

NS Feeder pillar up to 3200A

Advanced technology for
low voltage, outdoor distribution



GROUPE SCHNEIDER

■ Merlin Gerin ■ Modicon ■ Telemecanique

Outdoor electrical distribution with advanced technology

Merlin Gerin low voltage, NS Feeder Pillars for outdoor electrical distribution, incorporate technically advanced moulded case and air circuit breakers up to 3200A, providing important benefits including cost saving, flexibility and a high level of safety.



Adding additional circuits

A wide range of applications

The NS Feeder Pillar is particularly suited to commercial and light industrial applications where there is a need for outdoor, low voltage supply. Providing a safe, flexible solution with individual monitoring and protection, ensuring efficient management of the LV electrical distribution network.

Cost savings

All weatherproof outdoor enclosures allow the equipment to be located in any outdoor environment, freeing up valuable indoor floor space whilst retaining remote operation and control.

There are a wide range of metering instruments available for monitoring the unit locally or remotely, ensuring efficient operation.

NS Feeder pillars are available as part of a package substation with transformers and MV switch or circuit breakers. Additional cost savings are achieved through direct coupling from the transformer to the NS Feeder pillar eliminating expensive cable runs.

Safety

ASTA certified, providing IP2X operator protection under all circumstances during operation, allowing electrical systems to be fully co-ordinated minimising electrical faults.

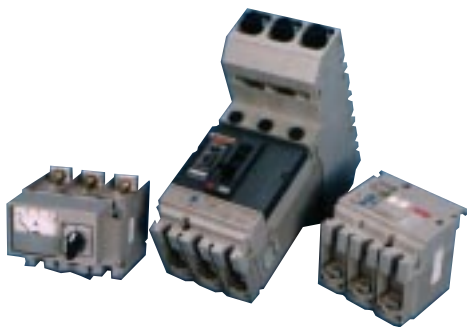
In addition to the overload and short circuit protection, each breaker can be fitted with earth fault protection.

Flexibility

The modular design enables customisation for individual requirements, and has the flexibility to suit the changing needs of the LV distribution system.

Maximum flexibility is achieved by the four pole busbar system up to 3200A and the Compact NS range of moulded circuit breakers of ratings up to 630A.

As a complete unit, the NS Feeder Pillar will not only provide circuit protection, but the outgoing circuits can also be controlled individually via hardwired pilots or linked to the incoming breaker. Other "add-on" benefits include remote monitoring and status of each breaker and also remote operation through motor mechanisms.



Add on modules for compact NS include ammeters and earth fault protection

Ease of use and installation

The NS Feeder pillar comes complete and factory assembled for easy installation in any outdoor location with bottom entry cable through individual gland plates. The cable space is protected by an earthed metal screen, and each breaker is fitted with cable shrouds to maintain IP2X operator protection when the screen is removed.

Addition of new circuits is made easy, by utilising the cassette on the NS breaker allows the breaker to be positioned anywhere on the busbar system before being clamped, contributing minimum disruption of supply.



Product Features

- Operator protection to IP2X of BSEN 60529
- Purpose built, weatherproof enclosure
- Four pole busbar system up to 3200A
- Outgoing ratings from 16A to 3200A
- Cable or flange connection to transformer
- Compact NS Breakers from 16A to 630A
- Compact C breakers from 800A to 1250A
- Provision for inclusion in package substations
- Wide range of accessories



Compact NS -Advanced technology in moulded case circuit breakers

Compact NS incorporates rota-active breaking, with a response time of approximately 1ms. This meets the highest levels defined by BSEN 60947-2. Compact NS advanced technology also includes total Discrimination, which is simple to design and select.

Accessories

There are accessories for many functions with local and remote monitoring which include:

- Ammeters • Voltmeters • KWH meters • MDI's
- Internal lamps • 13A RCD sockets
- Street lighting circuits • Anti condensation heaters

Pillar lights on manual or door operated switches can be fitted to the integral feeder pillar instrument panel. Accessories to customise the range of circuit breakers to meet specific cabling and operational needs are also available.



