

Option

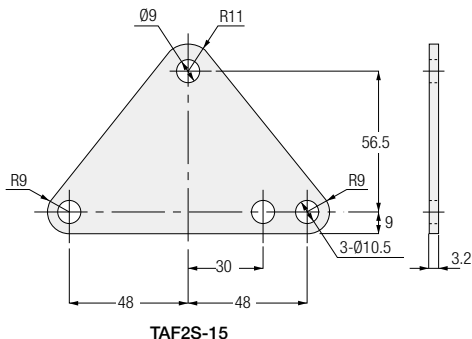
P.691	BATTERY POWERD GEAR MOTOR
	Output Shaft
P.691	Motor rear special specifications

Option

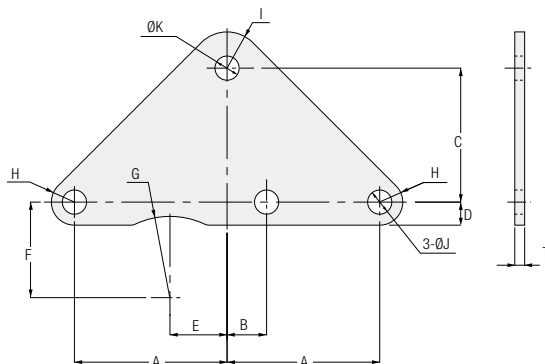
Battery powered Gearmotor V Series

■ F3S Type/VF3S Type

● Frame Size 15



● Frame Sizes 25 to 35



Part No.	Applicable Frame Size	Power	Applicable Reduction Ratio	A	B	C	D	E	F	G	H	I	J	K	T	Weight (kg)
TAF2S-15	15	0.1 kW	1/10 to 1/160	—	—	—	—	—	—	—	—	—	—	—	—	0.1
TAF3S-25-2	25	0.2 kW	1/10 to 1/60	60	27	61	10.5	16.5	43.5	R37	R10.5	R15	11	9	3.2	0.2
TAF3S-30-2	30	0.4 kW	1/10 to 1/60	69.5	26.5	70	10.5	21.5	48	R41.5	R10.5	R15	11	11	4.5	0.3
TAF3S-30-3		0.2 kW	1/80 to 1/240	78	14	70	12	32	46	R41.5	R12	R16.5	13.5	13.5	6	0.4
TAF3S-35-3	35	0.4 kW	1/80 to 1/240	97	11	94	15	43	54	R46.5	R15	R22.5	17.5	17.5	9	1.2

● Torque Arm Specifications

Part No.	Applicable Frame Size	Power	Applicable Reduction Ratio	Material	Surface Treatment	Color
TAF2S-15	15	0.1 kW	1/10 to 1/160	SS400	Trivalent Chromate	Surface Treatment Color (White-based Color)
TAF3S-25-2	25	0.2 kW	1/10 to 1/60			
TAF3S-30-2	30	0.4 kW	1/10 to 1/60			
TAF3S-30-3		0.2 kW	1/80 to 1/240			
TAF3S-35-3	35	0.4 kW	1/80 to 1/240			

VG/APG Type
Parallel Shaft

VH Type
Right Angle Shaft

VF3S/VF3T Type
Overhaul/Right Angle Shaft
F3S Type/Right Angle Shaft

Control Unit Specification

Technical Documentation

Option

Output Shaft Tapping (Threading)

The output shaft of the parallel shaft Type is tapped to the dimensions shown in the table below (Note 1), but the output shafts of other types are not tapped. If you desire output shaft tapping, we will prepare an output shaft manufactured to the dimensions shown in the table below. Designate these dimensions wherever possible at the time of design. To order tapping, enter "X40" at the end of the model name.

Note 1: Water-resistant specification stainless steel output shafts are not tapped.



Model example: Standard specification VHLC28L-80N200L2A ⇒ Output shaft with standard VHLC28L-80N200L2AX40

Note 2: The mark "●" in the table indicates a standard stock item. In addition, "▲" indicates that a lead time of about full 10 days is required.

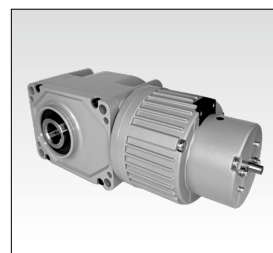
Note 3: Water-resistant specification stainless steel output shafts and dimensions other than those shown in the table below are custom specifications.

Note 4: For lead time, prices, and other details, please contact your nearest Sales Office.

