

LV high-current circuit-breakers  
from 800 A to 5000 A

# UL 489 Listed Masterpact NT and NW





# Circuit-breakers and switches

## Masterpact NT08 to NT12



Ratings for UL 489 Listed Masterpact NT circuit-breakers		NT08		NT12	
Rating (A)		800		1200	
Type of circuit-breaker		<b>N</b>	<b>L1</b>	<b>N</b>	<b>L1</b>
Interrupting current (kA rms)	240 V AC, 50/60 Hz	50	100	50	100
	480 V AC, 50/60 Hz	50	65	50	65
	600 V AC, 50/60 Hz	35	-	35	-
Short-time withstand current rating (kA rms)	0.5 s	35	10	35	10
Integrated instantaneous protection (kA rms $\pm$ 10%)		40	10	40	10
Close and latch ratings (kA rms)	AC 50/60 Hz	25	10	25	10
Breaking time (ms)		25 to 30		25 to 30	
Closing time (ms)		< 50		< 50	

### Choice of sensors

Sensor rating (A)	800	1200
Threshold setting I <sub>r</sub> (A)	320 to 800	500 to 1200

### Ratings for UL 489 Listed Masterpact NT automatic switches

Type of automatic switch		HF	HF
Withstand rating (kA rms)	220 V AC, 50/60 Hz	65	65
	480 V AC, 50/60 Hz	50	50
	600 V AC, 50/60 Hz	50	50
Integrated instantaneous protection (kA rms)		40	40

### Selection criteria

#### Masterpact NT

	N	L1
Type of application	Standard low short-circuit level application	Limiting circuit-breaker designed to protect cable feeders or for protection when the transformer power increases
Position of the neutral	Left	Left
Fixed	F	F
Draw-out	D	D
Front connector	Yes	Yes
Rear connector	Yes	Yes
Micrologic type	A, P, H	A, P, H

### Mechanical and electrical endurance

			NT08/NT12
Useful life	mechanical	without maintenance	12.5
C/O cycles x 1000	electrical	without maintenance	2.8

### Shipping weight

		NT08/NT12	
Number of poles		3P	4P
Circuit-breaker (lb/kg)		40/18	52/24
Chassis (lb/kg)		36/16	43/20
Connector (lb/kg)	Front	15/7	20/9
	Rear	6/3	8/4
Pallet (lb/kg)		10/5	10/5
Total weight (lb/kg)			
		Front	101/46
		Rear	125/57
			92/42
			113/51

# Circuit-breakers and switches

## Masterpact NW08 to NW50



### Ratings for UL 489 Listed Masterpact NW circuit-breakers

Rating (A)	
<b>Type of circuit-breaker</b>	
Interrupting current (kA rms)	240 V AC, 50/60 Hz 480 V AC, 50/60 Hz 600 V AC, 50/60 Hz
Short-time withstand current rating (kA rms) V AC 50/60 Hz	1 s
Integrated instantaneous protection (kA rms $\pm 10\%$ )	
Close and latch ratings (kA rms) V AC 50/60 Hz	
Breaking time (ms)	
Closing time (ms)	

### Choice of sensors

Sensor rating (A)	
Threshold setting $I_r$ (A)	



### Ratings for UL 489 Listed Masterpact NW automatic switches

<b>Type of automatic switch</b>	
Withstand rating (kA rms)	240 V AC, 50/60 Hz 480 V AC, 50/60 Hz 600 V AC, 50/60 Hz
Integrated instantaneous protection (kA rms)	

### Selection criteria

#### Masterpact NW

Type of application	
Position of neutral	
Fixed	
Draw-out	
Front connector	
Rear connector	
Micrologic type	

### Mechanical and electrical endurance

Useful life	mechanical	with maintenance
C/O cycles x 1000		without maintenance
	electrical	without maintenance

### Shipping weight

<b>Number of poles</b>	
Circuit-breaker (lb/kg)	
Chassis (lb/kg)	
Rear connector (lb/kg)	
Pallet (lb/kg)	
<b>Total weight (lb/kg)</b>	

	NW08	NW10	NW12	NW16	NW20	NW25	NW30	NW40	NW50
	800	1000	1200	1600	2000	2500	3000	4000	5000
	<b>N</b>	<b>H</b>				<b>H</b>		<b>H</b>	
	65	100				100		100	
	65	100				100		100	
	50	85				85		85	
	42	65				65		85	
	40	40				65		75	
	40	40				40		40	
	25 to 30	25 to 30				25 to 30		25 to 30	
	< 70	< 70				< 70		< 70	

