Low voltage asynchronous motors
Motors for use in potentially explosive atmospheres

Type of protection Increased safety “e”
Type of protection Non sparking “n”
Type of protection Flame-proof enclosure “d/de”
Type of protection Protected by enclosure “tD A21”
Type of protection Protected by enclosure “tD A22”

Excerpt from Main catalogue Ex 03-2009

رهاب صنعت سپاهان
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VEM

Low voltage asynchronous motors
Motors for use in
potentially explosive atmospheres

Excerpt from
Main catalogue Ex 03-2009

Contents

The products featured in this catalogue can also be found in the interactive electronic catalogue V 6.x.
Additional information about the company and the products of the VEM group are available via internet: www.vem-group.com.
The electronic catalogue can assist you in selecting and configuring VEM products. You can choose to print out data sheets and requests and the programme can display scaled and dimensioned drawings that can be downloaded in different 2D and 3D-data files. In addition to general information about the VEM group, you have access to catalogues, spare parts lists and operation and maintenance manuals of the individual product types.

Innovative drives made in Germany

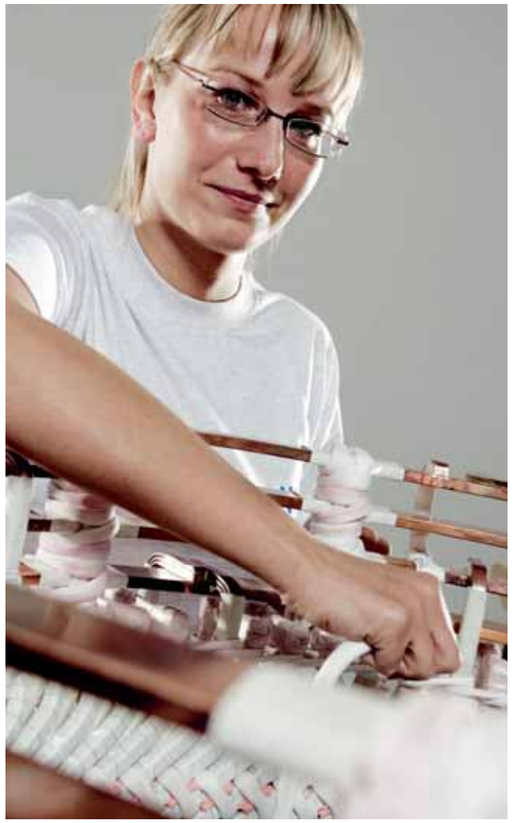
Electric machines made by VEM have millions of applications around the globe. VEM stands for high-quality products such as large and special-purpose machines, standard motors and customized drives which have given reliable service in a variety of industries. Systems of all types use our motors, generators and drives for a wide range of voltages. They have stood the test for decades even under extreme conditions – whether in the dust and heat of mill trains, chemical plants with explosion hazards, or in the moist, salty air aboard ships. VEM products meet all relevant standards and regulations.

Our quality assurance is certified and monitored by Germanischer Lloyd Certification GmbH, Hamburg pursuant to DIN EN ISO 9001:2000, and by IBExU Institut für Sicherheitstechnik GmbH, designated body no. 0637 pursuant to Article 10(1) of RL 94/9/EG.

More than standard products

Electric drives of all types are used throughout industry, and their properties are very often a key factor in making production efficient. The VEM range of three-phase asynchronous motors for low voltages meets customer requirements for versatility, better operating data, environmental acceptability and maximum reliability.

More particularly, the following features are available:
- energy conservation as a result of high motor efficiencies
- universal applications, less storage with IP 55 protective system fitted in series (degrees up to IP 66 on request)
- optional arrangement of connection box left/top/right
- improved service life, reliability and thermal overload capacity from series production in thermal class 155 (F) with thermal reserve (thermal class 180 (H) available as a special design)
- environmentally acceptable with low-noise ventilation system
- availability to East European standards
- alternative availability of conventional IEC/DIN series and an advanced line of products based on IEC 60072 for mounting dimensions and sizes
- facilities for mounting components such as pulse generators, tachometers, brakes, speed monitors and external ventilation units to deal with today's (automatic) control tasks as required by customers.



Caring for the environment

The VEM Group has long been committed to protecting and preserve the natural environment for this and following generations. We are working together with plant manufacturers to press ahead with the use of energyoptimized motors and drive systems for maximum conservation. The Voluntary Agreement made between CEMEP and the European Union, and the EU's "Motor Challenge Program" have shown that European manufacturers are committed to improving the efficiency of electric motors and seeking complete solutions in plant manufacture.

The VEM group and its European subsidiaries have signed the Voluntary Agreement and acceded to the "Motor Challenge Program". As a result, VEM has completely

stopped producing motors in efficiency class EFF3. We assist customers in the energy-conscious operation of plants and systems as a contribution to environmental protection and saving overheads. Motors in types of protection Non sparking "n" and protection by enclosure "tD A21" and "tD A22" are now available in efficiency classes IE1 and IE2 complying with EN 60034-30.

Security for areas with risk of explosions

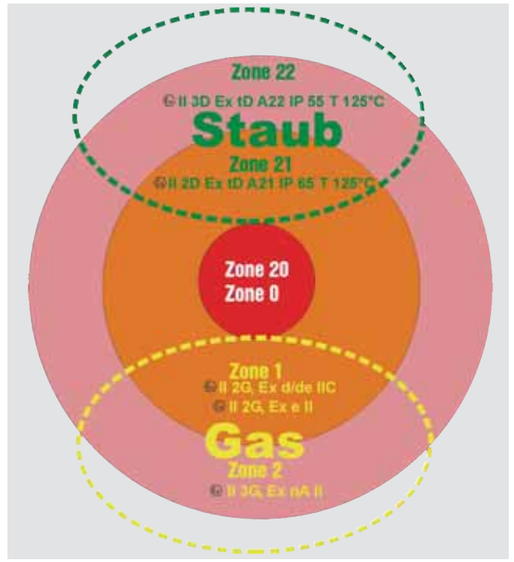
Explosion-proof service rooms, in which potentially explosive gas or vapour-air-mixtures can form or in which combustible dust can occur, require the use of electric equipment for areas with risk of explosions.

For the chemical industry the comprehensive range of low-voltage motors from VEM offers a wide selection of explosion-proof motors for different types of protection and for areas with risk of dust or gas explosions. The product line covers the following types of protection:

- Increased safety "e" acc. to EN 60079-0/60079-7
- Flameproof enclosure "d/de" acc. to EN 60079-0/60079-1
- Non sparking "n" acc. to EN 60079-0/EN 60079-15, IEC 79-15
- Protection by enclosure "tD A21" acc. to EN 61241-0/EN 61241-1
- Protection by enclosure "tD A22" acc. to EN 61241-0/EN 61241-1

As the motors are available in these types of protection it is possible to use them in drives for pumps and ventilators in all kinds of chemical industry applications. In addition they are used to drive conveyors, extruders, kneader, mixers, centrifuges and atomisers.

The chemical industry is currently operating more than 80,000 explosion-proof motors with outputs between 0.1 and 1 MW in different applications and processes. Until now about 5 to 7 % of the used motors are controlled by inverters. As energy efficiency is very important in the chemical industry, the number of inverter controlled drives is steadily increasing. To comply with this demand VEM is now offering Exe-motors that can operate with inverter feeding.



Working with customers worldwide

Wherever clients require electric machines, we are partners in supporting and accompanying their projects, whether they be in Europe, the Middle East, Asia or the Americas. After all, proximity to customers and customer care are dear to us. You can use the know-how of VEM subsidiaries in Finland, Britain, Austria, Sweden and Singapore, and a dense distribution and service network with agencies in over 40 countries.

For many years VEM is supplying explosion-proof motors for new and existing installations all over the world. Many producers rely on explosion-proof low-voltage motors of VEM. The motors operate daily with high reliability in chemical plants in Europe, Asia and North and Latin America. Especially in economically growing countries many new chemical installations (for example for the petrol industry or for production of fertilisers) are

currently built. Because of the high demand for oil and gas as energy sources a lot of new plants are constructed here as well. Thus VEM has provided the motors in type of protection Ex nA non-sparking for a new gas liquefaction plant as an example.

Motors for operation in zone 2 (EEx nA), zone 21 (Ex II 2D) and zone 22 (Ex II 3D) can be delivered in standard design (series K...) and also with increased efficiency EFF1/IE2 (series W...).

All motors of the VEM type series are tested and approved by the PTB (Physikalisch-Technische Bundesanstalt) Braunschweig (notified body No. 102), by IBExU Freiberg (notified body No. 0637) or by former DMT Gesellschaft für Forschung und Prüfung mbH (notified body 0158), which is now DEKRA EXAM GmbH. The certificates are accepted by all member states of the European Union. In addition the Non-EC members of CENELEC accept them as well.

For special designs influencing the explosion protection (different frequency, output, coolant temperature, inverter operation, etc.) an additional or new approval might become necessary.

Guideline 94/9/EG – ATEX 95 (former ATEX 100a)
The PTB (Physikalisch-Technische Bundesanstalt) Braunschweig and the IBExU Freiberg in accordance with article 9 of the Council Directive (94/9/EC) of 23.03.1994, certifies that this equipment has been found to comply with the essential health and safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the directive.

The quality assurance system is certified and monitored in accordance with article 10(1) of Directive 94/9/EC by German Lloyd Certification GmbH, Hamburg, complying with DIN EN ISO 9001:2000 and by IBExU Institut für Sicherheitstechnik GmbH, notified body No. 0637.

Please note:
Our policy is one of constant product improvement. Designs, technical data and illustrations remain subject to change. Specifications may only be considered binding after written confirmation by the supplier.


CERTIFICATE

VEM motors GmbH

Development, production and sale of electric motors, generators, drive systems and apparatus for potentially explosive areas.

ISO 9001:2000


VEM motors GmbH

VEM motors Thum GmbH

VEM Slovakia s.r.o.

VEM Competence-Center Süd

VEM Competence-Center West

VEM Competence-Center Siegen

VEM Competence-Center Nord

VEM Competence-Center Ost

VEM Competence-Center Berlin


IBExU Institut für Sicherheitstechnik GmbH

PRODUCT QUALITY ASSURANCE NOTIFICATION


EU Declaration of Conformity

Combinations of equipment groups and equipment categories

Type of protection increased safety “e”

CE 0637 Ex II 2G Ex e II T1/ T2,T3

Basic version
Rated voltage range A
50 Hz, 2- up to 8-pole
3000/1500/1000/750 rpm

Basic version
Rated voltage range A
60 Hz, 2- up to 8-pole
3600/1800/1200/900 rpm

Basic version
Extended voltage range A
50 Hz, 2- up to 8-pole
3000/1500/1000/750 rpm

Low noise design
with unidirectional fan
Rated voltage range A
50 Hz, 2-pole
3000 rpm

Type of protection increased safety “e”
for operation in Zone 1 acc. to EN 60079-7
or dustproof design
for operation in Zone 21 acc. to EN 61241-1
(IBExU 02 ATEX 1019 for series K1.R)
Rated voltage range A
50 Hz, 2- up to 8-pole
3000/1500/1000/750 rpm

Motors for inverter operation
1500/1000 rpm

CE 0637 ⟨Ex⟩ II 2G Ex e II T1/ T2,T3

Three-phase motors with squirrel-cage rotor
Type of protection Increased safety “e”
Motors for operation in Zone 1 acc. to EN 60079-7

for rated voltage, temperature classes T1/ T2 and T3
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155 (F/B)

Motor selection data — Design point 400 V, 50 Hz

Type	P	Temper-ature	M	n	η	cos φ	I 400 V	I_A/I_N	M_A/M_N	M_S/M_N	M_K/M_N	t_E time T1,T2	t_E time T3	Approval no.	J	m
	kW	class	Nm	rpm	%	-	A	-	-	-	-	s	s		kgm^2	kg
Synchronous speed 3000 rpm – 2-pole version																
KPER 63 K2	0.18	T1-T3	0.50	2870	61.0	0.80	0.53	3.7	1.6	1.6	2.0	30	29	PTB 99 ATEX 3309	0.00013	4.9
KPER 63 G2	0.25	T1-T3	0.85	2800	65.0	0.74	0.75	4.1	1.9	1.9	2.2	15	13	PTB 99 ATEX 3309	0.00015	5.2
KPER 71 K2	0.37	T1-T3	1.29	2740	67.0	0.84	0.97	4.1	1.7	1.7	2.2	18	16	PTB 99 ATEX 3310	0.00025	6.7
KPER 71 G2	0.55	T1-T3	1.90	2770	73.0	0.79	1.43	4.8	2.2	2.2	2.5	13	11	PTB 99 ATEX 3310	0.00032	7.6
KPER 80 K2	0.75	T1-T3	2.55	2810	74.0	0.84	1.76	5.3	1.9	1.9	2.4	16	14	PTB 99 ATEX 3311	0.00057	10.7
KPER 80 G2	1.10	T1-T3	3.71	2830	77.0	0.82	2.60	5.6	2.5	2.3	2.5	10	8	PTB 99 ATEX 3311	0.00072	11.5
KPER 90 S2	1.30	T1-T3	4.36	2850	78.0	0.88	2.75	6.5	2.4	2.0	2.6	16	14	PTB 99 ATEX 3312	0.00132	16
KPER 90 L2	1.85	T1-T3	6.16	2870	83.0	0.86	3.85	7.4	3.0	3.0	3.2	12	9	PTB 99 ATEX 3312	0.00170	19
KPER 100 L2	2.50	T1-T3	8.32	2870	82.0	0.87	5.20	6.8	2.5	2.4	2.7	16	13	PTB 99 ATEX 3313	0.00275	25
KPER 112 M2	3.30	T1-T3	10.8	2910	85.0	0.82	6.90	7.7	2.3	2.1	3.1	16	11	PTB 99 ATEX 3314	0.0045	32
KPER 112 MX2	4.10	T1-T3	13.5	2910	87.0	0.87	8.10	7.9	2.5	1.9	3.3	18	11	PTB 99 ATEX 3314	0.0055	38
K11R 132 S2	4.6	T1-T3	15.1	2900	87.5	0.88	8.6	7.0	1.4	1.2	2.8	29	13	PTB 08 ATEX 3037/09	0.0110	57
K11R 132 SX2	5.5	T1-T3	18.0	2925	89.0	0.86	10.4	8.5	1.9	1.3	3.3	16	6	PTB 08 ATEX 3037/10	0.0110	57
K12R 132 SX2	5.5	T1-T3	17.9	2930	89.5	0.92	9.6	7.4	2.1	1.3	2.6	35	18	IBExU 99 ATEX 1142/21	0.0258	88
	6.6	T1,T2	21.7	2910	90.0	0.93	11.6	6.2	1.7	1.1	2.1	30		IBExU 99 ATEX 1142/23	0.0258	88
K11R 160 M2	7.5	T1-T3	24.3	2945	87.5	0.90	13.7	6.9	1.9	1.6	2.7	40	21	PTB 08 ATEX 3038/11	0.0575	120
	9.5	T1,T2	31.1	2917	87.5	0.90	17.4	5.4	1.5	1.3	2.1	40		PTB 08 ATEX 3038/12	0.0575	120
K11R 160 MX2	10.0	T1-T3	32.5	2935	89.5	0.90	17.9	6.5	1.8	1.5	2.5	30	13	PTB 08 ATEX 3038/13	0.0575	120
	13.0	T1,T2	42.8	2900	88.0	0.90	23.5	5.0	1.4	1.1	1.9	20		PTB 08 ATEX 3038/14	0.0575	120
K11R 160 L2	12.5	T1-T3	40.5	2945	90.0	0.91	22.0	7.3	1.8	1.4	2.8	24	11	PTB 08 ATEX 3038/15	0.0675	138
	16.0	T1,T2	52.3	2920	89.5	0.91	28.5	5.6	1.4	1.1	2.2	20		PTB 08 ATEX 3038/16	0.0675	138
K11R 180 M2	15	T1-T3	48.6	2945	91.0	0.92	26.0	7.0	1.8	1.5	2.6	35	16	PTB 08 ATEX 3039/06	0.105	175
	19	T1,T2	62.1	2920	90.5	0.92	33.0	5.4	1.5	1.3	2.1	26		PTB 08 ATEX 3039/07	0.105	175
K11R 200 L2	20	T1-T3	65.1	2935	91.5	0.92	34.0	6.6	1.8	1.3	2.4	27	10	PTB 08 ATEX 3040/05	0.128	210
	25	T1,T2	82.0	2910	90.5	0.93	43.0	5.2	1.4	1.2	1.9	17		PTB 08 ATEX 3040/06	0.128	210
K11R 200 LX2	24	T1-T3	77.7	2950	93.0	0.90	41.0	7.0	1.6	1.2	2.5	26	10	PTB 08 ATEX 3040/07	0.193	255
	31	T1,T2	101	2925	91.5	0.90	54.0	5.3	1.4	1.2	2.2	16		PTB 08 ATEX 3040/08	0.193	255
K11R 225 M2	28	T1-T3	90.0	2970	93.0	0.91	47.5	7.6	1.5	1.0	2.6	30	15	PTB 08 ATEX 3041/05	0.375	360
	38	T1,T2	123	2950	93.0	0.91	65	5.4	1.2	0.9	2.0	27		PTB 08 ATEX 3041/06	0.375	360
K11R 250 M2	36	T1-T3	116	2970	93.2	0.93	60	7.2	1.9	1.5	2.6	40	19	PTB 08 ATEX 3042/03	0.650	490
	47	T1,T2	152	2955	93.0	0.92	79	5.4	1.4	1.1	1.9	35		PTB 08 ATEX 3042/04	0.650	490
K11R 280 S2	47	T1-T3	151	2970	93.7	0.88	82	7.1	1.4	1.3	2.2	50	25	PTB 08 ATEX 3043/03	1.21	730
	68	T1-T3	218	2975	94.0	0.89	117	7.8	1.4	1.3	2.3	23	9	IBExU 99 ATEX 1030/14	1.21	730
K11R 280 M2	58	T1-T3	186	2975	94.1	0.88	101	7.1	1.4	1.3	2.1	40	18	PTB 08 ATEX 3043/04	1.44	815
	76	T1-T3	244	2970	94.5	0.90	130	6.6	1.1	1.0	1.7	30	13	PTB 08 ATEX 3043/05	1.44	815
K11R 315 S2	68	T1-T3	218	2975	95.0	0.90	116	7.5	1.8	1.6	2.3	28	11	PTB 08 ATEX 3044/02	1.44	850
	95	T1,T2	307	2960	94.5	0.89	162	5.8	1.4	1.3	1.8	18		IBExU 99 ATEX 1137/02	1.44	850
K11R 315 M2	80	T1-T3	257	2975	95.3	0.90	134	7.5	1.8	1.6	2.2	29	12	PTB 08 ATEX 3044/03	1.76	970
	112	T1,T2	361	2960	95.0	0.89	191	7.5	1.2	1.2	2.1				1.76	970
K11R 315 MY2	110	T1-T3	354	2970	95.0	0.92	182	7.3	1.5	1.3	3.0	26	11	PTB 08 ATEX 3044/04	2.82	1150
	135	T1,T2													2.82	1150
K11R 315 L2	125	T1-T3	401	2980	95.3	0.93	205	8.0	1.4	1.2	2.5	30	12	IBExU 99 ATEX 1137/40	3.66	1460
	165	T1,T2													3.66	1460
K11R 315 LX2	150	T1-T3	480	2985	95.8	0.95	240	8.0	1.1	0.9	2.7	30	12	IBExU 99 ATEX 1137/30	4.43	1630
	200	T1,T2													4.43	1630
K12R 355 M2	190	T1-T3	609	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	705	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	801	2980	95.0	0.91	400	8.0	1.3	1.0	2.5				9.50	2400
	300	T1,T2	960	2985	96.6	0.93	485	6.3	1.5	0.9	2.3	17		IBExU 01 ATEX 1009/06	9.50	2400

Other voltages, frequencies, ambient temperatures above 40 °C, T4 and pole-changing motors on request
Changes are possible for motors that are not yet certified

