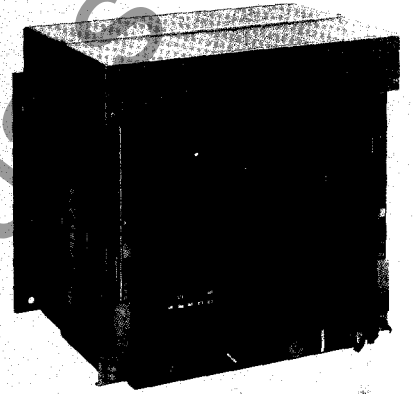


**Masterpact,
circuit-breakers
from 800 to 6300 A**



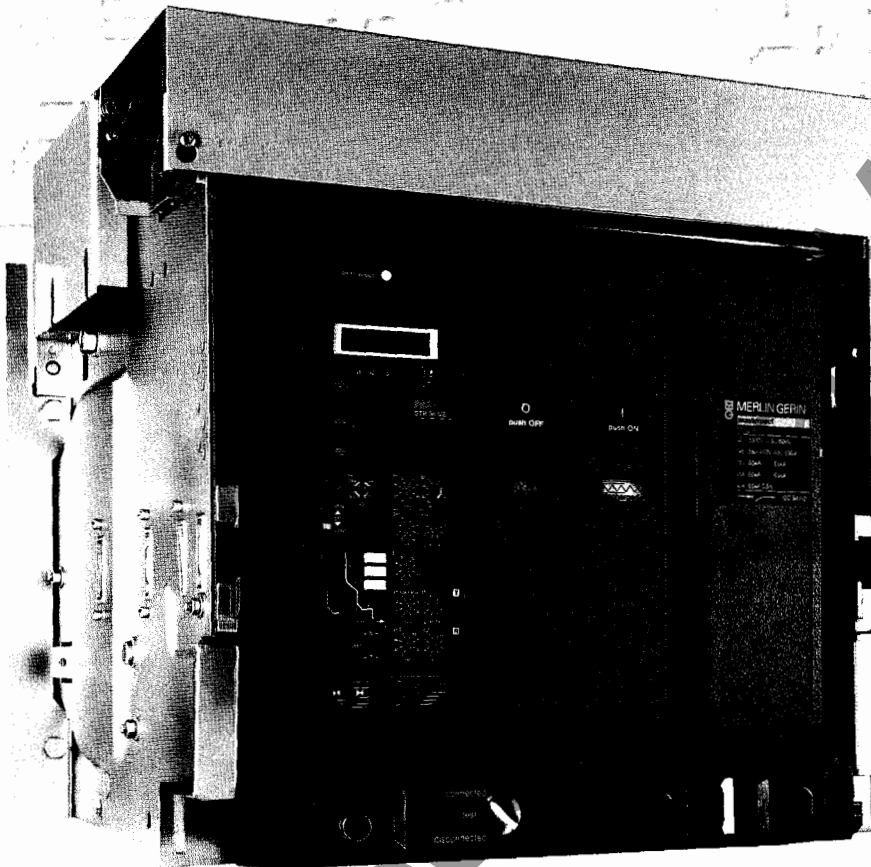
Masterpact, a concept which has become à standard

Masterpact, world leader

Through its use of the most recent technologies, Merlin Gerin has invented a new power circuit-breaker concept which has won over the entire world.

All the advantages of a modular construction in a polyester enclosure now reinforce the characteristics of the traditional air circuit-breaker.

Masterpact is the most widely sold power circuit-breaker in the world.



a single volume from 800 to 3200 A.

characteristics which have become a standard

- a modular design offering :
 - a limited number of parts,
 - reliability,
 - flexibility of adaptation and evolution.
- an optimized volume to reduce the number of versions and standardize as far as possible the switchboards.

- high performances
 - 6300 A and 150 kA breaking capacity...

extremely high thermal withstand, ensuring total chronometric discrimination.

■ high endurance

Designed to withstand several tens of thousands of operations, Masterpact is used in high technology sectors such as the nuclear industry and the military navy, where it meets the strictest requirements :

- impact withstand,
- vibration withstand,

- highly sophisticated control units which go beyond the classical functions ; standard electronics and intelligence as from the middle of the range.

- simple, completely safe operation, with maintenance and adaptation on site.

- reliable operation, thanks to the insulation of its polyester enclosure.

