

# SCHWARZBECK MESS - ELEKTRONIK

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## Helmholtz-Spulen HHS 5215 Helmholtz Coils HHS 5215



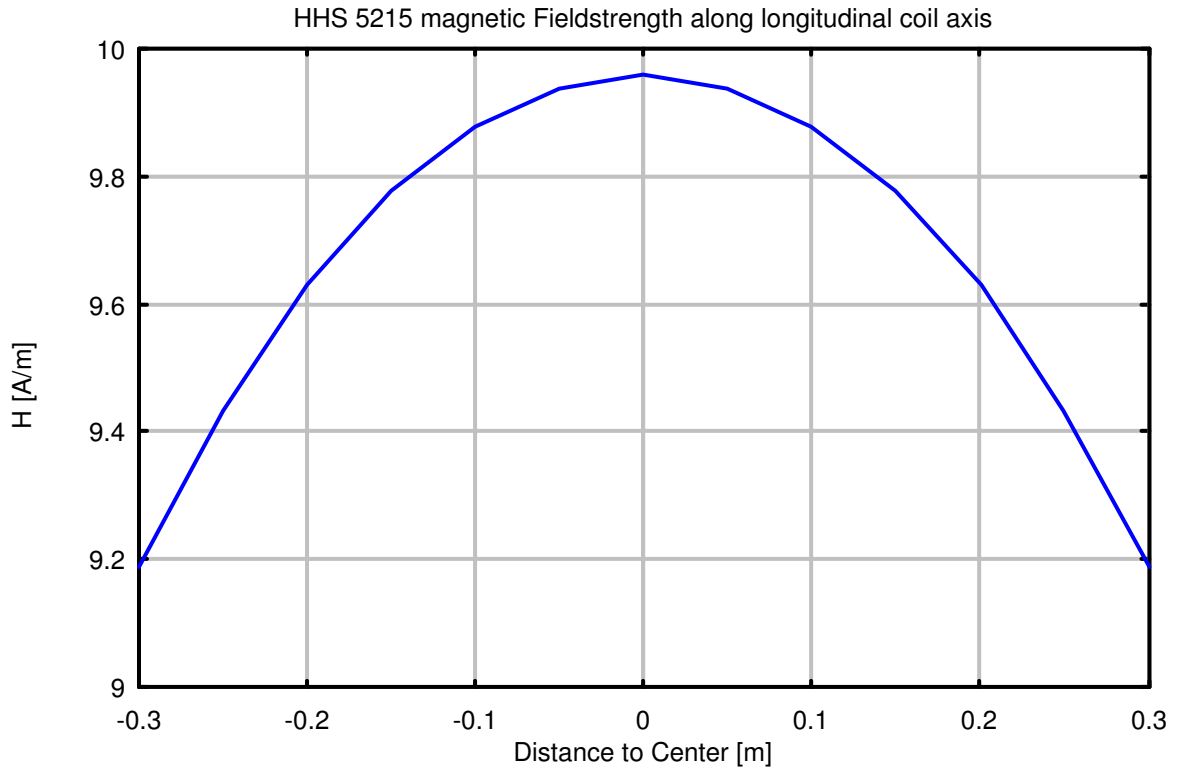
### Technische Daten:

Windungszahl (pro Spule):	10
Maximaler Spulenstrom:	20 A, 5 min.
Spulenstrom, nominell:	10 A continuos
Max. Magn. Feldstärke:	200 A/m, 5 min.
Magn. Nennfeldstärke:	100 A/m continuos
Magn. Feldstärke bei 1 A Spulenstrom:	9.96 A/m (Coil Dist. 0.6 m)
Erforderlicher Strom für 10 A/m:	1.004 A (Coil Dist. 0.6 m)
Abmessungen:	1.5 m x 1.5 m x 0.9 m
Max. Spulenabstand:	0.86 m
Spulenabstand gem. IEC 1000-4-8:	0.6 m
Spulenabstand für beste Feldhomogenität:	0.86 m
Nutzbarer Frequenzbereich:	0 - 100 kHz
Induktivität (pro Spule):	0.6 mH
Induktivität (Spulenpaar):	1.3 mH
Wirkwiderstand (pro Spule):	0.4 $\Omega$
Resonanzfrequenz (Spulenpaar):	> 400 kHz
Gewicht:	14 kg

