



Skema's Intelligent MCC is a modular system with withdrawable units for powering, controlling and protecting low-voltage motors. Thanks to its versatility, it can easily be adapted to suit any plant configuration, electrical layout or installation site. All the operations involved in the insertion and removal of the withdrawable units can be carried out from the front, with no risk of coming into contact with any live parts.

The Switchgear Control Unit (SCU) embedded into the MCC 2000 has up to 16 ports communicating via Rs-485 with Motor and Feeder Control Units using different serial protocols (Modbus, IEC-60870-5-101/103, DNP3) and enables multiple concurrent clients (DCS, ENMCS, local VDU, WiFi laptops) to interface via Ethernet with the switchboard using different protocols (IEC-61850, Modbus/TCP, OPC, IEC-60870-5-104).

Redundant configurations can be supplied thus guaranteeing communication reliability downward to the protections and upward to the control systems (DCS, ENMCS); two Ethernet ports (RJ45 and FO) and one VGA port are standard for every configuration.

Hardwired signals are integrated by remote I/O units, so all types of feeders can be remotely managed.

The SCU's patented firmware allows for the reading and/or setting of the protection parameters and the downloading of the Sequence of Events (SOE) and disturbance recordings, with the response time to DCS commands always below 500 ms. Local operation and supervision of the switchboard can be achieved by either a touch screen or a wirelessly connected laptop, and the MCC is easily integrated into any DCS and Electrical Network Monitoring System.



- Intelligent solution with centralized monitoring and control system
- Modular and compact, space-saving design and easy assembly
- Focus on quality, safety and reliability
- High performance at excellent price levels
- Compliant with the most stringent oil and gas standards (Shell DEPs)
- Flexibility during the design phase
- Fully type-tested by independent laboratories
- Fully insulated busbar system
- Internal arc proof
- Tested for seismic load and sinusoidal vibration
- Continuity of service and easy maintenance procedure
- Standards: CEI EN 60439-1, IEC 61641, IEC 60068-2-6, IEEE 1613, IEC 61850, IEEE C37.90, IEC 60255
- IRIG-B System clock Updating, Decoding and Generation for millisecond-accuracy timestamping
- Operating temperature: -40/+75° C
- Protocols available on individual serial ports: DNP3 serial, Modbus Master/Slave, IEC 60870-5-101/103
- Protocols available over Ethernet: Modbus/TCP, DNP3 LAN/WAN, IEC 60870-5-104, IEC61850, OPC

MCC 2000 - Main features		
Rated insulation voltage (Ui)		1000 V
Rated operating voltage (Ue)		400 V - 690 V
Rated Frequency		50/60 Hz
Rated current	main busbars	≤ 4000 A
	distribution busbars	630 A
Rated short-time withstand current for 1 sec. (Icw)		up to 100 kA
Rated peak withstand current (Ipk)		up to 220 kA
Degree of protection (according to EN 60529)	external enclosure	IP31/IP42
	with open door	IP2X/IP4X
Segregation form		form 4 type B
Maximum number of modules for section		12 (24)
Standard color of external enclosure		RAL 7032 and other colors on request
Access		from the front
Entry and exit of cables		from top or bottom
Section dimensions	Width	800, 900 mm
	Height	2365 mm
	Depth	590 mm (2000 A) 840 mm (4000 A)