



G Series Galvanometers

G1222

G2860

G3060

G4080





Introducing Galvanometer G Series

The new G-Series Galvanometer features four different sizes, designed to deliver excellent performance in a wide range of applications. Each galvanometer is equipped with an internally designed optical position sensor, ensuring high dynamic performance, accuracy, precision, reliability, and minimal thermal drift. Whether you're working with mirrors ranging from 3mm to 100mm, you can find the best galvanometer perfectly suited to maximize processing performance. Additionally, for seamless integration and control, we offer the option of including analogical and DSP driver board. The galvanometer series is suitable for both small-scale projects and large-scale industrial applications.

The series is completed with linear motors

offered in two different sizes, for high-speed lens movement (up to 1600mm/s) for dynamic focusing of the z-axis. These motors adjust the focus accurately using advanced motion control and they are meticulously designed and built with top-grade components, ensuring outstanding quality and optimal performance.

Key features

- Moving Magnet Technology
- High Dynamic Performance
- New Position Detector
- Low Thermal Drift
- Compact Size



Experience Rooted in Passion

G-series is designed, developed, and manufactured at El.En.'s Italian facilities.

For over 40 years, El.En. has passionately committed itself to achieving the highest levels of engineering and reliability, creating devices with advanced technological capabilities.

In addition to galvanometers, El.En. also develops laser sources and components for a perfect integration.

With more than 3000 industrial installations, El.En. has been chosen to achieve exceptional performance in a wide range of industries.

Embrace the precision, innovation, and expertise of El.En.'s laser solutions, empowering your industrial applications with cutting-edge technology.

Seamless integration

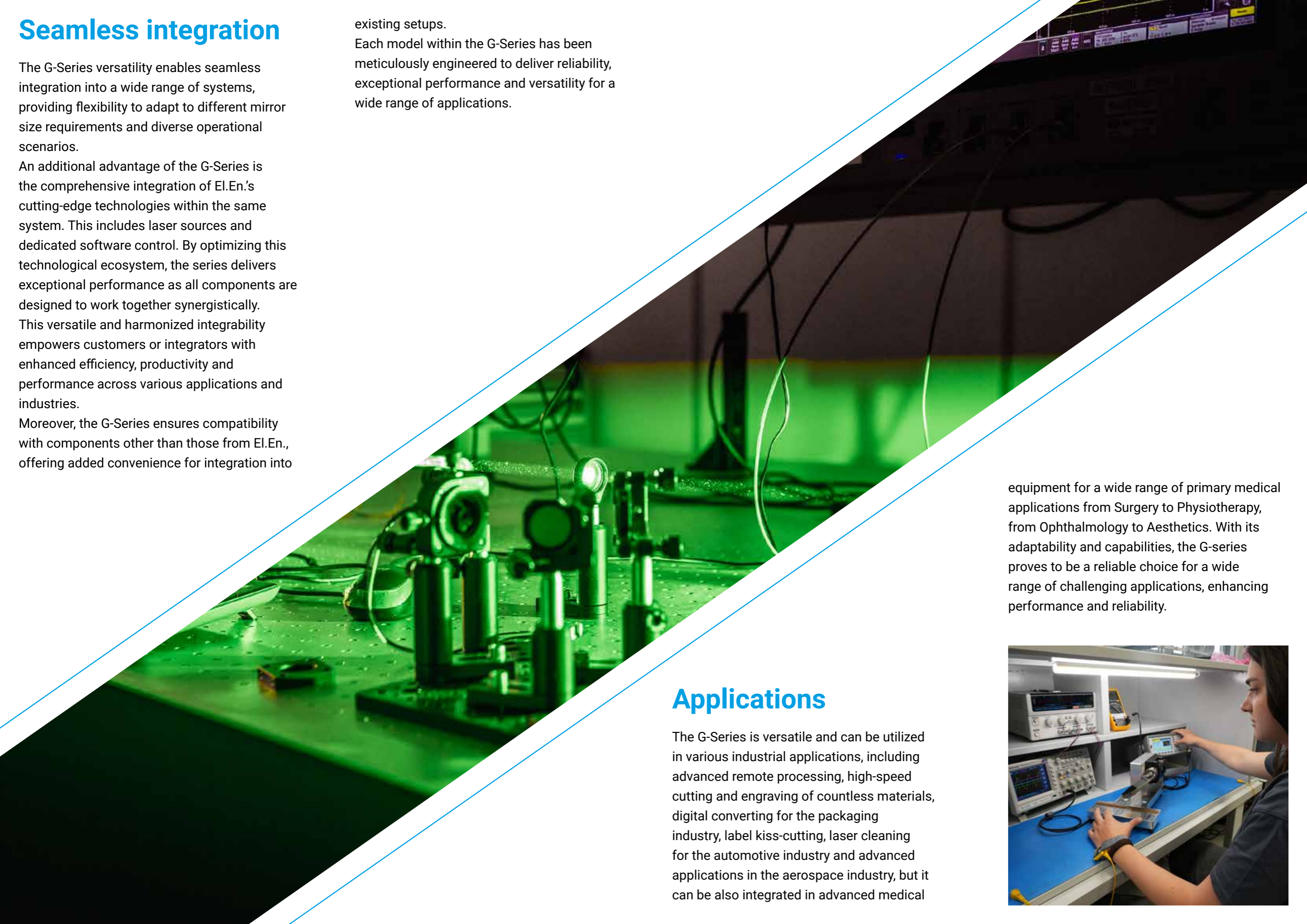
The G-Series versatility enables seamless integration into a wide range of systems, providing flexibility to adapt to different mirror size requirements and diverse operational scenarios.

