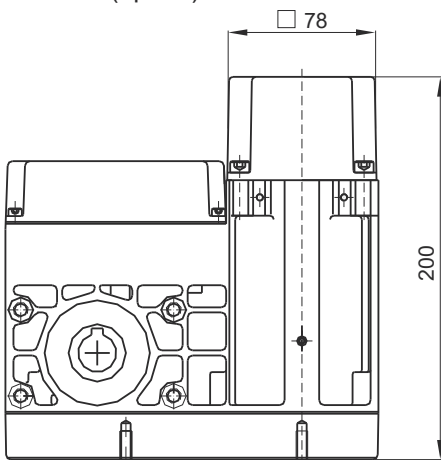
# Slip-on geared motor COMPACTA

## Dimensions

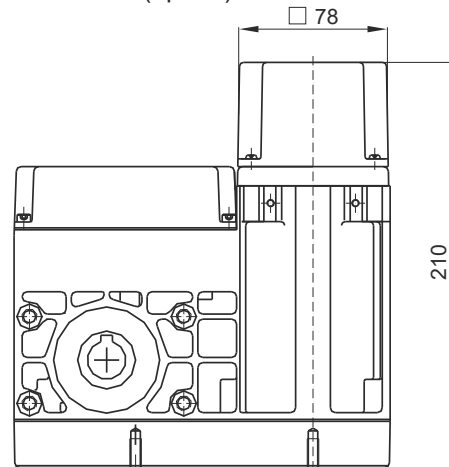
Standard drive with 3-phase and single-phase motors



DC-motor (option)



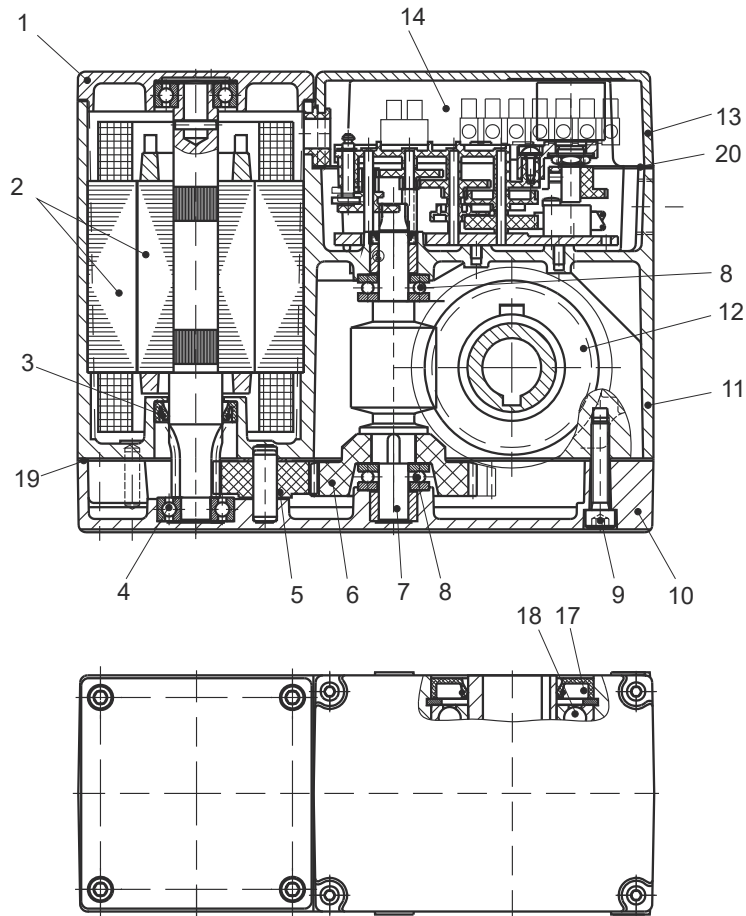
Motor brake (option)





# Slip-on geared motor COMPACTA

## 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

Slip-on geared motor COMPACTA

# MS 12



# Slip-on geared motor COMPACTA

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

Order code	Output speed n <sub>2</sub> rpm	Motor speed n <sub>1</sub> rpm	Motor output kW **			Output torque Nm **			Transmission ratio	Self- locking	Max. limit switch range; output rotation
			40%	60%	100%	40%	60%	100%			
CAC-MS12-3N33-1101	193	2750	0,4	0,3	0,3	16	12	12	14,2:1	So *	275
CAC-MS12-3M33-2201	137,5	2750	0,4	0,3	0,3	21	15,7	15,7	20:1	So *	275
CAC-MS12-3L33-3301	94,8	2750	0,4	0,3	0,3	30	22,5	22,5	29:1	So *	275
CAC-MS12-3K33-4401	68	2750	0,4	0,3	0,3	39,5	29,5	29,5	40,5:1	So *	275
CAC-MS12-3J33-5501	61	2750	0,4	0,3	0,3	44	33	33	45:1	So *	275
CAC-MS12-3H22-6301	47,6	1380	0,3	0,23	0,23	45,5	34	34	29:1	So *	275
CAC-MS12-3G33-5601	43,6	2750	0,4	0,3	0,3	44	33	33	63:1	So *	275
CAC-MS12-3F33-7701	36,7	2750	0,4	0,3	0,3	47	35	35	75:1	So *	275
CAC-MS12-3E33-8811	32,7	2750	0,4	0,3	0,3	59	44	44	84:1	Ss *	275
CAC-MS12-3D33-9911	30,5	2750	0,4	0,3	0,3	63	47	47	90:1	Ss *	275
CAC-MS12-3C33-BA11	24,1	2750	0,4	0,3	0,3	72	54	54	114:1	Ss *	275
CAC-MS12-3B22-A601	21,9	1380	0,3	0,23	0,23	66	49	49	63:1	So *	275
CAC-MS12-3A33-CB21	18,3	2750	0,4	0,3	0,3	84	63	63	150:1	Sd *	275
CAC-MS12-3922-D811	16,4	1380	0,3	0,23	0,23	88	66	66	84:1	Ss *	275
CAC-MS12-3822-F911	15,3	1380	0,3	0,23	0,23	94,5	71	71	90:1	Ss *	275
CAC-MS12-3722-HA11	12,1	1380	0,3	0,23	0,23	107,5	80,5	80,5	114:1	Ss *	275
CAC-MS12-3622-JB21	9,2	1380	0,3	0,23	0,23	126	94,5	94,5	150:1	Sd *	275
CAC-MS12-3522-KC21	7,7	1380	0,3	0,23	0,23	132	99	99	180:1	Sd *	275
CAC-MS12-3422-LD21	6,1	1380	0,3	0,23	0,23	142	106,5	106,5	225:1	Sd *	275
CAC-MS12-3311-DB21	4,5	680	0,12	0,09	0,09	88	66	-	150:1	Sd *	275
CAC-MS12-3211-EC21	3,8	680	0,12	0,09	0,09	92	68	-	180:1	Sd *	275
CAC-MS12-3111-GD21	3	680	0,12	0,09	0,09	100	75	-	225:1	Sd *	275

Single-phase motors - 1x230V-50Hz

Order code	Output speed n <sub>2</sub> rpm	Motor speed n <sub>1</sub> rpm	Motor output kW	Output torque Nm (20% ED) ***	Transmission ratio	Self- locking
CAC-MS12-1J22-2200	137,5	2750	0,28	13,0	20,0:1	So *
CAC-MS12-1H22-3300	94,8	2750	0,28	18,0	29,0:1	So *
CAC-MS12-1G22-4400	68,0	2750	0,28	23,9	40,5:1	So *
CAC-MS12-1F22-5500	61,0	2750	0,28	26,0	45,0:1	So *
CAC-MS12-1E11-6300	47,6	1380	0,25	27,0	29,0:1	So *
CAC-MS12-1D22-5600	43,6	2750	0,28	26,0	63,0:1	So *
CAC-MS12-1C22-7700	36,7	2750	0,28	28,0	75,0:1	So *
CAC-MS12-1B22-8810	32,7	2750	0,28	35,0	84,0:1	Ss *
CAC-MS12-1A22-9910	30,5	2750	0,28	38,0	90,0:1	Ss *
CAC-MS12-1922-BA10	24,1	2750	0,28	43,0	114,0:1	Ss *
CAC-MS12-1811-A600	21,9	1380	0,25	40,0	63,0:1	So *
CAC-MS12-1722-CB20	18,3	2750	0,28	49,8	150,0:1	Sd *
CAC-MS12-1611-D810	16,4	1380	0,25	53,0	84,0:1	Ss *
CAC-MS12-1511-E910	15,3	1380	0,25	56,9	90,0:1	Ss *
CAC-MS12-1411-FA10	12,1	1380	0,25	65,0	114,0:1	Ss *
CAC-MS12-1311-GB20	9,2	1380	0,25	75,9	150,0:1	Sd *
CAC-MS12-1211-HC20	7,7	1380	0,25	79,0	180,0:1	Sd *
CAC-MS12-1111-JD20	6,1	1380	0,25	84,9	225,0:1	Sd *

Additional output table information:  
 \*So = No self-locking  
 Sd = Dynamic self-locking  
 Ss = Static 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.

24V DC Permanentmagnet-Motor

	Output speed n <sub>2</sub> rpm	Output torque Nm	Transmission ratio	Self-locking
CDC-MS12-0D00-1100	140	16	14,2 : 1	So *
CDC-MS12-0C00-2200	100	21	20 : 1	So *
CDC-MS12-0B00-3300	69	30	29 : 1	So *
CDC-MS12-0A00-4400	49	40	40,5 : 1	So *
CDC-MS12-0900-5500	44	45	45 : 1	So *
CDC-MS12-0800-5600	32	45	63 : 1	So *
CDC-MS12-0700-6700	27	48	75 : 1	So *
CDC-MS12-0600-7810	24	60	84 : 1	Ss *
CDC-MS12-0500-8910	22	65	90 : 1	Ss *
CDC-MS12-0400-9A10	17,5	73	114 : 1	Ss *
CDC-MS12-0300-AB20	13	88	150 : 1	Sd *
CDC-MS12-0200-BC20	11	91	180 : 1	Sd *
CDC-MS12-0100-CD20	8,9	96	225 : 1	Sd *

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

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

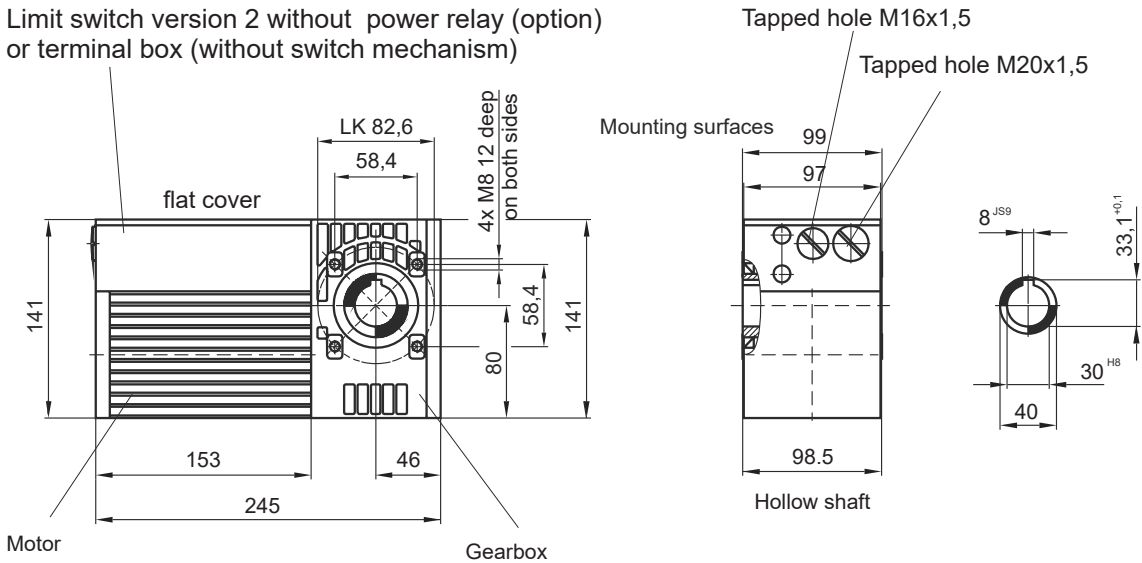
The output speed of Compacta gear motors with DC motors varies with the output torque.

