

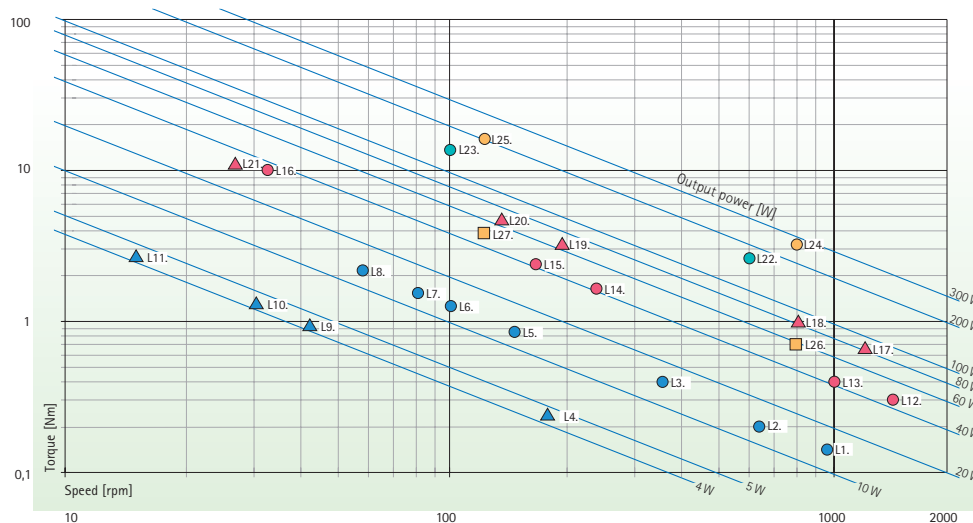
# Brushless EC motor, external and internal rotor with planetary gearhead Performax®

Innovation combined with longevity:  
top-class drives



● Performax® 32 with DPM2877   
 ● Performax® 42 with ECI4240   
 ● Performax® 52 with ECI2480   
 ● Performax® 63 with ECI6340  
▲ Performax® 32 with DPM2838   
 ▲ Performax® 42 with ECI4240/K1   
 ▲ Performax® 52 with ECI2480   
 ▲ Performax® 63 with VDC-3-49-15

## Performance overview



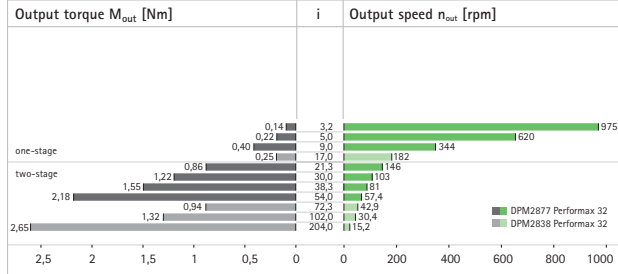
## Brushless EC motor, external and internal rotor with planetary gearhead Performax®

The drives of the Performax® series are an innovation in gearhead technology. An innovative (patent pending) planetary gearhead modular assembly concept is being used for the first time. Compared with other similar specified products on the market, Performax® gearheads offer outstanding power delivery and excellent smooth running.

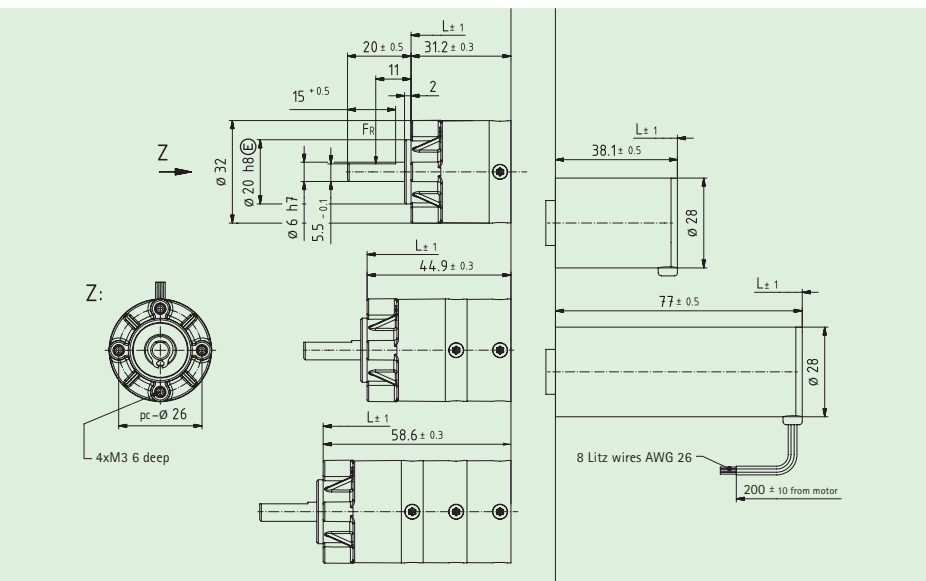
EC direct current motors have a very long life time by standards of electronic commutation (normally in excess of 10,000 hours). Speed control can be realised through integrated electronics, which is available with most models. Electronically commutated motors normally provide as a rule, high torques even at low speeds.

