

**Explosion-protected motors
for type of protection "Increased safety", EEx e II 2G**



Motor selection data for design voltage range A, 50 Hz, 2- up to 8-pole
3000/1500/1000/750 rpm

Motor selection data for design voltage range A, 60 Hz, 2- up to 8-pole
3600/1800/1200/900 rpm

Motor selection data for wide design voltage range A, 50 Hz, 2- up to 8-pole
3000/1500/1000/750 rpm

Summary EG certificates of conformity and EG certificates of sample tests

Series

KPER/K11R/K12R

mounting dimensions acc. to DIN 42673 sh. 2 and DIN 42677 sh. 2,

KPR/K10R

Transnorm version on request

Sizes

63 – 355

Power range

0.12 – 335 kW

Degrees of protection

IP 54, IP 55, IP 56, IP 65 acc. to DIN EN 60034-5

Cooling method

IC 411 acc. to DIN EN 60034-6

Types of construction

IM B3, IM B35, IM B5 and derived types of construction acc. to DIN EN 60034-7

Ambient temperatures

shaft heights 56 – 132T -20° C up to +40° C

from shaft height 132 -40° C up to +40° C

(depending on the Certificate, deviations possible)

Explosion-protected version in accordance to Apparatus Group II, Category 2

EN 50 014 (DIN VDE 0170/0171 part 1) General Requirements

EN 50 019 (DIN VDE 0170/0171 part 6) Increased safety "e"

Temperature class T1 up to T3; T4 available on request

The motor design version is certified in an EG-Sample Test Certificate.

Three-phase motors with squirrel-cage rotor

Increased-safety type of protection EEx e II acc. to DIN EN 50014/50019



acc. to
ATEX 95

for design voltage, temperature classes T1, T2 and T3
with surface ventilation, mode of operation S1, continuous duty
insulation class F, degree of protection IP 55, 50 Hz

Motor selection data

Design point 400 V, 50 Hz

Type		P	Temperature class	n	η	$\cos \varphi$	I	I_A/I_N	M_A/M_N	M_S/M_N	M_K/M_N	t_E -time	J	m	
		kW		rpm	%	-	400 V A					T3 s	T1,T2 s	kgm ²	kg
Synchronous speed 3000 rpm – 2-pole version															
KPER	63 K2	0.18	T1-T3	2870	61.0	0.80	0.53	3.7	1.6	1.6	2.0	29	30	0.00013	4.9
KPER	63 G2	0.25	T1-T3	2800	65.0	0.74	0.75	4.1	1.9	1.9	2.2	13	15	0.00015	5.2
KPER	71 K2	0.37	T1-T3	2740	67.0	0.84	0.97	4.1	1.7	1.7	2.2	16	18	0.00025	6.7
KPER	71 G2	0.55	T1-T3	2770	73.0	0.79	1.43	4.8	2.2	2.2	2.5	11	13	0.00032	7.6
KPER	80 K2	0.75	T1-T3	2810	74.0	0.84	1.76	5.3	1.9	1.9	2.4	14	16	0.00057	10.7
KPER	80 G2	1.10	T1-T3	2830	77.0	0.82	2.60	5.6	2.5	2.3	2.5	8	10	0.00072	11.5
KPER	90 S2	1.30	T1-T3	2850	78.0	0.88	2.75	6.5	2.4	2.0	2.6	14	16	0.00132	16
KPER	90 L2	1.85	T1-T3	2870	83.0	0.86	3.85	7.4	3.0	3.0	3.2	9	12	0.00170	19
KPER	100 L2	2.50	T1-T3	2870	82.0	0.87	5.20	6.8	2.5	2.4	2.7	13	16	0.00275	25
KPER	112 M2	3.30	T1-T3	2910	85.0	0.82	6.90	7.7	2.3	2.1	3.1	11	16	0.0045	32
KPER	112 MX2	4.10	T1-T3	2910	87.0	0.87	8.10	7.9	2.5	1.9	3.3	11	18	0.0055	38
K11R	132 S2	4.6	T1-T3	2900	87.5	0.88	8.6	7.0	1.4	1.2	2.8	13	29	0.0110	57
K11R	132 SX2	5.5	T1-T3	2925	89.0	0.86	10.4	8.5	1.9	1.3	3.3	6	16	0.0110	57
K12R	132 SX2	5.5	T1-T3	2930	89.5	0.92	9.6	7.4	2.1	1.3	2.6	18	35	0.0258	88
		6.6	T1,T2	2910	90.0	0.93	11.6	6.2	1.7	1.1	2.1		30	0.0258	88
K11R	160 M2	7.5	T1-T3	2945	87.5	0.90	13.7	6.9	1.9	1.6	2.7	21	40	0.0575	120
		9.5	T1,T2	2917	87.5	0.90	17.4	5.4	1.5	1.3	2.1		40	0.0575	120
K11R	160 MX2	10.0	T1-T3	2935	89.5	0.90	17.9	6.5	1.8	1.5	2.5	13	30	0.0575	120
		13.0	T1,T2	2900	88.0	0.90	23.5	5.0	1.4	1.1	1.9		20	0.0575	120
K11R	160 L2	12.5	T1-T3	2945	90.0	0.91	22.0	7.3	1.8	1.4	2.8	11	24	0.0675	138
		16.0	T1,T2	2920	89.5	0.91	28.5	5.6	1.4	1.1	2.2		20	0.0675	138
K11R	180 M2	15	T1-T3	2945	91.0	0.92	26.0	7.0	1.8	1.5	2.6	16	35	0.105	175
		19	T1,T2	2920	90.5	0.92	33.0	5.4	1.5	1.3	2.1		26	0.105	175
K11R	200 L2	20	T1-T3	2935	91.5	0.92	34.0	6.6	1.8	1.3	2.4	10	27	0.128	210
		25	T1,T2	2910	90.5	0.93	43.0	5.2	1.4	1.2	1.9		17	0.128	210
K11R	200 LX2	24	T1-T3	2950	93.0	0.90	41.0	7.0	1.6	1.2	2.5	10	26	0.193	255
		31	T1,T2	2925	91.5	0.90	54.0	5.3	1.4	1.2	2.2		16	0.193	255
K11R	225 M2	28	T1-T3	2970	93.0	0.91	47.5	7.6	1.5	1.0	2.6	15	30	0.375	360
		38	T1,T2	2950	93.0	0.91	65	5.4	1.2	0.9	2.0		27	0.375	360
K11R	250 M2	36	T1-T3	2970	93.2	0.93	60	7.2	1.9	1.5	2.6	19	40	0.650	490
		47	T1,T2	2955	93.0	0.92	79	5.4	1.4	1.1	1.9		35	0.650	490
K11R	280 S2	47	T1-T3	2970	93.7	0.88	82	7.1	1.4	1.3	2.2	25	50	1.21	730
		68	T1-T3	2975	94.0	0.89	117	7.8	1.4	1.3	2.3	9	23	1.21	730
K11R	280 M2	58	T1-T3	2975	94.1	0.88	101	7.1	1.4	1.3	2.1	18	40	1.44	815
		76	T1-T3	2970	94.5	0.90	130	6.6	1.1	1.0	1.7	13	30	1.44	815
K11R	315 S2	68	T1-T3	2975	95.0	0.90	116	7.5	1.8	1.6	2.3	11	28	1.44	850
		95	T1,T2	2960	94.5	0.89	162	5.8	1.4	1.3	1.8		18	1.44	850
K11R	315 M2	80	T1-T3	2975	95.3	0.90	134	7.5	1.8	1.6	2.2	12	29	1.76	970
		112	T1,T2	2960	95.0	0.89	191	7.5	1.2	1.2	2.1			1.76	970
K11R	315 MY2	110	T1-T3	2970	95.0	0.92	182	7.3	1.5	1.3	3.0	11	26	2.82	1150
		135	T1,T2											2.82	1150
K11R	315 L2	125	T1-T3	2980	95.3	0.93	205	8.0	1.5	1.3	2.8	12	30	3.66	1460
		165	T1,T2											3.66	1460
K11R	315 LX2	150	T1-T3	2985	95.8	0.95	240	8.0	1.1	0.9	2.7	12	30	4.43	1630
		200	T1,T2											4.43	1630
K12R	355 M2	190	T1-T3	2980	95.0	0.91	310	8.0	1.4	1.1	2.4			4.20	2000
		255	T1,T2											4.20	2000
K12R	355 MX2	220	T1-T3	2980	95.0	0.91	360	8.0	1.4	1.1	2.6			5.50	2200
		300	T1,T2											5.50	2200
K12R	355 L2	250	T1-T3	2980	95.0	0.91	400	8.0	1.3	1.0	2.5			9.50	2400
		335	T1,T2											9.50	2400

Other voltages and frequencies on request

Modifications of not yet certified motors are possible!

Three-phase motors with squirrel-cage rotor

Increased-safety type of protection EEx e II acc. to DIN EN 50014/50019



acc. to
ATEX 95

for design voltage, temperature classes T1, T2 and T3
with surface ventilation, mode of operation S1, continuous duty
insulation class F, degree of protection IP 55, 50 Hz

Motor selection data

Design point 400 V, 50 Hz

Type		P	Temperature class	n	η	$\cos \varphi$	I	I_A/I_N	M_A/M_N	M_S/M_N	M_K/M_N	t_E -time	J	m	
		kW		rpm	%	-	400 V A					T3 s	T1,T2 s	kgm ²	kg
Synchronous speed 1500 rpm – 4-pole version															
KPER	63 K4 ¹⁾	0.12	T1-T3	1370	54.0	0.68	0.48	2.9	1.8	1.8	2.2	50	70	0.00019	4.8
KPER	63 G4	0.18	T1-T3	1360	60.0	0.69	0.63	3.2	1.9	1.9	2.2	30	35	0.00024	5.2
KPER	71 K4	0.25	T1-T3	1380	65.0	0.73	0.79	3.4	1.4	1.4	1.8	24	27	0.00040	6.8
KPER	71 G4	0.37	T1-T3	1370	67.0	0.75	1.08	3.6	1.6	1.6	2.0	18	21	0.00050	7.8
KPER	80 K4	0.55	T1-T3	1380	69.0	0.76	1.59	3.9	1.8	1.8	2.0	13	16	0.00087	10.6
KPER	80 G4	0.75	T1-T3	1390	72.0	0.74	2.00	4.4	2.0	2.0	2.3	14	17	0.00107	11.7
KPER	90 S4	1.00	T1-T3	1410	77.0	0.80	2.40	5.1	2.4	2.3	2.5	17	19	0.00207	15.5
KPER	90 L4	1.35	T1-T3	1410	79.0	0.81	3.10	5.5	2.3	1.8	2.5	12	14	0.00260	18
KPER	100 L4	2.0	T1-T3	1420	80.0	0.80	4.65	6.0	2.8	2.6	2.9	11	13	0.00400	23.5
KPER	100 LX4	2.5	T1-T3	1440	83.0	0.78	5.6	6.7	2.3	2.2	2.9	11	12	0.00725	30
KPER	112 M4	3.6	T1-T3	1440	85.0	0.77	8.1	7.0	2.8	2.1	2.9	7	9	0.0090	37
K11R	132 S4	5.0	T1-T3	1435	84.5	0.83	10.2	6.5	2.0	1.6	2.8	10	15	0.0150	53
K11R	132 M4	6.8	T1-T3	1455	87.5	0.82	13.6	6.1	2.1	1.8	2.7	12	29	0.0280	72
K11R	160 M4	10.0	T1-T3	1465	91.0	0.89	18.0	6.3	2.0	1.7	2.5	18	40	0.0780	123
K11R	160 L4	13.5	T1-T3	1470	90.5	0.86	25.0	7.7	2.5	2.0	3.0	9	26	0.0900	136
K11R	180 M4	15.0	T1-T3	1475	90.5	0.87	27.5	6.8	1.9	1.6	2.5	15	45	0.1380	180
		17.0	T1,T2	1465	90.5	0.88	31.0	6.0	1.7	1.4	2.3	35	35	0.1380	180
K11R	180 L4	17.5	T1-T3	1475	90.5	0.85	33	7.1	2.1	1.8	2.8	9	25	0.1380	185
		20.0	T1,T2	1470	90.5	0.86	37	6.3	1.8	1.6	2.4	24	24	0.1380	185
K11R	200 L4	24	T1-T3	1477	92.7	0.87	43	6.8	1.8	1.5	2.4	12	35	0.2750	270
		27	T1,T2	1470	92.5	0.88	48	6.0	1.6	1.5	2.2	30	30	0.2750	270
K11R	225 S4	30	T1-T3	1475	93.0	0.85	55	6.1	1.6	1.4	1.9	14	30	0.525	380
		33	T1,T2	1472	92.9	0.85	60	5.6	1.5	1.2	1.7	30	30	0.525	380
K11R	225 M4	36	T1-T3	1480	94.0	0.85	65	7.4	2.2	1.7	2.3	7	22	0.525	385
		40	T1,T2	1475	93.5	0.85	73	6.6	2.0	1.6	2.1	19	19	0.525	385
K11R	250 M4	44	T1-T3	1485	94.0	0.86	79	7.2	1.8	1.6	2.1	10	30	0.950	530
		50	T1,T2	1480	94.0	0.86	90	6.3	1.7	1.5	1.9	27	27	0.950	530
K11R	280 S4	58	T1-T3	1485	94.2	0.84	106	7.2	1.8	1.6	2.2	13	40	1.96	765
		68	T1,T2	1480	94.0	0.85	124	6.1	1.5	1.4	1.8	30	30	1.96	765
K11R	280 M4	70	T1-T3	1485	95.0	0.84	127	7.5	2.0	1.8	2.4	13	35	2.27	840
		80	T1,T2	1483	94.5	0.84	147	6.5	1.7	1.6	2.0	30	30	2.27	840
K11R	315 S4	84	T1-T3	1485	95.0	0.84	152	7.2	2.0	1.8	2.2	9	25	2.27	875
		100	T1,T2	1480	95.0	0.84	184	6.0	1.7	1.5	1.9	20	20	2.27	875
K11R	315 M4	100	T1-T3	1485	95.0	0.84	181	6.8	1.8	1.7	2.2	10	30	2.73	1000
		120	T1,T2	1478	94.7	0.85	216	5.6	1.3	1.1	1.6	30	30	2.73	1000
K11R	315 MY4	115	T1-T3	1489	95.4	0.85	205	7.1	1.5	1.4	2.4	14	35	4.82	1200
		135	T1,T2											4.82	1200
K11R	315 L4	135	T1-T3	1491	96.0	0.86	236	7.6	1.4	1.3	2.4	18	40	5.93	1450
		165	T1,T2											5.93	1450
K11R	315 LX4	170	T1-T3	1490	96.0	0.85	300	7.1	1.2	1.0	2.3	18	45	6.82	1630
		200	T1,T2											6.82	1630
K12R	355 M4	215	T1-T3	1491	96.6	0.85	380	8.0	1.4	1.0	2.7	8	30	5.60	2150
		245	T1,T2											5.60	2150
K12R	355 MX4	240	T1-T3	1490	96.5	0.85	425	8.0	1.5	1.2	2.8			7.90	2400
		275	T1,T2											7.90	2400
K12R	355 L4	275	T1-T3	1490	96.5	0.85	485	8.0	1.6	1.2	2.8			9.50	2500
		315	T1,T2											9.50	2500

Other voltages and frequencies on request

Modifications of not yet certified motors are possible!

Three-phase motors with squirrel-cage rotor**Increased-safety type of protection EEx e II acc. to DIN EN 50014/50019**acc. to
ATEX 95

for design voltage, temperature classes T1, T2 and T3

with surface ventilation, mode of operation S1, continuous duty

insulation class F, degree of protection IP 55, 50 Hz

Motor selection data

Design point 400 V, 50 Hz

Type		P	Temperature class	n	η	$\cos \varphi$	I 400 V	I_A/I_N	M_A/M_N	M_S/M_N	M_K/M_N	t_E -time	J	m	
		kW		rpm	%	-	A					T3 s	T1,T2 s	kgm ²	kg
Synchronous speed 1000 rpm – 6-pole version															
KPER	80 K6	0.37	T1-T3	920	62.0	0.70	1.30	3.2	2.0	1.8	2.0	26	28	0.00130	11
KPER	80 G6	0.55	T1-T3	910	66.0	0.69	1.75	3.6	2.1	2.1	2.2	22	26	0.00175	12.5
KPER	90 S6	0.65	T1-T3	925	69.0	0.71	1.95	3.4	1.8	1.7	1.9	30	35	0.00325	16
KPER	90 L6	0.95	T1-T3	925	71.0	0.71	2.70	3.9	2.1	2.0	2.2	23	27	0.00425	19
KPER	100 L6	1.4	T1-T3	940	75.0	0.73	3.75	4.2	2.1	2.0	2.3	20	24	0.00625	24
KPER	112 M6	1.9	T1-T3	950	79.0	0.74	4.7	5.3	2.2	2.0	2.4	18	21	0.01225	33.5
K11R	132 S6	2.6	T1-T3	950	80.5	0.79	5.9	5.3	1.8	1.8	2.8	19	22	0.018	49
K11R	132 M6	3.5	T1-T3	960	82.9	0.82	7.4	6.3	2.0	2.0	3.0	21	24	0.023	53
K11R	132 MX6	4.8	T1-T3	963	83.5	0.83	10.0	5.1	1.8	1.6	2.5	28	30	0.043	70
K11R	160 M6	6.6	T1-T3	965	84.5	0.84	13.4	5.4	1.9	1.6	2.5	30	35	0.053	89
K11R	160 L6	9.7	T1-T3	970	85.0	0.84	19.6	5.8	2.2	1.9	2.7	13	30	0.113	123
K11R	180 L6	13.2	T1-T3	975	89.0	0.87	24.5	6.5	2.2	2.0	2.9	23	50	0.228	190
K11R	200 L6	16.5	T1-T3	977	87.5	0.82	33.0	6.8	2.4	2.1	3.2	9	28	0.228	190
K11R	200 LX6	20	T1-T3	977	90.5	0.90	35.5	6.4	2.2	1.6	2.5	18	45	0.443	265
K11R	225 M6	27	T1-T3	975	91.0	0.88	49.0	5.7	2.1	1.8	2.3	13	40	0.825	360
K11R	250 M6	33	T1-T3	985	92.0	0.86	60	6.0	2.1	1.7	2.4	12	35	1.28	475
K11R	280 S6	40	T1-T3	990	93.9	0.86	71	7.0	1.9	1.8	2.5	24	55	2.63	715
K11R	280 M6	46	T1-T3	990	94.0	0.88	80	7.5	1.9	1.6	2.5	25	60	3.33	810
		50	T1,T2	988	94.0	0.88	87	6.9	1.8	1.5	2.3		60	3.33	810
K11R	315 S6	64	T1-T3	988	94.5	0.89	113	7.2	2.2	1.8	2.5	9	30	3.33	840
		68	T1,T2	987	94.0	0.89	118	6.9	2.1	1.7	2.3		28	3.33	840
K11R	315 M6	76	T1-T3	992	95.2	0.88	131	7.2	1.6	1.3	2.5	17	45	6.00	1080
		82	T1,T2	990	95.1	0.88	141	6.7	1.5	1.2	2.3		40	6.00	1080
K11R	315 MY6	85	T1-T3	990	95.2	0.87	149	6.9	1.6	1.4	2.5	15	40	6.00	1080
		92	T1,T2	987	95.0	0.87	160	6.4	1.5	1.3	2.3		35	6.00	1080
K11R	315 L6	95	T1-T3	985	95.0	0.88	165	7.5	2.0	1.4	2.3			6.67	1250
		100	T1,T2											6.67	1250
K11R	315 LX6	110	T1-T3	990	95.0	0.88	190	8.0	2.0	1.4	2.3			8.6	1460
		120	T1,T2											8.6	1460
K12R	355 M6	125	T1-T3	993	96.0	0.86	220	8.0	1.5	1.0	2.5			8.2	1650
		135	T1,T2											8.2	1650
K12R	355 MX6	160	T1-T3	993	96.0	0.85	285	8.0	1.5	1.0	2.5			10.1	2100
		175	T1,T2											10.1	2100
K12R	355 L6	200	T1-T3	993	96.0	0.85	355	8.0	1.5	1.0	2.5			14	2400
		215	T1,T2											14	2400

Synchronous speed 750 rpm – 8-pole version

KPER 80 K8	0.18	T1-T3	670	52.0	0.64	0.78	2.5	1.6	1.6	1.9	150	180	0.00130	10.5
KPER 80 G8	0.25	T1-T3	670	55.0	0.67	1.00	2.8	2.3	2.3	2.4	60	70	0.00175	12
KPER 90 S8	0.37	T1-T3	700	59.0	0.56	1.61	2.9	1.5	1.5	2.0	55	60	0.00300	15
KPER 90 L8	0.55	T1-T3	695	64.0	0.58	2.15	3.0	1.6	1.6	2.1	55	60	0.00375	18
KPER 100 L8	0.65	T1-T3	700	66.0	0.63	2.25	2.9	1.5	1.5	1.8	60	70	0.00625	23
KPER 100 LX8	0.95	T1-T3	705	74.0	0.68	2.75	4.1	2.0	2.0	2.5	60	70	0.00900	28
KPER 112 M8	1.3	T1-T3	700	75.0	0.67	3.9	4.1	1.7	1.7	1.9	50	60	0.01225	33.5
K11R 132 S8	1.9	T1-T3	700	75.0	0.75	4.9	3.9	1.6	1.6	2.2	30	35	0.018	49
K11R 132 M8	2.6	T1-T3	705	78.5	0.74	6.5	4.5	1.8	1.7	2.6	29	30	0.023	57
K11R 160 M8	3.5	T1-T3	720	80.0	0.72	8.7	4.3	1.8	1.7	2.4	40	45	0.043	80
K11R 160 MX8	4.8	T1-T3	720	81.5	0.74	11.6	4.5	1.9	1.8	2.4	40	50	0.053	90
K11R 160 L8	6.6	T1-T3	730	84.0	0.73	15.6	5.0	2.1	1.9	2.7	35	40	0.113	122
K11R 180 L8	9.7	T1-T3	725	85.0	0.73	22.5	5.1	2.3	2.0	2.6	12	40	0.145	140
K11R 200 L8	13.2	T1-T3	730	86.5	0.72	30.5	5.6	2.3	2.1	2.9	13	40	0.228	195
K11R 225 S8	16.5	T1-T3	730	88.5	0.81	33.5	6.0	2.2	1.9	2.8	20	50	0.440	275
K11R 225 M8	20	T1-T3	735	90.5	0.81	39.5	5.3	2.0	1.7	2.2	25	60	0.825	360
K11R 250 M8	27	T1-T3	737	90.5	0.80	54	5.7	2.3	1.7	2.3	13	40	1.35	472
K11R 280 S8	33	T1-T3	742	93.5	0.78	65	6.3	2.0	1.8	2.4	30	70	2.63	700
K11R 280 M8	40	T1-T3	740	93.8	0.79	78	6.5	2.0	1.8	2.4	30	75	3.33	805
K11R 315 S8	50	T1-T3	740	94.0	0.80	96	5.9	1.7	1.6	2.1	18	50	3.33	850
K11R 315 M8	68	T1-T3	740	94.0	0.80	131	6.3	2.1	1.9	2.6	9	35	3.60	880
K11R 315 MY8	80	T1-T3	742	94.5	0.80	154	6.4	1.4	1.2	2.3	12	30	6.00	1080
K11R 315 L8	95	T1-T3	740	94.5	0.81	180	6.0	1.8	1.7	2.2			6.76	1250
K11R 315 LX8	115	T1-T3	740	94.5	0.80	220	6.0	1.8	1.7	2.2			8.71	1430
K12R 355 M8	140	T1-T3	740	95.0	0.79	270	7.5	1.5	1.1	2.5			9.5	1600
K12R 355 MX8	180	T1-T3	740	95.5	0.79	350	7.5	1.5	1.1	2.5			11.6	2100
K12R 355 L8	210	T1-T3	740	95.5	0.79	400	7.5	1.5	1.1	2.5			15.8	2400

Other voltages and frequencies on request

Modifications of not yet certified motors are possible!

