Industrial Solutions

PRODUCT GUIDE

ReliaGear™ OEM lighting panelboards

Building smart, reliable, and flexible solutions together

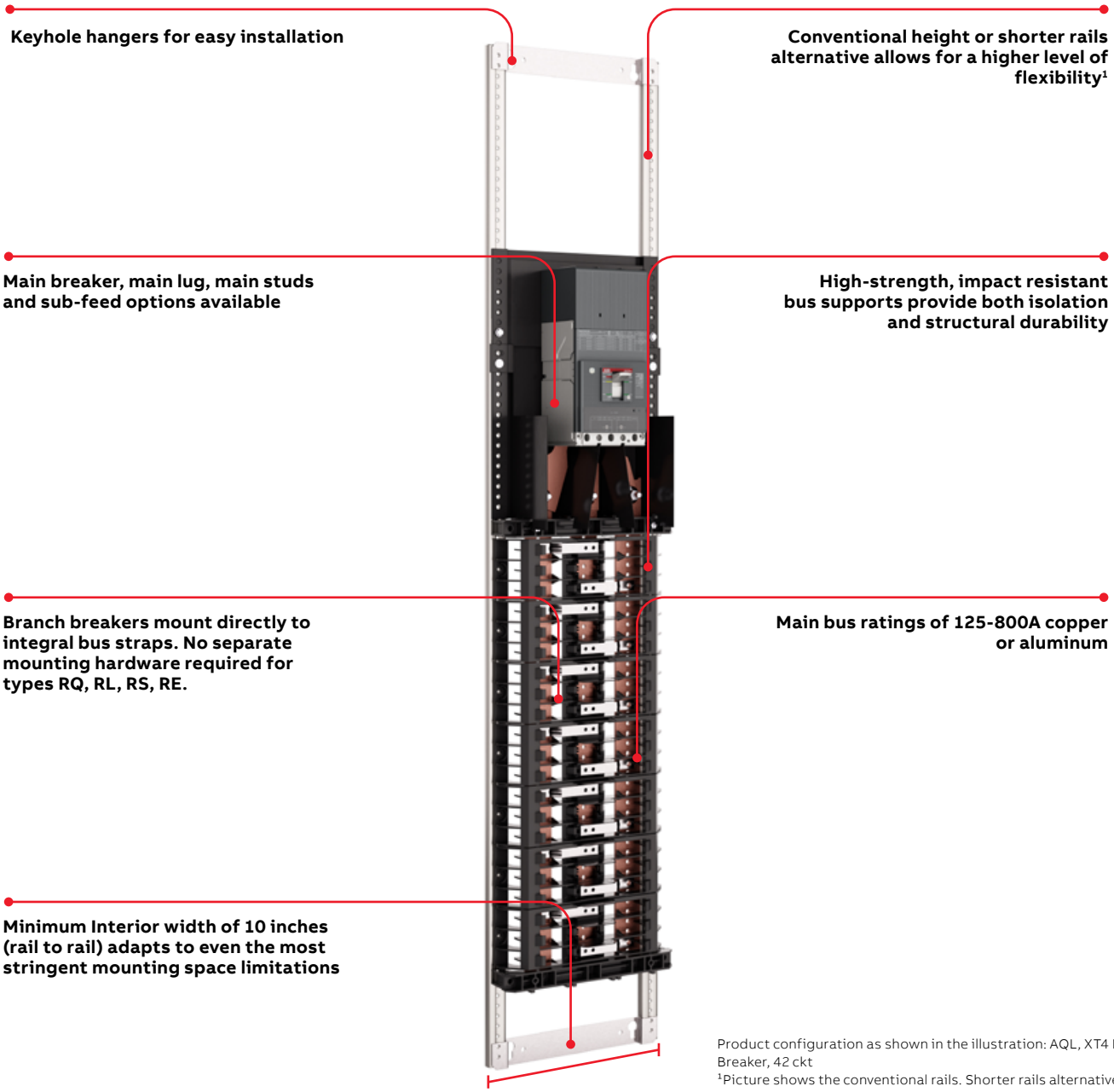
by ABB

ReliaGear™ OEM lighting panelboards

It is not only about delivering a product, it is also about delivering future proof solutions

When we designed ReliaGear™ OEM lighting panelboards, we not only thought about adding technical features that meet standards, we also thought about the way they will contribute to the success of our OEM partners. That is why we do not skimp on investing in R&D, product development, or adapting our process. The result, future proof solutions that will help you adapt to the ever-evolving industry requirements, improve performance and for your end customers, all while growing your business.

