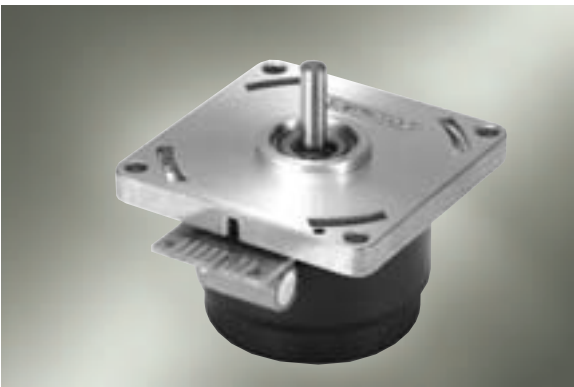


VARIODRIVE Compact

VDC-3-43.10

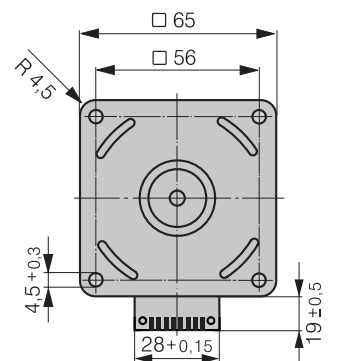
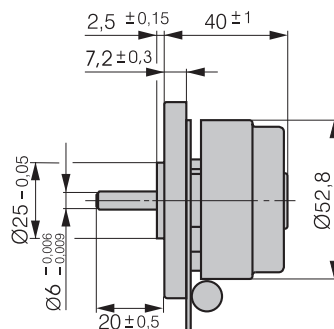
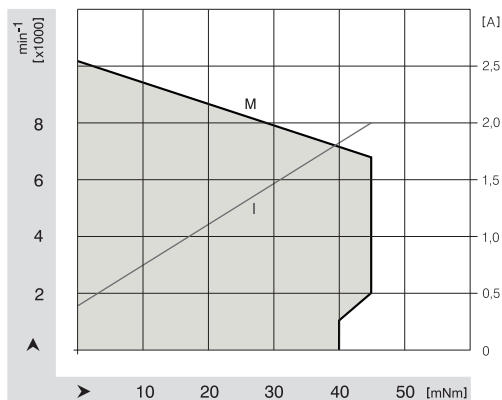
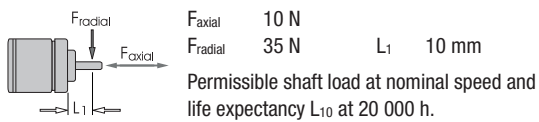


- 3-phase external rotor motor in EC technology.
- Dynamically balanced rotor with 4-pole, plastic-bonded ferrite magnet.
- Integrated operating electronics with powerful microcontroller.
- Excellent control response due to digital 4-Q PI controller.
- High operating efficiency due to FET power stage.
- Analogue set value.
- Operating mode selection (direction of rotation, braking and motor enable) via 2 control inputs.
- Protection against overload due to integrated, speed-dependent current limiting.
- Customer-specific version possible based on software and hardware adaption (e.g. fixed speed, direction of rotation).

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Nominal Data

Type		VDC-3-43.10	...610
Nominal voltage (U_{BN})	V DC	24 (18 ... 28)	24 (18 ... 28)
Nominal speed (n_N)	min^{-1}	6 800	4 000
Nominal torque (M_N)	mNm	45	45
Nominal current (I_{BN})	A	2.0	1.25
Nominal output power (P_N)	W	32	18.8
Free-running speed (n_L)	min^{-1}	10 200	4 080
Free-running current (I_{BL})	A	0.4	0.14
Max. reverse voltage	VDC	40	40
Set value input	V	0 ... 10	0 ... 10
Desired speed	min^{-1}	0 ... 10 000	0 ... 4 000
Recommended speed control range	min^{-1}	300 ... n_{max}	300 ... n_{max}
Function for motor protection at stall		yes	yes
by stall protection pulsing		$T_{\text{on}} 0.8 \text{ s} / T_{\text{off}} 2.5 \text{ s}$	$T_{\text{on}} 0.8 \text{ s} / T_{\text{off}} 2.5 \text{ s}$
Overload protection		yes	yes
Average starting torque	mNm	67	67
Rotor moment of inertia (J_R)	$\text{kgm}^2 \times 10^{-6}$	40	40
Thermal resistance (R_{th})	K/W	3.6	4.1
Protection class		IP 00	IP 00
Ambient temperature range (T_u)	$^{\circ}\text{C}$	0 ... +40	0 ... +40
Motor mass (m)	kg	0.24	0.24
Order No.		937 4310 600	937 4310 610



Permissible S1 operating characteristics

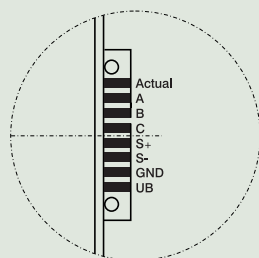
Product No. 937 4310 600

Speed n (min^{-1})	300	1000	2000	4000	6000
Torque M (mNm)	40	40	46	45	45
Input power $P_{S1 \text{ max}}$ (W)	7	11	19	30	45

Product No. 937 4310 610

Speed n (min^{-1})	300	1000	2000	4000
Torque M (mNm)	40	45	45	45
Input power $P_{S1 \text{ max}}$ (W)	10	15	20	30

Pin connection



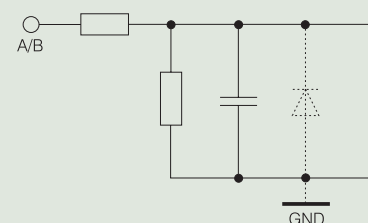
ACTUAL	ACTUAL Speed value
A	Input A
B	Input B
C	Not occupied
S+	Set value
S-	Ground set value
GND	Ground
+Ub	Supply voltage

1. Control inputs

A	B	
0	0	Power stage disabled
0	1	Counterclockwise rotation
1	0	Clockwise rotation
1	1	Brake function*
low (0)		0 ... 0.8 V
high (1)		2.4 ... 30 V

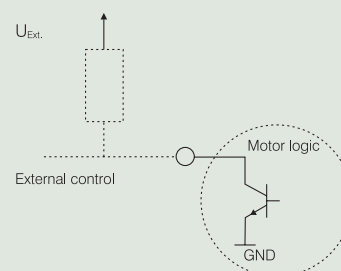
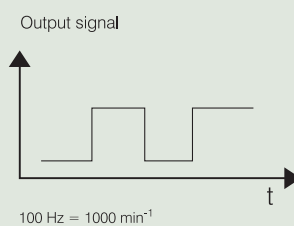
* Brake function:

The braking function serves to slow down the motor only. It has no holding brake function for the static duty.