- patent pending modular design
- noise-optimised helical teeth in the input stage
- planetary wheels utilising one hollow plastic wheel with optimised sliding properties in the first stage for additional noise reduction
- hardened steel planetary wheels running on bearings (slide bearings in the case of Pgp32) with zinc diecast spur teeth in the second stage
- ground and hardened output shaft (diameter tolerance h7)
- two output shaft variants (feather key / face) available
- Motors adjustable - and controllable from nominal speed to the smallest motor speed of 300 rpm with constant motor torque
- matching operating electronics and switched-mode power supplies are available as option (see accessories)
- gearhead lifetime of 5,000 hours (operating factor  $c_B=1$ )
- protection class IP 40 or IP54
- maintenance-free grease lubricated for life
- ambient temperature 0 °C to +40 °C
- CANopen Bus-interface (VDC-3-49-15)

# Brushless EC motor, internal rotor with planetary gearhead Performax® 32



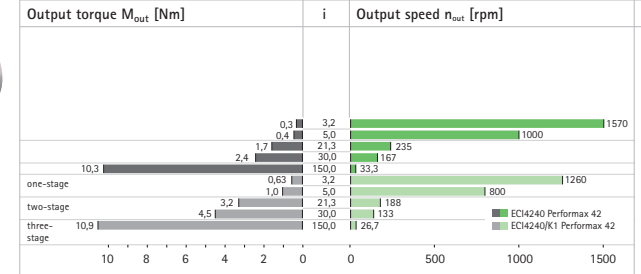
Max. radial load ( $F_R$ ) 150 N	Max. axial load 150 N	Lifetime at $M_{out}$ [Nm] 5000 h Operating factor $c_B=1$	Output shaft bearing assy. combined sliding/ ball bearing	Gearhead play approx. 0,7° to 1,2° depending on reduction	Protection IP 40
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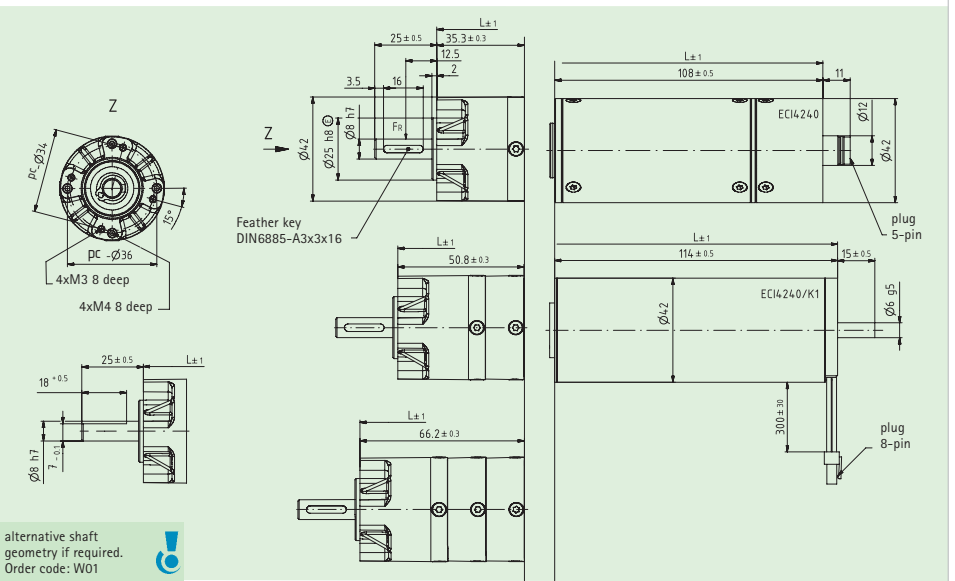
Planetary gearhead			Brushless EC motor, internal rotor						
Performax® 32			DPM2877			DPM2838			
No.	Reduction i / no. of stages	Output torque $M_{out}$ [Nm]*	Output speed $n_{out}$ [rpm]	Output power $P_{out}$ [W]	Motor	Order No.	Rated current I [A]	Weight m [kg]	Length L [mm]
L 1.	3,2 / 1	0,14	975	15	DPM2877	32.1.D2877.P01	1	0,3	108
L 2.	5 / 1	0,22	620	15	DPM2877	32.1.D2877.P02	1	0,3	108
L 3.	9 / 1	0,40	344	15	DPM2877	32.1.D2877.P03	1	0,33	122
L 4.	17 / 1	0,25	182	4,7	DPM2838	32.1.D2838.P04	0,41	0,25	83
L 5.	21,3 / 2	0,86	146	13	DPM2877	32.2.D2877.P05	1	0,35	122
L 6.	30 / 2	1,22	103	13	DPM2877	32.2.D2877.P06	1	0,35	122
L 7.	38,3 / 2	1,55	81	13	DPM2877	32.2.D2877.P07	1	0,38	136
L 8.	54 / 2	2,18	57,4	13	DPM2877	32.2.D2877.P08	1	0,38	136
L 9.	72,3 / 2	0,94	42,9	4,2	DPM2838	32.2.D2838.P09	0,41	0,3	97
L 10.	102 / 2	1,32	30,4	4,2	DPM2838	32.2.D2838.P10	0,41	0,3	97
L 11.	204 / 2	2,65	15,2	4,2	DPM2838	32.2.D2838.P11	0,41	0,3	97