### Specifications:

<i>Number of turns (per Coil):</i>
<i>Maximum Coil Current:</i>
<i>Nominal Coil Current:</i>
<i>Maximum Magnetic Field Strength:</i>
<i>Nominal Magnetic Field Strength:</i>
<i>Magnetic Fieldstrength, 1 A Coil Current:</i>
<i>Current required for 10 A/m:</i>
<i>Mechanical Dimensions:</i>
<i>Maximum Coil Separation:</i>
<i>Coil Separation acc. IEC 1000-4-8:</i>
<i>Coil Separation for best uniformity:</i>
<i>Usable Frequency Range:</i>
<i>Inductance (per Coil):</i>
<i>Inductance (Pair of Coils):</i>
<i>Resistance (per Coil):</i>
<i>Resonant Frequency (Pair of Coils):</i>
<i>Weight:</i>

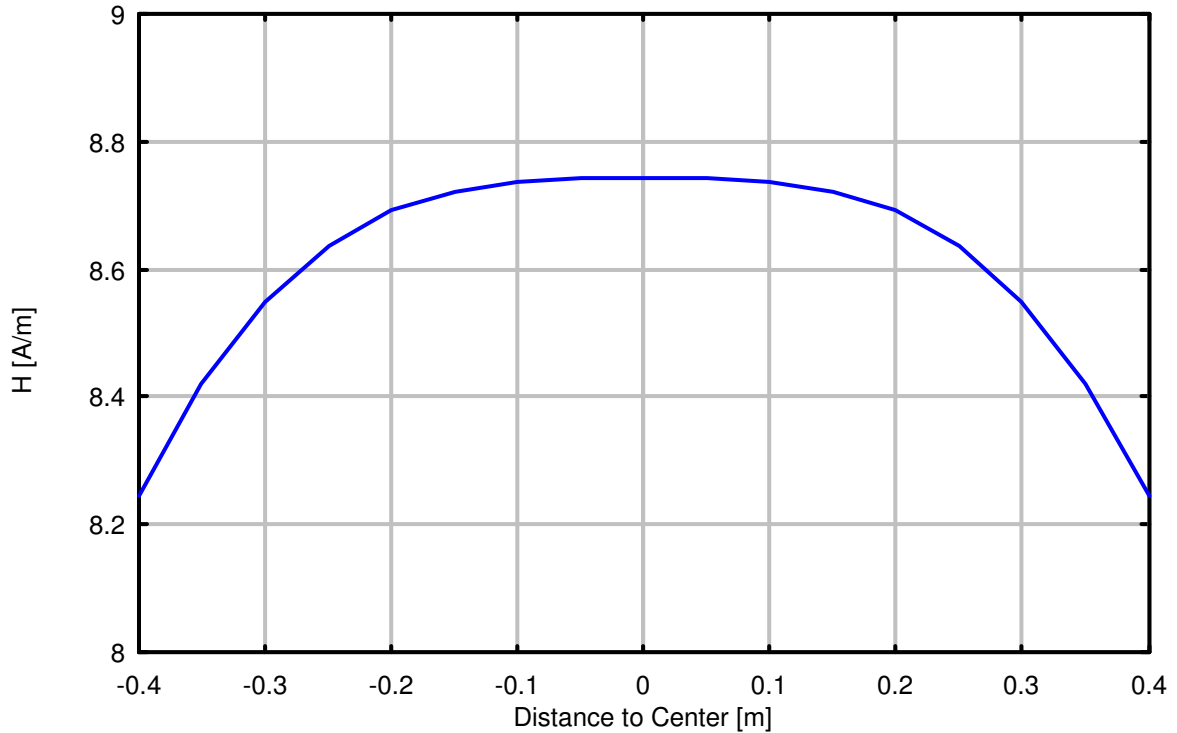
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HHS 5215 10 +10 Wdg. , Kantenlänge = 1.5 m, Spulenabstand <i>Coil Distance</i> 0.6 m, I = 1 Amp						
Längskomponente der magnetischen Feldstärke entlang der Spulenlängsachse						
<i>Magnet. Fieldstrength, longitudinal component along rotational axis</i>						
Abstand zur Spulenmitte	H1[A/m]	H2[A/m]	Hges[A/m]	H1[dBμA/m]	H2[dBμA/m]	Hges[dBμA/m]
Distance	H1[A/m]	H2[A/m]	Hges[A/m]	H1[dBμA/m]	H2[dBμA/m]	Hges[dBμA/m]
-0.30 (Center Coil 2)	3.1855	6.0021	9.1876	130.06	135.57	139.26
-0.25	3.4650	5.9689	9.4339	130.79	135.52	139.49
-0.20	3.7586	5.8712	9.6298	131.50	135.37	139.67
-0.15	4.0628	5.7144	9.7772	132.18	135.14	139.80
-0.10	4.3723	5.5066	9.8789	132.81	134.82	139.89
-0.05	4.6805	5.2578	9.9383	133.41	134.42	139.95
-0.00 (Center Plane)	4.9789	4.9789	9.9578	133.94	133.94	139.96
0.05	5.2578	4.6805	9.9383	134.42	133.41	139.95
0.10	5.5066	4.3723	9.8789	134.82	132.81	139.89
0.15	5.7144	4.0628	9.7772	135.14	132.18	139.80
0.20	5.8712	3.7586	9.6298	135.37	131.50	139.67
0.25	5.9689	3.4650	9.4339	135.52	130.79	139.49
0.30 (Center Coil 1)	6.0021	3.1855	9.1876	135.57	130.06	139.26
<b>Spulenabstand 0.6 m</b>						
<b><i>Coil Distance 0.6 m</i></b>						