■ unmatched service, constantly attentive to users' needs

Its modular design means Masterpact can be assembled locally and delivered

flexibility of installation

Masterpact boasts a large number of assets, allowing standardization and optimization of the installation in the switchboard.

a single size

All the 800 to 3200 A Masterpacts have the same volume for :

- a single switchboard structure up to 3200 A,
- simplified installation.

a single door cut-out

All the front faces have the same overall dimensions. A single drilling drawing for the entire range.

a zero safety perimeter

The necessary distance above the device is reduced to 0, thanks to a cover in fixed or withdrawable version. The volume necessary for the installation is the same as the dimensions of the circuit-breaker.

easy connection of auxiliaries

The auxiliaries and their connection terminal block can be accessed from the front.

ideal to retrofit existing equipment

Its compact dimensions mean it can replace most circuit-breakers in operation, irrespective of their make.



Masterpact :
a highly sophisticated technology, at the

operating simplicity and safety

no servicing...

**10000 operations at 1600 A,
30 operations at 50 kA,
without intervention**

- its exceptional endurance means the Masterpact requires very little maintenance : only checking of the main contacts and the arc chutes.
 - the control mechanism is adjusted in the factory, once and for all.
 - the lifetime of all the auxiliaries and accessories is the same as for the basic device.
- Their installation in no way affects the life expectancy of the circuit-breaker.

... but designed for maintenance...

visual inspection of the wear parts

The arc chutes and main contacts can be easily inspected either visually or by observing the maintenance indicators.

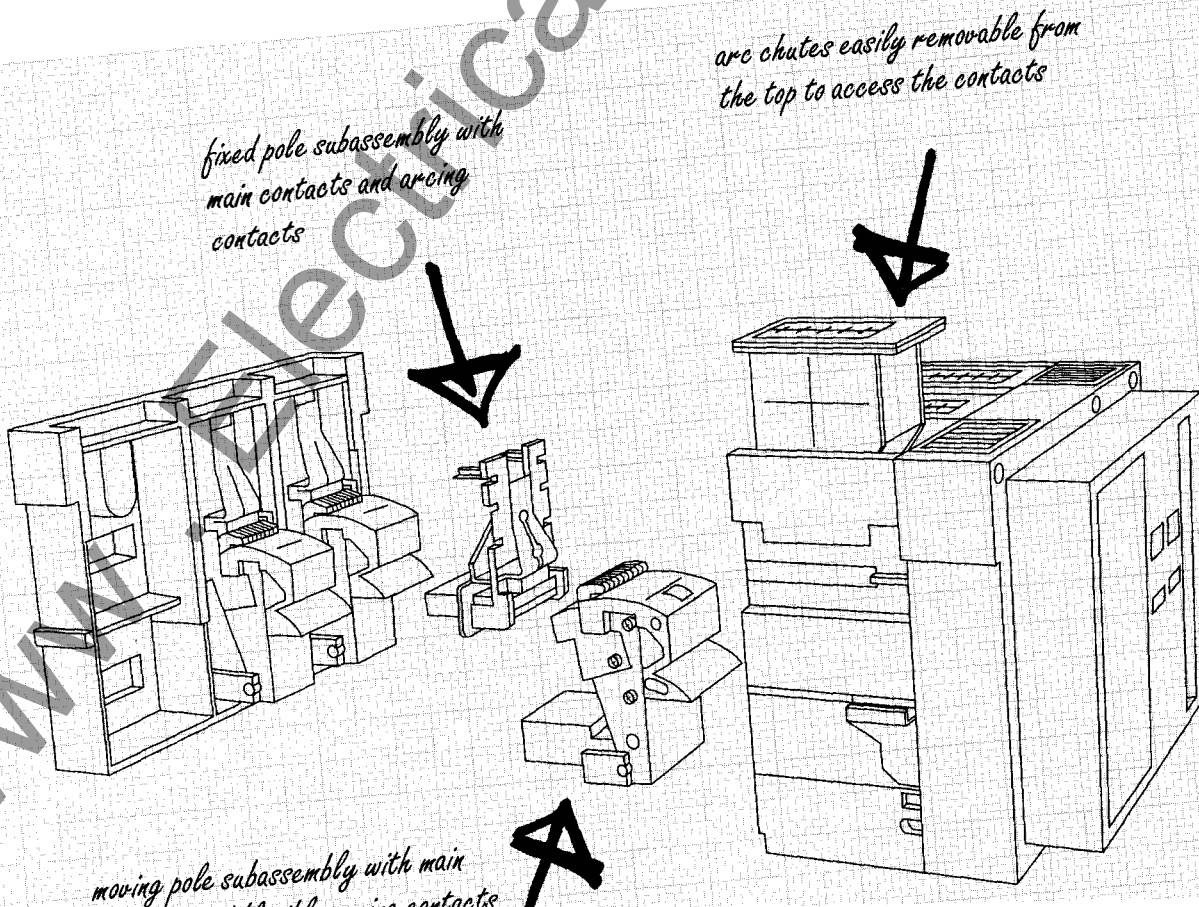
- all the Masterpact circuit-breakers are fitted with a mechanical wear indicator, accessible once the arc chute has been removed.