# Slip-on geared motor COMPACTA

## Dimensions

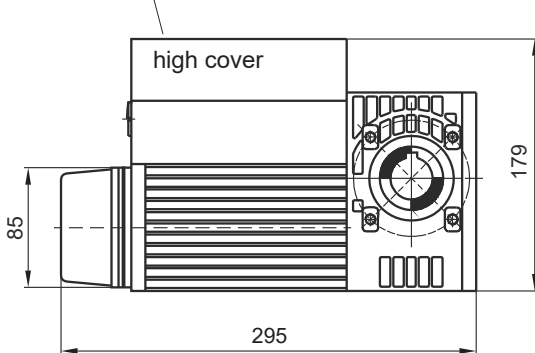
### Standard drive with 3-phase or single-phase motor

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

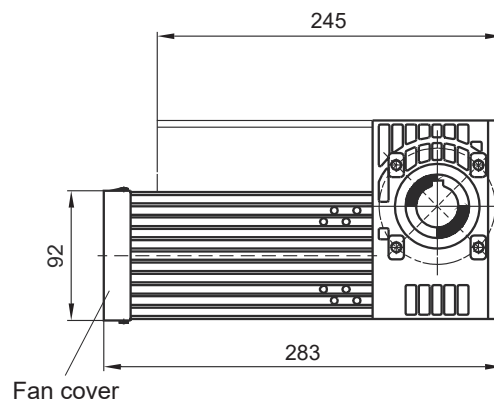


### with motor brake (option)

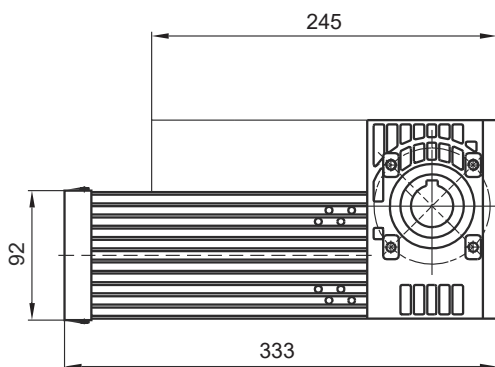
Limit switch version 1 with power relays, (options)



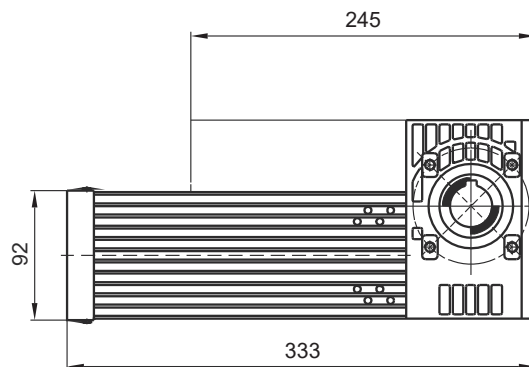
### with rotor fan (option)



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



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

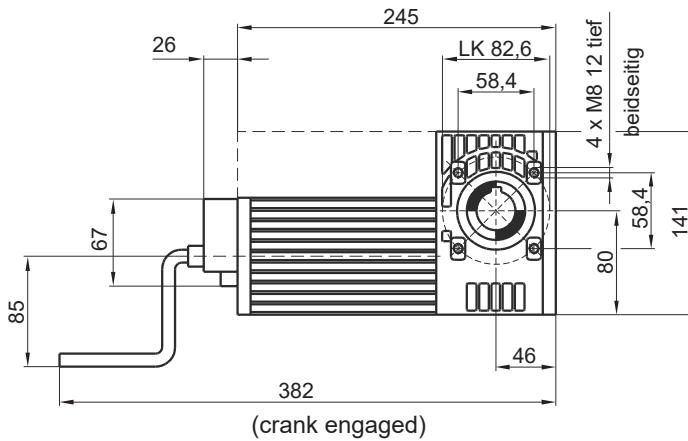


Some options may be combined

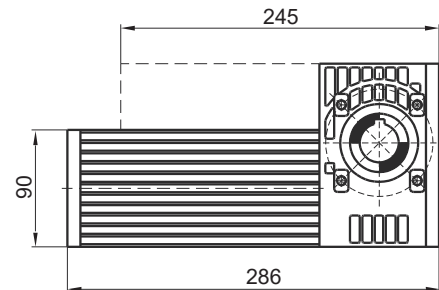
# Slip-on geared motor COMPACTA

## Dimensions

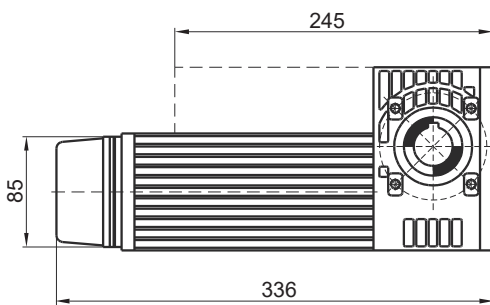
**Hand crank with elec. interlock (option)**  
(removable)



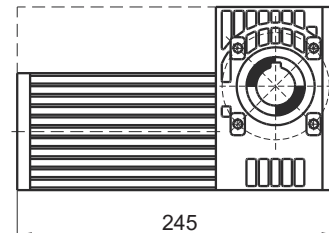
**with DC motor (option)**



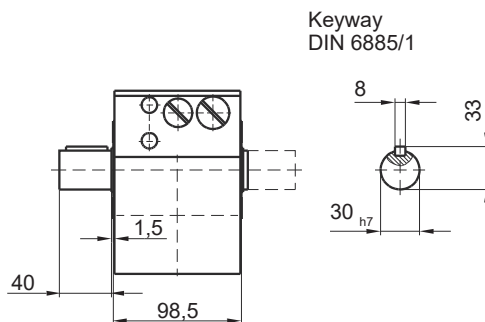
**with DC motor and motor brake (option)**



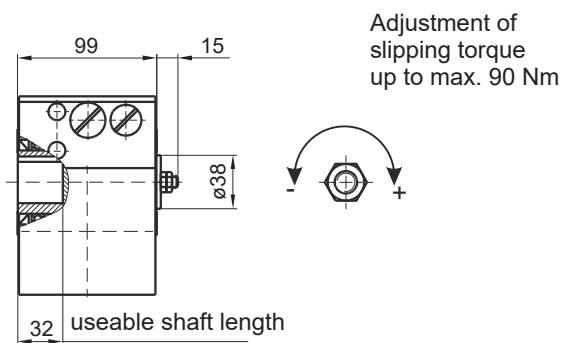
**with integrated cone brake (only with single- and 3-phase AC motor) (option)**



