

## HDSP 3WS/24

- The 3WS/24 module can be used to protect DC three-wire analog or switching sensors (e.g. 0-20 mA, 4-20 mA, 0-10 V, NPN, PNP) and the input of a connected evaluating device.
- Two-stage surge protection.
- They are installed prior to the protected equipment and at the interface of LPZs 1 – 2 and higher.
- They increase the EMC level of the connected equipment against switching and atmospheric transients.
- They provide cable shield protection by limiting pulse overvoltage through a built-in 90 V gas discharge tube.

Type		HDSP 3WS/24
Testing category according to IEC 61643-21:2000 and EN 61643-21:2001		C2, C3, B3
Number of pairs		1
Connector type		Screw terminals
Rated operating voltage DC of line X1-5, X3-5, X1-3	$U_N$	0 ÷ 24 V
Maximum continuous operating voltage DC of line X1-5, X3-5, X1-3	$U_C$	30 V
Maximum continuous operating voltage DC X5-9, X7-9	$U_C$	70 V
Rated load current of line X1-2, X3-4	$I_L$	0.5 A
C2 Nominal discharge current (8/20)	$I_n$	5 kA
C2 Voltage protection level X2-6, X4-6 at $+I_n$	$U_p$	< 56 V
C2 Voltage protection level X2-6, X4-6 at $-I_n$	$U_p$	> -10 V
C2 Voltage protection level X2-4 at $I_n$	$U_p$	< 63 V
C3 Voltage protection level X2-6, X4-6 at +1 kV/ $\mu$ s	$U_p$	< 40 V
C3 Voltage protection level X2-6, X4-6 at -1 kV/ $\mu$ s	$U_p$	> -1 V
C3 Voltage protection level X2-4 at 1 kV/ $\mu$ s	$U_p$	< 40 V
B3 Voltage protection level X8-10 at 100 V/ $\mu$ s	$U_p$	< 550 V
C3 Voltage protection level X8-10 at 1 kV/ $\mu$ s	$U_p$	< 700 V
Serial resistance of line X1-2, X3-4	R	1.6 $\Omega$
Capacitance X2-4 at 0 V	C	390 pF
Lightning protection zone		LPZ 1-2, LPZ 2-3
Housing material		Polyamid PA6, UL94 V-0
Degree of protection		IP20
Operating temperature	$\theta$	-40 ÷ 70 °C
Clamp fastening range (solid conductor)		0.2 ÷ 4 mm <sup>2</sup>
Tightening moment		0,5 Nm
Installation		On DIN rail 35 mm
Operating position		Any
Remote signalling		No
Modular design		No

## Designed according to standards

Requirements and test methods for SPDs connected to telecommunications and signalling networks		IEC 61643-21:2000
Safety of Flammability of Plastic Materials		UL 94

## Application standards

Protection against lightning		IEC 62305:2010
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## Ordering, packaging and additional data

Mass	m	68 g
Mass (including the packaging)	m	85 g
Packaging dimensions (H x W x D)		52 x 108 x 83 mm
Packaging value	V	0.47 dm <sup>3</sup>
ETIM group		EG000021
ETIM class		EC000943
Customs tariff no.		85363010
EAN code		8590681185759
<b>Art. number</b>		<b>56 051</b>

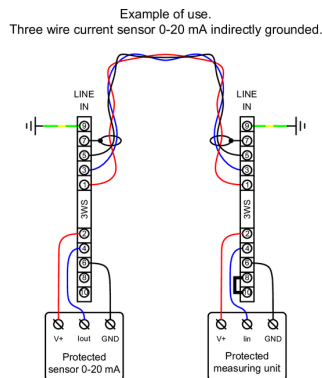


The link in the QR code leads to the online presentation of the **HDSP 3WS/24**. There, in addition to the always up-to-date data sheet, you will also find all diagrams and drawings, declarations of conformity, or 2D or 3D models and other necessary materials. For more information, visit [www.hakel.com](http://www.hakel.com)



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## Application wiring diagram (installation)



## Internal diagram