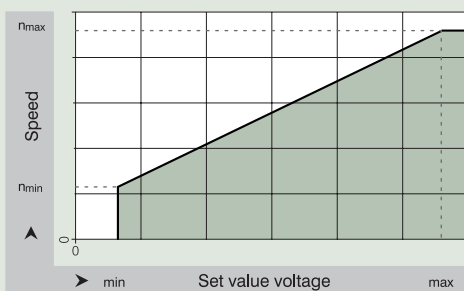
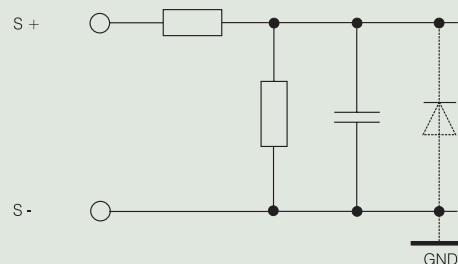
2. ACTUAL speed value output

Version:
Open Collector
 $U_{\text{ext. max}} = 30 \text{ V}$
 $U_{\text{CESAT}} = 0.5 \text{ V}$
 $I_{\text{C MAX}} = 5 \text{ mA}$



3. Set value input

Speed setting for speed control via set value voltage (interface 0 ... 10 V DC).



For detailed information, please refer to the corresponding specification data sheets. The instructions and safety notes in the operating manual must be kept at all times.

VARIODRIVE Compact

VDC-3-54.14

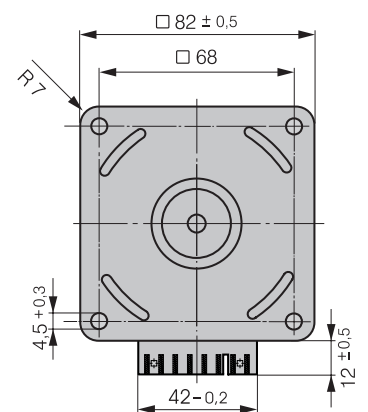
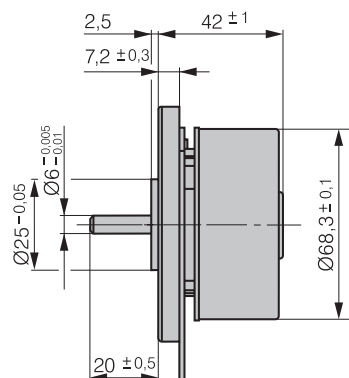
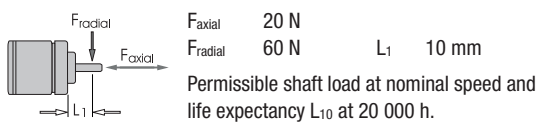


- 3-phase external rotor motor in EC technology.
- Dynamically balanced rotor with 4-pole, plastic-bonded ferrite magnet.
- Integrated operating electronics with powerful microcontroller.
- Excellent control response due to digital 4-Q PI controller.
- High operating efficiency due to FET power stage.
- Analogue set value.
- Operating mode selection (direction of rotation, braking and motor enable) via 2 control inputs.
- Protection against overload due to integrated, speed-dependent current limiting.
- Customer-specific version possible based on software and hardware adaption (e.g. fixed speed, direction of rotation).

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Nominal Data

Type		VDC-3-54.14	...620
Nominal voltage (U_{BN})	V DC	24 (18 ... 28)	24 (18 ... 28)
Nominal speed (n_N)	min^{-1}	6 000	3 500
Nominal torque (M_N)	mNm	100	130
Nominal current (I_{BN})	A	3.6	2.8
Nominal output power (P_N)	W	62.8	47.6
Free-running speed (n_L)	min^{-1}	8 000	4 000
Free-running current (I_{BL})	A	0.51	0.21
Max. reverse voltage	VDC	40	40
Set value input	V	0 ... 10	0 ... 10
Desired speed	min^{-1}	0 ... 10 000	0 ... 4 000
Recommended speed control range	min^{-1}	300 ... n_{max}	300 ... n_{max}
Function for motor protection at stall		yes	yes
by stall protection pulsing		$T_{\text{on}} 0.8 \text{ s} / T_{\text{off}} 2.5 \text{ s}$	$T_{\text{on}} 0.8 \text{ s} / T_{\text{off}} 2.5 \text{ s}$
Overload protection		yes	yes
Average starting torque	mNm	120	150
Rotor moment of inertia (J_R)	$\text{kgm}^2 \times 10^{-6}$	145	145
Thermal resistance (R_{th})	K/W	2.5	3.0
Protection class		IP 00	IP 00
Ambient temperature range (T_u)	$^{\circ}\text{C}$	0 ... +40	0 ... +40
Motor mass (m)	kg	0.52	0.52
Order No.		937 5414 622	937 5414 620



Permissible S1 operating characteristics

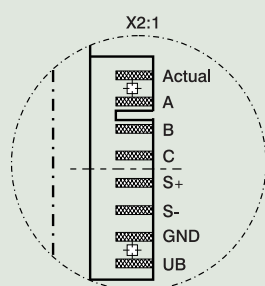
Product No. 937 5414 622

Speed n (min^{-1})	300	1000	2000	4000	6000
Torque M (mNm)	90	90	90	100	100
Input power $P_{S1 \max}$ (W)	14	22	33	63	88

Product No. 937 5414 620

Speed n (min^{-1})	300	1000	2000	4000
Torque M (mNm)	110	110	120	130
Input power $P_{S1 \max}$ (W)	14	23	40	70

Pin connection



ACTUAL	ACTUAL Speed value
A	Input A
B	Input B
C	Not occupied
S+	Set value
S-	Ground set value
GND	Ground
+Ub	Supply voltage

1. Control inputs

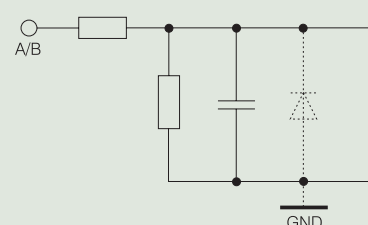
A	B	
0	0	Power stage disabled
0	1	Counterclockwise rotation
1	0	Clockwise rotation
1	1	Brake function*

low (0) 0 ... 0.8 V

high (1) 2.4 ... 30 V

* Brake function:

The braking function serves to slow down the motor only. It has no holding brake function for the static duty.



ACTUAL speed value output

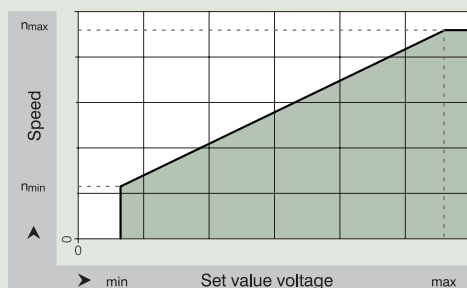
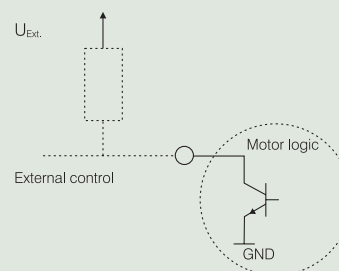
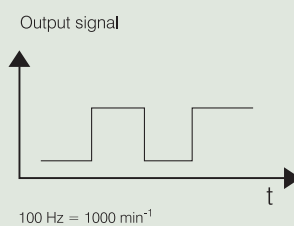
Version:

Open Collector

$U_{\text{ext. max}} = 30 \text{ V}$

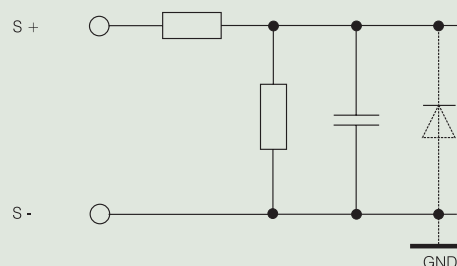
$U_{\text{CESAT}} = 0.5 \text{ V}$

$I_{\text{cMAX}} = 5 \text{ mA}$



3. Set value input

Speed setting for speed control via set value voltage (interface 0 ... 10 V DC).