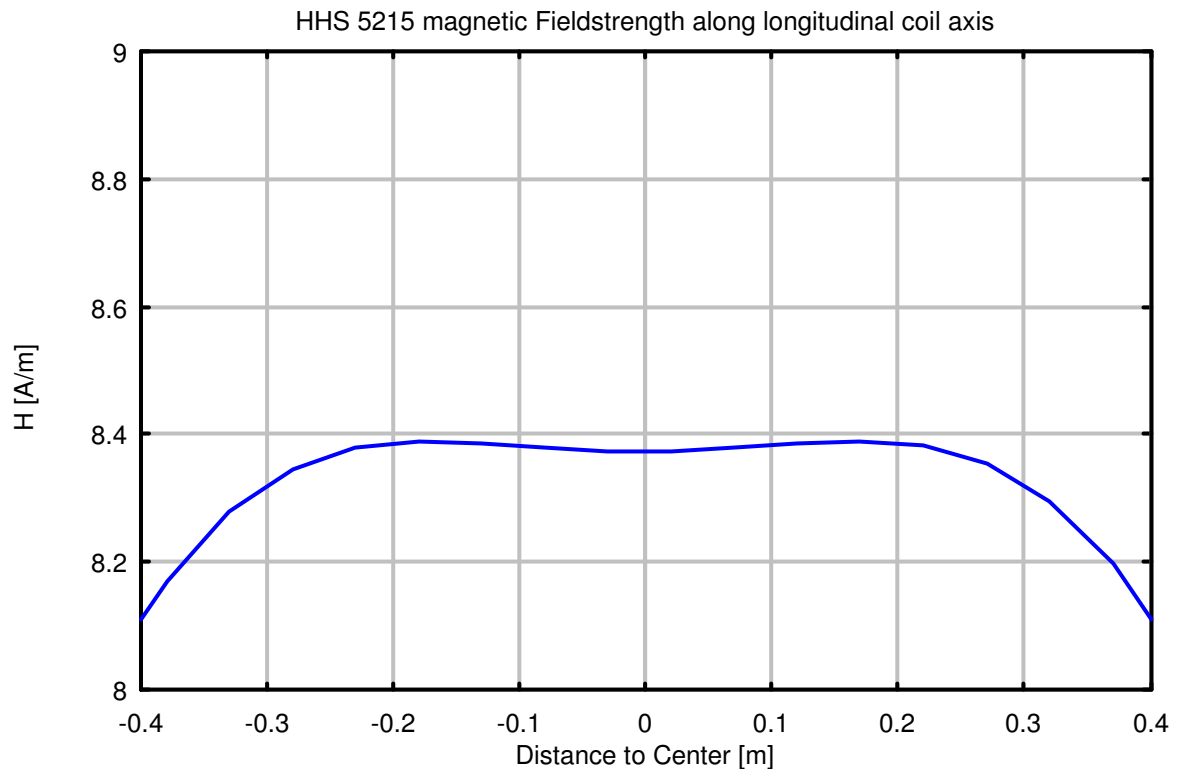
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HHS 5215 magnetic Fieldstrength along longitudinal coil axis