Instrument panel accessories

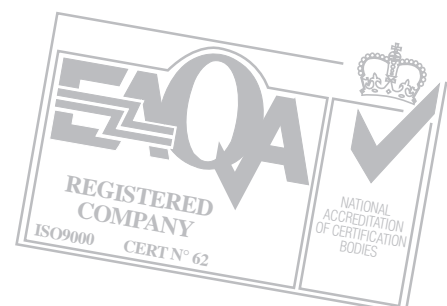
Outdoor enclosures expertise

With over 50 years experience, Merlin Gerin manufacture a range of feeder pillar enclosures of the highest durability. They are available in six sizes, are padlockable and made from 3mm sheet steel.

Total quality is assured

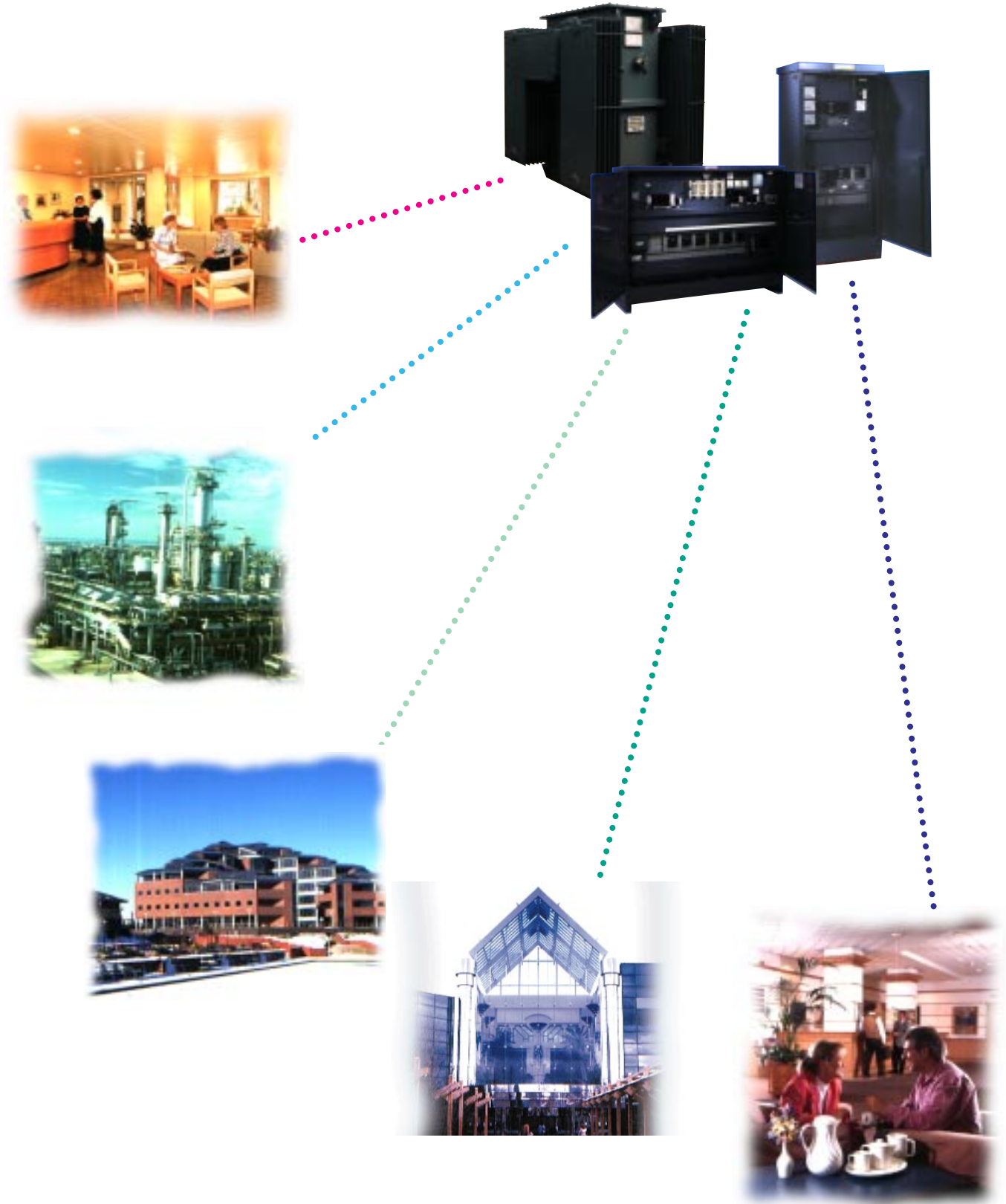
Merlin Gerin public distribution is quality approved for design/development production, installation and servicing of low voltage switchgear.

