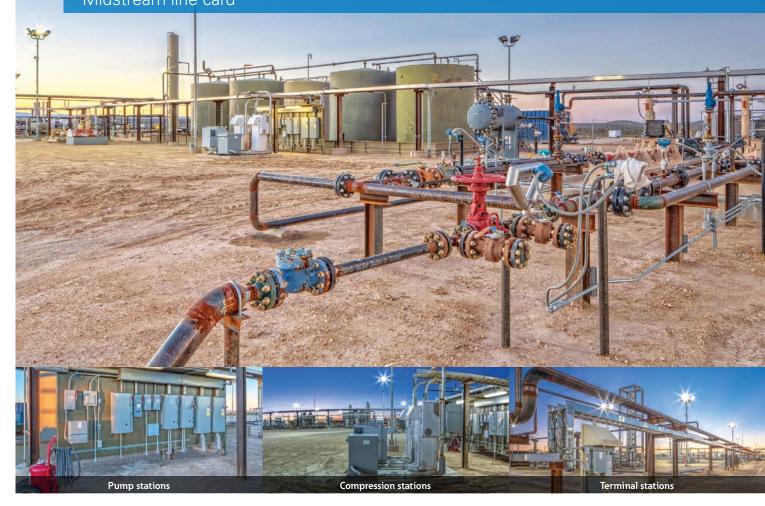
# **Solutions for oil and gas** Midstream line card



### Energizing a world that demands more.

Eaton's midstream solutions help you mitigate transport, environmental and safety risks, while also keeping costs down. Eaton's experience with large, high-pressure operations in challenging and remote locations will help you reach your project goals. Our comprehensive safety, control and monitoring solutions offer outstanding protection, along with optimized maintenance and extended equipment life, while also helping you comply with industry regulations and technical standards. And with leading safety products, including the Crouse-Hinds™ series family of offerings, we offer a unique combination of systems, components and services that ensure you minimize risk and optimize your investment, wherever your business takes you.





### Compressor stations (gas)

LED lighting, floodlights, LV and MV assemblies, transformers, disconnects, power control, LV and MV drives, circuit protection, regulators, couplings and filters

#### Pump stations (oil)

LED lighting, floodlights, LV and MV assemblies, motor control centers, regulators, transformers, MV switchgear, automatic transfer switches, process control, control and automation, disconnects, fuses, LV drives, couplings and filters

#### Power distribution

Cable management, LV assemblies, transformers, switchgear, capacitors and substations

#### Perimeter

LED lighting, hazardous area communications, mass notification systems, CCTV, automatic transfer switches, switchboards, panelboards, disconnects, plugs and receptacles and disconnects

### Storage

Network security, motor control centers, automation and control, drives, fuses and pipe hangers

### Filtration

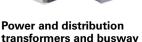
Expertise to meet quality, cost, safety or environmental needs

- ASME, PED, IEL, CE, CRN, CSA, NEC, ATEX, NACE, NR-13 standards
- Pipeline strainers, bag and cartridge filtration and gas liquid separators

# Learn more at **Eaton.com/oilandgas**







- Liquid-filled to 12 MVA (ANSI)
- Non-segregated medium- and low-voltage busway
- Envirotemp™ FR3™ dielectric fluid
- Dry-type distribution transformers (ANSI)
- Pole-mount, pad-mount and substation transformers
- ABS and Class I, Division 2 certifications
- Variable voltage transformer for heater cable and processing applications





## Medium- and low-voltage motor control centers

- Medium-voltage motor control centers rated 2.4 kV to 13.8 kV
- Standard and arc-flash preventative motor control centers
- Both NEMA/ANSI certified



### Meters, sensors and relays

- Revenue-grade energy monitors
- Fast transient sampling, event monitoring
- · Motor and feeder protective relays
- InsulGard<sup>™</sup> partial discharge



### Emergency and backup power

- Engineered for industrial environments with unpredictable power conditions
- · FERRUPS® voltage regulating
- Marine certified
- ANSI and IEC configurations
- 2000–3000 A contactor-based automatic transfer switches



### E-houses and portable power solutions

- Turnkey engineered E-houses
- · Mobile substations and capacitors
- Factory acceptance testing, field commissioning
- Dedicated project management resources
- One set of engineering documentation
- Safety studies
- Maintenance and emergency services



# Medium- and low-voltage switchgear

- Generator and line mounted switchgear
- Metal-clad medium-voltage switchgear rated to 38 kV
- Metal-enclosed low-voltage switchgear up to 600 V, 10,000 A continuous cross bus
- Standard and arc-resistant mediumand low-voltage switchgear
- Medium-voltage, liquid-filled vacuum interrupter switchgear and sectionalizing switches
- NEMA®/ANSI



### Medium- and low-voltage drives

- 4160 V to 6000 hp
- 600 V to 2000 hp
- Medium-voltage with 24-pulse input technology
- Low-voltage 6- and 18-pulse input technology
- IEEE® 519 harmonic compliance
- Medium-voltage arc-resistant
  design



## Low-voltage power distribution

- Panelboards
- Safety switches and disconnects
- · NEMA/ANSI and IEC ratings
- Industrial and hazardous areas
- · Hazardous area transformers



