







## **KO - 5GN (F/M)**

- Designed for protection of equipment connected to an aerial system by means of coaxial cables.
- The products consist of gas discharge tube with high discharge ability, thanks to which ensure a reliable protection of the receiving and transmitting systems even against a lightning stroke nearby.
- Wide range or products, various connector types and transmission power grades.
- Recommended for use in the Lightning Protection Zones at the boundaries of LPZ 0 LPZ 1 and higher.

Testing category according to IEC 61643-21:2000 and EN 61643-21:2001         C1, C2, C3, D1           Connector type         N           C2 Nominal discharge current (8/20)         In         10 kA           C3 Voltage protection level at 1 kV/µs         Up         < 2 V           D1 Impulse discharge current (10/350)         Imp         5 kA           Maximum discharge current (8/20)         Imp         5 kA           Maximum discharge current (8/20)         Imp         5 kA           Max. transmission power capacity         20 kA           Frequency bandwidth         B         5 ÷ 5.4 GHz           Max. transmission power capacity         200 W           Insertion loss         < 0.2 dB           Characteristic impedance         50 Ω           Peturn loss         50 Ω           Characteristic impedance         9         -30 ÷ 70 °C           Degree of protection         IP65           Operating temperature         9         -30 ÷ 70 °C           Designed according to standards         IEC 61643-21:2000           Requirements and test methods for SPDs connected to telecommunications and signalling networks         IEC 61643-21:2000           Protection against lightning         IEC 62305:2010           Ordering, packaging and additional data         m	Туре		KO - 5GN (F/M)
C2 Nominal discharge current (8/20)         In         10 kA           C3 Voltage protection level at 1 kV/μs         Up         <2 V	Testing category according to IEC 61643-21:2000 and EN 61643-21:2001		C1, C2, C3, D1
C3 Voltage protection level at 1 kV/µs         U <sub>p</sub> < 2 V	Connector type		N
D1 Impulse discharge current (10/350)         Imp         5 kA           Maximum discharge current (8/20)         Imax         20 kA           Frequency bandwidth         B         5 ÷ 5.4 GHz           Max. transmission power capacity         B         5 ÷ 5.4 GHz           Max. transmission power capacity         200 W           Insertion loss         < 0.2 dB           Return loss         50 Ω           Characteristic impedance         50 Ω           Degree of protection         IP65           Operating temperature         9         -30 ÷ 70 °C           Designed according to standards         IEC 61643-21:2000           Requirements and test methods for SPDs connected to telecommunications and signalling networks         IEC 61643-21:2000           Application standards         IEC 61643-21:2000           Protection against lightning         IEC 62305:2010           Ordering, packaging and additional data         m         134 g           Mass (including the packaging)         m         148 g           Packaging dimensions (H x W x D)         45 x 102 x 74 mm           Packaging value         V         0.34 dm³           Customs tariff no.         859681550250	C2 Nominal discharge current (8/20)	I <sub>n</sub>	10 kA
Maximum discharge current (8/20)         I <sub>max</sub> 20 kA           Frequency bandwidth         B         5 ÷ 5.4 GHz           Max. transmission power capacity         200 W           Insertion loss         < 0.2 dB	C3 Voltage protection level at 1 kV/µs	$U_p$	< 2 V
Frequency bandwidth         B         5 ÷ 5.4 GHz           Max. transmission power capacity         200 W           Insertion loss         < 0.2 dB           Return loss         > 20 dB           Characteristic impedance         50 Ω           Degree of protection         IP65           Operating temperature         θ         -30 ÷ 70 °C           Designed according to standards           Requirements and test methods for SPDs connected to telecommunications and signalling networks         Application standards           Protection against lightning         IEC 61643-21:2000           Ordering, packaging and additional data           Mass         m         134 g           Mass (including the packaging)         m         148 g           Packaging dimensions (H x W x D)         45 x 102 x 74 mm           Packaging value         V         0.34 dm³           Customs tariff no.         859681550250	D1 Impulse discharge current (10/350)	$I_{imp}$	5 kA
Max. transmission power capacity         200 W           Insertion loss         < 0.2 dB	Maximum discharge current (8/20)	I <sub>max</sub>	20 kA
Insertion loss	Frequency bandwidth	В	5 ÷ 5.4 GHz