BSEN 60529, IEC 529, BSEN 60439-1, BSEN 60947-2, BSEN ISO 9001.



Applications

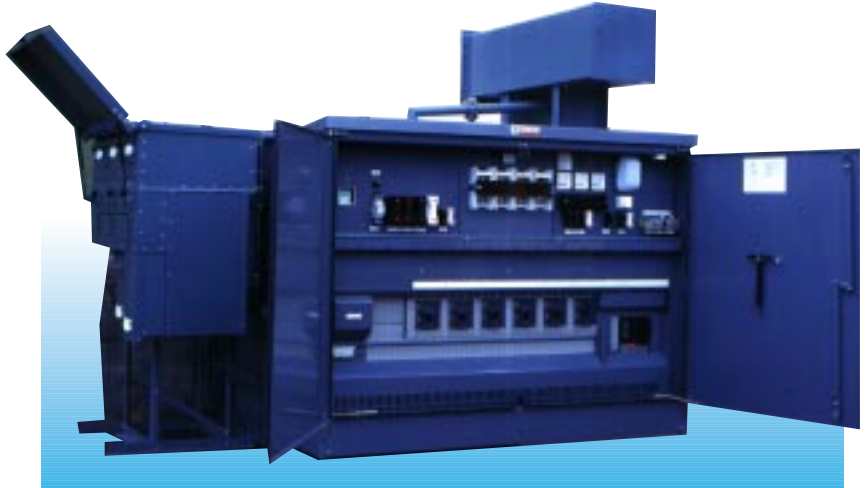
- Hospitals, medical centres
- Education, universities, shopping centres, retail parks
- Business parks, office buildings



One - stop package substations

Merlin Gerin can provide one stop engineered package substations, tailored to customer requirements. NS Feeder Pillar can be either ground mounted or transformer mounted to form part of a package substation, which encompass the range of Merlin Gerin transformers, MV switchgear and LV feeder pillars.

Cost savings are achieved by reducing the foundation area, minimum cabling due to direct coupling of MV, LV and transformer equipment and reduced time commitment needed by the customer.



Tailored configurations include:

- **NS Feeder Pillars up to 3200A**
- **Transformers from 315kVA to 2000kVA**
- **Extensible and non extensible Ringmaster and MV switchgear.**
- **Automation and monitoring systems**
- **Weatherproof enclosures if required.**



Stainless steel clad package substation for Hong Kong.

Enclosures

Merlin Gerin range of feeder pillar enclosures are robust, durable and secure, providing all weatherproof and vandal resistant protection.

Available in six sizes, these are padlockable and manufactured from 3mm sheet steel. The steel is shot blasted and zinc metal sprayed before being coated in electrostatically charged powder paint, and cured in an oven for a hard, high gloss finish.

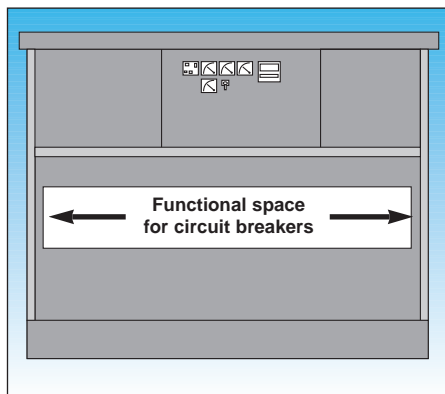
The enclosures accommodate a variety of interiors. These weatherproof enclosures are available in dark grey to BS 381C and IP33 as standard. IP54 can be achieved with the addition of filtered ventilation and door gaskets.

