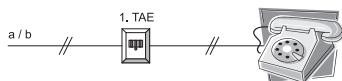


Surge protection for TAE telecommunications interfaces

Surge protection for analogue connections



Besides the use of standard telephones, an analogue installation can also be used to transmit data services like fault signalling systems and Internet. The fact that besides telephones other devices like fax machines and modems are also connected to the analogue line means that the hazards due to transient interference phenomena like surges are on the increase.

TAE surge protection for analogue lines is necessary to achieve protection against these surges. The basic version of the surface-mounted TAE-NFN socket has two-stage surge protection provided by a gas discharge tube and fast-acting suppression diodes.

The gas discharge tube achieves a high energy discharge; the suppression diodes ensure a low residual voltage. This setup protects the end terminals. Other TAE surge protection sockets with monitoring functions are also available.

These monitor the connection of the voice voltage/operating voltage. As soon as this is interrupted or short-circuited, the output is switched to high resistance. This signal can be evaluated via a PLC input. A visual indication (green LED) instead of the remote signalling can be selected as an option.

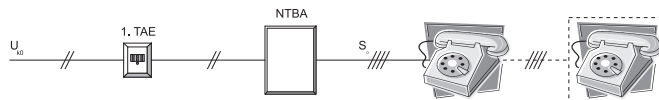
Installation instructions

The incoming telephone line must be connected with the right polarity La (-) / Lb (+). The connection of the operating voltage for the U_{k0} interface is monitored (transistor output is enabled). As soon as this is interrupted or short-circuited, the output is switched to high resistance. This signalling voltage of the TAE SP ISDN FM can be evaluated via a PLC input.

On the TAE SP ISDN LED model an LED indicates the operating status.

Surge protection for ISDN connections

Telephone connections at the U_{k0}/So interface



Digital signalling enables more intensive use of larger volumes of data and higher demands to be placed on communications.

The desire to communicate via several lines calls for the installation of a digital system. Such systems make use of special modems as well as ISDN telephones. This considerably increases the risk of transient interference such as surges.

The TAE surge protection for ISDN lines can be installed to protect against these surges.

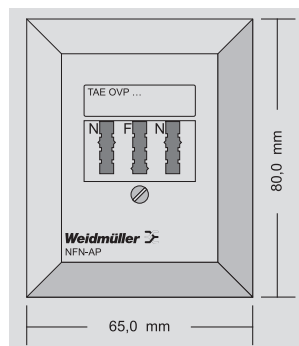
The basic version of the surface-mounted TAE-NFN socket has two-stage surge protection provided by a gas discharge tube and fast-acting suppression diodes.

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Other TAE surge protection sockets with monitoring functions are also available.

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Drawing with dimensions:



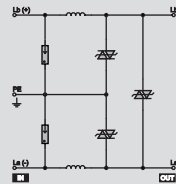
Overvoltage protection for data interface

For telecommunication interface

Overvoltage protection for telecommunication interfaces

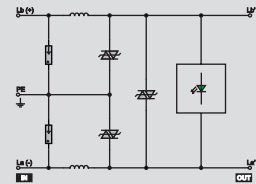
TAE ovp analog

TAE ovp analog



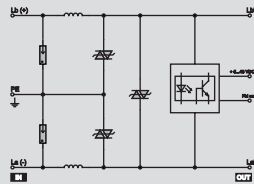
TAE ovp analog LED

TAE ovp analog LED



TAE ovp analog FM

TAE ovp analog FM



Technical data

Technical specification

Rated voltage U_n (AC)
 Operating voltage U_c (ac), max.
 Operating current, I_{max}
 Leakage current, max. (8/20 μ s)
 Response time
 On output side sym., at Input 8/20 μ s, typical
 On output side usym., Input 8/20 μ s, typical
 Optical function indicator
 Pollution severity
 Overvoltage category
 Oper. temp. min./Oper. temp. max.
 Stor. temp. min./Storage temp., max.