**with stub shaft (option)**  
(left or right)



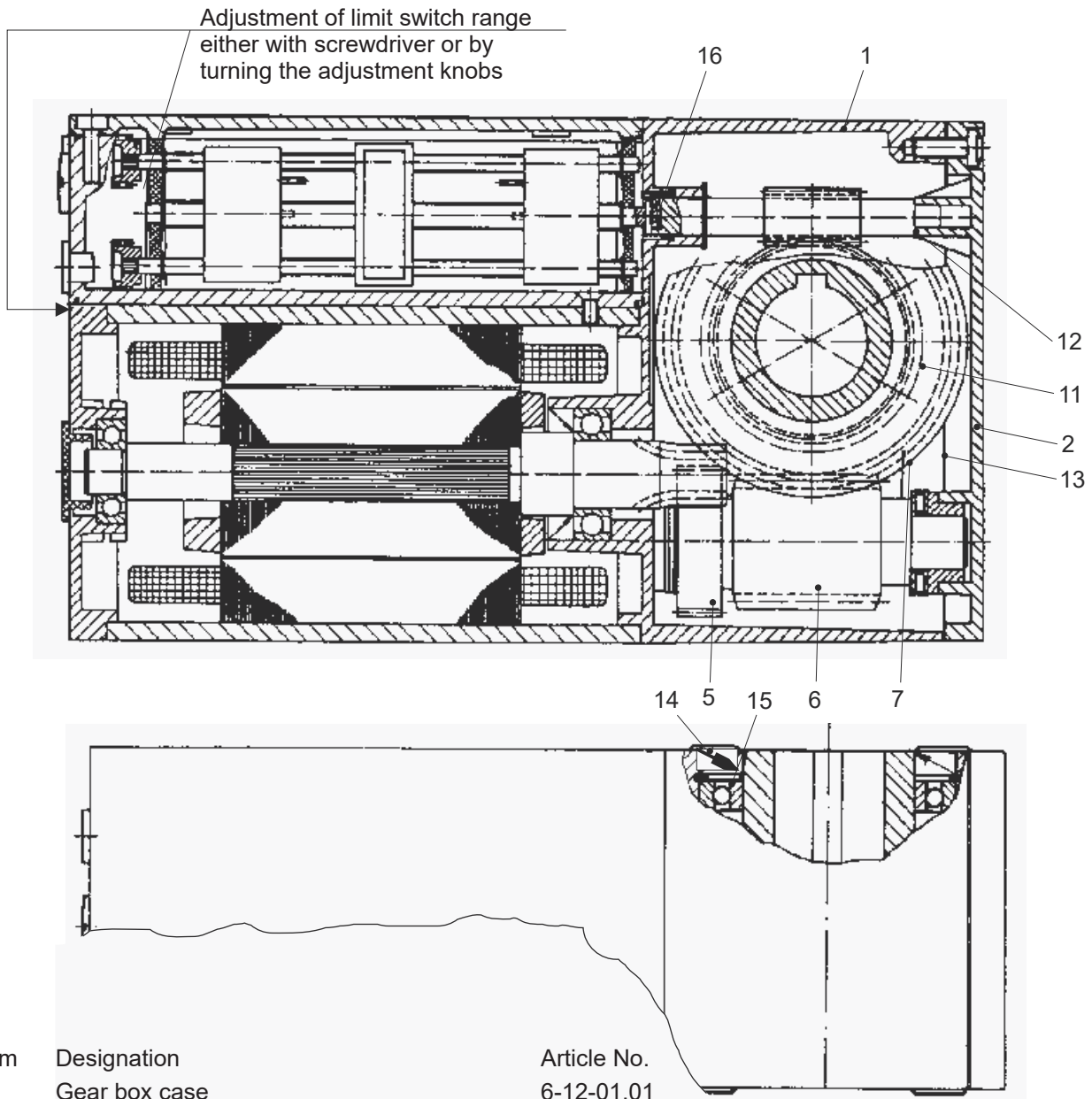
**with slip clutch (option)**



Some options may be combined

# Slip-on geared motor COMPACTA

## 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

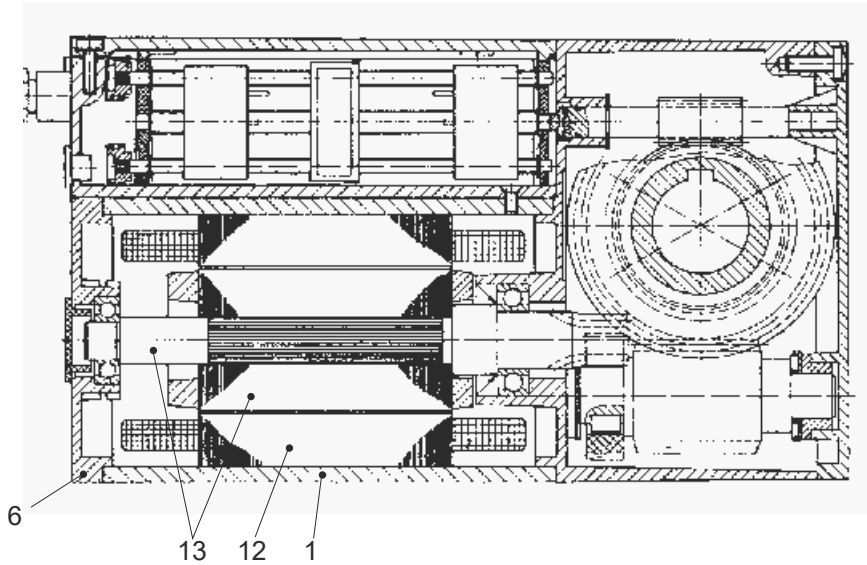
**Spare parts can only be supplied if the serial number is stated**

Some options may be combined

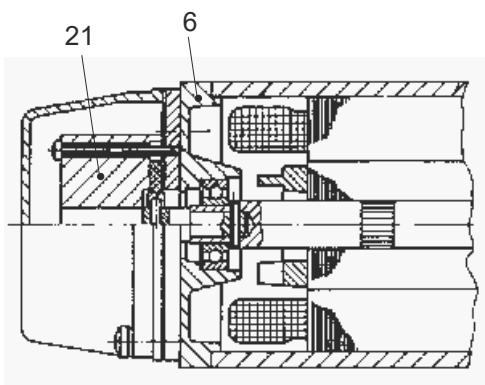
# Slip-on geared motor COMPACTA

## Spare parts motor

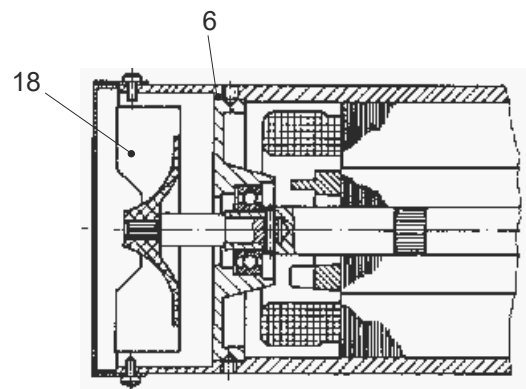
Motor - Standard version (without fan)



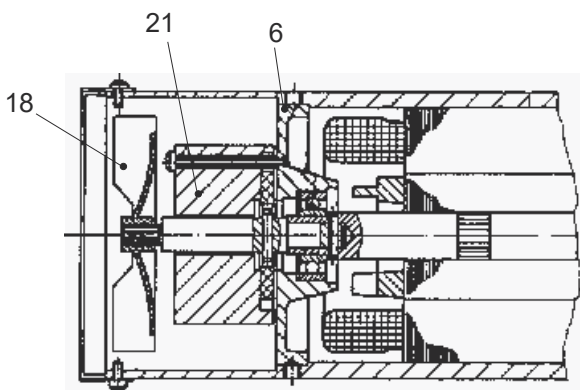
Motor with brake  
(without fan)



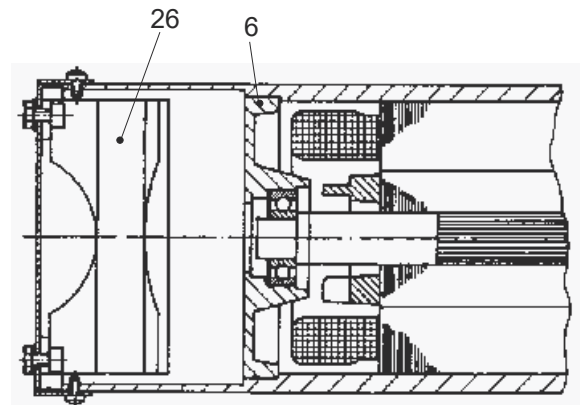
Motor with rotor fan



Motor with brake and rotor fan



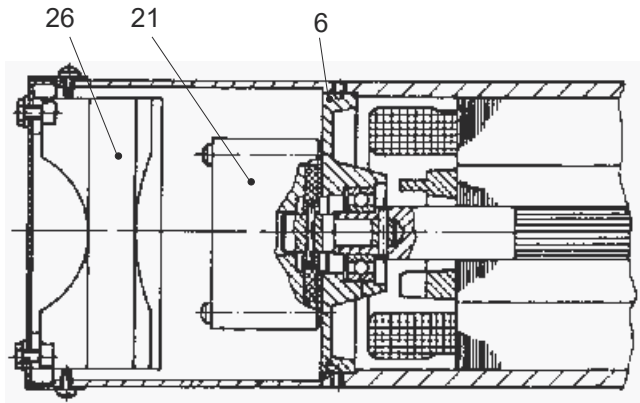
Motor with motorized fan



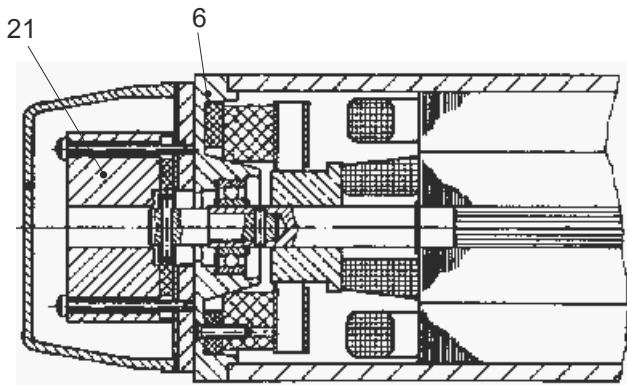
# Slip-on geared motor COMPACTA

## 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

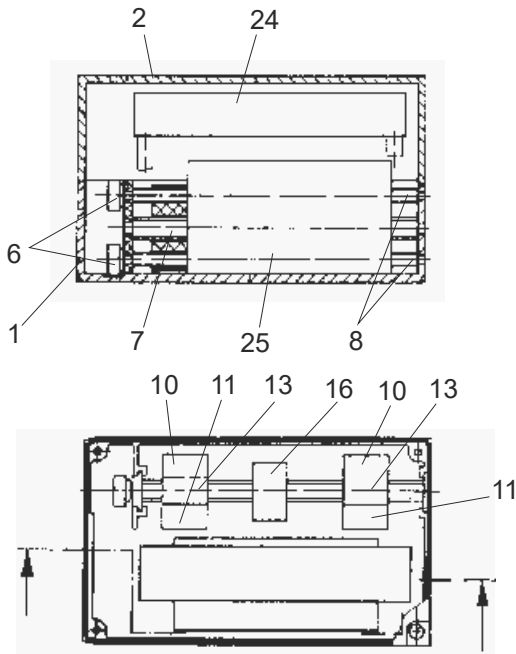
Spare parts can only be supplied if the serial number is stated



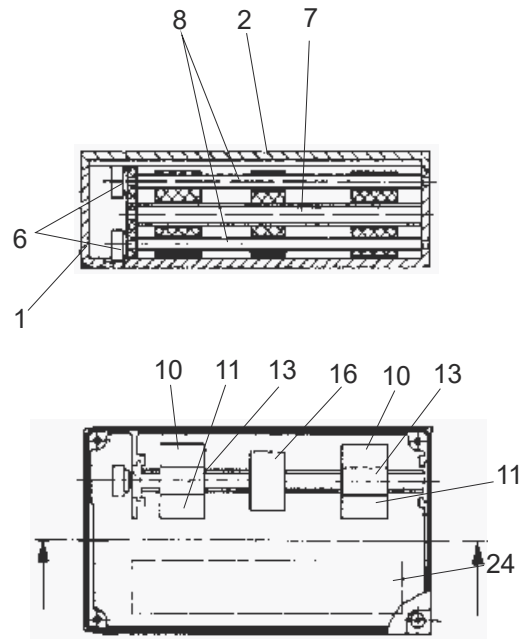
# Slip-on geared motor COMPACTA

## 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

Slip-on geared motor COMPACTA

# MR30



## Slip-on geared motor COMPACTA

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

Order code	Output speed $n_2$ rpm	Motor speed $n_1$ rpm	Motor output	Output torque	Transmission ratio	Self- locking	Limit switch	
			kW	Nm			range	Output rotation
			duty cycle 60%	duty cycle 60%			normal	lang
CAC-MR30-3H33-1108	123,4	2800	1,1	60	22,7:1	So *	260	430
CAC-MR30-3G33-2207	61,6	2800	1,1	112	45,4:1	So *	130	215
CAC-MR30-3F33-6306	39	2800	1,1	165	71,8:1	So *	85	135
CAC-MR30-3E22-3207	30,8	1400	0,6	125	45,4:1	So *	130	215
CAC-MR30-3D33-9405	28,4	2800	1,1	187	98,3:1	So *	60	100
CAC-MR30-3C33-B514	21,8	2800	1,1	220	128,5:1	Ss *	47	77
CAC-MR30-3B22-8306	19,5	1400	0,6	180	71,8:1	So *	85	135
CAC-MR30-3A33-C613	15,4	2800	1,1	240	181,4:1	Ss *	32	55
CAC-MR30-3922-A405	14,2	1400	0,6	206	98,3:1	So *	60	100
CAC-MR30-3833-F722	11,8	2800	1,1	270	238,1:1	Sd *	25	42
CAC-MR30-3733-D821	10,6	2800	1,1	250	264,6:1	Sd *	23	38
CAC-MR30-3622-E613	7,7	1400	0,6	267	181,4:1	Ss *	32	55
CAC-MR30-3522-H722	5,9	1400	0,6	300	238,1:1	Sd *	25	42
CAC-MR30-3422-G821	5,3	1400	0,6	278	264,6:1	Sd *	23	38
CAC-MR30-3311-4613	3,8	700	0,15 (40%)	148 (40%)	181,4:1	Ss *	32	55
CAC-MR30-3211-7722	2,9	700	0,15 (40%)	170 (40%)	238,1:1	Sd *	25	42
CAC-MR30-3111-5821	2,6	700	0,15 (40%)	160 (40%)	264,6:1	Sd *	23	38

