

# 产品销售目录 Sales Program



## 可靠保证



埃芬产品为电力、工控和通讯设备的操作提供了安全可靠的保证。我们是熔断器和低压熔断器开关的专家,并专注于提供"应用导向"的解决方案。埃芬的工程、技术专家时刻与客户保持紧密联络,并提供第一手资料.

埃芬产品的卓越品质建立于研发人员的领先水平 和零缺陷的生产过程管理之上。

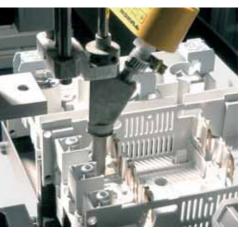
全球客户对埃芬产品的选择,保证了客户系统集成应用的成功。

#### 优质-埃芬制造

1922年成立于德国的莱茵河畔的埃芬,目前在德国有两个工厂。在匈牙利、波兰以及中国设有分支机构。全球市场销售源源不断将埃芬的技术拓展到全世界各地。

埃芬的质量管理系统已通过DIN ISO 9001 (EN29001) 国际标准认证,并拥有DIN ISO 14001国际环境管理系统认证。









### Reliable Contacts









EFEN products ensure the reliable and safe operation of utility, industrial and telecommunication installations. We are experts for fuse-links and low voltage switching devices. Our focus is on application-oriented solutions. EFEN engineers and technicians maintain a close liaison to our customers and provide information first-hand.

The unsurpassed quality of EFEN products is based on the advanced knowledge of our developers and a seamless production process management. The result: Products on which customers worldwide build their success.

»Quality made by EFEN« - founded in the Rheingau region in Germany in 1922, EFEN today has two plants in Germany. Subsidiaries in Hungary, Poland and China as well as international sales and marketing activities spread EFEN technology around the world.

The EFEN quality management system is certified in accordance with the international standard DIN ISO 9001 (EN 29001).

EFEN maintains a certified environment management system based on DIN ISO 14001.

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**IN THE LINE OF POWER** 

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### 满足所有需求

100 A

### NU

### NH熔断器底座

**符合**VDE0636 T201/IEC 60269-2-1

#### 产品

NH熔断器底座为熔断器在配电系统中方便、经 济的应用而设计。埃芬单极和三极底座适用于 固定、导轨和60mm母线系统三种安装方式,并 且具有多种接线形式。源于杰出设计的底座还 可选配高功率损耗的快速熔断器(gR/aR型)。

#### 产品系列

埃芬公司可以依据客户特殊需求订做,如: AC1500V的熔断器。并且可以提供各种附件: 如不同方式的接线端子、隔离板、绝缘罩和熔 断器罩盖等。

### Versions for all Needs

#### NH Fuse-Bases

VDE0636 T201/IEC 60269-2-1

#### System

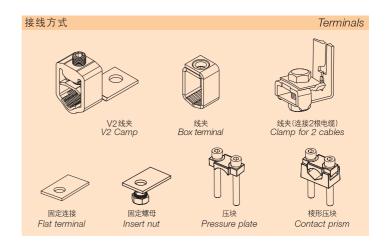
NH Fuse-Bases are designed for the easy and low-cost integration of NH Fuse-Links into distribution systems. For this purpose, EFEN offers systems suitable for base-plate, rail-mounting and for 60 mm busbar systems. The single- and triple-pole devices feature several connection options. Thanks to their design EFEN NH Fuse-Bases can also be used for fuses with higher power dissipation such as NH Fuse-Links for the protection of semi conductors gR/aR.

#### Product range

The EFEN product range is complemented by special designs e.g. for AC 1500 Volt Fuse-Links and by a comprehensive scope of accessories for various connection types, dividing walls, contact covers, fuse covers and many more.

尺码						Size
	000	00	1	2	3	4a
额定电流; Nominal current (A)		125/160	250	400	630	1250/1600
标准熔断器底座; Standard Fuse-Bases						
固定安装,3极; Base-plate mounting, 3 poles		•	•	•	•	
固定安装,1极; Base-plate mounting, 1 poles		•	•	•	•	
导轨安装,1极; Supporting-rail mounting		•				
特殊设计; Special designs						
1极 AC1500V; 1 pole, AC 1500 Volt				•		
3极 导轨安装; 3 poles, Supporting-rail mounting	•					