Three-phase motors with squirrel-cage rotor

Increased-safety type of protection EEx e II acc. to DIN EN 50014/50019



acc. to
ATEX 95

for design voltage, temperature classes T1, T2 and T3
with surface ventilation, mode of operation S1, continuous duty
insulation class F, degree of protection IP 55, 60 Hz

Motor selection data

Design point 480 V, 60 Hz

Type		P	Temperature class	n	η	$\cos \varphi$	I	I_A/I_N	M_A/M_N	M_S/M_N	M_K/M_N	t_E -time	J	m	
		kW		rpm	%	-	480 V A					T3 s	T1,T2 s	kgm ²	kg
Synchronous speed 3600 rpm – 2-pole version															
KPER	63 K2 ²⁾	0.18	T1-T3	3410	63.0	0.75	0.55 ¹⁾	4.0	2.3	2.3	2.7	29	30	0.00013	4.9
KPER	63 G2	0.25	T1-T3	3400	66.0	0.74	0.62	4.5	2.9	2.9	3.6	13	15	0.00015	5.2
KPER	71 K2	0.37	T1-T3	3375	67.0	0.79	0.83	4.6	2.5	2.5	2.9	16	18	0.00025	6.7
KPER	71 G2	0.55	T1-T3	3410	73.0	0.74	1.25	5.3	2.8	2.8	3.4	11	13	0.00032	7.6
KPER	80 K2	0.75	T1-T3	3430	75.0	0.79	1.53	5.8	2.5	2.3	4.0	14	16	0.00057	10.7
KPER	80 G2	1.10	T1-T3	3450	77.0	0.76	2.25	6.2	2.3	2.3	2.5	8	10	0.00072	11.5
KPER	90 S2	1.30	T1-T3	3450	78.0	0.85	2.40	7.2	2.2	2.2	2.6	14	16	0.00132	16
KPER	90 L2	1.85	T1-T3	3480	81.0	0.83	3.35	8.1	3.0	3.0	3.2	9	12	0.00170	19
KPER	100 L2	2.50	T1-T3	3480	82.0	0.85	4.50	7.4	2.4	2.4	2.7	13	16	0.00275	25
KPER	112 M2	3.3	T1-T3	3525	86.0	0.77	6.00	8.4	2.1	2.1	2.8	11	16	0.00450	32
KPER	112 MX2	4.1	T1-T3	3510	87.0	0.84	7.00	8.6	1.9	1.9	3.0	11	18	0.00550	38
K11R	132 S2	5.3	T1-T3	3515	88.0	0.88	8.3	7.5	1.5	1.2	2.8	11	26	0.0110	57
K11R	132 SX2	6.3	T1-T3	3514	89.0	0.88	9.7	8.2	1.6	1.2	2.9	8	19	0.0110	57
K11R	160 M2	8.6	T1-T3	3545	87.7	0.91	13.0	7.5	2.0	1.7	2.8	20	40	0.0575	120
K11R	160 MX2	12.0	T1-T3	3520	89.5	0.90	18.0	6.8	1.8	1.5	2.5	10	24	0.0575	120
K11R	160 L2	14.0	T1-T3	3550	90.3	0.91	20.5	8.1	1.9	1.5	3.0	10	24	0.0675	138
K11R	180 M2	17.0	T1-T3	3550	91.0	0.93	24.0	7.5	1.9	1.6	2.8	13	30	0.1050	175
K11R	200 L2	23	T1-T3	3540	91.5	0.93	32.5	7.2	1.9	1.6	2.6	8	23	0.1280	210
K11R	200 LX2	27	T1-T3	3555	93.0	0.91	38.0	7.7	1.7	1.3	2.7	10	23	0.1930	255
K11R	225 M2	33	T1-T3	3570	93.0	0.91	47.0	7.8	1.6	1.2	2.7	13	30	0.375	360
K11R	250 M2	44	T1-T3	3570	92.5	0.93	62	7.1	1.8	1.4	2.4	13	35	0.65	490
K11R	280 S2	56	T1-T3	3575	93.5	0.89	81	7.2	1.5	1.3	1.8	22	45	1.21	730
K11R	280 M2	70	T1-T3	3570	94.0	0.89	100	7.2	1.3	1.2	2.2	21	35	1.44	815
K11R	315 S2	82	T1-T3	3576	94.5	0.90	116	8.2	1.9	1.8	2.6	15	21	1.44	850
K11R	315 M2	96	T1-T3	3575	95.0	0.89	142	7.6	1.8	1.6	2.3			1.76	970
K11R	315 MY2	132	T1-T3	3570	94.0	0.93	182	7.5	1.5	1.3	3.0	8	22	2.82	1150

Synchronous speed 1800 rpm – 4-pole version

KPER 63 K4 ²⁾	0.12	T1-T3	1670	56.0	0.68	0.46 ¹⁾	3.2	1.8	1.8	2.2	50	70	0.00019	4.8
KPER 63 G4	0.18	T1-T3	1660	60.0	0.69	0.52	3.5	2.2	2.2	2.5	30	35	0.00024	5.2
KPER 71 K4	0.25	T1-T3	1680	64.0	0.73	0.66	3.7	1.8	1.8	2.2	24	27	0.00040	6.8
KPER 71 G4	0.37	T1-T3	1670	67.0	0.75	0.90	3.9	1.8	1.8	2.4	18	21	0.00050	7.8
KPER 80 K4	0.55	T1-T3	1695	69.0	0.71	1.38	4.3	1.8	1.8	2.0	13	16	0.00087	10.6
KPER 80 G4	0.75	T1-T3	1690	72.0	0.74	1.70	4.8	2.0	1.9	2.3	14	17	0.00107	11.7
KPER 90 S4	1.00	T1-T3	1715	77.0	0.77	2.10	5.5	2.4	2.3	2.6	17	19	0.00207	15.5
KPER 90 L4	1.35	T1-T3	1720	79.0	0.78	2.70	6.0	2.3	2.0	2.5	12	14	0.00260	18
KPER 100 L4	2.0	T1-T3	1730	81.0	0.74	4.05	6.6	2.5	2.3	2.9	11	13	0.00400	23.5
KPER 100 LX4	2.5	T1-T3	1750	84.0	0.74	4.85	7.3	2.3	2.2	2.9	11	12	0.00725	30
KPER 112 M4	3.6	T1-T3	1750	85.0	0.73	7.00	7.7	2.8	2.4	2.9	7	9	0.0090	37
K11R 132 S4	5.8	T1-T3	1740	86.0	0.82	10.0	6.9	2.0	1.7	2.9	9	15	0.0150	53
K11R 132 M4	7.8	T1-T3	1760	88.5	0.80	13.2	6.5	2.2	1.9	2.8	9	27	0.0280	72
K11R 160 M4	12.0	T1-T3	1765	91.0	0.88	18.1	6.5	2.0	1.7	2.5	14	30	0.0780	123
K11R 160 L4	15.5	T1-T3	1775	91.0	0.85	24.0	7.9	2.6	2.1	3.2	7	23	0.0900	136
K11R 180 M4	17.0	T1-T3	1775	90.5	0.87	26.0	7.3	2.0	1.7	2.7	12	35	0.1380	180
K11R 180 L4	20	T1-T3	1775	91.0	0.84	32.0	7.6	2.2	1.9	2.9	7	23	0.1380	185
K11R 200 L4	28	T1-T3	1775	93.0	0.88	41.5	7.2	1.9	1.6	2.5	7	30	0.2750	270
K11R 225 S4	36	T1-T3	1775	93.4	0.85	55	6.2	1.7	1.4	1.9	12	30	0.525	380
K11R 225 M4	43	T1-T3	1780	93.9	0.85	65	7.5	2.2	1.7	2.3	7	18	0.525	385
K11R 250 M4	52	T1-T3	1785	94.0	0.85	78	7.4	1.9	1.6	2.2	9	26	0.95	530
K11R 280 S4	58	T1-T3	1785	94.0	0.84	88	7.8	1.7	1.6	2.1	13	40	1.96	765
K11R 280 S4	70	T1-T3	1785	94.0	0.84	107	7.2	1.8	1.6	2.2	9	30	1.96	765
K11R 280 M4	84	T1-T3	1785	94.0	0.83	129	7.5	1.7	1.6	2.3	8	29	2.27	840
K11R 315 S4	100	T1-T3	1785	95.0	0.84	152	7.3	2.1	1.9	2.3	6	21	2.27	875
K11R 315 M4	100	T1-T3	1782	94.0	0.84	150	7.4	1.8	1.7	2.2	10	30	2.73	1000
K11R 315 M4	120	T1-T3	1780	95.0	0.84	190	7.3	1.7	1.6	2.1			2.73	1000
K11R 315 MY4	132	T1-T3	1790	95.0	0.85	197	7.5	1.5	1.4	2.5	12	30	4.82	1200

¹⁾ Currents at 400 V²⁾ only available up to 415V. Other voltages and frequencies on request
Modifications of not yet certified motors are possible!

Three-phase motors with squirrel-cage rotor**Increased-safety type of protection EEx e II acc. to DIN EN 50014/50019**

for design voltage, temperature classes T1, T2 and T3

with surface ventilation, mode of operation S1, continuous duty

insulation class F, degree of protection IP 55, 60 Hz

acc. to
ATEX 95

Motor selection data

Design point 480 V, 60 Hz

Type	P	Temperature class	n	η	$\cos \varphi$	I 480 V	I_A/I_N	M_A/M_N	M_S/M_N	M_K/M_N	t_E -time	J	m	
	kW		rpm	%	-	A					T3 s	T1,T2 s	kgm ²	kg
Synchronous speed 1200 rpm – 6-pole version														
KPER 80 K6	0.37	T1-T3	1130	61.0	0.65	1.13	3.5	2.0	1.8	2.0	26	28	0.00130	11
KPER 80 G6	0.55	T1-T3	1110	66.0	0.69	1.46	4.0	2.1	2.1	2.2	22	26	0.00175	12.5
KPER 90 S6	0.65	T1-T3	1135	69.0	0.67	1.69	3.7	1.8	1.7	1.9	30	35	0.00325	16
KPER 90 L6	0.95	T1-T3	1125	71.5	0.71	2.25	4.3	2.1	2.0	2.2	23	27	0.00425	19
KPER 100 L6	1.4	T1-T3	1150	75.0	0.69	3.25	4.6	2.1	2.0	2.3	20	24	0.00625	24
KPER 112 M6	1.9	T1-T3	1155	79.0	0.71	4.10	5.8	2.2	2.0	2.4	18	21	0.01225	33.5
K11R 132 S6	3.0	T1-T3	1155	82.0	0.79	5.7	5.8	2.0	1.9	3.0	18	21	0.0180	49
K11R 132 M6	4.0	T1-T3	1160	84.5	0.80	7.1	6.9	2.2	2.1	3.3	20	23	0.0230	53
K11R 132 MX6	5.5	T1-T3	1166	85.5	0.82	9.5	5.8	1.9	1.7	2.6	26	29	0.0430	70
K11R 160 M6	7.6	T1-T3	1165	86.5	0.82	12.9	5.8	2.0	1.7	2.6	24	30	0.0530	89
K11R 160 L6	11.0	T1-T3	1170	86.0	0.82	18.7	6.3	2.3	2.1	2.9	11	29	0.1130	123
K11R 180 L6	15.0	T1-T3	1178	89.5	0.87	23.0	7.1	2.3	2.1	3.0	20	45	0.2280	190
K11R 200 L6	19.0	T1-T3	1175	88.0	0.80	32.5	7.0	2.6	2.1	3.3			0.2280	190
K11R 200 LX6	23	T1-T3	1178	90.5	0.90	34.0	6.8	2.2	1.7	2.5	14	40	0.4430	265
K11R 225 M6	32	T1-T3	1177	92.0	0.88	47.5	6.1	2.2	1.8	2.3	10	30	0.8250	360
K11R 250 M6	40	T1-T3	1181	93.0	0.88	59	6.5	2.1	1.5	2.2	12	26	1.2800	475
K11R 280 S6	48	T1-T3	1190	94.0	0.87	71	7.5	2.1	1.7	2.5			2.630	715
K11R 280 M6	55	T1-T3	1190	94.0	0.87	81	8.1	2.2	2.0	2.9			3.330	810
K11R 315 S6	76	T1-T3	1190	94.5	0.87	111	8.7	2.3	2.1	3.0			3.330	840
K11R 315 M6	90	T1-T3	1191	95.1	0.88	130	7.4	1.6	1.3	2.5	12	35	6.000	1080
K11R 315 MY6	100	T1-T3	1185	94.5	0.86	148	8.2	1.9	1.7	2.3			6.000	1080

Synchronous speed 900 rpm – 8-pole version

KPER 80 K8	0.18	T1-T3	820	52.0	0.64	0.65	2.7	1.6	1.6	1.9	150	180	0.00130	10.5
KPER 80 G8	0.25	T1-T3	830	56.0	0.62	0.87	3.1	2.3	2.3	2.4	60	70	0.00175	12
KPER 90 S8	0.37	T1-T3	850	59.0	0.56	1.34	3.2	1.5	1.5	2.0	55	60	0.00300	15
KPER 90 L8	0.55	T1-T3	845	64.0	0.58	1.78	3.3	1.6	1.6	2.1	55	60	0.00375	18
KPER 100 L8	0.65	T1-T3	855	67.0	0.60	1.95	3.3	1.5	1.5	1.8	60	70	0.00625	23
KPER 100 LX8	0.95	T1-T3	860	74.5	0.64	2.40	4.5	2.0	2.0	2.5	60	70	0.00900	28
KPER 112 M8	1.3	T1-T3	860	75.5	0.61	3.40	4.5	1.7	1.7	1.9	50	60	0.01225	33.5
K11R 132 S8	2.2	T1-T3	850	75.0	0.77	4.6	3.8	1.7	1.4	1.9	30	35	0.0180	49
K11R 132 M8	3.0	T1-T3	850	80.8	0.76	6.0	4.9	1.8	1.7	2.3	28	30	0.0230	57
K11R 160 M8	4.0	T1-T3	875	82.0	0.70	8.4	4.6	2.0	1.9	2.5	35	45	0.0430	80
K11R 160 MX8	5.5	T1-T3	870	83.5	0.71	11.2	4.9	2.0	1.9	2.5	35	45	0.0530	90
K11R 160 L8	7.6	T1-T3	880	84.5	0.71	15.3	5.4	2.3	2.0	2.8	25	35	0.1130	122
K11R 180 L8	11.0	T1-T3	875	85.5	0.71	22.0	5.5	2.5	2.1	2.9	10	35	0.1450	140
K11R 200 L8	15.0	T1-T3	880	87.5	0.70	29.5	5.7	2.4	2.2	3.1			0.2280	195
K11R 225 S8	19.5	T1-T3	885	89.0	0.80	33.0	6.2	2.3	2.0	2.9			0.4400	275
K11R 225 M8	24	T1-T3	885	91.0	0.80	39.7	5.4	2.1	1.8	2.2			0.8250	360
K11R 250 M8	32	T1-T3	888	92.3	0.79	53.0	6.4	2.0	1.5	2.1	11	29	1.3500	472
K11R 280 S8	40	T1-T3	895	93.5	0.78	66	6.3	1.9	1.7	2.3			2.630	700
K11R 280 M8	48	T1-T3	892	94.0	0.79	78	6.5	2.1	1.8	2.4			3.330	805
K11R 315 S8	60	T1-T3	890	94.0	0.81	95	6.0	1.7	1.6	2.1			3.330	850
K11R 315 M8	82	T1-T3	890	94.0	0.78	135	7.0	2.1	1.8	2.5			3.600	880
K11R 315 MY8	95	T1-T3	894	94.7	0.79	152	6.6	1.4	1.2	2.3	10	28	6.000	1080

Other voltages and frequencies on request

Modifications of not yet certified motors are possible!

Three-phase motors with squirrel-cage rotor

Increased-safety type of protection EEx e II acc. to DIN EN 50014/50019



acc. to
ATEX 95

for design voltage range, temperature classes T1, T2 and T3
with surface ventilation, mode of operation S1, continuous duty
insulation class F, degree of protection IP 55, 50 Hz

Motor selection data

Design voltage range

Type	P	Temperature class	n	η	$\cos \varphi$	I	I_A/I_N	M_A/M_N	M_S/M_N	M_K/M_N	t_E -time	J	m
	kW		rpm	%	-	380...420 V A					T3 s	T1,T2 s	kgm ² kg
Synchronous speed 3000 rpm – 2-pole version													
KPER 63 K2	0.18	T1-T3	2710...2810	61.0	0.85...0.75	0.53	3.7	1.6	1.6	2.0	29	30	0.00013 4.9
KPER 63 G2	0.25	T1-T3	2700...2760	65.0	0.88...0.83	0.62	4.2	1.9	1.9	2.2	13	15	0.00015 5.2
KPER 71 K2	0.37	T1-T3	2700...2780	67.0	0.89...0.79	0.97	4.1	1.7	1.7	2.2	16	18	0.00025 6.7
KPER 71 G2	0.55	T1-T3	2740...2810	73.0	0.84...0.74	1.43	4.8	2.2	2.2	2.5	11	13	0.00032 7.6
KPER 80 K2	0.75	T1-T3	2780...2830	74.0	0.88...0.79	1.76	5.3	1.9	1.9	2.4	14	16	0.00057 10.7
KPER 80 G2	1.10	T1-T3	2800...2850	77.0	0.86...0.76	2.60	5.6	2.5	2.3	2.5	8	10	0.00072 11.5
KPER 90 S2	1.30	T1-T3	2830...2860	78.0	0.90...0.85	2.75	6.5	2.4	2.2	2.6	14	16	0.00132 16
KPER 90 L2	1.85	T1-T3	2850...2880	83.0	0.89...0.83	3.85	7.4	3.0	3.0	3.2	9	12	0.00170 19
KPER 100 L2	2.50	T1-T3	2850...2880	82.0	0.89...0.85	5.2	6.8	2.5	2.4	2.7	13	16	0.00275 25
KPER 112 M2	3.30	T1-T3	2905...2925	85.0	0.85...0.77	6.9	7.7	2.3	2.1	3.1	11	16	0.00450 32
KPER 112 MX2	4.10	T1-T3	2900...2920	87.0	0.89...0.84	8.1	7.9	2.5	1.9	3.3	11	18	0.00550 38
K11R 132 S2	4.6	T1-T3	2900	87.5	0.88	9.2	6.6	1.4	1.2	2.8	11	28	0.0110 57
K12R 132 SX2	5.5	T1-T3	2930	89.5	0.92	10.2	7.0	2.1	1.3	2.6	16	35	0.0110 57
K11R 160 M2	7.5	T1-T3	2945	87.5	0.90	14.4	6.6	1.9	1.6	2.7	19	40	0.0575 120
K11R 160 MX2	10.0	T1-T3	2935	89.5	0.90	19.1	6.1	1.8	1.5	2.5	11	28	0.0575 120
K11R 160 L2	12.5	T1-T3	2945	90.0	0.91	23	7.0	1.8	1.4	2.8	10	27	0.0675 138
K11R 180 M2	15.0	T1-T3	2945	91.0	0.92	27	6.6	1.8	1.5	2.6	13	30	0.105 175
K11R 200 L2	20	T1-T3	2935	91.5	0.92	36	6.2	1.8	1.4	2.4	8	25	0.128 210
K11R 200 LX2	24	T1-T3	2950	93.0	0.90	43	6.6	1.6	1.2	2.5	9	24	0.193 255
K11R 225 M2	28	T1-T3	2970	93.0	0.91	50	7.1	1.5	1.0	2.6	14	30	0.375 360
K11R 250 M2	36	T1-T3	2970	93.0	0.93	63	6.8	1.9	1.5	2.6	18	40	0.65 490
K11R 280 S2	47	T1-T3	2975	93.7	0.88	86	6.7	1.4	1.3	2.2	23	50	1.21 730
K11R 280 M2	58	T1-T3	2975	94.0	0.88	107	6.7	1.4	1.3	2.1	21	35	1.44 815
K11R 315 S2	68	T1-T3	2975	94.1	0.90	122	7.1	1.8	1.6	2.3	13	29	1.44 850
K11R 315 M2	80	T1-T3											1.76 970
K11R 315 MY2	110	T1-T3	2970	95.0	0.93	189	6.9	1.5	1.3	3.0	9	24	2.82 1170