Return loss       > 20 dB         Characteristic impedance       50 Ω         Degree of protection       IP65         Operating temperature       \$ -30 ÷ 70 °C         Designed according to standards         Requirements and test methods for SPDs connected to telecommunications and signalling networks         Application standards         Protection against lightning       IEC 62305:2010         Ordering, packaging and additional data         Mass       m       134 g         Mass (including the packaging)       m       148 g         Packaging dimensions (H x W x D)       45 x 102 x 74 mm         Packaging value       V       0.34 dm³         Customs tariff no.       85363010         EAN code       8590681550250	Max. transmission power capacity		200 W
Characteristic impedance50 ΩDegree of protectionIP65Operating temperatureθ-30 ÷ 70 °CDesigned according to standardsRequirements and test methods for SPDs connected to telecommunications and signalling networksIEC 61643-21:2000Application standardsProtection against lightningIEC 62305:2010Ordering, packaging and additional dataMassm134 gMass (including the packaging)m148 gPackaging dimensions (H x W x D)45 x 102 x 74 mmPackaging valueV0.34 dm³Customs tariff no.85363010EAN code8590681550250	Insertion loss		< 0.2 dB
Degree of protection Operating temperature 9 -30 ÷ 70 °C  Designed according to standards Requirements and test methods for SPDs connected to telecommunications and signalling networks  Application standards Protection against lightning IEC 62305:2010  Ordering, packaging and additional data  Mass m 134 g  Mass (including the packaging) m 148 g  Packaging dimensions (H x W x D) Packaging value V 0.34 dm³  Customs tariff no. 85363010  EAN code	Return loss		> 20 dB
Operating temperature\$-30 ÷ 70 °CDesigned according to standardsRequirements and test methods for SPDs connected to telecommunications and signalling networksIEC 61643-21:2000Application standardsProtection against lightningIEC 62305:2010Ordering, packaging and additional dataMassm134 gMass (including the packaging)m148 gPackaging dimensions (H x W x D)45 x 102 x 74 mmPackaging valueV0.34 dm³Customs tariff no.85363010EAN code8590681550250	Characteristic impedance		50 Ω
Designed according to standards  Requirements and test methods for SPDs connected to telecommunications and signalling networks  Application standards  Protection against lightning  Ordering, packaging and additional data  Mass  Mass (including the packaging)  Packaging dimensions (H x W x D)  Packaging value  Customs tariff no.  EAN code  IEC 61643-21:2000  IEC 62305:2010  IEC 6	Degree of protection		IP65
Requirements and test methods for SPDs connected to telecommunications and signalling networks  Application standards  Protection against lightning  Ordering, packaging and additional data  Mass m 134 g  Mass (including the packaging) m 148 g  Packaging dimensions (H x W x D) 45 x 102 x 74 mm  Packaging value V 0.34 dm³  Customs tariff no. 8590681550250	Operating temperature	θ	-30 ÷ 70 °C
signalling networks  Application standards  Protection against lightning  Ordering, packaging and additional data  Mass  Mass m 134 g  Mass (including the packaging) m 148 g  Packaging dimensions (H x W x D) 45 x 102 x 74 mm  Packaging value  Customs tariff no.  EAN code  EAN code  EAS 363010	Designed according to standards		
Protection against lightning  Ordering, packaging and additional data  Mass  Mass (including the packaging)  Packaging dimensions (H x W x D)  Packaging value  Customs tariff no.  EAN code  IEC 62305:2010  m 134 g  m 148 g  45 x 102 x 74 mm  V 0.34 dm³  85363010  8590681550250	•		IEC 61643-21:2000
Ordering, packaging and additional data           Mass         m         134 g           Mass (including the packaging)         m         148 g           Packaging dimensions (H x W x D)         45 x 102 x 74 mm           Packaging value         V         0.34 dm³           Customs tariff no.         85363010           EAN code         8590681550250	Application standards		
Mass         m         134 g           Mass (including the packaging)         m         148 g           Packaging dimensions (H x W x D)         45 x 102 x 74 mm           Packaging value         V         0.34 dm³           Customs tariff no.         85363010           EAN code         8590681550250	Protection against lightning		IEC 62305:2010
Mass (including the packaging)       m       148 g         Packaging dimensions (H x W x D)       45 x 102 x 74 mm         Packaging value       V       0.34 dm³         Customs tariff no.       85363010         EAN code       8590681550250	Ordering, packaging and additional data		
Packaging dimensions (H x W x D)       45 x 102 x 74 mm         Packaging value       V       0.34 dm³         Customs tariff no.       85363010         EAN code       8590681550250	Mass	m	134 g
Packaging value         V         0.34 dm³           Customs tariff no.         85363010           EAN code         8590681550250	Mass (including the packaging)	m	148 g
Customs tariff no.       85363010         EAN code       8590681550250	Packaging dimensions (H x W x D)		45 x 102 x 74 mm
EAN code 8590681550250	Packaging value	V	0.34 dm <sup>3</sup>
	Customs tariff no.		85363010
Art. number 55 025	EAN code		8590681550250
	Art. number		55 025



**The link in the QR code** leads to the online presentation of the **KO - 5GN (F/M)**. 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** 



## **Coaxial high-frequency protection**