### NT-IN

### The complete Range

### 埃芬 – IN系列 NH横向熔断器式负荷隔离开关

符合VDE 0660 T107/IEC/EN 60947-3 /GB14048.3

#### 产品

埃芬NT-IN系列熔断器负荷隔离开关是长期开发经验的结晶,为各种应用提供了完善的解决方案。 改进后开关应用广泛、灵活,方便安装是我们开 发该系列产品和附件的重要要求。开关的现代化 设计满足了客户系统集成的美观要求,并且已获 得国家和国际多项标准认证。

#### 可选方案

除具有便捷电压测量的滑动视窗外,还可提供熔断器监控和开闭位置指示的产品。众多以客户为导向的解决方案,确保了埃芬IN系列开关是市场上最全面的产品系列之一。

如需要更多信息,请联系我们。

#### EFEN-IN NH Fuse-Switches – horizontal design

VDE0660 T107/IEC/EN 60947-3/GB14048.3

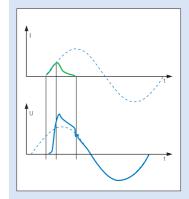
#### System

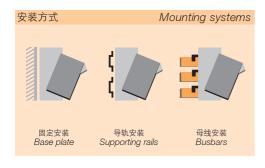
The NT-IN line of Fuse-Switches is the result of year-long experience and provides sophisticated technical solutions for all applications: The coordinated switching devices are available as an extensive and flexible system. Ease of installation has been a key requirement for the development of the system and its accessories. The system's appealing style enhances the appearance of a well-planned distribution system using EFEN products. The EFEN-IN line is nationally and internationally approved.

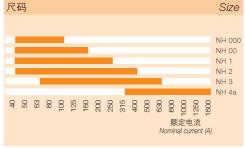
#### **Options**

母线安装

In addition to the standard sight windows for quick voltage checking, blown-fuse monitoring devices and switch-position indicators are available. A broad range of user-oriented solutions make EFEN-IN switching devices one of the most comprehensive product lines on the market. Please contact us for further information.

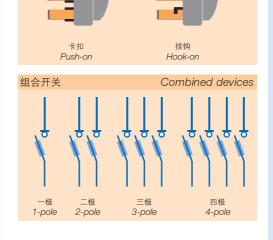






Busbar mounting





### **NSL**

### NH条形熔断器式负荷隔离开关

**符合**VDE 0660 T107/IEC/EN 60947-3 /GB14048.3

#### 产品

埃芬公司提供了应用于不同场合的4个系列的条 形熔断器式负荷隔离开关。

- IN系列条形熔断器式负荷隔离开关分为2种,1 种可以用于60mm中心距母线系统直接挂接,另一种可直接安装于100mm中心距的母线系统,配合转接板也可安装于185mm中心距的母线系统,统。
- 经过严格测试的NTSL产品系列,特别满足客户对配电系统中元器件高机械稳定性和耐热性的要求。
- 2000系列产品的尺码1型、2型、3型具有统一尺寸和现代时尚外观。同时具有改进后尺码00型。该系列产品接线空间特别宽裕。
- EKDEO系列为满足电力产品小型化应用需求 而特别研发。该系列产品结构紧凑,可以安装 于极为扁平的箱柜。

全系列产品均满足快速安装要求,并获得多项 国家和国际认证。

#### 服务

众多可选方案和以客户为导向的设计理念,确保 了埃芬条形开关是市场上最全面的产品系列之 一。我们将竭诚为各种应用提供最佳解决方案。

### Quality and Support

# NH Fuse-Switches – vertical design

VDE 0660 T107/IEC/EN 60947-3/GB14048.3

#### System

EFEN offers four product lines of vertical NH Fuse-Switches that have been developed for different purposes.

- The <u>IN Fuse-Switches vertical design</u> are available in two versions. One version allows the direct contacting on a 60 mm busbar system. The other version is designed for direct contacting on 100 mm and, using an adapter, 185 mm busbar systems.
- The proven <u>NTSL Product Line</u> is the right choice when extraordinary mechanical and thermal stability are required for highly demanding distribution systems.
- The <u>Product Line 2000</u> is characterized by completely unified dimensions in the sizes 1 to 3 and a modern design. It also includes a welladjustable size 00. The wiring connection spaces are especially generous.
- The <u>EKDEO Line</u> particularly meets the requirements of power utility applications. The low-profile devices allow installation even in cabinets with little depth.

All systems are designed for quick installation. SILAS devices are nationally and internationally approved.

#### Support

The many options and user-oriented versions make the EFEN NH Fuse-Switches – vertical design one of the most comprehensive systems on the market. We will assist you in finding optimal solutions for any application.