- the maintenance test available on the STR68 control unit displays, according to the real value of the broken currents and the number of operations, the wear percentage of the contacts, enabling the user to programme the maintenance operations.

... to increase its lifetime twofold

20000 operations at 1600 A

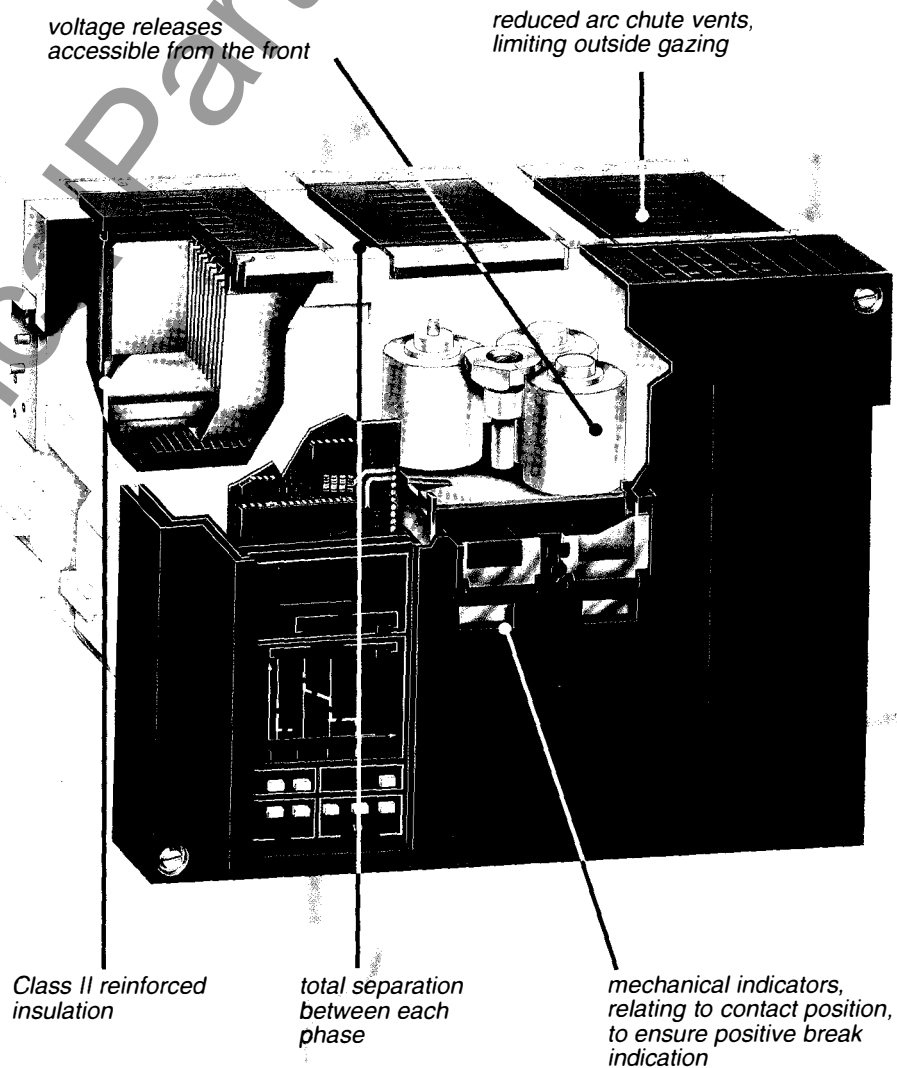
Replacement of the contacts and arc chutes increases the electrical endurance of the circuit-breaker twofold.



operating safety

Thanks to its insulating enclosure, Masterpact safety means :

- a class II front face ;
- auxiliaries in a compartment separated off from the power circuit ;
- each pole really isolated in its own enclosure ;
- breaking confinement and limited outside gazing ;
- proper protection of the device's crucial parts against aggression (dust, corrosion, humidity, etc) ;
- positive break indication ;
- suitable for isolation (standard IEC 947-2) ;
- reinforced insulation clearance in the test and withdrawn position.