Type of protection increased safety “e”

CE 0637 ⟨Ex⟩ II 2G Ex e II T1/ T2,T3

Three-phase motors with squirrel-cage rotor
Type of protection Increased safety “e”
Motors for operation in Zone 1 acc. to EN 60079-7

for rated voltage, temperature classes T1/ T2 and T3
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155 (F/B)

Motor selection data — Design point 400 V, 50 Hz

Type	P	Temper-ature	M	n	η	cos φ	I 400 V	I_A/I_N	M_A/M_N	M_S/M_N	M_K/M_N	t_E time T1,T2	t_E time T3	Approval no.	J	m
	kW	class	Nm	rpm	%	-	A	-	-	-	-	s	s		kgm^2	kg
Synchronous speed 1500 rpm – 4-pole version																
KPER 63 K4[1)]	0.12	T1-T3	0.84	1370	54.0	0.68	0.48	2.9	1.8	1.8	2.2	70	50	PTB 99 ATEX 3309	0.00019	4.8
KPER 63 G4	0.18	T1-T3	1.26	1360	60.0	0.69	0.63	3.2	1.9	1.9	2.2	35	30	PTB 99 ATEX 3309	0.00024	5.2
KPER 71 K4	0.25	T1-T3	1.73	1380	65.0	0.73	0.79	3.4	1.4	1.4	1.8	27	24	PTB 99 ATEX 3310	0.00040	6.8
KPER 71 G4	0.37	T1-T3	2.58	1370	67.0	0.75	1.08	3.6	1.6	1.6	2.0	21	18	PTB 99 ATEX 3310	0.00050	7.8
KPER 80 K4	0.55	T1-T3	3.81	1380	69.0	0.76	1.59	3.9	1.8	1.8	2.0	16	13	PTB 99 ATEX 3311	0.00087	10.6
KPER 80 G4	0.75	T1-T3	5.15	1390	72.0	0.74	2.00	4.4	2.0	2.0	2.3	17	14	PTB 99 ATEX 3311	0.00107	11.7
KPER 90 S4	1.00	T1-T3	6.77	1410	77.0	0.80	2.40	5.1	2.4	2.3	2.5	19	17	PTB 99 ATEX 3312	0.00207	15.5
KPER 90 L4	1.35	T1-T3	9.14	1410	79.0	0.81	3.10	5.5	2.3	1.8	2.5	14	12	PTB 99 ATEX 3312	0.00260	18
KPER 100 L4	2.0	T1-T3	13.5	1420	80.0	0.80	4.65	6.0	2.8	2.6	2.9	13	11	PTB 99 ATEX 3313	0.00400	23.5
KPER 100 LX4	2.5	T1-T3	16.6	1440	83.0	0.78	5.6	6.7	2.3	2.2	2.9	12	11	PTB 99 ATEX 3313	0.00725	30
KPER 112 M4	3.6	T1-T3	23.9	1440	85.0	0.77	8.1	7.0	2.8	2.1	2.9	9	7	PTB 99 ATEX 3314	0.0090	37
K11R 132 S4	5.0	T1-T3	33.3	1435	84.5	0.83	10.2	6.5	2.0	1.6	2.8	15	10	PTB 98 ATEX 3459/04	0.0150	53
K11R 132 M4	6.8	T1-T3	44.6	1455	87.5	0.82	13.6	6.1	2.1	1.8	2.7	29	12	PTB 98 ATEX 3459/06	0.0280	72
K11R 160 M4	10.0	T1-T3	65.2	1465	91.0	0.89	18.0	6.3	2.0	1.7	2.5	40	18	PTB 08 ATEX 3038/17	0.0780	123
K11R 160 L4	13.5	T1-T3	87.7	1470	90.5	0.86	25.0	7.7	2.5	2.0	3.0	26	9	PTB 08 ATEX 3038/18	0.0900	136
K11R 180 M4	15.0	T1-T3	97.1	1475	90.5	0.87	27.5	6.8	1.9	1.6	2.5	45	15	PTB 08 ATEX 3039/08	0.1380	180
	17.0	T1,T2	111	1465	90.5	0.88	31.0	6.0	1.7	1.4	2.3	35		PTB 08 ATEX 3039/09	0.1380	180
K11R 180 L4	17.5	T1-T3	113	1475	90.5	0.85	33	7.1	2.1	1.8	2.8	25	9	PTB 08 ATEX 3039/10	0.1380	185
	20.0	T1,T2	130	1470	90.5	0.86	37	6.3	1.8	1.6	2.4	24		PTB 08 ATEX 3039/11	0.1380	185
K11R 200 L4	24	T1-T3	155	1477	92.7	0.87	43	6.8	1.8	1.5	2.4	35	12	PTB 08 ATEX 3040/09	0.2750	270
	27	T1,T2	175	1470	92.5	0.88	48	6.0	1.6	1.5	2.2	30		PTB 08 ATEX 3040/10	0.2750	270
K11R 225 S4	30	T1-T3	194	1475	93.0	0.85	55	6.1	1.6	1.4	1.9	30	14	PTB 08 ATEX 3041/07	0.525	380
	33	T1,T2	214	1472	92.9	0.85	60	5.6	1.5	1.2	1.7	30		PTB 08 ATEX 3041/08	0.525	380
K11R 225 M4	36	T1-T3	232	1480	94.0	0.85	65	7.4	2.2	1.7	2.3	22	7	PTB 08 ATEX 3041/09	0.525	385
	40	T1,T2	259	1475	93.5	0.85	73	6.6	2.0	1.6	2.1	19		PTB 08 ATEX 3041/10	0.525	385
K11R 250 M4	44	T1-T3	283	1485	94.0	0.86	79	7.2	1.8	1.6	2.1	30	10	PTB 08 ATEX 3042/05	0.950	530
	50	T1,T2	323	1480	94.0	0.86	90	6.3	1.7	1.5	1.9	27		PTB 08 ATEX 3042/06	0.950	530
K11R 280 S4	58	T1-T3	373	1485	94.2	0.84	106	7.2	1.8	1.6	2.2	40	13	PTB 08 ATEX 3043/06	1.96	765
	68	T1,T2	439	1480	94.0	0.85	124	6.1	1.5	1.4	1.8	30		IBExU 99 ATEX 1030/02	1.96	765
K11R 280 M4	70	T1-T3	450	1485	95.0	0.84	127	7.5	2.0	1.8	2.4	35	13	PTB 08 ATEX 3043/07	2.27	840
	80	T1,T2	515	1483	94.5	0.84	147	6.5	1.7	1.6	2.0	30		PTB 08 ATEX 3043/08	2.27	840
K11R 315 S4	84	T1-T3	540	1485	95.0	0.84	152	7.2	2.0	1.8	2.2	25	9	PTB 08 ATEX 3044/05	2.27	875
	100	T1,T2	645	1480	95.0	0.84	184	6.0	1.7	1.5	1.9	20		IBExU 99 ATEX 1137/15	2.27	875
K11R 315 M4	100	T1-T3	643	1485	95.0	0.84	181	6.8	1.8	1.7	2.2	30	10	PTB 08 ATEX 3044/06	2.73	1000
	120	T1,T2	775	1478	94.7	0.85	216	5.6	1.3	1.1	1.6	30		IBExU 99 ATEX 1137/01	2.73	1000
K11R 315 MY4	115	T1-T3	738	1489	95.4	0.85	205	7.1	1.5	1.4	2.4	35	14	PTB 08 ATEX 3044/07	4.82	1200
	135	T1,T2													4.82	1200
K11R 315 L4	135	T1-T3	865	1491	96.0	0.86	236	7.6	1.4	1.3	2.4	40	18	IBExU 99 ATEX 1137/16	5.93	1450
	165	T1,T2													5.93	1450
K11R 315 LX4	170	T1-T3	1090	1490	96.0	0.85	300	7.1	1.2	1.0	2.3	45	18	IBExU 99 ATEX 1137/35	6.82	1630
	200	T1,T2													6.82	1630
K12R 355 M4	215	T1-T3	1377	1491	96.5	0.85	380	8.0	1.4	1.0	2.7	30	8	IBExU 01 ATEX 1009/01	5.60	1950
	245	T1,T2													5.60	1950
K12R 355 MX4	240	T1-T3	1538	1490	96.5	0.85	425	8.0	1.5	1.2	2.8				7.90	2150
	275	T1,T2													7.90	2150
K12R 355 L4	275	T1-T3	1755	1494	97.1	0.84	485	7.9	1.3	1.2	1.7	40	12	IBExU 01 ATEX 1009/02	9.50	2400
	315	T1,T2													9.50	2400

[1)] only available up to 380 V
Other voltages, frequencies, ambient temperatures above 40 °C, T4 and pole-changing motors on request
Changes are possible for motors that are not yet certified

CE 0637 Ex II 2G Ex e II T1/ T2,T3

Three-phase motors with squirrel-cage rotor
Type of protection Increased safety “e”
Motors for operation in Zone 1 acc. to EN 60079-7

for rated voltage, temperature classes T1/ T2 and T3
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155 (F/B)

Motor selection data — Design point 400 V, 50 Hz

Type	P	Temper-ature	M	n	η	cos φ	I 400 V	I_A/I_N	M_A/M_N	M_S/M_N	M_K/M_N	t_E time T1,T2	t_E time T3	Approval no.	J	m
	kW	class	Nm	rpm	%	-	A	-	-	-	-	s	s		kgm²	kg
Synchronous speed 1000 rpm – 6-pole version																
KPER 80 K6	0.37	T1-T3	3.84	920	62.0	0.70	1.30	3.2	2.0	1.8	2.0	28	26	PTB 99 ATEX 3311	0.00130	11
KPER 80 G6	0.55	T1-T3	5.77	910	66.0	0.69	1.75	3.6	2.1	2.1	2.2	26	22	PTB 99 ATEX 3311	0.00175	12.5
KPER 90 S6	0.65	T1-T3	6.71	925	69.0	0.71	1.95	3.4	1.8	1.7	1.9	35	30	PTB 99 ATEX 3312	0.00325	16
KPER 90 L6	0.95	T1-T3	9.81	925	71.0	0.71	2.70	3.9	2.1	2.0	2.2	27	23	PTB 99 ATEX 3312	0.00425	19
KPER 100 L6	1.4	T1-T3	14.2	940	75.0	0.73	3.75	4.2	2.1	2.0	2.3	24	20	PTB 99 ATEX 3313	0.00625	24
KPER 112 M6	1.9	T1-T3	19.1	950	79.0	0.74	4.7	5.3	2.2	2.0	2.4	21	18	PTB 99 ATEX 3314	0.01225	33.5
K11R 132 S6	2.6	T1-T3	26.1	950	80.5	0.79	5.9	5.3	1.8	1.8	2.8	22	19	PTB 98 ATEX 3459/08	0.018	49
K11R 132 M6	3.5	T1-T3	34.8	960	82.9	0.82	7.4	6.3	2.0	2.0	3.0	24	21	PTB 98 ATEX 3459/10	0.023	53
K11R 132 MX6	4.8	T1-T3	47.6	963	83.5	0.83	10.0	5.1	1.8	1.6	2.5	30	28	PTB 98 ATEX 3459/12	0.043	70
K11R 160 M6	6.6	T1-T3	65.3	965	84.5	0.84	13.4	5.4	1.9	1.6	2.5	35	30	PTB 08 ATEX 3038/19	0.053	89
K11R 160 L6	9.7	T1-T3	95.5	970	85.0	0.84	19.6	5.8	2.2	1.9	2.7	30	13	PTB 08 ATEX 3038/20	0.113	123
K11R 180 L6	13.2	T1-T3	129	975	89.0	0.87	24.5	6.5	2.2	2.0	2.9	50	23	PTB 08 ATEX 3039/12	0.228	190
K11R 200 L6	16.5	T1-T3	261	977	87.5	0.82	33.0	6.8	2.4	2.1	3.2	28	9	PTB 08 ATEX 3040/11	0.228	190
K11R 200 LX6	20	T1-T3	195	977	90.5	0.90	35.5	6.4	2.2	1.6	2.5	45	18	PTB 08 ATEX 3040/12	0.443	265
K11R 225 M6	27	T1-T3	264	975	91.0	0.88	49.0	5.7	2.1	1.8	2.3	40	13	PTB 08 ATEX 3041/11	0.825	360
K11R 250 M6	33	T1-T3	320	985	92.0	0.86	60	6.0	2.1	1.7	2.4	35	12	PTB 08 ATEX 3042/07	1.28	475
K11R 280 S6	40	T1-T3	386	990	93.9	0.86	71	7.0	1.9	1.8	2.5	55	24	PTB 08 ATEX 3043/09	2.63	715
K11R 280 M6	46	T1-T3	444	990	94.0	0.88	80	7.5	1.9	1.6	2.5	60	25	PTB 08 ATEX 3043/10	3.33	810
	50	T1,T2	483	988	94.0	0.88	87	6.9	1.8	1.5	2.3	60		IBExU 99 ATEX 1030/16	3.33	810
K11R 315 S6	64	T1-T3	619	988	94.5	0.89	113	7.2	2.2	1.8	2.5	30	9	PTB 08 ATEX 3044/08	3.33	840
	68	T1,T2	658	987	94.0	0.89	118	6.9	2.1	1.7	2.3	28		PTB 08 ATEX 3044/09	3.33	840
K11R 315 M6	76	T1-T3	732	992	95.2	0.88	131	7.2	1.6	1.3	2.5	45	17	IBExU 99 ATEX 1137/19	6.00	1080
	82	T1,T2	791	990	95.1	0.88	141	6.7	1.5	1.2	2.3	40		IBExU 99 ATEX 1137/21	6.00	1080
K11R 315 MY6	85	T1-T3	820	990	95.2	0.87	149	6.9	1.6	1.4	2.5	40	15	IBExU 99 ATEX 1137/04	6.00	1080
	92	T1,T2	890	987	95.0	0.87	160	6.4	1.5	1.3	2.3				6.00	1080
K11R 315 L6	95	T1-T3	921	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	1061	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	1202	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	1539	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	1923	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	2.57	670	52.0	0.64	0.78	2.5	1.6	1.6	1.9	180	150	PTB 99 ATEX 3311	0.00130	10.5
KPER 80 G8	0.25	T1-T3	3.56	670	55.0	0.67	1.00	2.8	2.3	2.3	2.4	70	60	PTB 99 ATEX 3311	0.00175	12
KPER 90 S8	0.37	T1-T3	5.05	700	59.0	0.56	1.61	2.9	1.5	1.5	2.0	60	55	PTB 99 ATEX 3312	0.00300	15
KPER 90 L8	0.55	T1-T3	7.56	695	64.0	0.58	2.15	3.0	1.6	1.6	2.1	60	55	PTB 99 ATEX 3312	0.00375	18
KPER 100 L8	0.65	T1-T3	8.87	700	66.0	0.63	2.25	2.9	1.5	1.5	1.8	70	60	PTB 99 ATEX 3313	0.00625	23
KPER 100 LX8	0.95	T1-T3	12.9	705	74.0	0.68	2.75	4.1	2.0	2.0	2.5	70	60	PTB 99 ATEX 3313	0.00900	28
KPER 112 M8	1.3	T1-T3	17.7	700	75.0	0.67	3.9	4.1	1.7	1.7	1.9	60	50	PTB 99 ATEX 3314	0.01225	33.5
K11R 132 S8	1.9	T1-T3	25.9	700	75.0	0.75	4.9	3.9	1.6	1.6	2.2	35	30	PTB 98 ATEX 3459/14	0.018	49
K11R 132 M8	2.6	T1-T3	35.2	705	78.5	0.74	6.5	4.5	1.8	1.7	2.6	30	29	PTB 98 ATEX 3459/16	0.023	57
K11R 160 M8	3.5	T1-T3	46.4	720	80.0	0.72	8.7	4.3	1.8	1.7	2.4	45	40	PTB 08 ATEX 3038/21	0.043	80
K11R 160 MX8	4.8	T1-T3	63.7	720	81.5	0.74	11.6	4.5	1.9	1.8	2.4	50	40	PTB 08 ATEX 3038/22	0.053	90
K11R 160 L8	6.6	T1-T3	86.3	730	84.0	0.73	15.6	5.0	2.1	1.9	2.7	40	35	PTB 08 ATEX 3038/23	0.113	122
K11R 180 L8	9.7	T1-T3	128	725	85.0	0.73	22.5	5.1	2.3	2.0	2.6	40	12	PTB 08 ATEX 3039/13	0.145	140
K11R 200 L8	13.2	T1-T3	173	730	86.5	0.72	30.5	5.6	2.3	2.1	2.9	40	13	PTB 08 ATEX 3040/13	0.228	195
K11R 225 S8	16.5	T1-T3	216	730	88.5	0.81	33.5	6.0	2.2	1.9	2.8	50	20	PTB 08 ATEX 3041/12	0.440	275
K11R 225 M8	20	T1-T3	260	735	90.5	0.81	39.5	5.3	2.0	1.7	2.2	60	25	PTB 08 ATEX 3041/13	0.825	360
K11R 250 M8	27	T1-T3	350	737	90.5	0.80	54	5.7	2.3	1.7	2.3	40	13	PTB 08 ATEX 3042/08	1.35	472
K11R 280 S8	33	T1-T3	425	742	93.5	0.78	65	6.3	2.0	1.8	2.4	70	30	PTB 08 ATEX 3043/11	2.63	700
K11R 280 M8	40	T1-T3	516	740	93.8	0.79	78	6.5	2.0	1.8	2.4	75	30	PTB 08 ATEX 3043/12	3.33	805
K11R 315 S8	50	T1-T3	645	740	94.0	0.80	96	5.9	1.7	1.6	2.1	50	18	PTB 08 ATEX 3044/10	3.33	850
K11R 315 M8	68	T1-T3	878	740	94.0	0.80	131	6.3	2.1	1.9	2.6	35	9	PTB 08 ATEX 3044/11	3.60	880
K11R 315 MY8	80	T1-T3	1030	742	94.5	0.80	154	6.4	1.4	1.2	2.3	30	12	IBExU 99 ATEX 1137/25	6.00	1080
K11R 315 L8	95	T1-T3	1226	740	94.5	0.81	180	6.0	1.8	1.7	2.2				6.76	1250
K11R 315 LX8	115	T1-T3	1484	740	94.5	0.80	220	6.0	1.8	1.7	2.2				8.71	1430
K12R 355 M8	140	T1-T3	1807	740	95.0	0.79	270	7.5	1.5	1.1	2.5				9.5	1600
K12R 355 MX8	180	T1-T3	2323	740	95.5	0.79	350	7.5	1.5	1.1	2.5				11.6	2100
K12R 355 L8	210	T1-T3	2710	740	95.5	0.79	400	7.5	1.5	1.1	2.5				15.8	2400

Other voltages, frequencies, ambient temperatures above 40 °C, T4 and pole-changing motors on request
Changes are possible for motors that are not yet certified

CE 0637 Ex II 2G Ex e II T1/ T2,T3

Three-phase motors with squirrel-cage rotor
Type of protection Increased safety “e”
Motors for operation in Zone 1 acc. to EN 60079-7

for rated voltage, temperature classes T1/ T2 and T3
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155 (F/B)