ReliaGear™ OEM lighting panelboards offer the compactness and flexibility you need to design and complement your solutions. Their performance and protection capabilities will help you ensure continuity of service and protection of equipment at all times. ReliaGear™ OEM lighting panelboards are well suited for commercial or light industrial applications to advanced heavy-duty applications.



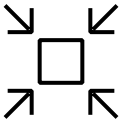
Product configuration as shown in the illustration: AQL, XT4 Main Breaker, 42 ckt

[1]Picture shows the conventional rails. Shorter rails alternative is described later in page 7 of this document.

ReliaGear™ OEM lighting panelboards

It is not just about high-quality components, it is also about a partner you can trust and count on.

Vast engineering documentation
Having complete information is essential to make sure that the components used in the design will deliver the desired performance. Even more, having access to hundreds of drawings and 3D models of different panelboard configurations will help you complete your design faster and reduce errors.



Space optimization
Space optimization is key for OEM customers.
Type L shorter rail alternative provides a smaller footprint by shortening the side rails and therefore reducing the total height of the interior, allowing customers to develop a higher power density solution.

Advanced flexibility
Being able to comply with unique sets of requirements can be critical to win or lose a project. ReliaGear™ OEM lighting panelboards offer the flexibility you need to design customized solutions by incorporating ReliaGear lighting panelboards configurations into two OEM arrangements, Type G and Type L.

Count on us 24/7
Doing business with us gives you the confidence and tranquility you need. We continue to invest in R&D, manufacturing capacity, innovative tools, and more importantly, our people to deliver best-in-class solutions. It is not just about a component, it is also about a partner you can trust and count on.

Continuous operation
Flexibility is nothing without performance, and ReliaGear™ OEM lighting panelboards are able to handle the most extreme breaking capacities. This functionality, combined with the most precise electronic trip units in the smallest of frames, help ensure continuity of service and equipment protection at all times.

Speed up your projects
Ease of installation is equal to savings in project costs. ReliaGear™ OEM lighting panelboards enable to complete more projects in less time. Both, Type G and Type L, include four keyhole hangers to effortlessly and safely secure screws through them to mount the panelboard interior enabling easier and faster installation. Plus, the extruded split neutrals and NEMA enclosures offer ample gutter space to simplify wiring in the type G.

ReliaGear™ OEM lighting panelboards

It is not just about a component, it is also about the flexibility and performance you expect.

ReliaGear™ OEM lighting panelboards are assembled on rigid steel frames and equipped with circuit breakers from 15 A to 600 A. The maximum short circuit rating is equal to 65 kAIC at 240 V AC and 480/277 V AC .

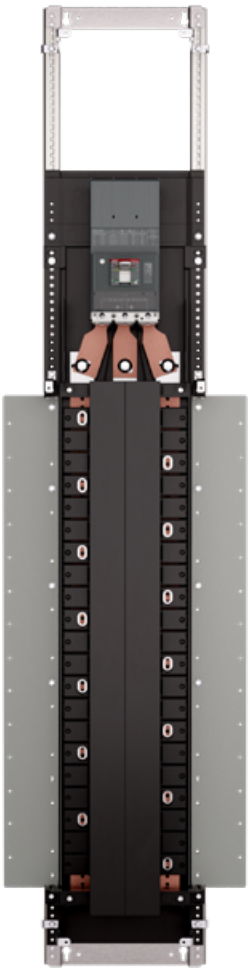
ReliaGear™ OEM lighting panelboards are available as type G or Type L.

Type G
Reliagear OEM Type G panelboards include the interior, enclosure, front, and shield.

Type L
Reliagear OEM Type L panelboards provide the interior construction only.

ReliaGear™ OEM lighting panelboards Type G or Type L incorporate the best features you find in the ReliaGear RQ, RL, RE, RS, and RD lighting panelboards.

