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The range of wall and floor mounted Powerpact 4 panelboards is designed, manufactured and tested to BS EN 61439-1. The structures are rigid sheet steel finished in a cream colour epoxy powder (RAL 9001).

All the boards contain a unique connection system which ensures that all busbar/ breaker connections are tightened to the correct torque. The system comprises a tightening bolt head which shears off when the correct torque is reached. Facilities are provided to enable the breaker to be repositioned at a later time if so required.

The breaker range comprises single pole, single pole with switched neutral, double pole, triple pole and three pole with switched neutral and four pole. Incoming device ratings up to 1600A and outgoing ratings up to 630A.

The extremely flexible board design allows 1, 2, 3 and 4 pole breakers to be positioned in any order on the busbar stack thus allowing maximum use of the available space and also allowing breakers feeding associated loads to be positioned together.

For this reason the number of outgoing ways in the selection tables is expressed in single pole ways as well as three pole ways.

Full discrimination simply by missing a frame size.

Special breakers

Details of the standard breakers that may be fitted into the various sizes of panelboard are given on the following pages.

The full range of Compact NSX moulded case circuit breakers includes a wide range of breakers for special applications, higher breaking capacities, additional ratings and adaptations including rotary handles and motor mechanisms for remote operation. Most of these breakers, of ratings up to 630A, can be adapted for use in the Powerpact 4 panelboards.

To order these special breakers add the words ‘for use in Powerpact 4 panelboard’ to your ordering description of the breaker.

Application

The Powerpact 4 is the straight forward answer to all power requirements. It provides an off-the-shelf solution for most standard distribution applications.

Range

Powerpact 4 is available in many styles to suit various applications in wall mounted and floor standing up to 1600 amps incoming

- Style A is a wall mounted Powerboard with 250amp main bars up to 17 single pole outgoing ways. There is no dedicated incomer position giving complete flexibility in the use of the board: splitter board, 2 incomers/1 outgoing or as a conventional board
- Style C is a wall mounted Panelboard with 250 amp main bars and side mounted incomer up to 13 outgoing triple pole ways
- Style D is a wall mounted Panelboard with up to 630 amp main bars and vertically mounted incomer up to 18 triple pole outgoing ways
- Style E is a wall mounted Panelboard with 800 amp main bars and vertically mounted incomer up to 18 triple pole outgoing ways
- Style G is a floor standing Panelboard with 1600 amp main bars and the incomer mounted in its own cubicle 14 outgoing triple pole ways extendible to 28 TP ways

Technical data

Incoming	Up to 1600A
Outgoing	Up to 28 triple pole ways (84 single pole ways)
Main cable entry	Top or bottom
Metering	Incoming metering and Outgoing metering as an option (incoming standard on style G)
Manufactured and tested to	BS EN 61349-1
Busbars rated	Up to 1600A at 415V, 50Hz
Short circuit withstand	36 or 50kA for .5 or 1s
Construction	Rigid folded sheet steel with removable gland plates and end covers
Finish	Steelwork in polyester epoxy powder, cream colour RAL9001
Degree of protection	IP3X
Form 3b type 2	As standard
Form 4 type 2 & 6	Can be achieved by use of individual disconnectable neutral links adjacent to breakers or by the use of 4 pole breakers. Outgoing terminals should be shrouded with long terminal shields. The main neutral bar either side of the incomer should be removed and discarded together with the connecting copper bar. The incoming breaker should be a 4 pole breaker
Extension cubicles	Side/top/bottom extension cubicle is available as an extra



NSX moulded case circuit breakers

Powerpact 4 panelboards have a unique interconnection system which automatically gives the correct torque settings. 1, 2, 3, and 4 pole devices may be mixed to suit the installation needs without loss of space.

Metering

- A PowerLogic PM5000 series multi-function digital meter is fitted as standard to monitor the incoming supply on style G and as an option on other styles. It is also used for all outgoing metering. Readings available voltage, current, frequency, power, energy, demand values and harmonic distortion. The meter also provides a pulse output for kWh and kVArh.
- A side extension cubicle may be fitted on styles D/E/G which has provision for metering outgoing circuits, refer to metering on page 2/18. This cubicle also acts as a cable extension box.

Technical data for circuit breakers

Manufactured and tested to	BS EN 60947-2
Ics	100% Icu 16 - 630A, 75% Icu 800 - 1600A
Calibration temperature	40°C
Thermal adjustment	16 - 250A = 0.7 - 1 x In
(3 and 4 pole)	400 - 630A = 0.4 - 1 x In
	800 - 1600A = 0.4 x In

MCCB Icu & terminal size

- 16 - 100A 36kA 6mm bolt
- 160 - 250A 36kA 8mm bolt
- 400 - 630A 50kA 10mm bolt
- 800 - 1600 50kA 2 x 12mm bolts

Earth fault protection

- May be added to any 4 pole MCCB
- Sensitivities 30, 300mA 1, 3, 10A
- Time delay 0, 60, 150, 310 milli - seconds

800/1250/1600A breakers

800/1250/1600A breakers are fitted with Micrologic 5.0 control units to enable full discrimination with the outgoing breakers to be obtained. Alternative control units may be fitted if required.

250A panelboards

The main incoming device is side mounted at the bottom right hand side. If a 4 pole incomer is used the number of outgoing ways available is reduced by one single pole way. The incoming terminal shroud can be positioned to suit a 3 or 4 pole incoming breaker.

250A powerboard

One 3 pole terminal shield for a 250A breaker is supplied as standard for the main incoming terminals. Two adjacent 3 or 4 pole toggle operated breakers may be mechanically interlocked using Part number LV429354.

400/630A panelboard

The line (supply) terminals on the incoming device must be suitably shrouded. The board is supplied with 1 or 3 pole shroud for a 400/630A breaker. For other breakers suitable terminal shields should be ordered separately:

- 250A 3 pole LV429323
- 250A 4 pole LV429324
- 400/630A 4 pole LV432595

These terminal shields are supplied singly.



	250A Powerboard	250A Panelboard	400/630A Panelboard	800A Panelboard	1600A panelboard
Busbar short circuit withstand	36kA	36kA, 1s	36kA, 1s	50kA, 1s	50kA, 1s
Number of outgoing ways					
13SP inc incomer	■				
17SP inc incomer	■				
15SP (5TP)		■			
18SP (6TP)			■	■	
21SP (7TP)		■			
27SP (9TP)		■			
36SP (12TP)			■	■	
39SP (13TP)		■			
42SP (14TP)					■
54SP (18TP)			■	■	
84SP (28 TP)					□
Incoming device					
100A MCCB	□	□			
160A MCCB	□	□			
250A MCCB	□	□	□		
400A MCCB			□		
630A MCCB			□		
800A MCCB				■	
1250A MCCB					□
1600A MCCB					□
250A fuse switch		□			
Incomer - field installable	■	■	■	■	■
Two incomers, mechanically interlocked	□				
Main incoming cable entry					
Top		□	□	□	□
Bottom	■	□	□	□	□
Incoming metering	□		□	□	■
Outgoing metering	□		□	□	□
Top/bottom extension boxes		□	□	□	
Side extension boxes	□		□	□	□
Integrated control and distribution unit			□	□	
Earth leakage protection on outgoing circuits			□	□	□

Standard ■ Option □



The 4 pole busbar system ready to accept the circuit breaker.



The circuit breaker is placed in the panelboard and pushed up to the busbars. 1P, 2P, 3P and 4 pole breakers may be mixed in any order on the busbars.



The circuit breaker fixing screw is fitted and tightened to retain the breaker in the board. Retaining screw M5 8.5mm long.



The connections to the busbars are tightened until the tops of the connection bolts shear off. This ensures that the correct torque has been applied to the connections.



The circuit breaker is now mechanically & electrically connected in the panel board. It is now ready for the outgoing cables. Note how the breaker cassette fully shrouds the busbars. Unused positions must be fitted with blanking plates.