Motor selection data — Design point 480 V, 60 Hz

Type	P	Temper-ature	M	n	η	cos φ	I 480 V	I_A/I_N	M_A/M_N	M_S/M_N	M_K/M_N	t_E time T1,T2	t_E time T3	Approval no.	J	m
	kW	class	Nm	rpm	%	-	A	-	-	-	-	s	s		kgm²	kg
Synchronous speed 3600 rpm – 2-pole version																
KPER 63 K2[2]	0.18	T1-T3	0.50	3410	63.0	0.75	0.55[1]	4.0	2.3	2.3	2.7	30	29	PTB 99 ATEX 3309	0.00013	4.9
KPER 63 G2	0.25	T1-T3	0.70	3400	66.0	0.74	0.62	4.5	2.9	2.9	3.6	15	13	PTB 99 ATEX 3309	0.00015	5.2
KPER 71 K2	0.37	T1-T3	1.05	3375	67.0	0.79	0.83	4.6	2.5	2.5	2.9	18	16	PTB 99 ATEX 3310	0.00025	6.7
KPER 71 G2	0.55	T1-T3	1.54	3410	73.0	0.74	1.25	5.3	2.8	2.8	3.4	13	11	PTB 99 ATEX 3310	0.00032	7.6
KPER 80 K2	0.75	T1-T3	2.09	3430	75.0	0.79	1.53	5.8	2.5	2.3	4.0	16	14	PTB 99 ATEX 3311	0.00057	10.7
KPER 80 G2	1.10	T1-T3	3.04	3450	77.0	0.76	2.25	6.2	2.3	2.3	2.5	10	8	PTB 99 ATEX 3311	0.00072	11.5
KPER 90 S2	1.30	T1-T3	3.60	3450	78.0	0.85	2.40	7.2	2.2	2.2	2.6	16	14	PTB 99 ATEX 3312	0.00132	16
KPER 90 L2	1.85	T1-T3	5.08	3480	81.0	0.83	3.35	8.1	3.0	3.0	3.2	12	9	PTB 99 ATEX 3312	0.00170	19
KPER 100 L2	2.50	T1-T3	6.86	3480	82.0	0.85	4.50	7.4	2.4	2.4	2.7	16	13	PTB 99 ATEX 3313	0.00275	25
KPER 112 M2	3.3	T1-T3	8.94	3525	86.0	0.77	6.00	8.4	2.1	2.1	2.8	16	11	PTB 99 ATEX 3314	0.00450	32
KPER 112 MX2	4.1	T1-T3	11.2	3510	87.0	0.84	7.00	8.6	1.9	1.9	3.0	18	11	PTB 99 ATEX 3314	0.00550	38
K11R 132 S2	5.3	T1-T3	14.4	3515	88.0	0.88	8.3	7.5	1.5	1.2	2.8	26	11	IBExU 99 ATEX 1142/08	0.0110	57
K11R 132 SX2	6.3	T1-T3	17.1	3514	89.0	0.88	9.7	8.2	1.6	1.2	2.9	19	8	IBExU 99 ATEX 1142/10	0.0110	57
K12R 132 SX2	6.6	T1-T3	17.9	3525	90.5	0.93	9.5	7.8	2.2	1.5	2.8	30	14	IBExU 99 ATEX 1142/24	0.0258	88
K11R 160 M2	8.6	T1-T3	23.2	3545	87.7	0.91	13.0	7.5	2.0	1.7	2.8	40	20	IBExU 99 ATEX 1105/12	0.0575	120
K11R 160 MX2	12.0	T1-T3	32.6	3520	89.5	0.90	18.0	6.8	1.8	1.5	2.5	24	10	IBExU 99 ATEX 1105/24	0.0575	120
K11R 160 L2	14.0	T1-T3	7.7	3550	90.3	0.91	20.5	8.1	1.9	1.5	3.0	24	10	IBExU 99 ATEX 1105/15	0.0675	138
K11R 180 M2	17.0	T1-T3	45.7	3550	91.0	0.93	24.0	7.5	1.9	1.6	2.8	30	13	IBExU 99 ATEX 1138/09	0.1050	175
K11R 200 L2	23	T1-T3	62.0	3540	91.5	0.93	32.5	7.2	1.9	1.6	2.6	23	8	IBExU 99 ATEX 1143/03	0.1280	210
K11R 200 LX2	27	T1-T3	72.5	3555	93.0	0.91	38.0	7.7	1.7	1.3	2.7	23	10	IBExU 99 ATEX 1143/11	0.1930	255
K11R 225 M2	33	T1-T3	88.3	3570	93.0	0.91	47.0	7.8	1.6	1.2	2.7	30	13	IBExU 99 ATEX 1144/02	0.375	360
K11R 250 M2	44	T1-T3	118	3570	92.5	0.93	62	7.1	1.8	1.4	2.4	35	13	IBExU 99 ATEX 1131/06	0.65	490
K11R 280 S2	56	T1-T3	150	3575	93.5	0.89	81	7.2	1.5	1.3	1.8	45	22	IBExU 99 ATEX 1030/06	1.21	730
K11R 280 M2	70	T1-T3	187	3570	94.0	0.89	100	7.2	1.3	1.2	2.2	35	21	IBExU 99 ATEX 1030/07	1.44	815
K11R 315 S2	82	T1-T3	219	3576	94.5	0.90	116	8.2	1.9	1.8	2.6	21	15	IBExU 99 ATEX 1137/02	1.44	850
K11R 315 M2	96	T1-T3	256	3575	95.0	0.89	142	7.6	1.8	1.6	2.3				1.76	970
K11R 315 MY2	132	T1-T3	353	3570	94.0	0.93	182	7.5	1.5	1.3	3.0	22	8	IBExU 99 ATEX 1137/09	2.82	1150
Synchronous speed 1800 rpm – 4-pole version																
KPER 63 K4[2]	0.12	T1-T3	0.69	1670	56.0	0.68	0.46[1]	3.2	1.8	1.8	2.2	70	50	PTB 99 ATEX 3309	0.00019	4.8
KPER 63 G4	0.18	T1-T3	1.04	1660	60.0	0.69	0.52	3.5	2.2	2.2	2.5	35	30	PTB 99 ATEX 3309	0.00024	5.2
KPER 71 K4	0.25	T1-T3	1.42	1680	64.0	0.73	0.66	3.7	1.8	1.8	2.2	27	24	PTB 99 ATEX 3310	0.00040	6.8
KPER 71 G4	0.37	T1-T3	2.12	1670	67.0	0.75	0.90	3.9	1.8	1.8	2.4	21	18	PTB 99 ATEX 3310	0.00050	7.8
KPER 80 K4	0.55	T1-T3	3.09	1695	69.0	0.71	1.38	4.3	1.8	1.8	2.0	16	13	PTB 99 ATEX 3311	0.00087	10.6
KPER 80 G4	0.75	T1-T3	4.24	1690	72.0	0.74	1.70	4.8	2.0	1.9	2.3	17	14	PTB 99 ATEX 3311	0.00107	11.7
KPER 90 S4	1.00	T1-T3	5.57	1715	77.0	0.77	2.10	5.5	2.4	2.3	2.6	19	17	PTB 99 ATEX 3312	0.00207	15.5
KPER 90 L4	1.35	T1-T3	7.50	1720	79.0	0.78	2.70	6.0	2.3	2.0	2.5	14	12	PTB 99 ATEX 3312	0.00260	18
KPER 100 L4	2.0	T1-T3	11.0	1730	81.0	0.74	4.05	6.6	2.5	2.3	2.9	13	11	PTB 99 ATEX 3313	0.00400	23.5
KPER 100 LX4	2.5	T1-T3	13.6	1750	84.0	0.74	4.85	7.3	2.3	2.2	2.9	12	11	PTB 99 ATEX 3313	0.00725	30
KPER 112 M4	3.6	T1-T3	19.6	1750	85.0	0.73	7.00	7.7	2.8	2.4	2.9	9	7	PTB 99 ATEX 3314	0.0090	37
K11R 132 S4	5.8	T1-T3	31.8	1740	86.0	0.82	10.0	6.9	2.0	1.7	2.9	15	9	IBExU 99 ATEX 1142/11	0.0150	53
K11R 132 M4	7.8	T1-T3	42.3	1760	88.5	0.80	13.2	6.5	2.2	1.9	2.8	27	9	IBExU 99 ATEX 1142/12	0.0280	72
K11R 160 M4	12.0	T1-T3	64.9	1765	91.0	0.88	18.1	6.5	2.0	1.7	2.5	30	14	IBExU 99 ATEX 1105/16	0.0780	123
K11R 160 L4	15.5	T1-T3	83.4	1775	91.0	0.85	24.0	7.9	2.6	2.1	3.2	23	7	IBExU 99 ATEX 1105/17	0.0900	136
K11R 180 M4	17.0	T1-T3	91.5	1775	90.5	0.87	26.0	7.3	2.0	1.7	2.7	35	12	IBExU 99 ATEX 1138/10	0.1380	180
K11R 180 L4	20	T1-T3	108	1775	91.0	0.84	32.0	7.6	2.2	1.9	2.9	23	7	IBExU 99 ATEX 1138/12	0.1380	185
K11R 200 L4	28	T1-T3	151	1775	93.0	0.88	41.5	7.2	1.9	1.6	2.5	30	7	IBExU 99 ATEX 1143/05	0.2750	270
K11R 225 S4	36	T1-T3	194	1775	93.4	0.85	55	6.2	1.7	1.4	1.9	30	12	IBExU 99 ATEX 1144/04	0.525	380
K11R 225 M4	43	T1-T3	231	1780	93.9	0.85	65	7.5	2.2	1.7	2.3	18	7	IBExU 99 ATEX 1144/05	0.525	385
K11R 250 M4	52	T1-T3	278	1785	94.0	0.85	78	7.4	1.9	1.6	2.2	26	9	IBExU 99 ATEX 1131/09	0.95	530
K11R 280 S4	70	T1-T3	375	1785	94.0	0.84	107	7.2	1.8	1.6	2.2	30	9	IBExU 99 ATEX 1030/11	1.96	765
K11R 280 M4	84	T1-T3	449	1785	94.0	0.83	129	7.5	1.7	1.6	2.3	29	8	IBExU 99 ATEX 1030/12	2.27	840
K11R 315 S4	100	T1-T3	535	1785	95.0	0.84	152	7.3	2.1	1.9	2.3	21	6	IBExU 99 ATEX 1137/11	2.27	875
K11R 315 M4	120	T1-T3	643	1783	95.6	0.85	179	7.0	1.4	1.2	2.0	24	6	IBExU 99 ATEX 1137/43	2.73	1000
K11R 315 MY4	132	T1-T3	704	1790	95.0	0.85	197	7.5	1.5	1.4	2.5	30	12	IBExU 99 ATEX 1137/13	4.82	1200

[1] currents at 400 V, [2] only available up to 415 V
Other voltages, frequencies, ambient temperatures above 40 °C, T4 and pole-changing motors on request
Changes are possible for motors that are not yet certified

Three-phase motors with squirrel-cage rotor
Type of protection Increased safety “e”
Motors for operation in Zone 1 acc. to EN 60079-7

for rated voltage, temperature classes T1/ T2 and T3
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155 (F/B)

Motor selection data — Design point 480 V, 60 Hz

Type	P	Temperature class	M	n	η	cos φ	I 480 V	I_A/I_N	M_A/M_N	M_S/M_N	M_K/M_N	t_E time T1,T2	t_E time T3	Approval no.	J	m
	kW		Nm	rpm	%	-	A	-	-	-	-	s	s		kgm²	kg
Synchronous speed 1200 rpm – 6-pole version																
KPER 80 K6	0.37	T1-T3	3.13	1130	61.0	0.65	1.13	3.5	2.0	1.8	2.0	28	26	PTB 99 ATEX 3311	0.00130	11
KPER 80 G6	0.55	T1-T3	4.73	1110	66.0	0.69	1.46	4.0	2.1	2.1	2.2	26	22	PTB 99 ATEX 3311	0.00175	12.5
KPER 90 S6	0.65	T1-T3	5.47	1135	69.0	0.67	1.69	3.7	1.8	1.7	1.9	35	30	PTB 99 ATEX 3312	0.00325	16
KPER 90 L6	0.95	T1-T3	8.07	1125	71.5	0.71	2.25	4.3	2.1	2.0	2.2	27	23	PTB 99 ATEX 3312	0.00425	19
KPER 100 L6	1.4	T1-T3	11.6	1150	75.0	0.69	3.25	4.6	2.1	2.0	2.3	24	20	PTB 99 ATEX 3313	0.00625	24
KPER 112 M6	1.9	T1-T3	15.7	1155	79.0	0.71	4.10	5.8	2.2	2.0	2.4	21	18	PTB 99 ATEX 3314	0.01225	33.5
K11R 132 S6	3.0	T1-T3	24.8	1155	82.0	0.79	5.7	5.8	2.0	1.9	3.0	21	18	IBExU 99 ATEX 1142/13	0.0180	49
K11R 132 M6	4.0	T1-T3	32.9	1160	84.5	0.80	7.1	6.9	2.2	2.1	3.3	23	20	IBExU 99 ATEX 1142/14	0.0230	53
K11R 132 MX6	5.5	T1-T3	45.0	1166	85.5	0.82	9.5	5.8	1.9	1.7	2.6	29	26	IBExU 99 ATEX 1142/15	0.0430	70
K11R 160 M6	7.6	T1-T3	62.3	1165	86.5	0.82	12.9	5.8	2.0	1.7	2.6	30	24	IBExU 99 ATEX 1105/18	0.0530	89
K11R 160 L6	11.0	T1-T3	89.8	1170	86.0	0.82	18.7	6.3	2.3	2.1	2.9	29	11	IBExU 99 ATEX 1105/19	0.1130	123
K11R 180 L6	15.0	T1-T3	122	1178	89.5	0.87	23.0	7.1	2.3	2.1	3.0	45	20	IBExU 99 ATEX 1138/14	0.2280	190
K11R 200 L6	19.0	T1-T3	15	1175	88.0	0.80	32.5	7.0	2.6	2.1	3.3				0.2280	190
K11R 200 LX6	23	T1-T3	186	1178	90.5	0.90	34.0	6.8	2.2	1.7	2.5	40	14	IBExU 99 ATEX 1143/06	0.4430	265
K11R 225 M6	32	T1-T3	260	1177	92.0	0.88	47.5	6.1	2.2	1.8	2.3	30	10	IBExU 99 ATEX 1144/06	0.8250	360
K11R 250 M6	40	T1-T3	323	1181	93.0	0.88	59	6.5	2.1	1.5	2.2	26	12	IBExU 99 ATEX 1131/10	1.2800	475
K11R 280 S6	48	T1-T3	385	1190	94.0	0.87	71	7.5	2.1	1.7	2.5				2.630	715
K11R 280 M6	55	T1-T3	441	1190	94.0	0.87	81	8.1	2.2	2.0	2.9				3.330	810
K11R 315 S6	76	T1-T3	610	1190	94.5	0.87	111	8.7	2.3	2.1	3.0				3.330	840
K11R 315 M6	90	T1-T3	722	1191	95.1	0.88	130	7.4	1.6	1.3	2.5	35	12	IBExU 99 ATEX 1137/22	6.000	1080
K11R 315 MY6	100	T1-T3	806	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	2.09	820	52.0	0.64	0.65	2.7	1.6	1.6	1.9	180	150	PTB 99 ATEX 3311	0.00130	10.5
KPER 80 G8	0.25	T1-T3	2.88	830	56.0	0.62	0.87	3.1	2.3	2.3	2.4	70	60	PTB 99 ATEX 3311	0.00175	12
KPER 90 S8	0.37	T1-T3	4.16	850	59.0	0.56	1.34	3.2	1.5	1.5	2.0	60	55	PTB 99 ATEX 3312	0.00300	15
KPER 90 L8	0.55	T1-T3	6.22	845	64.0	0.58	1.78	3.3	1.6	1.6	2.1	60	55	PTB 99 ATEX 3312	0.00375	18
KPER 100 L8	0.65	T1-T3	7.26	855	67.0	0.60	1.95	3.3	1.5	1.5	1.8	70	60	PTB 99 ATEX 3313	0.00625	23
KPER 100 LX8	0.95	T1-T3	10.5	860	74.5	0.64	2.40	4.5	2.0	2.0	2.5	70	60	PTB 99 ATEX 3313	0.00900	28
KPER 112 M8	1.3	T1-T3	14.4	860	75.5	0.61	3.40	4.5	1.7	1.7	1.9	60	50	PTB 99 ATEX 3314	0.01225	33.5
K11R 132 S8	2.2	T1-T3	24.7	850	75.0	0.77	4.6	3.8	1.7	1.4	1.9	35	30	IBExU 99 ATEX 1142/16	0.0180	49
K11R 132 M8	3.0	T1-T3	33.7	850	80.8	0.76	6.0	4.9	1.8	1.7	2.3	30	28	IBExU 99 ATEX 1142/17	0.0230	57
K11R 160 M8	4.0	T1-T3	43.7	875	82.0	0.70	8.4	4.6	2.0	1.9	2.5	45	35	IBExU 99 ATEX 1105/20	0.0430	80
K11R 160 MX8	5.5	T1-T3	60.4	870	83.5	0.71	11.2	4.9	2.0	1.9	2.5	45	35	IBExU 99 ATEX 1105/21	0.0530	90
K11R 160 L8	7.6	T1-T3	82.5	880	84.5	0.71	15.3	5.4	2.3	2.0	2.8	35	25	IBExU 99 ATEX 1105/22	0.1130	122
K11R 180 L8	11.0	T1-T3	120	875	85.5	0.71	22.0	5.5	2.5	2.1	2.9	35	10	IBExU 99 ATEX 1138/15	0.1450	140
K11R 200 L8	15.0	T1-T3	163	880	88.0	0.67	30.5	5.8	2.5	2.2	2.7	28	7	IBExU 99 ATEX 1143/21	0.2280	195
K11R 225 S8	19.5	T1-T3	210	885	89.0	0.80	33.0	6.2	2.3	2.0	2.9				0.4400	275
K11R 225 M8	24	T1-T3	259	885	91.0	0.80	39.7	5.4	2.1	1.8	2.2				0.8250	360
K11R 250 M8	32	T1-T3	344	888	92.3	0.79	53.0	6.4	2.0	1.5	2.1	29	11	IBExU 99 ATEX 1131/15	1.3500	472
K11R 280 S8	40	T1-T3	427	895	93.5	0.78	66	6.3	1.9	1.7	2.3				2.630	700
K11R 280 M8	48	T1-T3	514	892	94.0	0.79	78	6.5	2.1	1.8	2.4				3.330	805
K11R 315 S8	60	T1-T3	644	890	94.0	0.81	95	6.0	1.7	1.6	2.1				3.330	850
K11R 315 M8	82	T1-T3	880	890	94.0	0.78	135	7.0	2.1	1.8	2.5				3.600	880
K11R 315 MY8	95	T1-T3	1015	894	94.7	0.79	152	6.6	1.4	1.2	2.3	28	10	IBExU 99 ATEX 1137/27	6.000	1080

Other voltages, frequencies, ambient temperatures above 40 °C, T4 and pole-changing motors on request
Changes are possible for motors that are not yet certified

Three-phase motors with squirrel-cage rotor
Type of protection Increased safety “e”
Motos for operation in Zone 1 acc. to EN 60079-7

for extended voltage range, temperature classes T1/ T2 and T3
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155 (F/B)