Masterpact :
a highly sophisticated

facility of adaptation

delayed differentiation

Masterpact is the inventor of this concept, thanks to its modular design :

- adaptation and evolution of the circuit-breaker closely in line with users' needs,
- extremely short delivery times, thanks to local adaptation.

common auxiliaries

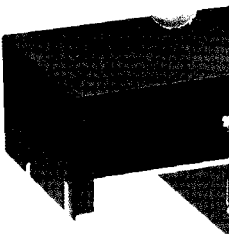
Designed to satisfy all the constraints relating to installation evolution, the accessories (lockings, electrical operating mechanism, auxiliary contacts, opening and closing coils, etc...) are common to the entire 800 to 6300 A range.

- complete accessibility from the front and perfectly safe handling, thanks to their compartment separated off from the power circuits ;
- the prewired auxiliaries are adapted on site, without adjustment, simply using a screwdriver ;
- the auxiliaries' connection terminal block completely accessible from the front with screwless terminals.


withdrawable by vocation, but fixed by simple adaptation

Since a power switchboard circuit-breaker is nearly always withdrawable, to ensure the continuity of service, Masterpact's design is geared towards its withdrawal capacity.

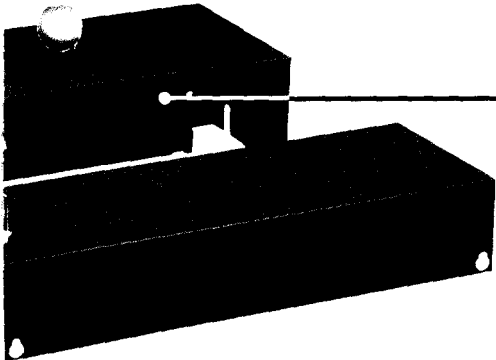
The fixed version is easily obtained



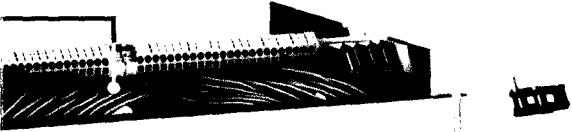
*electrical auxiliaries'
connection terminal block :
accessible from the front,
it makes auxiliaries much
simpler to assemble*



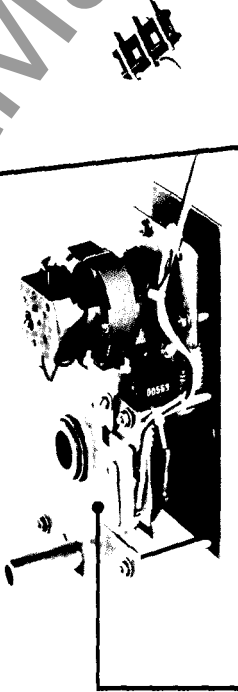
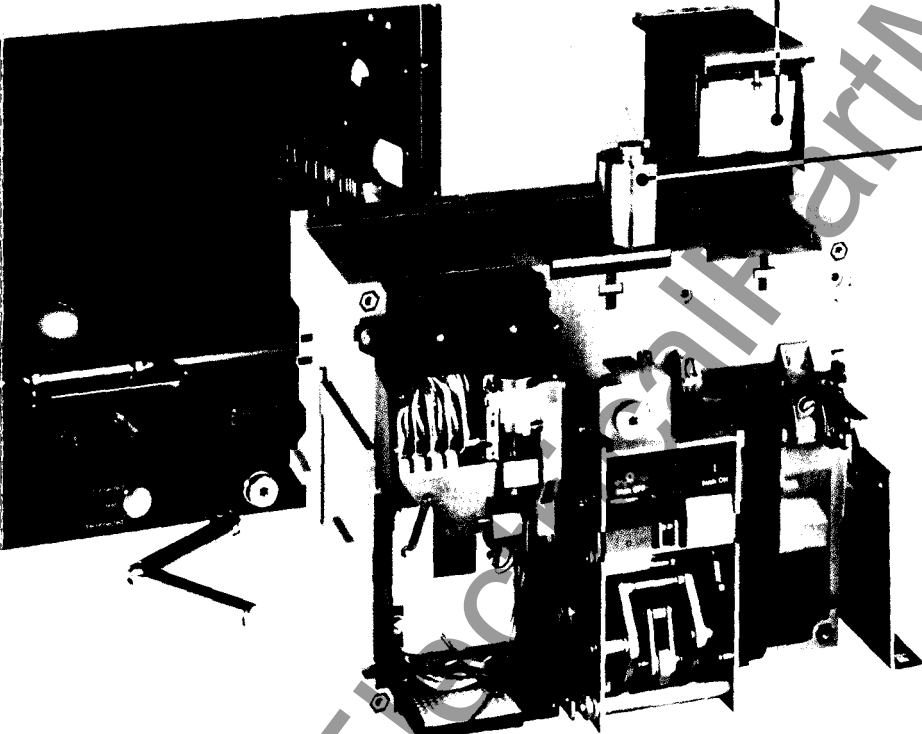
*control units :
interchangeable, to meet
installation evolution*