To remove (17mm bi-hexagonal socket)
RS number 572-864 (1/2")

Selection table

Powerpact 4 panelboards Bottom entry boards



Main cable entry at bottom

Busbar short circuit withstand	Number of incomer outgoing ways		Part number
	Single pole	Triple pole	
250A Powerboard			
Style A	13	3	MG25C2
36kA, 1s	17	4	MG25C4
	13	4 meters	MG25C2M
	17	4 meters	MG25C4M



Style C	15	5	MG2C5
36kA, 1s	21	7	MG2C7
	27	9	MG2C9
	39	13	MG2C13



400/630A Panelboard

Style D	18	6	MG6C6
36kA, 1s	36	12	MG6C12
	54	18	MG6C18

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800A Panelboard

Style E	18	6	MG8C6
50kA, 1s	36	12	MG8C12
	54	18	MG8C18



1600A Panelboard

Style G	42	14	MG16C14
50kA, 1s	42	14 Extension cubicle	MG16CE14

Above supplied with 3 SP shrouds - 1600A supplied with 6

Powerpact 4 panelboards Bottom entry moulded case circuit breakers



Incoming devices

Current rating	Number of poles	Style of board	Part number
Circuit breaker			
100	3	A,C,D	MGP1003X
160	3	A,C,D	MGP1603X
250	3	A,C,D	MGP2503X
400	3	D	MGP4003X
630	3	D	MGP6303X
800	3	E	33552 + LV433638 + 33646
1250	3	G	33564
1600	3	G	33568

100	4	A,C,D	MGP1004X
160	4	A,C,D	MGP1604X
250	4	A,C,D	MGP2504X
400	4	D	MGP4004X
630	4	D	MGP6304X
800	4	E	33555 + LV433639 + 33646
1250	4	G	33566
1600	4	G	33570

If specifying alternative breakers for the 800A panelboard, one long terminal shield and one set of phase separators must also be ordered.

Switch disconnecter

100	3	A,C,D	MGP1003NAX
160	3	A,C,D	MGP1603NAX
250	3	A,C,D	MGP2503NAX
400	3	D	MGP4003NAX
630	3	D	MGP6303NAX
800	3	E	33487 + LV433638 + 33646
1250	3	G	33489
1600	3	G	33490

100	4	A,C,D	MGP1004NAX
160	4	A,C,D	MGP1604NAX
250	4	A,C,D	MGP2504NAX
400	4	D	MGP4004NAX
630	4	D	MGP6304NAX
800	4	E	33492 + LV433639 + 33646
1250	4	G	33494
1600	4	G	33495

Direct connection

250	3	C	MGP2503LL
250	4	C	MGP2504LL
630	4	D	MGPCIN

Protection must be provided upstream by a suitably rated breaker.

Disconnectable neutral link

250	1	A,C,D	MGP250NL
630	1	D	MGP630NL



Main cable entry at top

Busbar short circuit withstand	Number of outgoing ways		Part number
	Single pole	Triple pole	
250A Panelboard			
Style C	15	5	MG2C5
36kA, 1s	21	7	MG2C7
	27	9	MG2C9
	39	13	MG2C13



400/630A Panelboard

Style D	18	6	MG6C6
36kA, 1s	36	12	MG6C12
	54	18	MG6C18



800A Panelboard

Style E	18	6	MG8C6T
50kA, 1s	36	12	MG8C12T
	54	18	MG8C18T

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1600A Panelboard

Style G	42	14	MG16C14T
50kA, 1s	42	14 Extension cubicle	MG16CE14T

Powerpact 4 panelboards

Top entry moulded case circuit breakers

Incoming devices			
Current rating	Number of poles	Style of board	Part number
Circuit breaker			
100	3	C	MGP1003X
160	3	C	MGP1603X
250	3	C	MGP2503X
100	3	D	MGP1003TX
160	3	D	MGP1603TX
250	3	D	MGP2503TX
400	3	D	MGP4003TX
630	3	D	MGP6303TX
800	3	E	33552 + LV433638 + 33646
1250	3	G	33564
1600	3	G	33568
100	4	C	MGP1004X
160	4	C	MGP1604X
250	4	C	MGP2504X
100	4	D	MGP1004TX
160	4	D	MGP1604TX
250	4	D	MGP2504TX
400	4	D	MGP4004TX
630	4	D	MGP6304TX
800	4	E	33555 + LV433639 + 33646
1250	4	G	33566
1600	4	G	33570
If specifying alternative breakers for the 800A panelboard, one long terminal shield and one set of phase separators must also be ordered.			
Switch disconnector			
100	3	C	MGP1003NAX
160	3	C	MGP1603NAX
250	3	C	MGP2503NAX
100	3	D	
160	3	D	
250	3	D	MGP2503NATX
400	3	D	MGP4003NATX
630	3	D	MGP6303NATX
800	3	E	33487 + LV433638 + 33646
1250	3	G	33489
1600	3	G	33490
100	4	C	MGP1004NAX
160	4	C	MGP1604NAX
250	4	C	MGP2504NAX
100	4	D	
160	4	D	
250	4	D	MGP2504NATX
400	4	D	MGP4004NATX
630	4	D	MGP6304NATX
800	4	E	33492 + LV433639 + 33646
1250	4	G	33494
1600	4	G	33495
If specifying alternative breakers for the 800A panelboard, one long terminal shield is required for the incoming terminals			
Direct connection			
250	3	C	MGP2503LL
250	4	C	MGP2504LL
630	4	D	MGPCIN
Protection must be provided upstream by a suitably rated breaker.			
Disconnectable neutral link			
250	1	C,D	MGP250NL
630	1	D	MGP630NL



Rating	Module width (35mm)	Part Number		
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Single pole

Breaking capacity 25kA at 230V

		L1	L2	L3
16	1	MGP0161L1	MGP0161L2	MGP0161L3
25	1	MGP0251L1	MGP0251L2	MGP0251L3
30	1	MGP0301L1	MGP0301L2	MGP0301L3
40	1	MGP0401L1	MGP0401L2	MGP0401L3
50		MGP0501L1	MGP0501L2	MGP0501L3
63	1	MGP0631L1	MGP0631L2	MGP0631L3
80	1	MGP0801L1	MGP0801L2	MGP0801L3
100	1	MGP1001L1	MGP1001L2	MGP1001L3
125	1	MGP1251L1	MGP1251L2	MGP1251L3
160	1	MGP1601L1	MGP1601L2	MGP1601L3



Two pole phase to neutral

Breaking capacity 85kA at 230V

		L1 - N	L2 - N	L3 - N
16	2	MGP0162L1N	MGP0162L2N	MGP0162L3N
25	2	MGP0252L1N	MGP0252L2N	MGP0252L3N
30	2	MGP0302L1N	MGP0302L2N	MGP0302L3N
40	2	MGP0402L1N	MGP0402L2N	MGP0402L3N
50		MGP0502L1N	MGP0502L2N	MGP0502L3N
63	2	MGP0632L1N	MGP0632L2N	MGP0632L3N
80	2	MGP0802L1N	MGP0802L2N	MGP0802L3N
100	2	MGP1002L1N	MGP1002L2N	MGP1002L3N
125	2	MGP1252L1N	MGP1252L2N	MGP1252L3N
160	2	MGP1602L1N	MGP1602L2N	MGP1602L3N



Two pole phase to phase

Breaking capacity 25kA at 415V

		L1 - L2	L2 - L3	L3 - L1
16	2	MGP0162L12	MGP0162L23	MGP0162L31
25	2	MGP0252L12	MGP0252L23	MGP0252L31
30	2	MGP0302L12	MGP0302L23	MGP0302L31
40	2	MGP0402L12	MGP0402L23	MGP0402L31
50		MGP0502L12	MGP0502L23	MGP0502L31
63	2	MGP0632L12	MGP0632L23	MGP0632L31
80	2	MGP0802L12	MGP0802L23	MGP0802L31
100	2	MGP1002L12	MGP1002L23	MGP1002L31
125	2	MGP1252L12	MGP1252L23	MGP1252L31
160	2	MGP1602L12	MGP1602L23	MGP1602L31



Rating	Module width (35mm)	Part Number
Three pole		
Breaking capacity 36kA at 415V		3 phase
16	3	MGP0163X
25	3	MGP0253X
32	3	MGP0323X
40	3	MGP0403X
50	3	MGP0503X
63	3	MGP0633X
80	3	MGP0803X
100	3	MGP1003X
125	3	MGP1253X
160	3	MGP1603X
200	3	MGP2003X
250	3	MGP2503X
400	4 ^{(1) (2)}	MGP4003X
630	4 ^{(1) (2)}	MGP6303X



Four pole		
Breaking capacity 36kA at 415V		3 phase + neutral
16	4	MGP0164X
25	4	MGP0254X
32	4	MGP0324X
40	4	MGP0404X
50	4	MGP0504X
63	4	MGP0634X
80	4	MGP0804X
100	4	MGP1004X
125	4	MGP1254X
160	4	MGP1604X
200	4	MGP2004X
250	4	MGP2504X
400	6 ^{(1) (2)}	MGP4004X One MGPBB25 also required
630	6 ^{(1) (2)}	MGP6303X One MGPBB25 also required

Disconnectable neutral links		
250	1	MGP250NL
630	2	MGP630NL One MGPBB25 also required

(1) If fitted in 630 or 800A board a shrouding kit is required.