Motor selection data — Extended voltage range, 50 Hz

Type	P	Temperature class	M	n	η	cos φ	I 380...420 V	I_A/I_N	M_A/M_N	M_S/M_N	M_K/M_N	t_E time T1,T2	t_E time T3	Approval no.	J	m
	kW		Nm	rpm	%	-	A					s	s		kgm²	kg
Synchronous speed 3000 rpm – 2-pole version																
KPER 63 K2	0.18	T1-T3	0.63	2710...2810	61.0	0.85...0.75	0.53	3.7	1.6	1.6	2.0	30	29	PTB 99 ATEX 3309	0.00013	4.9
KPER 63 G2	0.25	T1-T3	0.88	2700...2760	65.0	0.88...0.83	0.62	4.2	1.9	1.9	2.2	15	13		0.00015	5.2
KPER 71 K2	0.37	T1-T3	1.31	2700...2780	67.0	0.89...0.79	0.97	4.1	1.7	1.7	2.2	18	16	PTB 99 ATEX 3310	0.00025	6.7
KPER 71 G2	0.55	T1-T3	1.92	2740...2810	73.0	0.84...0.74	1.43	4.8	2.2	2.2	2.5	13	11	PTB 99 ATEX 3310	0.00032	7.6
KPER 80 K2	0.75	T1-T3	2.58	2780...2830	74.0	0.88...0.79	1.76	5.3	1.9	1.9	2.4	16	14	PTB 99 ATEX 3311	0.00057	10.7
KPER 80 G2	1.10	T1-T3	3.75	2800...2850	77.0	0.86...0.76	2.60	5.6	2.5	2.3	2.5	10	8	PTB 99 ATEX 3311	0.00072	11.5
KPER 90 S2	1.30	T1-T3	4.39	2830...2860	78.0	0.90...0.85	2.75	6.5	2.4	2.2	2.6	16	14	PTB 99 ATEX 3312	0.00132	16
KPER 90 L2	1.85	T1-T3	6.20	2850...2880	83.0	0.89...0.83	3.85	7.4	3.0	3.0	3.2	12	9	PTB 99 ATEX 3312	0.00170	19
KPER 100 L2	2.50	T1-T3	8.37	2850...2880	82.0	0.89...0.85	5.2	6.8	2.5	2.4	2.7	16	13	PTB 99 ATEX 3313	0.00275	25
KPER 112 M2	3.30	T1-T3	10.8	2905...2925	85.0	0.85...0.77	6.9	7.7	2.3	2.1	3.1	16	11	PTB 99 ATEX 3314	0.00450	32
KPER 112 MX2	4.10	T1-T3	13.5	2900...2920	87.0	0.89...0.84	8.1	7.9	2.5	1.9	3.3	18	11	PTB 99 ATEX 3314	0.00550	38
K11R 132 S2	4.6	T1-T3	15.1	2900	87.5	0.88	9.2	6.6	1.4	1.2	2.8	28	11	PTB 08 ATEX 3037/01	0.0110	57
K12R 132 SX2	5.5	T1-T3	17.9	2930	90.5	0.92	10.1	7.0	2.1	1.3	2.6	35	16	IBExU 99 ATEX 1142/22	0.0110	57
K11R 160 M2	7.5	T1-T3	24.3	2945	87.5	0.90	14.4	6.6	1.9	1.6	2.7	40	19	PTB 08 ATEX 3038/01	0.0575	120
K11R 160 MX2	10.0	T1-T3	32.5	2935	89.5	0.90	19.1	6.1	1.8	1.5	2.5	28	11	PTB 08 ATEX 3038/02	0.0575	120
K11R 160 L2	12.5	T1-T3	40.5	2945	90.0	0.91	23	7.0	1.8	1.4	2.8	27	10	PTB 08 ATEX 3038/03	0.0675	138
K11R 180 M2	15.0	T1-T3	48.6	2945	91.0	0.92	27	6.6	1.8	1.5	2.6	30	13	PTB 08 ATEX 3039/01	0.105	175
K11R 200 L2	20	T1-T3	65.1	2935	91.5	0.92	36	6.2	1.8	1.4	2.4	25	8	PTB 08 ATEX 3040/01	0.128	210
K11R 200 LX2	24	T1-T3	77.7	2950	93.0	0.90	43	6.6	1.6	1.2	2.5	24	9	PTB 08 ATEX 3040/02	0.193	255
K11R 225 M2	28	T1-T3	90.0	2970	93.0	0.91	50	7.1	1.5	1.0	2.6	30	14	PTB 08 ATEX 3041/01	0.375	360
K11R 250 M2	36	T1-T3	115	2970	93.0	0.93	63	6.8	1.9	1.5	2.6	40	18	PTB 08 ATEX 3042/01	0.65	490
K11R 280 S2	47	T1-T3	151	2975	93.7	0.88	86	6.7	1.4	1.3	2.2	50	23	IBExU 99 ATEX 1030/17	1.21	730
K11R 280 M2	58	T1-T3	186	2975	94.0	0.88	107	6.7	1.4	1.3	2.1	35	21	PTB 08 ATEX 3043/01	1.44	815
K11R 315 S2	68	T1-T3	218	2975	94.1	0.90	122	7.1	1.8	1.6	2.3	29	13	IBExU 99 ATEX 1137/23	1.44	850
K11R 315 M2	80	T1-T3	192	2975	95.3	0.88...0.90	144	7.0	1.8	1.6	2.2	27	9	IBExU 99 ATEX 1137/52	1.76	970
K11R 315 MY2	110	T1-T3	353	2970	95.0	0.93	189	6.9	1.5	1.3	3.0	24	9	IBExU 99 ATEX 1137/28	2.82	1170
Synchronous speed 1500 rpm – 4-pole version																
KPER 63 G4	0.12	T1-T4	0.86	1340...1380	62.5	0.78...0.68	0.37	3.3	1.9	1.9	2.2	75	70	PTB 99 ATEX 3309	0.00024	5.2
KPER 71 K4	0.25	T1-T3	1.77	1350...1390	65.0	0.79...0.69	0.79	3.4	1.4	1.4	1.8	27	24	PTB 99 ATEX 3310	0.00040	6.8
KPER 71 G4	0.37	T1-T3	2.62	1350...1390	67.0	0.79...0.70	1.08	3.6	1.6	1.6	2.0	21	18	PTB 99 ATEX 3310	0.00050	7.8
KPER 80 K4	0.55	T1-T3	3.85	1365...1395	69.0	0.80...0.71	1.59	3.9	1.8	1.8	2.0	16	13	PTB 99 ATEX 3311	0.00087	10.6
KPER 80 GX4	0.75	T1-T3	5.43	1320...1360	70.0	0.84...0.77	2.00	3.8	1.9	1.8	1.9	20	16	PTB 99 ATEX 3311	0.00120	12.4
KPER 90 S4	1.00	T1-T3	6.85	1395...1415	77.0	0.84...0.77	2.40	5.1	2.4	2.3	2.5	19	17	PTB 99 ATEX 3312	0.00207	15.5
KPER 90 L4	1.35	T1-T3	9.24	1395...1420	79.0	0.84...0.78	3.10	5.5	2.3	1.8	2.5	14	12	PTB 99 ATEX 3312	0.00260	18
KPER 100 L4	2.00	T1-T3	13.5	1410...1430	80.0	0.82...0.74	4.65	6.0	2.8	2.6	2.9	13	11	PTB 99 ATEX 3313	0.00400	23.5
KPER 100 LX4	2.5	T1-T3	16.6	1435...1450	83.0	0.81...0.74	5.6	6.7	2.3	2.2	2.9	12	11	PTB 99 ATEX 3313	0.00725	30
KPER 112 M4	3.6	T1-T3	24.1	1430...1450	85.0	0.82...0.73	8.1	7.0	2.8	2.1	2.9	9	7	PTB 99 ATEX 3314	0.009	37
K11R 132 S4	5.0	T1-T3	33.3	1435	84.5	0.83	10.5	6.3	2.0	1.6	2.8	16	8	PTB 08 ATEX 3037/02	0.015	53
K11R 132 M4	6.8	T1-T3	44.6	1455	87.5	0.85...0.78	14.0	5.9	2.1	1.8	2.7	27	10	PTB 08 ATEX 3037/03	0.028	72
K11R 160 M4	10.0	T1-T3	65.2	1465	91.0	0.89	18.9	6.1	2.0	1.7	2.5	35	16	PTB 08 ATEX 3038/04	0.078	123
K11R 160 L4	13.5	T1-T3	87.7	1470	90.5	0.87...0.83	26.0	7.4	2.5	2.0	3.0	25	7	PTB 08 ATEX 3038/05	0.090	136
K11R 180 M4	15.0	T1-T3	97.1	1475	90.5	0.87	28.5	6.4	1.9	1.6	2.5	40	13	PTB 08 ATEX 3039/02	0.138	180
K11R 180 L4	17.5	T1-T3	113	1475	90.5	0.86...0.82	34.0	6.9	2.1	1.8	2.8	27	8	PTB 08 ATEX 3039/03	0.138	185
K11R 200 L4	24	T1-T3	155	1477	92.5	0.87	45.0	6.4	1.8	1.5	2.4	30	8	PTB 08 ATEX 3040/03	0.275	270
K11R 225 S4	30	T1-T3	194	1475	93.0	0.85	59.0	5.7	1.6	1.4	1.9	30	12	PTB 08 ATEX 3041/02	0.525	380
K11R 225 M4	36	T1-T3	232	1480	94.0	0.85	69.0	7.0	2.2	1.7	2.3	20	7	PTB 08 ATEX 3041/03	0.525	385
K11R 250 M4	44	T1-T3	283	1485	94.0	0.86	83	6.9	1.8	1.6	2.1	29	9	PTB 08 ATEX 3042/02	0.95	530
K11R 280 S4	58	T1-T3	373	1485	94.2	0.84	113	6.7	1.8	1.6	2.2	40	13	IBExU 99 ATEX 1030/18	1.96	765
K11R 280 M4	70	T1-T3	450	1485	95.0	0.84	135	7.1	2.0	1.8	2.4	30	11	PTB 08 ATEX 3043/02	2.27	840
K11R 315 S4	84	T1-T3	540	1485	95.0	0.84	159	6.9	2.0	1.8	2.2	25	7	IBExU 99 ATEX 1137/24	2.27	875
K11R 315 M4	100	T1-T3	643	1485	95.0	0.84	190	6.5	1.8	1.7	2.2	27	8	IBExU 99 ATEX 1137/54	2.73	1000
K11R 315 MY4	110	T1-T3	706	1487	95.4	0.85	217	6.7	1.5	1.4	2.4	35	12	IBExU 99 ATEX 1137/29	4.82	1200
K11R 315 L4	135	T1-T3	865	1491	96.0	0.86	248	7.2	1.4	1.3	2.4	40	16	IBExU 99 ATEX 1137/17	5.93	1450

Other voltages, frequencies, ambient temperatures above 40 °C, T4 and pole-changing motors on request
Changes are possible for motors that are not yet certified by PTB

CE 0637 ⟨Ex⟩ II 2G Ex e II T1/ T2,T3

Three-phase motors with squirrel-cage rotor
Type of protection Increased safety “e”
Motos for operation in Zone 1 acc. to EN 60079-7

for extended voltage range, temperature classes T1/ T2 and T3
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155 (F/B)

Motor selection data — Extended voltage range, 50 Hz

Type	P	Temper-ature	M	n	η	cos φ	I 380...420 V	I_A/I_N	M_A/M_N	M_S/M_N	M_K/M_N	t_E time T1,T2	t_E time T3	Approval no.	J	m
	kW	class	Nm	rpm	%	-	A					s	s		kgm²	kg
Synchronous speed 1000 rpm – 6-pole version																
KPER 80 K6	0.37	T1-T3	3.72	905...930	62.0	0.74...0.65	1.3	3.2	2.0	1.8	2.0	28	26	PTB 99 ATEX 3311	0.00130	11
KPER 80 G6	0.55	T1-T3	not available for extended voltage range												0.00175	12.5
KPER 90 S6	0.65	T1-T3	6.78	915...935	69.0	0.74...0.67	1.95	3.4	1.8	1.7	1.9	35	30	PTB 99 ATEX 3312	0.00325	16
KPER 90 L6	0.95	T1-T3	not available for extended voltage range												0.00425	19
KPER 100 L6	1.4	T1-T3	14.4	930...950	75.0	0.76...0.69	3.75	4.2	2.1	2.0	2.3	24	20	PTB 99 ATEX 3313	0.00625	24
KPER 112 M6	1.9	T1-T3	19.2	945...955	79.0	0.78...0.71	4.7	5.3	2.2	2.0	2.4	21	18	PTB 99 ATEX 3314	0.01225	33.5
K11R 132 S6	2.6	T1-T3	26.1	950	80.5	0.83...0.77	6.1	5.1	1.8	1.8	2.8	21	18	PTB 08 ATEX 3037/04	0.018	49
K11R 132 M6	3.5	T1-T3	34.8	960	82.9	0.85...0.79	7.5	6.2	2.0	2.0	3.0	20	23	PTB 08 ATEX 3037/05	0.023	53
K11R 132 MX6	4.8	T1-T3	47.6	963	83.5	0.83	10.3	5.0	1.8	1.6	2.5	30	26	PTB 08 ATEX 3037/06	0.043	70
K11R 160 M6	6.6	T1-T3	65.3	965	84.5	0.86...0.82	13.8	5.2	1.9	1.6	2.5	30	26	PTB 08 ATEX 3038/06	0.053	89
K11R 160 L6	9.7	T1-T3	95.5	970	85.0	0.87...0.80	20.0	5.6	2.2	1.9	2.2	29	12	PTB 08 ATEX 3038/07	0.113	123
K11R 180 L6	13.2	T1-T3	129	975	89.0	0.87	25.5	6.2	2.2	2.0	2.9	45	21	PTB 08 ATEX 3039/04	0.228	190
K11R 200 L6	16.5	T1-T3	161	977	87.5	0.84…0.77	34.5	6.7	2.4	2.1	3.2	26	7	IBExU 99 ATEX 1143/32	0.228	190
K11R 200 LX6	20	T1-T3	195	977	90.5	0.90...0.89	37.5	6.0	2.2	1.6	2.5	45	14	PTB 08 ATEX 3040/04	0.443	265
K11R 225 M6	27	T1-T3	264	975	91.0	0.88..0.84	51	5.4	2.1	1.8	2.3	35	10	PTB 08 ATEX 3041/04	0.825	360
K11R 250 M6	33	T1-T3	320	985	92.0	0.86	63	5.7	2.1	1.7	2.4	30	9	IBExU 99 ATEX 1131/13	1.28	475
K11R 280 S6	40	T1-T3	388												2.63	715
K11R 280 M6	46	T1-T3	446												3.33	810
K11R 315 S6	64	T1-T3	619	988	94.5	0.90...0.88	116	7.0	2.2	1.8	2.5	28	8	PTB 08 ATEX 3044/01	3.33	840
K11R 315 M6	76	T1-T3	732	992	95.2	0.88	136	6.9	1.6	1.3	2.5	40	15	IBExU 99 ATEX 1137/20	6.00	1080
K11R 315 MY6	85	T1-T3	818											IBExU 99 ATEX 1137/05	6.00	1080
Synchronous speed 750 rpm – 8-pole version																
KPER 80 K8	0.18	T1-T3	not available for extended voltage range												0.00130	10.5
KPER 80 G8	0.25	T1-T3	3.64	655...680	55.0	0.70...0.62	1.0	2.8	2.3	2.2	2.4	70	60	PTB 99 ATEX 3311	0.00175	12
KPER 90 S8	0.37	T1-T3	not available for extended voltage range												0.00300	15
KPER 90 L8	0.55	T1-T3	not available for extended voltage range												0.00375	18
KPER 100 L8	0.65	T1-T3	9.00	690...705	66.0	0.67...0.60	2.25	2.9	1.5	1.5	1.8	70	60	PTB 99 ATEX 3313	0.00900	28
KPER 100 LX8	0.95	T1-T3	13.0	700...710	74.0	0.72...0.64	2.75	4.1	2.0	2.0	2.5	70	60	PTB 99 ATEX 3313	0.00900	28
KPER 112 M8	1.3	T1-T3	18.0	690...710	75.0	0.70...0.61	3.9	4.1	1.8	1.7	1.9	60	50	PTB 99 ATEX 3314	0.01225	33.5
K11R 132 S8	1.9	T1-T3	25.9	700	76.2	0.75	5.0	3.8	1.6	1.6	2.2	35	30	PTB 08 ATEX 3037/07	0.018	49
K11R 132 M8	2.6	T1-T3	35.2	705	78.5	0.78...0.71	6.6	4.4	1.8	1.7	2.6	30	27	PTB 08 ATEX 3037/08	0.023	57
K11R 160 M8	3.5	T1-T3	46.4	720	80.0	0.76...0.70	8.8	4.2	1.8	1.7	2.4	45	40	PTB 08 ATEX 3038/08	0.043	80
K11R 160 MX8	4.8	T1-T3	63.7	720	83.5	0.76...0.70	11.8	4.4	2.0	1.9	2.5	45	40	PTB 08 ATEX 3038/09	0.053	90
K11R 160 L8	6.6	T1-T3	86.3	730	81.5	0.76...0.68	16.3	4.7	1.9	1.8	2.4	35	29	PTB 08 ATEX 3038/10	0.113	122
K11R 180 L8	9.7	T1-T3	128	725	85.0	0.77...0.69	22.5	5.0	2.3	2.0	2.6	40	10	PTB 08 ATEX 3039/05	0.145	140
K11R 200 L8	13.2	T1-T3	174												0.228	195
K11R 225 S8	16.5	T1-T3	217												0.440	275
K11R 225 M8	20	T1-T3	263												0.825	360
K11R 250 M8	27	T1-T3	350	737	90.5	0.81...0.77	55	5.9	2.3	1.7	2.3	35	14	IBExU 99 ATEX 1131/14	1.35	472
K11R 280 S8	33	T1-T3	428												2.63	700
K11R 280 M8	40	T1-T3	518												3.33	805
K11R 315 S8	50	T1-T3	648												3.33	850
K11R 315 M8	68	T1-T3	881												3.60	880
K11R 315 MY8	80	T1-T3	1030	742	94.3	0.81...0.77	160	6.2	1.4	1.2	2.3	30	11	IBExU 99 ATEX 1137/26	6.00	1080

Other voltages, frequencies, ambient temperatures above 40 °C, T4 and pole-changing motors on request
Changes are possible for motors that are not yet certified by PTB

CE 0637 ⟨Ex⟩ II 2G Ex e II T1/ T2,T3

Three-phase motors with squirrel-cage rotor
Type of protection Increased safety “e”
Motos for operation in Zone 1 acc. to EN 60079-7
low noise design with unidirectional fan

for rated voltage, temperature classes T1/ T2 and T3
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155 (F/B)

Motor selection data — Design point 400 V, 50 Hz

Type	P	Temper-ature	M	n	η	cos φ	I 400 V	I_A/I_N	M_A/M_N	M_S/M_N	M_K/M_N	t_E time T1,T2	t_E time T3	Approval no.	J	m
	kW	class	Nm	rpm	%	-	A	-	-	-	-	s	s		kgm²	kg
Synchronous speed 3000 rpm – 2-pole version																
K11R 132 S2 G	4.6	T1-T3	15.0	2920	90.5	0.88	8.3	7.2	1.4	1.2	2.8	28	14	IBExU99ATEX1142/50	0.0110	57
K12R 132 SX2 G	5.5	T1-T3	17.9	2930	90.0	0.93	9.5	6.8	2.0	1.5	2.6	35	18	IBExU99ATEX1142/48	0.0258	88
	6.6	T1,T2	21.7	2910	90.0	0.93	11.5	5.6	1.7	1.2	2.2	30		IBExU99ATEX1142/49	0.0258	88
K11R 160 M2 G	7.5	T1-T3	24.3	2950	91.5	0.92	12.9	7.3	1.8	1.4	2.5	40	21	IBExU99ATEX1105/50	0.0575	120
	9.5	T1,T2	31.0	2927	90.8	0.92	16.4	5.8	1.4	1.1	2.0	35		IBExU99ATEX1105/51	0.0575	120
K11R 160 MX2 G	10.0	T1-T3	32.5	2940	91.5	0.92	17.1	6.8	1.6	1.3	2.2	29	12	IBExU99ATEX1105/52	0.0575	120
	13.0	T1,T2	42.8	2900	89.5	0.92	23.0	5.1	1.3	1.0	1.7	20		IBExU99ATEX1105/53	0.0575	120
K11R 160 L2 G	12.5	T1-T3	40.5	2950	93.2	0.90	21.5	7.5	1.9	1.5	2.7	25	10	IBExU99ATEX1105/48	0.0675	138
	16.0	T1,T2	52.2	2925	91.6	0.90	28.0	5.7	1.5	1.1	2.1	18		IBExU99ATEX1105/49	0.0675	138
K11R 180 M2 G	15	T1-T3	48.6	2950	92.0	0.89	26.5	7.2	1.5	1.2	2.4	40	17	IBExU99ATEX1138/28	0.105	175
	19	T1,T2	62.0	2930	92.5	0.91	32.5	5.8	1.2	1.0	1.9	30		IBExU99ATEX1138/29	0.105	175
K11R 200 L2 G	20	T1-T3	65.0	2945	92.7	0.93	33.5	6.7	1.3	1.2	2.3	35	13	IBExU99ATEX1143/30	0.128	210
	25	T1,T2	82.0	2920	92.3	0.92	42.5	5.3	1.1	1.0	1.8	24		IBExU99ATEX1143/31	0.128	210
K11R 200 LX2 G	24	T1-T3	77.5	2953	93.5	0.91	40.5	7.0	1.5	1.1	2.4	27	12	IBExU99ATEX1143/15	0.193	255
	31	T1,T2	100	2934	93.7	0.91	52.5	5.4	1.1	0.9	1.9	18		IBExU99ATEX1143/16	0.193	255
K11R 225 M2 G	28	T1-T3	90	2968	94.3	0.92	47.0	7.8	1.4	1.0	2.7	30	16	IBExU99ATEX1144/15	0.375	360
	38	T1,T2	125	2951	94.2	0.91	64	5.7	1.0	0.8	2.0	25		IBExU99ATEX1144/16	0.375	360
K11R 250 M2 G	36	T1-T3	115	2970	94.5	0.92	59.5	7.2	1.7	1.4	2.4	45	23	IBExU99ATEX1131/18	0.650	490
	47	T1,T2	150	2958	94.2	0.92	79	5.4	1.3	1.1	1.8	40		IBExU99ATEX1131/19	0.650	490
K11R 280 S2 G	47	T1-T3	150	2976	94.5	0.89	81	8.0	1.4	1.1	2.1	35	18	IBExU99ATEX1030/23	1.21	730
K11R 280 M2 G	58	T1-T3	185	2970	94.7	0.90	98	7.3	1.1	1.0	2.1	45	21	IBExU99ATEX1030/24	1.44	815
K11R 315 S2 G	68	T1-T3	220	2974	94.3	0.90	116	7.8	1.5	1.3	2.1	24	9	IBExU99ATEX1137/39	1.44	850
K11R 315 M2 G	80	T1-T3	255	2975	95.3	0.90	135	7.1	1.3	1.2	2.3	35	15	IBExU99ATEX1137/56	1.76	970
K11R 315 MY2 G	110	T1-T3	350	2970	95.2	0.93	180	6.5	1.3	1.2	2.7	30	11	IBExU99ATEX1137/41	2.82	1150
K11R 315 L2 G	125	T1-T3	400	2980	95.8	0.93	205	8.0	1.5	1.3	2.8				3.66	1460
K11R 315 LX2 G	150	T1-T3	480	2985	95.8	0.95	240	8.0	1.1	0.9	2.7				4.43	1630