arc chute cover :
reduces the safety perimeter above
the circuit-breaker to zero

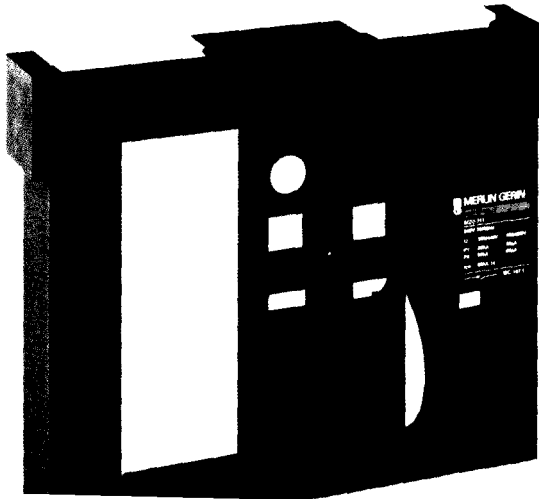
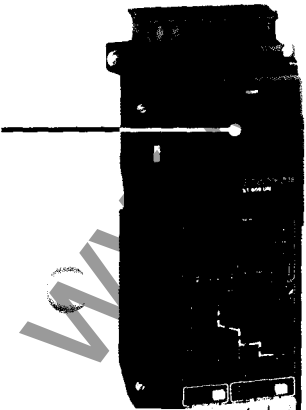


arc chutes :
a single type for the entire range



voltage releases :
the remote opening and
closing functions combined
in a single release, common
to the entire range

motor for electrical charging
of stored energy mechanism :
a single model for all the
circuit-breakers
from 800 to 6300 A.
Adaptable on site, no
adjustment required



Masterpact, the intelligent circuit-breaker

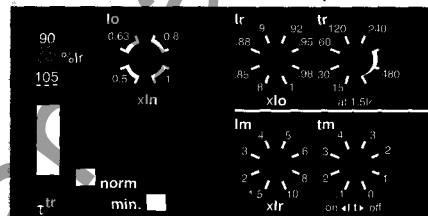
functions adapted to
each type of network

■ Masterpact is fitted with electronic control units which allow the circuit-breaker to perform its basic task, protection, as well as additional functions such as, signalling, monitoring, measuring...

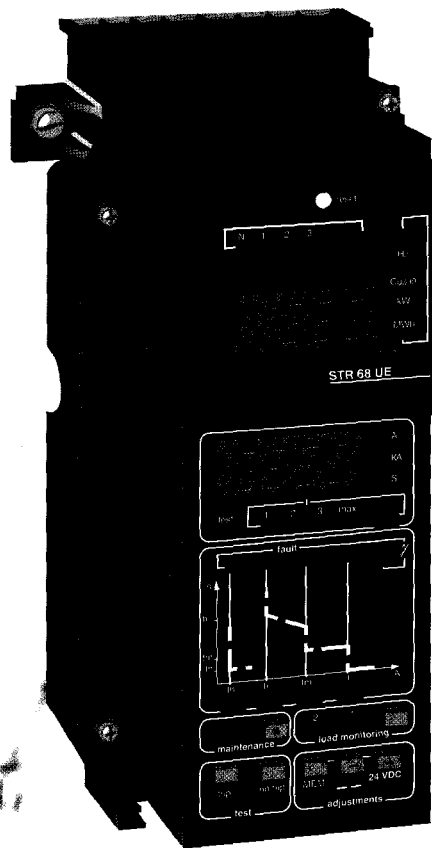
■ the user can choose between four control units, ranging from simple cable and busbar protection to the highly sophisticated universal version.

