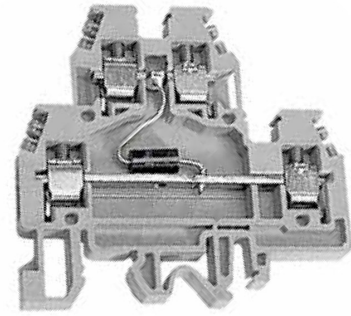


## With electronic components

- with cross-connection possibility
- universal mounting onto both PR/DIN and PR/3 type rails - according to IEC 60715 standard
- two and three level circuits with bidirectional suppressor diode
- protection against overvoltage, transistor, pulse jamming
- class D protection according to standard DIN VDE 0675. 1989
- overvoltage category <1.5 kV, I (DIN VDE 0110.1)
- available in grey and beige



The **DAS.4...D** terminal blocks with suppressor diodes inserted as in **diagram 3**, limit voltage peaks due to surges, electrostatic discharges and switching of inductive loads, and enable the equipment to pass the tests on immunity to electromagnetic interferences defined by the EN 61000-4-2 (Electrostatic discharge), EN 61000-4-4 (Fast Transient/Burst) and EN 61000-4-5 (Surge Test) Standards. The suppressor diodes have an intervention time (<1 ns) much faster than the intervention time of varistors (approximately 25 ns) and a lower and more precise intervention voltage, but compared to these withstand lower discharge currents.

The great precision of the intervention voltage and the great speed, makes them suitable for protecting industrial PLC, DCS, PC I/O signal ports, against voltage interferences and discharge currents lower than 500A impulse 8/20µs. This type of interference is usually caused by the normal operation of the plants themselves, owing to the switching of strong inductive loads, dispersed currents, faults, etc...

The range of models available makes it possible to choose between nominal voltages suitable for protecting signals with standard voltages of 5Vdc, 12Vdc, 24Vdc and 60Vdc. The **DAS.4...D** connected as in **diagram 4** is an effective protection against differential mode interferences for industrial PLC, DCS, PC inputs and outputs, signal conditioners and sensors, and also for stabilised direct current power supplies of electronic equipment in general.

The **DAS.4...D** does not have a signal wiring direction to be observed, as also the connection of the positive and negative polarities can be made either on the lower or the upper level.

**Differential mode interference (diagram 5):** these generate a great difference of potential between the two conductors of a signal (positive and negative of the twisted pair) or of a power supply, and as they are applied directly to the input/output circuits of the device, they always cause a fault in the same.

**Common mode interference (diagram 6):** these generate a great difference of potential between the two signal or power supply conductors and the reference earth. They are less destructive than differential mode interferences.

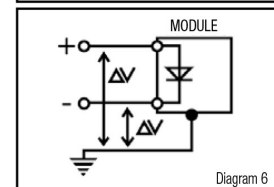
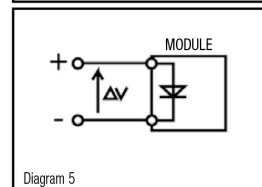
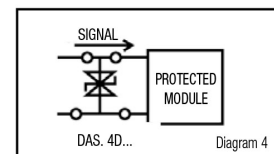
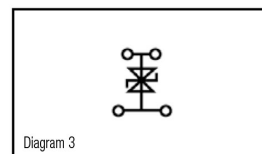
**Caution:** inserting surge protection devices with varistors, diodes and other components between the signal and/or power supply conductors and the protection earth reduces the insulation voltage approximately to the V breakdown value of the discharger used; to perform insulation tests on the equipment, disconnect the dischargers (IEC EN 60950 Standard).

grey version	
beige version	
ACCESSORIES	
End sections	grey beige blue
Permanent cross connection (pre-assembled)	
Switchable cross connection	
Multiple common bar	250 mm
Shunting screw and sleeve	
Coloured partition	red, green, white
Cross connection barrier	red
Test plug socket	
Test plug	
Modular test plug	
End section for modular test plug	
Numbering strip	
Warning plate	on adjacent terminal blocks
Cover for cross-connections	red, blue or white
Marking tag	printed or blank
End bracket	