Advanced FORMULA A2 and SACE Tmax® XT circuit breakers as mains and sub-feeds are in charge of protecting against destructive overloads or short circuits. High-strength, impact resistant bus supports provide both isolation and structural durability.



System voltages

- United States and Canada
  - 480 V AC; 3-phase, 3-wire
  - 600 V AC; 3-phase, 3-wire
  - 208Y/120 V AC; 3-phase, 4-wire
  - 480Y/277 V AC; 3-phase, 4-wire
  - 600Y/347 V AC; 3-phase, 4-wire
  - 120/240 V AC; 1-phase, 3-wire
  - 240 V AC; 3-phase, 3-wire

- International
  - 380 V AC, 3-phase, 3-wire
  - 400 V AC, 3-phase, 3-wire
  - 415 V AC, 3-phase, 3-wire
  - 220Y/127 V AC, 3-phase, 4-wire
  - 230Y/127 V AC, 3-phase, 4-wire
  - 380Y/220 V AC, 3-phase, 4-wire
  - 400Y/231V AC, 3-phase, 4-wire
  - 415Y/240V AC, 3-phase, 4-wire

ReliaGear™ OEM lighting panelboards– Type G and Type L

Choosing the right configuration for your business

Type G or Type L panelboards are built from the ReliaGear lighting panelboard family of configurations RQ, RL, RE, RS and RD.

RQ

- 240 V max., 1- or 3-phase
- 125-800A1
- Fully rated2: 65 kAIC at 240V
- Branch breaker: Bolt-on THQB

RL

- 240 V max., 1- or 3-phase
- 125-800A1
- Fully rated2: 65 kAIC at 240V
- Branch breaker: Plug-on THQL

RE

- 480Y/277 V max., 3-phase
- 125-800A1
- Fully rated2: 18 kAIC at 480Y/277 V; 65 kAIC at 240 V
- Branch breaker: Bolt-on TEY(F)
- Main lugs 125-800A up to 250VDC & Main breaker 125A at 250VDC max

RS

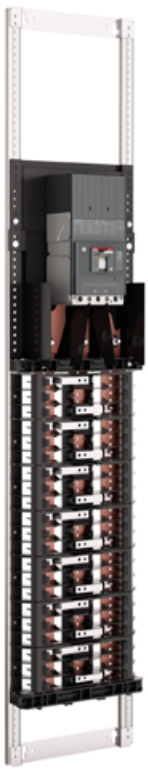
- 480Y/277 V max., 3-phase
- 125-800A1
- Fully rated2:65 kAIC at 480 V
- Branch breaker: Bolt-on TEY(D/H/L)
- Main lugs 125-800A up to 250VDC & Main breaker 125A at 250VDC max

RD

- 600 V max., 3-phase
- 125-800A1
- Fully rated2: 42kAIC at 600Y/347V
- Branch breakers: Bolt-on
  FB 1/2P: 15-100A
  XT2 3P: 15-125A

Type G

Type L



— **Type G** includes enclosure, front, interior and shield

— **Type L** includes interior only

[1]125-600A Main Breaker; 125-800A Main Lug Only
[2]Series rating capabilities are indicated in panel configuration in Empower or DET-008 document

ReliaGear™ OEM lighting panelboards – Type G

Design flexibility for an advanced level of customization

ReliaGear™ OEM Type G includes the same standard components as the ReliaGear™ lighting panelboards: enclosure, shield, front and Interior[1]. Designed for facility electrical systems where main and branch connections are made in the field, this interior contains a full height deadfront shield that provides NEC compliant wire bending space when utilized with ReliaGear or equivalently sized enclosures. UL labeled and listed, Type G is available in main lug or main breaker and gives you the full capabilities of the factory assembled panelboard with the ability to stock and ship as needed.