All these devices are immunized against:

- the network harmonics (RMS current sensing),
- the influence of electromagnetic phenomena (in accordance with standard IEC 801).



precision and fine setting by
32-position commutator



STR38/58

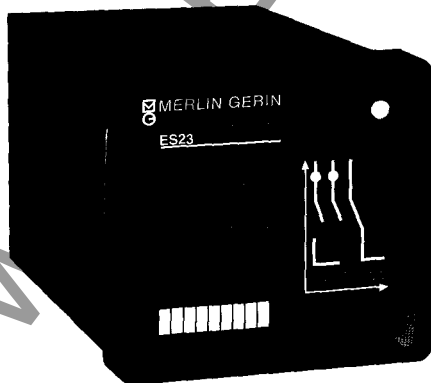
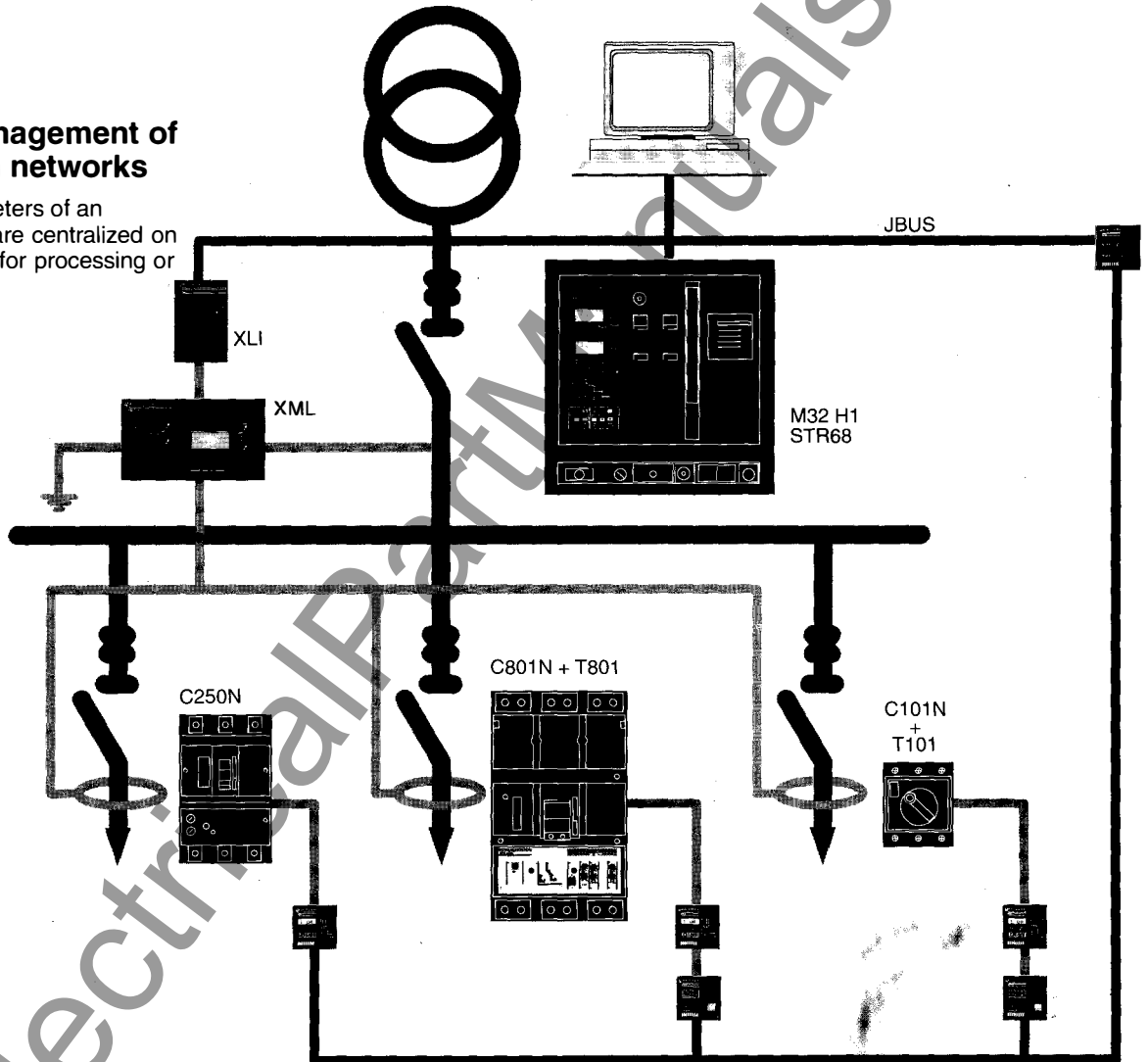
selective and universal protection
STR58 is suitable for communication
with Dialpact monitoring and control
system

STR68

- upmarket control unit, designed for :
- diagnostic aid : local signalling of tripping causes, measuring interrupted currents...
 - energy managing and operating aid : measuring power and energy, remote control, contact wear rate...
 - data transmission on JBUS network.