DAS.4/6/D.../GR	
DAS.4/6/D...	
Type	Cat. No.
DAS/PT/GR	DS101GR
DAS/PT	DS101
-	-
PM/41/2 poles	PM412
PM/51/3 poles	PM513
PM/51/5 poles	PM515
PM/51/10 poles	PM510
POS/43	POS43
PMP/58	PMP58
CPM/01	CPM01
DFU/7	DU07..
-	-
PSD/A	PD001
SDD/1	DD001
-	-
CNU/8/61	NU0861
-	-
PRP/5	PRP05
CNU/8/51	NU0851
BTU for PR/DIN and PR/3	BT005
BT/DIN/PO for PR/DIN only	BT001
BT/3-BTO for PR/3 only	BT003-BT007

**Note for wiring:** wiring of the power surge protection devices greatly influences their actual efficacy and we recommend following the instructions below:

- the protection device must be placed as close as possible to the equipment to be protected;
- the connection wires must be as short and straight as possible, interwoven with each other and with the largest possible cross section;
- the earth conductors between common mode dischargers and the equipotential busbar must be as short as possible and with the largest possible cross section and their path must not be parallel to other conductors. The earth of the protected equipment must be connected to the same earth of its discharger and from there to the general protection earthing.

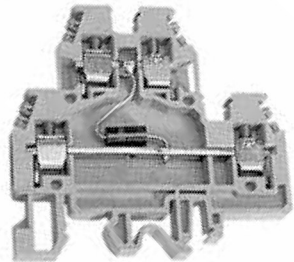


Differential mode interference.  
The potential difference is applied between positive and negative poles of the power supply signal.

Common mode interference.  
The potential difference is applied between the poles of the signal/power supply unit and the earth.

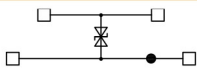
## With electronic components

- with cross-connection possibility on lower level
- universal mounting for both PR/DIN and PR/3 rails which meet IEC 60715 norms, "G32" and TH/35 types
- two and three level circuits with bidirectional suppressor diode
- protection against overvoltage, transistor, pulse jamming
- class D protection according to standard DIN VDE 0675
- overvoltage category <1.5 kV, I (DIN VDE 0110.1)
- available in grey and beige



(\*) values referred to the characteristics of the connection  
The **/GR** tag indicates the grey version.

<b>grey version</b>	<b>DAS.4/D.../GR</b>
<b>beige version</b>	<b>DAS.4/D...</b>
<b>TECHNICAL CHARACTERISTICS</b>	
function/type	diagram
rated cross-section (mm <sup>2</sup> )	4
connecting capacity	
flexible (mm <sup>2</sup> )	0.2-6
rigid (mm <sup>2</sup> )	0.2-6
max. flexible with ferrule (mm <sup>2</sup> ) - ferrule type	4-WP40/16
rated voltage / rated current / gauge conf. to IEC 60947-7-1	630 V / 32 A / A4 (*)
rated voltage / rated current / AWG / tightening torque value UL	-
rated impulse withstand voltage / pollution degree	8 KV / 3
insulation stripping length (mm)	9
tightening torque value (test / max) (Nm)	0.5 / 1.2
height / width / thickness  TH/35 7.5 mm	62 / 64 / 6
height / width / thickness  TH/35 15 mm	70 / 64 / 6
height / width / thickness  G32	66 / 64 / 6



### APPROVALS



<b>TECHNICAL DATA</b>	<b>DAS.4/D5/GR</b>	<b>DAS.4/D12/GR</b>	<b>DAS.4/D24/GR</b>	<b>DAS.4/D60/GR</b>
	<b>DAS.4/D5</b>	<b>DAS.4/D12</b>	<b>DAS.4/D24</b>	<b>DAS.4/D60</b>
	Cat. No. <b>DSD005GR</b>	Cat. No. <b>DSD012GR</b>	Cat. No. <b>DSD024GR</b>	Cat. No. <b>DSD060GR</b>
	Cat. No. <b>DSD005</b>	Cat. No. <b>DSD012</b>	Cat. No. <b>DSD024</b>	Cat. No. <b>DSD060</b>
Rated voltage	5	12	24	60
Vdc max. (Vcc)	6.45	15.2	28.5	77.9
Vac max.	-	-	-	-
Breakdown voltage(1 mA)	6.8 V ± 5%	16 V ± 5%	30 V ± 5%	82 V ± 5%
Max clamping voltage (V)	11	23	41	113
Response time	< 1 ns	< 1 ns	< 1 ns	< 1 ns
ISC pulse /20 μs (A)	750	350	160	70
C (1 kHz)	5 nF	3 nF	1.5 nF	0.6 nF