Selection of outgoing circuit breakers

outgoing current rating (A)	Circuit breaker reference	functional space used (mm)		
		3 pole	4 pole	neutral link
16	MGP016	105	140	35
25	MGP025	105	140	35
40	MGP040	105	140	35
63	MGP063	105	140	35
80	MGP080	105	140	35
100	MGP100	105	140	35
125	MGP125	105	140	35
160	MGP160	105	140	35
200	MGP200	105	140	35
250	MGP250	105	140	35
400	MGP400	140	185	45
630	MGP630	140	185	45
800	C800N	280	420	–
800A	MO8 H1	560	560	–
1000A	C1001N	280	420	–
1000A	M10H1	560	560	–
1250A	C1251N	280	420	–
1600A	M16H1	560	560	–
2000A	M20H1	560	560	–
2500A	M25H1	560	560	–
3200A	M32H1	560	560	–

Selection of incoming unit

incoming current rating (A)	unit	functional space used (mm)	
		3 pole	4 pole
3200	M32 Masterpact air circuit breaker	665	665
3000	disconnector	665	665
2500	M25 Masterpact air circuit breaker	560	560
2000	M20 Masterpact air circuit breaker	560	560
2000	disconnector	560	560
1600	M16 Masterpact air circuit breaker	560	560
1250	C1251N Compact moulded case circuit breaker	280	420
1000	C1000N Compact moulded case circuit breaker	280	420
1000	Disconnecter	560	580
800	M08 Masterpact air circuit breaker	560	560
800	C800N Compact NS moulded case circuit breaker	280	420
630	NS630 Compact NS moulded case circuit breaker	140	185
400	NS400 Compact NS moulded case circuit breaker	140	185
250	NS250 Compact NS moulded case circuit breaker	105	140



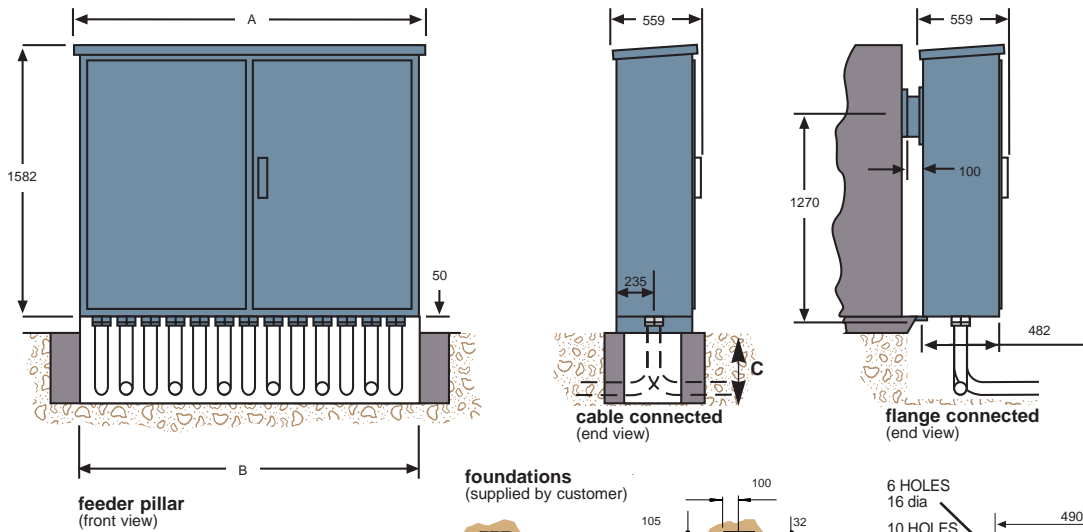
Enclosure selection

shell size (mm)	functional space (mm)
2110	1995
1830	1715
1550	1435
1270	1155
990	875
710	595