HHS 5215 10 +10 Wdg. , Kantenlänge = 1.5 m, Spulenabstand <i>Coil Distance</i> 0.8 m, I = 1 Amp						
Längskomponente der magnetischen Feldstärke entlang der Spulenlängsachse						
<i>Magnet. Fieldstrength, longitudinal component along rotational axis</i>						
Abstand zur Spulenmitte	H1[A/m]	H2[A/m]	Hges[A/m]	H1[dBµA/m]	H2[dBµA/m]	Hges[dBµA/m]
Distance	H1[A/m]	H2[A/m]	Hges[A/m]	H1[dBµA/m]	H2[dBµA/m]	Hges[dBµA/m]
-0.40 (Center Coil 2)	2.2415	6.0021	8.2436	127.01	135.57	138.32
-0.35	2.4504	5.9689	8.4193	127.78	135.52	138.51
-0.30	2.6773	5.8712	8.5485	128.55	135.37	138.64
-0.25	2.9225	5.7144	8.6369	129.32	135.14	138.73
-0.20	3.1855	5.5066	8.6921	130.06	134.82	138.78
-0.15	3.4650	5.2578	8.7228	130.79	134.42	138.81
-0.10	3.7586	4.9789	8.7375	131.50	133.94	138.83
-0.05	4.0628	4.6805	8.7433	132.18	133.41	138.83
0.00 (Center Plane)	4.3723	4.3723	8.7447	132.81	132.81	138.83
0.05	4.6805	4.0628	8.7433	133.41	132.18	138.83
0.10	4.9789	3.7586	8.7375	133.94	131.50	138.83
0.15	5.2578	3.4650	8.7228	134.42	130.79	138.81
0.20	5.5066	3.1855	8.6921	134.82	130.06	138.78
0.25	5.7144	2.9225	8.6369	135.14	129.32	138.73
0.30	5.8712	2.6773	8.5485	135.37	128.55	138.64
0.35	5.9689	2.4503	8.4193	135.52	127.78	138.51
0.40 (Center Coil 1)	6.0021	2.2415	8.2436	135.57	127.01	138.32
<b>Spulenabstand 0.8 m</b>						
<b><i>Coil Distance 0.8 m</i></b>						

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HHS 5215 10 +10 Wdg. , Kantenlänge = 1.5 m, Spulenabstand <i>Coil Distance</i> 0.86 m, I = 1 Amp						
Längskomponente der magnetischen Feldstärke entlang der Spulenlängsachse						
<i>Magnet. Fieldstrength, longitudinal component along rotational axis</i>						
Abstand zur Spulenmitte	H1[A/m]	H2[A/m]	Hges[A/m]	H1[dBμA/m]	H2[dBμA/m]	Hges[dBμA/m]
Distance	H1[A/m]	H2[A/m]	Hges[A/m]	H1[dBμA/m]	H2[dBμA/m]	Hges[dBμA/m]
-0.43	2.0140	6.0021	8.0161	126.08	135.57	138.08
-0.38	2.2019	5.9689	8.1708	126.86	135.52	138.25
-0.33	2.4072	5.8712	8.2784	127.63	135.37	138.36
-0.28	2.6304	5.7144	8.3448	128.40	135.14	138.43
-0.23	2.8720	5.5066	8.3786	129.16	134.82	138.46
-0.18	3.1315	5.2578	8.3893	129.92	134.42	138.47
-0.13	3.4078	4.9789	8.3867	130.65	133.94	138.47
-0.08	3.6989	4.6805	8.3794	131.36	133.41	138.46
-0.03	4.0013	4.3723	8.3737	132.04	132.81	138.46
0.02	4.3103	4.0628	8.3731	132.69	132.18	138.46
0.07	4.6194	3.7586	8.3780	133.29	131.50	138.46
0.12	4.9205	3.4650	8.3854	133.84	130.79	138.47
0.17	5.2041	3.1855	8.3896	134.33	130.06	138.47
0.22	5.4598	2.9225	8.3822	134.74	129.32	138.47
0.27	5.6766	2.6773	8.3539	135.08	128.55	138.44
0.32	5.8444	2.4503	8.2947	135.33	127.78	138.38
0.37	5.9544	2.2415	8.1960	135.50	127.01	138.27
0.42	6.0008	2.0503	8.0510	135.56	126.24	138.12

**Spulenabstand 0.86 m**  
**Coil Distance 0.86 m**