	800	1000	1200	1600	2000	2500	3000	4000	5000
	320 to 800	400 to 1000	500 to 1200	630 to 1600	800 to 2000	1000 to 2500	1250 to 3000	1600 to 4000	2000 to 5000

	NW08	NW10	NW12	NW16	NW20	NW25	NW30	NW40	NW50
	<b>HF</b>					<b>HF</b>		<b>HF</b>	
	100					100		100	
	100					100		100	
	85					85		85	
	40					65		75	

NW800-5000	
<b>N</b>	<b>H</b>
Standard medium short-circuit level applications	High-performance circuit-breaker used in heavy industry, with a high short-circuit current level
Left or right	Left or right
F	F
D	D
No	No
Yes	Yes
A, P, H	A, P, H

NW08/NW10/NW12/NW16	NW20	NW25/NW30	NW40/NW50
25	20	20	10
12.5	12.5	10	5
2.8	2.8	1	1

NW08/NW10/NW12/NW16/NW20		NW25/NW30		NW40/NW50	
3P	4P	3P	4P	3P	4P
109/50	142/65	127/58	165/75	227/103	295/134
97/44	116/53	124/57	149/68	278/126	334/152
17/8	22/10	26/12	34/15	52/24	68/31
17/8	17/8	17/8	17/8	39/18	39/18
240/109	288/130	294/134	356/161	596/271	736/333

# Performance and technologies

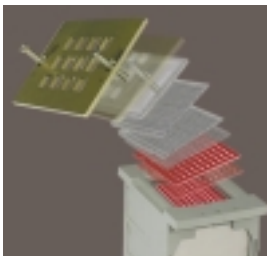
## The reliability of a major brand

Over the last hundred years, Merlin Gerin has gained a strong reputation for quality and innovation by integrating advanced technologies into its circuit-breakers. The requirements for reliability, flexibility and simplicity have always been the company's priorities. Merlin Gerin offers the largest range of products on the market, with sizes, accessories and technical data that are suitable for every type of application.



### UL 489 listing

UL 489 listed products have been assessed with respect to the following criteria: specific properties, a certain type of risk or suitability for use under restricted or special conditions. It is the certification mark most readily accepted by consumers, regulatory bodies and industries in the United States and Canada.



Arc chute cover

### Safety limit

Masterpact incorporates an interrupter with a highly original design. This device absorbs the energy released during an interruption, which limits stress within the installation. It filters and cools the gases released, whilst significantly reducing external problems.



A: ammeter P: A + power H: P + harmonics

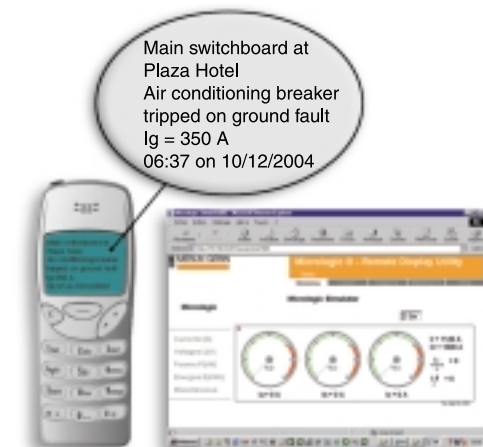
### More intelligent tripping devices...

The tripping device has become a true circuit-breaker control unit. It combines different types of measurement with different types of protection. It accurately measures the network parameters, instantaneously calculates values, stores, records, signals, communicates, acts, etc. It is both an extremely reliable safety device and an accurate measuring instrument.

### ...combining measurement with protection

### MPS100 Micro Power Server

MPS is a Web server that makes information from circuit-breakers available from a remote location over an Ethernet network or modem. Added value of MPS 100: it automatically informs the maintenance personnel by email or SMS whenever a preset threshold is exceeded.



Main switchboard at Plaza Hotel  
Air conditioning breaker tripped on ground fault  
I<sub>g</sub> = 350 A  
06:37 on 10/12/2004

Messaging service (SMS)

Your main switchboard is monitored via the Web pages embedded in MPS100

## A mine of expertise

### New UL 489 Listed Masterpact NT and NW

The UL 489 Listed Masterpact product range was designed to address the concerns of customers and systems integrators. Small size, flexible configuration, easy installation, improved continuity of service and reduced maintenance are the key factors of Masterpact's success, which have made it the most competitive power circuit-breaker on the market.



#### Masterpact NT... the smallest power circuit-breaker in the world

Masterpact NT is extremely innovative in that it delivers the high performance of a power circuit-breaker despite its very small dimensions.