Synchronous speed 1500 rpm – 4-pole version

KPER 63 K4	0.12	T1-T3	Not possible in design voltage range (as KPER 63G4 possible)										0.00019	4.8
KPER 63 G4	0.12	T1-T4	1340...1380	62.5	0.78...0.68	0.37	3.3	1.9	1.9	2.2	70	75	0.00024	5.2
KPER 71 K4	0.25	T1-T3	1350...1390	65.0	0.79...0.69	0.79	3.4	1.4	1.4	1.8	24	27	0.00040	6.8
KPER 71 G4	0.37	T1-T3	1350...1390	67.0	0.79...0.70	1.08	3.6	1.6	1.6	2.0	18	21	0.00050	7.8
KPER 80 K4	0.55	T1-T3	1365...1395	69.0	0.80...0.71	1.59	3.9	1.8	1.8	2.0	13	16	0.00087	10.6
KPER 80 GX4	0.75	T1-T3	1320...1360	70.0	0.84...0.77	2.00	3.8	1.9	1.8	1.9	16	20	0.00120	12.4
KPER 90 S4	1.00	T1-T3	1395...1415	77.0	0.84...0.77	2.40	5.1	2.4	2.3	2.5	17	19	0.00207	15.5
KPER 90 L4	1.35	T1-T3	1395...1420	79.0	0.84...0.78	3.10	5.5	2.3	1.8	2.5	12	14	0.00260	18
KPER 100 L4	2.00	T1-T3	1410...1430	80.0	0.82...0.74	4.65	6.0	2.8	2.6	2.9	11	13	0.00400	23.5
KPER 100 LX4	2.5	T1-T3	1435...1450	83.0	0.81...0.74	5.6	6.7	2.3	2.2	2.9	11	12	0.00725	30
KPER 112 M4	3.6	T1-T3	1430...1450	85.0	0.82...0.73	8.1	7.0	2.8	2.1	2.9	7	9	0.009	37
K11R 132 S4	5.0	T1-T3	1435	84.5	0.83	10.5	6.3	2.0	1.6	2.8	8	16	0.015	53
K11R 132 M4	6.8	T1-T3	1455	87.5	0.85...0.78	14.0	5.9	2.1	1.8	2.7	10	27	0.028	72
K11R 160 M4	10.0	T1-T3	1465	91.0	0.89	18.9	6.1	2.0	1.7	2.5	16	35	0.078	123
K11R 160 L4	13.5	T1-T3	1470	90.5	0.87...0.83	26.0	7.4	2.5	2.0	3.0	7	25	0.090	136
K11R 180 M4	15.0	T1-T3	1475	90.5	0.87	28.5	6.4	1.9	1.6	2.5	13	40	0.138	180
K11R 180 L4	17.5	T1-T3	1475	90.5	0.86...0.82	34.0	6.9	2.1	1.8	2.8	8	27	0.138	185
K11R 200 L4	24.0	T1-T3	1477	92.5	0.87	45.0	6.4	1.8	1.5	2.4	8	30	0.275	270
K11R 225 S4	30	T1-T3	1475	93.0	0.85	59.0	5.7	1.6	1.4	1.9	12	30	0.525	380
K11R 225 M4	36	T1-T3	1480	94.0	0.85	69.0	7.0	2.2	1.7	2.3	7	20	0.525	385
K11R 250 M4	44	T1-T3	1485	94.0	0.86	83	6.9	1.8	1.6	2.1	9	29	0.95	530
K11R 280 S4	58	T1-T3	1485	94.2	0.84	113	6.7	1.8	1.6	2.2	13	40	1.96	765
K11R 280 M4	70	T1-T3	1485	95.0	0.84	135	7.1	2.0	1.8	2.4	11	30	2.27	840
K11R 315 S4	84	T1-T3	1485	95.0	0.84	159	6.9	2.0	1.8	2.2	7	25	2.27	875
K11R 315 M4	100	T1-T3											2.73	1000
K11R 315 MY4	110	T1-T3	1487	95.4	0.85	217	6.7	1.5	1.4	2.4	12	35	4.82	1200
K11R 315 L4	135	T1-T3	1491	96.0	0.86	248	7.2	1.4	1.3	2.4	16	40	5.93	1450

Other voltages and frequencies on request

Modifications of not yet certified motors by PTB are possible!

Three-phase motors with squirrel-cage rotor

Increased-safety type of protection EEx e II acc. to DIN EN 50014/50019



acc. to
ATEX 95

for design voltage range, temperature classes T1, T2 and T3
with surface ventilation, mode of operation S1, continuous duty
insulation class F, degree of protection IP 55, 50 Hz

Motor selection data

Design voltage range

Type		P	Temperature class	n	η	$\cos \varphi$	I	I_A/I_N	M_A/M_N	M_S/M_N	M_K/M_N	t_E -time	J	m	
		kW		rpm	%	-	380...420 V A					T3 s	T1,T2 s	kgm ²	kg
Synchronous speed 1000 rpm – 6-pole version															
KPER	80 K6	0.37	T1-T3	905...930	62.0	0.74...0.65	1.3	3.2	2.0	1.8	2.0	26	28	0.00130	11
KPER	80 G6	0.55	T1-T3	not possible in design voltage range										0.00175	12.5
KPER	90 S6	0.65	T1-T3	915...935	69.0	0.74...0.67	1.95	3.4	1.8	1.7	1.9	30	35	0.00325	16
KPER	90 L6	0.95	T1-T3	not possible in design voltage range										0.00425	19
KPER	100 L6	1.4	T1-T3	930...950	75.0	0.76...0.69	3.75	4.2	2.1	2.0	2.3	20	24	0.00625	24
KPER	112 M6	1.9	T1-T3	945...955	79.0	0.78...0.71	4.7	5.3	2.2	2.0	2.4	18	21	0.01225	33.5
K11R	132 S6	2.6	T1-T3	950	80.5	0.83...0.77	6.1	5.1	1.8	1.8	2.8	18	21	0.018	49
K11R	132 M6	3.5	T1-T3	960	82.9	0.85...0.79	7.5	6.2	2.0	2.0	3.0	23	20	0.023	53
K11R	132 MX6	4.8	T1-T3	963	83.5	0.83	10.3	5.0	1.8	1.6	2.5	26	30	0.043	70
K11R	160 M6	6.6	T1-T3	965	84.5	0.86...0.82	13.8	5.2	1.9	1.6	2.5	26	30	0.053	89
K11R	160 L6	9.7	T1-T3	970	85.0	0.87...0.80	20.0	5.6	2.2	1.9	2.2	12	29	0.113	123
K11R	180 L6	13.2	T1-T3	975	89.0	0.87	25.5	6.2	2.2	2.0	2.9	21	45	0.228	190
K11R	200 L6	16.5	T1-T3											0.228	190
K11R	200 LX6	20	T1-T3	977	90.5	0.90...0.89	37.5	6.0	2.2	1.6	2.5	14	45	0.443	265
K11R	225 M6	27	T1-T3	975	91.0	0.88...0.84	51	5.4	2.1	1.8	2.3	10	35	0.825	360
K11R	250 M6	33	T1-T3	985	92.0	0.86	63	5.7	2.1	1.7	2.4	9	30	1.28	475
K11R	280 S6	40	T1-T3											2.63	715
K11R	280 M6	46	T1-T3											3.33	810
K11R	315 S6	64	T1-T3	988	94.5	0.90...0.88	116	7.0	2.2	1.8	2.5	8	28	3.33	840
K11R	315 M6	76	T1-T3	992	95.2	0.88	136	6.9	1.6	1.3	2.5	15	40	6.00	1080
K11R	315 MY6	85	T1-T3											6.00	1080

Synchronous speed 750 rpm – 8-pole version

KPER 80 K8	0.18	T1-T3	not possible in design voltage range											
KPER 80 G8	0.25	T1-T3	655...680	55.0	0.70...0.62	1.0	2.8	2.3	2.2	2.4	60	70	0.00060	8.1
KPER 90 S8	0.37	T1-T3	not possible in design voltage range											
KPER 90 L8	0.55	T1-T3	not possible in design voltage range											
KPER 100 L8	0.65	T1-T3	690...705	66.0	0.67...0.60	2.25	2.9	1.5	1.5	1.8	60	70	0.00625	23
KPER 100 LX8	0.95	T1-T3	700...710	74.0	0.72...0.64	2.75	4.1	2.0	2.0	2.5	60	70	0.00900	28
KPER 112 M8	1.3	T1-T3	690...710	75.0	0.70...0.61	3.9	4.1	1.8	1.7	1.9	50	60	0.01225	33.5
K11R 132 S8	1.9	T1-T3	700.00	76.2	0.75	5.0	3.8	1.6	1.6	2.2	30	35	0.018	49
K11R 132 M8	2.6	T1-T3	705.00	78.5	0.78...0.71	6.6	4.4	1.8	1.7	2.6	27	30	0.023	57
K11R 160 M8	3.5	T1-T3	720.00	80.0	0.76...0.70	8.8	4.2	1.8	1.7	2.4	40	45	0.043	80
K11R 160 MX8	4.8	T1-T3	720.00	83.5	0.76...0.70	11.8	4.4	2.0	1.9	2.5	40	45	0.053	90
K11R 160 L8	6.6	T1-T3	730.00	81.5	0.76...0.68	16.3	4.7	1.9	1.8	2.4	29	35	0.113	122
K11R 180 L8	9.7	T1-T3	725.00	85.0	0.77...0.69	22.5	5.0	2.3	2.0	2.6	10	40	0.145	140
K11R 200 L8	13.2	T1-T3											0.228	195
K11R 225 S8	16.5	T1-T3											0.440	275
K11R 225 M8	20	T1-T3											0.825	360
K11R 250 M8	27	T1-T3	737.00	90.5	0.81...0.77	55	5.9	2.3	1.7	2.3	14	35	1.35	472
K11R 280 S8	33	T1-T3											2.63	700
K11R 280 M8	40	T1-T3											3.33	805
K11R 315 S8	50	T1-T3											3.33	850
K11R 315 M8	68	T1-T3											3.60	880
K11R 315 MY8	80	T1-T3	742.00	94.3	0.81...0.77	160	6.2	1.4	1.2	2.3	11	30	6.00	1080

Other voltages and frequencies on request

T1,T2-design on request

Modifications of not yet certified motors by PTB are possible!

Three-phase motors with squirrel-cage rotor

Increased-safety type of protection EEx e II acc. to DIN EN 50014/50019



acc. to
ATEX 95

temperature classes T1, T2 and T3

with surface ventilation, mode of operation S1, continuous duty

insulation class F, degree of protection IP 54, 50 Hz/60 Hz

Partial certification PTB Nr. Ex-91.C.3070 U, Ex-95.D.3020 U

Design in accordance to EG Certificates IBExU00ATEX1083 U and IBExU00ATEX1051 U

Summary of Approvals

Type	P ₂	U _B , 50 Hz, T1-T3 ATEX	P ₂	U _B ...U ₀ , 50 Hz, T1-T3 ATEX	P ₂	U _B , 50 Hz, T1,T2 ATEX	P ₂	U _B , 60 Hz, T1-T3 ATEX
	kW		kW		kW		kW	
2-pole version								
KPER 63 K2	0.18	PTB 99 ATEX 3309	0.18	PTB 99 ATEX 3309			0.18	PTB 99 ATEX 3309
KPER 63 G2	0.25	PTB 99 ATEX 3309					0.25	PTB 99 ATEX 3309
KPER 63 GX2			0.25	PTB 99 ATEX 3309				
KPER 71 K2	0.37	PTB 99 ATEX 3310	0.37	PTB 99 ATEX 3310			0.37	PTB 99 ATEX 3310
KPER 71 G2	0.55	PTB 99 ATEX 3310	0.55	PTB 99 ATEX 3310			0.55	PTB 99 ATEX 3310
		PTB 99 ATEX 3311		PTB 99 ATEX 3311				PTB 99 ATEX 3311
KPER 80 K2	0.75	PTB 99 ATEX 3311	0.75	PTB 99 ATEX 3311			0.75	PTB 99 ATEX 3311
KPER 80 G2	1.10	PTB 99 ATEX 3311	1.10	PTB 99 ATEX 3311			1.1	PTB 99 ATEX 3311
KPER 90 S2	1.30	PTB 99 ATEX 3312	1.30	PTB 99 ATEX 3312			1.3	PTB 99 ATEX 3312
KPER 90 L2	1.85	PTB 99 ATEX 3312	1.85	PTB 99 ATEX 3312			1.85	PTB 99 ATEX 3312
KPER 100 L 2	2.5	PTB 99 ATEX 3313	2.5	PTB 99 ATEX 3313			2.5	PTB 99 ATEX 3313
KPER 112 M2	3.3	PTB 99 ATEX 3314	3.3	PTB 99 ATEX 3314			3.3	PTB 99 ATEX 3314
KPER 112 MX2	4.1	PTB 99 ATEX 3314	4.1	PTB 99 ATEX 3314			4.1	PTB 99 ATEX 3314
K11R 132 S2	4.6	PTB 98 ATEX 3459/01	4.6	PTB 98 ATEX 3459/02			5.3	IBExU 99 ATEX 1142/08
K11R 132 SX2	5.5	PTB 98 ATEX 3459/03					6.3	IBExU 99 ATEX 1142/10
K12R 132 SX2	5.5	IBExU 99 ATEX 1142/21	5.5	IBExU 99 ATEX 1142/22	6.6	IBExU 99 ATEX 1142/23	6.6	IBExU 99 ATEX 1142/24
K11R 160 M2	7.5	PTB 98 ATEX 3460/01	7.5	PTB 98 ATEX 3460/02	9.5	PTB 98 ATEX 3460/03	8.6	IBExU 99 ATEX 1105/12
K11R 160 MX2	10	PTB 98 ATEX 3460/04	10	PTB 98 ATEX 3460/05	13	PTB 98 ATEX 3460/06	12	IBExU 99 ATEX 1105/24
K11R 160 L2	12.5	PTB 98 ATEX 3460/07	12.5	PTB 98 ATEX 3460/09	16	PTB 98 ATEX 3460/08	14	IBExU 99 ATEX 1105/15
K11R 180 M2	15	PTB 98 ATEX 3461/01	15	PTB 98 ATEX 3461/02	19	PTB 98 ATEX 3461/03	17	IBExU 99 ATEX 1138/09
K11R 200 L2	20	PTB 98 ATEX 3462/01	20	PTB 98 ATEX 3462/02	25	PTB 98 ATEX 3462/03	23	IBExU 99 ATEX 1143/03
K11R 200 LX2	24	PTB 98 ATEX 3462/04	24	PTB 98 ATEX 3462/05	31	PTB 98 ATEX 3462/06	27	IBExU 99 ATEX 1143/11
K11R 225 M2	28	PTB 98 ATEX 3463/01	28	PTB 98 ATEX 3463/02	38	PTB 98 ATEX 3463/03	33	IBExU 99 ATEX 1144/02
K11R 250 M2	36	PTB 98 ATEX 3464/01	36	PTB 98 ATEX 3464/02	47	PTB 98 ATEX 3464/03	44	IBExU 99 ATEX 1131/06
K11R 280 S2	47	PTB 98 ATEX 3466/01	47	IBExU 99 ATEX 1030/17	68	IBExU 99 ATEX 1030/14	56	IBExU 99 ATEX 1030/06
K11R 280 S2	68	IBExU 99 ATEX 1030/14						
K11R 280 M2	58	PTB 98 ATEX 3466/02	58	PTB 98 ATEX 3466/03	76	PTB 98 ATEX 3466/04	70	IBExU 99 ATEX 1030/07
K11R 280 M2	76	PTB 98 ATEX 3466/04						
K11R 315 S2	68	PTB 98 ATEX 3465/01	68	IBExU 99 ATEX 1137/23	95	IBExU 99 ATEX 1137/02	82	IBExU 99 ATEX 1137/02
K11R 315 M2	80	PTB 98 ATEX 3465/02	80		112		80	IBExU 99 ATEX 1137/08
K11R 315 MY2	110	PTB 98 ATEX 3465/03	110	IBExU 99 ATEX 1137/28	135		132	IBExU 99 ATEX 1137/09
K11R 315 LX2	150	IBExU 99 ATEX 1137/30						

4-pole version

KPER 63 K4	0.12	PTB 99 ATEX 3309					0.12	PTB 99 ATEX 3309
KPER 63 G4	0.18	PTB 99 ATEX 3309	0.12	PTB 99 ATEX 3309			0.18	PTB 99 ATEX 3309
KPER 71 K4	0.25	PTB 99 ATEX 3310	0.25	PTB 99 ATEX 3310			0.25	PTB 99 ATEX 3310
KPER 71 G4	0.37	PTB 99 ATEX 3310	0.37	PTB 99 ATEX 3310			0.37	PTB 99 ATEX 3310
KPER 80 K4	0.55	PTB 99 ATEX 3311	0.55	PTB 99 ATEX 3311			0.55	PTB 99 ATEX 3311
KPER 80 G4	0.75	PTB 99 ATEX 3311					0.75	PTB 99 ATEX 3311
KPER 80 GX4			0.75	PTB 99 ATEX 3311				
KPER 90 S4	1.00	PTB 99 ATEX 3312	1.00	PTB 99 ATEX 3312			1.00	PTB 99 ATEX 3312
KPER 90 L4	1.35	PTB 99 ATEX 3312	1.35	PTB 99 ATEX 3312			1.35	PTB 99 ATEX 3312
KPER 100 L 4	2.00	PTB 99 ATEX 3313	2.00	PTB 99 ATEX 3313			2.00	PTB 99 ATEX 3313
KPER 100 LX4	2.5	PTB 99 ATEX 3313	2.5	PTB 99 ATEX 3313			2.5	PTB 99 ATEX 3313
KPER 112 M4	3.6	PTB 99 ATEX 3314	3.6	PTB 99 ATEX 3314			3.6	PTB 99 ATEX 3314
K11R 132 S4	5	PTB 98 ATEX 3459/04	5	PTB 98 ATEX 3459/05			5.8	IBExU 99 ATEX 1142/11
K11R 132 M4	6.8	PTB 98 ATEX 3459/06	6.8	PTB 98 ATEX 3459/07			7.8	IBExU 99 ATEX 1142/12
K11R 160 M4	10	PTB 98 ATEX 3460/10	10	PTB 98 ATEX 3460/11			12	IBExU 99 ATEX 1105/16
K11R 160 L4	13.5	PTB 98 ATEX 3460/12	13.5	PTB 98 ATEX 3460/13			15.5	IBExU 99 ATEX 1105/17
K11R 180 M4	15	PTB 98 ATEX 3461/04	15	PTB 98 ATEX 3461/05	17	PTB 98 ATEX 3461/06	17	IBExU 99 ATEX 1138/10
K11R 180 L4	17.5	PTB 98 ATEX 3461/07	17.5	PTB 98 ATEX 3461/08	20	PTB 98 ATEX 3461/09	20	IBExU 99 ATEX 1138/12
K11R 200 L4	24	PTB 98 ATEX 3462/07	24	PTB 98 ATEX 3462/08	27	PTB 98 ATEX 3462/09	28	IBExU 99 ATEX 1143/05
K11R 225 S4	30	PTB 98 ATEX 3463/04	30	PTB 98 ATEX 3463/05	33	PTB 98 ATEX 3463/06	36	IBExU 99 ATEX 1144/04
K11R 225 M4	36	PTB 98 ATEX 3463/07	36	PTB 98 ATEX 3463/08	40	PTB 98 ATEX 3463/09	43	IBExU 99 ATEX 1144/05
K11R 250 M4	44	PTB 98 ATEX 3464/04	44	PTB 98 ATEX 3464/06	50	PTB 98 ATEX 3464/05	52	IBExU 99 ATEX 1131/09
K11R 280 S4	58	PTB 98 ATEX 3466/05	58	IBExU 99 ATEX 1030/18	68	IBExU 99 ATEX 1030/02	70	IBExU 99 ATEX 1030/10
K11R 280 M4	70	PTB 98 ATEX 3466/06	70	PTB 98 ATEX 3466/07	80	PTB 98 ATEX 3466/08	84	IBExU 99 ATEX 1030/11
K11R 315 S4	84	PTB 98 ATEX 3465/04	84	IBExU 99 ATEX 1137/24	100	IBExU 99 ATEX 1137/15	100	IBExU 99 ATEX 1137/11
K11R 315 M4	100	PTB 98 ATEX 3465/05	100		120	IBExU 99 ATEX 1137/01	100	IBExU 99 ATEX 1137/12
K11R 315 MY4	115	PTB 98 ATEX 3465/06	115	IBExU 99 ATEX 1137/29	135		132	IBExU 99 ATEX 1137/13
K11R 315 L4	135	IBExU 99 ATEX 1137/16	135	IBExU 99 ATEX 1137/17				
K11R 315 LX4	170	IBExU 99 ATEX 1137/35						
K12R 355 M4	215	IBExU 01 ATEX 1009/01						