(2) Breaking capacity 50kA at 415V.

Description	Part Number
Three pole	
PP4 MCCB 3P 16A 50kA	MGP0163XN
PP4 MCCB 3P 25A 50kA	MGP0253XN
PP4 MCCB 3P 32A 50kA	MGP0323XN
PP4 MCCB 3P 40A 50kA	MGP0403XN
PP4 MCCB 3P 50A 50kA	MGP0503XN
PP4 MCCB 3P 63A 50kA	MGP0633XN
PP4 MCCB 3P 80A 50kA	MGP0803XN
PP4 MCCB 3P 100A 50kA	MGP1003XN
PP4 MCCB 3P 125A 50kA	MGP1253XN
PP4 MCCB 3P 160A 50kA	MGP1603XN
PP4 MCCB 3P 200A 50kA	MGP2003XN
PP4 MCCB 3P 250A 50kA	MGP2503XN

Four pole	
PP4 MCCB 4P 16A 50kA	MGP0164XN
PP4 MCCB 4P 25A 50kA	MGP0254XN
PP4 MCCB 4P 32A 50kA	MGP0324XN
PP4 MCCB 4P 40A 50kA	MGP0404XN
PP4 MCCB 4P 50A 50kA	MGP0504XN
PP4 MCCB 4P 63A 50kA	MGP0634XN
PP4 MCCB 4P 80A 50kA	MGP0804XN
PP4 MCCB 4P 100A 50kA	MGP1004XN
PP4 MCCB 4P 125A 50kA	MGP1254XN
PP4 MCCB 4P 160A 50kA	MGP1604XN
PP4 MCCB 4P 200A 50kA	MGP2004XN
PP4 MCCB 4P 250A 50kA	MGP2504XN

Three pole (ML2.2)	
PP4 MCCB 3P 40A (ML2.2)	MGP0403XE2
PP4 MCCB 3P 100A (ML2.2)	MGP1003XE2
PP4 MCCB 3P 160A (ML2.2)	MGP1603XE2
PP4 MCCB 3P 250A (ML2.2)	MGP2503XE2
PP4 MCCB 3P 40A (ML2.2) 50kA	MGP0403XE2N
PP4 MCCB 3P 100A (ML2.2) 50kA	MGP1003XE2N
PP4 MCCB 3P 160A (ML2.2) 50kA	MGP1603XE2N
PP4 MCCB 3P 250A (ML2.2) 50kA	MGP2503XE2N

Four pole (ML2.2)	
PP4 MCCB 4P 40A (ML2.2)	MGP0404XE2
PP4 MCCB 4P 100A (ML2.2)	MGP1004XE2
PP4 MCCB 4P 160A (ML2.2)	MGP1604XE2
PP4 MCCB 4P 250A (ML2.2)	MGP2504XE2
PP4 MCCB 4P 40A (ML2.2) 50kA	MGP0404XE2N
PP4 MCCB 4P 100A (ML2.2) 50kA	MGP1004XE2N
PP4 MCCB 4P 160A (ML2.2) 50kA	MGP1604XE2N
PP4 MCCB 4P 250A (ML2.2) 50kA	MGP2504XE2N

Three pole (ML5.3E)	
PP4 MCCB 3P 400A (ML5.3E)	MGP4003X5E
PP4 MCCB 3P 630A (ML5.3E)	MGP6303X5E

Four pole (ML5.3E)	
PP4 MCCB 4P 400A (ML5.3E)	MGP4004X5E
PP4 MCCB 4P 630A (ML5.3E)	MGP6304X5E

Dimensions

Type	Height mm	Width mm	Depth mm	(1)	Weight kg
Style A - 250A powerboard					
3 way	650	600	268		32
4 way	650	778	268		57

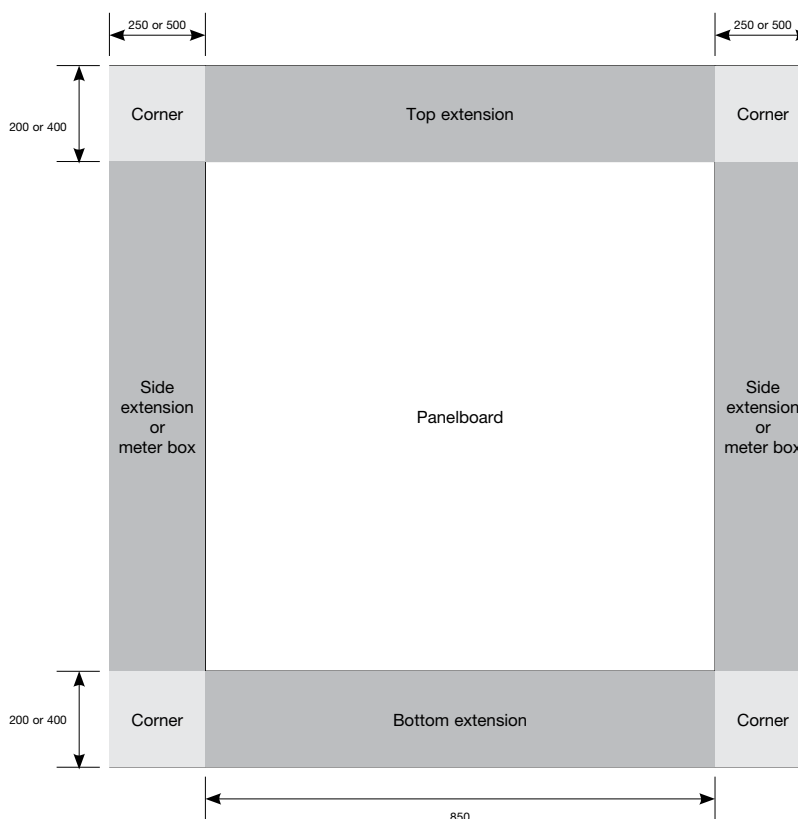
Style C - 250A panelboard					
5 way	680	853	260	198	40
7 way	785	853	260	198	44
9 way	890	853	260	198	50
13 way	1075	853	260	198	60

Style D - 400/620A panelboard					
6 way	1178	850	260	290	66
12 way	1493	850	260	290	89
18 way	1808	850	260	290	98

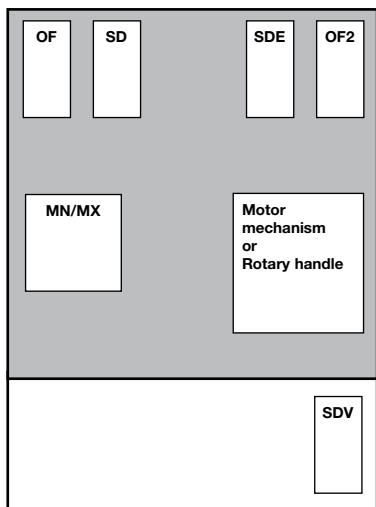
Style E - 800A panelboard					
6 way	1580	850	260	490 ⁽³⁾	86
12 way	1896	850	260	490 ⁽³⁾	104
18 way	2210	850	260	490 ⁽³⁾	122

Style G - 1600A panelboard					
14 way	2106	1256	450	708 ⁽²⁾	375
14 way extension	2106	850	450		200