The various connection pads make it possible to optimise the different configurations and solutions.



#### Masterpact NW... optimised sizes

Up to 3000 A, all the products in the Masterpact NW range are the same size, which is that of the previous M08 to 32 ranges. The H x W x D dimensions of a 3-pole draw-out Masterpact NW30 circuit-breaker are therefore 440 x 440 x 400.

All the circuit-breakers between 4000 A and 5000 A are the same size, which is much smaller than before.

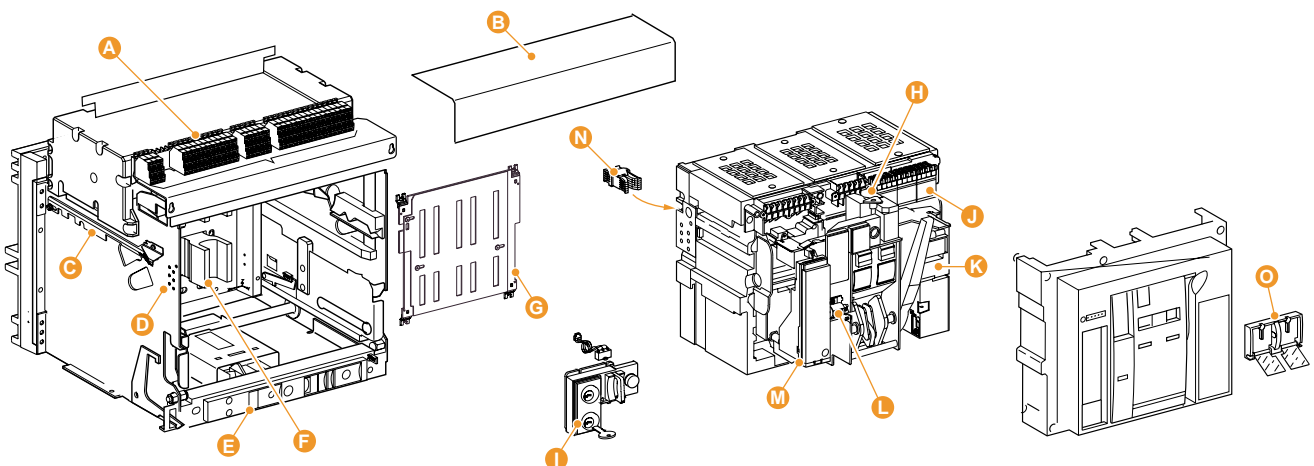


#### A simplified installation

The Masterpact product range is designed to standardise switchboards, optimise volumes and facilitate installation:

- streamlined chassis available separately
- upstream or downstream supply
- connections:
  - horizontal or vertical rear connectors that can be modified on site without any change in depth
  - small size front connectors on the Masterpact NT

#### A wide selection of accessories



##### Masterpact NW accessories

- |                                     |  |                                  |
|-------------------------------------|--|----------------------------------|
| A- Auxiliary or secondary terminals | F- Primary connectors  | K- MCH spring-charging motor     |
| B- Terminal cover                   | G- Shutters  | L- Operation counter             |
| C- Shutter lock                     | H- MX shunt trip, MN undervoltage trip device, or FX shunt close | M- Trip unit                     |
| D- Cradle rejection feature         | I- Padlock attachment & key interlock                            | N- Cluster                       |
| E- Padlock provision                | J- Auxiliary contacts  | O- Push button padlockable cover |

## The Guiding System, the new way to build your electrical installations

### The UL 489 Listed Masterpact is part of a complete offer of uniformly designed products

The Guiding System is first and foremost an offer of Merlin Gerin products for all your electrical distribution needs. But the difference is that these products have been designed to work together: mechanical and electrical compatibility, interoperability, modularity, communication.

The electrical installation is therefore both optimised and more efficient: with better continuity of service, improved safety for operators and property, guaranteed upgradeability and effective monitoring and control.

### Tools for easier design and implementation

The Guiding System provides you with a complete range of tools and services to familiarise you with Merlin Gerin products and support you in their use, in conformance with current standards and best practice.

The tools, specifications and technical manuals, computer aided design software, training courses, etc. are regularly updated.



### For a true partnership

There is no universal solution because each electrical installation is a special case. With the Guiding System, the wide range of combinations really allows you to customise the technical solutions. You can express your creativity and enhance your know-how in designing, implementing and operating an electrical installation. You and the Merlin Gerin Guiding System are a real partnership.

To find out more about the Guiding System,  
[www.merlin-gerin.com](http://www.merlin-gerin.com)

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