Three-phase motors with squirrel-cage rotor Increased-safety type of protection EEx e II acc. to DIN EN 50014/50019



acc. to
ATEX 95

temperature classes T1, T2 and T3

with surface ventilation, mode of operation S1, continuous duty

insulation class F, degree of protection IP 54, 50 Hz/60 Hz

Partial certification PTB Nr. Ex-91.C.3070 U, Ex-95.D.3020 U

Design in accordance to EG Certificates IBExU00ATEX1083 U and IBExU00ATEX1051 U

Summary of Approvals

Type	P ₂	U _B , 50 Hz, T1-T3 ATEX PTB ..	P ₂	U _B ...U ₀ , 50 Hz, T1-T3 ATEX PTB ..	P ₂	U _B , 50 Hz, T1,T2 ATEX PTB ..	P ₂	U _B , 60 Hz, T1-T3 ATEX
	kW		kW		kW		kW	
6-pole version								
KPER 80 K6	0.37	PTB 99 ATEX 3311	0.37	PTB 99 ATEX 3311			0.37	PTB 99 ATEX 3311
KPER 80 G6	0.55	PTB 99 ATEX 3311					0.55	PTB 99 ATEX 3311
KPER 90 S6	0.65	PTB 99 ATEX 3312	0.65	PTB 99 ATEX 3312			0.65	PTB 99 ATEX 3312
KPER 90 L6	0.95	PTB 99 ATEX 3312					0.95	PTB 99 ATEX 3312
KPER 100 L 6	1.4	PTB 99 ATEX 3313	1.4	PTB 99 ATEX 3313			1.4	PTB 99 ATEX 3313
KPER 112 M6	1.9	PTB 99 ATEX 3314	1.9	PTB 99 ATEX 3314			1.9	PTB 99 ATEX 3314
K11R 132 S6	2.6	PTB 98 ATEX 3459/08	2.6	PTB 98 ATEX 3459/09			3	IBExU 99 ATEX 1142/13
K11R 132 M6	3.5	PTB 98 ATEX 3459/10	3.5	PTB 98 ATEX 3459/11			4	IBExU 99 ATEX 1142/14
K11R 132 MX6	4.8	PTB 98 ATEX 3459/12	4.8	PTB 98 ATEX 3459/13			5.5	IBExU 99 ATEX 1142/15
K11R 160 M6	6.6	PTB 98 ATEX 3460/14	6.6	PTB 98 ATEX 3460/14			7.6	IBExU 99 ATEX 1105/18
K11R 160 L6	9.7	PTB 98 ATEX 3460/16	9.7	PTB 98 ATEX 3460/17			11	IBExU 99 ATEX 1105/19
K11R 180 L6	13.2	PTB 98 ATEX 3461/10	13.2	PTB 98 ATEX 3461/11			15	IBExU 99 ATEX 1138/14
K11R 200 L6	16.5	PTB 98 ATEX 3462/10	16.5				19	
K11R 200 LX6	20	PTB 98 ATEX 3462/11	20	PTB 98 ATEX 3462/12			23	IBExU 99 ATEX 1143/06
K11R 225 M6	27	PTB 98 ATEX 3463/10	27	PTB 98 ATEX 3463/11			32	IBExU 99 ATEX 1144/06
K11R 250 M6	33	PTB 98 ATEX 3464/07	33	IBExU 99 ATEX 1131/13			40	IBExU 99 ATEX 1131/10
K11R 280 S6	40	PTB 98 ATEX 3466/09	40				48	
K11R 280 M6	46	PTB 98 ATEX 3466/10	46		50	IBExU 99 ATEX 1030/16	55	
K11R 315 S6	64	PTB 98 ATEX 3465/07	64	PTB 98 ATEX 3465/09	68	PTB 98 ATEX 3465/08	76	
K11R 315 M6	76	IBExU 99 ATEX 1137/19	76	IBExU 99 ATEX 1137/20	82	IBExU 99 ATEX 1137/21	90	IBExU 99 ATEX 1137/22
K11R 315 MY6	85	IBExU 99 ATEX 1137/04	85	IBExU 99 ATEX 1137/05	92		100	
8-pole version								
KPER 80 K8	0.18	PTB 99 ATEX 3311					0.18	PTB 99 ATEX 3311
KPER 80 G8	0.25	PTB 99 ATEX 3311	0.25	PTB 99 ATEX 3311			0.25	PTB 99 ATEX 3311
KPER 90 S8	0.37	PTB 99 ATEX 3312					0.37	PTB 99 ATEX 3312
KPER 90 L8	0.55	PTB 99 ATEX 3312					0.55	PTB 99 ATEX 3312
KPER 100 L 8	0.65	PTB 99 ATEX 3313	0.65	PTB 99 ATEX 3313			0.65	PTB 99 ATEX 3313
KPER 100 LX8	0.95	PTB 99 ATEX 3313	0.95	PTB 99 ATEX 3313			0.95	PTB 99 ATEX 3313
KPER 112 M8	1.3	PTB 99 ATEX 3314	1.3	PTB 99 ATEX 3314			1.3	PTB 99 ATEX 3314
K11R 132 S8	1.9	PTB 98 ATEX 3459/14	1.9	PTB 98 ATEX 3459/15			2.2	IBExU 99 ATEX 1142/16
K11R 132 M8	2.6	PTB 98 ATEX 3459/16	2.6	PTB 98 ATEX 3459/17			3	IBExU 99 ATEX 1142/17
K11R 160 M8	3.5	PTB 98 ATEX 3460/18	3.5	PTB 98 ATEX 3460/19			4	IBExU 99 ATEX 1105/20
K11R 160 MX8	4.8	PTB 98 ATEX 3460/20	4.8	PTB 98 ATEX 3460/21			5.5	IBExU 99 ATEX 1105/21
K11R 160 L8	6.6	PTB 98 ATEX 3460/22	6.6	PTB 98 ATEX 3460/23			7.6	IBExU 99 ATEX 1105/22
K11R 180 L8	9.7	PTB 98 ATEX 3461/12	9.7	PTB 98 ATEX 3461/13			11	IBExU 99 ATEX 1138/15
K11R 200 L8	13.2	PTB 98 ATEX 3462/13	13.2				15	
K11R 225 S8	16.5	PTB 98 ATEX 3463/12	16.5				19.5	
K11R 225 M8	20	PTB 98 ATEX 3463/13	20				24	
K11R 250 M8	27	PTB 98 ATEX 3464/08	27	IBExU 99 ATEX 1131/14			32	IBExU 99 ATEX 1131/15
K11R 280 S8	33	PTB 98 ATEX 3466/11	33				40	
K11R 280 M8	40	PTB 98 ATEX 3466/12	40				48	
K11R 315 S8	50	PTB 98 ATEX 3465/10	50				60	
K11R 315 M8	68	PTB 98 ATEX 3465/11	68				82	
K11R 315 MY8	80	IBExU 99 ATEX 1137/25	80	IBExU 99 ATEX 1137/26			95	IBExU 99 ATEX 1137/27

Explosion protected motors
for type of protection "Flame-proof enclosure", EEx d II 2G / EEx de II 2G



Motor selection data, 50 Hz, 2- up to 8-pole
3000/1500/1000/750 rpm

Series

K8.R

mounting dimensions and output correlation acc. to DIN 42673 sh. 3 and 42677 sh. 3

Sizes

56 – 355

Output range

0.12 – 630 kW

Degrees of protection

IP 55, IP 56 acc. to DIN EN 60034-5

Cooling method

IC 411 acc. to DIN EN 60034-6

Types of construction

IM B3, IM B35, IM B5 and derived types of construction acc. to DIN EN 60034-7

Ambient temperatures

-20 °C up to +60 °C

Temperature classes

T3 up to T6

Explosion-protected version in accordance to Apparatus Group II, Category 2

EN 50 014 (DIN VDE 0170/0171 p. 1) General Requirements

EN 50 018 (DIN VDE 0170/0171 p. 5) Flame-proof enclosure "d"

The motor design version is certified in an EG-Sample Test Certificate.

Three-phase motors with squirrel-cage rotor, Flame-proof enclosure type of protection EEx d/de II acc. to DIN EN 50014/50018



temperature class T3 – T6

version for design voltage range A acc. to IEC 34-1, 50 Hz

with surface ventilation, mode of operation S1, continuous duty

insulation class F, degree of protection IP 55, 50 Hz

acc. to
ATEX 95

Motor selection data

Design point 400 V, 50 Hz

Type	P	n	η	$\cos \varphi$	I	I_A/I	M_A/M_B	M_k/M_B	J	m
	kW	rpm	%	-	400 V A	-	-	-	kgm ²	kg
Synchronous speed 3000 rpm – 2-pole version										
K81R 63 K2	0.18	2905	66	0.67	0.59	6.8	4.6	6.5	0.00028	16
K81R 63 L2	0.25	2860	70	0.75	0.69	5.8	3.4	4.7	0.00028	16
K81R 71 K2	0.37	2800	71.5	0.84	0.89	5.2	2.7	3.5	0.00028	16
K81R 71 L2	0.55	2810	72	0.84	1.31	5.5	2.8	3.6	0.00039	17
K81R 80 K2	0.75	2790	74	0.84	1.74	4.8	2.7	3.3	0.00058	24
K81R 80 L2	1.1	2820	78	0.85	2.4	5.5	2.8	3.5	0.0008	25
K81R 90 L2	1.5	2840	78.5	0.87	3.15	5.5	2.7	3.2	0.0013	31
K81R 90 LX2	2.2	2850	83	0.87	4.4	5.6	2.7	3.3	0.0018	35
K81R 100 L2	3	2850	85	0.87	5.9	6.8	2.7	3.3	0.0029	45
K81R 112 M2	4	2880	85.5	0.88	7.7	6.5	2.3	3.1	0.0051	53
K82R 132 S2	5.5	2880	87	0.88	10.4	6.4	2.5	3.3	0.0089	95
K82R 132 SX2	7.5	2910	88	0.89	13.8	6.8	2.7	3.5	0.0125	100
K82R 160 M2	11	2925	89	0.89	20	6.6	2.8	3.2	0.032	163
K82R 160 MX2	15	2920	89.5	0.92	26.5	6.8	2.8	3.2	0.043	173
K82R 160 L2	18.5	2925	90.5	0.92	32	6.8	2.6	3.1	0.052	188
K81R 180 M2	22	2925	91.5	0.92	37.5	6.9	2.5	3	0.075	196
K81R 200 L2	30	2955	92.5	0.90	52	7.2	2.6	2.9	0.13	254
K81R 200 LX2	37	2955	93.3	0.91	63	7.2	2.7	3	0.16	278
K82R 225 M2	45	2960	93.4	0.90	77	7.1	2.5	3	0.24	400
K82R 250 M2	55	2970	93.8	0.90	94	7.1	2.4	2.8	0.4	545
K82R 280 S2	75	2970	94.5	0.90	127	6.8	2.2	2.7	0.65	700
K82R 280 M2	90	2970	94.5	0.91	151	6.6	2.4	2.8	0.78	762
K82R 315 S2	110	2975	95	0.91	184	6.3	2	2.4	1.4	960
K82R 315 M2	132	2975	95.5	0.91	220	6.8	2.1	2.5	1.6	1025
K82R 315 L2	160	2975	95.7	0.91	265	6.9	2.4	2.7	1.7	1065
K82R 315 LX2	200	2980	95.8	0.92	330	6.9	2.3	2.6	2.2	1270
K82R 315 LY2	250	2980	96	0.92	410 ¹⁾	7.2	1.7	2.7	2.8	1420
K82R 355 L2	315	2980	96.6	0.92	510 ¹⁾	6.7	1.5	2.8	4.5	1900
K82R 355 LX2	355	2985	96.8	0.93	415 ¹⁾	6.9	1.4	2.7	5	2050
K82R 400 M2	400	2985	96.8	0.93	640 ¹⁾	7	1.3	2.7	5.5	2350
K82R 400 L2	450	2990	97	0.94	710 ¹⁾	7.2	1.1	2.8	8.5	2910

¹⁾ always two parallel feeding lines are required
EG-Sample Test Certificate PTB 99 ATEX 1098

Three-phase motors with squirrel-cage rotor, Flame-proof enclosure type of protection EEx d/de II acc. to DIN EN 50014/50018



acc. to
ATEX 95

temperature class T3 – T6

version for design voltage range A acc. to IEC 34-1, 50 Hz

with surface ventilation, mode of operation S1, continuous duty

insulation class F, degree of protection IP 55, 50 Hz

Motor selection data

Design point 400 V, 50 Hz

Type	P	n	η	$\cos \varphi$	I	I_A/I	M_A/M_B	M_k/M_B	J	m
	kW	rpm	%	-	400 V A	-	-	-	kgm ²	kg
Synchronous speed 1500 rpm – 4-pole version										
K81R 63 K4	0.12	1445	67	0.60	0.43	5.6	3.9	3.9	0.00046	16
K81R 63 L4	0.18	1415	70	0.70	0.53	4.7	2.7	2.7	0.00046	16
K81R 71 K4	0.25	1370	68.5	0.80	0.66	3.9	2	2.5	0.00046	16
K81R 71 L4	0.37	1380	71	0.80	0.94	3.9	2.2	2.6	0.00063	17
K81R 80 K4	0.55	1380	73	0.80	1.36	3.8	2	2.3	0.00092	24
K81R 80 L4	0.75	1400	75.5	0.79	1.81	4.5	2.1	2.5	0.0013	25
K81R 90 L4	1.1	1400	77	0.83	2.5	4.8	2.1	2.5	0.0021	31
K81R 90 LX4	1.5	1405	79	0.82	3.35	5	2.3	2.7	0.0029	35
K81R 100 L4	2.2	1420	81	0.82	4.8	5.4	2.4	2.8	0.0046	44
K81R 100 LX4	3	1415	82.5	0.83	6.3	5.5	2.3	2.7	0.0056	46
K81R 112 M4	4	1435	85	0.84	8.1	6.8	2.7	3.2	0.011	59
K82R 132 S4	5.5	1440	87	0.85	10.7	6.2	2.5	2.7	0.022	100
K82R 132 M4	7.5	1440	88.2	0.86	14.3	6.5	2.7	2.8	0.03	110
K82R 160 M4	11	1460	89.5	0.85	21	6.6	2.5	2.8	0.057	168
K82R 160 L4	15	1455	90	0.86	28	6.5	2.8	3.1	0.079	184
K81R 180 M4	18.5	1460	91	0.85	34.5	6.6	2.9	3	0.13	198
K81R 180 L4	22	1460	91.5	0.86	41	6.9	3	3	0.155	217
K81R 200 L4	30	1460	92.5	0.88	53	6.8	2.6	2.9	0.25	274
K82R 225 S4	37	1465	93	0.88	65	6.7	2.7	2.6	0.4	372
K82R 225 M4	45	1470	93.5	0.88	79	6.5	2.7	2.6	0.48	402
K82R 250 M4	55	1470	93.9	0.89	95	7.1	2.9	2.9	0.75	573
K82R 280 S4	75	1480	94.3	0.86	133	6.8	2.6	2.5	1.25	740
K82R 280 M4	90	1480	94.7	0.86	160	6.9	2.8	2.6	1.48	820
K82R 315 S4	110	1485	95.2	0.86	194	6.7	2.5	2.6	2.2	1040
K82R 315 M4	132	1485	95.5	0.86	230	6.8	2.5	2.7	2.7	1120
K82R 315 L4	160	1485	95.7	0.86	280	6.9	2.6	2.6	3.1	1210
K82R 315 LX4	200	1485	95.9	0.87	345	6.9	2.6	2.6	3.9	1430
K82R 315 LY4	250	1490	96.2	0.87	430 ¹⁾	7.3	1.7	2.7	4.6	1565
K82R 355 L4	315	1490	96.3	0.89	530 ¹⁾	6.9	1.5	2.7	6.1	2050
K82R 355 LX4	355	1490	96.6	0.90	590 ¹⁾	6.9	1.6	2.8	6.7	2200
K82R 355 LY4	400	1490	97	0.90	665 ¹⁾	7	1.5	2.8	7.4	2430
K82R 400 M4	450	1495	97	0.91	735 ¹⁾	7.3	1.1	2.7	18	2850
K82R 400 L4	500	1495	97.1	0.91	815 ¹⁾	7.3	1.1	2.7	20	3230
K82R 450 M4	560	1495	97.2	0.91	915 ¹⁾	6.8	1	2.7	26	3500
K82R 450 L4	630	1495	97.4	0.91	1025 ¹⁾	6.8	1	2.7	31	3800

¹⁾ always two parallel feeding lines are required
EG-Sample Test Certificate PTB 99 ATEX 1098

Three-phase motors with squirrel-cage rotor, Flame-proof enclosure type of protection EEx d/de II acc. to DIN EN 50014/50018



acc. to
ATEX 95

temperature class T3 – T6

version for design voltage range A acc. to IEC 34-1, 50 Hz

with surface ventilation, mode of operation S1, continuous duty

insulation class F, degree of protection IP 55, 50 Hz

Motor selection data

Design point 400 V, 50 Hz

Type	P	n	η	$\cos \varphi$	I	I_A/I	M_A/M_B	M_K/M_B	J	m
	kW	rpm	%	-	400 V A	-	-	-	kgm ²	kg
Synchronous speed 1000 rpm – 6-pole version										
K81R 71 L6	0.25	920	62	0.71	0.82	3.5	2.2	2.6	0.0012	17
K81R 80 K6	0.37	925	67	0.71	1.12	4.1	2.5	2.8	0.0019	24
K81R 80 L6	0.55	925	69	0.72	1.6	4	2.4	2.7	0.0025	25
K81R 90 L6	0.75	910	67	0.75	2.15	3.4	1.8	2.1	0.0033	31
K81R 90 LX6	1.1	920	71	0.73	3.05	3.7	2	2.2	0.0046	35
K81R 100 L6	1.5	945	77	0.75	3.75	5	2.4	2.9	0.0095	46
K81R 112 M6	2.2	950	81	0.75	5.2	5.6	2.7	3.1	0.017	59
K82R 132 S6	3	965	84	0.78	6.6	6.3	2.7	3.1	0.031	100
K82R 132 M6	4	960	85	0.79	8.6	6	2.6	3	0.037	104
K82R 132 MX6	5.5	960	86	0.81	11.4	6.4	2.6	3	0.043	112
K82R 160 M6	7.5	960	86.8	0.85	14.7	6.8	2.5	3.3	0.087	170
K82R 160 L6	11	965	87.5	0.86	21	6.7	2.5	3.2	0.12	190
K81R 180 L6	15	965	90	0.84	28.5	6.9	2.4	3.2	0.19	215
K81R 200 L6	18.5	975	90.5	0.84	35	6.2	1.9	2.7	0.28	270
K81R 200 LX6	22	970	91	0.85	41	6.8	2.2	3	0.31	280
K82R 225 M6	30	975	92	0.84	56	6.6	2.8	2.5	0.69	404
K82R 250 M6	37	980	92.5	0.84	69	6.6	2.8	2.6	1.03	570
K82R 280 S6	45	985	93.5	0.83	84	5.8	2.8	2.4	1.35	720
K82R 280 M6	55	985	93.5	0.82	104	5.8	2.7	2.3	1.7	770
K82R 315 S6	75	990	94	0.87	132	6.4	2.6	2.4	4.3	995
K82R 315 M6	90	990	94.2	0.88	157	6.5	2.6	2.4	5	1050
K82R 315 L6	110	990	94.5	0.88	191	6.5	2.7	2.5	6	1145
K82R 315 LX6	132	990	94.7	0.88	230	6.7	2.7	2.5	7.3	1265
K82R 315 LY6	160	990	95	0.88	275	6.8	2.6	2.5	8.3	1440
K82R 355 M6	200	990	95.5	0.88	345	6.7	1.8	2.7	11.3	1750
K82R 355 L6	250	990	95.9	0.88	430 ¹⁾	6.7	1.8	2.7	13.8	1950
K82R 355 LX6	315	990	96	0.88	540 ¹⁾	6.9	1.7	2.6	17.6	2300
K82R 400 M6	355	994	96.6	0.89	595 ¹⁾	6.6	1.1	2.7	27	2850
K82R 400 L6	400	994	96.6	0.89	670 ¹⁾	6.8	1.1	2.6	31	3230
K82R 450 M6	450	995	96.6	0.89	755 ¹⁾	6.8	1.2	2.8	46	3500
K82R 450 L6	500	995	97	0.89	835 ¹⁾	6.8	1.1	2.7	51	3800

Synchronous speed 750 rpm – 8-pole version

K81R 71 L8	0.12	680	51	0.65	0.52	2.6	1.9	2.4	0.0012	17
K81R 80 K8	0.18	690	61	0.65	0.66	3.2	2.2	2.6	0.0019	24
K81R 80 L8	0.25	690	62	0.64	0.91	3.2	2.2	2.5	0.0025	25
K81R 90 L8	0.37	690	63	0.65	1.3	3	1.8	2.2	0.0033	31
K81R 90 LX8	0.55	690	67	0.64	1.85	3.1	1.8	2.2	0.0046	35
K81R 100 L8	0.75	710	71	0.66	2.3	4	2.4	2.6	0.008	44
K81R 100 LX8	1.1	695	69	0.73	3.15	3.8	2	2.4	0.0095	46
K81R 112 M8	1.5	710	78	0.67	4.15	4.6	2.2	2.8	0.017	59
K82R 132 S8	2.2	695	80	0.79	5	4.1	2	2.3	0.029	97
K82R 132 M8	3	705	81	0.77	6.9	4.6	2.4	2.7	0.036	113
K82R 160 M8	4	715	85	0.78	8.7	4.6	1.8	2.3	0.071	157
K82R 160 MX8	5.5	720	86	0.77	12	5.4	2.1	2.8	0.105	170
K82R 160 L8	7.5	720	86.5	0.77	16.3	5.6	2.2	2.9	0.136	190
K81R 180 L8	11	725	89	0.79	22.5	6.4	2.4	3	0.22	215
K81R 200 L8	15	730	89.5	0.80	30	6.9	2.4	3.2	0.4	280
K82R 225 S8	18.5	730	90	0.79	37.5	6.3	2.2	3	0.56	372
K82R 225 M8	22	730	91	0.79	44	6.6	2.2	3	0.69	404
K82R 250 M8	30	735	92.5	0.82	57	6.8	2	3	1.2	550
K82R 280 S8	37	735	92.8	0.82	70	6.2	2.1	2.8	1.9	740
K82R 280 M8	45	735	92.8	0.82	85	6.3	2	2.6	2.3	800
K82R 315 S8	55	740	92.5	0.83	103	6	2.5	2.6	4.3	995
K82R 315 M8	75	740	93	0.83	140	6.3	2.5	2.5	5	1050
K82R 315 L8	90	740	93.2	0.83	168	6.6	2.6	2.6	6	1145
K82R 315 LX8	110	740	93.2	0.82	210	6.8	2.7	2.7	7.3	1265
K82R 315 LY8	132	735	93.4	0.82	250	6.3	2.5	2.5	8.3	1440
K82R 355 M8	160	740	95.1	0.83	295	6.4	1.9	2.4	11.4	1750
K82R 355 L8	200	745	95.5	0.82	370	6.6	1.7	2.5	13.9	1950
K82R 355 LX8	250	745	95.6	0.82	460 ¹⁾	6.7	1.7	2.5	17.7	2300
K82R 400 M8	315	745	96.2	0.83	570 ¹⁾	6.2	1.2	2.4	30	3100
K82R 400 L8	355	745	96.3	0.83	640 ¹⁾	6.3	1.1	2.3	34	3440
K82R 450 M8	400	745	96.6	0.84	710 ¹⁾	6.1	1	2.2	51	3750
K82R 450 L8	450	745	96.7	0.84	800 ¹⁾	6.1	1	2.2	57	4050

¹⁾ always two parallel feeding lines are required
EG-Sample Test Certificate PTB 99 ATEX 1098

**Explosion protected motors
for type of protection "Non-sparking", EEx nA II 3G**



Motor selection data, 50 Hz, 2- up to 8-pole
3000/1500/1000/750 rpm

Series

KPER/K11R/K12R

mounting dimensions and output correlation acc. to DIN EN 50347

KPR/K10R

Transnorm version on request

WE1R/W21R

mounting dimensions and output correlation acc. to DIN EN 50347

Size

63 – 355

Output range

0.06 – 450 kW

Degrees of protection

IP 54, 55, 56, 65 acc. to DIN EN 60034-5

Cooling method

IC 411 acc. to DIN EN 60034-6

Types of construction

IM B3, IM B35, IM B5 and derived types of construction acc. to DIN EN 60034-7

Ambient temperatures

shaft heights 56 – 112 -20 °C up to +40 °C

from shaft height 132 -40 °C up to +55 °C
(depending on the Certificate, deviations possible)

Temperature class

T1 up to T3

Explosion-protected version in accordance to Apparatus Group II, Category 3

EN 50 014 (DIN VDE 0170/0171 p. 1) General Requirements

EN 50 021 (DIN VDE 0170/0171 p. 16) Non-sparking "n"

The motor design version is certified in an EG-Sample Test Certificate.