For detailed information, please refer to the corresponding specification data sheets. The instructions and safety notes in the operating manual must be kept at all times.

VARIODRIVE Compact Small

VDCS-3-54.14

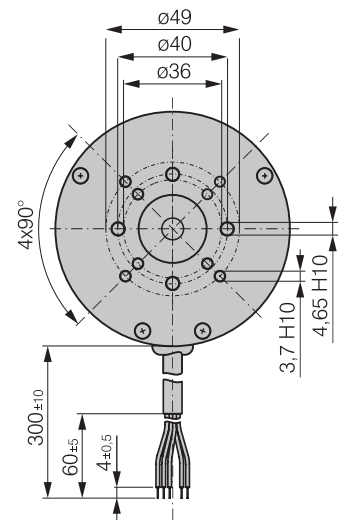
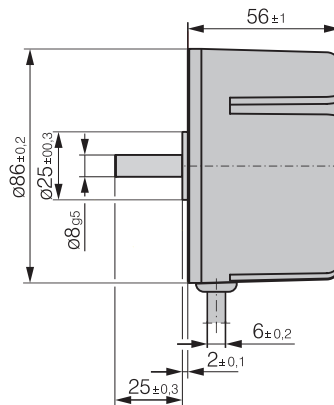
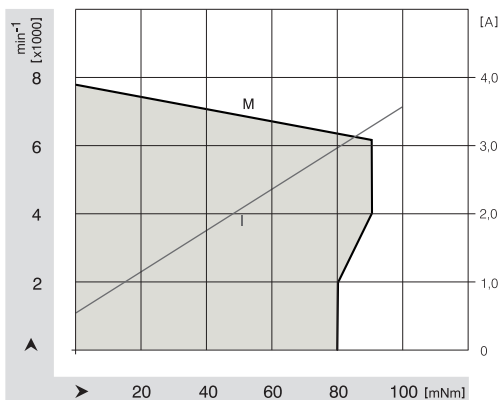
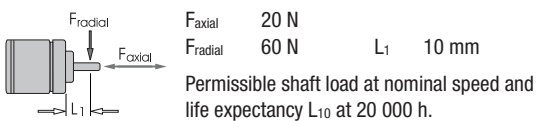


- 3-phase external rotor motor in EC-Technology.
- Dynamically balanced rotor with 4-pole, plastic-bonded ferrite magnet.
- Integrated operating electronics for open loop speed-controlled operation.
- Direction of rotation setting via control input.
- Protection against overload due to speed-dependent reduction of torque.

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Nominal Data

Type	VDCS-3-54.14	
Nominal voltage (U_{BN})	V DC	24 (12 ... 28)
Nominal speed (n_N)	min^{-1}	6 000
Nominal torque (M_N)	mNm	90
Nominal current (I_{BN})	A	3.3
Nominal output power (P_N)	W	56.5
Free-running speed (n_L)	min^{-1}	7 800
Free-running current (I_{BL})	A	0.51
Max. reverse voltage	VDC	-
Set value input	V	0 ... 10
Function for motor protection at stall		optional
Overload protection		yes
Average starting torque	mNm	80
Rotor moment of inertia (J_R)	$\text{kgm}^2 \times 10^{-6}$	145
Thermal resistance (R_{th})	K/W	-
Protection class		IP 40
Ambient temperature range (T_U)	°C	0 ... +40
Motor mass (m)	kg	0.72
Order No.		937 5414 800



Permissible S1 operating characteristics

Product No. 937 5414 800

Speed n (min^{-1})	300	1000	2000	4000	6000
Torque M (mNm)	80	80	80	90	90
Input power $P_{s1 \text{ max}}$ (W)	12	19	29	56	80

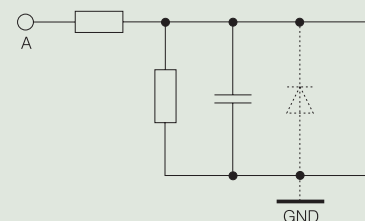
Pin connection

Color	Signal	Description
Yellow	ACTUAL	ACTUAL Speed value
White	A	Input A
Green	S+	Set value
Black	GND	Ground
Red	+Ub	Supply voltage

1. Control input, direction of rotation

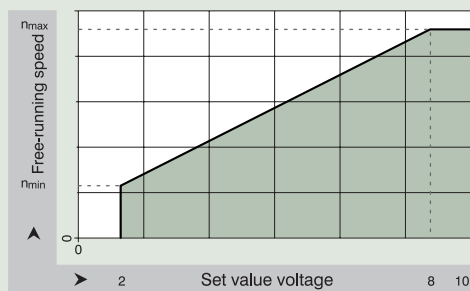
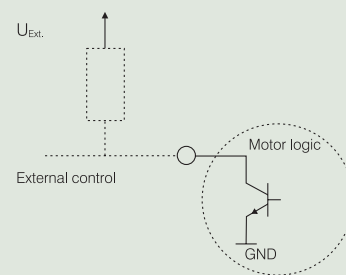
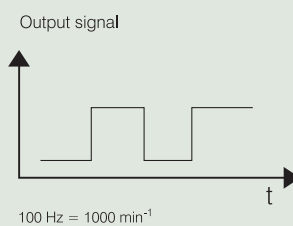
A	
0	Counterclockwise rotation*
1	Clockwise rotation*
low (0)	0 ... 0.8 V
high (1)	2.4 ... 30 V

* Change in direction of rotation only allowed at standstill!



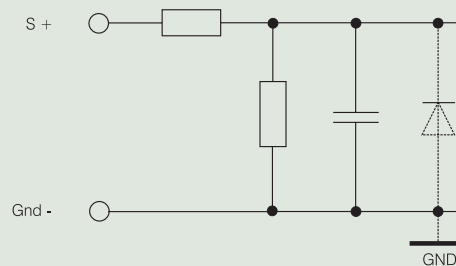
2. ACTUAL speed value output

Version:
Open Collector
 $U_{\text{ext. max}} = 30 \text{ V}$
 $U_{\text{CESAT}} = 0.5 \text{ V}$
 $I_{\text{cMAX}} = 5 \text{ mA}$



3. Set value input

Speed setting for open loop speed control via control voltage (0 ... 10 V DC).
interface:
< 2 V = 0% PWM
8 V = 100% PWM



For detailed information, please refer to the corresponding specification data sheets.
The instructions and safety notes in the operating manual must be kept at all times.