Other voltages, frequencies and ambient temperatures above 40 °C on request
Changes are possible for motors that are not yet certified

CE 0637 ⟨Ex⟩ II 2G Ex e II T1/ T2,T3
CE 0637 ⟨Ex⟩ II 2D tD A21 IP 65 T125 °C

Three-phase motors with squirrel-cage rotor Type of protection Increased safety “e” for operation in Zone 1 acc. to EN 60079-7 or dustproof design for operation in Zone 21 acc. to EN 61241-1 (IBExU 02 ATEX 1019 for series K1.R)

for rated voltage, temperature classes T1/ T2 and T3
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 65, thermal class 155 (F/B)

Motor selection data — Design point 400 V, 50 Hz

Type	P	Temperature class	M	n	η	cos φ	I 400 V	I_A/I_N	M_A/M_N	M_S/M_N	M_K/M_N	t_E time T1,T2	t_E time T3	Approval no.	J	m
	kW		Nm	rpm	%	-	A	-	-	-	-	s	s		kgm²	kg
Synchronous speed 3000 rpm – 2-pole version																
KPER 63 K2	0.18	T1-T3	0.50	2870	61.0	0.80	0.53	3.7	1.6	1.6	2.0	30	29		0.00013	4.9
KPER 63 G2	0.25	T1-T3	0.85	2800	65.0	0.74	0.75	4.1	1.9	1.9	2.2	15	13		0.00015	5.2
KPER 71 K2	0.37	T1-T3	1.29	2740	67.0	0.84	0.97	4.1	1.7	1.7	2.2	18	16		0.00025	6.7
KPER 71 G2	0.55	T1-T3	1.90	2770	73.0	0.79	1.43	4.8	2.2	2.2	2.5	13	11		0.00032	7.6
KPER 80 K2	0.75	T1-T3	2.55	2810	74.0	0.84	1.76	5.3	1.9	1.9	2.4	16	14		0.00057	10.7
KPER 80 G2	1.10	T1-T3	3.71	2830	77.0	0.82	2.60	5.6	2.5	2.3	2.5	10	8		0.00072	11.5
KPER 90 S2	1.30	T1-T3	4.36	2850	78.0	0.88	2.75	6.5	2.4	2.0	2.6	16	14		0.00132	16
KPER 90 L2	1.85	T1-T3	6.16	2870	83.0	0.86	3.85	7.4	3.0	3.0	3.2	12	9		0.00170	19
KPER 100 L2	2.50	T1-T3	8.32	2870	82.0	0.87	5.20	6.8	2.5	2.4	2.7	16	13		0.00275	25
KPER 112 M2	3.30	T1-T3	10.8	2910	85.0	0.82	6.90	7.7	2.3	2.1	3.1	16	11		0.0045	32
KPER 112 MX2	4.10	T1-T3	13.5	2910	87.0	0.87	8.10	7.9	2.5	1.9	3.3	18	11		0.0055	38
K11R 132 S2	4.6	T1-T3	15.1	2900	87.5	0.88	8.6	7.0	1.4	1.2	2.8	29	13	PTB 08 ATEX 3037/09	0.0110	57
K11R 132 SX2	5.5	T1-T3	18.0	2925	89.0	0.86	10.4	8.5	1.9	1.3	3.3	16	6	PTB 08 ATEX 3037/10	0.0110	57
K12R 132 SX2	5.5	T1-T3	17.9	2930	89.5	0.92	9.6	7.4	2.1	1.3	2.6	35	18	IBExU 99 ATEX 1142/21	0.0258	88
	6.6	T1,T2	21.7	2910	90.0	0.93	11.6	6.2	1.7	1.1	2.1	30		IBExU 99 ATEX 1142/23	0.0258	88
K11R 160 M2	7.5	T1-T3	24.3	2945	87.5	0.90	13.7	6.9	1.9	1.6	2.7	40	21	PTB 08 ATEX 3038/11	0.0575	120
	9.5	T1,T2	31.1	2917	87.5	0.90	17.4	5.4	1.5	1.3	2.1	40		PTB 08 ATEX 3038/12	0.0575	120
K11R 160 MX2	10.0	T1-T3	32.5	2935	89.5	0.90	17.9	6.5	1.8	1.5	2.5	30	13	PTB 08 ATEX 3038/13	0.0575	120
	13.0	T1,T2	42.8	2900	88.0	0.90	23.5	5.0	1.4	1.1	1.9	20		PTB 08 ATEX 3038/14	0.0575	120
K11R 160 L2	12.5	T1-T3	40.5	2945	90.0	0.91	22.0	7.3	1.8	1.4	2.8	24	11	PTB 08 ATEX 3038/15	0.0675	138
	16.0	T1,T2	52.3	2920	89.5	0.91	28.5	5.6	1.4	1.1	2.2	20		PTB 08 ATEX 3038/16	0.0675	138
K11R 180 M2	15	T1-T3	48.6	2945	91.0	0.92	26.0	7.0	1.8	1.5	2.6	35	16	PTB 08 ATEX 3039/06	0.105	175
	19	T1,T2	62.1	2920	90.5	0.92	33.0	5.4	1.5	1.3	2.1	26		PTB 08 ATEX 3039/07	0.105	175
K11R 200 L2	20	T1-T3	65.1	2935	91.5	0.92	34.0	6.6	1.8	1.3	2.4	27	10	PTB 08 ATEX 3040/05	0.128	210
	25	T1,T2	82.0	2910	90.5	0.93	43.0	5.2	1.4	1.2	1.9	17		PTB 08 ATEX 3040/06	0.128	210
K11R 200 LX2	24	T1-T3	77.7	2950	93.0	0.90	41.0	7.0	1.6	1.2	2.5	26	10	PTB 08 ATEX 3040/07	0.193	255
	31	T1,T2	101	2925	91.5	0.90	54.0	5.3	1.4	1.2	2.2	16		PTB 08 ATEX 3040/08	0.193	255
K11R 225 M2	28	T1-T3	90.0	2970	93.0	0.91	47.5	7.6	1.5	1.0	2.6	30	15	PTB 08 ATEX 3041/05	0.375	360
	38	T1,T2	123	2950	93.0	0.91	65	5.4	1.2	0.9	2.0	27		PTB 08 ATEX 3041/06	0.375	360
K11R 250 M2	36	T1-T3	116	2970	93.2	0.93	60	7.2	1.9	1.5	2.6	40	19	PTB 08 ATEX 3042/03	0.650	490
	47	T1,T2	152	2955	93.0	0.92	79	5.4	1.4	1.1	1.9	35		PTB 08 ATEX 3042/04	0.650	490
K11R 280 S2	47	T1-T3	151	2970	93.7	0.88	82	7.1	1.4	1.3	2.2	50	25	PTB 08 ATEX 3043/03	1.21	730
	68	T1-T3	218	2975	94.0	0.89	117	7.8	1.4	1.3	2.3	23	9	IBExU 99 ATEX 1030/14	1.21	730
K11R 280 M2	58	T1-T3	186	2975	94.1	0.88	101	7.1	1.4	1.3	2.1	40	18	PTB 08 ATEX 3043/04	1.44	815
	76	T1-T3	244	2970	94.5	0.90	130	6.6	1.1	1.0	1.7	30	13	PTB 08 ATEX 3043/05	1.44	815
K11R 315 S2	68	T1-T3	218	2975	95.0	0.90	116	7.5	1.8	1.6	2.3	28	11	PTB 08 ATEX 3044/02	1.44	850
	95	T1,T2	307	2960	94.5	0.89	162	5.8	1.4	1.3	1.8	18		IBExU 99 ATEX 1137/02	1.44	850
K11R 315 M2	80	T1-T3	257	2975	95.3	0.90	134	7.5	1.8	1.6	2.2	29	12	PTB 08 ATEX 3044/03	1.76	970
	112	T1,T2	361	2960	95.0	0.89	191	7.5	1.2	1.2	2.1				1.76	970
K11R 315 MY2	110	T1-T3	354	2970	95.0	0.92	182	7.3	1.5	1.3	3.0	26	11	PTB 08 ATEX 3044/04	2.82	1150
	135	T1,T2													2.82	1150
K11R 315 L2	125	T1-T3	401	2980	95.3	0.93	205	8.0	1.4	1.2	2.5	30	12	IBExU 99 ATEX 1137/40	3.66	1460
	165	T1,T2													3.66	1460
K11R 315 LX2	150	T1-T3	480	2985	95.8	0.95	240	8.0	1.1	0.9	2.7	30	12	IBExU 99 ATEX 1137/30	4.43	1630
	200	T1,T2													4.43	1630
K12R 355 M2	190	T1-T3	609	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	705	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	801	2980	95.0	0.91	400	8.0	1.3	1.0	2.5				9.50	2400
	300	T1,T2	960	2985	96.6	0.93	485	6.3	1.5	0.9	2.3	17		IBExU 01 ATEX 1009/06	9.50	2400

Other voltages, frequencies and pole-changing motors on request
Changes are possible for motors that are not yet certified

Type of protection increased safety “e”

CE 0637 ⟨Ex⟩ II 2G Ex e II T1/ T2,T3
CE 0637 ⟨Ex⟩ II 2D tD A21 IP 65 T125 °C

Three-phase motors with squirrel-cage rotor Type of protection Increased safety “e” for operation in Zone 1 acc. to EN 60079-7 or dustproof design for operation in Zone 21 acc. to EN 61241-1 (IBExU 02 ATEX 1019 for series K1.R)

for rated voltage, temperature classes T1/ T2 and T3
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 65, thermal class 155 (F/B)

Motor selection data — Design point 400 V, 50 Hz

Type	P	Temperature class	M	n	η	cos φ	I 400 V	I_A/I_N	M_A/M_N	M_S/M_N	M_K/M_N	t_E time T1,T2	t_E time T3	Approval no.	J	m
	kW		Nm	rpm	%	-	A	-	-	-	-	s	s		kgm²	kg
Synchronous speed 1500 rpm – 4-pole version																
KPER 63 K4[1)]	0.12	T1-T3	0.84	1370	54.0	0.68	0.48	2.9	1.8	1.8	2.2	70	50		0.00019	4.8
KPER 63 G4	0.18	T1-T3	1.26	1360	60.0	0.69	0.63	3.2	1.9	1.9	2.2	35	30		0.00024	5.2
KPER 71 K4	0.25	T1-T3	1.73	1380	65.0	0.73	0.79	3.4	1.4	1.4	1.8	27	24		0.00040	6.8
KPER 71 G4	0.37	T1-T3	2.58	1370	67.0	0.75	1.08	3.6	1.6	1.6	2.0	21	18		0.00050	7.8
KPER 80 K4	0.55	T1-T3	3.81	1380	69.0	0.76	1.59	3.9	1.8	1.8	2.0	16	13		0.00087	10.6
KPER 80 G4	0.75	T1-T3	5.15	1390	72.0	0.74	2.00	4.4	2.0	2.0	2.3	17	14		0.00107	11.7
KPER 90 S4	1.00	T1-T3	6.77	1410	77.0	0.80	2.40	5.1	2.4	2.3	2.5	19	17		0.00207	15.5
KPER 90 L4	1.35	T1-T3	9.14	1410	79.0	0.81	3.10	5.5	2.3	1.8	2.5	14	12		0.00260	18
KPER 100 L4	2.0	T1-T3	13.5	1420	80.0	0.80	4.65	6.0	2.8	2.6	2.9	13	11		0.00400	23.5
KPER 100 LX4	2.5	T1-T3	16.6	1440	83.0	0.78	5.6	6.7	2.3	2.2	2.9	12	11		0.00725	30
KPER 112 M4	3.6	T1-T3	23.9	1440	85.0	0.77	8.1	7.0	2.8	2.1	2.9	9	7		0.0090	37
K11R 132 S4	5.0	T1-T3	33.3	1435	84.5	0.83	10.2	6.5	2.0	1.6	2.8	15	10	PTB 98 ATEX 3459/04	0.0150	53
K11R 132 M4	6.8	T1-T3	44.6	1455	87.5	0.82	13.6	6.1	2.1	1.8	2.7	29	12	PTB 98 ATEX 3459/06	0.0280	72
K11R 160 M4	10.0	T1-T3	65.2	1465	91.0	0.89	18.0	6.3	2.0	1.7	2.5	40	18	PTB 08 ATEX 3038/17	0.0780	123
K11R 160 L4	13.5	T1-T3	87.7	1470	90.5	0.86	25.0	7.7	2.5	2.0	3.0	26	9	PTB 08 ATEX 3038/18	0.0900	136
K11R 180 M4	15.0	T1-T3	97.1	1475	90.5	0.87	27.5	6.8	1.9	1.6	2.5	45	15	PTB 08 ATEX 3039/08	0.1380	180
	17.0	T1,T2	111	1465	90.5	0.88	31.0	6.0	1.7	1.4	2.3	35		PTB 08 ATEX 3039/09	0.1380	180
K11R 180 L4	17.5	T1-T3	113	1475	90.5	0.85	33	7.1	2.1	1.8	2.8	25	9	PTB 08 ATEX 3039/10	0.1380	185
	20.0	T1,T2	130	1470	90.5	0.86	37	6.3	1.8	1.6	2.4	24		PTB 08 ATEX 3039/11	0.1380	185
K11R 200 L4	24	T1-T3	155	1477	92.7	0.87	43	6.8	1.8	1.5	2.4	35	12	PTB 08 ATEX 3040/09	0.2750	270
	27	T1,T2	175	1470	92.5	0.88	48	6.0	1.6	1.5	2.2	30		PTB 08 ATEX 3040/10	0.2750	270
K11R 225 S4	30	T1-T3	194	1475	93.0	0.85	55	6.1	1.6	1.4	1.9	30	14	PTB 08 ATEX 3041/07	0.525	380
	33	T1,T2	214	1472	92.9	0.85	60	5.6	1.5	1.2	1.7	30		PTB 08 ATEX 3041/08	0.525	380
K11R 225 M4	36	T1-T3	232	1480	94.0	0.85	65	7.4	2.2	1.7	2.3	22	7	PTB 08 ATEX 3041/09	0.525	385
	40	T1,T2	259	1475	93.5	0.85	73	6.6	2.0	1.6	2.1	19		PTB 08 ATEX 3041/10	0.525	385
K11R 250 M4	44	T1-T3	283	1485	94.0	0.86	79	7.2	1.8	1.6	2.1	30	10	PTB 08 ATEX 3042/05	0.950	530
	50	T1,T2	323	1480	94.0	0.86	90	6.3	1.7	1.5	1.9	27		PTB 08 ATEX 3042/06	0.950	530
K11R 280 S4	58	T1-T3	373	1485	94.2	0.84	106	7.2	1.8	1.6	2.2	40	13	PTB 08 ATEX 3043/06	1.96	765
	68	T1,T2	439	1480	94.0	0.85	124	6.1	1.5	1.4	1.8	30		IBExU 99 ATEX 1030/02	1.96	765
K11R 280 M4	70	T1-T3	450	1485	95.0	0.84	127	7.5	2.0	1.8	2.4	35	13	PTB 08 ATEX 3043/07	2.27	840
	80	T1,T2	515	1483	94.5	0.84	147	6.5	1.7	1.6	2.0	30		PTB 08 ATEX 3043/08	2.27	840
K11R 315 S4	84	T1-T3	540	1485	95.0	0.84	152	7.2	2.0	1.8	2.2	25	9	PTB 08 ATEX 3044/05	2.27	875
	100	T1,T2	645	1480	95.0	0.84	184	6.0	1.7	1.5	1.9	20		IBExU 99 ATEX 1137/15	2.27	875
K11R 315 M4	100	T1-T3	643	1485	95.0	0.84	181	6.8	1.8	1.7	2.2	30	10	PTB 08 ATEX 3044/06	2.73	1000
	120	T1,T2	775	1478	94.7	0.85	216	5.6	1.3	1.1	1.6	30		IBExU 99 ATEX 1137/01	2.73	1000
K11R 315 MY4	115	T1-T3	738	1489	95.4	0.85	205	7.1	1.5	1.4	2.4	35	14	PTB 08 ATEX 3044/07	4.82	1200
	135	T1,T2													4.82	1200
K11R 315 L4	135	T1-T3	865	1491	96.0	0.86	236	7.6	1.4	1.3	2.4	40	18	IBExU 99 ATEX 1137/16	5.93	1450
	165	T1,T2													5.93	1450
K11R 315 LX4	170	T1-T3	1090	1490	96.0	0.85	300	7.1	1.2	1.0	2.3	45	18	IBExU 99 ATEX 1137/35	6.82	1630
	200	T1,T2													6.82	1630
K12R 355 M4	215	T1-T3	1377	1491	96.5	0.85	380	8.0	1.4	1.0	2.7	30	8	IBExU 01 ATEX 1009/01	5.60	1950
	245	T1,T2													5.60	1950
K12R 355 MX4	240	T1-T3	1538	1490	96.5	0.85	425	8.0	1.5	1.2	2.8				7.90	2150
	275	T1,T2													7.90	2150
K12R 355 L4	275	T1-T3	1755	1494	97.1	0.84	485	7.9	1.3	1.2	1.7	40	12	IBExU 01 ATEX 1009/02	9.50	2400
	315	T1,T2													9.50	2400

[1)] only available up to 380 V
Other voltages, frequencies and pole-changing motors on request
Changes are possible for motors that are not yet certified