Three-phase motors with squirrel-cage rotor

with surface ventilation, mode of operation S1, continuous duty

Motors for the use in zone 2

type of protection "Non-sparking", EEx nA II acc. to DIN EN 50021, temperature classes T1 – T3

insulation class F, degree of protection IP 55, 50 Hz



acc. to
ATEX 95

Motor selection data

Design point 400 V, 50 Hz

Type	P	n	η	$\cos \varphi$	I	I_k/I	M_k/M	M_s/M	M_k/M	max. T	J	m
	kW	rpm	%	-	400 V A	-	-	-	-	°C	kgm ²	kg
Synchronous speed 3000 rpm – 2-pole version												
KPER 56 K2	0.09	2840	70.0	0.74	0.25	4.9	2.3	2.3	2.8	140	0.00013	4.4
KPER 56 G2	0.12	2830	70.3	0.77	0.32	4.5	2.1	2.1	2.3	140	0.00013	4.5
KPER 63 K2	0.18	2790	67.1	0.76	0.51	4.1	1.9	1.9	2.2	140	0.00013	4.9
KPER 63 G2	0.25	2800	68.1	0.72	0.74	4.2	2.2	2.2	2.4	150	0.00015	5.2
KPER 71 K2	0.37	2780	71.5	0.79	0.94	4.4	2.1	2.1	2.3	150	0.00025	6.7
KPER 71 G2	0.55	2775	74.3	0.81	1.32	5.1	2.3	2.1	2.6	160	0.00032	7.6
KPER 80 K2	0.75	2825	77.5	0.81	1.72	5.9	2.4	2.4	2.4	150	0.00057	10.7
KPER 80 G2	1.1	2835	77.8	0.80	2.55	6.0	2.4	2.3	2.6	180	0.00072	11.5
KPER 90 S2	1.5	2840	81.2	0.86	3.1	7.0	2.5	2.5	2.8	160	0.00132	16
KPER 90 L2	2.2	2850	82.0	0.85	4.55	7.5	2.8	2.3	2.9	170	0.00170	19
KPER 100 L2	3.0	2865	83.4	0.84	6.15	6.8	2.4	2.2	2.8	180	0.00275	25
KPER 112 M2	4.0	2900	85.0	0.81	8.4	7.0	2.2	2.1	2.9	170	0.0045	32
KPER 112 MX2 ¹⁾	5.5	2890	86.3	0.84	11	7.5	2.4	2.2	3.0	190	0.0055	38
K11R 132 SX2	7.5	2900	87.0	0.86	14.5	6.6	1.8	1.3	2.5	170	0.0110	57
K11R 160 M2	11	2900	88.5	0.90	20.0	7.0	2.4	2.0	3.0	175	0.0258	81
K11R 160 MX2	15	2920	89.4	0.90	27.0	7.1	2.2	1.7	2.9	165	0.0575	118
K11R 160 L2	18.5	2930	90.5	0.92	32.5	7.2	2.1	1.6	2.8	165	0.0675	134
K11R 180 M2	22	2935	91.8	0.92	37.5	6.8	1.7	1.4	2.6	165	0.105	165
K11R 200 L2	30	2940	92.8	0.92	50.5	7.3	2.0	1.6	2.9	180	0.128	195
K11R 200 LX2	37	2940	93.0	0.90	64.0	7.0	1.8	1.3	2.4	165	0.193	255
K11R 225 M2	45	2940	93.7	0.91	76.0	7.5	1.8	1.4	2.7	180	0.220	290
K11R 250 M2	55	2955	93.7	0.91	93.0	7.5	2.0	1.5	2.6	165	0.375	360
K11R 280 S2	75	2970	94.6	0.92	124	7.5	2.0	1.6	2.6	140	0.650	490
K11R 280 M2	90	2970	94.7	0.91	151	8.5	2.2	1.8	2.8	155	0.675	510
K11R 315 S2	110	2975	95.4	0.91	183	8.5	1.5	1.3	2.5	150	1.21	720
K11R 315 M2	132	2975	95.4	0.91	219	8.5	2.0	1.8	2.7	160	1.44	800
K11R 315 MX2	160	2975	96.0	0.93	259	8.5	2.0	1.6	2.6	180	1.76	980
K11R 315 MY2	200	2970	96.0	0.92	327	8.2	2.6	2.0	2.6	165	2.82	1170
K11R 315 L2	250	2973	96.1	0.93	404	7.3	2.1	1.4	2.0	180	3.66	1460
K12R 355 M2	315	2985	96.8	0.91	520	8.2	1.4	1.0	3.0	150	4.20	2000
K12R 355 MX2	355	2985	96.9	0.91	580	8.5	1.4	1.0	2.9	170	5.60	2200
K12R 355 LY2	400	2985	97.1	0.91	650	8.6	1.6	1.0	2.9	180	7.10	2400
K12R 355 L2	450	2985	97.2	0.92	725	9.0	2.0	0.9	2.8	190	7.1	2400

max. T: maximum surface temperature (rotor included)

¹⁾ also available as K11R 132 S2

Three-phase motors with squirrel-cage rotor

with surface ventilation, mode of operation S1, continuous duty

Motors for the use in zone 2

type of protection "Non-sparking", EEx nA II acc. to DIN EN 50021, temperature classes T1 – T3

insulation class F, degree of protection IP 55, 50 Hz



acc. to
ATEX 95

Motor selection data

Design point 400 V, 50 Hz

Type	P	n	η	$\cos \varphi$	I	I_{Δ}/I	M_{Δ}/M	M_S/M	M_K/M	max. T	J	m
	kW	rpm	%	-	400 V A	-	-	-	-	°C	kgm ²	kg
Synchronous speed 1500 rpm – 4-pole version												
KPER 56 K4	0.06	1410	60.5	0.60	0.24	3.1	2.3	2.3	2.7	140	0.00019	4.3
KPER 56 G4	0.09	1375	62.0	0.68	0.31	3.2	1.9	1.9	2.2	140	0.00019	4.4
KPER 63 K4	0.12	1370	57.5	0.68	0.44	3.2	1.9	1.8	2.2	150	0.00019	4.8
KPER 63 G4	0.18	1360	61.0	0.66	0.65	3.3	2.0	2.0	2.3	160	0.00024	5.2
KPER 71 K4	0.25	1385	64.6	0.72	0.78	3.6	1.8	1.8	2.1	140	0.00040	6.8
KPER 71 G4	0.37	1370	67.8	0.74	1.06	3.8	2.0	2.0	2.2	160	0.00050	7.8
KPER 80 K4	0.55	1400	71.5	0.69	1.60	4.1	2.1	2.0	2.3	180	0.00087	10.6
KPER 80 G4	0.75	1400	73.5	0.70	2.10	4.6	2.2	2.1	2.3	160	0.00107	11.7
KPER 90 S4	1.10	1410	76.6	0.79	2.62	5.5	2.3	2.2	2.5	150	0.00207	15.5
KPER 90 L4	1.50	1400	78.8	0.81	3.40	5.5	2.5	2.4	2.6	160	0.00260	18
KPER 100 L4	2.20	1410	81.2	0.79	4.95	6.0	2.5	2.3	2.7	170	0.00400	23.5
KPER 100 LX4	3.00	1430	82.3	0.79	6.65	6.5	2.5	2.2	2.9	170	0.00725	30
KPER 112 M4	4.00	1435	84.2	0.78	8.80	6.9	2.6	2.5	3.2	180	0.0090	37
KPER 112 MX4 ¹⁾	5.5	1425	84.0	0.78	12.1	6.3	2.5		2.9	195	0.0110	45
K11R 132 M4	7.5	1450	85.0	0.82	15.5	5.5	2.0	1.7	2.9	160	0.028	69
K11R 160 M4	11.0	1440	87.0	0.83	22.0	6.0	2.2	1.9	3.3	165	0.035	86
K11R 160 L4	15.0	1455	89.0	0.86	28.5	6.0	2.5	2.0	3.0	170	0.078	120
K11R 180 M4	18.5	1455	90.0	0.86	34.5	6.0	2.5	2.0	2.9	180	0.090	136
K11R 180 L4	22	1465	90.5	0.84	42.0	6.5	2.0	1.8	2.6	180	0.138	170
K11R 200 L4	30	1465	91.5	0.85	55.5	7.0	2.0	1.7	2.4	190	0.168	200
K11R 225 S4	37	1470	92.5	0.86	67.0	7.0	2.0	1.7	2.5	180	0.275	270
K11R 225 M4	45	1470	93.0	0.86	81.0	7.0	2.0	1.7	2.5	195	0.313	300
K11R 250 M4	55	1475	93.5	0.86	98.5	7.0	2.2	1.7	2.3	180	0.525	375
K11R 280 S4	75	1480	94.1	0.86	134	7.0	2.0	1.7	2.2	170	0.950	520
K11R 280 M4	90	1480	94.6	0.86	160	7.0	2.1	1.6	2.2	175	1.100	580
K11R 315 S4	110	1485	95.1	0.86	194	7.5	1.8	1.6	2.2	160	1.96	740
K11R 315 M4	132	1485	95.1	0.86	233	7.0	1.8	1.5	2.2	160	2.27	840
K11R 315 MX4	160	1480	95.0	0.87	279	7.0	1.8	1.5	2.0	170	2.73	1000
K11R 315 MY4	200	1485	96.0	0.88	342	7.5	2.0	1.8	2.4	180	4.82	1200
K11R 315 L4	250	1485	96.1	0.90	415	8.0	2.0	1.6	2.3	180	5.93	1450
K12R 355 M4	315	1495	96.8	0.85	555	9.0	2.0	1.3	3.4	150	5.6	1950
K12R 355 MX4	355	1495	96.8	0.84	630	9.2	2.0	1.3	3.8	160	7.9	2150
K12R 355 LY4	400	1495	96.8	0.82	730	9.0	2.1	1.3	4.0	170	9.5	2400
K12R 355 L4	450	1490	96.7	0.79	850	8.7	1.9	1.4	4.0	185	9.5	2400

max. T: maximum surface temperature (rotor included)

¹⁾ also available as K11R 132 S2

Three-phase motors with squirrel-cage rotor

with surface ventilation, mode of operation S1, continuous duty

Motors for the use in zone 2

type of protection "Non-sparking", EEx nA II acc. to DIN EN 50021, temperature classes T1 – T3

insulation class F, degree of protection IP 55, 50 Hz



acc. to
ATEX 95

Motor selection data

Design point 400 V, 50 Hz

Type	P	n	η	cos φ	I	I _A /I	M _A /M	M _S /M	M _K /M	max. T	J	m
	kW	rpm	%	-	400 V A	-	-	-	-	°C	kgm ²	kg
Synchronous speed 1000 rpm – 6-pole version												
KPER 80 K6	0.37	915	66.0	0.66	1.22	3.4	2.0	2.0	2.0	150	0.00130	11
KPER 80 G6	0.55	915	68.0	0.67	1.73	3.7	2.2	2.2	2.4	170	0.00175	12.5
KPER 90 S6	0.75	935	70.0	0.64	2.43	4.5	2.4	2.4	2.6	140	0.00325	16
KPER 90 L6	1.10	935	73.0	0.69	3.15	4.6	2.2	2.2	2.6	180	0.00425	19
KPER 100 L6	1.50	945	76.4	0.73	3.90	4.6	2.1	2.0	2.4	160	0.00625	24
KPER 112 M6	2.20	950	79.8	0.74	5.35	5.3	2.2	2.1	2.7	150	0.01225	33.5
K11R 132 S6	3.0	955	78.5	0.82	6.7	5.7	1.8	1.6	2.7	130	0.0180	46
K11R 132 M6	4.0	955	80.0	0.80	9.0	6.0	2.2	2.0	3.1	130	0.0230	53
K11R 132 MX6	5.5	955	83.0	0.83	11.5	5.0	1.8	1.5	2.3	140	0.0430	70
K11R 160 M6	7.5	960	85.0	0.82	15.5	5.5	2.0	1.6	2.5	150	0.0530	86
K11R 160 L6	11.0	965	85.2	0.86	21.5	5.0	2.0	1.7	2.3	165	0.113	114
K11R 180 L6	15.0	965	86.0	0.83	30.5	6.0	2.4	2.1	2.7	180	0.145	136
K11R 200 L6	18.5	970	88.1	0.87	35.0	5.5	2.0	1.7	2.4	170	0.228	175
K11R 200 LX6	22	970	88.8	0.87	41.0	6.2	2.2	1.8	2.6	180	0.268	200
K11R 225 M6	30	973	90.4	0.89	54.0	6.5	2.2	1.7	2.5	180	0.443	265
K11R 250 M6	37	975	91.0	0.89	66.0	6.5	2.2	1.7	2.3	165	0.825	360
K11R 280 S6	45	980	92.0	0.87	81.0	6.0	2.0	1.5	2.0	155	1.28	465
K11R 280 M6	55	980	92.5	0.88	97.5	6.5	2.3	1.7	2.4	155	1.48	520
K11R 315 S6	75	985	93.5	0.87	133	7.0	2.0	1.6	2.4	140	2.63	690
K11R 315 M6	90	990	94.4	0.88	156	7.0	2.0	1.7	2.4	140	3.33	800
K11R 315 MX6	110	990	94.0	0.88	192	7.5	2.2	1.7	2.6	165	3.60	880
K11R 315 MY6	132	990	95.0	0.88	228	7.5	2.0	1.7	2.4	165	6.00	1050
K11R 315 L6	160	985	95.3	0.89	272	7.5	2.3	1.9	2.4	180	6.76	1250
K12R 355 M6	200	995	96.0	0.84	360	9.2	2.0	1.3	3.5	190	8.2	1650
K12R 355 MX6	250	995	96.6	0.85	440	9.0	2.0	1.2	3.2	190	12.1	2200
K12R 355 LY6	315	995	96.6	0.84	560	8.8	2.0	1.2	3.4	190	14.0	2400

Synchronous speed 750 rpm – 8-pole version												
KPER 80 K8	0.18	690	56.5	0.59	0.78	2.8	2.0	2.0	2.2	140	0.00130	10.5
KPER 80 G8	0.25	695	58.0	0.56	1.12	3.0	2.3	2.3	2.5	140	0.00175	12
KPER 90 S8	0.37	700	61.5	0.54	1.6	3.0	1.9	1.9	2.1	150	0.00300	15
KPER 90 L8	0.55	695	64.5	0.60	2.04	3.2	1.9	1.9	2.2	160	0.00375	18
KPER 100 L8	0.75	705	67.0	0.60	2.7	3.3	2.0	2.0	2.3	160	0.00625	23
KPER 100 LX8	1.1	705	73.0	0.67	3.25	4.0	2.0	2.0	2.4	150	0.00900	28
KPER 112 M8	1.5	705	75.5	0.70	4.1	4.4	2.2	2.1	2.5	150	0.01225	33.5
K11R 132 S8	2.2	705	75.5	0.76	5.5	4.5	1.7	1.6	2.3	125	0.0180	46
K11R 132 M8	3.0	705	78.0	0.75	7.4	4.5	1.7	1.6	2.3	135	0.0230	53
K11R 160 M8	4.0	710	79.3	0.78	9.3	4.0	1.6	1.3	1.9	140	0.0430	70
K11R 160 MX8	5.5	710	81.4	0.78	12.5	4.5	1.7	1.6	2.1	140	0.0530	86
K11R 160 L8	7.5	725	83.0	0.78	16.5	4.5	1.8	1.6	2.1	150	0.1130	114
K11R 180 L8	11.0	720	85.0	0.78	24.0	4.5	2.0	1.7	2.1	165	0.1450	136
K11R 200 L8	15.0	725	86.5	0.79	31.5	5.0	2.0	1.7	2.3	160	0.2280	175
K10R 180 M8	18.5	725	87.5	0.80	38.0	5.0	1.9	1.7	2.2	185	0.2680	200
K11R 225 S8	18.5	725	89.2	0.83	36.0	5.5	2.0	1.6	2.2	175	0.440	265
K11R 225 M8	22	725	89.2	0.84	42.5	5.0	1.8	1.5	2.2	175	0.440	265
K11R 250 M8	30	730	90.2	0.79	61.0	5.5	2.2	1.8	2.2	165	0.825	360
K11R 280 S8	37	735	91.0	0.80	73.5	5.5	2.0	1.5	2.0	155	1.350	465
K11R 280 M8	45	735	91.5	0.77	92.0	6.0	2.3	1.8	2.4	155	1.550	520
K11R 315 S8	55	740	93.1	0.80	107	6.5	1.8	1.6	2.3	130	2.63	690
K11R 315 M8	75	740	93.3	0.81	143	6.0	2.0	1.6	2.3	140	3.33	800
K11R 315 MX8	90	740	93.5	0.81	172	6.0	1.9	1.6	2.2	160	3.60	880
K11R 315 MY8	110	740	94.5	0.81	207	6.5	2.1	1.8	2.4	165	6.00	1050
K11R 315 L8	132	740	95.0	0.83	242	6.3	2.0	1.7	2.1	180	6.76	1250
K12R 355 M8	160	745	95.6	0.77	315	7.5	1.8	1.2	3.0	180	9.5	1600
K12R 355 MX8	200	745	95.9	0.79	380	8.2	2.0	1.3	3.5	190	13.4	2200
K12R 355 LY8	250	745	95.8	0.74	510	8.0	2.2	1.3	3.5	190	15.8	2400

max. T: maximum surface temperature (rotor included)

Energy saving motors in accordance to CEMEP "High Efficiency" eff 1 Efficiency determination acc. to DIN EN 60034-2



with surface ventilation, mode of operation S1, continuous duty
 for the use in zone 2

acc. to
 ATEX 95

type of protection "Non-sparking", EEx nA II acc. to DIN EN 50021, temperature classes T1 – T3
 insulation class F, degree of protection IP 55

Motor selection data

Design point 400 V, 50 Hz

Type	P _B	n _B	EFF-	η _B	η _{3/4}	cos φ _B	I _B	I _A /I _B	M _A /M _B	M _S /M _B	M _K /M _B	max. surface temp.	J	m
	kW	rpm	-	%	%	-	400 V A	-	-	-	-	°C	kgm ²	kg
Synchronous speed 3000 rpm – 2-pole version														
WE1R 132 S2	5.5	2915	1	88.9	88.6	0.86	10.5	7.3	2.2	1.5	2.9	135	0.01270	58
WE1R 132 SX2	7.5	2910	1	89.5	89.2	0.91	13.5	7.0	2.1	1.5	2.7	160	0.0168	75
WE1R 160 M2	11.0	2930	1	90.5	89.9	0.88	20.0	8.5	2.7	2.1	3.6	150	0.0258	100
WE1R 160 MX2	15.0	2935	1	91.3	91.0	0.92	26.0	7.3	2.1	1.6	2.7	165	0.0675	140
WE1R 160 L2	18.5	2930	1	91.8	91.7	0.91	32.0	7.5	2.2	1.6	2.8	160	0.0675	140
WE1R 180 M2	22	2942	1	92.7	92.8	0.90	38.0	6.6	1.8	1.4	2.6	165	0.105	175
WE1R 200 L2	30	2942	1	93.0	93.1	0.91	51.0	7.2	1.9	1.5	2.9	160	0.128	210
WE1R 200 LX2	37	2945	1	93.7	93.7	0.92	62.0	7.8	2.1	1.5	3.0	160	0.154	235
WE1R 225 M2	45	2945	1	93.7	93.7	0.89	78.0	7.4	1.8	1.5	3.0	180	0.360	300
WE1R 250 M2	55	2957	1	94.5	94.4	0.89	94.5	8.4	2.4	2.0	3.1	150	0.375	385
WE1R 280 S2	75	2972	1	95.2	95.0	0.90	126	8.0	2.1	1.7	3.0	135	0.65	510
WE1R 280 M2	90	2970	1	95.2	95.1	0.91	150	7.4	1.9	1.6	2.7	155	0.68	550
W21R 315 S2	110	2970	-	95.9	95.9	0.89	186	8.3	1.7	1.6	2.6	150	1.21	730
W21R 315 M2	132	2975	-	96.0	96.2	0.89	223	9.2	1.9	1.8	2.9	160	1.44	820
W21R 315 MX2	160	2970	-	96.1	96.1	0.90	267	8.2	1.6	1.5	2.4	160	1.76	955
W21R 315 MY2	200	2984	-	96.0	95.8	0.88	342	9.4	2.5	1.9	2.8	150	2.82	1200
W21R 315 L2	250	2980	-	96.0	96.0	0.93	404	8.6	2.3	1.7	2.4	180	3.66	1450
W21R 315 LX2	315	2980	-	96.8	96.8	0.95	494	9.8	2.8	1.9	2.7	190	4.43	1630