VARIODRIVE Compact

VDC-3-54.32

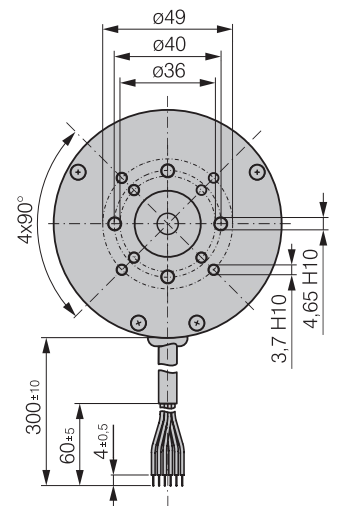
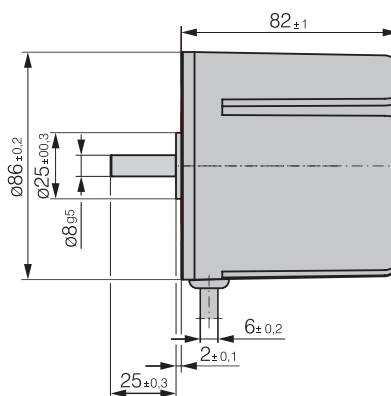
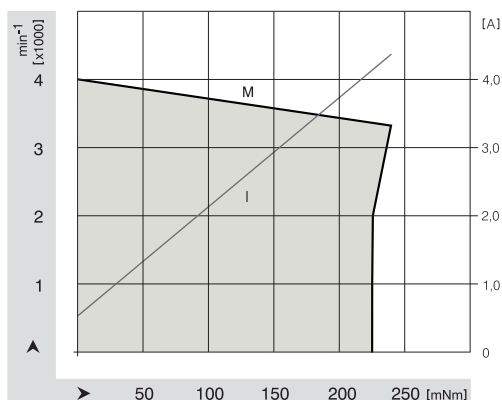
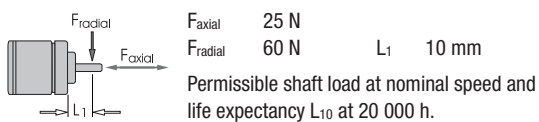


- 3-phase external rotor motor in EC technology.
- Dynamically balanced rotor with 4-pole, hard ferrite magnet.
- Integrated operating electronics with powerful microcontroller.
- Excellent control response due to digital 4-Q PI controller.
- High operating efficiency due to FET power stage.
- Analogue set value.
- Operating mode selection (direction of rotation, braking and motor enable) via 2 control inputs.
- Protection against overload due to integrated, speed-dependent current limiting.
- Customer-specific version possible based on software and hardware adaption (e.g. fixed speed, direction of rotation).

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Nominal Data

Type	VDC-3-54.32	
Nominal voltage (U_{BN})	V DC	24 (18 ... 28)
Nominal speed (n_N)	min^{-1}	3 300
Nominal torque (M_N)	mNm	240
Nominal current (I_{BN})	A	4.3
Nominal output power (PN)	W	83
Free-running speed (n_L)	min^{-1}	4 100
Free-running current (I_{BL})	A	0.5
Max. reverse voltage	VDC	40
Set value input	V	0 ... 10
Desired speed	min^{-1}	0 ... 4 000
Recommended speed control range	min^{-1}	300 ... n_{max}
Function for motor protection at stall		yes
by stall protection pulsing		$T_{\text{on}} 0.8 \text{ s} / T_{\text{off}} 2.5 \text{ s}$
Overload protection		yes
Average starting torque	mNm	280
Rotor moment of inertia (J_R)	$\text{kgm}^2 \times 10^{-6}$	500
Thermal resistance (R_{th})	K/W	2.15
Protection class		IP 40
Ambient temperature range (T_u)	$^{\circ}\text{C}$	0 ... +40
Motor mass (m)	kg	1.1
Order No.		937 5432 610



Permissible S1 operating characteristics

Product No. 937 5432 610

Speed n (min ⁻¹)	300	1000	2000	3300
Torque M (mNm)	225	225	225	240
Input power $P_{S1 \max}$ (W)	31	50	77	115

Pin connection

Yellow	ACTUAL	ACTUAL Speed value
White	A	Input A
Grey	B	Input B
—	C	Not occupied
Green	S+	Set value
—	S-	Ground set value
Black	GND	Ground
Red	+Ub	Supply voltage

1. Control inputs

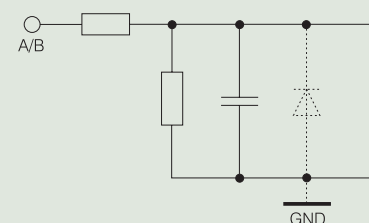
A	B	
0	0	Power stage disabled
0	1	Counterclockwise rotation
1	0	Clockwise rotation
1	1	Brake function*

low (0) 0 ... 0.8 V

high (1) 2.4 ... 30 V

* Brake function:

The braking function serves to slow down the motor only.
It has no holding brake function for the static duty.



2. ACTUAL speed value output

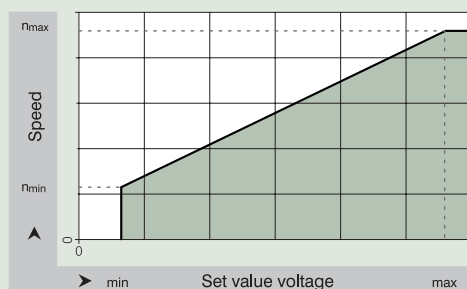
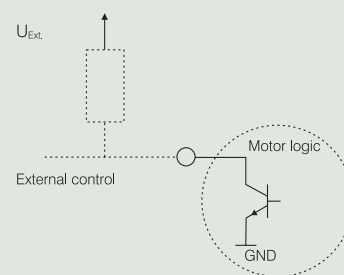
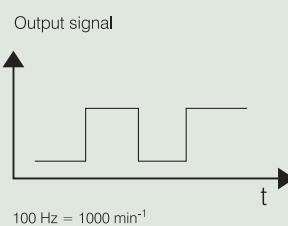
Version:

Open Collector

$U_{\text{ext. max}} = 30 \text{ V}$

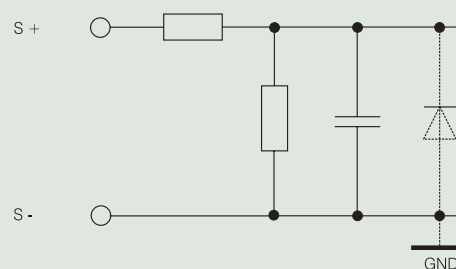
$U_{\text{CESAT}} = 0.5 \text{ V}$

$I_{\text{CMAX}} = 5 \text{ mA}$



3. Set value input

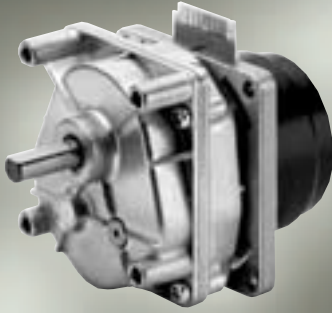
Speed setting for speed control via
set value voltage
(interface 0 ... 10 V DC).



For detailed information, please refer to the corresponding specification data sheets.
The instructions and safety notes in the operating manual must be kept at all times.

VARIODRIVE Compact

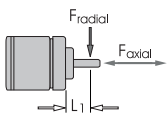
Gear motor VDC-3-43.10-C



- 3-phase external rotor motor in EC technology for gear applications.
- Dynamically balanced rotor with 4-pole, plastic-bonded ferrite magnet.
- Integrated operating electronics with powerful microcontroller.
- Excellent control response due to digital 4-Q PI controller.
- Analogue set value.
- Available in various reduction ratios.
- Motor mass 0.55 kg.