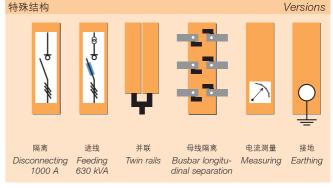


NTSL





供给 分配 保护 Supply, distribution 2000系列 IN Series 2000



	产品系列				Pr	oduct line
/s		00	1	2	3	4a
1	额定电流 Nominal current (A)	125/160	250	400	630	1250/1600
*	EKDEO			•		
	NTSL					•
t给 分配 保护 ply, distribution,	2000系列	•		•		
protection	IN					

NL

#### NH条形熔断器配电排

符合VDE 0636 T201/IEC 60269-2-1

#### 产品

埃芬提供2个系列的条形熔断器配电排产品,其外形和规格与相应的条形开关对应。

- 经过严格测试的NH条形熔断器配电排,尺码包括00至3。对于尺码1至3配有可选开闭附件。
- EDURO系列产品包括尺码1和2。为满足电力产品小型化应用需求特别设计。

#### 特点

系列产品和附件可以快速安装,并获得了多项 国家和国际认证。

#### NH Fuse-Rails

VDE 0636 T201/IEC 60269-2-1

#### System

EFEN offers two lines of NH Fuse-Rails whose style and dimensions match the corresponding fuse switches lines:

- The proven <u>NH-Fuse-Rails</u> in the sizes 00 to 3 with the optional "switching aid" for sizes 1 to 3.
- The <u>EDURO Line</u> comprises of sizes 1 and 2. It is especially designed to meet the requirements of power utility applications.

#### Benefits

产品系列

The systems and accessories allow for a quick device installation. SILAS devices are nationally and internationally approved.

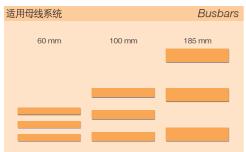
Product line

3

630

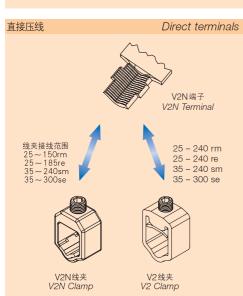
2

400



	00	1
额定电流 Nominal current (A)	125/160	25
NL		
EDURO		









### N

### Safety & Innovation by Tradition

#### NH低压高分断能力熔断器

**符合**VDE 0636 T201/IEC 60269-2-1 /GB13539

#### 产品

基于传统的核心竞争优势,埃芬提供技术先进的全系列NH低压高分断能力熔断器。不同电压等级的NH系列高分断能力熔断器获得多项国内和国际认证。时间电流特性曲线符合

VDE/IEC/GB等标准要求,例如: gG为电缆和线路保护,gTr为变压器保护,gR/aR为半导体器件保护。同时,埃芬提供的多种配件完善了该系列产品,例如:带有撞针指示、电池保护熔断器和特殊维修用限流熔断器。

#### 优点

针对任何实际应用, 埃芬产品均能提供各种解 决方案

#### 服务

埃芬的长期经验积累可为客户特殊需求提供解 决方案。

我们非常乐意为客户提供帮助。

#### NH Fuse-Links

VDE 0636 T201/IEC 60269-2-1/GB13539

#### System

Based on its traditional core competence EFEN offers a complete system of state-of-the-art NH Fuse-Links. The Fuse-Links are nationally and internationally certified for various nominal voltages. The characteristic curves comply with VDE/IEC requirements, e.g. for gG cable and line protection, for gTr transformer protection, for gR/aR semiconductor protection. A wide range of accessories and versions complements the system, e.g. for strikers, battery fuses and maintenance-work fuses with special current limitation.

#### **Benefits**

The EFEN product range offers a wide variety of solutions for virtually any application.

#### Support

EFEN looks back on a long history of providing solutions for very specific requirements. We will gladly assist you in planning your system.