Synchronous speed 1500 rpm – 4-pole version

WE1R 112M4	4.0	1456	1	89.0	89.2	0.86	7.5	8.6	2.7	2.4	4.2		0.0170	56
WE1R 132 S4	5.5	1465	1	89.6	89.4	0.86	10.5	7.4	2.3	1.8	3.2	135	0.035	90
WE1R 132 M4	7.5	1470	1	90.3	89.9	0.82	14.5	8.5	2.8	2.2	4.0	160	0.035	92
WE1R 160 M4	11.0	1472	1	91.0	90.4	0.83	21.0	8.5	2.8	2.3	3.4	135	0.078	124
WE1R 160 L4	15.0	1470	1	91.8	91.5	0.88	27.0	8.5	2.8	2.2	3.3	135	0.115	165
WE1R 180 M4	18.5	1477	1	93.0	92.7	0.86	33.5	7.0	1.9	1.7	2.9	180	0.168	210
WE1R 180 L4	22	1478	1	93.0	92.5	0.82	42.0	7.7	2.3	1.9	3.3	180	0.168	210
WE1R 200 L4	30	1479	1	93.4	93.0	0.81	57.0	7.8	2.2	2.0	3.1	140	0.275	280
WE1R 225 S4	37	1475	1	93.7	93.5	0.84	68.0	7.3	2.3	1.9	2.9	160	0.313	320
WE1R 225 M4	45	1480	1	94.8	94.7	0.84	81.5	8.1	2.0	1.9	2.6	135	0.525	390
WE1R 250 M4	55	1485	1	95.0	94.7	0.82	102	8.0	1.9	1.8	2.4	135	0.95	535
WE1R 280 S4	75	1483	1	95.4	95.5	0.82	138	7.4	1.7	1.6	2.2	170	0.95	550
WE1R 280 M4	90	1484	1	95.5	95.5	0.82	166	7.9	2.2	1.9	2.4	160	1.10	605
W21R 315 S4	110	1485	-	95.7	95.8	0.81	204	8.4	1.8	1.5	2.7	160	1.96	760
W21R 315 M4	132	1484	-	96.2	96.3	0.83	239	7.9	1.8	1.6	2.5	160	2.27	850
W21R 315 MX4	160	1482	-	95.8	96.0	0.84	289	7.4	1.6	1.5	2.2	150	2.73	975
W21R 315 MY4	200	1490	-	96.2	96.2	0.88	341	8.3	1.7	1.2	2.4	150	4.82	1270
W21R 315 L4	250	1490	-	96.7	96.8	0.86	432	8.0	1.4	1.2	2.4	180	5.93	1450
W21R 315 LX4	315	1489	-	96.3	96.3	0.84	562	8.5	1.9	1.2	2.5	190	6.82	1630

Sample test certificate IBEXU03ATEXB004

Energy saving motors Efficiency determination acc. to DIN EN 60034-2



with surface ventilation, mode of operation S1, continuous duty
for the use in zone 2

acc. to
ATEX 95

type of protection "Non-sparking", EEx nA II acc. to DIN EN 50021, temperature classes T1 – T3
insulation class F, degree of protection IP 55

Motor selection data

Design point 400 V, 50 Hz

Type	P _B	n _B	η _B	η _{3/4}	cos φ _B	I _B	I _A /I _B	M _A /M _B	M _S /M _B	M _K /M _B	max. surface temp.	J	m
	kW	rpm	%	%	-	400 V A	-	-	-	-	°C	kgm ²	kg
Synchronous speed 1000 rpm – 6-pole version													
W21R 132 S6	3.0	961	85.0	85.7	0.80	6.5	5.9	2.2	2.1	3.2	130	0.023	54
W21R 132 M6	4.0	967	88.0	87.4	0.82	8.0	5.2	1.7	1.5	2.4	130	0.043	76
W21R 132 MX6	5.5	969	87.5	87.5	0.78	11.5	5.5	2.5	2.0	3.0	140	0.053	85
W21R 160 M6	7.5	976	89.0	88.0	0.81	15.0	6.3	2.4	2.2	3.0	150	0.113	118
W21R 160 L6	11.0	972	90.0	89.8	0.85	21.0	5.8	2.4	2.1	2.7	165	0.145	135
W21R 180 L6	15.0	975	91.0	90.0	0.85	28.0	6.3	2.4	2.0	2.9	180	0.228	183
W21R 200 L6	18.5	978	91.5	91.4	0.85	34.5	7.2	2.6	2.4	3.4	170	0.268	206
W21R 200 LX6	22	979	92.5	92.3	0.87	39.5	6.9	2.6	2.1	3.2	180	0.443	278
W21R 225 M6	30	985	93.0	92.6	0.85	54.5	7.0	2.6	2.3	3.1	180	0.825	360
W21R 250 M6	37	985	93.5	93.3	0.84	68.5	6.4	2.2	1.9	2.6	165	1.28	468
W21R 280 S6	45	983	94.0	94.0	0.85	81.0	6.2	2.1	1.8	2.5	155	1.48	545
W21R 280 M6	55	989	95.2	94.5	0.85	98.0	6.5	1.7	1.5	2.3	155	2.63	710
W21R 315 S6	75	987	95.2	94.5	0.86	132	6.6	2.0	1.6	2.4	140	3.33	804
W21R 315 M6	90	990	95.6	94.6	0.86	158	9.0	2.3	2.0	2.8	140	3.60	1148
W21R 315 MX6	110	990	96.1	95.9	0.87	190	8.0	2.4	1.8	2.5	165	6.00	1210
W21R 315 MY6	132	990	95.0	94.7	0.88	228	7.5	2.0		2.4	165	6.00	1250
W21R 315 L6	160	985	95.3	95.0	0.89	272	7.5	2.3		2.4	180	6.67	1250
W21R 315 LX6	200	990	95.0	94.7	0.87	349	8.3	2.2		2.7	190	8.60	1460

Synchronous speed 750 rpm – 8-pole version

W21R 132 S8	2.2	715	81.5	81	0.70	5.6	5.5	2.0		3.0	125	0.0180	53
W21R 132 M8	3.0	717	84.8	84.3	0.74	6.9	4.4	1.5		2.4	135	0.0430	70
W21R 160 M8	4	718	85.7	85.2	0.72	9.3	4.6	1.6		2.5	140	0.0530	86
W21R 160 MX8	5.5	719	87.3	86.9	0.81	11	4.6	1.6		2.2	140	0.1130	114
W21R 160 L8	7.5	725	89.0	88.5	0.77	16	5.5	2.0		2.8	150	0.1450	136
W21R 180 L8	11	730	89.8	88.8	0.76	23	5.8	2.0		2.9	165	0.2280	175
W21R 200 L8	15	727	90.0	89.5	0.77	31	5.6	2.0		2.8	160	0.2680	200
W21R 225 S8	18.5	730	91.1	90.1	0.79	37	5.6	1.7		2.8	175	0.44	265
W21R 225 M8	22	733	91.7	90.5	0.78	44.5	5.6	1.8		2.6	175	0.83	360
W21R 250 M8	30	737	92.8	92.5	0.78	59.5	5.5	1.8		2.5	165	1.35	465
W21R 280 S8	37	736	93.0	92.5	0.79	72.5	5.4	1.8		2.4	155	1.55	520
W21R 280 M8	45	740	93.9	93.4	0.81	85	6.7	2.2		2.5	155	2.63	690
W21R 315 S8	55	740	94.6	94.1	0.81	104	6.9	2.3		2.6	130	3.33	800
W21R 315 M8	75	740	93.3	93	0.81	143	6	2		2.3	140	3.33	800
W21R 315 MX8	90	740	93.5	93	0.81	172	6	1.9		2.2	160	3.6	880
W21R 315 MY8	110	740	94.6	94.1	0.81	207	6.5	2.1		2.4	165	6	1050
W21R 315 L8	132	740	95	94.5	0.83	242	6.3	2		2.1	180	6.76	1250
W21R 315 LX8	160	740	95.2	94.7	0.79	307	7.2	2.2		2.5	190	8.71	1430

Sample test certificate IBExU03ATEXB004

Motors for use in areas with occurrence of combustible dust
Motors for use in Zone 21, Ex II 2D



Motor selection data, 50 Hz, 2- up to 8-pole
3000/1500/1000/750 rpm

Series

KPER / K21Q

mounting dimensions and output correlation acc. to DIN EN 50347

KPR / K20Q

Transnorm version on request

WE1R / W21R Q

mounting dimensions and output correlation acc. to DIN EN 50347

Sizes

56 – 315

Output range

0.06 – 315 kW

Degree of protection

IP 65 acc. to DIN EN 60034-5

Cooling method

IC 411 acc. to DIN EN 60034-6

Types of construction

IM B3, IM B35, IM B5 and derived types of construction acc. to DIN EN 60034-7

Ambient temperatures

shaft heights 56 – 132T -20°C up to +40°C

from shaft height 132 -40°C up to +40°C

(depending on the Certificate, deviations possible)

Explosion-protected version in accordance to Apparatus Group II, Category 2

EN 50 014 (DIN VDE 0170/0171 p. 1) General Requirements

EN 50281-1-1(DIN VDE 0170/0171 p. 15) Areas with combustible dusts

The motor design version is certified in an EG-Sample Test Certificate.

Three-phase motors with squirrel-cage rotor

for use in zone 21 acc. to DIN EN 50281, T = 125 °C IP 65

version for design voltage range A acc. to IEC 34-1, 50 Hz

with surface ventilation, mode of operation S1, continuous duty

insulation class F, degree of protection IP 65

max. surface temperature 125 °C

acc. to
ATEX 95

Motor selection data

Design point 400 V, 50 Hz

Type	P	n	η	$\cos \varphi$	I	I_A/I	M_A/M_B	M_S/M_B	M_K/M_B	J	m
	kW	rpm	%	-	400 V A	-	-	-	-	kgm ²	kg
Synchronous speed 3000 rpm – 2-pole version											
KPER 56 K2	0.09	2840	70.0	0.74	0.25	4.9	2.3	2.3	2.8	0.00013	4.4
KPER 56 G2	0.12	2830	70.5	0.77	0.32	4.5	2.1	2.1	2.3	0.00013	4.5
KPER 63 K2	0.18	2790	67.0	0.76	0.51	4.1	1.9	1.9	2.2	0.00013	4.9
KPER 63 G2	0.25	2800	68.0	0.72	0.74	4.2	2.2	2.2	2.4	0.00015	5.2
KPER 71 K2	0.37	2780	71.5	0.79	0.94	4.4	2.1	2.1	2.3	0.00025	6.7
KPER 71 G2	0.55	2775	74.5	0.81	1.32	5.1	2.3	2.1	2.6	0.00032	7.6
KPER 80 K2	0.75	2825	77.5	0.81	1.72	5.9	2.4	2.4	2.4	0.00057	10.7
KPER 80 G2	1.1	2835	78.0	0.80	2.55	6.0	2.4	2.3	2.6	0.00072	11.5
KPER 90 S2	1.5	2840	81.0	0.86	3.1	7.0	2.5	2.5	2.8	0.00132	16
KPER 90 L2	2.2	2850	82.0	0.85	4.55	7.5	2.8	2.3	2.9	0.0017	19
KPER 100 L2	3.0	2865	83.5	0.84	6.15	6.8	2.4	2.4	2.8	0.00275	25
KPER 112 M2	4.0	2900	85.0	0.81	8.4	7.0	2.2	2.1	2.9	0.0045	32
KPER 132 S2T ¹⁾	5.5	2890	86.5	0.84	11	7.5	2.4	2.2	3.0	0.0055	40
KPER 132 SX2T	7.5	2880	87.0	0.84	14.8	6.3				0.0068	48
K21Q 132 SX2	7.5	2900	87.0	0.86	15	6.6	1.8	1.3	2.5	0.0110	57
K21Q 160 M2	11.0	2900	88.5	0.90	20	7.0	2.4	2.0	3.0	0.0258	81
K21Q 160 MX2	15.0	2930	89.4	0.90	27	7.1	2.2	1.7	2.9	0.0575	118
K21Q 160 L2	18.5	2920	90.5	0.92	32	7.2	2.1	1.6	2.8	0.0675	134
K21Q 180 M2	22	2935	91.8	0.92	37.5	6.8	1.7	1.4	2.6	0.1050	165
K21Q 200 L2	30	2940	92.8	0.92	50.5	7.3	2.0	1.6	2.9	0.1280	195
K21Q 200 Lx2	37	2940	93.0	0.90	64	7.0	1.8	1.3	2.4	0.1930	255
K21Q 225 M2	45	2940	93.7	0.91	76	7.5	1.8	1.4	2.7	0.2200	290
K21Q 250 M2	55	2955	93.7	0.91	93	7.5	2.0	1.5	2.6	0.3750	360
K21Q 280 S2	75	2970	94.6	0.92	124	7.5	2.0	1.6	2.6	0.6500	490
K21Q 280 M2	90	2970	94.7	0.91	151	8.5	2.2	1.8	2.8	0.6750	510
K21Q 315 S2	110	2975	95.4	0.91	183	8.5	1.5	1.3	2.5	1.210	720
K21Q 315 M2	132	2975	95.4	0.91	219	8.5	2.0	1.8	2.7	1.440	800
K21Q 315 MX2	160	2975	96.0	0.93	259	8.5	2.0	1.6	2.6	1.760	980
K21Q 315 MY2	200	2970	96.0	0.92	327	8.2	2.6	2.0	2.6	2.820	1170
K21Q 315 L2	250	2973	96.1	0.93	404	7.3	2.1	1.4	2.0	3.66	1460
K21Q 315 LX2	315	2975	96.7	0.92	511	7.4	2.4	1.4	2.0	4.43	1630

¹⁾ also available as K21Q 132 S4

Series K21Q also available as series K20Q

Three-phase motors with squirrel-cage rotor

for use in zone 21 acc. to DIN EN 50281, T = 125 °C IP 65

version for design voltage range A acc. to IEC 34-1, 50 Hz

with surface ventilation, mode of operation S1, continuous duty

insulation class F, degree of protection IP 65

max. surface temperature 125 °C

acc. to
ATEX 95

Motor selection data

Design point 400 V, 50 Hz

Type	P	n	η	$\cos \varphi$	I	I_A/I	M_A/M_B	M_S/M_B	M_K/M_B	J	m
	kW	rpm	%	-	400 V A	-	-	-	-	kgm ²	kg
Synchronous speed 1500 rpm – 4-pole version											
KPER 56 K4	0.06	1410	60.5	0.60	0.24	3.1	2.3	2.3	2.7	0.00019	4.3
KPER 56 G4	0.09	1375	62.0	0.68	0.31	3.2	1.9	1.9	2.2	0.00019	4.4
KPER 63 K4	0.12	1370	57.5	0.68	0.44	3.2	1.9	1.8	2.2	0.00019	4.8
KPER 63 G4	0.18	1360	61.0	0.66	0.65	3.3	2.0	2.0	2.3	0.00024	5.2
KPER 71 K4	0.25	1385	64.5	0.72	0.78	3.6	1.8	1.8	2.1	0.00040	6.8
KPER 71 G4	0.37	1370	68.0	0.74	1.06	3.8	2.0	2.0	2.2	0.00050	7.8
KPER 80 K4	0.55	1400	71.5	0.69	1.60	4.1	2.1	2.0	2.3	0.00087	10.6
KPER 80 G4	0.75	1400	73.5	0.70	2.10	4.6	2.2	2.1	2.3	0.00107	11.7
KPER 90 S4	1.10	1410	76.5	0.79	2.62	5.5	2.3	2.2	2.5	0.00207	15.5
KPER 90 L4	1.50	1400	79.0	0.81	3.40	5.5	2.5	2.4	2.6	0.00260	18
KPER 100 L4	2.20	1410	81.0	0.79	4.95	6.0	3.0	2.7	3.1	0.00400	23.5
KPER 100 LX4	3.00	1430	82.5	0.79	6.65	6.5	2.3	2.1	2.8	0.00725	30
KPER 112 M4	4.00	1435	84.0	0.78	8.80	6.9	2.6	2.5	3.2	0.00900	37
KPER 132 S4T ¹⁾	5.5	1420	86.5	0.78	11.80	6.3	2.5	2.4	2.9	0.01100	47
K21Q 132 M4	7.5	1450	87.0	0.84	15	6.0	2.0	1.7	2.9	0.0280	70
K21Q 160 M4	11.0	1450	88.4	0.85	21.0	6.8	2.2	1.9	3.3	0.0350	92
K21Q 160 L4	15.0	1465	89.4	0.86	28.0	7.3	2.5	2.0	3.0	0.0780	120
K21Q 180 M4	18.5	1460	90.0	0.86	35	6.8	2.5	2.0	2.9	0.0900	136
K21Q 180 L4	22	1465	90.5	0.84	42	6.5	2.0	1.8	2.6	0.1380	170
K21Q 200 L4	30	1465	91.5	0.85	55.5	7.0	2.0	1.7	2.4	0.1680	200
K21Q 225 S4	37	1470	92.5	0.86	67	7.0	2.0	1.7	2.5	0.2750	270
K21Q 225 M4	45	1470	93.0	0.86	81	7.0	2.0	1.7	2.5	0.3130	300
K21Q 250 M4	55	1475	93.5	0.86	98.5	7.0	2.2	1.7	2.3	0.5250	375
K21Q 280 S4	75	1480	94.1	0.86	134	7.0	2.0	1.7	2.2	0.950	520
K21Q 280 M4	90	1480	94.6	0.86	160	7.0	2.1	1.6	2.2	1.100	580
K21Q 315 S4	110	1485	95.1	0.86	194	7.5	1.8	1.6	2.2	1.960	740
K21Q 315 M4	132	1485	95.1	0.86	233	7.0	1.8	1.5	2.2	2.270	840
K21Q 315 MX4	160	1480	95.0	0.87	279	7.0	1.8	1.5	2.0	2.730	1000
K21Q 315 MY4	200	1485	96.0	0.88	342	7.5	2.0	1.8	2.4	4.820	1200
K21Q 315 L4	250	1485	96.1	0.90	417	8.0	2.0	1.6	2.3	5.93	1450
K21Q 315 LX4	315	1490	96.5	0.88	535	8.6	1.9	1.5	2.5	6.82	1630

¹⁾ also available as K21Q 132 S4

Series K21Q also available as series K20Q

**Three-phase motors with squirrel-cage rotor**

for use in zone 21 acc. to DIN EN 50281, T = 125 °C IP 65

version for design voltage range A acc. to IEC 34-1, 50 Hz

with surface ventilation, mode of operation S1, continuous duty

insulation class F, degree of protection IP 65

max. surface temperature 125 °C

acc. to
ATEX 95

Motor selection data

Design point 400 V, 50 Hz

Type	P	n	η	$\cos \varphi$	I	I_A/I	M_A/M_B	M_S/M_B	M_K/M_B	J	m
	kW	rpm	%	-	400 V A	-	-	-	-	kgm ²	kg
Synchronous speed 1000 rpm – 6-pole version											
KPER 63 K6	0.09	895	50.5	0.56	0.46	2.5	2.0	2.0	2.4	0.00024	4.9
KPER 63 G6	0.12	880	52.0	0.56	0.59	2.5	2.0	2.0	2.3	0.00027	5.7
KPER 71 K6	0.18	925	58.0	0.51	0.88	2.8	1.6	1.6	2.1	0.00045	7.4
KPER 71 G6	0.25	915	60.0	0.55	1.10	2.9	2.0	2.0	2.2	0.00060	8.3
KPER 80 K6	0.37	915	66.0	0.66	1.22	3.4	2.0	2.0	2.0	0.00130	11
KPER 80 G6	0.55	915	68.0	0.67	1.73	3.7	2.2	2.2	2.4	0.00175	12.5
KPER 90 S6	0.75	935	70.0	0.64	2.43	4.5	2.4	2.4	2.4	0.00325	16
KPER 90 L6	1.10	935	73.0	0.69	3.15	4.6	2.2	2.2	2.4	0.00425	19
KPER 100 L6	1.50	945	76.5	0.73	3.90	4.6	2.1	2.0	2.4	0.00625	24
KPER 112 M6	2.20	950	80.0	0.74	5.35	5.3	2.2	2.1	2.7	0.01225	33.5
KPER 132 S6T	3.00	935	82.0	0.75	7.05	5.2				0.01390	39
K21Q 132 S6	3.0	955	78.5	0.82	6.7	5.7	1.8	1.6	2.7	0.0180	46
K21Q 132 M6	4.0	955	80.0	0.80	9	6.0	2.2	2.0	3.1	0.0230	53
K21Q 132 MX6	5.5	955	83.0	0.83	11.5	5.0	1.8	1.5	2.3	0.0430	70
K21Q 160 M6	7.5	960	85.0	0.82	15.5	5.5	2.0	1.6	2.5	0.0530	86
K21Q 160 L6	11.0	965	85.2	0.86	21.5	5.0	2.0	1.7	2.3	0.1130	114
K21Q 180 L6	15.0	965	86.0	0.83	30.5	6.0	2.4	2.1	2.7	0.1450	136
K21Q 200 L6	18.5	970	88.1	0.87	35.0	5.5	2.0	1.7	2.4	0.2280	175
K21Q 200 LX6	22	970	88.8	0.87	41	6.2	2.2	1.8	2.6	0.2680	200
K21Q 225 M6	30	973	90.4	0.89	54	6.5	2.2	1.7	2.5	0.4430	265
K21Q 250 M6	37	975	91.0	0.89	66	6.5	2.2	1.7	2.3	0.8250	360
K21Q 280 S6	45	980	92.0	0.87	81	6.0	2.0	1.5	2.0	1.280	465
K21Q 280 M6	55	980	92.5	0.88	97.5	6.5	2.3	1.7	2.4	1.480	520
K21Q 315 S6	75	985	93.7	0.87	133	7.0	2.0	1.6	2.4	2.630	690
K21Q 315 M6	90	990	94.4	0.88	156	7.0	2.0	1.7	2.4	3.330	800
K21Q 315 MX6	110	990	94.0	0.88	192	7.5	2.2	1.7	2.6	3.60	880
K21Q 315 MY6	132	990	95.0	0.88	228	7.5	2.0	1.7	2.4	6.00	1050
K21Q 315 L6	160	985	95.3	0.89	272	7.5	2.3	1.9	2.4	6.67	1250
K21Q 315 LX6	200	990	95.0	0.87	349	8.3	2.2	2.0	2.7	8.60	1460