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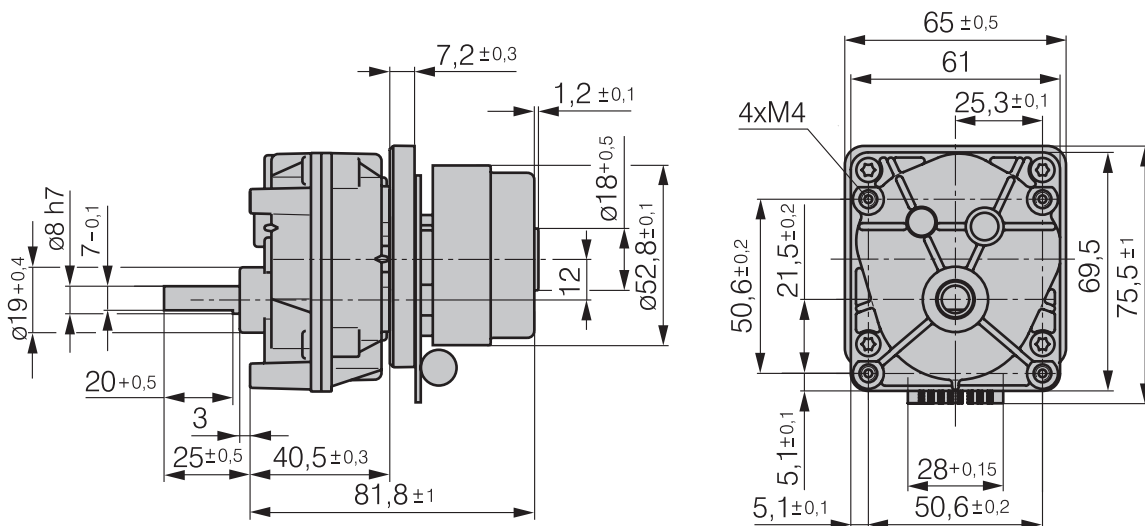
Nominal Data	Gear ratio	Nominal torque	Speed range	Order No.
Preferred Type VDC	i	Nm	min ⁻¹	
VDC-3-43.10-C 16	16 : 1	0.6	19 ... 250	947 4310 600
VDC-3-43.10-C 22	22.9 : 1	0.8	13 ... 175	947 4310 601
VDC-3-43.10-C 32	32 : 1	1.2	9 ... 125	947 4310 602
VDC-3-43.10-C 45	45.4 : 1	1.5	7 ... 88	947 4310 603
VDC-3-43.10-C 58	57.8 : 1	1.9	5 ... 69	947 4310 604
VDC-3-43.10-C 79	79.1 : 1	2.6	4 ... 51	947 4310 605
VDC-3-43.10-C 122	121.6 : 1	4.0	2 ... 33	947 4310 606



F_{axial} 40 N
 F_{radial} 120 N L_1 17 mm
 Permissible shaft load at nominal speed.

Gear type C

Multi-stage spur gear in zinc diecast body.
 Grease lubrication for maintenance-free continuous operation.
 Shaft output with combined sleeve / needle bearing.
 Reversible direction of rotation.



Gear motor VD-3-43.10-C

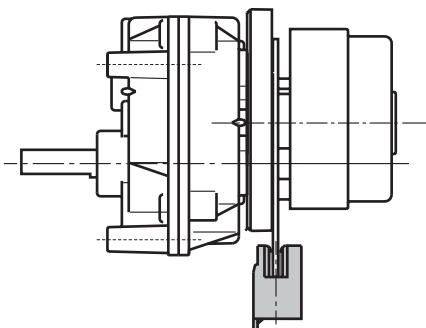
Motor variation with external operating electronics

- 3-phase, 6-pulse external rotor motor for gear applications.
- EC-technology.
- Dynamically fine-balanced rotor with 4-pole, plastic-bonded ferrite magnet.
- Determination of rotor position via 3 Hall sensors.
- Motor supply and control via external operating electronics.

Nominal Data		Gear ratio	Nominal torque	Speed range	Order No.
Type VD	i	Nm	min ⁻¹		
VD-3-43.10-C 16	16 : 1	0.8	22 ... 215	947 4310 000	
VD-3-43.10-C 22	22.9 : 1	1.1	15 ... 150	947 4310 001	
VD-3-43.10-C 32	32 : 1	1.0	11 ... 110	947 4310 002	
VD-3-43.10-C 45	45.4 : 1	2.0	8 ... 77	947 4310 003	
VD-3-43.10-C 58	57.8 : 1	2.5	6 ... 60	947 4310 004	
VD-3-43.10-C 79	79.1 : 1	3.4	5 ... 44	947 4310 005	
VD-3-43.10-C 122	121.6 : 1	5.3	3 ... 28	947 4310 006	

Operating electronics:

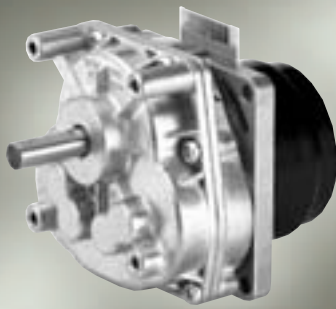
DRIVECONTROL VT-A / Order No. 937 1401 002



Type VD-3-43.10 with AMP-plug frame.
Dimensions on page 34 dimension drawing.

VARIODRIVE Compact

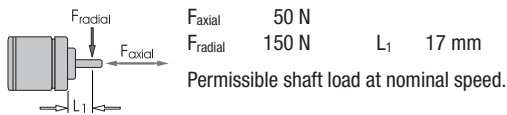
Gear motor VDC-3-43.10-D



- 3-phase external rotor motor in EC technology for gear applications.
- Dynamically balanced rotor with 4-pole, plastic-bonded ferrite magnet.
- Integrated operating electronics with powerful microcontroller.
- Excellent control response due to digital 4-Q PI controller.
- Analogue set value.
- Available in various reduction ratios.
- Motor mass 0.62 kg.

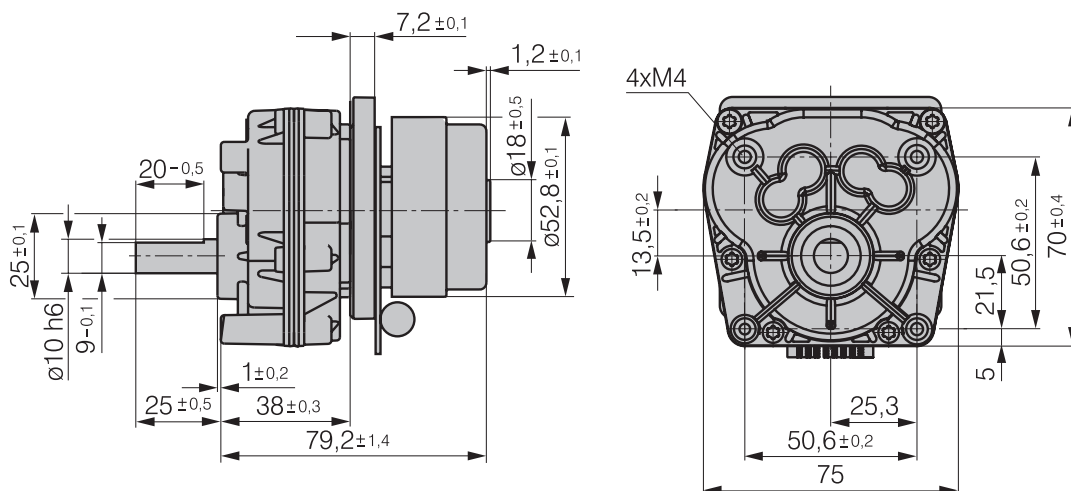
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Nominal Data	Gear ratio	Nominal torque	Speed range	Order No.
Type	i	Nm	min ⁻¹	
VDC-3-43.10-D 11	11.3 : 1	0.4	27 ... 354	947 4310 610
VDC-3-43.10-D 13	13.2 : 1	0.5	23 ... 303	947 4310 611
VDC-3-43.10-D 16	15.9 : 1	0.6	19 ... 252	947 4310 612
VDC-3-43.10-D 26	26.4 : 1	1.0	11 ... 152	947 4310 613
VDC-3-43.10-D 39	38.6 : 1	1.4	8 ... 104	947 4310 614