Add-on components	DPM2877	DPM2838
	Electronics V04-V05, CAN01, S01-S02	Electronics V04-V05, CAN01, S01-S02

# Brushless EC motor, internal rotor with planetary gearhead Performax® 42



Max. radial load ( $F_R$ ) 250 N	Max. axial load 150 N	Lifetime at $M_{out}$ [Nm] 5000 h Operating factor $c_B=1$	Output shaft bearing assy. combined sliding/ ball bearing	Gearhead play approx. 0,7° to 1,2° depending on reduction	Protection IP 40
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Planetary gearhead			Brushless EC motor, internal rotor					
Performax® 42			ECI4240		ECI4240/K1			
No.	Reduction i / no. of stages	Output torque $M_{out}$ [Nm]*	Output speed $n_{out}$ [rpm]	Output power $P_{out}$ [W]	Order No.	Rated current I [A]	Weight m [kg]	Length L [mm]
L 12.	3,2 / 1	0,3	1570	47	42.1.E4240.P01	3	0,9	143
L 13.	5 / 1	0,4	1000	47	42.1.E4240.P02	3	0,9	143
L 14.	21,3 / 2	1,7	235	42	42.2.E4240.P03	3	1,0	159
L 15.	30 / 2	2,4	167	42	42.2.E4240.P04	3	1,0	159
L 16.	150 / 3	10,3	33,3	36	42.3.E4240.P05	3	1,1	174

Performax® 42			ECI4240/K1					
No.	Reduction i / no. of stages	Output torque $M_{out}$ [Nm]*	Output speed $n_{out}$ [rpm]	Output power $P_{out}$ [W]	Order No.	Rated current I [A]	Weight m [kg]	Length L [mm]
L 17.	3,2 / 1	0,63	1260	83	42.1.E4240.P06	5,1	0,7	149
L 18.	5 / 1	1,0	800	83	42.1.E4240.P07	5,1	0,7	149
L 19.	21,3 / 2	3,2	188	63	42.2.E4240.P08	5,1	0,8	165
L 20.	30 / 2	4,5	133	63	42.2.E4240.P09	5,1	0,8	165
L 21.	150 / 3	10,9	26,7	30,5	42.3.E4240.P10	5,1	0,9	180