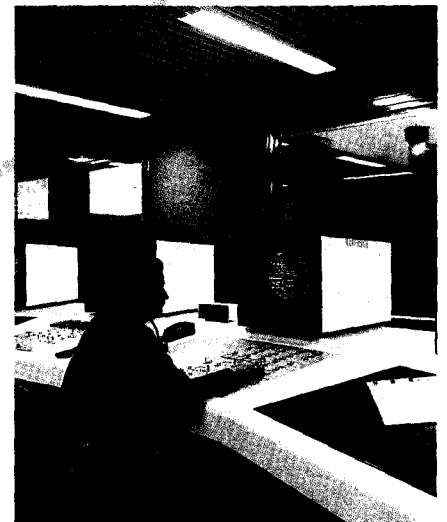
centralized management of the distribution networks

The operating parameters of an electrical installation are centralized on a supervision system for processing or logging.



Dialpact

setting and control system of

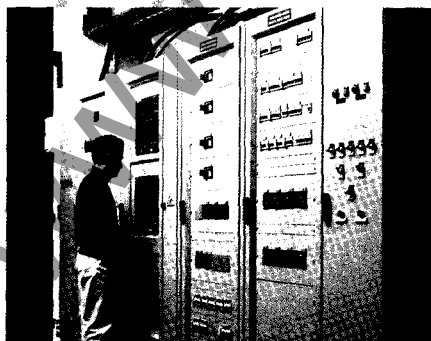


Masterpact M08 to M63

| characteristics IEC 947-2 | | | M08 | | | | M10 | | | | M12 | | | | |
|--|----------------------------------|----------------------|-------------|----|-----|-----|------|----|-----|-----|-------|----|-----|-----|-----|
| rated current (A) | I_n | | 800 | | | | 1000 | | | | 1250 | | | | |
| number of poles | | | 3, 4 | | | | 3, 4 | | | | 3, 4 | | | | |
| circuit breaker type | | | N1 | H1 | H2 | L1 | N1 | H1 | H2 | L1 | N1 | H1 | H2 | L1 | |
| breaking capacity | $I_{cs} = I_{cu}$ | 220/415 V | 40 | 65 | 100 | 130 | 40 | 65 | 100 | 130 | 40 | 65 | 100 | 130 | |
| | | AC 50/60 Hz (kA rms) | 440 V | 40 | 65 | 100 | 110 | 40 | 65 | 100 | 110 | 40 | 65 | 100 | 110 |
| | | | 500/690 V | 40 | 65 | 85 | 65 | 40 | 65 | 85 | 65 | 40 | 65 | 85 | 65 |
| rated short time withstand current | I_{cw} | 0,5 s | 40 | 65 | 65 | 12 | 40 | 65 | 65 | 12 | 40 | 65 | 65 | 12 | |
| rated impulse withstand voltage (V) | | | 8000 | | | | | | | | | | | | |
| dimensions (mm) | drawout rear conn. - 3PH x W x D | | 439x435x367 | | | | | | | | | | | | |
| | fixed rear conn. - 3P H x W x D | | 356x422x290 | | | | | | | | | | | | |
| electrical endurance (FO cycle) 440 V | with maintenance | | 20000 | | | | | | | | 15000 | | | | |
| | without maintenance | | 10000 | | | | 3000 | | | | 10000 | | | | |
| | | | | | | | | | | | 2700 | | | | |
| | | | | | | | | | | | 10000 | | | | |
| | | | | | | | | | | | 2500 | | | | |

| characteristics UL 489 | | | MP08 | | | | MP10 | | | | MP12 | | | |
|---|----------------------------------|-------|-------------|--|-----|--|------|--|-----|--|------|--|-----|--|
| rated current (A) | I_n | | 800 | | | | 1000 | | | | 1200 | | | |
| circuit breaker type | | | H1 | | H2 | | H1 | | H2 | | H1 | | H2 | |
| breaking capacity (kA rms) | | 480 V | 65 | | 100 | | 65 | | 100 | | 65 | | 100 | |
| | | 600 V | 65 | | 65 | | 65 | | 65 | | 65 | | 65 | |
| rated short time withstand current (kA rms) | | 0,5 s | 50 | | 50 | | 50 | | 50 | | 50 | | 50 | |
| dimensions (mm) | drawout rear conn. - 3PH x W x D | | 439x435x367 | | | | | | | | | | | |
| | fixed rear conn. - 3P H x W x D | | 356x422x290 | | | | | | | | | | | |
| electrical endurance (FO cycle) 480 V | with maintenance | | 20000 | | | | | | | | | | | |
| | without maintenance | | 10000 | | | | | | | | | | | |

