

MR164E



ELECTRICAL OPERATING MECHANISM / UNIVERSAL SMART DRIVE



MAIN FEATURES

- Reliable, powerful and cost effective
- 6000 units operating worldwide
- Robust design, suitable for harsh environmental conditions (humid, heat, cold, corrosive atmosphere, ..)
- Easy to install: compact, lightweight, reduced installation time
- Real time condition monitoring (native IED, embedded sensors, Plug&Play options)
- Perfect for existing switches motorization or remotorization.

CUSTOMER BENEFITS

- Universal smart drive: flexible configuration
- Plug and play, easy wiring
- Increased grid safety: early detection of mechanical or electrical failures
- Condition based maintenance (CBM) / predictive maintenance of HV switches and operating mechanism
- Smart grid ready, fully IEC61850 compliant
- On site condition assesment / self diagnosis

CONTROL & MONITORING

COMMUNICATION

	BASE	OPTION
Interfaces	Copper wires	RS232 / RS485 / fiber optics
Protocol	Analog	Digital : S-COM (Modbus RTU, Modbus TCP, IEC61850, ..)
Priority mode	Analog	Dual mode: analog digital automatic switch

CONDITION MONITORING

Torque monitoring of the HV switch		S-TORQUE: low / mean / max torque, alert on output relay / through IT network
Light display on the box		S-LUX
Inside humidity		S-WET hygrometer
Information record	Last operation parameters	S-MEMORY: data recorder
10 leds display for operational informations status	✓	
3-digits display with informations code and 10 parameters menu V S	✓ S-DIGIT	
Operating mechanism automatic self diagnosis	✓	

More than 90 real-time monitored operational parameters:

Operation counter	✓ real time monitored	alert on output relay / through IT network
Motor overload	✓ real time monitored	alert on output relay / through IT network
Inside temperature	✓ real time monitored	alert on output relay / through IT network
Low / Mean / Max motor voltage supply	✓ real time monitored	alert on output relay / through IT network
Low / Mean / Max operating current	✓ real time monitored	alert on output relay / through IT network
Presence of auxiliary supply	✓ real time monitored	alert on output relay / through IT network
Anticondensation heater health	✓ real time monitored	alert on output relay / through IT network
Anticondensation heater power supply	✓ real time monitored	alert on output relay / through IT network
Operating time	✓ real time monitored	alert on output relay / through IT network
Interlock	✓ real time monitored	alert on output relay / through IT network
Selector position (local/ remote/out of use/manual)	✓ real time monitored	alert on output relay / through IT network
Operation in progress (opening / closing)	✓ real time monitored	alert on output relay / through IT network

OTHERS: Electrical / Mechanical interlock, Internal light, Padlockable door / selector, door switch ...



TECHNICAL FEATURES

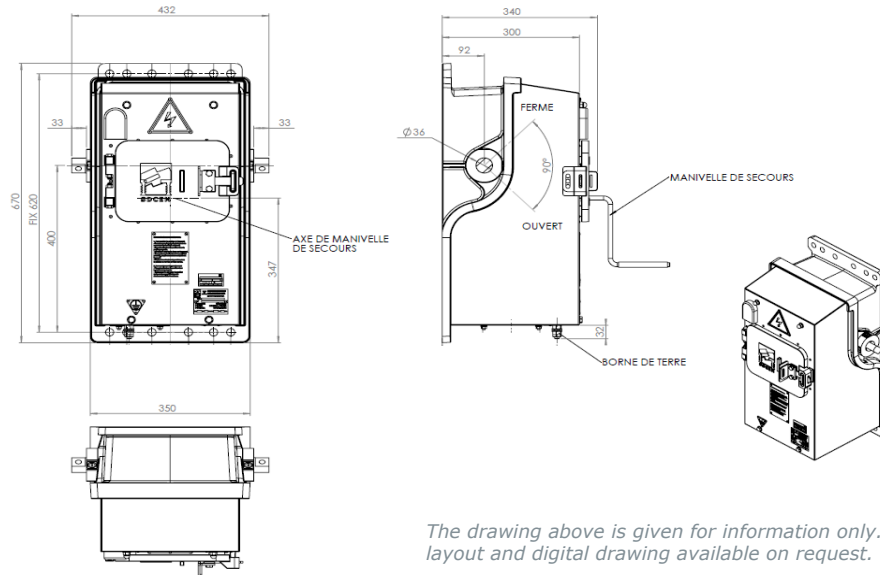
MECHANICAL

	BASE	OPTION
Drive / Transmission mechanism	Electrical motor, non-reversible mechanism	-
Operating angle	90°	-
Operating time	<10 s	Other value upon request
Output shaft position	left & right	-
Output torque	1 000 N.m	2 000 N.m
Mechanical endurance	2000 cycles	20000 cycles, other value upon request
Operating temperature	- 25°C / + 40°C	On request
Dimensions	350 x 340 x 670 mm	-
Weight	45 kg	-
Protection degree	IP56	-

ELECTRICAL

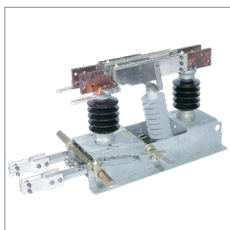
	BASE	OPTION
Motor		
Power supply voltage	48 to 220 VDC / 60 to 400 VAC	On request
Frequency range	DC / 16 Hz 2/3 / 50 Hz / 60 Hz	-
Nominal power	300 W	-
Auxiliary supply voltage	48 to 220 VDC / 110 to 230 VAC	On request
Auxiliary contacts O/C NO/NC	80 / 8C	xO / xC / xNO / xNC upon request
Anticondensation heater		
Supply voltage	230 VAC	110 VDC
Nominal power	25 W	100 W
Output relays	2	Up to 5
EMC	IEC61000	On request

OUTLINE DRAWING

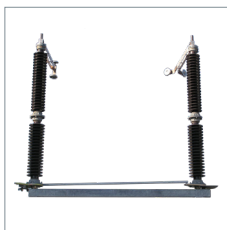


The drawing above is given for information only. Detailed layout and digital drawing available on request.

RELATED EQUIPMENT



SBE
VERTICAL BREAK
DISCONNECTOR



SR16200
CENTER BREAK
DISCONNECTOR



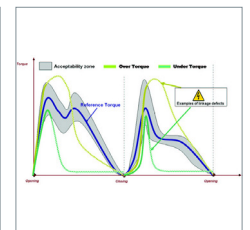
MR164E
UNIVERSAL SMART
DRIVE



S-COM
REMOTE CONTROL
BOARD



S-OFT
PORTABLE
DIAGNOSTIC TOOL



S-TORQUE
MECHANICAL FAILURE
AND POSITION
DETECTION