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Available environmental enclosure types
- NEMA 1
- NEMA 3R
- NEMA 4/4X
- NEMA 4/4X/12

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Fronts for NEMA1 enclosures
- Standard
- Door within door
- Front hinged to box
- Standard with quarter turn lock

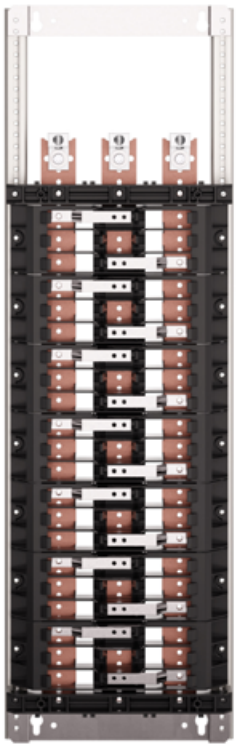
[1] Enclosure and Front can be excluded from the provision by selecting “Interior only” option in the Empower configurator. In this case, customer will receive only the interior and shield. Product configuration as shown in the illustration: AQG, XT5 Main Breaker, 42 ckt

ReliaGear™ OEM lighting panelboards offering – Type L

Compact interiors to make the best use of available space

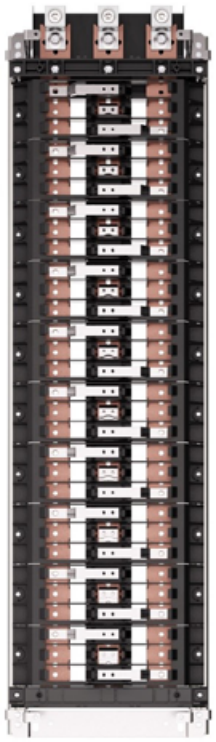
Reliagear OEM Type L provides the interior construction which is the core component for any power distribution solution. This UL recognized interior is the perfect choice for customers who desire to incorporate Reliagear interiors in their electrical distribution equipment. Originally designed for power conditioning equipment, it can be utilized anywhere mounting space is at a premium and wiring terminations will be made at the factory. Type L interiors are furnished without a deadfront shield, and do not include the enclosure and front. They are available in 125-800A main lug and main stud and 125-600A main breaker. Developed with customer input, the new Type L shorter rail alternative provides a smaller footprint by shortening the side rails and therefore reducing the total height of the interior. This brings even more flexibility allowing OEMs to optimize the final design/solution. Type L shorter rail alternative can be easily selected in our empower configurator tool and is available for main lug interiors only.