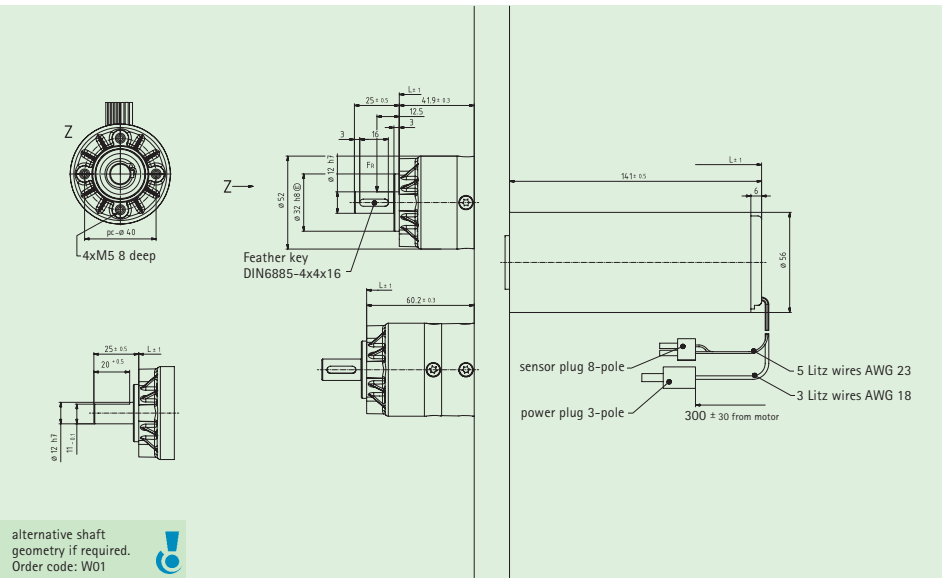
Add-on components	ECI4240	ECI4240/K1
	Electronics CAN01, S02-S02 SB07	Brake Encoder Electronics V04-V05, CAN01, S02-S03 SB08

# Brushless EC motor, internal rotor with planetary gearhead Performax® 52



Output torque $M_{out}$ [Nm]	i	Output speed $n_{out}$ [rpm]
one-stage: 2,7	5,0	600
two-stage: 14,3	30,0	100

Max. radial load ( $F_R$ ) 350 N	Max. axial load 500 N	Lifetime at $M_{out}$ [Nm] 5000 h Operating factor $c_B=1$	Output shaft bearing assy. combined sliding/ ball bearing	Gearhead play approx. 0,7° to 1,2° depending on reduction	Protection IP 40
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Planetary gearhead		Brushless EC motor, internal rotor						
Performax® 52		ECI2480						
No.	Reduction i / no. of stages	Output torque $M_{out}$ [Nm]*	Output speed $n_{out}$ [rpm]	Output power $P_{out}$ [W]	Order No.	Rated current I [A]	Weight m [kg]	Length L [mm]
L 22.	5 / 1	2,7	600	170	52.1.E2480.P01	11	1,7	183
L 23.	30 / 2	14,3	100	150	52.2.E2480.P02	11	1,9	201

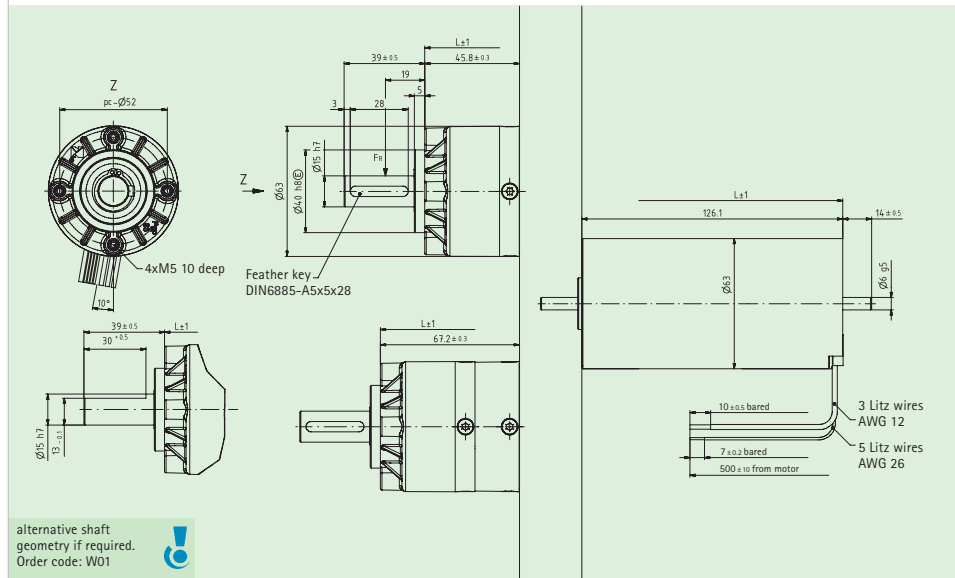
Add-on components	ECI2480
	Electronics V04-V05, CAN02, S03
	Circuit diagram SB08

# Brushless EC motor, internal rotor with planetary gearhead Performax® 63



Output torque $M_{out}$ [Nm]	i	Output speed $n_{out}$ [rpm]
one-stage: 3	5,0	800
two-stage: 16	30,0	133