An additional advantage of the G-Series is the comprehensive integration of El.En.'s cutting-edge technologies within the same system. This includes laser sources and dedicated software control. By optimizing this technological ecosystem, the series delivers exceptional performance as all components are designed to work together synergistically. This versatile and harmonized integrability empowers customers or integrators with enhanced efficiency, productivity and performance across various applications and industries.

Moreover, the G-Series ensures compatibility with components other than those from El.En., offering added convenience for integration into

existing setups.

Each model within the G-Series has been meticulously engineered to deliver reliability, exceptional performance and versatility for a wide range of applications.



equipment for a wide range of primary medical applications from Surgery to Physiotherapy, from Ophthalmology to Aesthetics. With its adaptability and capabilities, the G-series proves to be a reliable choice for a wide range of challenging applications, enhancing performance and reliability.

Applications

The G-Series is versatile and can be utilized in various industrial applications, including advanced remote processing, high-speed cutting and engraving of countless materials, digital converting for the packaging industry, label kiss-cutting, laser cleaning for the automotive industry and advanced applications in the aerospace industry, but it can be also integrated in advanced medical



G1222



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Mechanical & Electrical specifications

Model	G1222	G2860	G3060	G4080	Note
Rated excursion rotor (°mech.)	40	40	40	40	42° mechanically limited
Rotor inertia (g·cm ²)	0.015	1.9	9	55	± 10%
Recommended aperture size (mm)	3 ÷ 8	8 ÷ 30	15 ÷ 40	40 ÷ 100	
Torque constant (mN·m/A)	2.2	17.2	48	103	± 10%
Back EMF (mV/(rad/s))	2.2	17.2	48	103	± 10%
Coil resistance (Ohm)	3.6	1.6	2.8	2	± 10%
Coil inductance (μH)	100	270	650	1.1	± 10%
Thermal resistance coil to case (°K/W)	4	0.9	0.65	0.3	Max
RMS Coil current (A)	1.6	5	6	10	Max Stator's temperature 60°C
RMS Power (W)	10	50	90	200	Max Stator's temperature 60°C
Peak Coil current (A)	5	20	20	35	10 ms @ 20 Hz
Weight (g)	27	210	330	1400	
Linearity (%)	99.9 99.8	99.9 99.8	99.95 99.9	99.9 99.8	Min over +/-15° mecc excursion Min over +/-20° mecc excursion
Scale drift (ppm/K)	+/-50	+/-50	+10/-35	+/-50	Max, over 20 to 60°C case temperature
Zero drift (μrad/°K)	+/-15	+/-15	±8	+/-15	Max, over 20 to 60°C case temperature
Long term drift (% f.s./year)	0.1	0.1	0.05	0.1	
Repeatability (μrad)	15	15	10	15	Short term, no temperature change
Output signal, differential mode (μA/°mech)	6*	6*	21.5**	6*	
Output signal, common mode (μA)	150	150	280	150	Recommended
Sensor power requirements (V ; mA)	4.5-7*** 15-30****	4.5-7*** 15-30****	20***** 25*****	4.5-7*** 15-30****	