Gear type D

Multi-stage spur gear in zinc diecast body.
 Grease lubrication for maintenance-free continuous operation.
 Shaft output with combined sleeve / needle bearing.
 Reversible direction of rotation.



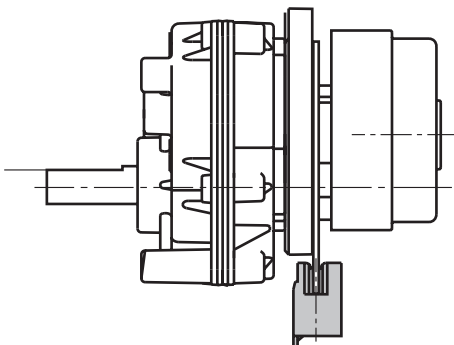
Gear motor VD-3-43.10-D

Motor variation with external operating electronics

- 3-phase, 6-pulse external rotor motor for gear applications.
- EC-technology.
- Dynamically fine-balanced rotor with 4-pole, plastic-bonded ferrite magnet.
- Determination of rotor position via 3 Hall sensors.
- Motor supply and control via external operating electronics.

Nominal Data	Gear ratio	Nominal torque	Speed range	Order No.
Type	i	Nm	min ⁻¹	
VD-3-43.10-D 11	11.3 : 1	0.5	31 ... 310	947 4310 010
VD-3-43.10-D 13	13.2 : 1	0.6	27 ... 265	947 4310 011
VD-3-43.10-D 16	15.9 : 1	0.8	22 ... 220	947 4310 012
VD-3-43.10-D 26	26.4 : 1	1.3	13 ... 130	947 4310 013
VD-3-43.10-D 39	38.6 : 1	1.9	9 ... 90	947 4310 014

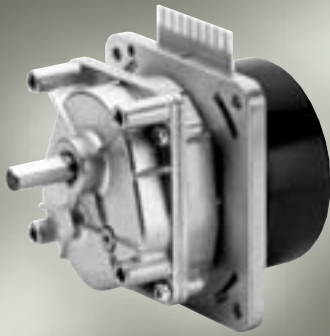
Operating electronics:
 DRIVECONTROL VT-A / Order No. 937 1401 002



Type VD-3-43.10 with AMP-plug frame.
 Dimensions on page 36 dimension drawing.

VARIODRIVE Compact

Gear motor VDC-3-54.14-C

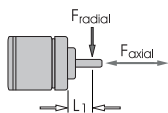


- 3-phase external rotor motor in EC technology for gear applications.
- Dynamically balanced rotor with 4-pole, plastic-bonded ferrite magnet.
- Integrated operating electronics with powerful microcontroller.
- Excellent control response due to digital 4-Q PI controller.
- Analogue set value.
- Available in various reduction ratios.
- Motor mass 0.83 kg.

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Nominal Data	Gear ratio	Nominal torque	Speed range	Order No.
Type	i	Nm	min ⁻¹	
VDC-3-54.14-C 16	16 : 1	1.7	19 ... 250	947 5414 600
VDC-3-54.14-C 22	22.9 : 1	2.4	13 ... 175	947 5414 601
VDC-3-54.14-C 32	32 : 1	3.4	9 ... 125	947 5414 602
VDC-3-54.14-C 45	45.4 : 1	4.3	7 ... 88	947 5414 603
VDC-3-54.14-C 58	57.8 : 1	5.5	5 ... 69	947 5414 604
VDC-3-54.14-C 79	79.1 : 1	7.0*	4 ... 51	947 5414 605
VDC-3-54.14-C 122	121.6 : 1	7.0*	2 ... 33	947 5414 606

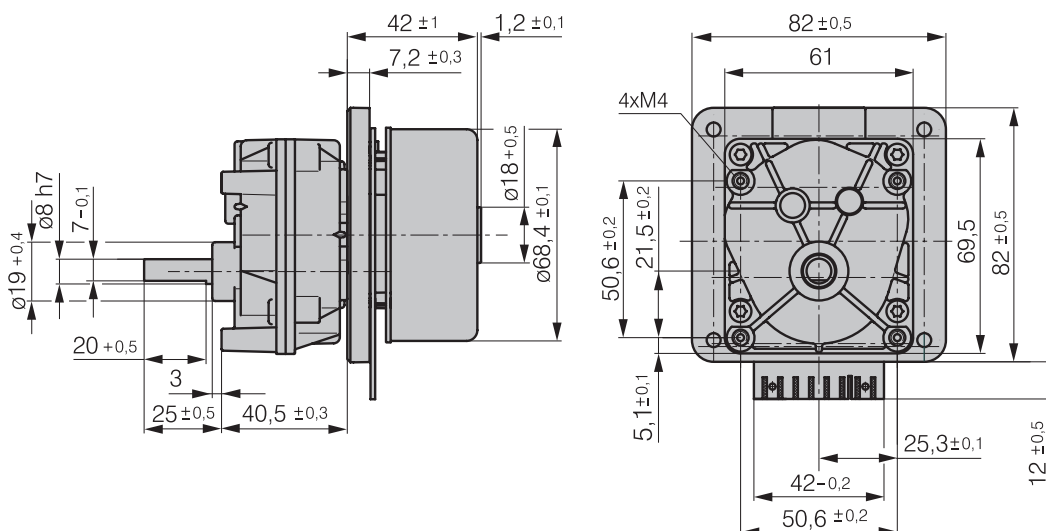
*Monitor torque limitation at max. 7.0 Nm on output side.



F_{axial} 40 N
 F_{radial} 120 N L_1 17 mm
 Permissible shaft load at nominal speed.

Gear Type C

Multi-stage spur gear in zinc diecast body.
 Grease lubrication for maintenance-free continuous operation.
 Shaft output with combined sleeve / needle bearing.
 Reversible direction of rotation.



Gear motor VD-3-54.14-C

Motor variation with external operating electronics

- 3-phase, 6-pulse external rotor motor for gear applications.
- EC-technology.
- Dynamically fine-balanced rotor with 4-pole, plastic-bonded ferrite magnet.
- Determination of rotor position via 3 Hall sensors.
- Motor supply and control via external operating electronics.

