



## HL120

- Voltage limiting device class 2.2 for AC or DC traction systems public transportation as are tram or trolleybus systems.
- Intended for the protection of non-live parts of metal structures.
- Ensure the equipotential bonding between inactive parts, which are not conductively interconnected due to the operating conditions.
- Used for effective protection of persons who may get in touch with these parts in the event of a lightning strike or traction line failure.
- Installed directly on the protected construction structure with connection to the track.
- In the event of a fault by short-circuiting the structure with the track, a quick-release switch will react and interrupt the power supply of the traction line.
- Resistant to vandalism, acid rain and mechanical damage.

Type		HL120
Class of VLD according EN 50526-2		2.2
Type of VLD according EN 50122-1:2011		VLD-F, VLD-O
Maximum non-triggering AC voltage	$U_W$	60 V
Nominal triggering DC voltage	$U_{Tn}$	120 V
Short time withstand current DC (25 ms repeatable)	$I_W$	4.7 kA
Short time withstand current DC (100 ms unrepeatable)	$I_W$	20 kA
Rated current DC (60 min)	$I_r$	105 A
Lightning current impulse (8/20)	$I_{imp-n}$	40 kA
High charge impulse (10/350)	$I_{imp-hc}$	40 kA
Varistor voltage DC at 1 mA	$U_V$	180 V
Residual voltage at $I_{imp-n}$	$U_{res}$	$\leq 500$ V
Response time at lightning current impulse	$t_R$	$< 25$ ns
Response time of thyristor	$t_R$	$< 1.2$ ms
Operating temperature	$\vartheta$	$-40 \div 55$ °C
Altitude		Without limits
Tightening moment		16 Nm
Degree of protection		IP67
Installation		Using two M12 screws
Operating position		Vertical
Product placement environment		External

### Designed according to standards

Railway applications – Protective provisions against electric shock	EN 50122-1:2011
Railway applications – Fixed installations – D.C. surge arresters and voltage limiting devices	EN 50526-2:2014
Requirements and test methods for SPDs connected to low-voltage power systems	IEC 61643-11:2011
Surge arresters – Part 4: Metal-oxide surge arresters without gaps for a.c. systems	IEC 60099-4:2014

## Ordering, packaging and additional data

Mass	m	4.7 kg
Mass (including the packaging)	m	4.819 kg
Packaging dimensions (H x W x D)		122 x 214 x 133 mm
Packaging value	V	3.47 dm <sup>3</sup>
Customs tariff no.		85363010
EAN code		8590681102404
<b>Art. number</b>		<b>10 240</b>



The link in the QR code leads to the online presentation of the HL120. 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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## Internal diagram