### HH

#### HH高压高分断能力熔断器

符合IEC 60282-1 /VDE 0670 T4 /T402 /GB15166

#### 产品

经过严格测试的全范围熔断器和后备式熔断器,源自埃芬的核心竞争力之一,额定电压从3.0 kV至40.5 kV。所有产品已获得国家和国际多项认证。该系列熔断器可以为变压器、电容器、电机提供可靠保护,并可用于室内、户外和油浸式等场所。埃芬HH系列熔断器设计可在几毫秒内限流,从而截断电流正弦曲线的峰值。埃芬带功率损耗控制的ÜLA系列高压熔断器,确保了熔断器功耗在熔断室允许范围内。

#### 优点

埃芬能提供各种HH系列熔断器附件,根据一些特殊要求,还会提供其它规格和用途的熔断器 以及关于应用方面的专业支持和协助。

#### High Voltage Fuse-Links

IEC 60282-1 /VDE 0670 T4 /T402 /GB15166

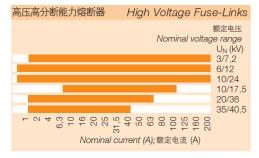
#### System

The proven range of general purpose and back-up Fuse-Links for nominal voltages from 3.0 kV to 40.5 kV is derived from the core competence of EFEN. All products are nationally and internationally approved. These Fuse-Links allow for reliable protection for transformers, condensers and motors and can be used for indoor, outdoor and oil-submerged applications. EFEN HH Fuse-Links are designed to limit currents within milliseconds, thus attenuating the peak value of the sine-shape current curve. The ÜLA product line controls the power dissipation of the fuse within the Fuse-Link compartments of control systems.

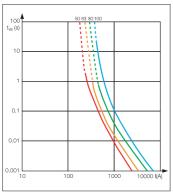
#### Benefits

EFEN offers a wide range of accessories for HH Fuse-Links, but also special product variants and qualified support in all matters concerning applications.











## NZ



#### NH附件

#### WITACC

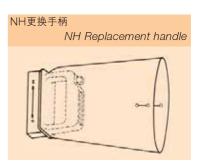
让工作更加简单:埃芬生产品种众多的熔断器 和熔断器开关的附件。

提供熔断器、熔断器开关的一站式服务,并可根据客户特殊需求订制。

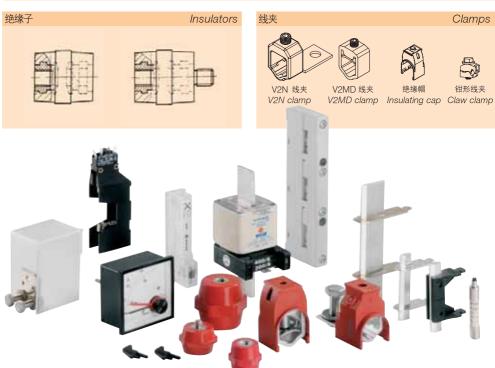
### **NH Accessories**

To make your work easier: EFEN offers a wide range of accessories for fuse links and fuse switches. As a one-stop source of fuse switches and fuse links as well as specific components, EFEN provides solutions for special requirements.

NH刀闸						ı	VH s	olid i	links
	00	0	1	2	3	3	3L	4	4a
额定电流 Nominal current (A)	160	160	250	400	630	1000	1000	1250	1600
金属搭扣连接								•	
Metal gripping-lugs									
绝缘搭扣连接									
Insulated gripping-lugs									



绝缘子							Ins	sulators
额定电压; Nominal current (kV)	1,0	1,0	1,0	1,5	1,5	2,0	2,0	2,0
长度; Length (mm)	25	30	35	40	45	50	60	70
M6		••	••	• •	••	•	•	
M8	••	••	• •	• •	• •	• •	• •	••
M10	•	••	••	• •	• •	• •	• •	••
M12						• •	••	••
M16							•	•
● 螺栓/螺母; Bold/threaded sleeve								
● 螺母; Threaded sleeve/Threaded sleeve	9							



### 全系列的测量装置



IN THE LINE OF POWER

### NW

### A full Range of Measuring Equipment

#### 低压电流互感器

符合VDE 0414 T44-1/IEC/EN 60044-1

#### 产品

埃芬生产电力系统中全系列各种尺寸的电流互感器: 带配线视窗的贯穿式电流互感器(可与NH条形开关和底座一起安装)、绕线式电流互感器和总和电流互感器。对条形开关来说, 电流互感器组合可以实现单极和三极测量。所有标定等级的系列高品质产品安装便捷, 即使该安装是需要装配含较多部件的整套系统。

#### 品质

埃芬系列产品可以达到0.2S的精度等级,根据其型号、精度及用于计算的互感器误差限值精度。

类型	
钳形电流互感器	30 - 5000 A
贯穿式电流互感器	50 - 600 A
绕线式电流互感器	1 - 200 A
总和电流互感器	2 - 10 回路
测量用电流互感器	75 - 5000 A
	Types
Clip-on transformer	30 - 5000 A
Tube-type transformer	50 - 600 A
Wound current transformer	1 - 200 A
Summation current transformer	2 - 10 circuits
Calibratable transformers	75 - 5000 A