Nominal Data	Gear ratio	Nominal torque	Speed range	Order No.
Type	i	Nm	min ⁻¹	
VD-3-54.14-C 16	16 : 1	1.8	22 ... 215	947 5414 000
VD-3-54.14-C 22	22.9 : 1	2.6	15 ... 150	947 5414 001
VD-3-54.14-C 32	32 : 1	3.6	11 ... 110	947 5414 002
VD-3-54.14-C 45	45.4 : 1	4.6	8 ... 77	947 5414 003
VD-3-54.14-C 58	57.8 : 1	5.9	6 ... 60	947 5414 004
VD-3-54.14-C 79	79.1 : 1	7.0**	5 ... 44	947 5414 005
VD-3-54.14-C 122	121.6 : 1	7.0**	3 ... 28	947 5414 006

**Torque control at max. 7.0 Nm output due to operating electronics.
DRIVECONTROL VT-A, Series 2400.

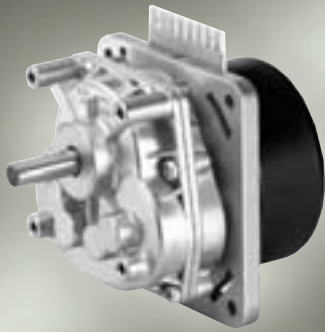
Operating electronics:

DRIVECONTROL VT-A / Order No. 937 2501 002

Dimensions on page 38 dimension drawing.

VARIODRIVE Compact

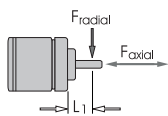
Gear motor VDC-3-54.14-D



- 3-phase external rotor motor in EC technology for gear applications.
- Dynamically balanced rotor with 4-pole, plastic-bonded ferrite magnet.
- Integrated operating electronics with powerful microcontroller.
- Excellent control response due to digital 4-Q PI controller.
- Analogue set value.
- Available in various reduction ratios.
- Motor mass 0.90 kg.

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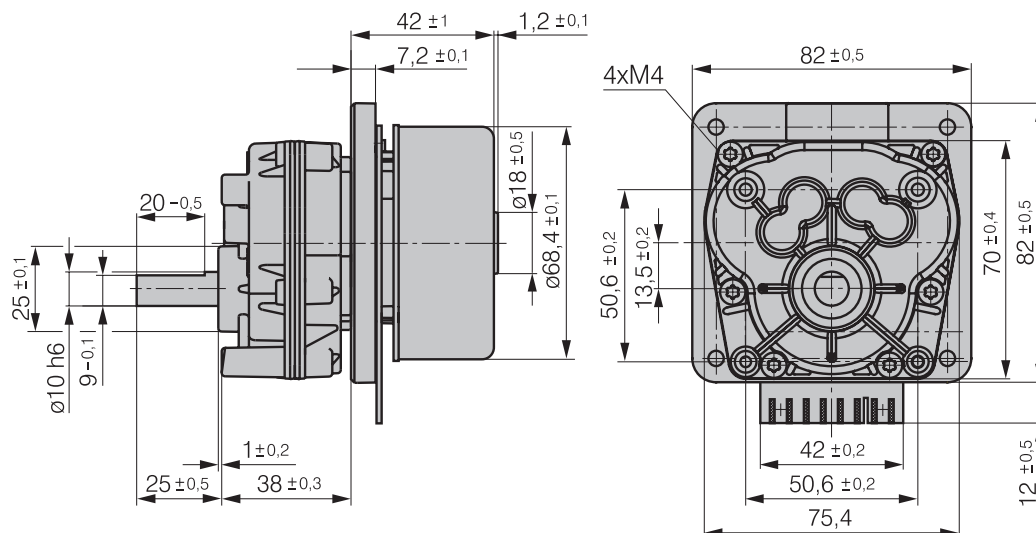
Nominal Data	Gear ratio	Nominal torque	Speed range	Order No.
Type	i	Nm	min ⁻¹	
VDC-3-54.14-D 11	11.3 : 1	1.2	27 ... 354	947 5414 610
VDC-3-54.14-D 16	15.9 : 1	1.7	19 ... 252	947 5414 611
VDC-3-54.14-D 26	26.4 : 1	2.8	11 ... 152	947 5414 612
VDC-3-54.14-D 39	38.6 : 1	4.1	8 ... 104	947 5414 613



F_{axial} 50 N
 F_{radial} 150 N L_1 17 mm
 Permissible shaft load at nominal speed.

Gear type D

Multi-stage spur gear in zinc diecast body.
 Grease lubrication for maintenance-free continuous operation.
 Shaft output with combined sleeve / needle bearing.
 Reversible direction of rotation.



Gear motor VD-3-54.14-D

Motor variation with external operating electronics

- 3-phase, 6-pulse external rotor motor for gear applications.
- EC-technology.
- Dynamically fine-balanced rotor with 4-pole, plastic-bonded ferrite magnet.
- Determination of rotor position via 3 Hall sensors.
- Motor supply and control via external operating electronics.

Nominal Data	Gear ratio	Nominal torque	Speed range	Order No.
Type	i	Nm	min ⁻¹	
VD-3-54.14-D 11	11.3 : 1	1.3	31 ... 310	947 5414 010
VD-3-54.14-D 16	15.9 : 1	1.8	22 ... 220	947 5414 011
VD-3-54.14-D 26	26.4 : 1	3.0	13 ... 130	947 5414 012
VD-3-54.14-D 39	38.6 : 1	4.4	9 ... 90	947 5414 013

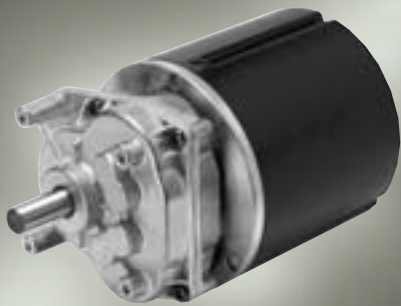
Operating electronics:

DRIVECONTROL VT-A / Order No. 937 2501 002

Dimensions on page 40 dimension drawing.

VARIODRIVE Compact

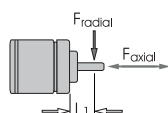
Gear motor VDC-3-54.32-D



- 3-phase external rotor motor in EC technology for gear applications.
- Dynamically balanced rotor with 4-pole, hard ferrite magnet.
- Integrated operating electronics with powerful microcontroller.
- Excellent control response due to digital 4-Q PI controller.
- Analogue set value.
- Available in various reduction ratios.
- Motor mass 1.39 kg.