### Single-phase motors - 1x230V-50Hz

Order code	Output speed $n_2$ rpm	Motor speed $n_1$ rpm	Motor output kW	Output torque	Transmission ratio	Self- locking
				Nm (40% duty cycle) **		
CAC-MR30-1F22-1100	123,4	2800	0,66	36,0	22,7:1	So *
CAC-MR30-1E22-2200	61,6	2800	0,66	67,2	45,4:1	So *
CAC-MR30-1D22-4300	39,0	2800	0,66	99,0	71,8:1	So *
CAC-MR30-1C11-3200	30,8	1400	0,36	73,3	45,4:1	So *
CAC-MR30-1B22-6400	28,4	2800	0,66	112,2	98,3:1	So *
CAC-MR30-1A22-7510	21,8	2800	0,66	132,0	128,5:1	Ss *
CAC-MR30-1911-5300	19,5	1400	0,36	108,0	71,8:1	So *
CAC-MR30-1822-8610	15,4	2800	0,66	144,0	181,4:1	Ss *
CAC-MR30-1711-8400	14,1	1400	0,36	144,0	98,3:1	So *
CAC-MR30-1622-B720	11,8	2800	0,66	162,0	238,1:1	Sd *
CAC-MR30-1511-8510	10,9	1400	0,36	144,0	128,5:1	Ss *
CAC-MR30-1422-9820	10,6	2800	0,66	150,0	264,6:1	Sd *
CAC-MR30-1311-A610	7,7	1400	0,36	157,1	181,4:1	Ss *
CAC-MR30-1211-D720	5,9	1400	0,36	176,7	238,1:1	Sd *
CAC-MR30-1111-C820	5,3	1400	0,36	163,4	264,6:1	Sd *

### 24V DC shunt-wound motor

Order code	Output speed $n_2$ rpm	Output torque Nm	Transmission ratio	Self-locking
CDC-MR30-0800-1100	66	52	22,7 : 1	So *
CDC-MR30-0700-2200	33	97	45,4 : 1	So *
CDC-MR30-0600-3300	21	141	71,8 : 1	So *
CDC-MR30-0500-4400	15	162	98,3 : 1	So *
CDC-MR30-0400-5510	11,5	190	128,5 : 1	Ss *
CDC-MR30-0300-7610	8	205	181,4 : 1	Ss *
CDC-MR30-0200-8720	6,5	220	238,1 : 1	Sd *
CDC-MR30-0100-6820	5,5	200	264,6 : 1	Sd *

#### 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.

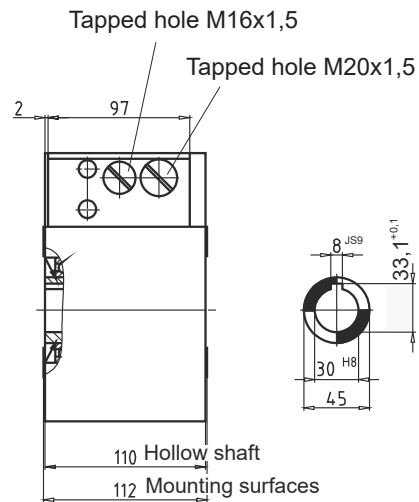
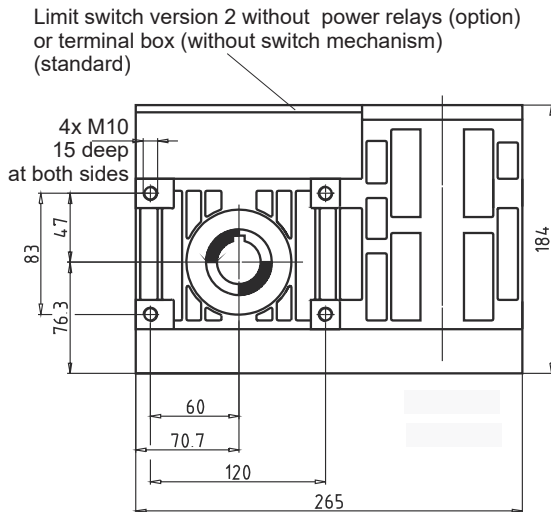
#### Please contact the manufacturer in case of the following operating conditions:

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

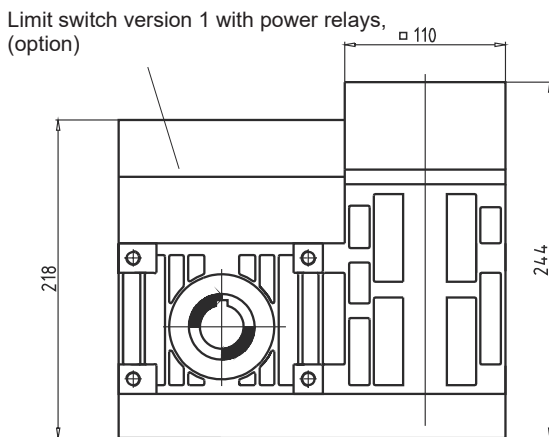
# Slip-on geared motor COMPACTA

## Dimensions

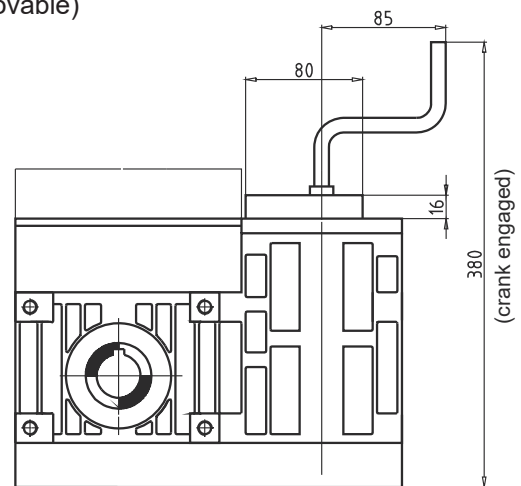
### Standard drive with 3-phase or single-phase AC motor



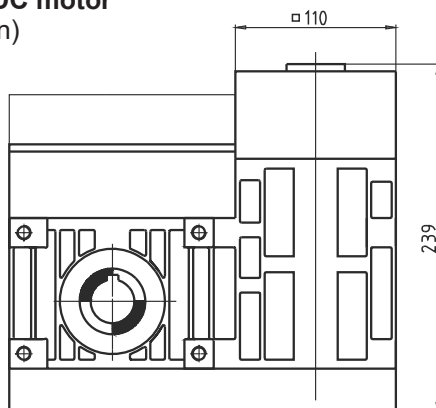
### with motor brake (option)



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



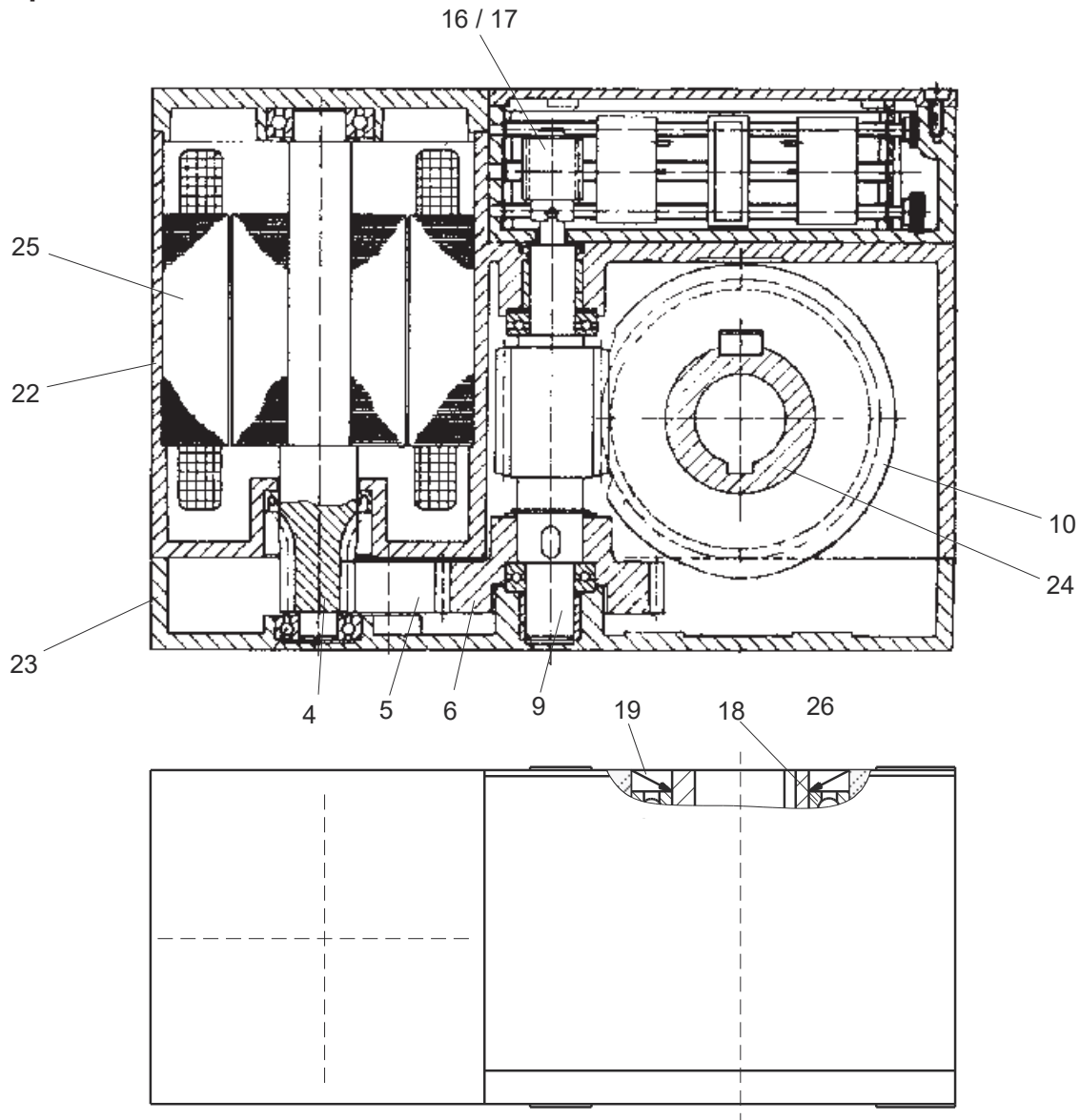
### with DC motor (option)