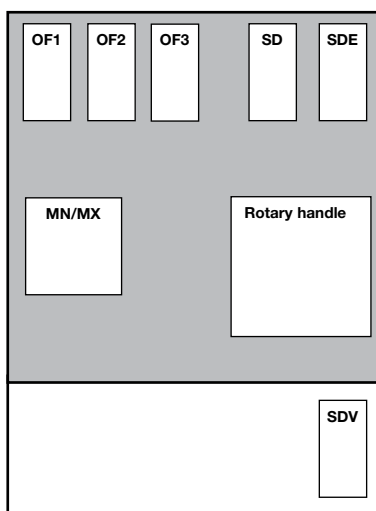
- (1) Distance from gland plate to incoming terminals
- (2) Terminals will accept up to 3 lugs 400mm² per phase
- (3) Main connection M12 bolt



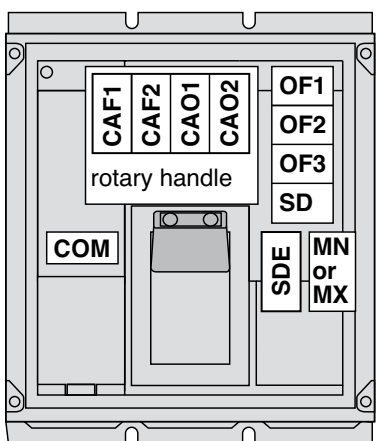
Note: Side extensions and corner units cannot be fitted to 250A panelboards



NSX100/160/250



NSX400/630

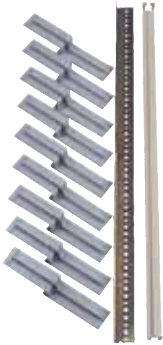


NS800/1600

- OF** Changeover auxiliary contact
- SD** Changeover alarm switch
- MX** Shunt trip
- MN** Undervoltage release
- SDE** Fault alarm
- SDV** Earth fault alarm
- CAF** Early make auxiliary contacts (with rotary handle)
- CAO** Early break auxiliary contacts (with rotary handle)
- COM** Communications function

All accessories are capable of being fitted on site. Full details may be obtained from the Compact NS moulded case circuit breaker catalogue.

Manually operated device



Shrouding kit (400/630A and 800A panelboards only)

Provides additional support for device and shrouding for front cover. One shrouding kit must be used per side when fitting either outgoing 400/630A MCCBs or outgoing ammeter and/or earth leakage protection. In addition to the shrouding kit an additional 25mm three stage filler piece is required when 4 pole 400A or 630A circuit breakers are fitted on the outgoing pan assembly **MGPTSF25**.

Number of outgoing ways		Part number
SP	TB	
18	6	MGPCH6
36	12	MGPCH12
54	18	MGPCH18

Extension enclosure

250A powerboard style A side extension

TP ways	Mounting arrangement	Part number
Side	Top/bottom	
3	W600	MG25EXC
4	W600	MG25EXC

250A panelboard style C top or bottom extension

5,7,9,13	H200	MG6CEX
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More than one extension can be added if required.

400/630A panelboard style D and 800A panelboard style E top or bottom extension

Top/bottom ext.	6,12,18	H200	MG6CEX
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Side extensions

Side ext. 6	W250	MGPXC206
Side ext. 12	W250	MGPXC212
Side ext. 18	W250	MGPXC218
Side ext. 6	W500	MGPXC506
Side ext. 12	W500	MGPXC512
Side ext. 18	W500	MGPXC518

For side extensions with metering facility see page 8/20.

More than one extension can be added if required. Side extensions are recommended when 400A and 630A outgoers are fitted or when outgoing circuit breakers have earth fault protection.

Corner units style D/E

W250	H200	MGPC2025
W500	H200	MGPC2050
W250	H400	MGPC4025
W500	H400	MGPC4050

For squaring off a panelboard when a top or bottom extension and side extension are used together, and side extension are used together.

1600A panelboard style G side extension

14	W400	MG16CEX4
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More than one extension can be added if required.

Metering MG16CEM4

Replacement items

Door and cover assembly

250A powerboard	9 way	MG25FCC2
	13 way	MG25FCC4
	9 way + metering	MG25FCC2M
	13 way + metering	MG25FCC4M
400/630A panelboard	18 way	MG6FCC6
	36 way	MG6FCC12
	54 way	MG6FCC18
800A panelboard	18 way	MG8FCC6
	36 way	MG8FCC12
	56 way	MG8FCC18
Gland plate for 400/630/800A panelboard		MGPGPC8
Door lock kit up to 800A		MGPP4S007
2 spare door keys		MGK33
Touch up paint RAL9001	Spray	08962
	Brush	08961
Adhesive drawing pocket	RAL9001	08963

Residual current protection modules

Using 4 pole residual current add-on modules (Vigi block) for incoming or outgoing ways (requires a 4 pole MCCB).

Frame rating	Earth leakage tripping current options (A)	Current rating MCCB	Vigi module Part number
Up to 160A	0.03 - 0.3 - 1 - 3 - 10*	NSX100/160	LV429211
200 - 250A	0.03 - 0.3 - 1 - 3 - 10*	NSX250	LV431536
400 - 630A	0.3 - 1 - 3 - 10 - 30*	NSX400/630	LV432456

* Time delay settings (ms) 0 - 60 - 150 and 310 (30mA - instantaneous only).

(i) For combinations of items of RCD's, metering and remote metering please contact us for further information.





Metering facility

- 3 phase current transformer module with voltage measurement outputs.
- Fits directly on the terminals of the breaker.
- The voltage measurement outputs have inbuilt protection with automatic reset.
- Suitable for use with the PowerLogic range of meters.

Breaker	CT ratio	VA output	Class at VA output	Part number	
				3 pole	4 pole
NS100	125/5	1.1	1.0	LV429461	LV429462
NS160	150/5	1.1	1.0	LV430561	LV430562
NS250	250/5	1.1	0.5	LV431569	LV431570
NS400	400/5	2.0	0.5	LV432653	LV432654
NS630	600/5	2.0	0.5	LV432861	LV432862



Current transformer module nt transformer module

- 3 phase current transformer module.
- Fits directly on the terminals of the breaker.

Breaker	CT ratio	VA output	Class at VA output	Part number	
				3 pole	4 pole
NS100	125/5	1.6	3.0	LV429457	LV429458
NS160	150/5	3.0	3.0	LV430557	LV430558
NS250	250/5	5.0	3.0	LV431567	LV431568
NS400	400/5	8.0	3.0	LV432657	LV432658
NS630	600/5	8.0	3.0	LV432857	LV432858



Motor operator module

All 3 pole and 4 pole breakers up to 250A can be fitted with a motor operator mechanism allowing remote opening and closing of the circuit breaker.

Operating voltages

50Hz	a.c.	48 - 415V
	d.c.	24 - 250V

Specify requirements at time of ordering the breaker.



Rotary handles with inbuilt padlocking facilities

Current rating	Part number	
	Black	Red/yellow
Up to 250A	LV429337	LV429339
400/630A	LV432597	LV432599

Toggle padlocking attachments Locking in OFF position

Current rating	Part number	
	Removable	Fixed
250A	29370	LV429371
630A	29370	LV432631
800A	44936	LV432631



Connection accessories

Bare cable connectors

Capacity	Breaker	Part number	
		Set of 3	Set of 4
1.5 - 95mm ²	160	LV429242	LV429243
10 - 185mm ²	250	LV429259	LV429260
35 - 300mm ²	630	LV432479	LV432480
2 x 95 - 240mm ²	630	LV432481	LV432482

Crimp cable lugs supplied with phase barriers

120mm ² copper	250	LV429252	LV429256
150mm ² copper	250	LV429253	LV429257
185mm ² copper	250	LV429254	LV429258
240mm ² copper	630	LV432500	LV432501
300mm ² copper	630	LV432502	LV432503
150mm ² aluminium	250	LV429504	LV429505
185mm ² aluminium	250	LV429506	LV429507
240mm ² aluminium	630	LV432504	LV432505
300mm ² aluminium	630	LV432506	LV432507

Spreaders

A	Pole pitch mm	Quantity	Part number
250	45	Set of 3	LV431563
250	45	Set of 4	LV431564
630	52.5	Set of 3	LV432490
630	52.5	Set of 4	LV432491

Auxiliary switch for 3 or 4 pole devices only

- For all MCCBs
- Used to indicate open, closed or tripped status
- SDE adaptor required for trip unit devices up to 250A TM or MA (to indicate trip on overcurrent). **Two** auxiliary switches will be needed to indicate open, closed **and** tripped status

	Part number
Auxiliary changeover switch	29450
SDE adaptor	29451

Voltage releases to fit all MCCBs 16/630A for 3 or pole devices only

AC 50/60Hz Voltage (V)	Part number Shunt trip (MX)	Undervoltage release (MN)
200/240	LV429387	LV429407
380/415	LV429388	LV429408

Other voltages available - refer to Compact NSX catalogue.