# Cable ladder systems and mechanical solutions

- Aluminum, stainless steel, galvanized steel and FA series fiberglass material options
- Strut systems, fittings and accessories
- Grip Strut™ safety grating and various slip-resistant grating solutions
- · NEMA/ANSI and IEC ratings





### Medium-voltage circuit protection

- Medium-voltage vacuum circuit breakers
- Medium-voltage
   Bussmann™ series fuses
- 5 to 38 kV
- 600 to 6000 A



### Low-voltage circuit protection

- Hazardous area, molded-case industrial and marine breakers
- Arcflash Reduction Maintenance System™
- Power Xpert™ release trip units
- Bussmann series branch circuit fuses, fuse holders and blocks, and power distribution blocks



### Power panels and motor control

- · Power distribution panels
- Combination motor starters
- Explosionproof VFDs
- Specialty and traditional control stations
- Switch rack assemblies
- Hazardous, harsh, industrial areas



#### Hazardous area control stations

- · Suitable for use in hazardous areas
- · Impact-resistant thermoplastic
- · Ingress protection to IP67 rated voltage
  - · Contact blocks; 500 V
  - · Signal lamps; 240 V IEC
- NEMA/ANSI and IEC ratings



### Interior and perimeter hazardous area lighting

- Light sources: LED, HID, incandescent and fluorescent
- Types: flood, task, high bay, wall pack, linear, area and confined space
- NEMA/ANSI and IEC ratings



#### **Enclosures**

- · Junction boxes and enclosures
- Stainless steel, aluminum, fiberglass and steel iron
- Instrument housings
- · Hazardous and industrial areas
- NEMA/ANSI and IEC ratings



### Hazardous area and life safety communications

- · Command and control centers
- · Fire detection and alarms
- · Mass notification systems
- · Visual and audible signaling devices
- · CCTV systems
- VOIP and analog phones
- NEMA/ANSI and IEC ratings
- Offshore PA/GA systems

### Plugs, receptacles and connectors

- · Roughneck multi-pin and single-pole connectors
- PowerMate<sup>™</sup> pin-and-sleeve connectors
- PowerGard NEMA receptacles
- Molded to cable
- · Hazardous, harsh, industrial areas

### Cable and conduit wiring solutions

- · Industrial fittings
- Cable glands
- · Hub reducers, adapters and accessories
- · Hazardous, harsh, industrial areas
- · ANSI and IEC configurations



### Metering and monitoring

Pipeline/transportation

LED lighting, variable

frequency drives, motor

and structural support

LV and MV assemblies, transformers, automatic transfer switches, regulators, capacitors, fuses, mobile substations, overhead distribution equipment, microgrid energy system

Gathering and transmission pipelines

and software

Infrastructure Connectivity, cable management, enclosures, safety grating, pipe hangers, bolted framing, fasteners and mechanical supports

control centers, heat trace

Integrated communications, metering relays and sensors, panelboards, HMI, graphical user interfaces (GUI), GridAdvisor series smart sensor, wireless, and industrial networking fieldbus and barriers

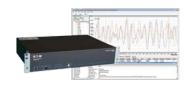


### Wireless and communications

- · Wireless I/O systems
- · Cellular communications
- Gateway interconnection
- · Network management
- · Remote monitoring and control

### Power management system

- · Electrical network monitoring and control
- Real-time data acquisition and historian
- · Station controller
- · Bay control units
- HMI



### Industry certified competency training

- Understand the theory behind products, solutions, and industry standards
- Experience real products first-hand through hands-on training with live products
- Identify and assess application environments, install product and test equipment
- Receive industry recognized competency certification

Learn more at Eaton.com/experience

#### **Process instrumentation** and protection

- · Intrinsically safe
- Surge protection
- Process alarm equipment
- HMI and visualization
- Field bus



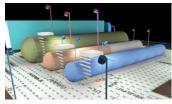
### Power engineering software (CYME)

- Detailed one-line diagram modeling
- · Power flow analysis
- Fault analysis (IEC, ANSI)
- Arc flash hazard analysis
- Protective device sizing and coordination
- Motor starting analysis
- Customizable reports



### **Engineering services**

- Arc flash and power systems studies
- · Life cycle extension services
- · Energy management services · Site testing and commissioning
- · Turnkey project services
- · Emergency response services



### Design tools and services

- Lighting layout and design services
- Custom SKU-level 2D and 3D models for integration into design software
- Custom SKU-level specification sheets

MGE OFFICE PROTECTION SYSTEMS MCGRAW-EDISON **MOELLER** METALUX **CUTLER-HAMMER** COOPER **HALO** ARROW HART **B-LINE** BUSSMANN MCGRAW-EDISON ARROW HART BUSSMANN **METALUX** POWERWARE MEM HALO BUSSMANN MCGRAW-EDISON CEAG **AEROQUIP-VICKERS** MTL COOPER BUSSMANN **B-LINE** MTLThe Power of One EATON MCGRAW-EDISON We serve the world's oil companies, OEMs **B-LINE** and EPCs with electrical, hydraulic and MOELLER filtration solutions supported by a global HALO MEM network of over 2,500 services professionals. MTL

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COOPER HALO CROUSE-HINDS



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