CE 0637 ⟨Ex⟩ II 2G Ex e II T1/ T2,T3
CE 0637 ⟨Ex⟩ II 2D tD A21 IP 65 T125 °C

Three-phase motors with squirrel-cage rotor Type of protection Increased safety “e” for operation in Zone 1 acc. to EN 60079-7 or dustproof design for operation in Zone 21 acc. to EN 61241-1 (IBExU 02 ATEX 1019 for series K1.R)

for rated voltage, temperature classes T1/ T2 and T3
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 65, thermal class 155 (F/B)

Motor selection data — Design point 400 V, 50 Hz

Type	P	Temperature	M	n	η	cos φ	I	I_A/I_N	M_A/M_N	M_S/M_N	M_K/M_N	t_E time		Approval no.	J	m
							400 V					T1,T2	T3			
	kW	class	Nm	rpm	%	-	A	-	-	-	-	s	s		kgm²	kg
Synchronous speed 1000 rpm – 6-pole version																
KPER 80 K6	0.37	T1-T3	3.84	920	62.0	0.70	1.30	3.2	2.0	1.8	2.0	28	26		0.00130	11
KPER 80 G6	0.55	T1-T3	5.77	910	66.0	0.69	1.75	3.6	2.1	2.1	2.2	26	22		0.00175	12.5
KPER 90 S6	0.65	T1-T3	6.71	925	69.0	0.71	1.95	3.4	1.8	1.7	1.9	35	30		0.00325	16
KPER 90 L6	0.95	T1-T3	9.81	925	71.0	0.71	2.70	3.9	2.1	2.0	2.2	27	23		0.00425	19
KPER 100 L6	1.4	T1-T3	14.2	940	75.0	0.73	3.75	4.2	2.1	2.0	2.3	24	20		0.00625	24
KPER 112 M6	1.9	T1-T3	19.1	950	79.0	0.74	4.7	5.3	2.2	2.0	2.4	21	18		0.01225	33.5
K11R 132 S6	2.6	T1-T3	26.1	950	80.5	0.79	5.9	5.3	1.8	1.8	2.8	22	19	PTB 98 ATEX 3459/08	0.018	49
K11R 132 M6	3.5	T1-T3	34.8	960	82.9	0.82	7.4	6.3	2.0	2.0	3.0	24	21	PTB 98 ATEX 3459/10	0.023	53
K11R 132 MX6	4.8	T1-T3	47.6	963	83.5	0.83	10.0	5.1	1.8	1.6	2.5	30	28	PTB 98 ATEX 3459/12	0.043	70
K11R 160 M6	6.6	T1-T3	65.3	965	84.5	0.84	13.4	5.4	1.9	1.6	2.5	35	30	PTB 08 ATEX 3038/19	0.053	89
K11R 160 L6	9.7	T1-T3	95.5	970	85.0	0.84	19.6	5.8	2.2	1.9	2.7	30	13	PTB 08 ATEX 3038/20	0.113	123
K11R 180 L6	13.2	T1-T3	129	975	89.0	0.87	24.5	6.5	2.2	2.0	2.9	50	23	PTB 08 ATEX 3039/12	0.228	190
K11R 200 L6	16.5	T1-T3	261	977	87.5	0.82	33.0	6.8	2.4	2.1	3.2	28	9	PTB 08 ATEX 3040/11	0.228	190
K11R 200 LX6	20	T1-T3	195	977	90.5	0.90	35.5	6.4	2.2	1.6	2.5	45	18	PTB 08 ATEX 3040/12	0.443	265
K11R 225 M6	27	T1-T3	264	975	91.0	0.88	49.0	5.7	2.1	1.8	2.3	40	13	PTB 08 ATEX 3041/11	0.825	360
K11R 250 M6	33	T1-T3	320	985	92.0	0.86	60	6.0	2.1	1.7	2.4	35	12	PTB 08 ATEX 3042/07	1.28	475
K11R 280 S6	40	T1-T3	386	990	93.9	0.86	71	7.0	1.9	1.8	2.5	55	24	PTB 08 ATEX 3043/09	2.63	715
K11R 280 M6	46	T1-T3	444	990	94.0	0.88	80	7.5	1.9	1.6	2.5	60	25	PTB 08 ATEX 3043/10	3.33	810
	50	T1,T2	483	988	94.0	0.88	87	6.9	1.8	1.5	2.3	60		IBExU 99 ATEX 1030/16	3.33	810
K11R 315 S6	64	T1-T3	619	988	94.5	0.89	113	7.2	2.2	1.8	2.5	30	9	PTB 08 ATEX 3044/08	3.33	840
	68	T1,T2	658	987	94.0	0.89	118	6.9	2.1	1.7	2.3	28		PTB 08 ATEX 3044/09	3.33	840
K11R 315 M6	76	T1-T3	732	992	95.2	0.88	131	7.2	1.6	1.3	2.5	45	17	IBExU 99 ATEX 1137/19	6.00	1080
	82	T1,T2	791	990	95.1	0.88	141	6.7	1.5	1.2	2.3	40		IBExU 99 ATEX 1137/21	6.00	1080
K11R 315 MY6	85	T1-T3	820	990	95.2	0.87	149	6.9	1.6	1.4	2.5	40	15	IBExU 99 ATEX 1137/04	6.00	1080
	92	T1,T2	890	987	95.0	0.87	160	6.4	1.5	1.3	2.3				6.00	1080
K11R 315 L6	95	T1-T3	921	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	1061	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	1202	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	1539	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	1923	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	2.57	670	52.0	0.64	0.78	2.5	1.6	1.6	1.9	180	150		0.00130	10.5
KPER 80 G8	0.25	T1-T3	3.56	670	55.0	0.67	1.00	2.8	2.3	2.3	2.4	70	60		0.00175	12
KPER 90 S8	0.37	T1-T3	5.05	700	59.0	0.56	1.61	2.9	1.5	1.5	2.0	60	55		0.00300	15
KPER 90 L8	0.55	T1-T3	7.56	695	64.0	0.58	2.15	3.0	1.6	1.6	2.1	60	55		0.00375	18
KPER 100 L8	0.65	T1-T3	8.87	700	66.0	0.63	2.25	2.9	1.5	1.5	1.8	70	60		0.00625	23
KPER 100 LX8	0.95	T1-T3	12.9	705	74.0	0.68	2.75	4.1	2.0	2.0	2.5	70	60		0.00900	28
KPER 112 M8	1.3	T1-T3	17.7	700	75.0	0.67	3.9	4.1	1.7	1.7	1.9	60	50		0.01225	33.5
K11R 132 S8	1.9	T1-T3	25.9	700	75.0	0.75	4.9	3.9	1.6	1.6	2.2	35	30	PTB 98 ATEX 3459/14	0.018	49
K11R 132 M8	2.6	T1-T3	35.2	705	78.5	0.74	6.5	4.5	1.8	1.7	2.6	30	29	PTB 98 ATEX 3459/16	0.023	57
K11R 160 M8	3.5	T1-T3	46.4	720	80.0	0.72	8.7	4.3	1.8	1.7	2.4	45	40	PTB 08 ATEX 3038/21	0.043	80
K11R 160 MX8	4.8	T1-T3	63.7	720	81.5	0.74	11.6	4.5	1.9	1.8	2.4	50	40	PTB 08 ATEX 3038/22	0.053	90
K11R 160 L8	6.6	T1-T3	86.3	730	84.0	0.73	15.6	5.0	2.1	1.9	2.7	40	35	PTB 08 ATEX 3038/23	0.113	122
K11R 180 L8	9.7	T1-T3	128	725	85.0	0.73	22.5	5.1	2.3	2.0	2.6	40	12	PTB 08 ATEX 3039/13	0.145	140
K11R 200 L8	13.2	T1-T3	173	730	86.5	0.72	30.5	5.6	2.3	2.1	2.9	40	13	PTB 08 ATEX 3040/13	0.228	195
K11R 225 S8	16.5	T1-T3	216	730	88.5	0.81	33.5	6.0	2.2	1.9	2.8	50	20	PTB 08 ATEX 3041/12	0.440	275
K11R 225 M8	20	T1-T3	260	735	90.5	0.81	39.5	5.3	2.0	1.7	2.2	60	25	PTB 08 ATEX 3041/13	0.825	360
K11R 250 M8	27	T1-T3	350	737	90.5	0.80	54	5.7	2.3	1.7	2.3	40	13	PTB 08 ATEX 3042/08	1.35	472
K11R 280 S8	33	T1-T3	425	742	93.5	0.78	65	6.3	2.0	1.8	2.4	70	30	PTB 08 ATEX 3043/11	2.63	700
K11R 280 M8	40	T1-T3	516	740	93.8	0.79	78	6.5	2.0	1.8	2.4	75	30	PTB 08 ATEX 3043/12	3.33	805
K11R 315 S8	50	T1-T3	645	740	94.0	0.80	96	5.9	1.7	1.6	2.1	50	18	PTB 08 ATEX 3044/10	3.33	850
K11R 315 M8	68	T1-T3	878	740	94.0	0.80	131	6.3	2.1	1.9	2.6	35	9	PTB 08 ATEX 3044/11	3.60	880
K11R 315 MY8	80	T1-T3	1030	742	94.5	0.80	154	6.4	1.4	1.2	2.3	30	12	IBExU 99 ATEX 1137/25	6.00	1080
K11R 315 L8	95	T1-T3	1226	740	94.5	0.81	180	6.0	1.8	1.7	2.2				6.76	1250
K11R 315 LX8	115	T1-T3	1484	740	94.5	0.80	220	6.0	1.8	1.7	2.2				8.71	1430
K12R 355 M8	140	T1-T3	1807	740	95.0	0.79	270	7.5	1.5	1.1	2.5				9.5	1600
K12R 355 MX8	180	T1-T3	2323	740	95.5	0.79	350	7.5	1.5	1.1	2.5				11.6	2100
K12R 355 L8	210	T1-T3	2710	740	95.5	0.79	400	7.5	1.5	1.1	2.5				15.8	2400

Other voltages, frequencies and pole-changing motors on request; Changes are possible for motors that are not yet certified

CE 0637 ⟨Ex⟩ II 2G Ex e II T1/ T2,T3

Three-phase motors with squirrel-cage rotor for inverter operation Type of protection Increased safety “e” Motors for operation in zone 1 acc. to EN 60079-0/EN 60079-7

with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155, temperature class T3
maximum inverter input voltage 500 V

Motor selection data

Type	P	I		Torque M				Approval no.	Data	J	m
Frequency f	50 Hz	50 Hz	5 Hz	25 Hz	50 Hz	87 Hz	87 Hz		sheet		
	400 V Y [1]					Y	Δ				
	kW	A	Nm	Nm	Nm	Nm	Nm			kgm²	kg
Synchronous speed 1500 rpm – 4-pole version											
K12R 112 M4	4.55	9.4	15	25	30	17	30	PTB 08 ATEX 3026 X		0.0150	53
K11R 132 S4	4.55	9.4	15	25	30	17	30	PTB 08 ATEX 3001 X	01	0.0150	53
K11R 132 M4	6.1	12.9	20	40	40	20	40	PTB 08 ATEX 3001 X	02	0.0280	72
K11R 160 M4	10	18.5	45	65	65	30	65	PTB 07 ATEX 3142 X	01	0.0780	123
K11R 160 L4	13.1	24.7	65	85	85	45	85	PTB 07 ATEX 3142 X	02	0.0900	136
K11R 180 M4	14.7	27.7	70	95	95	50	95	PTB 07 ATEX 3143 X	01	0.1380	180
K11R 180 L4	20	38	85	130	130	65	130	PTB 07 ATEX 3143 X	02	0.1380	185
K11R 200 L4	30	56.5	140	195	195	85	160	PTB 08 ATEX 3027 X	01	0.2750	270
K11R 225 S4	35.7	66.6	200	230	230	120	230	PTB 08 ATEX 3028 X	01	0.525	380
K11R 225 M4	44.3	87.5	240	285	285	156	241	PTB 08 ATEX 3028 X	02	0.525	385
K11R 250 M4	55.2	101.2	310	355	355	186	306	PTB 08 ATEX 3029 X	01	0.950	530
K11R 280 S4	75	135	400	480	480	240	450	PTB 08 ATEX 3030 X		1.96	765
K11R 280 M4	90	160	500	580	580	300	550	PTB 08 ATEX 3030 X		2.27	840
K11R 315 S4	110	195	550	650	700	350	650	PTB 08 ATEX 3031 X		2.27	875
K11R 315 M4	132	230	650	760	850	425	800	PTB 08 ATEX 3031 X		2.73	1000
Synchronous speed 1000 rpm – 6-pole version											
K12R 112 M6	2.6	5.9	7	26	26	15	26	PTB 08 ATEX 3026 X		0.018	49
K11R 132 S6	2.6	5.9	7	26	26	15	26	PTB 08 ATEX 3001 X		0.018	49
K11R 132 M6	3.5	7.4	12	35	35	20	35	PTB 08 ATEX 3001 X		0.023	53
K11R 132 MX6	4.8	10.0	18	48	48	25	48	PTB 08 ATEX 3001 X		0.043	70
K11R 160 M6	6.6	13.4	25	65	65	30	65	PTB 07 ATEX 3142 X		0.053	89
K11R 160 L6	9.7	19.6	50	95	95	50	95	PTB 07 ATEX 3142 X		0.113	123
K11R 180 L6	15.0	29	80	150	150	75	150	PTB 07 ATEX 3143 X		0.228	190
K11R 200 L6	16.5	33	80	150	160	80	150	PTB 08 ATEX 3027 X		0.228	190
K11R 200 LX6	22	40	150	215	215	120	215	PTB 08 ATEX 3027 X		0.443	265
K11R 225 M6	30	55	200	295	295	150	295	PTB 08 ATEX 3028 X		0.825	360
K11R 250 M6	37	68	280	360	360	190	360	PTB 08 ATEX 3029 X		1.28	475
K11R 280 S6	45	80	440	440	440	240	440	PTB 08 ATEX 3030 X		2.63	715
K11R 280 M6	55	95	535	535	535	280	535	PTB 08 ATEX 3030 X		3.33	810
K11R 315 S6	75	130	670	725	725	365	725	PTB 08 ATEX 3031 X		3.33	840
K11R 315 M6	90	160	750	865	865	440	850	PTB 08 ATEX 3031 X		6.00	1080

[1] Motor terminal voltage
Temperature monitoring: NAT 130 °C
An adjustment of the rated voltage of the motor in the range of 220 V up to 500 V is permissible by changing the number of turns of the winding.
The rated current changes in a reciprocal ratio to the rated voltage.

Changes are possible for motors that are not yet certified

Three-phase motors with squirrel-cage rotor for inverter operation
Type of protection Increased safety “e”
Motors for operation in zone 1 acc. to EN 60079-0/EN 60079-7

with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155, temperature class T3
maximum inverter input voltage 500 V

Inverter parameters

In connection with the above mentioned monitoring device the following inverter parameters have to be set and kept during operation:

Minimal pulse frequency:	3	kHZ
Current limit for short time:	$1.5*I_N$	
Maximum overload period:	60	s
Minimal frequency f_{min}:	5	Hz
Maximum frequency f_{max}:	87	Hz
Permissible period for operation below f_{min}:	60	s

The maximum overload period and the permissible period for operation below f_{min} comply to a time interval of 10 min.
The torque in relation to the frequency results from the permissible continuous current limit.

Special conditions
Motor operation in groups is not allowed.
Motors of this type shall only be operated with inverters that comply with the above mentioned “inverter parameters”.
The rated current of the frequency inverter shall only amount to max. 2 x rated motor current.
The current monitoring of the frequency inverter must be able to detect the effective value of the motor current with a tolerance of ± 5 % related to the rated motor current.
Before start-up it has to be secured that no inverter induced overvoltages with a peak value of more than 1556 V occur at the terminals of the electric motor.

Example of name plate

VEM motors GmbH D 38855 Wernigerode Made in Germany 0637 — Ex e II 2G T3 — Th.Kl./Th.cl. 155 (F/B) — IP 55 — 53 kg

3 ~ Mot.Nr./Nº 161507/0001 K11R 132 S4 Exe II T3 TWS VIK HW

	Y						Δ				
Hz	Nm	kW	min-1/r.p.m.	V	A	Nm	kW	min-1/r.p.m.	V	A
5	15	0,186	118	40	5,7	15	0,186	118	23	9,9
25	25	1,855	707	200	8,1	25	1,855	707	115	14
50	30	4,551	1444	400	9,4	30	4,551	1444	230	16,3
87	17	4,46	2493	400	9,3	30	8,016	2554	400	16,5

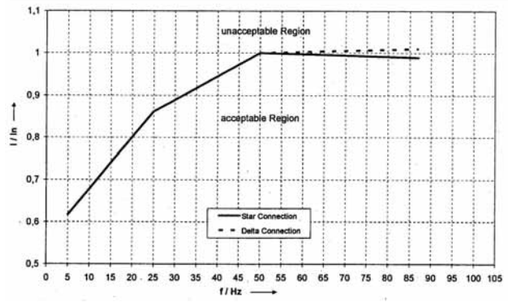
Prof./Test 19.03.2008 Bescheln./Certif. PTB08ATEX3001X/01
IM B3 DIN EN 60034-1

Fett/Grease
DE 6208 ZZ C3 DIN 625 cm³
NE 6207 ZZ C3 DIN 625 cm³ h
NAT 130 °C

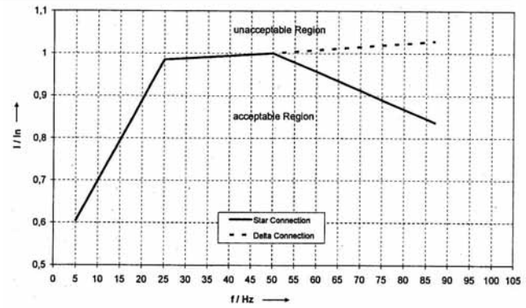
Three-phase motors with squirrel-cage rotor for inverter operation
Type of protection Increased safety “e”
Motors for operation in zone 1 acc. to EN 60079-0/EN 60079-7

with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155, temperature class T3
maximum inverter input voltage 500 V

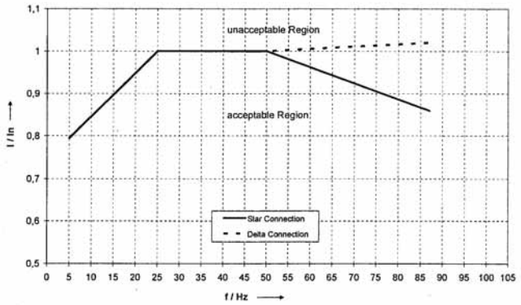
Setting parameters for continuous current limit of the frequency inverter between 5 Hz and 87 Hz



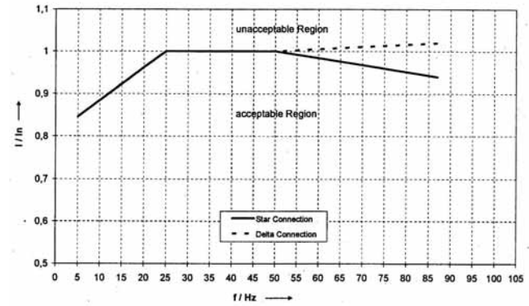
K11R 132 S4 Ex e II T3, PTB 08 ATEX 3001 X/01



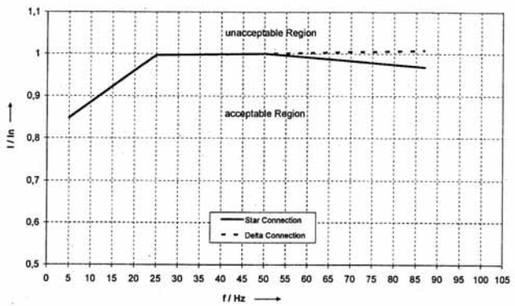
K11R 132 M4 Ex e II T3, PTB 08 ATEX 3001 X/02



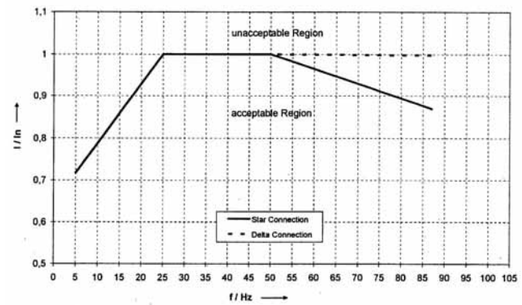
K11R 160 M4 Ex e II T3, PTB 07 ATEX 3342 X/01