Terminal shields

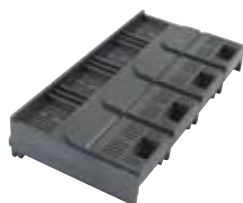
Current rating (A)	Part number
Up to 160A single pole and 250A neutral link	LV429320
Up to 160A 2 pole	LV429320 x 2
Up to 250A 3 pole (single) long	LV429517
Up to 250A 4 pole (single) long	LV429518
Up to 400/630A 3 pole (single)	LV432593
Up to 400/630A 4 pole (single)	LV432594

For shielding a TP MCCB with neutral link use the 4 pole terminal shield.

Single pole shrouding plates

MGPBBP **MGPBB25**
 Single pole shrouding plates are required for each unoccupied outgoing way. In addition a 25mm shrouding plate is always required when 4 pole 400A or 630A circuit breakers are mounted on the outgoing pan assembly.

Boards up to 800A are supplied with 3 x MGPBBP. 1600A board is supplied with 6 x MGPBBP.





The PowerLogic PM5000 series power meter offers all the measurement capabilities required to monitor an electrical installation in a single 96 x 96 mm unit extending only 72 mm behind the mounting surface. With its large display, you can monitor all three phases and neutral at the same time. The anti-glare display features large 11 mm high characters and powerful backlighting for easy reading even in extreme lighting conditions and viewing angles.

The PowerLogic PM5000 series meters are available in 12 versions:

- PM5100, basic metering with up to 15th individual harmonic measurement and one pulse output for energy metering
- PM5110, same function as PM5100, plus RS485 port for Modbus communication
- PM5111, same function as PM5110, plus MID certified
- PM5310, basic metering with up to 31st individual harmonic measurement, 256KB data logging, two digital inputs, two digital output and one RS485 port for Modbus communication
- PM5320, basic metering with up to 31st individual harmonic measurement, 256KB data logging, two digital inputs, two digital output and one Ethernet port for Modbus TCP/IP communication
- PM5330, same function as PM5310, plus two relay outputs
- PM5331, same function as PM5330, plus MID certified
- PM5340, same function as PM5320, plus two relay outputs
- PM5341, same function as PM5340, plus MID certified
- PM5560, basic metering with up to 63rd individual harmonic measurement, 1.1MB data logging, four digital inputs, two digital outputs, one RS485 port for Modbus and two Ethernet port for Modbus TCP/IP communications, embedded webpages
- PM5561, same function as PM5560, plus MID certified
- PM5563, same function as PM5560, but DIN rail mounted without display

Applications

Sub billing/tenant metering
 Cost allocation
 Basic Power Quality monitoring
 Min/Max monitoring with timestamp
 Programmed alarming
 WAGES monitoring

Characteristics

Requires only 72 mm behind mounting surface

The Power Meter Series 5000 can be mounted on switchboard doors to maximise free space for electrical devices.

Large back lit display with integrated bar charts

Displays 4 measurements at a time for fast readings.

Intuitive use

Easy navigation using context-sensitive menus.

Power and current demand, THD ,TDD, individual harmonics and min/max reading in basic version

A high-performance solution for trouble-free monitoring of your electrical installation.

Active energy IEC 62053-22 class 0.5S (PM5100 and PM5300 models) and class 0.2S (PM5500 models)

Suitable for cost-allocation applications.

Legal billing compliance

Meets EN50470-1/3-Class C that specifies requirements for billing applications.

Performance measuring and monitoring devices

Meet IEC 61557-12 PMD/S/K55/0.5 (PM5100 and PM5300 models) and IEC61557-12 PMD/S/K55/0.2 (PM5500 model) that specifies requirements for combined Performance Measuring and monitoring Devices (PMD)

Innovative Power Meter

RS 485 communications, alarming and digital I/O in a single Power Meter (PM5310).



Power meter inputs

The NSX moulded case circuit breakers up to 630A have current transformer modules that fit directly on to the load terminals of the breaker. As well as the current transformer coils they also have self protected voltage connections off each phase. This eliminates the need to have additional overcurrent protection on these circuits. The meter is wired direct from this CT module without the need for any intermediate devices.

Panelboard configurations

250A Powerboard

There are two versions of this equipment, basic or with the facility to have metering. The meter versions allow metering to be added to any 3 or 4 pole MCCB fitted in the board. All components are easily fitted; there are no extension boxes to fit or apertures to cut. The meters are positioned behind the overall lockable door preventing unauthorised access to the meters. MG25C2M has 4 apertures, MG25C4M has 5.

Note: the meters and CT modules must be ordered separately. The wiring looms to link the CT modules to the meters are included with the panelboards.

Metering options are not available for the 250A panelboard. It is recommended that a MG6Pxx board is used with a 250A incomer.

Ordering references

250A powerboard with metering facility

13 SP positions	MG25C2M
17 SP positions	MG25C4M

250A Panelboard

Incoming/Outgoing metering

The metering extension box allows for metering for the incoming and outgoing devices to be metered. The kit comes complete with a fuse holder and wiring looms to provide power to the meters. The meters and CT modules are ordered separately.

630 & 800A Panelboards

Incoming metering

This is easily added to a board when it is first being installed. The kit comprises an extension box that houses the meter and, when fitted to the same end of the board as the incoming cables, provides additional space for the main incoming cables. All components including the meter, CTs and wiring is included in the kit. The meter is fully set up for the CT ratio and the voltage configuration.

Outgoing circuit metering

Metering can be fitted to some or all of the three phase outgoing circuits on 630A & 800A boards whether the boards are fitted with incoming metering or not.

The arrangement consists of side extension boxes that house the meters and also provide additional cabling space. Meters and current transformers are ordered separately to meet the needs of the installation. The necessary cable looms are included with the steelwork. The meters are mounted on hinged doors. The box also contains the auxiliary busbar that provides the 240V control supply for the meters. The left hand extensions have sufficient meter positions for half the number of outgoing ways. The right hand extensions have positions for half the number of outgoing ways plus three additional positions. These extra positions may be used for additional metering or mounting surge arresters, control fuses etc. The lower two positions have a transparent window and DIN rail. This can be removed if not required.

Note: the meters, CT modules and surge arresters must be ordered separately

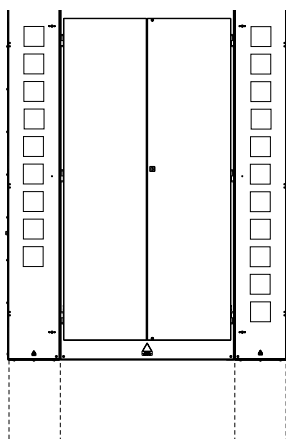
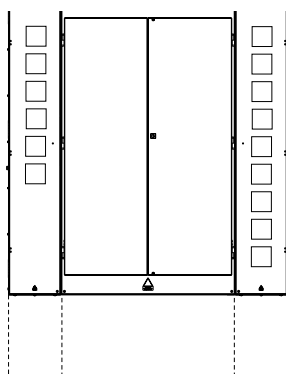
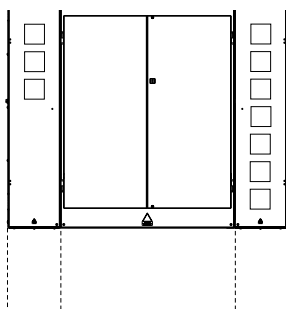
Incoming and outgoing metering for boards up to 630A

(This arrangement is not applicable for boards fitted with MGPINC direct connections). When both incoming and outgoing metering is required there is a very cost effective solution by incorporating the incoming metering into the right hand side extension box. Components required are:

- Standard extension box MG6CEX to provide the required cable spreading space
- Current transformer module to fit on line side of incoming breaker.
- PM750MG meter.
- Two MGPC2025 corner units, optional

The meter should be cabled to the CT module according to the diagram supplied. (loom not supplied). The auxiliary supply to the meter should be taken from one phase and neutral and must be suitably fused.