Some options may be combined

# Slip-on geared motor COMPACTA

## 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

**Slip-on geared motor COMPACTA**

# AG160



## Slip-on geared motor COMPACTA

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

Order code	Output speed $n_2$ rpm	Motor speed $n_1$ rpm ED 60%	Motor output kW	Output torque Nm ED 60%	Transmission ratio	Self-locking	Limit switch range Output rotation
CAC-AG160-3722-1101	8,30	2800	1,10	720	339 : 1	So	45
CAC-AG160-3622-2201	5,70	2800	1,10	960	490 : 1	So	45
CAC-AG160-3522-4301	3,70	2800	1,10	1400	764 : 1	So	45
CAC-AG160-3411-3201	2,90	1400	0,60	1000	490 : 1	So	45
CAC-AG160-3311-5301	1,80	1400	0,60	1530	764 : 1	So	45
CAC-AG160-3222-6421	0,90	2800	1,10	1600	3111 : 1	Sd	45
CAC-AG160-3111-6421	0,45	1400	0,60	1600	3111 : 1	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.

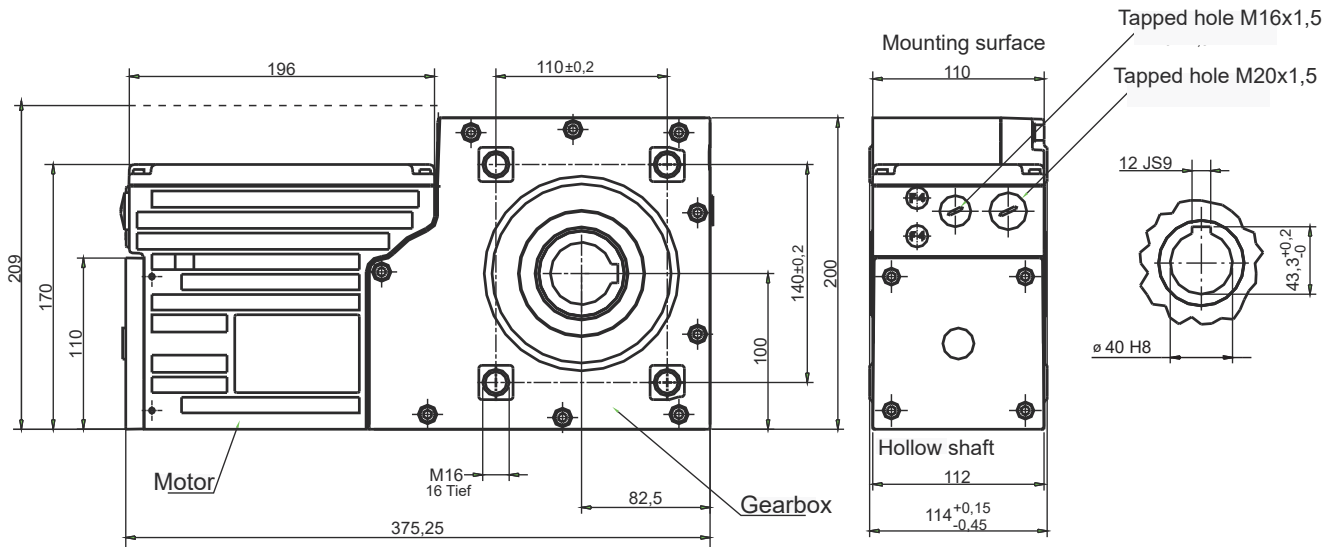
#### **Please contact the manufacturer in case of the following operating conditions:**

