



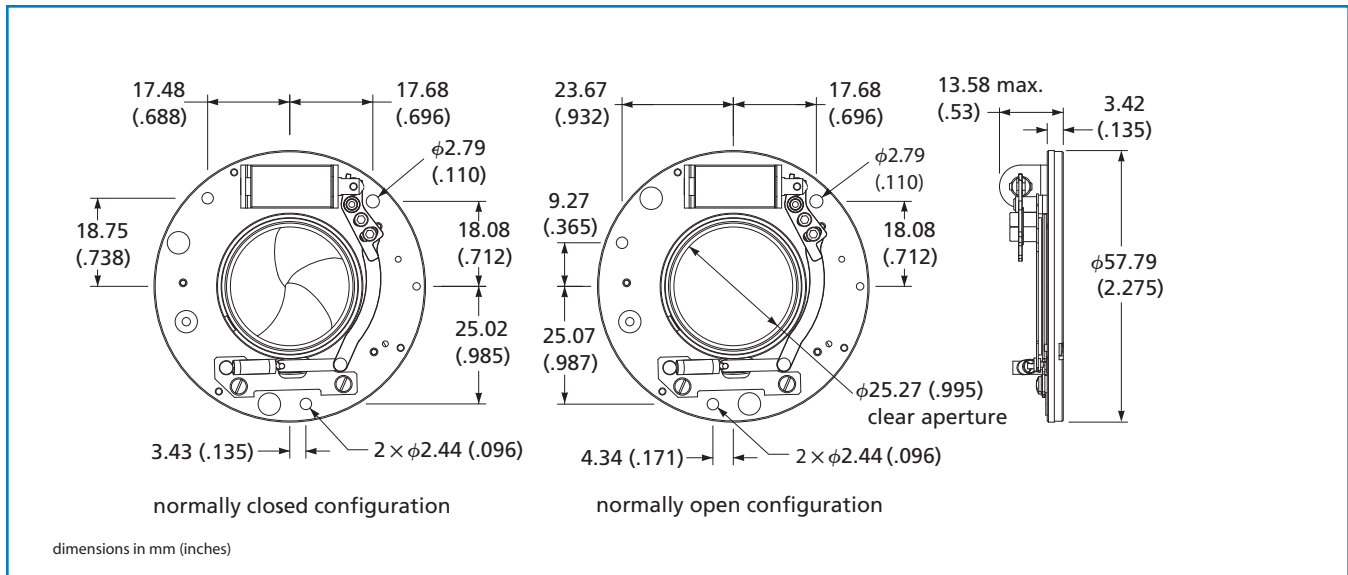
Electronic Shutters

ExtremeService™ Electronic Shutters

ExtremeService™ shutters from CVI Melles Griot offer industry-leading reliability in harsh environmental conditions. Their robust, temperature-insensitive design thrives at temperatures as low as -40°C and as high as 70°C . The coating on the blades is highly emissive in the infrared spectral region, making these shutters an ideal choice for calibrating uncooled sensors in FLIR systems. ExtremeService™ shutters provide the reliability and control needed for night-vision and infrared-illumination systems, as well as for a wide range of analytical, metrology, and photonics instrumentation.

ExtremeService™ Electronic Shutter Features

- Operates reliably from -40°C to $+70^{\circ}\text{C}$
- Proprietary low-friction, high-IR emissivity blade coating
- Offered in normally closed and normally open configurations
- Available with 12-Vdc or 3 Vdc solenoids



04 ESC- and ESO-series shutters

ExtremeService™ Electronic Shutters

Clear Aperture (mm)	Configuration	Maximum Speed* (sec)	Shutter Blades	Peak Pulse Current (mA)	Holding Current (mA)	Rated Solenoid Voltage (Vdc)	Resistance** (Ω)	Inductance (mH)	PART NUMBER
25.20	Normally Open	1/60	5	1000	120	12	50	54.9	04 ESO 121
25.20	Normally Closed	1/60	5	1000	120	12	50	54.9	04 ESC 121
25.20	Normally Open	1/60	5	4000	500	3	3	2.7	04 ESO 031
25.20	Normally Closed	1/60	5	4000	500	3	3	2.7	04 ESC 031

*Typical

** Resistance is nominal ($\pm 10\%$) at 20 degrees Celsius and will vary approximately 0.393% per degree Celsius

Note: Solenoid properties are nominal and apply at a 10% duty cycle as calculated by the formula: Duty Cycle (% of rated power) for a 20-msec pulse = $100 \times (0.32 + 0.25 \times \text{hold time}) / (\text{total cycle time})$. To achieve specified performance, duty cycle, calculated by the preceding formula, should not exceed 100%