Calibratable transformers	70 000071					
参数						
等级	1 - 0,2s					
用于电力应用						
用于16 2/3 Hz 或 400 Hz						
	Specifications					
Classes	1 - 0,2s					
Transformers for electronic applications						
Transformers for 16 2/3 Hz or 400 Hz						

#### Low Voltage Current Transformers

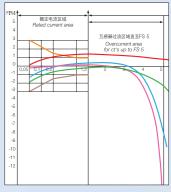
VDE 0414 T44-1/IEC/EN 60044-1

#### System

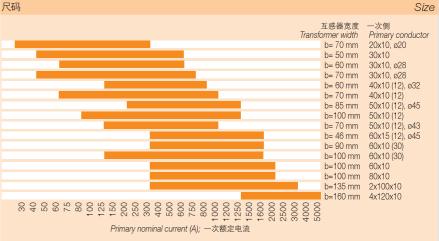
The EFEN system comprises complete ranges of transformers for power rails in all sizes, tubetype transformers with wiring window (also for installation behind NH Fuse-Switches – vertical design and NH Fuse-Rails), as well as wound and summary current transformers. For Fuse-Switches – vertical design, transformer sets and blocks for single and three-phase measurements are available. The range of high-quality devices in all rating classes facilitates even complex installations to be equipped with components of one single system.

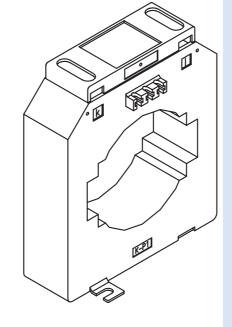
#### Quality

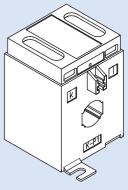
The EFEN system is characterized by accuracies of up to class 0.2s, depending on type, calibration or calibration suitability of the transformers for computing.





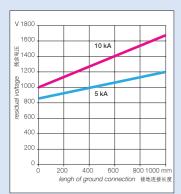






### 安全相伴

### NA





### Safety wherever needed

#### 低压避雷器

**符合**IEC 61643-1, ClassII /VDE 0675 T6-4

#### 产品

埃芬生产2个系列的用于供电架空线路的避雷器,额定放电电流从5KA到10KA。该装置使用金属氧化物电阻以及坚固耐用的防老化陶瓷外罩。该装置可在几毫微秒范围内动作,残留电压极低,确保了电涌保护的高安全性。通过指示装置可清晰识别被触发避雷器。

#### 产品范围

埃芬低压避雷器包括绝缘型和非绝缘型,用于 各种安装和接线方式。

### Low Voltage Surge Arrestors

IEC 61643-1, ClassII/VDE 0675 T6-4

#### System

EFEN offers two lines of surge arrestors with nominal discharge currents from 5 kA to 10 kA for overhead-line grids. The devices are equipped with metal-oxide varistors in robust and aging-resistant ceramic housings. The devices respond within nanoseconds and with low residual voltages. This ensures a high level of surge protection. Triggered surge arrestors are easily identified by the catch cable.

#### Product range

EFEN surge arrestors are available as insulated and uninsulated versions for various mounting types and terminals.

类型				Versions
		电压; Voltage	280 V	500 V
额定放电电	流; Nominal discharge current			
5 kA	绝缘外罩; insulated		•	•
	不锈钢外罩; Stainless-steel housing		•	•
10 kA	绝缘外罩; insulated		•	•
	不锈钢外罩; Stainless-steel housing			•





### LT/LU

#### 负荷断路开关/转换开关

符合VDE 0660 T107/IEC/EN 60947-3

#### 产品

该系列产品来自于2003年并购的佩特雷茵 (Peterrein)公司,随后由埃芬成功地进行发展。 该系列开关功能完善并有多个尺寸和规格可供 选择。例如:具有按照DIN和BS标准设计的低 压熔断器负荷断路开关。