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Nominal Data	Gear ratio	Nominal torque	Speed range	Order No.
Type	i	Nm	min ⁻¹	
VDC-3-54.32-D 9	9.2 : 1	2.0	38 ... 330	947 5432 610
VDC-3-54.32-D 18	18.4 : 1	3.5	19 ... 163	947 5432 611

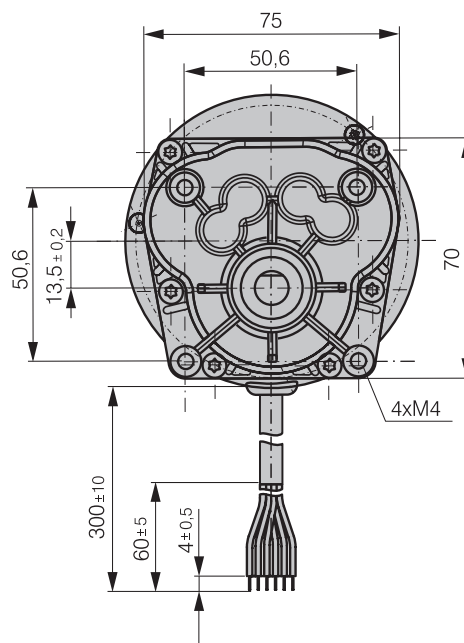
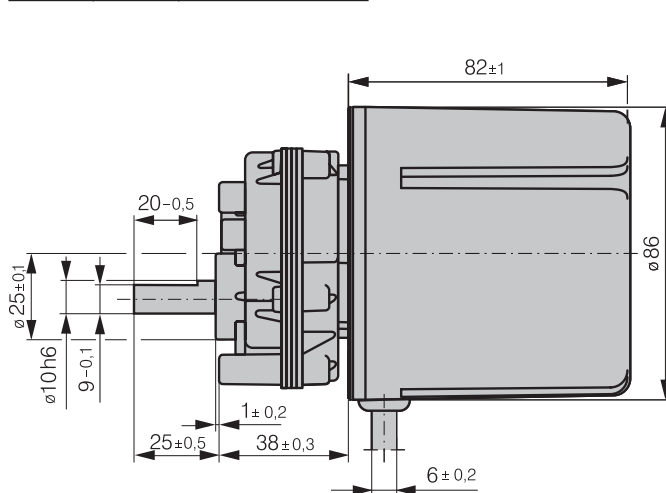


F_{axial} 50 N
 F_{radial} 150 N L₁ 17 mm
 Permissible shaft load at nominal speed.

Gear type D

Multi-stage spur gear in zinc diecast body.
 Grease lubrication for maintenance-free continuous operation.
 Shaft output with combined sleeve / needle bearing.
 Reversible direction of rotation.

Color	Code	Description
Yellow	ACTUAL	ACTUAL Speed value
White	A	Input A
Grey	B	Input B
—	C	Not occupied
Green	S+	Set value
—	S-	Ground set value
Black	GND	Ground
Red	+Ub	Supply voltage



VARIODRIVE Compact

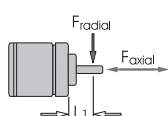
Gear motor VDC-3-54.32-E



- 3-phase external rotor motor in EC technology for gear applications.
- Dynamically balanced rotor with 4-pole, hard ferrite magnet.
- Integrated operating electronics with powerful microcontroller.
- Excellent control response due to digital 4-Q PI controller.
- Analogue set value.
- Available in various reduction ratios.
- Motor mass 1.48 kg.

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Nominal Data	Gear ratio	Nominal torque	Speed range	Order No.
Type	i	Nm	min ⁻¹	
VDC-3-54.32-E 31	31.1 : 1	5.9	11 ... 97	947 5432 620
VDC-3-54.32-E 70	70.4 : 1	11.8	5 ... 43	947 5432 621

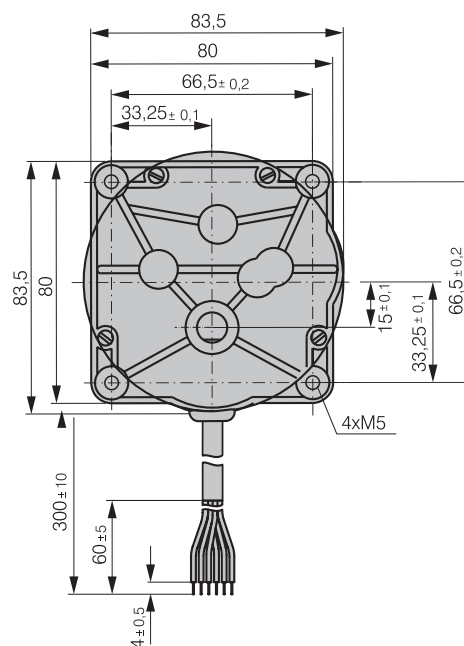
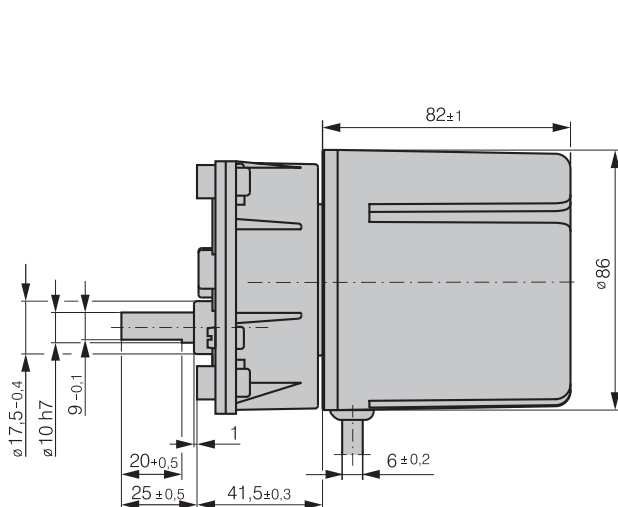


F_{axial} 50 N
 F_{radial} 150 N L_1 17 mm
 Permissible shaft load at nominal speed.

Gear type E

Multi-stage spur gear in zinc diecast body.
Grease lubrication for maintenance-free continuous operation.
Shaft output with combined sleeve / needle bearing.
Reversible direction of rotation.

Yellow	ACTUAL	ACTUAL Speed value
White	A	Input A
Grey	B	Input B
—	C	Not occupied
Green	S+	Set value
—	S-	Ground set value
Black	GND	Ground
Red	+Ub	Supply voltage



VARIODRIVE Compact

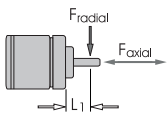
Gear motor VDC-3-54.32-PC



- 3-phase external rotor motor in EC technology for gear applications.
- Dynamically balanced rotor with 4-pole, hard ferrite magnet.
- Integrated operating electronics with powerful microcontroller.
- Excellent control response due to digital 4-Q PI controller.
- Analogue set value.
- Available in various reduction ratios.
- Motor mass One-stage = 1.53 kg, Two-stage = 1.72 kg.

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Nominal Data	Gear ratio	Nominal torque	Speed range	Order No.
Type	i	Nm	min ⁻¹	
VDC-3-54.32-PC 3	3.15 : 1	0.7	110 ... 950	947 5432 630
VDC-3-54.32-PC 10	9.6 : 1	2.0	36 ... 310	947 5432 631
VDC-3-54.32-PC 15	15.3 : 1	3.3	23 ... 196	947 5432 632
VDC-3-54.32-PC 29	28.5 : 1	5.4	12 ... 105	947 5432 633
VDC-3-54.32-PC 64	64 : 1	12.3	5 ... 47	947 5432 634
VDC-3-54.32-PC 96	96 : 1	18.4	3 ... 31	947 5432 635



F_{axial} 200 N
 F_{radial} 250 N L_1 27 mm
 Permissible shaft load at nominal speed.

Gear type PC

One and / or multi-stage planetary gear in turned aluminium body with optimized helical gearing for quiet running and long service life. Grease lubrication for maintenance-free continuous operation. Output shaft double ball bearings.

Yellow	ACTUAL	ACTUAL Speed value
White	A	Input A
Grey	B	Input B
—	C	Not occupied
Green	S+	Set value
—	S-	Ground set value
Black	GND	Ground
Red	+Ub	Supply voltage

