Grid Solutions

CMM AND CML

Motor and manual disconnector operating mechanisms

Designed for safety and reliability

Grid Solutions4 motor and manual mechanisms also provide real position signalisation of the disconnector, as well as the necessary operational interlocking functions.

The primary function of a motor operating mechanism is to provide reliable remote operation of disconnectors by means of a torsional pipe.

Type

	DISCONNECTOR OR EARTHING SWITCH
CMM	Motor
CML	Manual lever
CMH	Crank

Maintenance Free

Grid Solutions uses only the highest quality corrosion-resistant materials available. The housing has a standard tightness rating of IP54 and is made of stainless steel, the only real solution to ensuring mechanical strength and corrosion resistance.

Our gear are lubricated for life and therefore do not require any maintenance or greasing. The main worm-gear assembly, which provides operating torque and supports the weight of the mechanism, is bolted to the supporting structure allowing the housing to serve only as a weatherproof covering. Air vents, an internal heater to prevent condensation and ensure trouble-free operation to low voltage relays and switches are supplied as standard equipment.

Easy to Install

The removable side panel ensures easy and quick on-site wiring. All mechanisms are factory-wired to the terminal blocks.

Safety

A manual operating handle is stored just inside the operating mechanism. Each motor mechanism may be manually operated by inserting the handle through the access hole for emergency operations. Manual operation turns the same gearing as motor operation.

The signalisation device is housed inside the mechanism to ensure direct and reliable correspondence between the signalisation of the mechanism and the disconnector position. Commutator switches and cam+ microswitch signalisation devices are both available.

The operating force (manual or motor) is transmitted by an irreversible reduction gear, which prevents the disconnector from changing position due to environmental (wind, seismic...) or electrodynamic stress. It also eliminates the unwanted feedback which would be transmitted to the manual handle. The motor drive electromechanical lock requires energising to permit the insertion of the crank into the working position and will interlock the manual operation with other devices when required (i.e. with circuit breaker) and override the motor operation when the crank is inserted. The manual drive electromechanical padlock also requires energising for operation. The motor is always fed through an MCB.

CMM Motor Operating Mechanism

Customer Benefits

- Maintenance-free
- Tested at up to 20,000 operations
- Easy retrofitting of motor operation
- Stainless steel enclosure
- Irreversible reduction gear
- Removable side panel for easy wiring access
- AC or DC motors available

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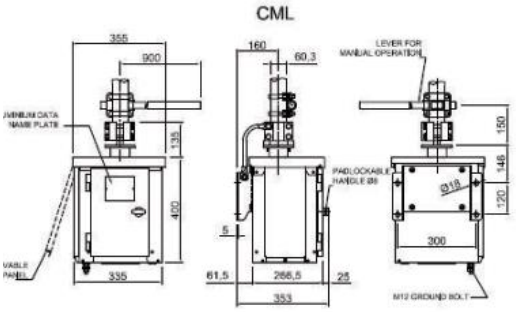
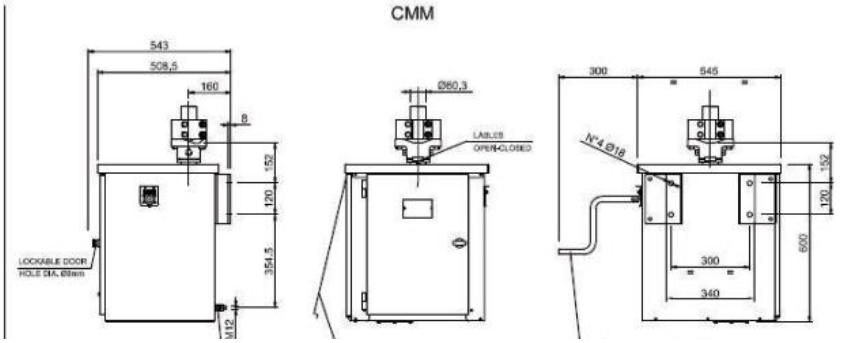
Dimensions



CML manual lever operating mechanism



CMM motor operating mechanism

Reliability

Mechanical endurance tests at up to 20,000 C/O operations have proven the reliability of all mechanical parts. Fully operational from -50°C to +55°C, Grid Solutions mechanisms have confirmed their performance in the scorching climates of Egypt and Sudan, in the extremely cold territories of Canada and Russia, in the tropical weather of Indonesia and Venezuela and in the intense seismic regions of Chile and California (USA).

Flexibility

Various combinations of worm-gear ratios give a wide range of output torque and operating times. As a result, Grid Solutions mechanisms are suitable for most disconnectors and earthing switches, even those of other manufacturers. Motor and manual mechanisms are fully inter-changeable, allowing the motorisation of disconnectors originally installed with manual mechanisms.

Quality

Grid Solutions designs, manufactures, tests and delivers its disconnectors in accordance with the latest IEC and ANSI standards.

All our disconnector manufacturing sites worldwide are certified according to the ISO 9001 Quality Management System.

On-line routine tests are carried out on every mechanism before leaving our factories.

Optional Accessories

Electromechanical interlocks, manual/ local/remote switch, open/close push buttons, electric outlets, internal light, key interlocks, signalling lamps, operations counter, thermostatically controlled additional heaters, auxiliary circuits and/ or heating protection, undervoltage relay, time delay relay, up to 24 NO and 24 NC signalisation contacts, padlockable end position, front door padlock, mechanical decoupler, IP55 tightness rating.

Other accessories are available on request.

Railway Applications

Grid Solutions has designed a range of mechanisms to meet the specific needs of railway applications. Full details on the various models available can be found in the disconnector brochure dedicated to railway applications.

CML Manual lever operating mechanism

Painting

Our mechanisms can be painted for added protection in particularly aggressive environments. Further details are available upon request.

Painted mechanism for addded protection against corrosion

For more information, visit
gevernova.com/grid-solutions

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English
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