Note. A warning notice should be placed in the board as the voltage connections are taken off the live side of the main breaker.



MG2C* 250A board

Incoming metering kit 250A	MG6CEXM
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MG6Cxx 630A board

Incoming metering kit 400A	MG64M
630A	MG66M

MG8Cxx 800A board

Incoming metering kit 800A	MG88M
MG88MX - less meter	

630A & 800A outgoing metering side extension boxes

6 way board	Left hand side (*)	3 meter positions	MGPCM6L
	Right hand side (*)	7 meter positions	MGPCM6R
12 way board	Left hand side (*)	6 meter positions	MGPCM12L
	Right hand side (*)	9 meter positions	MGPCM12R
18 way board	Left hand side (*)	9 meter positions	MGPCM18L
	Right hand side (*)	11 meter positions	MGPCM18R

(*) When the board is inverted for top entry main cables these side extensions fit on the other side of the board.

Accessories

Cable loom	MGPCML
Meter blanks	03908

1600A Panelboards

Incoming metering

A PM750MG meter is fitted as standard in the board. The meter is fully set up for use on a 415V 3ph 4 wire system and for use with the 1600/5 current transformers that are installed on the busbars.

Outgoing circuit metering

Metering can be fitted to some or all of the three phase outgoing circuits in these boards. The arrangement consists of a side extension cubicle that houses the meters and also provides additional cabling space. Meters and current transformers are ordered separately to meet the needs of the installation. The necessary cable looms are included with the cubicle.

The meters are mounted on the front, hinged cover of the cubicle and can be aligned with their associated breaker. The cubicle also contains the auxiliary busbar that provides the 240V control supply for the meters

1600A panelboard

Side extension cubicle

MG16CEM4

Current transformer modules for direct fitting to NS breakers in all boards

Breaker	Poles	CT ratio	Part number
NS100X	3	125/5	LV429461
NS100X	4	125/5	LV429462
NS160X	3	150/5	LV430561
NS160X	4	150/5	LV430562
NS250X	3	250/5	LV431569
NS250X	4	250/5	LV431570
NS400X	3	400/5	LV432653
NS400X	4	400/5	LV432654
NS630X	3	600/5	LV432861
NS630X	4	600/5	LV432862

Unused 92 x 92 metering apertures can be blanked off using Part number **03908**
All these CT modules have voltage connections.



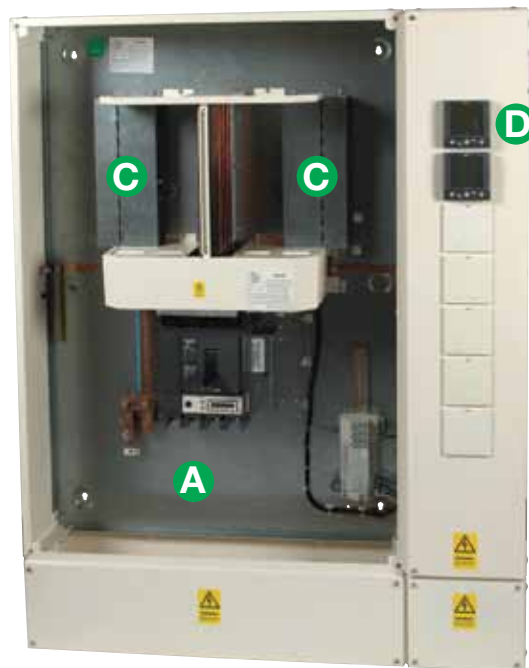
The intelligent panelboard system utilises the advanced features of the Compact NSX range with Micrologic 5 trip units for integrated protection, metering, measuring and monitoring.

With no requirement for external current transformers and an advanced plug and play communication cable system, on site adaptation is tool free, simple and quick to install.

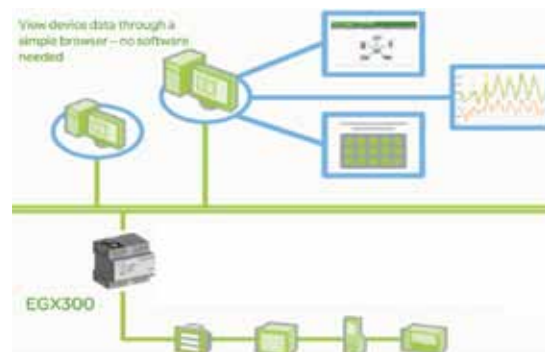
This system is available in 4 levels for incoming and outgoing devices.

- 1 Local display on the NSX breaker only
- 2 Local display plus data available via Modbus
- 3 Local display and remote functional display on the panelboard
- 4 Local display and remote functional display on the panelboard plus data available via Modbus

All devices are 4 pole and may be configured into a form 4b type 2 or 6 to BSEN 61439-1



- Key**
- A - Main incomer
 - B - Interface kit
 - C - Outgoing devices area
 - D - Display modules



Make your panel board smarter simply by using the Powerlogic EGX300.

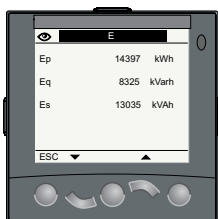
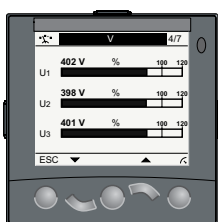
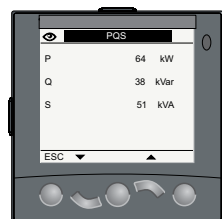
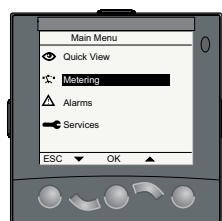
The integrated gateway-server Powerlogic EGX300 is used to optimise energy usage, and identify opportunities to save energy.

The user friendly tool uses only the web browser and network to display the energy consumption on panel boards, incorporating meters, NSX and communicating NSX breakers, trend plots from the electrical system and stores historical information from multiple locations.

The din rail mounted device can be fitted in any Power pact 4 panelboard using the webserver power and interface kit **SEPINTPEGX**.

In addition to protection functions, Micrologic 5 offers all the functions of Power Meter products as well as operating assistance for the circuit breaker:

- Display of settings
- Measurement functions:
 - Energy (E)
- Alarms
- Time stamped histories and event tables
- Maintenance indicator
- Communication



Micrologic E measurement functions are made possible by Micrologic intelligence and the accuracy of the sensors. They are handled by a microprocessor that operates independent of protection functions.

Display



Micrologic LCD

The user can display all the protection settings and the main measurements on the LCD screen of the trip unit.

- Instantaneous rms current measurements
 - Micrologic E voltage, frequency and power measurements and energy metering
- To make the display available under all conditions and increase operating comfort, an external power supply is recommended.

It is indispensable to:

- Display faults and interrupted current measurements
- Use all the functions of Micrologic E (e.g. metering of low power and energy values)
- Ensure operation of the communication system

The external power supply can be shared by several devices.

FDM121 display unit

An FDM121 switchboard display unit can be connected to a Micrologic trip unit using a prefabricated cord to display all measurements on a screen. The result is a veritable 96 x 96 mm Power Meter.

In addition to the information displayed on the Micrologic LCD, the FDM121 screen shows demand, power quality and maximeter/minimeter values along with alarms, histories and maintenance indicators.

The FDM121 display unit requires a 24 V DC power supply. The Micrologic trip unit is supplied by the same power supply via the cord connecting it to the FDM121.

PC screen

When the Micrologic, with or without an FDM121 switchboard display unit, is connected to a communication network, all information can be accessed via a PC.