* ±5%; Output signal common mode =150 μA

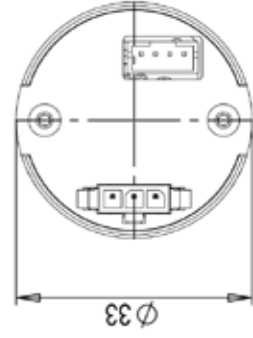
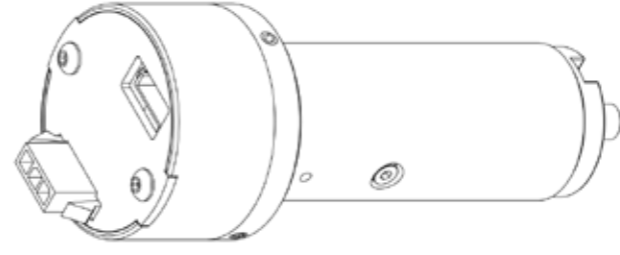
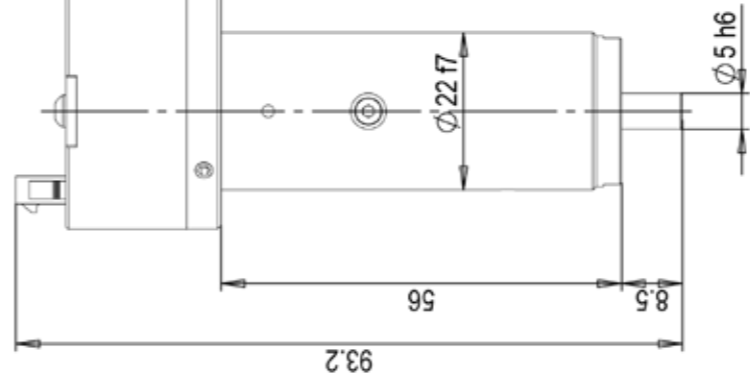
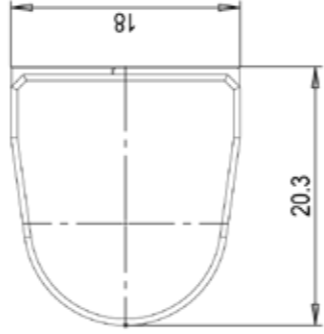
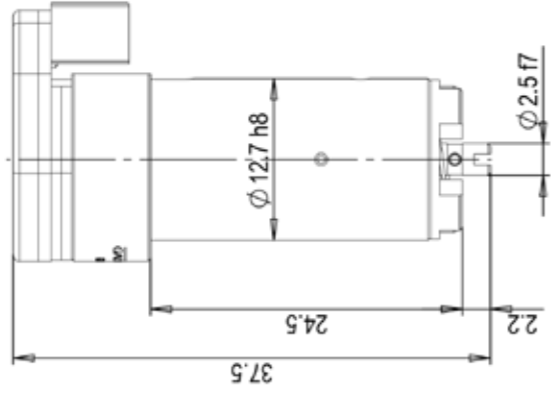
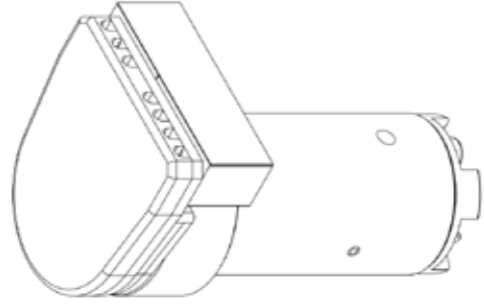
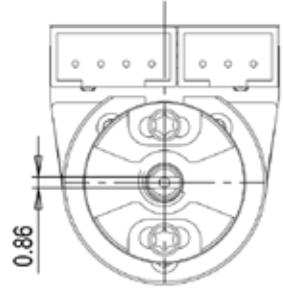
** ±5%; Output signal common mode =280 μA