Type L



AQL, 42 ckt, Conventional Rails, Main Lug

Type L – Shorter rails

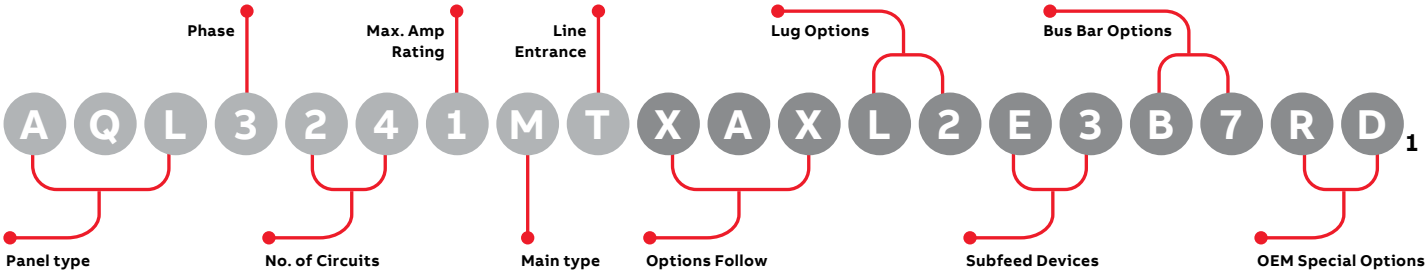


AQL, 60 ckt, Shorter Rails, Main Lug

ReliaGear™ OEM lighting panelboards

Choosing the right configuration

Interior product number structure



Panel type[2]	Phase	No. of Circuits	Max. Amp Rating	Main type	Max.IC	Max.volts	Family	Main device	Line Entrance
AQL	1= 1PH/3W	12	1=125A	A =	10kA	240	RQ,RL	THQB, A2A	T=Top
ALL	3= 3PH/4W,	18	2=250A	B =	14kA	480Y/277	RE, RS	TEY	B=Bottom
AEL	3PH/3W	24	4=400A	C =	22kA	240	RQ,RL	THHQB, A2N	
ASL		30	6=600A	D =	65kA	480Y/277	RE, RS, RD	XT1H, XT4H, XT5H	
ADL		36	8=800A[4]	E =	65kA	240	RQ,RL	TEY	
AQG		42		J =	65kA	240	RQ,RL	XT1S, XT4N, XT5N	
ALG		48		K =	10kA-35kA	480Y/277	RE, RS, RD	XT1S, XT4N, XT5N	
AEG		54		L =	22kA	480Y/277	RE,RS	Lighting contactor	
ASG		60				240	RQ,RL		
ADG		66		M =	65kA	600	RD	Main lugs	
		72				480Y/277	RE,RS		
		78				240	RQ,RL		
		84		N =	65kA	480Y/277	RE,RS	Main stud / No neutral	
		96[3]				240	RQ,RL		
				S =	65kA	600	RD	Subfeed (dual) main lugs	
						480Y/277	RE,RS		
						240	RQ,RL		
				U =	18kA/42kA	600		XT4L, XT5L, XT5N	
				Y =	65kA	600	RD	Molded case switch	
						480Y/277	RE,RS		
						240	RQ,RL		

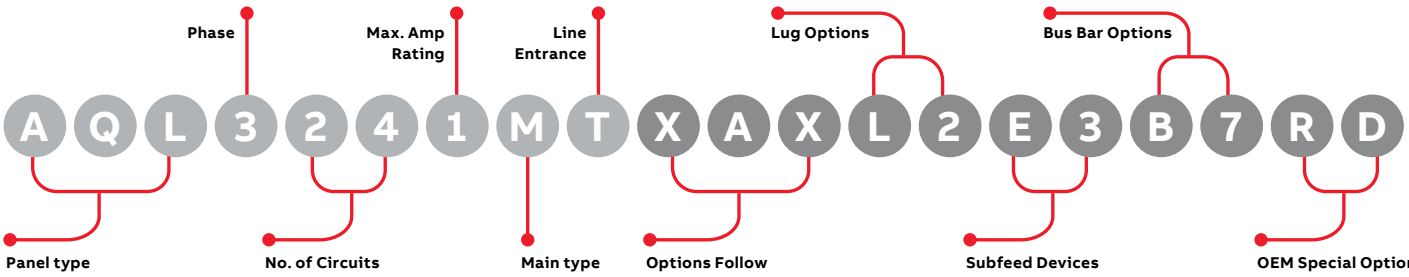
[1]"XAX" and characters after will only appear in the number structure if options, which are indicated in the next page, are being selected in our Empower configurator tool
[2]A= Reliagear || **Branch breakers:** Q =THQB; L = THQL; E = TEY; D = XT2/FB; S = STEY || **OEM Type:** L = Type L; G= Type G
[3]Available as main lug, no neutral, shorter rails only
[4]Main Lug Only

ReliaGear™ OEM lighting panelboards

Choosing the right configuration

Options

Interior product number structure - Options



Lug Options[1]	Subfeed Devices[2]	Bus Bar Options	OEM Special Options
L1 = Aluminum compression L2 = Copper pressure L3 = Aluminum oversize compression L4 = Aluminum oversize pressure L5 = Copper extrusion neutral, cu strap/ plate, cu sub-feed lugs L6 = Tin plated copper compression L7 = Tin plated copper oversize compression L8 = Copper extrusion neutral w/copper comp lugs, cu strap/plate, cu sub-feed lugs	Q2= A2 2P Q3= A2 3P Q4= A2 4P Q5= A2 5P Q6= A2 6P E3= XT1 2/3P E6= (2 or 3) XT1 2/3P F1 = XT4 2/3P F6 = (2, 3 or 4) XT4 2/3P	B1 = 600A PSI aluminum B2 = 750A PSI aluminum B3 = 800A PSI copper B4 = 1000A PSI copper B5 = 1000A PSI silver plated copper B6 = 1000A PSI tin plated copper B7 = Heat rise un-plated copper	RD = Type L 225/400/600A on channel RO = Shorter rails RV = Type L 225A A2 vertical with shield for std boxes

[1]Pressure lug = Standard lug; Compression lug = Crimped.
Oversize: Bigger holes for larger cable diameter which are used to mitigate voltage drop on larger distances.
[2]XT breakers occupy 3P spaces but can be used as 2P.