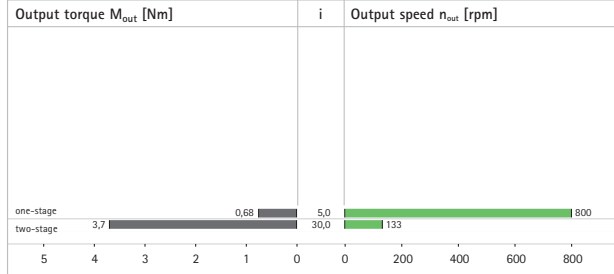
Max. radial load ( $F_R$ ) 350 N	Max. axial load 500 N	Lifetime at $M_{out}$ [Nm] 5000 h Operating factor $c_B=1$	Output shaft bearing assy. combined sliding/ ball bearing	Gearhead play approx. 0,7° to 1,2° depending on reduction	Protection IP 54
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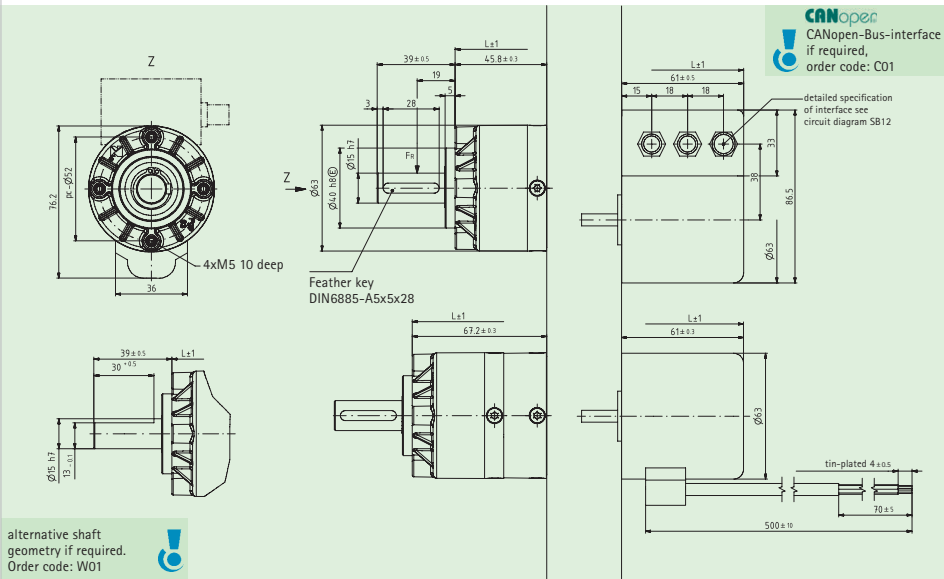
Planetary gearhead		Brushless EC motor, internal rotor						
Performax® 63		ECI6340						
No.	Reduction i / no. of stages	Output torque $M_{out}$ [Nm]*	Output speed $n_{out}$ [rpm]	Output power $P_{out}$ [W]	Order No.	Rated current I [A]	Weight m [kg]	Length L [mm]
L 24.	5 / 1	3	800	250	63.1.E6340.P03	14	1,9	172
L 25.	30 / 2	16	133	230	63.2.E6340.P04	14	2,2	193

Add-on components	ECI6340
	Brake B03
	Encoder G04
	Electronics V04-V05, CAN02, S03
	Circuit diagram SB08

# Brushless EC motor, external rotor with planetary gearhead Performax® 63



Max. radial load ( $F_R$ ) 350 N	Max. axial load 500 N	Lifetime at $M_{out}$ [Nm] 5000 h Operating factor $c_{63}=1$	Output shaft bearing assy. combined sliding/ ball bearing	Gearhead play approx. 0,7° to 1,2° depending on reduction	Protection IP 54
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Planetary gearhead		Brushless EC motor, external rotor							
Performax® 63		VDC-3-49-15 4000 rpm/63 W 24 V							
No.	Reduction i / no. of stages	Output torque $M_{out}$ [Nm]*	Output speed $n_{out}$ [rpm]	Output power $P_{out}$ [W]	Order No.	Rated current I [A]	Weight m [kg]	Length L [mm]	
L 26.	5 / 1	0,68	800	57	63.1.C4915.P01	3,5	1,3	107	
L 27.	30 / 2	3,7	133	51	63.2.C4915.P02	3,5	1,6	128	

Add-on components	VDC-3-49-15
Electronics	Circuit diagram
S01-S02	SB12



4,209 drive solutions



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