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

# Slip-on geared motor COMPACTA

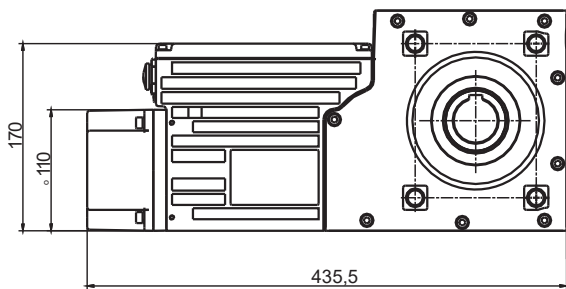
## Dimensions

### Standard drive with 3-phase motor

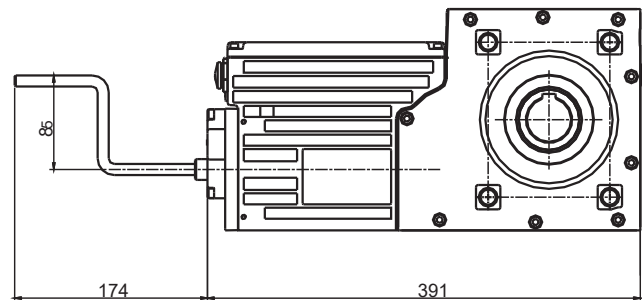


### with solenoid brake (option)

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



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

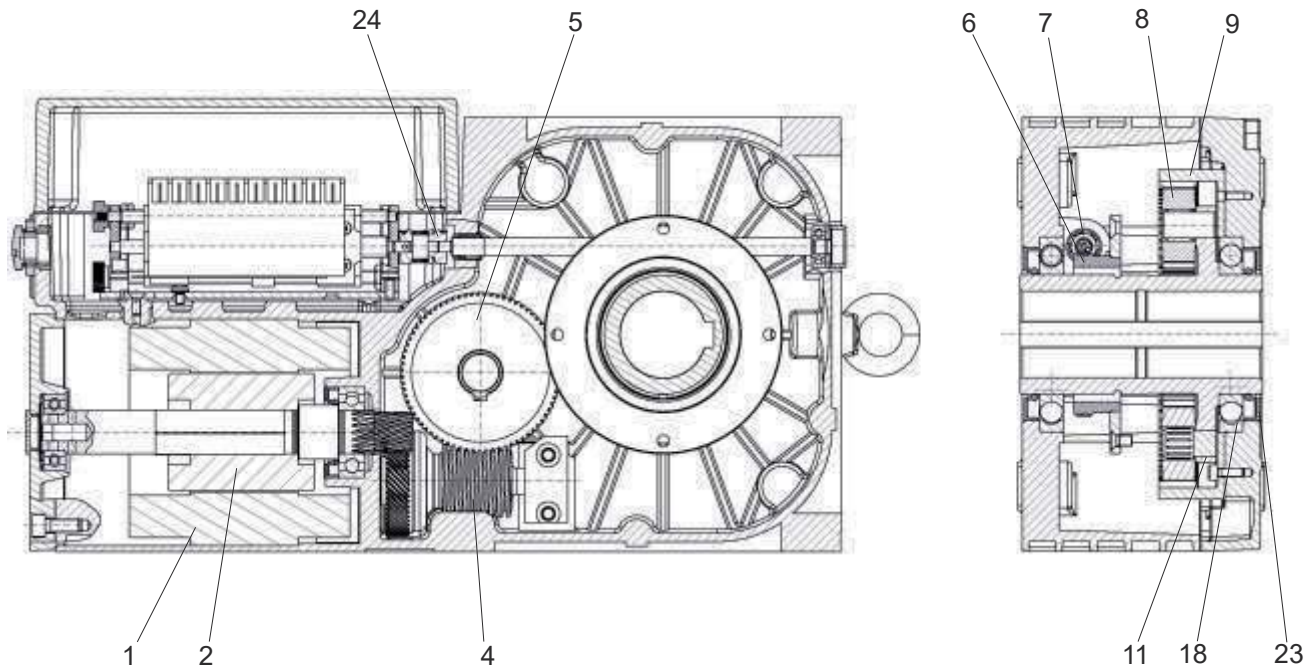


Some options may be combined



# Slip-on geared motor COMPACTA

## 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	00200105072084
24	Clutch	02870600008000

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

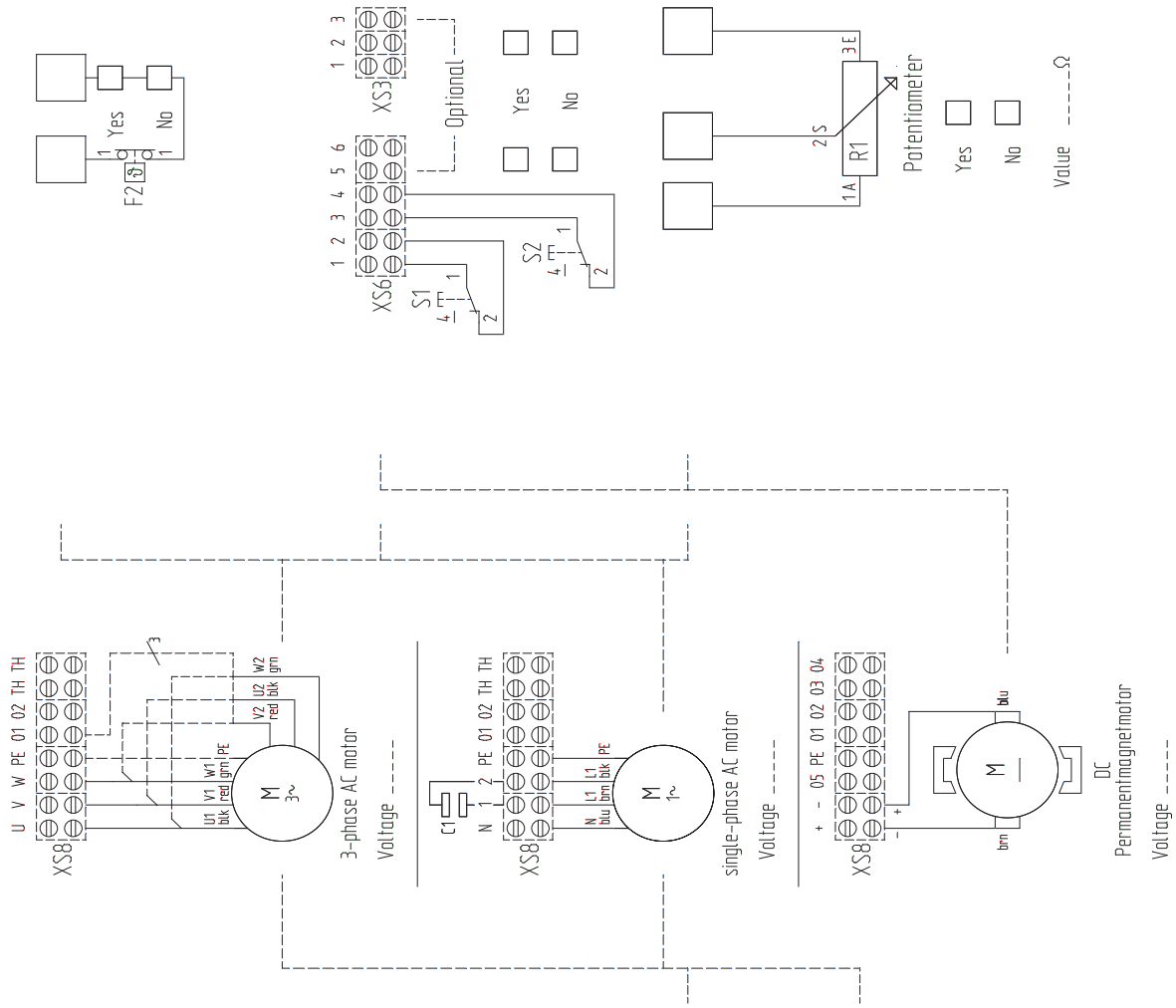
**Slip-on geared motor COMPACTA**



# Circuit diagrams

# Slip-on geared motor COMPACTA

## Built-in limit switches - version 6



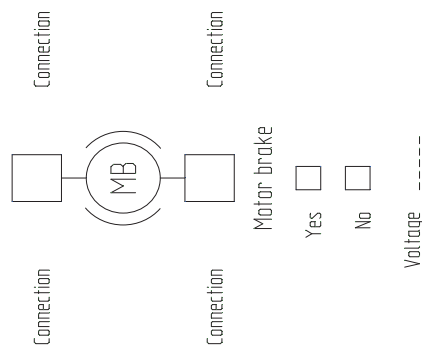
**Attention !**  
The relays used must be interlocked

- XS8PE = Earth wire connection / PE
- S1 = limit switch
- S2 = limit switch
- F2 = Thermal switch
- XS3 = terminal strip 3 pole
- XS6 = terminal strip 6 pole

### Options:

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

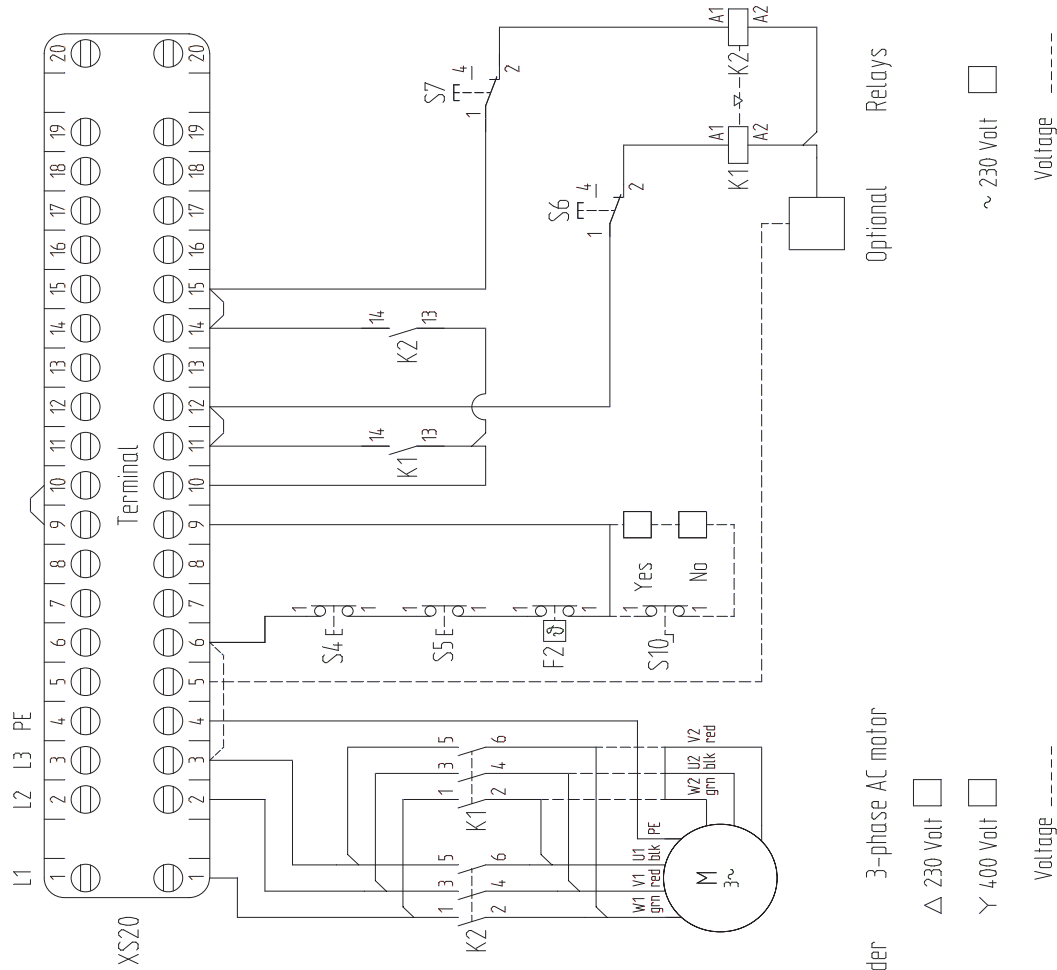
- Potentiometer for actual value / different values on request



Subject to technical changes

# Slip-on geared motor COMPACTA

## Built-in limit switches - version 1 Connection plan with internal wiring



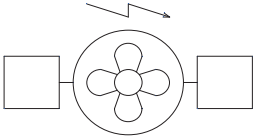
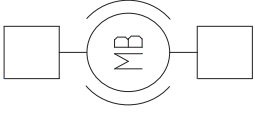
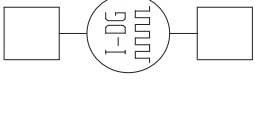
### Attention !

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:

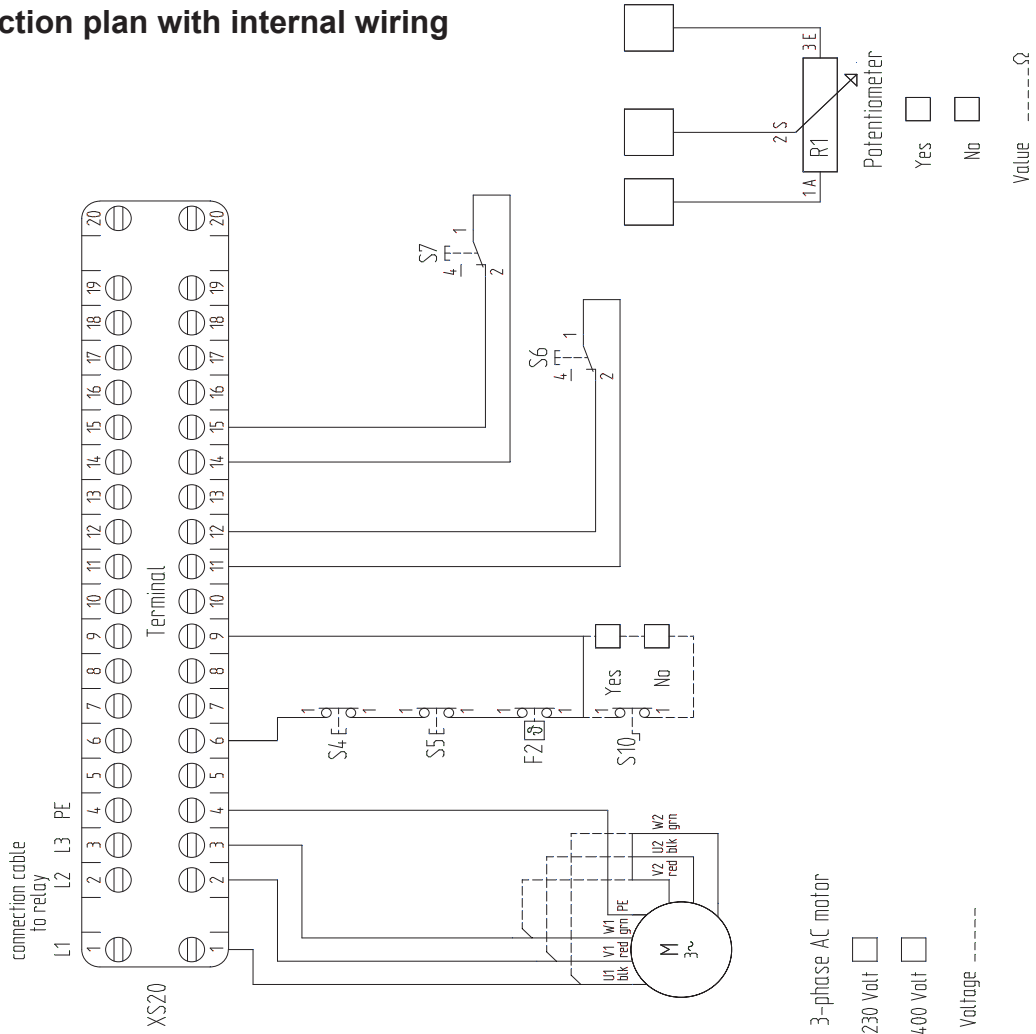
- S10 emergency hand crank with push-in isolator switch
- Motor brake 24 Volt/DC + 230 Volt/AC + 400 Volt/AC
- External ventilator with axial fan 230 Volt/AC for Compacta MS12
- Incremental-Encoder / different resolutions on request

 Connection	 Connection	 Connection
Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Voltage -----	Voltage -----	Resolutions -----
Connection data refer to supplement		

Subject to technical changes

# Slip-on geared motor COMPACTA

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



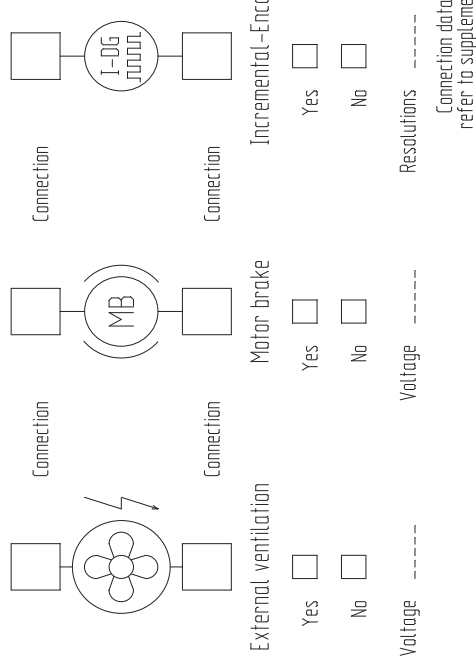
### Attention!