Only standard options are included in this table and example interior product number structure. Please visit our Empower configurator tool for options not included in this document

Molded case circuit breakers

From design to manufacturing, FORMULA A2 and Tmax XT circuit breakers set the standard for edge technologies to deliver XTreme performance. With superior quality and advanced features such as higher interrupt ratings (up to 200 kA), Ekip DIP and thermal magnetic trip units, FORMULA A2 and Tmax XT circuit breakers support low tier to high tier customers.

Tmax XT, FORMULA A2, and legacy GE circuit breakers

			FORMULA A2	XT1	XT4	XT5
Frame size		(A)	225	125	250	400 and 600
Poles			2, 3	3[1]	3[1]	3[1]
Amperage		(A)	125–225	15–125	25–250	250–600
Max. rated voltage		(V)	240	480	600	600
Trip units			Thermal magnetic fixed (TMF)	Thermal magnetic fixed (TMF)	Thermal magnetic fixed (TMF) Ekip DIP LSI	Thermal magnetic adjustable (TMA) Ekip DIP LSI
Max. interrupting rating	240 V	(kA)	10	100[3]	200[3]	200[3]
	480 V		–	65	100	65
	600Y/347V					
	600V					

[1] 3-pole can be used in a 2-pole application
[2] 1-pole rated 15–70 A
[3] over 65 kAIC
[4] The ReliaGear lighting panelboard is rated to 65 kAIC.
‡1-pole rated 15–60 A
†1-pole max. (kA) 14

Note: FORMULA A2 replaces TQD and THQD | XT1 or XT4 replaces SE | XT4 replaces SF | XT5 replaces SG
TMF: Thermo-Mag Fixed: No Adjustments Possible
TMA: Thermo-Mag Adjustable: Adjustable Thermal (L) & Magnetic (I)

Tmax XT trip units — thermal magnetic adjustable and Ekip DIP LSI

Thermal magnetic adjustable

Key:
1. Current threshold for short circuit protection.
2. Rotary switch for short circuit protection.
3. Current threshold for overload protection.
4. Rotary switch for overload threshold setting.

FB	XT2	THQB (bolt-on) THQL (plug-on)	THHQB (bolt-on) THHQL (plug-on)	TEY	TEYF	TEYD	TEYH	TEYL
100	125	100	100	100	100	100	100	100
1, 2	3	1, 2, 3	1, 2, 3	1[†],2, 3	1[†], 2, 3	1, 2, 3	1, 2, 3	1, 2, 3
15-100A	15-125A	15–100[(2)]	15–100[(2)]	15–100	15–100[‡]	15–125[(2)]	15–125[(2)]	15–125[(2)]
220 double branch	220 double branch	240	240	480	480	480	480	480
TMF	TMF ekip DIP ekip Hi-Touch	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
200	200 (XT2L)	10	22	65	65	65	65	100[(3)]
150	150 (XT2V)	–	–	14	18	25	35	65
42	42 (XT2V)							
N/A	42 (XT2V)							

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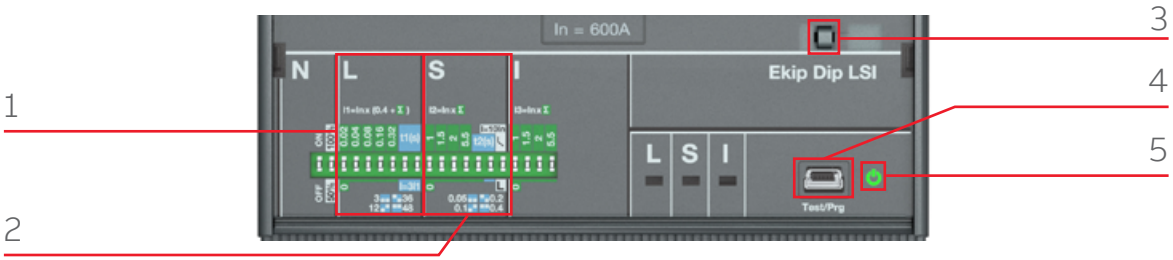
Ekip DIP LSI or adjustable L, S, and I



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Key:
1. DIP switches for overload protection setting.
2. DIP switches for short circuit and time-delayed short circuit protection settings.
3. Slot for lead seal.
4. Test connector.
5. Power-on LED.

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