K11R 160 L4 Ex e II T3, PTB 07 ATEX 3342 X/02



K11R 180 M4 Ex e II T3, PTB 07 ATEX 3143 X/01

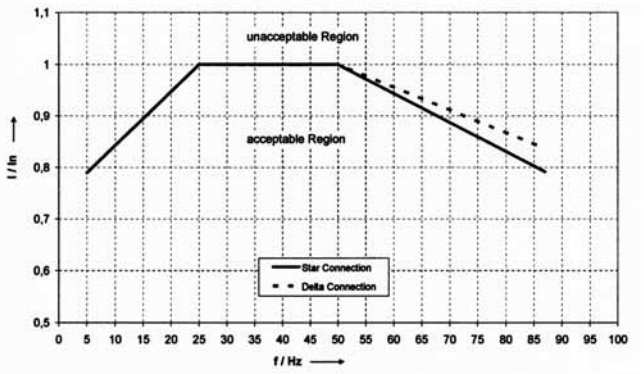


K11R 180 L4 Ex e II T3, PTB 07 ATEX 3143 X/02

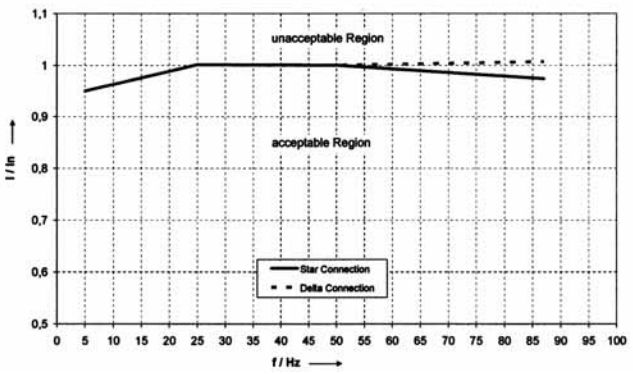
Three-phase motors with squirrel-cage rotor for inverter operation
Type of protection Increased safety “e”
Motors for operation in zone 1 acc. to EN 60079-0/EN 60079-7

with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155, temperature class T3
maximum inverter input voltage 500 V

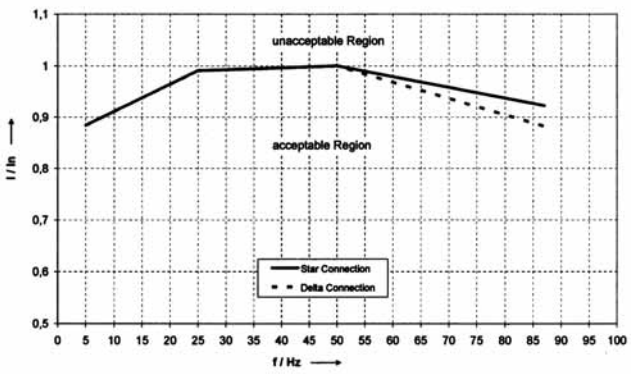
Setting parameters for continuous current limit of the frequency inverter between 5 Hz and 87 Hz



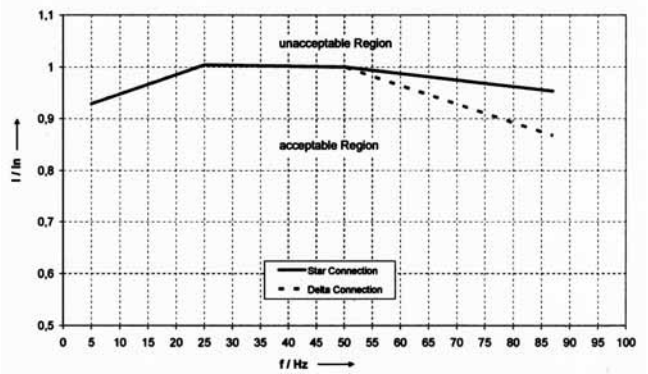
K11R 200 L4 Ex e II T3, PTB 08 ATEX 3027 X/01



K11R 225 S4 Ex e II T3, PTB 08 ATEX 3028 X/01



K11R 225 M4 Ex e II T3, PTB 08 ATEX 3028 X/02



K11R 250 M4 Ex e II T3, PTB 08 ATEX 3029 X/01

Type of protection Non sparking “n”

CE 0637 ⟨Ex⟩ II 3G Ex nA II T1–T3

Energy saving motors acc. to CEMEP
“Improved Efficiency” EFF2
or according to EN 60034-30
“Standard Efficiency” IE1
Rated voltage range A
50 Hz, 2- up to 8-pole
3000/1500/1000/750 rpm

Energy saving motors acc. to CEMEP
“High Efficiency” EFF1
or according to EN 60034-30
“High Efficiency” IE2
Rated voltage range A
50 Hz, 2- to 8-pole
3000/1500/1000/750 rpm

Type of protection Flameproof enclosure “d/de”

CE 0637 ⟨Ex⟩ II 2G Ex d/de IIC T3 –T6

Basic design
Rated voltage range A
50 Hz, 2- to 8-pole
3000/1500/1000/750 rpm

Basic design
Rated voltage range A
60 Hz, 2- to 8-pole
3600/1800/1200/900 rpm

Three-phase motor with squirrel-cage rotor and built-in brake
Rated voltage range A
50 Hz, 2- to 8-pole,
8/4- and 8/2-pole
3000/1500/1000/750 rpm
750/1500, 750/3000 rpm

Three-phase motor with squirrel-cage rotor and built-on brake
Rated voltage range A
50 Hz, 2- to 8-pole
3000/1500/1000/750 rpm

Coil data for built-in and built-on brakes

CE 0637 ⟨Ex⟩ II 3G Ex nA II T1–T3

Energy saving motors acc. to EN 60034-30 – IE1 CE 0637 ⟨Ex⟩ II 2D Ex tD A21 IP 65 T125 °C

Type of protection Non sparking “n”

Motors for operation in Zone 2 acc. to EN 60079-15 and IEC 60079-15

Motors for operation in Zone 21 acc. to EN 61241-0/EN 61241-1

EFF 2 **IE1**

with surface ventilation, mode of operation S1, continuous duty

temperature class T1–T3

degree of protection IP 55 (or IP 65 for Ex II 2D), thermal class 155

Motor selection data — Design point 400 V, 50 Hz

Type with EFF-mark	P kW	M_B Nm	n rpm	η (EN 60034-2) %	cos φ -	I 400 V A	I_A/I -	M_A/M -	M_S/M -	M_K/M -	J kgm²	m kg	Approval no. IBExU... Zone 2	Zone 21	Type with IE-mark	η (EN 60034-2-1) %
Synchronous speed 3000 rpm – 2-pole version																
KPER 56 K2	0.09	0.3	2840	70.0	0.74	0.25	4.9	2.3	2.3	2.8	0.00013	4.4	06ATEXB002	-		
KPER 56 G2	0.12	0.41	2830	70.3	0.77	0.32	4.5	2.1	2.1	2.3	0.00013	4.5	06ATEXB002	-		
KPER 63 K2	0.18	0.62	2790	67.1	0.76	0.51	4.1	1.9	1.9	2.2	0.00013	4.9	06ATEXB002	-		
KPER 63 G2	0.25	0.85	2800	68.1	0.72	0.74	4.2	2.2	2.2	2.4	0.00015	5.2	06ATEXB002	-		
KPER 71 K2	0.37	1.27	2780	71.5	0.79	0.94	4.4	2.1	2.1	2.3	0.00025	6.7	06ATEXB002	-		
KPER 71 G2	0.55	1.89	2775	74.3	0.81	1.32	5.1	2.3	2.1	2.6	0.00032	7.6	06ATEXB002	-		
KPER 80 K2	0.75	2.54	2825	77.5	0.81	1.72	5.9	2.4	2.4	2.4	0.00057	10.7	06ATEXB002	-	IE1-KPER 80 K2	76.8
KPER 80 G2	1.1	3.71	2835	77.8	0.80	2.55	6.0	2.4	2.3	2.6	0.00072	11.5	06ATEXB002	-	IE1-KPER 80 G2	76.9
KPER 90 S2	1.5	5.04	2840	81.2	0.86	3.1	7.0	2.5	2.5	2.8	0.00132	16	06ATEXB002	-	IE1-KPER 90 S2	81.2
KPER 90 L2	2.2	7.4	2850	82.0	0.85	4.55	7.5	2.8	2.3	2.9	0.00170	19	06ATEXB002	-	IE1-KPER 90 L2	82.1
KPER 100 L2	3.0	10	2865	83.4	0.84	6.15	6.8	2.4	2.2	2.8	0.00275	25	06ATEXB002	-	IE1-KPER 100 L2	82.8
KPER 112 M2	4.0	13.2	2900	85.0	0.81	8.4	7.0	2.2	2.1	2.9	0.0045	32	06ATEXB002	-	IE1-KPER 112 M2	84.9
KPER 112 MX2	5.5	18.2	2890	86.3	0.84	11	7.5	2.4	2.2	3.0	0.0055	38	06ATEXB002	-	IE1-KPER 112 MX2	85.9
K11R 132 S2	5.5	18.4	2860	85.7	0.86	11.0	5.5	1.8	1.6	2.2	0.0081	52	99ATEX1095		IE1-K11R 132 S2	84.7
K11R 132 SX2	7.5	24.7	2900	87.0	0.86	14.5	6.6	1.8	1.3	2.5	0.0110	57	99ATEX1095		IE1-K11R 132 SX2	86.0
K11R 160 M2	11	36.2	2900	88.5	0.90	20.0	7.0	2.4	2.0	3.0	0.0258	81	99ATEX1095		IE1-K11R 160 M2	87.6
K11R 160 MX2	15	49.1	2920	89.4	0.90	27.0	7.1	2.2	1.7	2.9	0.0575	118	99ATEX1095		IE1-K11R 160 MX2	88.7
K11R 160 L2	18.5	60	2930	90.5	0.92	32.5	7.2	2.1	1.6	2.8	0.0675	134	99ATEX1095		IE1-K11R 160 L2	89.3
K11R 180 M2	22	72	2935	91.8	0.92	37.5	6.8	1.7	1.4	2.6	0.105	165	99ATEX1095		IE1-K11R 180 M2	89.9
K11R 200 L2	30	97	2940	92.8	0.92	50.5	7.3	2.0	1.6	2.9	0.128	195	99ATEX1095		IE1-K11R 200 L2	91.1
K11R 200 LX2	37	120	2940	93.0	0.90	64.0	7.0	1.8	1.3	2.4	0.193	255	99ATEX1095		IE1-K11R 200 LX2	91.5
K11R 225 M2	45	146	2940	93.7	0.91	76.0	7.5	1.8	1.4	2.7	0.220	290	99ATEX1095		IE1-K11R 225 M2	92.0
K11R 250 M2	55	178	2955	93.7	0.91	93.0	7.5	2.0	1.5	2.6	0.375	360	99ATEX1095		IE1-K11R 250 M2	92.2
K11R 280 S2	75	241	2970	94.6	0.92	124	7.5	2.0	1.6	2.6	0.650	490	99ATEX1095		IE1-K11R 280 S2	93.1
K11R 280 M2	90	289	2970	94.7	0.91	151	8.5	2.2	1.8	2.8	0.675	510	99ATEX1095		IE1-K11R 280 M2	93.2
K11R 315 S2	110	353	2975	95.4	0.91	183	8.5	1.5	1.3	2.5	1.21	720	99ATEX1095		IE1-K11R 315 S2	93.5
K11R 315 M2	132	424	2975	95.4	0.91	219	8.5	2.0	1.8	2.7	1.44	800	99ATEX1095		IE1-K11R 315 M2	93.8
K11R 315 MX2	160	514	2975	96.0	0.93	259	8.5	2.0	1.6	2.6	1.76	980	99ATEX1095		IE1-K11R 315 MX2	94.0
K11R 315 MY2	200	643	2970	96.0	0.92	327	8.2	2.6	2.0	2.6	2.82	1170	99ATEX1095		IE1-K11R 315 MY2	94.0
K11R 315 L2	250	803	2973	96.1	0.93	404	7.3	2.1	1.4	2.0	3.66	1460	99ATEX1095		IE1-K11R 315 L2	94.1
K12R 355 M2	315	1008	2985	96.8	0.91	520	8.2	1.4	1.0	3.0	4.20	2000	99ATEX1095		IE1-K12R 355 M2	94.5
K12R 355 M2	355	1136	2985	96.9	0.91	580	8.5	1.4	1.0	2.9	5.60	2200	99ATEX1095		IE1-K12R 355 M2	94.3
K12R 355 LY2	400	1280	2985	97.1	0.91	650	8.6	1.6	1.0	2.9	7.10	2400	99ATEX1095			
K12R 355 L2	450	1440	2985	97.2	0.92	725	9.0	2.0	0.9	2.8	7.1	2400	99ATEX1095			

CE 0637 ⟨Ex⟩ II 3G Ex nA II T1–T3

Energy saving motors acc. to EN 60034-30 – IE1 CE 0637 ⟨Ex⟩ II 2D Ex tD A21 IP 65 T125 °C

Type of protection Non sparking “n”

Motors for operation in Zone 2 acc. to EN 60079-15 and IEC 60079-15

Motors for operation in Zone 21 acc. to EN 61241-0/EN 61241-1

EFF 2 IE1

with surface ventilation, mode of operation S1, continuous duty

temperature class T1–T3

degree of protection IP 55 (or IP 65 for Ex II 2D), thermal class 155

Motor selection data — Design point 400 V, 50 Hz

Type with EFF-mark	P kW	M_B Nm	n rpm	η (EN 60034-2) %	cos φ -	I 400 V A	I_A/I -	M_A/M -	M_S/M -	M_K/M -	J kgm²	m kg	Approval no. IBExU... Zone 2	Zone 21	Type with IE-mark	η (EN 60034-2-1) %
Synchronous speed 1500 rpm – 4-pole version																
KPER 56 K4	0.06	0.41	1410	60.5	0.60	0.24	3.1	2.3	2.3	2.7	0.00019	4.3	06ATEXB002	-		
KPER 56 G4	0.09	0.63	1375	62.0	0.68	0.31	3.2	1.9	1.9	2.2	0.00019	4.4	06ATEXB002	-		
KPER 63 K4	0.12	0.84	1370	57.5	0.68	0.44	3.2	1.9	1.8	2.2	0.00019	4.8	06ATEXB002	-		
KPER 63 G4	0.18	1.26	1360	61.0	0.66	0.65	3.3	2.0	2.0	2.3	0.00024	5.2	06ATEXB002	-		
KPER 71 K4	0.25	1.72	1385	64.6	0.72	0.78	3.6	1.8	1.8	2.1	0.00040	6.8	06ATEXB002	-		
KPER 71 G4	0.37	2.58	1370	67.8	0.74	1.06	3.8	2.0	2.0	2.2	0.00050	7.8	06ATEXB002	-		
KPER 80 K4	0.55	3.75	1400	71.5	0.69	1.60	4.1	2.1	2.0	2.3	0.00087	10.6	06ATEXB002	-		
KPER 80 G4	0.75	5.12	1400	73.5	0.70	2.10	4.6	2.2	2.1	2.3	0.00107	11.7	06ATEXB002	-	IE1-KPER 80 G4	73.6
KPER 90 S4	1.10	7.5	1410	76.6	0.79	2.62	5.5	2.3	2.2	2.5	0.00207	15.5	06ATEXB002	-	IE1-KPER 90 S4	76.7
KPER 90 L4	1.50	10.2	1400	78.8	0.81	3.40	5.5	2.5	2.4	2.6	0.00260	18	06ATEXB002	-	IE1-KPER 90 L4	78.6
KPER 100 L4	2.20	14.9	1410	81.2	0.79	4.95	6.0	2.5	2.3	2.7	0.00400	23.5	06ATEXB002	-	IE1-KPER 100 L4	80.2
KPER 100 LX4	3.00	20	1430	82.3	0.79	6.65	6.5	2.5	2.2	2.9	0.00725	30	06ATEXB002	-	IE1-KPER 100 LX4	82.4
KPER 112 M4	4.00	26.6	1435	84.2	0.78	8.80	6.9	2.6	2.5	3.2	0.0090	37	06ATEXB002	-	IE1-KPER 112 M4	84.1
KPER 112 MX4	5.5	36.9	1425	84.0	0.78	12.1	6.3	2.5		2.9	0.0110	45	06ATEXB002	-	IE1-KPER 112 MX4	85.2
K11R 132 S4	5.5	36.5	1440	83.0	0.82	11.5	6.5	2.4	2.1	3.2	0.015	50	99ATEX1095		IE1-K21R 132 S4	84.9
K11R 132 M4	7.5	49.4	1450	85.0	0.82	15.5	5.5	2.0	1.7	2.9	0.028	69	99ATEX1095		IE1-K21R 132 M4	86.5
K11R 160 M4	11.0	73	1440	87.0	0.83	22.0	6.0	2.2	1.9	3.3	0.035	86	99ATEX1095		IE1-K21R 160 M4	88.0
K11R 160 L4	15.0	98	1455	89.0	0.86	28.5	6.0	2.5	2.0	3.0	0.078	120	99ATEX1095		IE1-K21R 160 L4	88.7
K11R 180 M4	18.5	121	1455	90.0	0.86	34.5	6.0	2.5	2.0	2.9	0.090	136	99ATEX1095		IE1-K21R 180 M4	89.3
K11R 180 L4	22	143	1465	90.5	0.84	42.0	6.5	2.0	1.8	2.6	0.138	170	99ATEX1095		IE1-K11R 180 L4	89.9
K11R 200 L4	30	196	1465	91.5	0.85	55.5	7.0	2.0	1.7	2.4	0.168	220	99ATEX1095		IE1-K11R 200 L4	90.7
K11R 225 S4	37	240	1470	92.5	0.86	67.0	7.0	2.0	1.7	2.5	0.275	270	99ATEX1095		IE1-K11R 225 S4	91.2
K11R 225 M4	45	292	1470	93.0	0.86	81.0	7.0	2.0	1.7	2.5	0.313	300	99ATEX1095		IE1-K11R 225 M4	91.7
K11R 250 M4	55	356	1475	93.5	0.86	98.5	7.0	2.2	1.7	2.3	0.525	375	99ATEX1095		IE1-K11R 250 M4	92.3
K11R 280 S4	75	484	1480	94.1	0.86	134	7.0	2.0	1.7	2.2	0.950	520	99ATEX1095		IE1-K11R 280 S4	92.7
K11R 280 M4	90	581	1480	94.6	0.86	160	7.0	2.1	1.6	2.2	1.100	580	99ATEX1095		IE1-K11R 280 M4	93.3
K11R 315 S4	110	707	1485	95.1	0.86	194	7.5	1.8	1.6	2.2	1.96	740	99ATEX1095		IE1-K11R 315 S4	93.5
K11R 315 M4	132	849	1485	95.1	0.86	233	7.0	1.8	1.5	2.2	2.27	840	99ATEX1095		IE1-K11R 315 M4	93.5
K11R 315 MX4	160	1032	1480	95.0	0.87	279	7.0	1.8	1.5	2.0	2.73	1000	99ATEX1095		IE1-K11R 315 MX4	93.8
K11R 315 MY4	200	1286	1485	96.0	0.88	342	7.5	2.0	1.8	2.4	4.82	1200	99ATEX1095		IE1-K11R 315 MY4	94.3
K11R 315 L4	250	1608	1485	96.1	0.90	415	8.0	2.0	1.6	2.3	5.93	1450	99ATEX1095		IE1-K11R 315 L4	94.3
K12R 355 MX4	315	2012	1495	96.8	0.85	555	9.0	2.0	1.3	3.4	5.6	1950	99ATEX1095		IE1-K12R 355 MX4	94.0
K12R 355 MX4	355	2268	1495	96.8	0.84	630	9.2	2.0	1.3	3.8	7.9	2150	99ATEX1095		IE1-K12R 355 MX4	94.5
K12R 355 LY4	400	2555	1495	96.8	0.82	730	9.0	2.1	1.3	4.0	9.5	2400	99ATEX1095			
K12R 355 L4	450	2884	1490	96.7	0.79	850	8.7	1.9	1.4	4.0	9.5	2400	99ATEX1095			