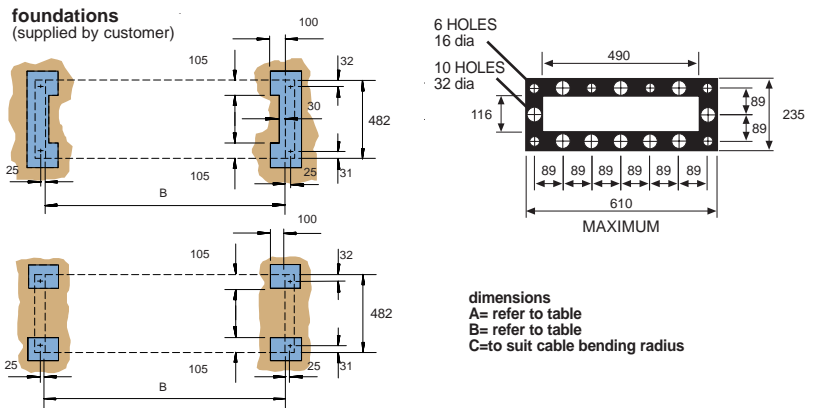
Circuit breaker feeder pillars

Dimensions/mountings

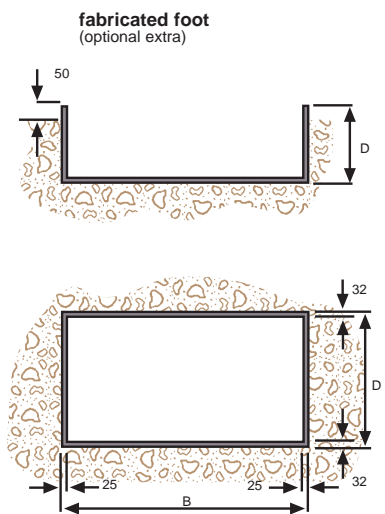
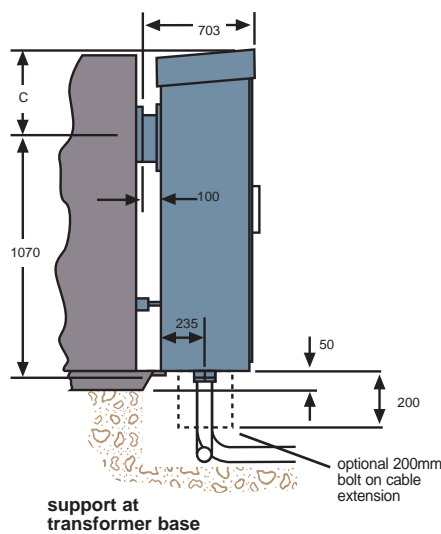
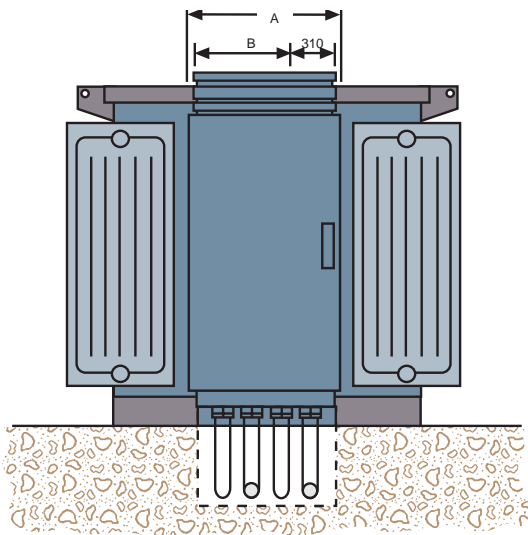
Feeder pillar



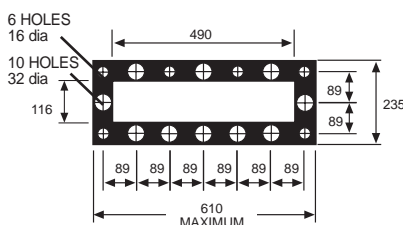
Doors	Dimensions	
	A	B
	cable & flange connected	
1	740	710
2	1020	990
2	1300	1270
2	1580	1550
2	1860	1830
2	2140	2110



Breaker cabinet



Doors	Dimensions (mm)		
	A	B	C
	flange connected only		
1	776	430	460
1	656	310	460
1	656	310	370



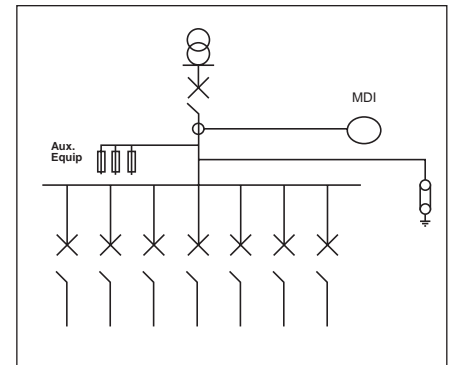
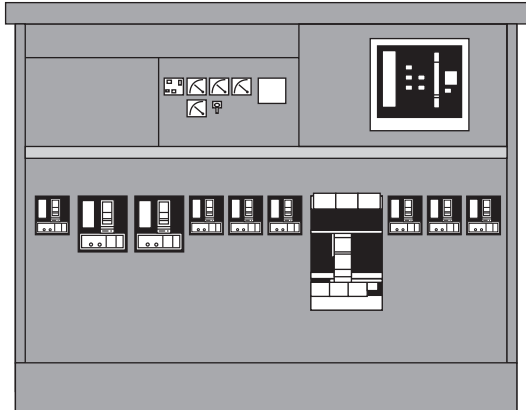
dimensions
 A= refer to table
 B= refer to table
 C= refer to table
 D= 450mm or 900mm