Shaft Diameter (Frame Size)	Size x Pitch x Depth	VG Type (Parallel Shaft)	VH Type (Right Angle Shaft)			VF3F Type (Right Angle Shaft)		
			L Shaft	R Shaft	T Shaft	L Shaft	R Shaft	T Shaft
12/15	M5 x 0.8 x 12 ℓ	●	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
18	M6 x 1.0 x 15 ℓ	●	●	●	●	▲	▲	▲
22/28	M8 x 1.25 x 20 ℓ	With Output Shaft Tapping	●	●	▲	●	▲	▲
32	M10 x 1.5 x 25 ℓ	●	●	●	▲	●	▲	▲

Motor Shaft Extension (No Encoder)

An encoder can be attached to the rear of the motor with the specifications shown in the table below. If you require this option, please place an order with the appropriate option code shown in the table below.



■ Target Models

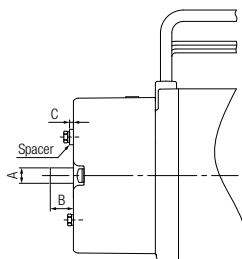
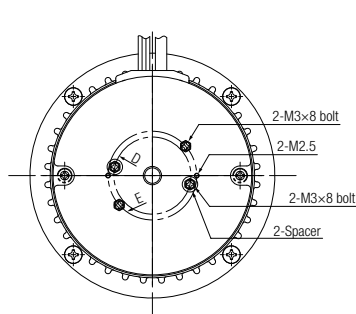
Battery Powered Gearmotors

0.1 kW to 0.4 kW * Except VG/VH Types of 0.1 kW with 1/80 or above reduction ratio

Option	Option Code
X	X8

Model example: Standard specification VGLD22-80N200L4A ⇒ Motor shaft extension VGLD22-80N200L4AXX8

■ Motor Shaft Extension Specifications



Motor Power	A	B	C	D	E
0.1 kW					
0.2 kW	8	12	2	40	46
0.4 kW					

The bolts are upset type bolts.

VG/APG Type
Parallel Shaft

VH Type
Right Angle Shaft

VF3S/VF3F Type
Concentric Right Angle Shaft
VF3S Type Right Angle Shaft

Control Unit Specification

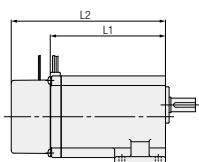
Technical Documentation

Option

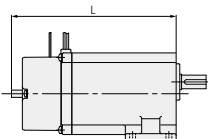
Product Outline Dimensions

When the shaft is extended, the overall length of the motor will increase For details, please refer to the table shown below.

● 0.1 kW VG type



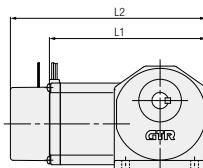
[Figure-1]



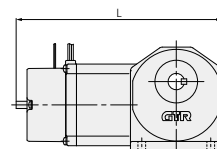
[Figure-2]

Motor Power	Standard type [Figure-1]		Motor Shaft Extension [Figure-2]
	No Brake L1	Brakemotor L2	Common to No brake/brakemotor L
15	129	170	181.5

VH type



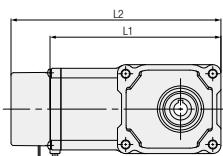
[Figure-1]



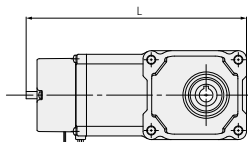
[Figure-2]

Motor Power	Standard type [Figure-1]		Motor Shaft Extension [Figure-2]
	No Brake L1	Brakemotor L2	Common to No brake/brakemotor L
18	174.5	215.5	227

VF3S type



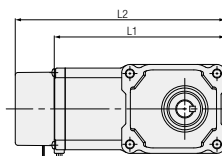
[Figure-1]



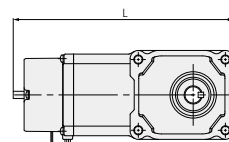
[Figure-2]

Motor Power	Standard type [Figure-1]		Motor Shaft Extension [Figure-2]
	No Brake L1	Brakemotor L2	Common to No brake/brakemotor L
15	190.5	231.5	243

VF3F type



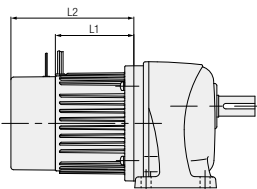
[Figure-1]