General data

Input voltage max.
 Norm Signal
 Rated leakage current (8/20 μ s)
 Total current
 Response time, type
 Resistance per path
 Cut-off frequency f_g , 600 M-System
 Transistor output, positive-switching
 Residual voltage at output at input pulse of 1 kV/ μ s
 Residual voltage at output at 8/20 μ s and input pulse of 5kA

Dimensions

Clamping range (rating- / min. / max.) mm²
 Length x width x height mm

Information

Ordering data

Version

Information

Accessories

Information

Rated voltage U_n (AC)	190V
Operating voltage U_c (ac), max.	190V
Operating current, I_{max}	0.45A
Leakage current, max. (8/20 μ s)	10kA
Response time	<= 5 ns
On output side sym., at Input 8/20 μ s, typical	100V @5kA
On output side usym., Input 8/20 μ s, typical	100V @5kA
Optical function indicator	
Pollution severity	2
Overvoltage category	III
Oper. temp. min./Oper. temp. max.	0°C/60°C
Stor. temp. min./Storage temp., max.	-25°C/85°C
Input voltage max.	190V
Norm Signal	analog telephone signal Uko
Rated leakage current (8/20 μ s)	4 kA
Total current	10kA 8/20 μ s
Response time, type	< 5ns
Resistance per path	1.1 Ω
Cut-off frequency f_g , 600 M-System	2.0Mhz
Transistor output, positive-switching	
Residual voltage at output at input pulse of 1 kV/ μ s	a/b < 270V
Residual voltage at output at 8/20 μ s and input pulse of 5kA	a-b/PE < 270V a-b/PE < 100V a-b/PE < 100V

Clamp. yoke connection

0.80 / 0.50 / 1.50
 30 x 65.0 x 80

AP Housing NFN

Type	(Qty.=1)	Order No.
TAE OVP analog		8673980000

Rated voltage U_n (AC)	190V
Operating voltage U_c (ac), max.	190V
Operating current, I_{max}	0.45A
Leakage current, max. (8/20 μ s)	10kA
Response time	<= 5 ns
On output side sym., at Input 8/20 μ s, typical	100V @5kA
On output side usym., Input 8/20 μ s, typical	100V @5kA
Optical function indicator	LED
Pollution severity	2
Overvoltage category	III
Oper. temp. min./Oper. temp. max.	0°C/60°C
Stor. temp. min./Storage temp., max.	-25°C/85°C
Input voltage max.	190V
Norm Signal	analog telephone signal Uko
Rated leakage current (8/20 μ s)	4 kA
Total current	10kA 8/20 μ s
Response time, type	< 5ns
Resistance per path	1.1 Ω
Cut-off frequency f_g , 600 M-System	2.0Mhz
Transistor output, positive-switching	
Residual voltage at output at input pulse of 1 kV/ μ s	a/b < 270V
Residual voltage at output at 8/20 μ s and input pulse of 5kA	a-b/PE < 270V a-b/PE < 100V a-b/PE < 100V

Clamp. yoke connection

0.80 / 0.50 / 1.50
 30 x 65.0 x 80

AP Housing NFN

Type	(Qty.=1)	Order No.
TAE OVP analog LED		8674020000

Rated voltage U_n (AC)	190V
Operating voltage U_c (ac), max.	190V
Operating current, I_{max}	0.45A
Leakage current, max. (8/20 μ s)	10kA
Response time	<= 5 ns
On output side sym., at Input 8/20 μ s, typical	100V @5kA
On output side usym., Input 8/20 μ s, typical	100V @5kA
Optical function indicator	
Pollution severity	2
Overvoltage category	III
Oper. temp. min./Oper. temp. max.	0°C/60°C
Stor. temp. min./Storage temp., max.	-25°C/85°C
Input voltage max.	190V
Norm Signal	analog telephone signal Uko
Rated leakage current (8/20 μ s)	4 kA
Total current	10kA 8/20 μ s
Response time, type	< 5ns
Resistance per path	1.1 Ω
Cut-off frequency f_g , 600 M-System	2.0Mhz
Transistor output, positive-switching	5...48V/0.1A
Residual voltage at output at input pulse of 1 kV/ μ s	a/b < 270V
Residual voltage at output at 8/20 μ s and input pulse of 5kA	a-b/PE < 270V a-b/PE < 100V a-b/PE < 100V