Circuit breaker feeder pillar

Panel types - transformer connected offset & centre flange

NS-FT3

LV distribution pillar supplies up to 3200A



Specification

Location	outdoor (flange connected) enclosure to IP33
Enclosure doors open	IP2X under normal operating conditions
Phase busbar rating	3200A
Neutral busbar rating	full or half busbar rating
Short circuit level	50kA 1 second
Incoming units	Masterpact ACB's Compact MCCB & NS also off-load disconnectors
Outgoing breakers	Compact MCCB's and NS
Load indication	provision - see accessories
Circuit protection	adjustable overload protection
Incoming cable entry	Below vertical
Gland plates	undrilled
Outgoing cable entry	below vertical

Incoming unit

reference	rating (A)
M32 ACB	3000
disconnecter	3000
M25 ACB	2500
M20 ACB	2000
disconnecter	2000
M16 ACB	1600
disconnecter	1600
C1251N	1250
M10 ACB	1000
C1000N	1000
M08 ACB	800
C800N	800
disconnecter	800
NS 630	630
NS 400	400
NS 250	250

Accessories

Pillar

Padlocking devices
Internal light
13A sockets
Ammeters
Volts meters
Kilowatt hour meters
Maximum demand indicators
Anti-condensation heater
Thermostat

Compact MCCB

toggle padlocking device
NS motor mechanisms
terminal shrouds
NS VIGI earth leakage module
NS ammeter module
NS current transformer module
NS disconnectable neutral links
cable termination spreaders
C800-1251 earth fault unit
shunt release (MX)
undervoltage release (MN)
NS electronic trip unit (STR 22SE)
NS selective trip unit (STR 23SE)
NS universal trip unit (STR 53UE)

Masterpact ACB

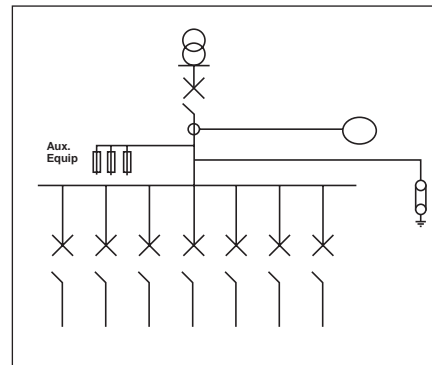
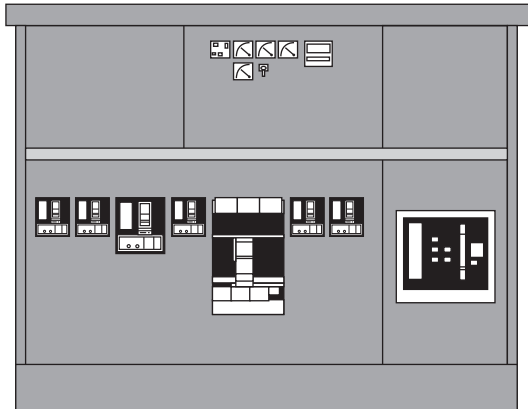
instantaneous protection (STR 18)
selective protection (STR 38)
universal protection (STR 58)
padlocking devices
dialpact modules
electrical operating mechanism
undervoltage release instantaneous (MN)
undervoltage release time delayed (MNR)
shunt release (MX)
closing release (XF)
auxiliary switches

Circuit breaker feeder pillar

Panel types - cable connected pillars

NS-FC3

LV distribution pillar supplies up to 3200A



Specification

Location	outdoor (cable connected) enclosure to IP33
Enclosure doors open	IP2X under normal operating conditions
Phase busbar rating	3200A
Neutral busbar rating	full or half busbar rating
Short circuit level	50kA 1 second
Incoming units	Masterpact ACB's Compact mccb & NS also off-load disconnectors
Outgoing breakers	Compact mccb's and NS
Load indication	provision - see accessories
Circuit protection	adjustable overload protection
Incoming cable entry	below vertical
Gland plates	provision - see accessories
Outgoing cable entry	below vertical
Accessories	As per NS-FT3