- The relays used must be interlocked
- Terminal 1 + 2 + 3 = power supply from relay
- Terminal 6 + 9 = safety circuit
- Terminal 14 + 15 = end position
- Terminal 11 + 12 = end position
- External pushbuttons must be wired between terminal 9 + 11 respectively 9 + 14
- Terminal 4 = Earth wire connection / PE

- 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:

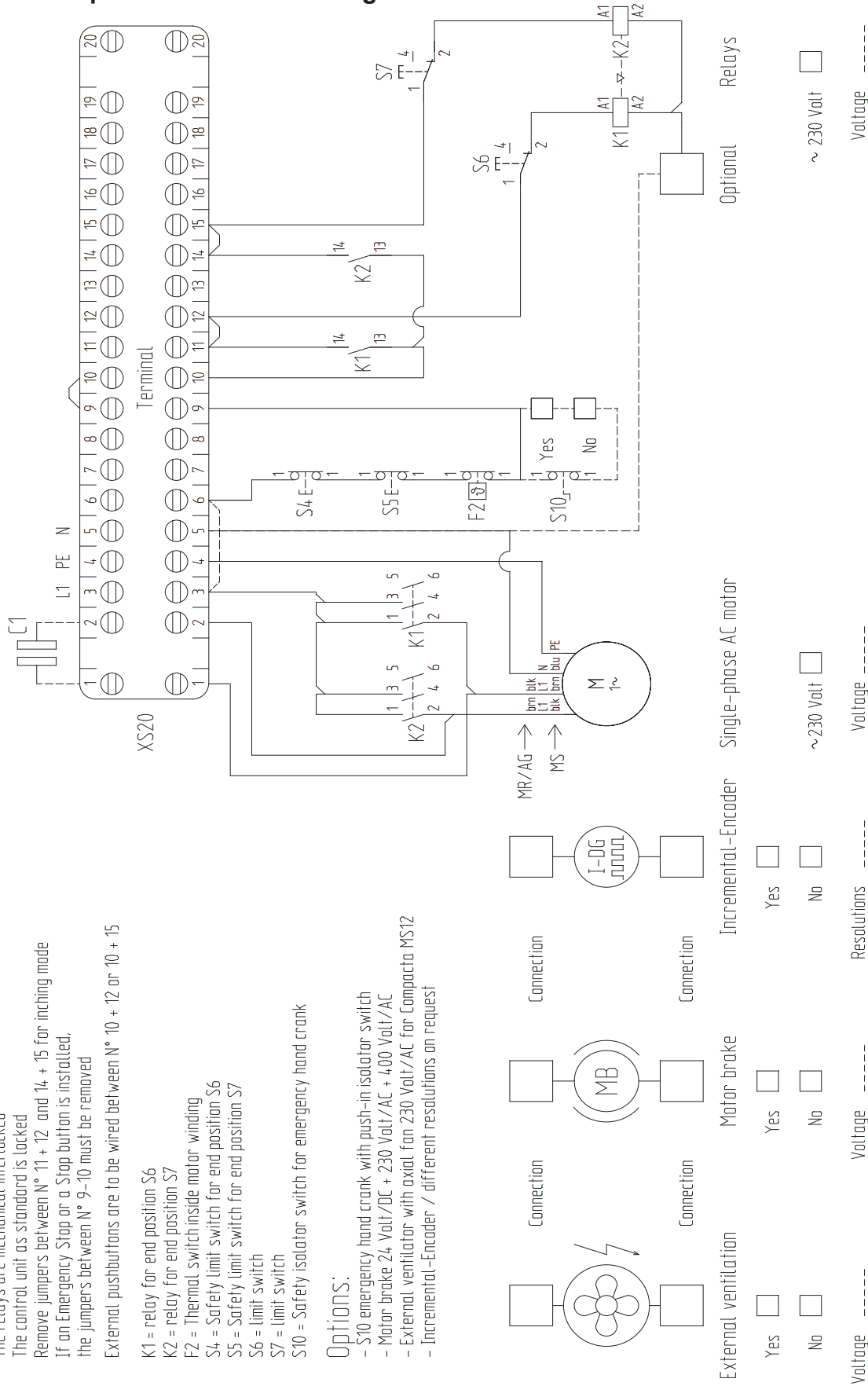
- S10 emergency hand crank with push-in isolator switch
- Motor brake 24 Volt/DC + 230 Volt/AC + 400 Volt/AC
- External ventilator with axial fan 230 Volt/AC for Compacta MS12
- Incremental-Encoder / different resolutions on request
- Potentiometer for actual value / different values on request



Subject to technical changes

# Slip-on geared motor COMPACTA

## Built-in limit switches - version 11 Connection plan with internal wiring



Subject to technical changes

# Slip-on geared motor COMPACTA

## Built-in limit switches - version 12 Connection plan with internal wiring

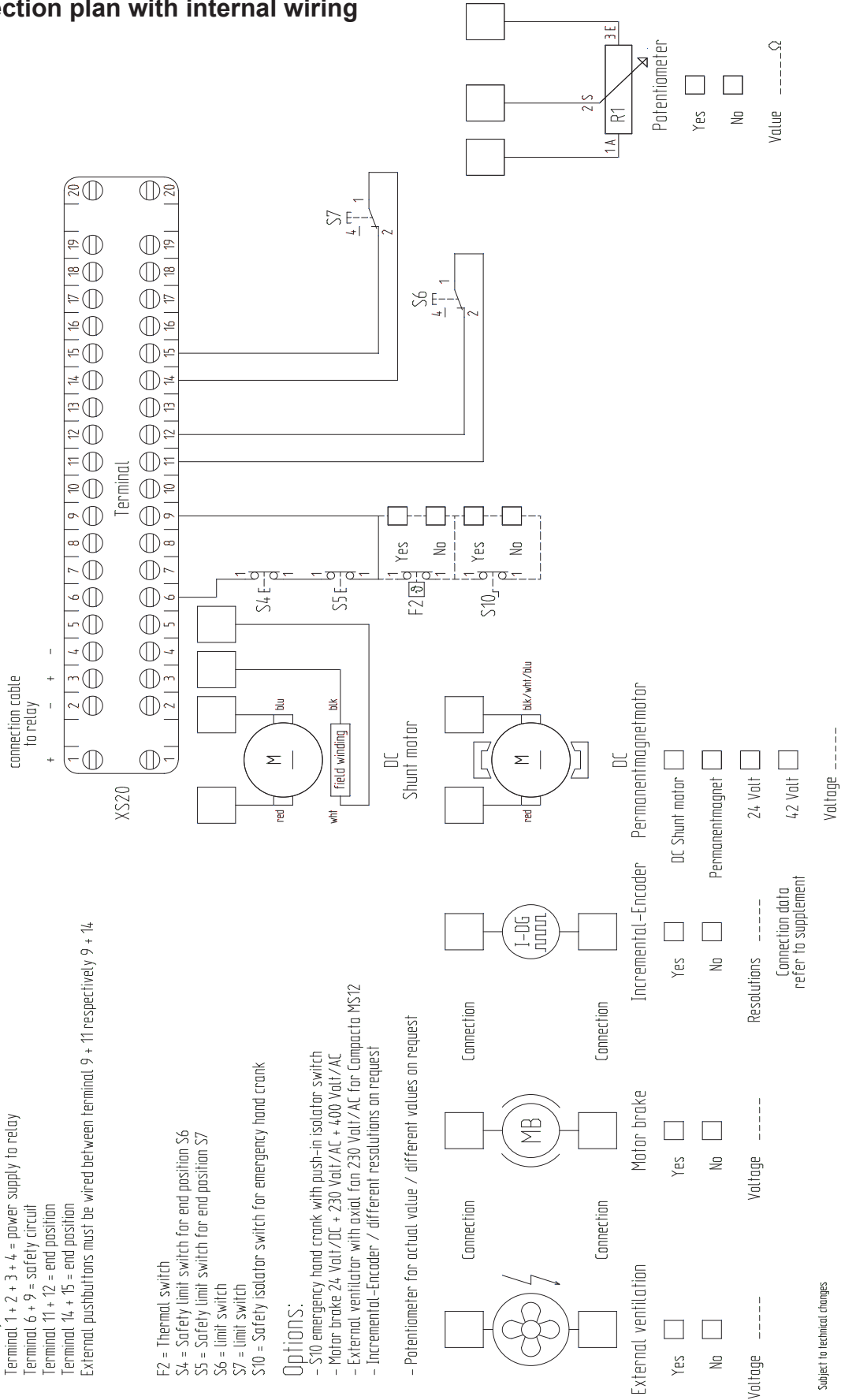
### Attention !

