# On Board Disconnectors HAS range 25kV (1000Amp) 

ON BOARD DISCONNECTOR SWITCH

## 25KV ON BOARD DISCONNECTORS SWITCH



For more than 100 years, Mersen have been providing the market with safe, reliable and longer life time off-load disconnectors. These devices offer high performances and robustness for heavy duty requirements with very limited maintenance.
Mersen offers one of the largest product ranges on the market and is the global leader. Mersen has a switch solution that will meet your unique needs.
Our standard HAS High Power Switches are rigorously engineered to meet your technical specifications.
Operation : They can be operated manually or with an adapted motor (see list) up to 25.000 cycles.
Signaling, Terminal Box or Locking system can be studied and customised.
Small making or braking capacity (under request)
Maximum frequency up to 175 Hz
Indoor in a currentless state

TECHNICAL DATA OVERVIEW

| Size per Standard | HAS 1000A (higher rating on request) |
| :--- | :--- |
| Speed/Characteristic | Around 5 sec with motor operation |
| Working Temperature | $-20^{\circ} \mathrm{C}$ to $+70^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{C}\right.$ upon request) |
| Number of Poles | 1, more under request |
| Humidity | $95 \%$ Max. |

## FEATURES \& BENEFITS

- No Load Operation
- Indoor Type - Horizontal axis mounting
- Configuration with 1 pole
- Mechanical endurance : 25.000 cycles (1 cycle = open + close)
- Temperature rise at nominal current is less than $60^{\circ} \mathrm{K}$ (with $40^{\circ} \mathrm{C}$ max. ambient temperature)
- Electrical contact by contact blades with pressed-on Hard Silver Contact Rivets and silver-plated
- Supporting insulators made of cast epoxy resin (fire classification according to UL94-V1)
- Large isolation air and creepage path
- Self-cleaning blade contacts
- True opening and visible distance
- Rugged anti-torsion construction
- Full customisation with :
- Manual, motor
- Auxiliary switches, blocking magnets, locking devices
- Dimensions and Fitting


## APPLICATIONS

- On Board Disconnector for 25 kV Locomotives


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## PRODUCT RANGE

HAS Range 25kV

| Catalog <br> number | Rated current In | Rated peak current | RMS 1 sec short-time <br> withstand current | Voltage drop | Weight |
| :--- | :--- | :--- | :--- | :--- | :--- |
| HAS101P1000A25KV | 1000 A | 75 kA | 30 kA | 35 mV | 60 kg |

## DIMENSIONS

25kV Disconnector 1 pole 1000VDC motorized (dwg 1020376)


## MOTORS

| Motor types | Code | Motor voltage <br> rating |
| :--- | :--- | :--- |
| AC Mono | Code A 50Hz <br> Code B 60Hz | 230 VAC <br> 220 VAC |
| AC 3 phases | Code C 50Hz <br> Code D 60Hz | 400 400VAC |
| DC | Code G | 110 VDC <br> 220 VDC |

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## FUNCTIONS



## Customized signaling

This range can be equipped with micro switches offering 10 Amp under 400VAC (or DC13 110VDC 0,5Amp) and 10 million cycles operation.
These microswitches are used to signal the switch position and also to cut the power of the motor when it arrives at the end of its operation.
The disconnectors can be equipped with 1, 2, 3 microswitches (more under study).


## Tropicalized version

This range can be designed to be installed in salty atmospheres and in tropical geographical zones using stainless steel and a tropicalized version of motor or microswitches and special paints.

## Connection plate adaptation

To adapt the disconnector to the Busbar, we can adapt the orientation of the connecting plates (Vertically or Horizontally)

## Blocking magnets

The disconnector in this range have their position secured in Open and Closed (or both) positions using various locking systems for complete security.

- Padlocking (1 padlock diam 6mm)
- Key locking using preferably a Ronis Lock
- Blocking Magnets


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## FUNCTIONS



## Connection box, Connection Terminal

Blocking magnets are used to guarantee electromechanically the position of the Disconnector using remote control. This operation can be done for one or both position (open and closed).
Blocking magnet can be used missing Voltage or Voltage can be 24VDC, 48VDC, 110VDC, 230VDC and 230VAC (consumption GE40; TGN15; TGN17 between 20 to 45W)

## Mechanical Operation Counter



This Disconnector range can be equipped with a wiring connection terminal or connection box.

## ACCESSORIES

## Indication facilities



| Catalog <br> number | Item number | Length | Package | Weight |
| :--- | :--- | :--- | :--- | :--- |
| MECHANICAL OPERATION COUNTER | W110902 | 63 mm | 1 piece | 0.5 kg |

## Microswitches

| Catalog <br> number | Item number | Package | Weight |
| :--- | :--- | :--- | :--- |
| Microswitches |  |  |  |
| S/E SGN 2 CA SW11 | D1030058 | 1 piece | 0.3 kg |
| S/E SGN 4 CA SW11 | D1027229 | 1 piece | 0.35 kg |
| S/E SGN 6 CA SW11 | L1027489 | 1 piece | 0.4 kg |
| S/E SGN 8 CA SW11 | B1028952 | 1 piece | 0.5 kg |

## Supplementary poles

| Catalog <br> number | Rated current $\ln$ | Package | Weight |
| :--- | :--- | :--- | :--- |
| S/E POLE HAS 1000A U74 | 1000 A | 1 piece | 6.2 kg |

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## ACCESSORIES

## Lubricants

| Catalog <br> number | Item number | Package | Weight |
| :--- | :--- | :--- | :--- |
| Copper Grease | L108501 | 1 piece | 1 kg |



R817113

## Removable handles for emergency manual operation

| Catalog <br> number | Item number | Length | Package | Weight |
| :--- | :--- | :--- | :--- | :--- |
| ARB FLEX SSB-7 1043 | P1013646 | 1.043 m | 1 piece | 0.5 kg |
| LIMITING TORQUE MAN D10 L170 | Z819305 | 0.17 m | 1 piece | 0.46 kg |
| S/E MANIVELLE D10.2 170 | R817113 | 0.17 m | 1 piece | 0.27 kg |
| S/E MANIVELLE D10.2 170 Tropical | N827782 | 0.17 m | 1 piece | 0.27 kg |
| S/E MANIVELLE D10.2 300 | Z817143 | 0.3 m | 1 piece | 0.29 kg |
| S/E MANIVELLE D10.2 480 | Q822103 | 0.48 m | 1 piece | 0.33 kg |
| S/E MANIVELLE D10.2 600 | E834168 | 0.6 m | 1 piece | 0.6 kg |
| S/E MANIVELLE D10.2 1000 | L827688 | 1 m | 1 piece | 0.6 kg |
| S/E SGN CDE SECOURS FLEX 1043 | W1013652 | 1.043 m | 1 piece | 0.7 kg |

## Manual operation handles

| Catalog <br> number | Item number | Length | Package | Weight |
| :--- | :--- | :--- | :--- | :--- |
| S/E EYE LEVER D30/30 L450 | H821728 | 450 mm | 1 piece | 0.7 kg |
| ISOLATING STICK L1120 20KV | L820190 | 1120 mm | 1 piece | 0.85 kg |
| ISOLATING STICK L1520 45KV | V908380 | 1520 mm | 1 piece | 1 kg |
| ISOLATING STICK L2020 60KV | W908381 | 2020 mm | 1 piece | 1.25 kg |