Measurements

Instantaneous rms measurements

The Micrologic E continuously display the RMS value of the highest current of the three phases and neutral (Imax). The navigation buttons can be used to scroll through the main measurements.

In the event of a fault trip, the current interrupted is memorised.

Measures phase, neutral, ground fault currents plus voltage, frequency and power measurements

Maximeters / minimeters

Every instantaneous measurement provided by Micrologic E can be associated with a maximeter/minimeter. The maximeters for the highest current of the 3 phases and neutral, the demand current and power can be reset via the trip unit keypad, the FDM121 display unit or the communication system.

Energy metering

The Micrologic E also measures the energy consumed since the last reset of the meter. The active energy meter can be reset via the keypad and the FDM121 display unit or the communication system.

Demand and maximum demand values

Micrologic E also calculates demand current and power values. These calculations can be made using a block or sliding interval that can be set from 5 to 60 minutes in steps of 1 minute. The window can be synchronised with a signal sent via the communication system. Whatever the calculation method, the calculated values can be recovered on a PC via Modbus communication.

Ordinary spreadsheet software can be used to provide trend curves and forecasts based on this data. They will provide a basis for load shedding and reconnection operations used to adjust consumption to the subscribed power.

Power quality

Micrologic E calculates power quality indicators taking into account the presence of harmonics up to the 15th order, including the total harmonic distortion (THD) of current and voltage.





Micrologic 5 / 6 integrated Power Meter functions				Display		
				E	Micrologic LCD	FDM121 display
Display of protection settings						
Pick-ups (A) and delays	All settings can be displayed	I _r , t _r , I _{sd} , t _{sd} , I _i , I _g , t _g	■	■		
Measurements						
Instantaneous rms measurements						
Currents (A)	Phases and neutral	I ₁ , I ₂ , I ₃ , I _N	■	■	■	■
	Average of phases	I _{avg} = (I ₁ + I ₂ + I ₃) / 3	■	-	■	■
	Highest current of the 3 phases and neutral	I _{max} of I ₁ , I ₂ , I ₃ , I _N	■	■	■	■
	Ground fault (Micrologic 6)	% I _g (pick-up setting)	■	■	■	■
	Current unbalance between phases	% I _{avg}	■	-	■	■
Voltages (V)	Phase-to-phase	U ₁₂ , U ₂₃ , U ₃₁	■	■	■	■
	Phase-to-neutral	V _{1N} , V _{2N} , V _{3N}	■	■	■	■
	Average of phase-to-phase voltages	U _{avg} = (U ₁₂ + U ₂₁ + U ₂₃) / 3	■	-	■	■
	Average of phase-to-neutral voltages	V _{avg} = (V _{1N} + V _{2N} + V _{3N}) / 3	■	-	■	■
	Ph-Ph and Ph-N voltage unbalance	% U _{avg} and % V _{avg}	■	-	■	■
	Phase sequence	1-2-3, 1-3-2	■	■	■	■
Frequency (Hz)	Power system	f	■	■	■	■
Power	Active (kW)	P, total / per phase	■	■	■	■
	Reactive (kVAR)	Q, total / per phase	■	■	■	■
	Apparent (kVA)	S, total / per phase	■	■	■	■
	Power factor and cos φ (fundamental)	PF and cos φ, total and per phase	■	-	■	■
Maximeters / minimeters						
	Associated with instantaneous rms measurements	Reset via Micrologic or FDM121 display unit	■	-	■	■
Energy metering						
Energy	Active (kWh), reactive (kVARh), apparent (kVAh)	Total since last reset Absolute or signed mode ⁽¹⁾	■	■	■	■
Demand and maximum demand values						
Demand current (A)	Phases and neutral	Present value on the selected window	■	-	■	■
		Maximum demand since last reset	■	-	■	■
Demand power	Active (kWh), reactive (kVAR), apparent (kVA)	Present value on the selected window	■	-	■	■
		Maximum demand since last reset	■	-	■	■
Calculation window	Sliding, fixed or com-synchronised	Adjustable from 5 to 60 minutes in 1 minute steps	■	-		(2)
Power quality						
Total harmonic distortion (%)	Of voltage with respect to rms value	THDU, THDV of the Ph-Ph and Ph-N voltage	■	-	■	■
	Of current with respect to rms value	THDI of the phase current	■	-	■	■

(1) Absolute mode: E absolute = E out + E in; Signed mode: E signed = E out - E in.

(2) Available via the communication system only.

Additional technical characteristics

Measurement accuracy

Accuracies are those of the entire measurement system, including the sensors:

- Current: Class 1 as per IEC 61557-12
- Voltage: 0.5 %
- Power and energy: Class 2 as per IEC 61557-12
- Frequency: 0.1 %

Micrologic measurement capabilities come into full play with the FDM121 switchboard display. It connects to Compact NSX via a simple cord and displays Micrologic information. The result is a true integrated unit combining a circuit breaker and a Power Meter. Additional operating assistance functions can also be displayed.



FDM121 display.



Surface mount accessory.



Connection with FDM121 display unit.

FDM121 switchboard display

The FDM121 is a switchboard display unit that can be integrated in the Compact NSX100 to 630 A system. It uses the sensors and processing capacity of the Micrologic trip unit. It is easy to use and requires no special software or settings. It is immediately operational when connected to the Compact NSX by a simple cord. The FDM121 is a large display, but requires very little depth. The anti-glare graphic screen is backlit for very easy reading even under poor ambient lighting and at sharp angles.

Display of Micrologic measurements and alarms

The FDM121 is intended to display Micrologic 5 measurements, alarms and operating information. It cannot be used to modify the protection settings. Measurements may be easily accessed via a menu.

All user-defined alarms are automatically displayed. The display mode depends on the priority level selected during alarm set-up:

- High priority: a pop-up window displays the time-stamped description of the alarm and the orange LED flashes
- Medium priority: the orange "Alarm" LED goes steady on
- Low priority: no display on the screen

All faults resulting in a trip automatically produce a high-priority alarm, without any special settings required.

In all cases, the alarm history is updated.

If power to the FDM121 fails, all information is stored in the Micrologic non-volatile memory. The data can be consulted via the communication system when power is restored.

Status indications and remote control

When the circuit breaker is equipped with the BSCM module, the FDM121 display can also be used to view circuit breaker status conditions:

- O/F: ON/OFF
- SD: trip indication
- SDE: Fault-trip indication (overload, short-circuit, ground fault)

Main characteristics

- 96 x 96 x 30 mm screen requiring 10 mm behind the door (or 20 mm when the 24 volt power supply connector is used)
 - White backlighting
 - Wide viewing angle: vertical $\pm 60^\circ$, horizontal $\pm 30^\circ$
 - High resolution: excellent reading of graphic symbols
 - Alarm LED: flashing orange for alarm pick-up, steady orange after operator reset if alarm condition persists
 - Operating temperature range -10°C to $+55^\circ\text{C}$
 - CE / UL marking
 - 24 V DC power supply, with tolerances 24 V -20% (19.2 V) to 24 V $+10\%$ (26.4 V)
- When the FDM121 is connected to the communication network, the 24 V is supplied by the communication system wiring system
- Consumption 40 mA

Mounting

The FDM121 is easily installed in a switchboard.

- Standard door cut-out 92 x 92 mm
- Attached using clips

To avoid a cut-out in the door, an accessory is available for surface mounting by drilling only two 22 mm diameter holes.

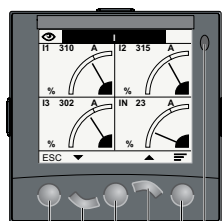
The FDM121 degree of protection is IP54 in front. IP54 is maintained after switchboard mounting by using the supplied gasket during installation.

Connection

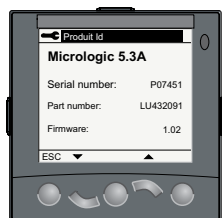
The FDM121 is equipped with:

- A 24 V DC terminal block:
 - Plug-in type with 2 wire inputs per point for easy daisy-chaining
 - Power supply range of 24 V -20% (19.2 V) to 24 V $+10\%$ (26.4 V)
- Two RJ45 jacks

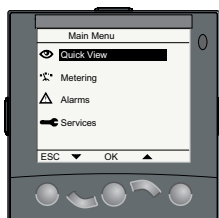
The Micrologic connects to the internal communication terminal block on the Compact NSX via the pre-wired NSX cord. Connection to one of the RJ45 connectors on the FDM121 automatically establishes communication between the Micrologic and the FDM121 and supplies power to the Micrologic measurement functions. When the second connector is not used, it must be fitted with a line terminator.