- 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



External ventilation

Yes  No

Voltage -----

Motor brake

Yes  No

Voltage -----

Incremental-Encoder

Yes  No

Resolutions -----

Connection data refer to supplement

DC Shunt motor

Yes  No

DC Shunt motor

Permanent magnet

24 Volt

42 Volt

Voltage -----

Potentiometer

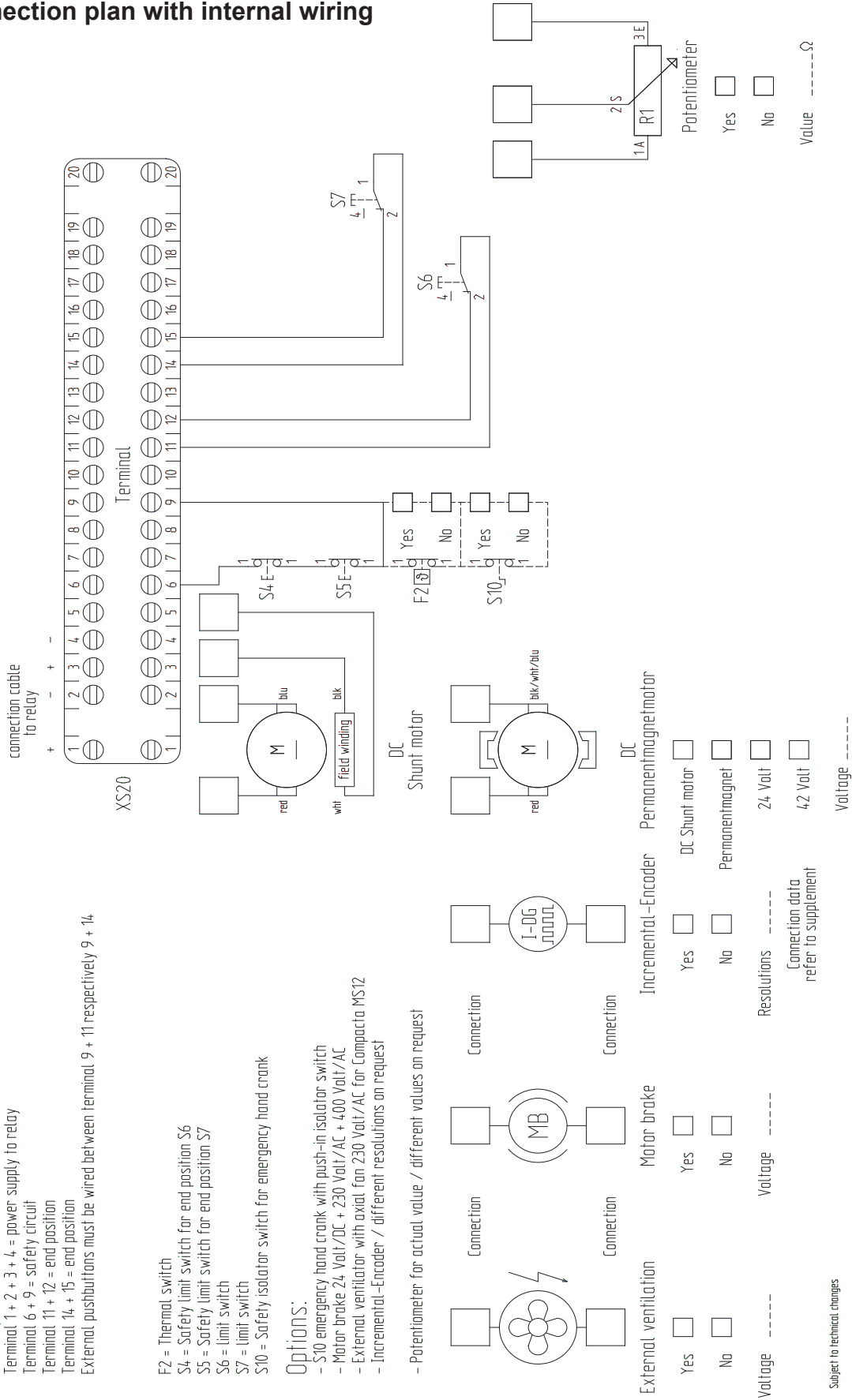
Yes  No

Value -----Ω

Subject to technical changes

# Slip-on geared motor COMPACTA

## Built-in limit switches - version 22 Connection plan with internal wiring



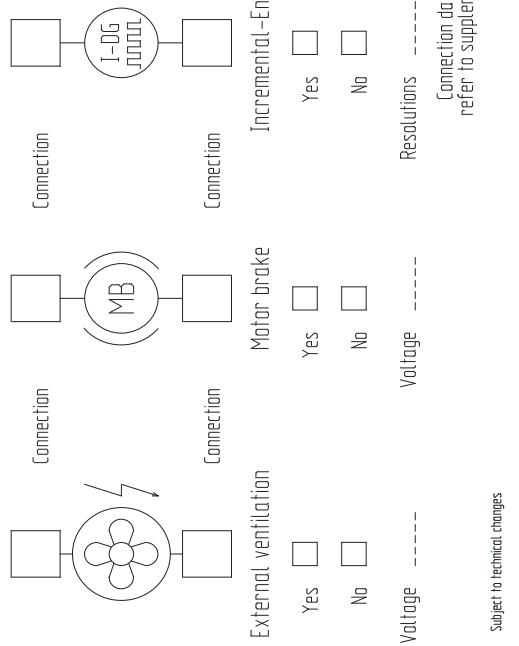
### Attention !

- 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
- Incremental ventilator with axial fan 230 Volt/AC for Compacta MS12
- Incremental-Encoder / different resolutions on request
- Potentiometer for actual value / different values on request

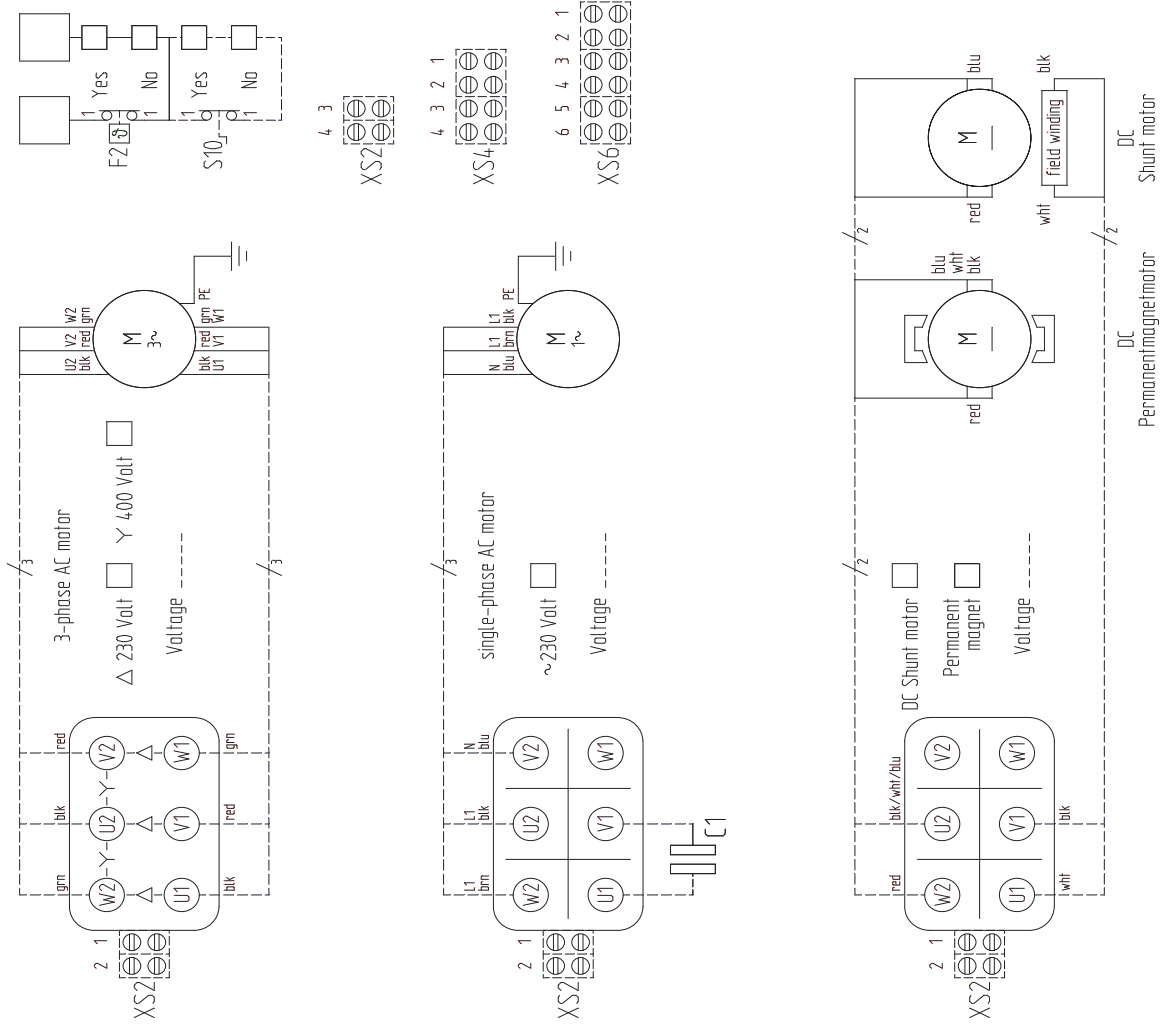


Subject to technical changes



# Slip-on geared motor COMPACTA

## Connection diagram with terminal box



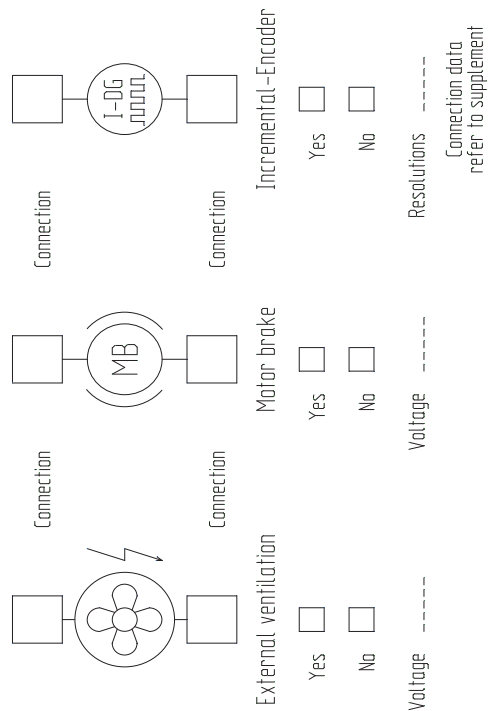
**Attention !**  
The relays used must be interlocked

- 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



Connection data refer to supplement

Subject to technical changes

# Slip-on geared motor COMPACTA

## Technical questionnaire

Company \_\_\_\_\_

Date \_\_\_\_\_

Processed by \_\_\_\_\_

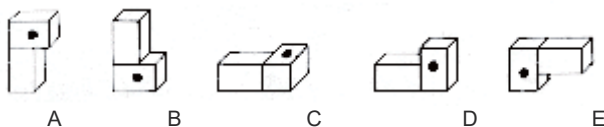
Tel.-No. \_\_\_\_\_

Quantity required \_\_\_\_\_

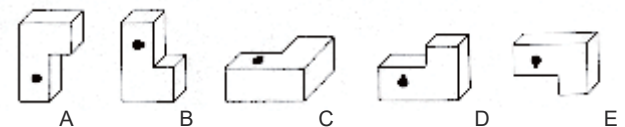
Dear customer,  
In your own interest, you should answer the questions below as precisely as possible in order to submit a detailed quotation.

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. \_\_\_\_\_

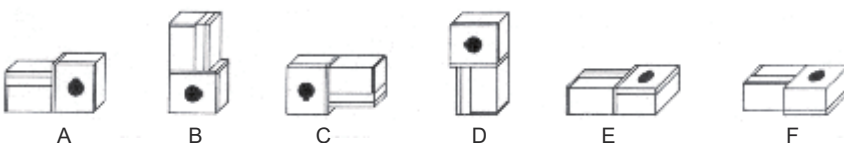
### Type MS



### Type MR



### Type AG



# Slip-on geared motor COMPACTA