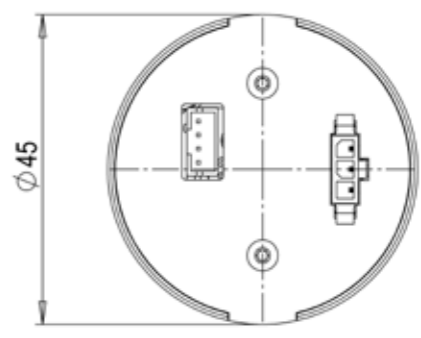
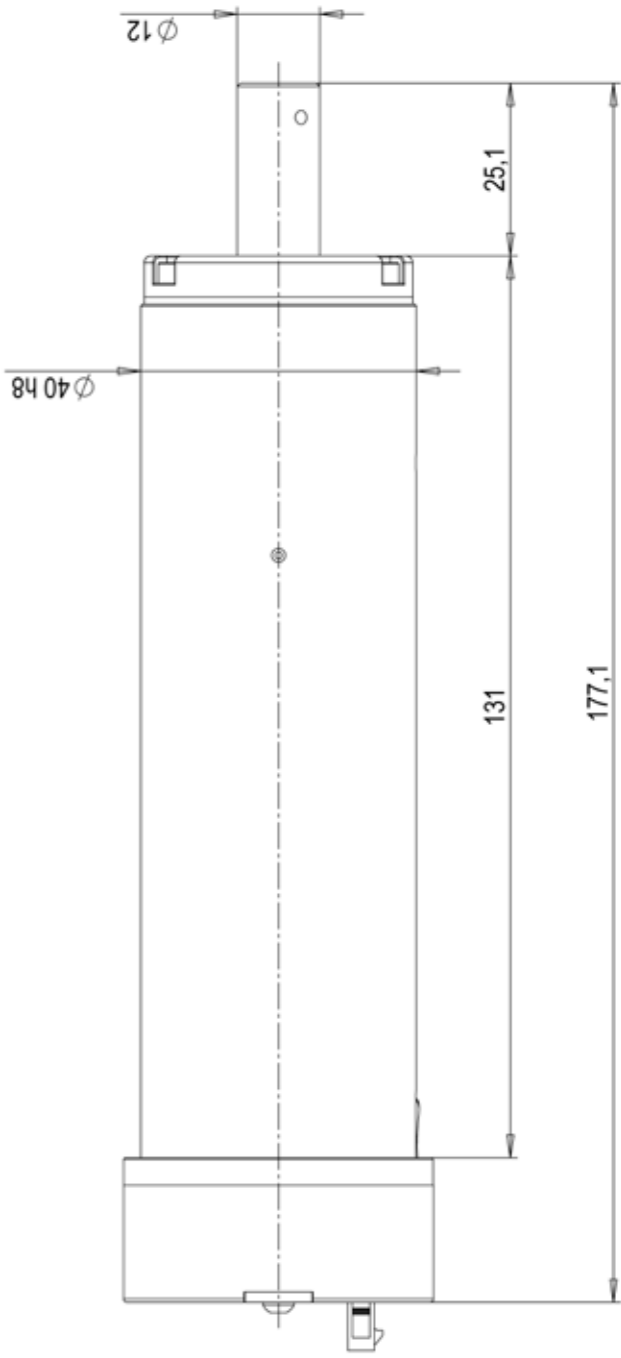
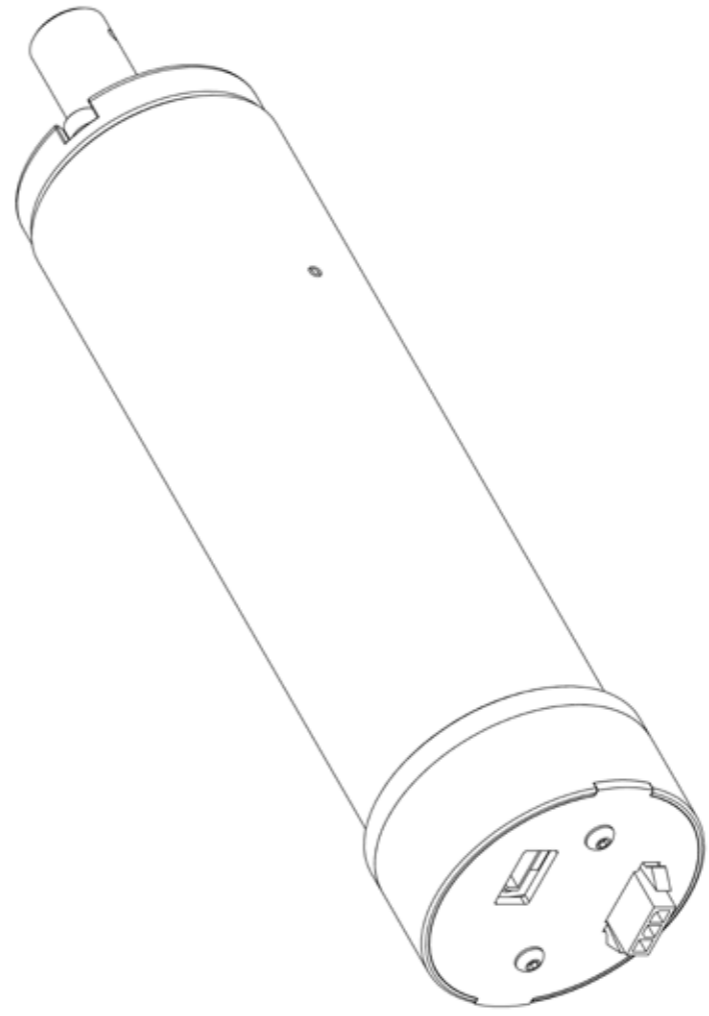