Clamp. yoke connection

0.80 / 0.50 / 1.50
 30 x 65.0 x 80

AP Housing NFN

Type	(Qty.=1)	Order No.
TAE OVP analog FM		8649910000

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 Delivery times see page X.2

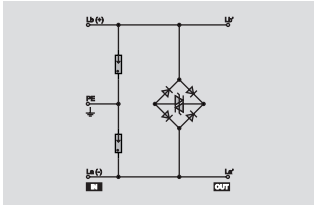
Overvoltage protection for data interface

For telecommunication interface

Overvoltage protection for telecommunication interfaces

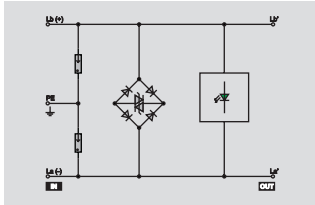
TAE ovp ISDN

TAE ovp ISDN



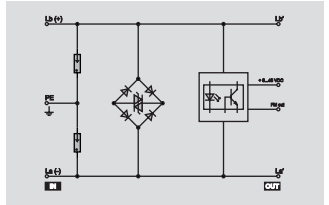
TAE ovp ISDN LED

TAE ovp ISDN LED



TAE ovp ISDN FM

TAE ovp ISDN FM



Technical data

Technical specification

Rated voltage U_n (AC)
 Operating voltage U_c (ac), max.
 Operating current, I_{max}
 Leakage current, max. (8/20 μ s)
 Response time
 On output side sym., at Input 8/20 μ s, typical
 On output side asym., Input 8/20 μ s, typical
 Optical function indicator
 Pollution severity
 Overvoltage category
 Oper. temp. min./Oper. temp. max.
 Stor. temp. min./Storage temp., max.

190V
 190V
 0.45A
 10kA
 <= 5 ns
 100V @5kA
 100V @5kA

0.45A
 10kA
 <= 5 ns
 100V @5kA
 100V @5kA
 LED green
 2
 III
 0°C/60°C
 -25°C/85°C

0.45A
 10kA
 <= 5 ns
 100V @5kA
 100V @5kA

General data

Input voltage max.
 Norm Signal
 Rated leakage current (8/20 μ s)
 Total current
 Response time, type
 Resistance per path
 Cut-off frequency f_g , 600 M-System
 Transistor output, positive-switching
 Residual voltage at output at input pulse of 1 kV/ μ s
 Residual voltage at output at 8/20 μ s and input pulse of 5kA

190V
 ISDN telephone signal Uko interface
 4 kA
 10kA 8/20 μ s
 < 5ns
 1.1 Ω
 80.0Mhz
 a/b < 270V
 a-b/PE < 270V
 a-b/PE < 100V
 a-b/PE < 100V

190V
 ISDN telephone signals Uko interface
 4 kA
 10kA 8/20 μ s
 < 5ns
 1.1 Ω
 2.0Mhz
 a/b < 270V
 a-b/PE < 270V
 a-b/PE < 100V
 a-b/PE < 100V

190V
 ISDN telephone signals Uko interface
 4 kA
 10kA 8/20 μ s
 < 5ns
 1.1 Ω
 2.0Mhz
 5...48Vdc/ 0.1A
 a/b < 270V
 a-b/PE < 270V
 a-b/PE < 100V
 a-b/PE < 100V

Dimensions

Clamping range (rating- / min. / max.) mm²
 Length x width x height mm

Clamp. yoke connection

0.80 / 0.50 / 1.50
 30 x 65.0 x 80

Clamp. yoke connection

0.80 / 0.50 / 1.50
 30 x 65.0 x 80

Clamp. yoke connection

0.80 / 0.50 / 1.50
 30 x 65.0 x 80

Information

AP Housing NFN

AP Housing NFN

AP Housing NFN

Ordering data

Version

Type	(Qty.=1)	Order No.
TAE OVP ISDN		8674000000

Type	(Qty.=1)	Order No.
TAE OVP ISDN LED		8674010000

Type	(Qty.=1)	Order No.
TAE OVP ISDN FM		8673970000

Information

Accessories

Information

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 Delivery times see page X.2