多种规格的FMU负荷断路开关包括3极、4极以及带有双重机械装置的旁路结构,即可以同时操作6极或8极。

如有其它特殊要求,请和我们联系。

#### 特点

该系列开关具有众多显著优点,如耐用设计,可广泛用于建筑配电、输电网络、后备电源系统、铁路以及公用供电、通信、广播系统、医院、机场和运输机构等。

# Load Break Switches / Changeover Switches

VDE 0660 T107/IEC/EN 60947-3

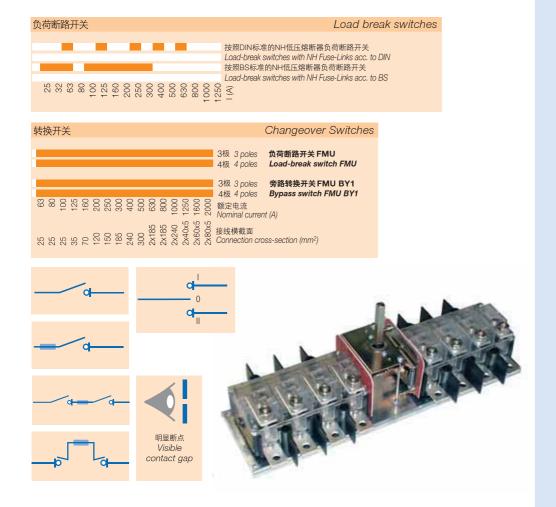
#### System

This product range was taken over from Peterreins in 2003 and has been successfully continued by EFEN. The switching devices feature a superb functionality and are available in many sizes and versions. For example, there are load-break switch versions for NH Fuse-Links acc. to DIN standard and also for NH Fuse-Links acc. to BS standard. The wide range of FMU load-break switches includes 3- and 4-pole versions as well as bypass versions with dual switch mechanisms, i.e. 6 or 8 poles that are switched simultaneously. Please ask for special versions.

#### **Properties**

The devices have important system benefits, are of a rugged design and are frequently used for construction site power distribution, grid and back-up feed systems, railroad and utility applications, telecommunication and broadcasting systems, hospitals, airports and transport providers.





### New Technologies for confined Spaces

#### NH熔断器开关 直流应用

#### 创新

埃芬-TPS熔断器式负荷隔离开关特别为直流 DC80V配电系统而研发,具备众多显著优点。 特别设计的直流熔断器具备极高的通流容量, 从而外形紧凑。用于配电系统可节约空间和成 本。全系列产品中,均可选配熔断监控、开关

位置指示、熔断器底座和 配电模块。



TPS系列隔离开关用于直流配电系统,例如通信电源供给系统。敬请联系我们,我们将根据您的需要提供支持和服务,选择合适装置及保护系统。



### DC **直流应用系列产品**

符合VDE 0660 T107/IEC/EN 60 947/3

#### 产品

对于不间断电源供给系统,埃芬提供全系列紧凑型单极负荷隔离开关,特别设计用于550V直流操作电压。该系列负荷隔离开关适用于电池保护及其回路,如用于维修保养时,控制电路的连接和断开。客户可以选配熔断监控,开关位置指示等多种附件。

#### 服务

电池供电系统的短路保护必须精确的考虑其特 性和要求。

正确选择埃芬熔断器将为电池供电系统带来可 靠、安全的保护。

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# NH Fuse-Switches for DC Applications

#### Innovation

The EFEN-TPS Fuse-Switches are developed particularly for power systems of up to 80 Volt DC and have significant benefits. Their special DC Fuse-Links have a very high energy density which results in a compact design. This saves space and cost when installing power distribution systems. Signal monitoring devices with switch-position indicators, fuse bases and distributor modules are available for the complete product range.

#### Support

TPS disconnectors are used to protect DC distribution system, e.g. in telecommunications power-supply systems. Please contact EFEN for support in selecting the right devices and protection systems for your needs.

尺码				Size
	00/250	00/600	2/1200	2/1600
I (A)	250	600	1200	1600
H (mm)	200	224	304	304
B (mm)	50	50	100	100
T (mm)	125	125	184	184
固定安装		Ва	se-plate r	nounting
	•	•		•
母线安装				
			Busbar r	mounting
		•	•	

#### **DC Products**

VDE 0660 T107/IEC/EN 60 947/3

#### System

For uninterruptible power supplies, EFEN offers a complete range of single-pole compact load break switches which are specifically designed for 550 Volt DC operating voltage. The Load Break Switches are used to protect batteries and battery-supplied circuits, they define the interface and discon nect the system e.g. for service purposes. Fuse-monitoring devices, signaling devices and a multitude of accessories are available.

#### Support

The short-circuit disconnection of a battery system must be precisely tuned to its capacity and service concept. Battery-Fuses selected in coordination with EFEN ensure reliable protection.





Notes;	备忘录:		
	Notes:		