Incoming unit

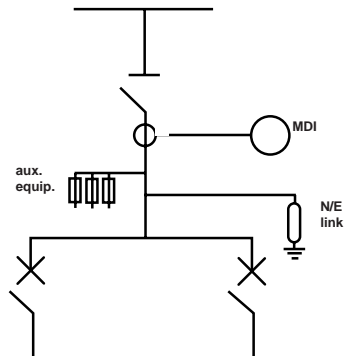
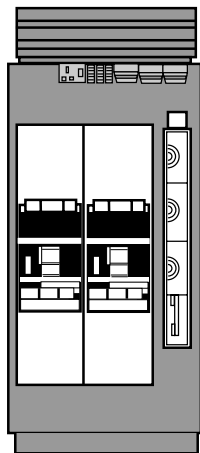
reference	rating (A)	Max. No. of SC 960mm	
		phase	neutral
M32 ACB	3000	4	2
disconnecter	3000	4	2
M25 ACB	2500	3	2
M20 ACB	2000	2	1
disconnecter	2000	3	2
M16 ACB	1600	2	1
disconnecter	1600	2	1
C1251N	1250	1	1
M10 ACB	1000	1	1
C1000N	1000	1	1
M08 ACB	800	1	1
C800N	800	1	1
disconnecter	800	1	1
NS 630	630	SC 300mm sq	
NS 400	400	SC 300mm sq	
NS 250	250	SC 185mm sq	

Circuit breaker cabinets

Panel types - transformer connected

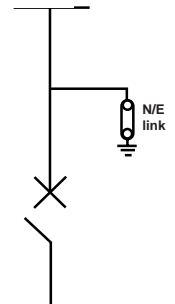
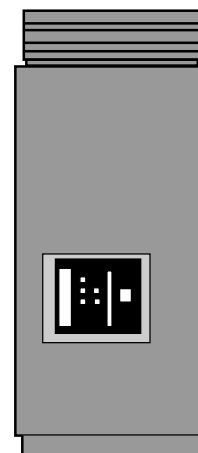
SM2 - C1

LV cabinet supplies up to 1600A



SX - C3

LV cabinet supplies up to 3000A



Specification

Location	outdoor IP33 enclosure tx mounted only	outdoor IP33 enclosure tx mounted only
Phase busbar rating	up to 1600A	up to 3000A
Neutral busbar rating	up to 800A	up to 1500A
Short circuit level	up to 50KA 1 second	50KA 1 second
Incomer	TP&N Off-load disconnecter	N/A
Load indication	provision - see accessories	provision - see accessories
Outgoing units	2 - TP Compact C MCCB'S	TP Masterpact ACB type H1
Circuit protection	Adjustable overload & short circuit	standard - STR28D overload & short circuit optional - STR38ST incorporating earth fault
Outgoing cable entry	below vertical	below vertical
Outgoing cable size	up to 7 x SC 600mm sq	up to 7 x SC 600mm sq (800-1600A) up to 11 x SC 600mm sq (2000-2500A) up to 3 x SC 960mm sq per phase &... up to 2 x SC 960mm on neutral (3000A only)
Gland plates	undrilled	undrilled

General technical information

Details	cabinet		pillars		
	800-3200 Masterpact & Compact		2400	1600	800
Enclosures and protection BSEN 60529 & IEC 529	circuit breakers				
Weatherproof, vermin proof and ventilated	(IP33)	standard	standard		
Dustproof with filtered ventilation	(IP54)	no	optional		
Personnel protection (enclosure doors open)	(IP2X)	IP2X	IP2X		
Rated short time current withstand current					
Flange connected 1 second	(kA)	50 35.5	50	50	35.5
Cable after 1 second	(kA)	– –	60	60	35.5
Standards listed are applicable to all					
Types and ratings					
Standards complied with are:	(BSEN)	60439 - 1	60439 - 1		
	(BSEN)	60947 - 2	60947 - 2		

Note: for ambient temperature in excess of those defined as normal in BSEN 60439 - 1, please consult the manufacturer.