(1) not UL listed.



| M16 | | | | M20 | | | | M25 | | | | M32 | | M40 | | M50 | | M63 | |
|-------|----|-----|-------|------|-------|-----|------|------|------|-----|-------|-------------|------|-------------|------|--------------|------|------|-----|
| 1600 | | | | 2000 | | | | 2500 | | | | 3200 | | 4000 | | 5000 | | 6300 | |
| 3, 4 | | | | 3, 4 | | | | 3, 4 | | | | 3, 4 | | 3, 4 | | 3, 4 | | 3, 4 | |
| N1 | H1 | H2 | L1 | N1 | H1 | H2 | L1 | N1 | H1 | H2 | L1 | H1 | H2 | H1 | H2 | H1 | H2 | H1 | H2 |
| 40 | 65 | 100 | 130 | 55 | 75 | 100 | 130 | 55 | 75 | 100 | 130 | 75 | 100 | 75 | 100 | 100 | 150 | 100 | 150 |
| 40 | 65 | 100 | 110 | 55 | 75 | 100 | 110 | 55 | 75 | 100 | 110 | 75 | 100 | 75 | 100 | 100 | 150 | 100 | 150 |
| 40 | 65 | 85 | 65 | 55 | 75 | 85 | 65 | 55 | 75 | 85 | 65 | 75 | 85 | 75 | 85 | 85 | 85 | 85 | 85 |
| 40 | 65 | 65 | 17 | 55 | 75 | 65 | 17 | 55 | 75 | 65 | 17 | 75 | 75 | 75 | 75 | 100 | 100 | 100 | 100 |
| | | | | | | | | | | | | 439x550x367 | | 484x815x367 | | 484x1045x367 | | | |
| | | | | | | | | | | | | 356x537x290 | | 356x802x290 | | | | | |
| 20000 | | | 15000 | | 15000 | | | | | | 10000 | | | | | | | | |
| 10000 | | | 2200 | | 9000 | | 2000 | | 8000 | | 1800 | | 4000 | | 3000 | | 2000 | | |

| MP16 | | | MP20 | | | MP25 | | | MP30 | | MP40 | | MP50 | | MP63 (1) | |
|------|-----|--|-------|-----|------|------|------|--|-------|-----|------|-------------|------|--------------|----------|-----|
| 1600 | | | 2000 | | | 2500 | | | 3000 | | 4000 | | 5000 | | 6300 | |
| H1 | H2 | | H1 | H2 | | H1 | H2 | | H1 | H2 | H1 | H2 | H1 | H2 | H1 | H2 |
| 65 | 100 | | 75 | 100 | | 75 | 100 | | 75 | 100 | 100 | 125 | 100 | 125 | 100 | 150 |
| 65 | 65 | | 75 | 75 | | 75 | 75 | | 75 | 75 | 100 | 100 | 100 | 100 | 100 | 100 |
| 50 | 50 | | 75 | 75 | | 75 | 75 | | 75 | 75 | 100 | 100 | 100 | 100 | 100 | 100 |
| | | | | | | | | | | | | 484x815x367 | | 485x1045x367 | | |
| | | | | | | | | | | | | 356x802x290 | | | | |
| | | | 15000 | | | | | | 10000 | | | | | | | |
| | | | 9000 | | 8000 | | 4000 | | 3000 | | 2000 | | | | | |



Masterpact, a universal circuit-breaker

Masterpact complies with international requirements

■ international standards and homologation

IEC 947-2, BS 4752, UL 489, ANSI
C37-13, JEC 160, JIS C 8372, UTE
C63-120, VDE 0660, NEMA, ABI et SG3.

■ marine approved

LRS, BV, GL, USSR, RS, DNU, ABS,
KRS, NK, RINA.

installed in all fields of activity

- industry,
- service,
- merchant and military navy,
- nuclear power plants,
- offshore,
- space industry, etc.

for all applications

- 690 V AC,
- 1000 V AC version,
- DC version,
- earthing switch,
- standard tropicalized version,
- anti-corrosion version.