Synchronous speed 750 rpm – 8-pole version

KPER 71 K8	0.09	675	45.5	0.51	0.56	2.1	1.9	1.9	2.1	0.00050	6.6
KPER 71 G8	0.12	670	46.5	0.51	0.73	2.3	1.8	1.8	2.1	0.00060	8.1
KPER 80 K8	0.18	690	56.5	0.59	0.78	2.8	2.0	2.0	2.2	0.00130	10.5
KPER 80 G8	0.25	695	58.0	0.56	1.12	3.0	2.3	2.3	2.5	0.00175	12
KPER 90 S8	0.37	700	61.5	0.54	1.6	3.0	1.9	1.9	2.1	0.00300	15
KPER 90 L8	0.55	695	64.5	0.60	2.04	3.2	1.9	1.9	2.2	0.00375	18
KPER 100 L8	0.75	705	67.0	0.60	2.7	3.3	2.0	2.0	2.3	0.00625	23
KPER 100 LX8	1.1	705	73.0	0.67	3.25	4.0	2.0	2.0	2.4	0.00900	28
KPER 112 M8	1.5	705	75.5	0.70	4.1	4.4	2.2	2.1	2.5	0.01225	33.5
KPER 132 S8T	2.2	685	76.0	0.68	6.3	3.8				0.01390	39
K21Q 132 S8	2.2	705	75.5	0.76	5.5	4.5	1.7	1.6	2.3	0.0180	46
K21Q 132 M8	3.0	705	78.0	0.75	7.4	4.5	1.7	1.6	2.3	0.0230	53
K21Q 160 M8	4.0	710	79.3	0.78	9.3	4.0	1.6	1.3	1.9	0.0430	70
K21Q 160 MX8	5.5	710	81.4	0.78	12.5	4.5	1.7	1.6	2.1	0.0530	86
K21Q 160 L8	7.5	725	83.0	0.78	16.5	4.5	1.8	1.6	2.1	0.1130	114
K21Q 180 L8	11.0	720	85.0	0.78	24	4.5	2.0	1.7	2.1	0.1450	136
K21Q 200 L8	15.0	725	86.5	0.79	31.5	5.0	2.0	1.7	2.3	0.2280	175
K21Q 225 S8	18.5	725	89.2	0.83	36	5.5	2.0	1.6	2.2	0.4400	265
K21Q 225 M8	22	725	89.2	0.84	42.5	5.0	1.8	1.5	2.2	0.4400	265
K21Q 250 M8	30	730	90.2	0.79	61	5.5	2.2	1.8	2.2	0.8250	360
K21Q 280 S8	37	735	91.0	0.80	73.5	5.5	2.0	1.5	2.0	1.350	465
K21Q 280 M8	45	735	91.5	0.77	92	6.0	2.3	1.8	2.4	1.550	520
K21Q 315 S8	55	740	93.1	0.80	107	6.5	1.8	1.6	2.3	2.630	690
K21Q 315 M8	75	740	93.3	0.81	143	6.0	2.0	1.6	2.3	3.330	800
K21Q 315 MX8	90	740	93.5	0.81	172	6.0	1.9	1.6	2.2	3.60	880
K21Q 315 MY8	110	740	94.6	0.81	207	6.5	2.1	1.8	2.4	6.00	1050
K21Q 315 L8	132	740	95.0	0.83	242	6.3	2.0	1.7	2.1	6.76	1250
K21Q 315 LX8	160	740	95.2	0.79	307	7.2	2.2	1.9	2.5	8.71	1430

Series K21Q also available as series K20Q



Energy saving motors in accordance to CEMEP "High Efficiency" eff1



Efficiency determination acc. to DIN EN 60034-2

for use in zone 21 acc. to DIN EN 50281, T = 125 °C IP 65

and in type of protection "n" acc. to DIN EN 50014/50021

with surface ventilation, mode of operation S1, continuous duty

insulation class F, degree of protection IP 65

acc. to
ATEX 95

Motor selection data

Design point 400 V, 50 Hz

Type	P _B	n _B	EFF-	η _B	η _{3/4}	cos φ _B	I _B	I _A /I _B	M _A /M _B	M _S /M _B	M _K /M _B	max. surface temp.	J	m
	kW	rpm	-	%	%	-	400 V A	-	-	-	-	°C	kgm ²	kg
Synchronous speed 3000 rpm – 2-pole version														
WE1R 132 S2	5.5	2915	1	88.9	88.6	0.86	10.5	7.3	2.2	1.5	2.9	135	0.01270	58
WE1R 132 SX2	7.5	2910	1	89.5	89.2	0.91	13.5	7.0	2.1	1.5	2.7	160	0.0168	75
WE1R 160 M2	11.0	2930	1	90.5	89.9	0.88	20.0	8.5	2.7	2.1	3.6	150	0.0258	100
WE1R 160 MX2	15.0	2935	1	91.3	91.0	0.92	26.0	7.3	2.1	1.6	2.7	165	0.0675	140
WE1R 160 L2	18.5	2930	1	91.8	91.7	0.91	32.0	7.5	2.2	1.6	2.8	160	0.0675	140
WE1R 180 M2	22	2942	1	92.7	92.8	0.90	38.0	6.6	1.8	1.4	2.6	165	0.105	175
WE1R 200 L2	30	2942	1	93.0	93.1	0.91	51.0	7.2	1.9	1.5	2.9	160	0.128	210
WE1R 200 LX2	37	2945	1	93.7	93.7	0.92	62.0	7.8	2.1	1.5	3.0	160	0.154	235
WE1R 225 M2	45	2945	1	93.7	93.7	0.89	78.0	7.4	1.8	1.5	3.0	180	0.360	300
WE1R 250 M2	55	2957	1	94.5	94.4	0.89	94.5	8.4	2.4	2.0	3.1	150	0.375	385
WE1R 280 S2	75	2972	1	95.2	95.0	0.90	126	8.0	2.1	1.7	3.0	135	0.65	510
WE1R 280 M2	90	2970	1	95.2	95.1	0.91	150	7.4	1.9	1.6	2.7	155	0.68	550
W21R 315 S2	110	2970	-	95.9	95.9	0.89	186	8.3	1.7	1.6	2.6	150	1.21	730
W21R 315 M2	132	2975	-	96.0	96.2	0.89	223	9.2	1.9	1.8	2.9	160	1.44	820
W21R 315 MX2	160	2970	-	96.1	96.1	0.90	267	8.2	1.6	1.5	2.4	160	1.76	955
W21R 315 MY2	200	2984	-	96.0	95.8	0.88	342	9.4	2.5	1.9	2.8	150	2.82	1200
W21R 315 L2	250	2980	-	96.0	96.0	0.93	404	8.6	2.3	1.7	2.4	180	3.66	1450
W21R 315 LX2	315	2980	-	96.8	96.8	0.95	494	9.8	2.8	1.9	2.7	190	4.43	1630

Synchronous speed 1500 rpm – 4-pole version

WE1R 132 S4	5.5	1465	1	89.6	89.4	0.86	10.5	7.4	2.3	1.8	3.2	135	0.035	90
WE1R 132 M4	7.5	1470	1	90.3	89.9	0.82	14.5	8.5	2.8	2.2	4.0	160	0.035	92
WE1R 160 M4	11.0	1472	1	91.0	90.4	0.83	21.0	8.5	2.8	2.3	3.4	135	0.078	124
WE1R 160 L4	15.0	1470	1	91.8	91.5	0.88	27.0	8.5	2.8	2.2	3.3	135	0.115	165
WE1R 180 M4	18.5	1477	1	93.0	92.7	0.86	33.5	7.0	1.9	1.7	2.9	180	0.168	210
WE1R 180 L4	22	1478	1	93.0	92.5	0.82	42.0	7.7	2.3	1.9	3.3	180	0.168	210
WE1R 200 L4	30	1479	1	93.4	93.0	0.81	57.0	7.8	2.2	2.0	3.1	140	0.275	280
WE1R 225 S4	37	1475	1	93.7	93.5	0.84	68.0	7.3	2.3	1.9	2.9	160	0.313	320
WE1R 225 M4	45	1480	1	94.8	94.7	0.84	81.5	8.1	2.0	1.9	2.6	135	0.525	390
WE1R 250 M4	55	1485	1	95.0	94.7	0.82	102	8.0	1.9	1.8	2.4	135	0.95	535
WE1R 280 S4	75	1483	1	95.4	95.5	0.82	138	7.4	1.7	1.6	2.2	170	0.95	550
WE1R 280 M4	90	1484	1	95.5	95.5	0.82	166	7.9	2.2	1.9	2.4	160	1.10	605
W21R 315 S4	110	1485	-	95.7	95.8	0.81	204	8.4	1.8	1.5	2.7	160	1.96	760
W21R 315 M4	132	1484	-	96.2	96.3	0.83	239	7.9	1.8	1.6	2.5	160	2.27	850
W21R 315 MX4	160	1482	-	95.8	96.0	0.84	289	7.4	1.6	1.5	2.2	150	2.73	975
W21R 315 MY4	200	1490	-	96.2	96.2	0.88	341	8.3	1.7	1.2	2.4	150	4.82	1270
W21R 315 L4	250	1490	-	96.7	96.8	0.86	432	8.0	1.4	1.2	2.4	180	5.93	1450
W21R 315 LX4	315	1489	-	96.3	96.3	0.84	562	8.5	1.9	1.2	2.5	190	6.82	1630

EG-Sample Test Certificate IBExU04ATEX1118



Energy saving motors

Efficiency determination acc. to DIN EN 60034-2

for use in zone 21 acc. to DIN EN 50281, T = 125 °C IP65

and in type of protection "n" acc. to DIN EN 50014/50021

with surface ventilation, mode of operation S1, continuous duty

insulation class F, degree of protection IP 65



acc. to
ATEX 95

Motor selection data

Design point 400 V, 50 Hz

Type	P _B	n _B	η _B	η _{3/4}	cos φ _B	I _B	I _A /I _B	M _A /M _B	M _S /M _B	M _K /M _B	max. surface temp.	J	m
	kW	rpm	%	%	-	400 V A	-	-	-	-	°C	kgm ²	kg
Synchronous speed 1000 rpm – 6-pole version													
W21R 132 S6	3.0	961	85.0	85.7	0.80	6.5	5.9	2.2	2.1	3.2	130	0.023	54
W21R 132 M6	4.0	967	88.0	87.4	0.82	8.0	5.2	1.7	1.5	2.4	130	0.043	76
W21R 132 MX6	5.5	969	87.5	87.5	0.78	11.5	5.5	2.5	2.0	3.0	140	0.053	85
W21R 160 M6	7.5	976	89.0	88.0	0.81	15.0	6.3	2.4	2.2	3.0	150	0.113	118
W21R 160 L6	11.0	972	90.0	89.8	0.85	21.0	5.8	2.4	2.1	2.7	165	0.145	135
W21R 180 L6	15.0	975	91.0	90.0	0.85	28.0	6.3	2.4	2.0	2.9	180	0.228	183
W21R 200 L6	18.5	978	91.5	91.4	0.85	34.5	7.2	2.6	2.4	3.4	170	0.268	206
W21R 200 LX6	22	979	92.5	92.3	0.87	39.5	6.9	2.6	2.1	3.2	180	0.443	278
W21R 225 M6	30	985	93.0	92.6	0.85	54.5	7.0	2.6	2.3	3.1	180	0.825	360
W21R 250 M6	37	985	93.5	93.3	0.84	68.5	6.4	2.2	1.9	2.6	165	1.28	468
W21R 280 S6	45	983	94.0	94.0	0.85	81.0	6.2	2.1	1.8	2.5	155	1.48	545
W21R 280 M6	55	989	95.2	94.5	0.85	98.0	6.5	1.7	1.5	2.3	155	2.63	710
W21R 315 S6	75	987	95.2	94.5	0.86	132	6.6	2.0	1.6	2.4	140	3.33	804
W21R 315 M6	90	990	95.6	94.6	0.86	158	9.0	2.3	2.0	2.8	140	3.60	1148
W21R 315 MX6	110	990	96.1	95.9	0.87	190	8.0	2.4	1.8	2.5	165	6.00	1210
W21R 315 MY6	132	990	95.0	94.7	0.88	228	7.5	2.0		2.4	165	6.00	1250
W21R 315 L6	160	985	95.3	95.0	0.89	272	7.5	2.3		2.4	180	6.67	1250
W21R 315 LX6	200	990	95.0	94.7	0.87	349	8.3	2.2		2.7	190	8.60	1460

Synchronous speed 750 rpm – 8-pole version

W21R 132 S8	2.2	715	81.5	81	0.70	5.6	5.5	2.0		3.0	125	0.0180	53
W21R 132 M8	3.0	717	84.8	84.3	0.74	6.9	4.4	1.5		2.4	135	0.0430	70
W21R 160 M8	4	718	85.7	85.2	0.72	9.3	4.6	1.6		2.5	140	0.0530	86
W21R 160 MX8	5.5	719	87.3	86.9	0.81	11	4.6	1.6		2.2	140	0.1130	114
W21R 160 L8	7.5	725	89.0	88.5	0.77	16	5.5	2.0		2.8	150	0.1450	136
W21R 180 L8	11	730	89.8	88.8	0.76	23	5.8	2.0		2.9	165	0.2280	175
W21R 200 L8	15	727	90.0	89.5	0.77	31	5.6	2.0		2.8	160	0.2680	200
W21R 225 S8	18.5	730	91.1	90.1	0.79	37	5.6	1.7		2.8	175	0.44	265
W21R 225 M8	22	733	91.7	90.5	0.78	44.5	5.6	1.8		2.6	175	0.83	360
W21R 250 M8	30	737	92.8	92.5	0.78	59.5	5.5	1.8		2.5	165	1.35	465
W21R 280 S8	37	736	93.0	92.5	0.79	72.5	5.4	1.8		2.4	155	1.55	520
W21R 280 M8	45	740	93.9	93.4	0.81	85	6.7	2.2		2.5	155	2.63	690
W21R 315 S8	55	740	94.6	94.1	0.81	104	6.9	2.3		2.6	130	3.33	800
W21R 315 M8	75	740	93.3	93	0.81	143	6	2		2.3	140	3.33	800
W21R 315 MX8	90	740	93.5	93	0.81	172	6	1.9		2.2	160	3.6	880
W21R 315 MY8	110	740	94.6	94.1	0.81	207	6.5	2.1		2.4	165	6	1050
W21R 315 L8	132	740	95	94.5	0.83	242	6.3	2		2.1	180	6.76	1250
W21R 315 LX8	160	740	95.2	94.7	0.79	307	7.2	2.2		2.5	190	8.71	1430

EG-Sample Test Certificate IBEU04ATEX1118

Motors for use in areas with occurrence of combustible dust
Motors for use in Zone 22, Ex II 3D



Motor selection data, 50 Hz, 2- up to 8-pole
3000/1500/1000/750 rpm

Series

KPER/K21Q

mounting dimensions and output correlation acc. to DIN EN 50347

KPR/K20Q

Transnorm version on request

WE1R/W21R

mounting dimensions and output correlation acc. to DIN EN 50347

Sizes

56 – 315

Output range

0.09 – 450 kW

Degree of protection

IP 55 acc. to DIN EN 60034-5

IP 65 acc. to DIN EN 60034-5 for conductive dusts

Cooling method

IC 411 acc. to DIN EN 60034-6

Types of construction

IM B3, IM B35, IM B5 and derived types of construction acc. to DIN EN 60034-7

Ambient temperatures

shaft heights 56 acc. to 132T -20 °C up to +40 °C

from shaft height 132 -40 °C up to +40 °C

Explosion-protected version in accordance to Apparatus Group II, Category 2

EN 50014 (DIN VDE 0170/0171 p. 1) General Requirements

EN 50281-1-1 (DIN VDE 0170/0171 p. 15) Areas with combustible dust

The motor design version is certified in a Manufacturer's Declaration of Incorporation.

Three-phase motors with squirrel-cage rotor

for use in zone 22 acc. to DIN EN 50281, T = 125 °C IP 55

version for design voltage range A acc. to IEC 34-1, 50 Hz

with surface ventilation, mode of operation S1, continuous duty

insulation class F, degree of protection IP 55,

max. surface temperature 125 °C

acc. to
ATEX 95

Motor selection data

Design point 400 V, 50 Hz

Type	P	n	η	$\cos \varphi$	I	I_A/I	M_A/M_B	M_S/M_B	M_K/M_B	J	m
	kW	rpm	%	-	400 V A	-	-	-	-	kgm ²	kg
Synchronous speed 3000 rpm – 2-pole version											
K21R 56 K2	0.09	2840	70.0	0.74	0.25	4.9	2.3	2.3	2.8	0.00013	4.4
K21R 56 G2	0.12	2830	70.5	0.77	0.32	4.5	2.1	2.1	2.3	0.00013	4.5
K21R 63 K2	0.18	2790	67.0	0.76	0.51	4.1	1.9	1.9	2.2	0.00013	4.9
K21R 63 G2	0.25	2800	68.0	0.72	0.74	4.2	2.2	2.2	2.4	0.00015	5.2
K21R 71 K2	0.37	2780	71.5	0.79	0.94	4.4	2.1	2.1	2.3	0.00025	6.7
K21R 71 G2	0.55	2775	74.5	0.81	1.32	5.1	2.3	2.1	2.6	0.00032	7.6
K21R 80 K2	0.75	2825	77.5	0.81	1.72	5.9	2.4	2.4	2.4	0.00057	10.7
K21R 80 G2	1.1	2835	78.0	0.80	2.55	6.0	2.4	2.3	2.6	0.00072	11.5
K21R 90 S2	1.5	2840	81.0	0.86	3.1	7.0	2.5	2.5	2.8	0.00132	16
K21R 90 L2	2.2	2850	82.0	0.85	4.55	7.5	2.8	2.3	2.9	0.0017	19
K21R 100 L2	3.0	2865	83.5	0.84	6.15	6.8	2.4	2.4	2.8	0.00275	25
K21R 112 M2	4.0	2900	85.0	0.81	8.4	7.0	2.2	2.1	2.9	0.0045	32
K21R 132 S2T ¹⁾	5.5	2890	86.5	0.84	11	7.5	2.4	2.2	3.0	0.0055	40
K21R 132 SX2T	7.5	2880	87.0	0.84	14.8	6.3				0.0068	48
K21R 132 SX2	7.5	2900	87.0	0.86	15	6.6	1.8	1.3	2.5	0.0110	57
K21R 160 M2	11.0	2900	88.5	0.90	20	7.0	2.4	2.0	3.0	0.0258	81
K21R 160 MX2	15.0	2930	89.4	0.90	27	7.1	2.2	1.7	2.9	0.0575	118
K21R 160 L2	18.5	2920	90.5	0.92	32	7.2	2.1	1.6	2.8	0.0675	134
K21R 180 M2	22	2935	91.8	0.92	37.5	6.8	1.7	1.4	2.6	0.1050	165
K21R 200 L2	30	2940	92.8	0.92	50.5	7.3	2.0	1.6	2.9	0.1280	195
K21R 200 Lx2	37	2940	93.0	0.90	64	7.0	1.8	1.3	2.4	0.1930	255
K21R 225 M2	45	2940	93.7	0.91	76	7.5	1.8	1.4	2.7	0.2200	290
K21R 250 M2	55	2955	93.7	0.91	93	7.5	2.0	1.5	2.6	0.3750	360
K21R 280 S2	75	2970	94.6	0.92	124	7.5	2.0	1.6	2.6	0.6500	490
K21R 280 M2	90	2970	94.7	0.91	151	8.5	2.2	1.8	2.8	0.6750	510
K21R 315 S2	110	2975	95.4	0.91	183	8.5	1.5	1.3	2.5	1.210	720
K21R 315 M2	132	2975	95.4	0.91	219	8.5	2.0	1.8	2.7	1.440	800
K21R 315 MX2	160	2975	96.0	0.93	259	8.5	2.0	1.6	2.6	1.760	980
K21R 315 MY2	200	2970	96.0	0.92	327	8.2	2.6	2.0	2.6	2.820	1170
K21R 315 L2	250	2973	96.1	0.93	404	7.3	2.1	1.4	2.0	3.66	1460
K21R 315 LX2	315	2975	96.7	0.92	511	7.4	2.4	1.4	2.0	4.43	1630