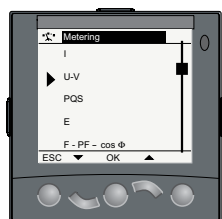
- 1 Escape
- 2 Down
- 3 OK
- 4 Up
- 5 Context
- 6 Alarm LED



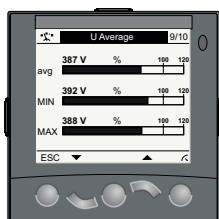
Product identification



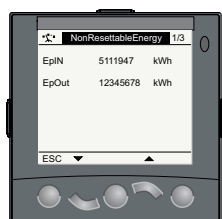
Quick view



Metering: sub-menu



Metering: U average



Metering: meter



Services

Navigation

Five buttons are used for intuitive and fast navigation.

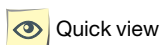
The "Context" button may be used to select the type of display (digital, bargraph, analogue).

The user can select the display language (Chinese, English, French, German, Italian, Portuguese, Spanish, etc.) Other languages can be downloaded.

Screens

Main menu

When powered up, the FDM121 screen automatically displays the ON/OFF status of the device.



Quick view



Metering



Alarms



Services.

When not in use, the screen is not backlit. Backlighting can be activated by pressing one of the buttons. It goes off after 3 minutes.

Fast access to essential information

- "Quick view" provides access to five screens that display a summary of essential operating information (I, U, f, P, E, THD, circuit breaker On / Off)

Access to detailed information

- "Metering" can be used to display the measurement data (I, U-V, f, P, Q, S, E, THD, PF) with the corresponding min/max values
- Alarms displays active alarms and the alarm history
- Services provides access to the operation counters, energy and maximeter reset function, maintenance indicators, identification of modules connected to the internal bus and FDM121 internal settings (language, contrast, etc.)

Selection and order form

Panelboards with the new range of Moulded Case Circuit Breakers (NSX) Installation Monitoring & Measuring functionality all integrated into the MCCB (4 Pole only), with Remote Display (FDM) and Modbus output Compact NSX enable the measured and metered data to be integrated in software management systems.

Note:- 4 pole breakers only on the incommer

Panel board Selection		
Order Code	Description	Selection
400A/630A Panelboard		
MG6C6	18 single pole ways (4 x 4 pole)	<input type="checkbox"/>
MG6C12	36 single pole ways (8 x 4 pole)	<input type="checkbox"/>
MG6C18	54 single pole ways (12 x 4 pole + 2 x 3 pole)	<input type="checkbox"/>
800A Panelboard		
MG8C6	18 single pole ways (4 x 4 pole)	<input type="checkbox"/>
MG8C12	36 single pole ways (8 x 4 pole)	<input type="checkbox"/>
MG8C18	54 single pole ways (12 x 4 pole + 2 x 3 pole)	<input type="checkbox"/>
1600A Panelboard		
MG16C14	42 single pole ways (9 x 4 pole + 2 x 3 pole)	<input type="checkbox"/>
Incomer		
Order Code	Description	Selection
400A/630A Panelboard 4 pole		
SEP400M5M	400A 4 pole MCCB compact NSX Integrated Metering & Monitoring Micrologic 5 Including Metering Cable	<input type="checkbox"/>
SEP630M5M	630A 4 pole MCCB compact NSX Integrated Metering & Monitoring Micrologic 5 Including Metering Cable	<input type="checkbox"/>
800A Panelboard		
MGP8004B5	800A 4 Pole incomer	<input type="checkbox"/>
1600A Panelboard		
33566	1250A 4 pole Incomer	<input type="checkbox"/>
33570	1600A 4 pole incomer	<input type="checkbox"/>
SEPINTP1	Power and interface kit	<input type="checkbox"/>
Outgoing ways 4 pole (only) with Micrologic 5 (Integrated U,I,E,P,f*,THD* Measuring and Monitoring**)		
Order Code	36kA rated circuit breakers	Out going way position
		1 2 3 4 5 6 7 8 9 10 11 12
SEP0404M5	40 A protection module Micrologic 5	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
SEP1004M5	100 A protection module Micrologic 5	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
SEP1604M5	160 A protection module Micrologic 5	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
SEP2504M5	250 A protection module Micrologic 5	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
SEP4004M5	400 A protection module Micrologic 5***	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
SEP6304M5	630 A protection module Micrologic 5***	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
* FDM display required		
** Available via Modbus		
*** 50kA rated breakers		

Metering options (Metering extension Box Required if Fitting Display module)

Order Code	Side Extension boxes	Selection
630A & 800A		
MGPCM6LX	6 Way board Left Hand Side 3 remote display positions	<input type="checkbox"/>
MGPCM6RX	6 Way board Right Hand Side 6 remote display positions	<input type="checkbox"/>
MGPCM12LX	12 Way board Left Hand Side 6 remote display positions	<input type="checkbox"/>
MGPCM12RX	12 Way board Right Hand Side 9 remote display positions	<input type="checkbox"/>
MGPCM18LX	18 Way board Left Hand Side 9 remote display positions	<input type="checkbox"/>
MGPCM18RX	18 Way board Right Hand Side 11 remote display positions	<input type="checkbox"/>
1600A		
MG16CEM4X	Side Extension Cubicle	<input type="checkbox"/>
Display		
TRV00121	FDM121 Metering Display module	<input type="checkbox"/>
Cable accessories		
TRV00870	5 RJ45 female/ female connector	<input type="checkbox"/>
TRV00810	5 RJ45/RJ45 1M interconnector	<input type="checkbox"/>
TRV00820	5 RJ45/RJ45 2M interconnector	<input type="checkbox"/>
TRV00880	10 ULP Line terminators	<input type="checkbox"/>
Modbus Communication accessories		
TRV00210	Modbus interface	<input type="checkbox"/>
TRV00217	Stacking Connector for TRV00210	<input type="checkbox"/>

Standard Outgoing way MCCB (3pole) order codes

Order Code	Description
MGP0163X	PP4 MCCB 3P 16A
MGP0253X	PP4 MCCB 3P 25A
MGP0323X	PP4 MCCB 3P 32A
MGP0403X	PP4 MCCB 3P 40A
MGP0633X	PP4 MCCB 3P 63A
MGP0803X	PP4 MCCB 3P 80A
MGP1003X	PP4 MCCB 3P 100A
MGP1253X	PP4 MCCB 3P 125A
MGP1603X	PP4 MCCB 3P 160A
MGP2003X	PP4 MCCB 3P 200A
MGP2503X	PP4 MCCB 3P 250A
MGP4003X	PP4 MCCB 3P 400A
MGP6303X	PP4 MCCB 3P 630A

Other options

Order Code	Description	
	On site Engineer Support 1 Day	
LV434205	Breaker Status information required (up to 630A)	1 required per Breaker

Example of ordering a Panel Board with Metering

Step 1	Select the Required Panel board from Section 1	MG6C	x1
Step 2	Select Incommer device	SEP630M5M	x1
2a	Select Power & Interface Kit	SEPINTP1	x1
Step 3	Select appropriate outgoing device	SEP1004M5	x1
Step 4	Add Metering accessories		
4a	If you require the display module for each outgoing way then select a side extension box	MGPCM6L	x1
4b	Select required Number of Display Modules (include Incommer)	TRV00121	x3
4c	If data is required over Modbus protocol select the required number of Modbus interfaces (include incomer)	TRV00210	x3
4d	Select modbus stacking connectors (pack of 10) include incommer	TRV00217	x1
4e	Select Required number of RJ45 interconnectors (Pack of 5)	TRV00810	x1
4f	Select ULP terminator (pack of 10)	TRV00880	x1

Note: If no display modules are required and data is to be made available over Modbus only items 4a and 4b are not required.