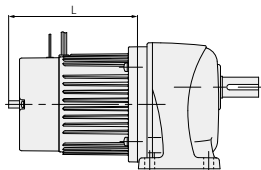
[Figure-2]

Motor Power	Standard type [Figure-1]		Motor Shaft Extension [Figure-2]
	No Brake L1	Brakemotor L2	Common to No brake/brakemotor L
18	190.5	231.5	243

● 0.2 kW, 0.4 kW



[Figure-3]



[Figure-4]

Motor Power	Standard type [Figure-3]		Motor Shaft Extension [Figure-4]
	No Brake L1	Brakemotor L2	Common to No brake/brakemotor L
0.2 kW	67	111	123
0.4 kW	89.5	135.5	142

VG/AFG Type Parallel Shaft

VH Type Right Angle Shaft

VF3S/VF3F Type Overhung Right Angle Shaft

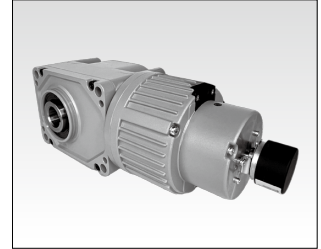
Control Unit Specification

Technical Documentation

Option

Encoders

An encoder can be attached to the rear of the motor with the specifications shown in the table below. If you require this option, please place an order with the appropriate option code shown in the table below.



Target Models

Battery Powered Gearmotors
0.1 kW to 0.4 kW * Except VG/VH Types of 0.1 kW with 1/80 or above reduction ratio

Encoder Specifications

Option	Option Code	Specification	
		Number of Pulses	Output Method
X	X3	1024 p/r	A/B/Z Line Drive Type
X	X4	1024 p/r	A/B/Z Open Drive Type

Model example: Standard specification VGLD22-80N200L4A ⇒ With an encoder VGLD22-80N200L4AXX3

Electrical Specifications

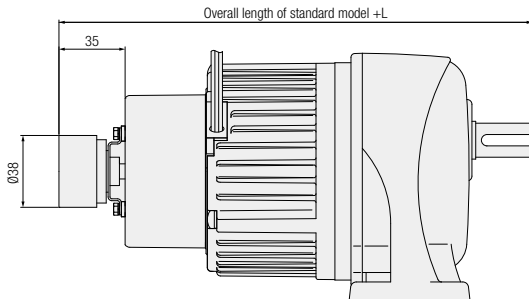
Supply Voltage	4.5 to 13.2 VDC
Current Consumption	30 mA MAX
Output Voltage	H level 2.5 V or more L level 0.5 V or below
Maximum Draw-in Current	20 mA
Maximum Response Frequency	120 kHz
Rise and Fall Time	100 ns MAX

**Connector Specifications
(Hirose Electric DF3-9S-2C)**

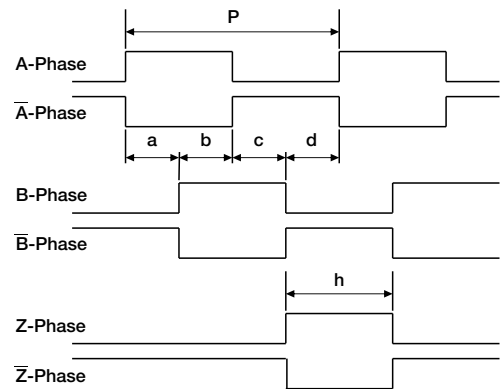
Terminal No.	Color	Connection	Terminal No.	Color	Connection
1	Red	Vcc	6	Gray	Sig B̄
2	Black	OV	7	Yellow	Sig Z
3	Green	Sig A	8	Orange	Sig Z̄
4	Blue	Sig Ā	9	Black	Shield
5	White	Sig B			

Product Appearance Dimensions

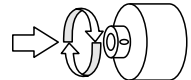
When an encoder is installed, the overall length of the motor will increase.
For details, please refer to the table shown below.



Waveform Specifications



Signal A, B $a, b, c, d = (P/4) \pm (P/8)$
Duty = $(P/2) \pm (P/4)$
Signal Z $(P/4) \leq h \leq (3P/4)$



Motor Power	Overall length increment (L)	
	No Brake	Brakemotor
0.1kW	75.5	34.5
0.2kW	75.5	34.5
0.4kW	75.5	29.5

VG/APG Type
Parallel Shaft

VH Type
Right Angle Shaft

VF3S/VF3F Type
Concentric Shaft
VF3S Type Right Angle Shaft

Control Unit Specification

Technical Documentation

Option