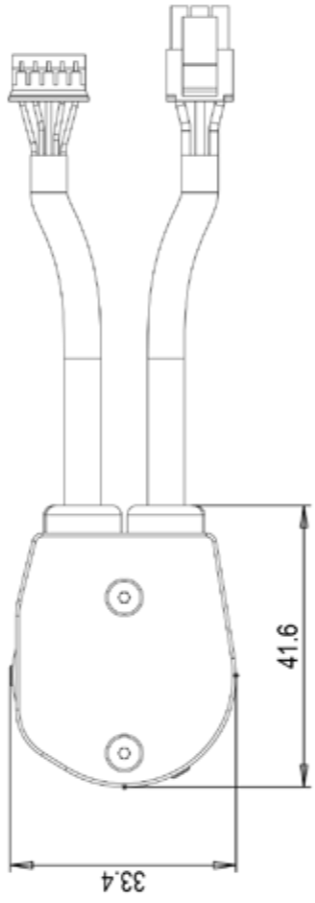
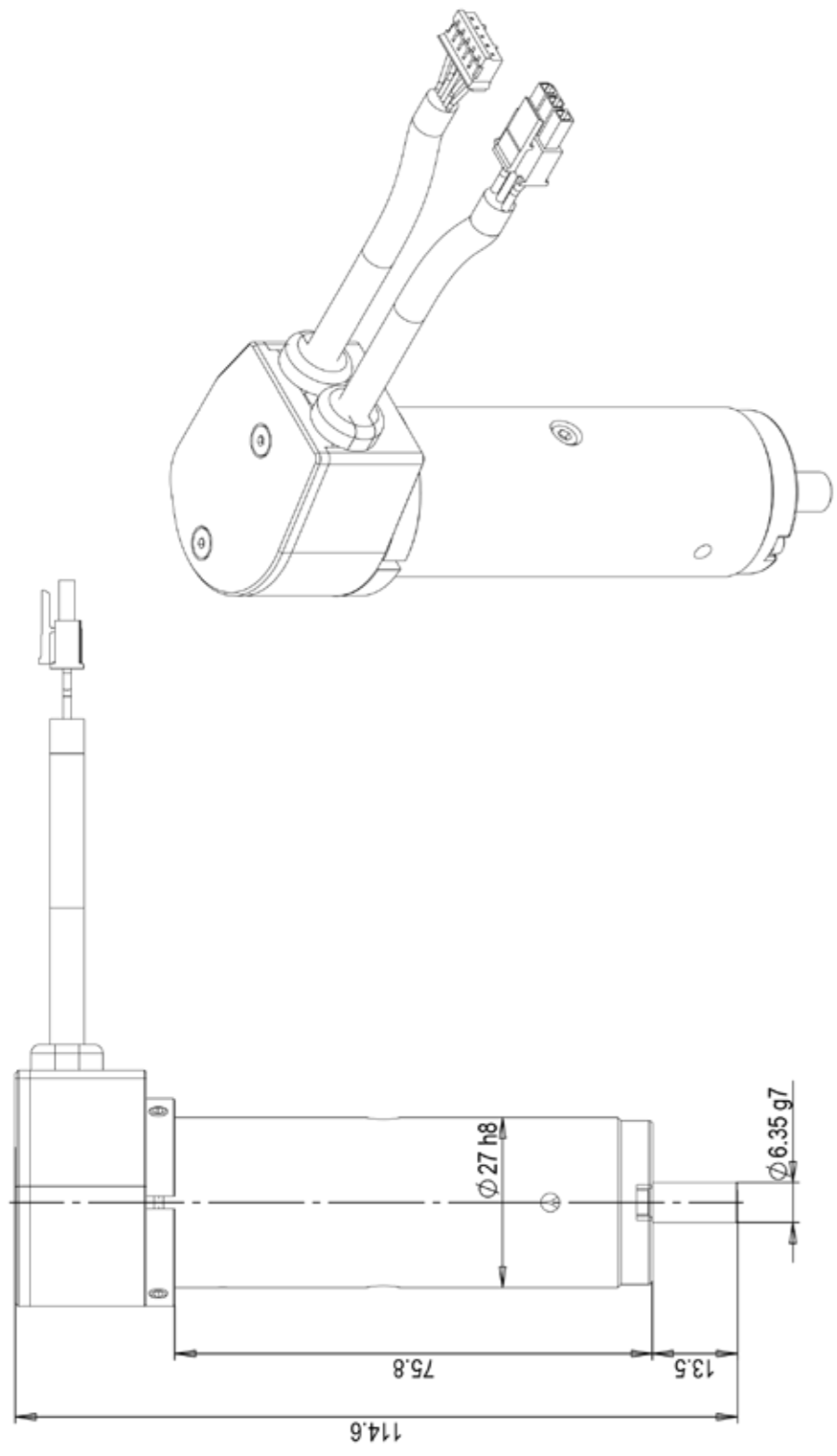
***Over 20 to 60°C case temp

****Output signal, common mode =150 μA

*****Typical, Output signal common mode = 280 μA

*****Max, over 20 to 60°C case temperature







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