¹⁾ also available as K21R 132 S2

Three-phase motors with squirrel-cage rotor

for use in zone 22 acc. to DIN EN 50281, T = 125 °C IP 55

version for design voltage range A acc. to IEC 34-1, 50 Hz

with surface ventilation, mode of operation S1, continuous duty

insulation class F, degree of protection IP 55,

max. surface temperature 125 °C



acc. to
ATEX 95

Motor selection data

Design point 400 V, 50 Hz

Type	P	n	η	$\cos \varphi$	I	I_A/I	M_A/M_B	M_S/M_B	M_K/M_B	J	m
	kW	rpm	%	-	400 V A	-	-	-	-	kgm ²	kg
Synchronous speed 1500 rpm – 4-pole version											
K21R 56 K4	0.06	1410	60.5	0.60	0.24	3.1	2.3	2.3	2.7	0.00019	4.3
K21R 56 G4	0.09	1375	62.0	0.68	0.31	3.2	1.9	1.9	2.2	0.00019	4.4
K21R 63 K4	0.12	1370	57.5	0.68	0.44	3.2	1.9	1.8	2.2	0.00019	4.8
K21R 63 G4	0.18	1360	61.0	0.66	0.65	3.3	2.0	2.0	2.3	0.00024	5.2
K21R 71 K4	0.25	1385	64.5	0.72	0.78	3.6	1.8	1.8	2.1	0.00040	6.8
K21R 71 G4	0.37	1370	68.0	0.74	1.06	3.8	2.0	2.0	2.2	0.00050	7.8
K21R 80 K4	0.55	1400	71.5	0.69	1.60	4.1	2.1	2.0	2.3	0.00087	10.6
K21R 80 G4	0.75	1400	73.5	0.70	2.10	4.6	2.2	2.1	2.3	0.00107	11.7
K21R 90 S4	1.10	1410	76.5	0.79	2.62	5.5	2.3	2.2	2.5	0.00207	15.5
K21R 90 L4	1.50	1400	79.0	0.81	3.40	5.5	2.5	2.4	2.6	0.00260	18
K21R 100 L4	2.20	1410	81.0	0.79	4.95	6.0	3.0	2.7	3.1	0.00400	23.5
K21R 100 LX4	3.00	1430	82.5	0.79	6.65	6.5	2.3	2.1	2.8	0.00725	30
K21R 112 M4	4.00	1435	84.0	0.78	8.80	6.9	2.6	2.5	3.2	0.00900	37
K21R 132 S4T ¹⁾	5.5	1420	86.5	0.78	11.80	6.3	2.5	2.4	2.9	0.01100	47
K21R 132 M4	7.5	1450	87.0	0.84	15	6.0	2.0	1.7	2.9	0.0280	70
K21R 160 M4	11.0	1450	88.4	0.85	21.0	6.8	2.2	1.9	3.3	0.0350	92
K21R 160 L4	15.0	1465	89.4	0.86	28.0	7.3	2.5	2.0	3.0	0.0780	120
K21R 180 M4	18.5	1460	90.0	0.86	35	6.8	2.5	2.0	2.9	0.0900	136
K21R 180 L4	22	1465	90.5	0.84	42	6.5	2.0	1.8	2.6	0.1380	170
K21R 200 L4	30	1465	91.5	0.85	55.5	7.0	2.0	1.7	2.4	0.1680	200
K21R 225 S4	37	1470	92.5	0.86	67	7.0	2.0	1.7	2.5	0.2750	270
K21R 225 M4	45	1470	93.0	0.86	81	7.0	2.0	1.7	2.5	0.3130	300
K21R 250 M4	55	1475	93.5	0.86	98.5	7.0	2.2	1.7	2.3	0.5250	375
K21R 280 S4	75	1480	94.1	0.86	134	7.0	2.0	1.7	2.2	0.950	520
K21R 280 M4	90	1480	94.6	0.86	160	7.0	2.1	1.6	2.2	1.100	580
K21R 315 S4	110	1485	95.1	0.86	194	7.5	1.8	1.6	2.2	1.960	740
K21R 315 M4	132	1485	95.1	0.86	233	7.0	1.8	1.5	2.2	2.270	840
K21R 315 MX4	160	1480	95.0	0.87	279	7.0	1.8	1.5	2.0	2.730	1000
K21R 315 MY4	200	1485	96.0	0.88	342	7.5	2.0	1.8	2.4	4.820	1200
K21R 315 L4	250	1485	96.1	0.90	417	8.0	2.0	1.6	2.3	5.93	1450
K21R 315 LX4	315	1490	96.5	0.88	535	8.6	1.9	1.5	2.5	6.82	1630

¹⁾ also available as K21R 132 S4

Three-phase motors with squirrel-cage rotor

for use in zone 22 acc. to DIN EN 50281, T = 125 °C IP 55

version for design voltage range A acc. to IEC 34-1, 50 Hz

with surface ventilation, mode of operation S1, continuous duty

insulation class F, degree of protection IP 55,

max. surface temperature 125 °C

acc. to
ATEX 95

Motor selection data

Design point 400 V, 50 Hz

Type	P	n	η	$\cos \varphi$	I	I_A/I	M_A/M_B	M_S/M_B	M_K/M_B	J	m
	kW	rpm	%	-	400 V A	-	-	-	-	kgm ²	kg
Synchronous speed 1000 rpm – 6-pole version											
K21R 63 K6	K20R 56 K6	0.09	895	50.5	0.56	0.46	2.5	2.0	2.4	0.00024	4.9
K21R 63 G6	K20R 56 G6	0.12	880	52.0	0.56	0.59	2.5	2.0	2.3	0.00027	5.7
K21R 71 K6	K20R 63 K6	0.18	925	58.0	0.51	0.88	2.8	1.6	2.1	0.00045	7.4
K21R 71 G6	K20R 63 G6	0.25	915	60.0	0.55	1.10	2.9	2.0	2.2	0.00060	8.3
K21R 80 K6	K20R 71 K6	0.37	915	66.0	0.66	1.22	3.4	2.0	2.0	0.00130	11
K21R 80 G6	K20R 71 G6	0.55	915	68.0	0.67	1.73	3.7	2.2	2.2	0.00175	12.5
K21R 90 S6	K20R 80 K6	0.75	935	70.0	0.64	2.43	4.5	2.4	2.4	0.00325	16
K21R 90 L6	K20R 80 G6	1.10	935	73.0	0.69	3.15	4.6	2.2	2.4	0.00425	19
K21R 100 L6	K20R 90 L6	1.50	945	76.5	0.73	3.90	4.6	2.1	2.0	0.00625	24
K21R 112 M6	K20R 100 L6	2.20	950	80.0	0.74	5.35	5.3	2.2	2.1	0.01225	33.5
K21R 132 S6T		3.00	935	82.0	0.75	7.05	5.2			0.01390	39
K21R 132 S6	K20R 112 M6	3.0	955	78.5	0.82	6.7	5.7	1.8	1.6	0.0180	46
K21R 132 M6	K20R 112 MX6	4.0	955	80.0	0.80	9	6.0	2.2	2.0	0.0230	53
K21R 132 MX6	K20R 132 S6	5.5	955	83.0	0.83	11.5	5.0	1.8	1.5	0.0430	70
K21R 160 M6	K20R 132 M6	7.5	960	85.0	0.82	15.5	5.5	2.0	1.6	0.0530	86
K21R 160 L6	K20R 160 S6	11.0	965	85.2	0.86	21.5	5.0	2.0	1.7	0.1130	114
K21R 180 L6	K20R 160 M6	15.0	965	86.0	0.83	30.5	6.0	2.4	2.1	0.1450	136
K21R 200 L6	K20R 180 S6	18.5	970	88.1	0.87	35.0	5.5	2.0	1.7	0.2280	175
K21R 200 LX6	K20R 180 M6	22	970	88.8	0.87	41	6.2	2.2	1.8	0.2680	200
K21R 225 M6	K20R 200 M6	30	973	90.4	0.89	54	6.5	2.2	1.7	0.4430	265
K21R 250 M6	K20R 225 M6	37	975	91.0	0.89	66	6.5	2.2	1.7	0.8250	360
K21R 280 S6	K20R 250 S6	45	980	92.0	0.87	81	6.0	2.0	1.5	1.280	465
K21R 280 M6	K20R 250 M6	55	980	92.5	0.88	97.5	6.5	2.3	1.7	1.480	520
K21R 315 S6	K20R 280 S6	75	985	93.7	0.87	133	7.0	2.0	1.6	2.630	690
K21R 315 M6	K20R 280 M6	90	990	94.4	0.88	156	7.0	2.0	1.7	3.330	800
K21R 315 MX6	K20R 315 S6	110	990	94.0	0.88	192	7.5	2.2	1.7	3.600	880
K21R 315 MY6	K20R 315 M6	132	990	95.0	0.88	228	7.5	2.0	1.7	6.000	1050
K21R 315 L6	K20R 315 L6	160	985	95.3	0.89	272	7.5	2.3	1.9	6.67	1250
K21R 315 LX6	K20R 315 LX6	200	990	95.0	0.87	349	8.3	2.2	2.0	8.60	1460

Synchronous speed 750 rpm – 8-pole version

K21R 71 K8	K20R 63 K8	0.09	675	45.5	0.51	0.56	2.1	1.9	1.9	2.1	0.00050	6.6
K21R 71 G8	K20R 63 G8	0.12	670	46.5	0.51	0.73	2.3	1.8	1.8	2.1	0.00060	8.1
K21R 80 K8	K20R 71 K8	0.18	690	56.5	0.59	0.78	2.8	2.0	2.0	2.2	0.00130	10.5
K21R 80 G8	K20R 71 G8	0.25	695	58.0	0.56	1.12	3.0	2.3	2.3	2.5	0.00175	12
K21R 90 S8	K20R 80 K8	0.37	700	61.5	0.54	1.6	3.0	1.9	1.9	2.1	0.00300	15
K21R 90 L8	K20R 80 G8	0.55	695	64.5	0.60	2.04	3.2	1.9	1.9	2.2	0.00375	18
K21R 100 L8	K20R 90 L8	0.75	705	67.0	0.60	2.7	3.3	2.0	2.0	2.3	0.00625	23
K21R 100 LX8	K20R 100 S8	1.1	705	73.0	0.67	3.25	4.0	2.0	2.0	2.4	0.00900	28
K21R 112 M8	K20R 100 L8	1.5	705	75.5	0.70	4.1	4.4	2.2	2.1	2.5	0.01225	33.5
K21R 132 S8T		2.2	685	76.0	0.68	6.3	3.8				0.01390	39
K21R 132 S8	K20R 112 M8	2.2	705	75.5	0.76	5.5	4.5	1.7	1.6	2.3	0.0180	46
K21R 132 M8	K20R 112 MX8	3.0	705	78.0	0.75	7.4	4.5	1.7	1.6	2.3	0.0230	53
K21R 160 M8	K20R 132 S8	4.0	710	79.3	0.78	9.3	4.0	1.6	1.3	1.9	0.0430	70
K21R 160 MX8	K20R 132 M8	5.5	710	81.4	0.78	12.5	4.5	1.7	1.6	2.1	0.0530	86
K21R 160 L8	K20R 160 S8	7.5	725	83.0	0.78	16.5	4.5	1.8	1.6	2.1	0.1130	114
K21R 180 L8	K20R 160 M8	11.0	720	85.0	0.78	24	4.5	2.0	1.7	2.1	0.1450	136
K21R 200 L8	K20R 180 S8	15.0	725	86.5	0.79	31.5	5.0	2.0	1.7	2.3	0.2280	175
K21R 225 S8		18.5	725	89.2	0.83	36	5.5	2.0	1.6	2.2	0.4400	265
K21R 225 M8	K20R 200 M8	22	725	89.2	0.84	42.5	5.0	1.8	1.5	2.2	0.4400	265
K21R 250 M8	K20R 225 M8	30	730	90.2	0.79	61	5.5	2.2	1.8	2.2	0.8250	360
K21R 280 S8	K20R 250 S8	37	735	91.0	0.80	73.5	5.5	2.0	1.5	2.0	1.350	465
K21R 280 M8	K20R 250 M8	45	735	91.5	0.77	92	6.0	2.3	1.8	2.4	1.550	520
K21R 315 S8	K20R 280 S8	55	740	93.1	0.80	107	6.5	1.8	1.6	2.3	2.630	690
K21R 315 M8	K20R 280 M8	75	740	93.3	0.81	143	6.0	2.0	1.6	2.3	3.330	800
K21R 315 MX8	K20R 315 S8	90	740	93.5	0.81	172	6.0	1.9	1.6	2.2	3.60	880
K21R 315 MY8	K20R 315 M8	110	740	94.6	0.81	207	6.5	2.1	1.8	2.4	6.00	1050
K21R 315 L8	K20R 315 L8	132	740	95.0	0.83	242	6.3	2.0	1.7	2.1	6.76	1250
K21R 315 LX8	K20R 315 LX8	160	740	95.2	0.79	307	7.2	2.2	1.9	2.5	8.71	1430



Energy saving motors in accordance to CEMEP "High Efficiency" eff1



Efficiency determination acc. to DIN EN 60034-2

for use in zone 22 acc. to DIN EN 50281, T = 125 °C IP 55

and in type of protection "n" acc. to DIN EN 50014/50021

with surface ventilation, mode of operation S1, continuous duty

insulation class F, degree of protection IP 55

acc. to

ATEX 95

Motor selection data

Design point 400 V, 50 Hz

Type	P _B	n _B	EFF-	η _B	η _{3/4}	cosφ _B	I _B	I _A /I _B	M _A /M _B	M _S /M _B	M _K /M _B	max. surface temp	J	m
	kW	rpm	-	%	%	-	400 V A	-	-	-	-	°C	kgm ²	kg
Synchronous speed 3000 rpm – 2-pole version														
WE1R 132 S2	5.5	2915	1	88.9	88.6	0.86	10.5	7.3	2.2	1.5	2.9	135	0.01270	58
WE1R 132 SX2	7.5	2910	1	89.5	89.2	0.91	13.5	7.0	2.1	1.5	2.7	160	0.0168	75
WE1R 160 M2	11.0	2930	1	90.5	89.9	0.88	20.0	8.5	2.7	2.1	3.6	150	0.0258	100
WE1R 160 MX2	15.0	2935	1	91.3	91.0	0.92	26.0	7.3	2.1	1.6	2.7	165	0.0675	140
WE1R 160 L2	18.5	2930	1	91.8	91.7	0.91	32.0	7.5	2.2	1.6	2.8	160	0.0675	140
WE1R 180 M2	22	2942	1	92.7	92.8	0.90	38.0	6.6	1.8	1.4	2.6	165	0.105	175
WE1R 200 L2	30	2942	1	93.0	93.1	0.91	51.0	7.2	1.9	1.5	2.9	160	0.128	210
WE1R 200 LX2	37	2945	1	93.7	93.7	0.92	62.0	7.8	2.1	1.5	3.0	160	0.154	235
WE1R 225 M2	45	2945	1	93.7	93.7	0.89	78.0	7.4	1.8	1.5	3.0	180	0.360	300
WE1R 250 M2	55	2957	1	94.5	94.4	0.89	94.5	8.4	2.4	2.0	3.1	150	0.375	385
WE1R 280 S2	75	2972	1	95.2	95.0	0.90	126	8.0	2.1	1.7	3.0	135	0.65	510
WE1R 280 M2	90	2970	1	95.2	95.1	0.91	150	7.4	1.9	1.6	2.7	155	0.68	550
W21R 315 S2	110	2970	-	95.9	95.9	0.89	186	8.3	1.7	1.6	2.6	150	1.21	730
W21R 315 M2	132	2975	-	96.0	96.2	0.89	223	9.2	1.9	1.8	2.9	160	1.44	820
W21R 315 MX2	160	2970	-	96.1	96.1	0.90	267	8.2	1.6	1.5	2.4	160	1.76	955
W21R 315 MY2	200	2984	-	96.0	95.8	0.88	342	9.4	2.5	1.9	2.8	150	2.82	1200
W21R 315 L2	250	2980	-	96.0	96.0	0.93	404	8.6	2.3	1.7	2.4	180	3.66	1450
W21R 315 LX2	315	2980	-	96.8	96.8	0.95	494	9.8	2.8	1.9	2.7	190	4.43	1630

Synchronous speed 1500 rpm – 4-pole version

WE1R 132 S4	5.5	1465	1	89.6	89.4	0.86	10.5	7.4	2.3	1.8	3.2	135	0.035	90
WE1R 132 M4	7.5	1470	1	90.3	89.9	0.82	14.5	8.5	2.8	2.2	4.0	160	0.035	92
WE1R 160 M4	11.0	1472	1	91.0	90.4	0.83	21.0	8.5	2.8	2.3	3.4	135	0.078	124
WE1R 160 L4	15.0	1470	1	91.8	91.5	0.88	27.0	8.5	2.8	2.2	3.3	135	0.115	165
WE1R 180 M4	18.5	1477	1	93.0	92.7	0.86	33.5	7.0	1.9	1.7	2.9	180	0.168	210
WE1R 180 L4	22	1478	1	93.0	92.5	0.82	42.0	7.7	2.3	1.9	3.3	180	0.168	210
WE1R 200 L4	30	1479	1	93.4	93.0	0.81	57.0	7.8	2.2	2.0	3.1	140	0.275	280
WE1R 225 S4	37	1475	1	93.7	93.5	0.84	68.0	7.3	2.3	1.9	2.9	160	0.313	320
WE1R 225 M4	45	1480	1	94.8	94.7	0.84	81.5	8.1	2.0	1.9	2.6	135	0.525	390
WE1R 250 M4	55	1485	1	95.0	94.7	0.82	102	8.0	1.9	1.8	2.4	135	0.95	535
WE1R 280 S4	75	1483	1	95.4	95.5	0.82	138	7.4	1.7	1.6	2.2	170	0.95	550
WE1R 280 M4	90	1484	1	95.5	95.5	0.82	166	7.9	2.2	1.9	2.4	160	1.10	605
W21R 315 S4	110	1485	-	95.7	95.8	0.81	204	8.4	1.8	1.5	2.7	160	1.96	760
W21R 315 M4	132	1484	-	96.2	96.3	0.83	239	7.9	1.8	1.6	2.5	160	2.27	850
W21R 315 MX4	160	1482	-	95.8	96.0	0.84	289	7.4	1.6	1.5	2.2	150	2.73	975
W21R 315 MY4	200	1490	-	96.2	96.2	0.88	341	8.3	1.7	1.2	2.4	150	4.82	1270
W21R 315 L4	250	1490	-	96.7	96.8	0.86	432	8.0	1.4	1.2	2.4	180	5.93	1450
W21R 315 LX4	315	1489	-	96.3	96.3	0.84	562	8.5	1.9	1.2	2.5	190	6.82	1630

with manufacturer's declaration



Energy saving motors

Efficiency determination acc. to DIN EN 60034-2

for use in zone 22 acc. to DIN EN 50281, T = 125 °C IP 55

and in type of protection "n" acc. to DIN EN 50014/50021

with surface ventilation, mode of operation S1, continuous duty

insulation class F, degree of protection IP 55



acc. to
ATEX 95

Motor selection data

Design point 400 V, 50 Hz

Type	P _B	n _B	η _B	η _{3/4}	cosφ _B	I _B	I _A /I _B	M _A /M _B	M _S /M _B	M _K /M _B	max. surface temp	J	m
	kW	rpm	%	%	-	A	400 V	-	-	-	°C	kgm ²	kg
Synchronous speed 1000 rpm – 6-pole version													
W21R 132 S6	3.0	961	85.0	85.7	0.80	6.5	5.9	2.2	2.1	3.2	130	0.023	54
W21R 132 M6	4.0	967	88.0	87.4	0.82	8.0	5.2	1.7	1.5	2.4	130	0.043	76
W21R 132 MX6	5.5	969	87.5	87.5	0.78	11.5	5.5	2.5	2.0	3.0	140	0.053	85
W21R 160 M6	7.5	976	89.0	88.0	0.81	15.0	6.3	2.4	2.2	3.0	150	0.113	118
W21R 160 L6	11.0	972	90.0	89.8	0.85	21.0	5.8	2.4	2.1	2.7	165	0.145	135
W21R 180 L6	15.0	975	91.0	90.0	0.85	28.0	6.3	2.4	2.0	2.9	180	0.228	183
W21R 200 L6	18.5	978	91.5	91.4	0.85	34.5	7.2	2.6	2.4	3.4	170	0.268	206
W21R 200 LX6	22	979	92.5	92.3	0.87	39.5	6.9	2.6	2.1	3.2	180	0.443	278
W21R 225 M6	30	985	93.0	92.6	0.85	54.5	7.0	2.6	2.3	3.1	180	0.825	360
W21R 250 M6	37	985	93.5	93.3	0.84	68.5	6.4	2.2	1.9	2.6	165	1.28	468
W21R 280 S6	45	983	94.0	94.0	0.85	81.0	6.2	2.1	1.8	2.5	155	1.48	545
W21R 280 M6	55	989	95.2	94.5	0.85	98.0	6.5	1.7	1.5	2.3	155	2.63	710
W21R 315 S6	75	987	95.2	94.5	0.86	132	6.6	2.0	1.6	2.4	140	3.33	804
W21R 315 M6	90	990	95.6	94.6	0.86	158	9.0	2.3	2.0	2.8	140	3.60	1148
W21R 315 MX6	110	990	96.1	95.9	0.87	190	8.0	2.4	1.8	2.5	165	6.00	1210
W21R 315 MY6	132	990	95.0	94.7	0.88	228	7.5	2.0		2.4	165	6.00	1250
W21R 315 L6	160	985	95.3	95.0	0.89	272	7.5	2.3		2.4	180	6.67	1250
W21R 315 LX6	200	990	95.0	94.7	0.87	349	8.3	2.2		2.7	190	8.60	1460

Synchronous speed 750 rpm – 8-pole version

W21R 132 S8	2.2	715	81.5	81	0.70	5.6	5.5	2.0		3.0	125	0.0180	53
W21R 132 M8	3.0	717	84.8	84.3	0.74	6.9	4.4	1.5		2.4	135	0.0430	70
W21R 160 M8	4	718	85.7	85.2	0.72	9.3	4.6	1.6		2.5	140	0.0530	86
W21R 160 MX8	5.5	719	87.3	86.9	0.81	11	4.6	1.6		2.2	140	0.1130	114
W21R 160 L8	7.5	725	89.0	88.5	0.77	16	5.5	2.0		2.8	150	0.1450	136
W21R 180 L8	11	730	89.8	88.8	0.76	23	5.8	2.0		2.9	165	0.2280	175
W21R 200 L8	15	727	90.0	89.5	0.77	31	5.6	2.0		2.8	160	0.2680	200
W21R 225 S8	18.5	730	91.1	90.1	0.79	37	5.6	1.7		2.8	175	0.44	265
W21R 225 M8	22	733	91.7	90.5	0.78	44.5	5.6	1.8		2.6	175	0.83	360
W21R 250 M8	30	737	92.8	92.5	0.78	59.5	5.5	1.8		2.5	165	1.35	465
W21R 280 S8	37	736	93.0	92.5	0.79	72.5	5.4	1.8		2.4	155	1.55	520
W21R 280 M8	45	740	93.9	93.4	0.81	85	6.7	2.2		2.5	155	2.63	690
W21R 315 S8	55	740	94.6	94.1	0.81	104	6.9	2.3		2.6	130	3.33	800
W21R 315 M8	75	740	93.3	93	0.81	143	6	2		2.3	140	3.33	800
W21R 315 MX8	90	740	93.5	93	0.81	172	6	1.9		2.2	160	3.6	880
W21R 315 MY8	110	740	94.6	94.1	0.81	207	6.5	2.1		2.4	165	6	1050
W21R 315 L8	132	740	95	94.5	0.83	242	6.3	2		2.1	180	6.76	1250
W21R 315 LX8	160	740	95.2	94.7	0.79	307	7.2	2.2		2.5	190	8.71	1430

EG-Sample Test Certificate IBExU04ATEX1118