CE 0637 ⟨Ex⟩ II 3G Ex nA II T1–T3

Energy saving motors acc. to EN 60034-30 – IE1

CE 0637 ⟨Ex⟩ II 2D Ex tD A21 IP 65 T125 °C

Type of protection Non sparking “n”

Motors for operation in Zone 2 acc. to EN 60079-15 and IEC 60079-15

Motors for operation in Zone 21 acc. to EN 61241-0/EN 61241-1 IE1

with surface ventilation, mode of operation S1, continuous duty

temperature class T1–T3

degree of protection IP 55 (or IP 65 for Ex II 2D), thermal class 155

Motor selection data — Design point 400 V, 50 Hz

Type with EFF-mark	P kW	M_B Nm	n rpm	η (EN 60034-2) %	cos φ -	I 400 V A	I_A/I -	M_A/M -	M_S/M -	M_K/M -	J kgm²	m kg	Approval no. IBExU... Zone 2	Zone 21	Type with IE-mark	η (EN 60034-2-1) %
Synchronous speed 1000 rpm – 6-pole version																
KPER 63 K6	0.09	0.96	895	50.5	0.56	0.46	2.5	2.0	2.0	2.4	0.00024	4.9	06ATEXB002	-		
KPER 63 G6	0.12	1.3	880	52.0	0.56	0.59	2.5	2.0	2.0	2.3	0.00027	5.7	06ATEXB002	-		
KPER 71 K6	0.18	1.86	925	58.0	0.51	0.88	2.8	1.6	1.6	2.1	0.00045	7.4	06ATEXB002	-		
KPER 71 G6	0.25	2.61	915	60.0	0.55	1.10	2.9	2.0	2.0	2.2	0.00060	8.3	06ATEXB002	-		
KPER 80 K6	0.37	3.86	915	66.0	0.66	1.22	3.4	2.0	2.0	2.0	0.00130	11	06ATEXB002	-		
KPER 80 G6	0.55	5.74	915	68.0	0.67	1.73	3.7	2.2	2.2	2.4	0.00175	12.5	06ATEXB002	-		
KPER 90 S6	0.75	7.7	935	70.0	0.64	2.43	4.5	2.4	2.4	2.6	0.00325	16	06ATEXB002	-	IE1-KPER 90 S6	70.5
KPER 90 L6	1.10	11.2	935	73.0	0.69	3.15	4.6	2.2	2.2	2.6	0.00425	19	06ATEXB002	-	IE1-KPER 90 L6	73.4
KPER 100 L6	1.50	15.2	945	76.4	0.73	3.90	4.6	2.1	2.0	2.4	0.00625	24	06ATEXB002	-	IE1-KPER 100 L6	76.0
KPER 112 M6	2.20	22.1	950	79.8	0.74	5.35	5.3	2.2	2.1	2.7	0.01225	33.5	06ATEXB002	-	IE1-KPER 112 M6	78.1
K11R 132 S6	3.0	30	955	78.5	0.82	6.7	5.7	1.8	1.6	2.7	0.0180	46	99ATEX1095		IE1-K11R 132 S6	79.7
K11R 132 M6	4.0	40	955	80.0	0.80	9.0	6.0	2.2	2.0	3.1	0.0230	53	99ATEX1095		IE1-K11R 132 M6	81.4
K11R 132 MX6	5.5	55	955	83.0	0.83	11.5	5.0	1.8	1.5	2.3	0.0430	70	99ATEX1095		IE1-K11R 132 MX6	83.3
K11R 160 M6	7.5	75	960	85.0	0.82	15.5	5.5	2.0	1.6	2.5	0.0530	86	99ATEX1095		IE1-K11R 160 M6	85.0
K11R 160 L6	11.0	109	965	85.2	0.86	21.5	5.0	2.0	1.7	2.3	0.113	114	99ATEX1095		IE1-K11R 160 L6	86.4
K11R 180 L6	15.0	148	965	86.0	0.83	30.5	6.0	2.4	2.1	2.7	0.145	136	99ATEX1095		IE1-K11R 180 L6	87.7
K11R 200 L6	18.5	182	970	88.1	0.87	35.0	5.5	2.0	1.7	2.4	0.228	175	99ATEX1095		IE1-K11R 200 L6	88.6
K11R 200 LX6	22	217	970	88.8	0.87	41.0	6.2	2.2	1.8	2.6	0.268	200	99ATEX1095		IE1-K11R 200 LX6	89.2
K11R 225 M6	30	294	973	90.4	0.89	54.0	6.5	2.2	1.7	2.5	0.443	265	99ATEX1095		IE1-K11R 225 M6	90.2
K11R 250 M6	37	362	975	91.0	0.89	66.0	6.5	2.2	1.7	2.3	0.825	360	99ATEX1095		IE1-K11R 250 M6	90.8
K11R 280 S6	45	439	980	92.0	0.87	81.0	6.0	2.0	1.5	2.0	1.28	465	99ATEX1095		IE1-K11R 280 S6	91.4
K11R 280 M6	55	536	980	92.5	0.88	97.5	6.5	2.3	1.7	2.4	1.48	520	99ATEX1095		IE1-K11R 280 M6	91.9
K11R 315 S6	75	727	985	93.5	0.87	133	7.0	2.0	1.6	2.4	2.63	690	99ATEX1095		IE1-K11R 315 S6	92.7
K11R 315 M6	90	868	990	94.4	0.88	156	7.0	2.0	1.7	2.4	3.33	800	99ATEX1095		IE1-K11R 315 M6	93.4
K11R 315 MX6	110	1061	990	94.0	0.88	192	7.5	2.2	1.7	2.6	3.60	880	99ATEX1095		IE1-K11R 315 MX6	93.3
K11R 315 MY6	132	1273	990	95.0	0.88	228	7.5	2.0	1.7	2.4	6.00	1050	99ATEX1095		IE1-K11R 315 MY6	94.0
K11R 315 L6	160	1551	985	95.3	0.89	272	7.5	2.3	1.9	2.4	6.76	1250	99ATEX1095		IE1-K11R 315 L6	94.3
K12R 355 M6	200	1920	995	96.0	0.84	360	9.2	2.0	1.3	3.5	8.2	1650	99ATEX1095		IE1-K12R 355 M6	94.4
K12R 355 MX6	250	2399	995	96.6	0.85	440	9.0	2.0	1.2	3.2	12.1	2200	99ATEX1095		IE1-K12R 355 MX6	94.5
K12R 355 LY6	315	3023	995	96.6	0.84	560	8.8	2.0	1.2	3.4	14.0	2400	99ATEX1095		IE1-K12R 355 LY6	94.5

Other pole numbers and pole-changing motors on request
Available also in series KPR (IBExU06ATEXB001)/K10R (IBExU99ATEX1094)

CE 0637 ⟨Ex⟩ II 3G Ex nA II T1–T3

Energy saving motors

CE 0637 ⟨Ex⟩ II 2D Ex tD A21 IP 65 T125 °C

Type of protection Non sparking “n”

Motors for operation in Zone 2 acc. to EN 60079-15 and IEC 60079-15

Motors for operation in Zone 21 acc. to EN 61241-0/EN 61241-1

with surface ventilation, mode of operation S1, continuous duty

temperature class T1–T3

degree of protection IP 55 (or IP 65 for Ex II 2D), thermal class 155

Motor selection data — Design point 400 V, 50 Hz

Type with EFF-mark	P kW	M_B Nm	n rpm	η (EN 60034-2) %	cos φ -	I 400 V A	I_A/I -	M_A/M -	M_S/M -	M_K/M -	J kgm²	m kg	Approval no. IBExU... Zone 2	Zone 21
Synchronous speed 750 rpm – 8-pole version														
KPER 71 K8	0.09	1.27	675	45.5	0.51	0.56	2.1	1.9	1.9	2.1	0.00050	6.6	06ATEXB002	-
KPER 71 G8	0.12	1.71	670	46.5	0.51	0.73	2.3	1.8	1.8	2.1	0.00060	8.1	06ATEXB002	-
KPER 80 K8	0.18	2.49	690	56.5	0.59	0.78	2.8	2.0	2.0	2.2	0.00130	10.5	06ATEXB002	-
KPER 80 G8	0.25	3.44	695	58.0	0.56	1.12	3.0	2.3	2.3	2.5	0.00175	12	06ATEXB002	-
KPER 90 S8	0.37	5.05	700	61.5	0.54	1.6	3.0	1.9	1.9	2.1	0.00300	15	06ATEXB002	-
KPER 90 L8	0.55	7.6	695	64.5	0.60	2.04	3.2	1.9	1.9	2.2	0.00375	18	06ATEXB002	-
KPER 100 L8	0.75	10.2	705	67.0	0.60	2.7	3.3	2.0	2.0	2.3	0.00625	23	06ATEXB002	-
KPER 100 LX8	1.1	14.9	705	73.0	0.67	3.25	4.0	2.0	2.0	2.4	0.00900	28	06ATEXB002	-
KPER 112 M8	1.5	20.3	705	75.5	0.70	4.1	4.4	2.2	2.1	2.5	0.01225	33.5	06ATEXB002	-
K11R 132 S8	2.2	29.8	705	75.5	0.76	5.5	4.5	1.7	1.6	2.3	0.0180	46	99ATEX1095	
K11R 132 M8	3.0	40.6	705	78.0	0.75	7.4	4.5	1.7	1.6	2.3	0.0230	53	99ATEX1095	
K11R 160 M8	4.0	54	710	79.3	0.78	9.3	4.0	1.6	1.3	1.9	0.0430	70	99ATEX1095	
K11R 160 MX8	5.5	74	710	81.4	0.78	12.5	4.5	1.7	1.6	2.1	0.0530	86	99ATEX1095	
K11R 160 L8	7.5	99	725	83.0	0.78	16.5	4.5	1.8	1.6	2.1	0.1130	114	99ATEX1095	
K11R 180 L8	11.0	146	720	85.0	0.78	24.0	4.5	2.0	1.7	2.1	0.1450	136	99ATEX1095	
K11R 200 L8	15.0	198	725	86.5	0.79	31.5	5.0	2.0	1.7	2.3	0.2280	175	99ATEX1095	
K10R 180 M8	18.5	244	725	87.5	0.80	38.0	5.0	1.9	1.7	2.2	0.2680	200	99ATEX1095	
K11R 225 S8	18.5	244	725	89.2	0.83	36.0	5.5	2.0	1.6	2.2	0.440	265	99ATEX1095	
K11R 225 M8	22	290	725	89.2	0.84	42.5	5.0	1.8	1.5	2.2	0.440	265	99ATEX1095	
K11R 250 M8	30	392	730	90.2	0.79	61.0	5.5	2.2	1.8	2.2	0.825	360	99ATEX1095	
K11R 280 S8	37	481	735	91.0	0.80	73.5	5.5	2.0	1.5	2.0	1.350	465	99ATEX1095	
K11R 280 M8	45	585	735	91.5	0.77	92.0	6.0	2.3	1.8	2.4	1.550	520	99ATEX1095	
K11R 315 S8	55	710	740	93.1	0.80	107	6.5	1.8	1.6	2.3	2.63	690	99ATEX1095	
K11R 315 S8	75	968	740	93.3	0.81	143	6.0	2.0	1.6	2.3	3.33	800	99ATEX1095	
K11R 315 M8	90	1161	740	93.5	0.81	172	6.0	1.9	1.6	2.2	3.60	880	99ATEX1095	
K11R 315 MX8	110	1420	740	94.5	0.81	207	6.5	2.1	1.8	2.4	6.00	1050	99ATEX1095	
K11R 315 L8	132	1704	740	95.0	0.83	242	6.3	2.0	1.7	2.1	6.76	1250	99ATEX1095	
K12R 355 M8	160	2051	745	95.6	0.77	315	7.5	1.8	1.2	3.0	9.5	1600	99ATEX1095	
K12R 355 MX8	200	2564	745	95.9	0.79	380	8.2	2.0	1.3	3.5	13.4	2200	99ATEX1095	
K12R 355 LY8	250	3205	745	95.8	0.74	510	8.0	2.2	1.3	3.5	15.8	2400	99ATEX1095	

Other pole numbers and pole-changing motors on request
Available also in series KPR (IBExU06ATEXB001)/K10R (IBExU99ATEX1094)

CE 0637 ⟨Ex⟩ II 3G Ex nA II T1–T3

Energy saving motors acc. to CEMEP “High Efficiency” EFF1 and EN 60034-30 – IE2

Type of protection Non sparking “n”

Motors for operation in Zone 2 acc. to EN 60079-0 and IEC 60079-15

EFF 1 **IE2**

with surface ventilation, mode of operation S1, continuous duty

temperature class T1–T3

type of construction IM B3, degree of protection IP 55, thermal class 155

EC type examination certificate: IBExU03ATEXB004

Motor selection data — Design point 400 V, 50 Hz

Type	P_B	M_B	n_B	η_B (EN 60034-2)	$\eta_{3/4}$	cos φ_B	I_B 400 V	I_A/I_B	M_A/M_B	M_S/M_B	M_K/M_B	J	m	Type with IE-mark	η (EN 60034-2-1)
	kW	Nm	rpm	%	%	-	A	-	-	-	-	kgm²	kg		%
Synchronous speed 3000 rpm – 2-pole version															
WE1R 132 S2	5.5	18.0	2915	88.9	88.6	0.86	10.5	7.3	2.2	1.5	2.9	0.01270	58	IE2-WE1R 132 S2	87.0
WE1R 132 SX2	7.5	24.6	2910	89.5	89.2	0.91	13.5	7.0	2.1	1.5	2.7	0.0168	75	IE2-WE1R 132 SX2	89.5
WE1R 160 M2	11.0	35.9	2930	90.5	89.9	0.88	20.0	8.5	2.7	2.1	3.6	0.0258	100	IE2-WE1R 160 M2	90.2
WE1R 160 MX2	15.0	48.8	2935	91.3	91.0	0.92	26.0	7.3	2.1	1.6	2.7	0.0675	140	IE2-WE1R 160 MX2	90.3
WE1R 160 L2	18.5	60.3	2930	91.8	91.7	0.91	32.0	7.5	2.2	1.6	2.8	0.0675	140	IE2-WE1R 160 L2	91.0
WE1R 180 M2	22	71.4	2942	92.7	92.8	0.90	38.0	6.6	1.8	1.4	2.6	0.105	175	IE2-WE1R 180 M2	91.3
WE1R 200 L2	30	97.4	2942	93.0	93.1	0.91	51.0	7.2	1.9	1.5	2.9	0.128	210	IE2-WE1R 200 L2	92.0
WE1R 200 LX2	37	120	2945	93.7	93.7	0.92	62.0	7.8	2.1	1.5	3.0	0.154	235	IE2-WE1R 200 LX2	92.5
WE1R 225 M2	45	146	2945	93.7	93.7	0.89	78.0	7.4	1.8	1.5	3.0	0.360	300	IE2-WE1R 225 M2	93.0
WE1R 250 M2	55	178	2957	94.5	94.4	0.89	94.5	8.4	2.4	2.0	3.1	0.375	385	IE2-WE1R 250 M2	93.2
WE1R 280 S2	75	241	2972	95.2	95.0	0.90	126	8.0	2.1	1.7	3.0	0.65	510	IE2-WE1R 280 S2	93.8
WE1R 280 M2	90	289	2970	95.2	95.1	0.91	150	7.4	1.9	1.6	2.7	0.68	550	IE2-WE1R 280 M2	94.5
W21R 315 S2	110	354	2970	95.9	95.9	0.89	186	8.3	1.7	1.6	2.6	1.21	730	IE2-W21R 315 S2	94.5
W21R 315 M2	132	424	2975	96.0	96.2	0.89	223	9.2	1.9	1.8	2.9	1.44	820	IE2-W21R 315 M2	95.0
W21R 315 MX2	160	515	2970	96.1	96.1	0.90	267	8.2	1.6	1.5	2.4	1.76	955	IE2-W21R 315 MX2	95.0
W21R 315 MY2	200	640	2984	96.4	96.1	0.88	340	9.4	2.5	1.9	2.8	2.82	1200	IE2-W21R 315 MY2	95.4
W21R 315 L2	250	801	2980	96.6	96.5	0.92	406	8.3	1.9	1.2	2.3	3.66	1450	IE2-W21R 315 L2	95.4
W21R 315 LX2	315	1010	2980	96.8	96.8	0.95	494	9.8	2.8	1.9	2.7	4.43	1630	IE2-W21R 315 LX2	95.4
Synchronous speed 1500 rpm – 4-pole version															
WE1R 112M4	4.0	26.2	1456	89.0	89.2	0.86	7.5	8.6	2.7	2.4	4.2	0.0170	56	IE2-WE1R 112M4	87.5
WE1R 132 S4	5.5	35.9	1465	89.6	89.4	0.86	10.5	7.4	2.3	1.8	3.2	0.035	90	IE2-WE1R 132 S4	88.5
WE1R 132 M4	7.5	48.7	1470	90.3	89.9	0.82	14.5	8.5	2.8	2.2	4.0	0.035	92	IE2-WE1R 132 M4	89.0
WE1R 160 M4	11.0	71.4	1472	91.0	90.4	0.83	21.0	8.5	2.8	2.3	3.4	0.078	124	IE2-WE1R 160 M4	91.0
WE1R 160 L4	15.0	97.5	1470	91.8	91.5	0.88	27.0	8.5	2.8	2.2	3.3	0.115	165	IE2-WE1R 160 L4	90.8
WE1R 180 M4	18.5	120	1477	93.0	92.7	0.86	33.5	7.0	1.9	1.7	2.9	0.168	210	IE2-WE1R 180 M4	91.5
WE1R 180 L4	22	142	1478	93.0	92.5	0.82	42.0	7.7	2.3	1.9	3.3	0.168	210	IE2-WE1R 180 L4	92.0
WE1R 200 L4	30	193	1479	93.4	93.0	0.81	57.0	7.8	2.2	2.0	3.1	0.275	280	IE2-WE1R 200 L4	92.5
WE1R 225 S4	37	240	1475	93.7	93.5	0.84	68.0	7.3	2.3	1.9	2.9	0.313	320	IE2-WE1R 225 S4	93.0
WE1R 225 M4	45	290	1480	94.8	94.7	0.84	81.5	8.1	2.0	1.9	2.6	0.525	390	IE2-WE1R 225 M4	93.6
WE1R 250 M4	55	354	1485	95.0	94.7	0.82	102	8.0	1.9	1.8	2.4	0.95	535	IE2-WE1R 250 M4	94.0
WE1R 280 S4	75	483	1483	95.4	95.5	0.82	138	7.4	1.7	1.6	2.2	0.95	550	IE2-WE1R 280 S4	94.5
WE1R 280 M4	90	579	1484	95.5	95.5	0.82	166	7.9	2.2	1.9	2.4	1.10	605	IE2-WE1R 280 M4	94.5
W21R 315 S4	110	707	1485	95.7	95.8	0.81	204	8.4	1.8	1.5	2.7	1.96	760	IE2-W21R 315 S4	94.8
W21R 315 M4	132	849	1484	96.2	96.3	0.83	239	7.9	1.8	1.6	2.5	2.27	850	IE2-W21R 315 M4	95.0
W21R 315 MX4	160	1031	1482	95.8	96.0	0.84	289	7.4	1.6	1.5	2.2	2.73	975	IE2-W21R 315 MX4	95.0
W21R 315 MY4	200	1282	1490	96.2	96.2	0.88	341	8.3	1.7	1.2	2.4	4.82	1270	IE2-W21R 315 MY4	95.1
W21R 315 L4	250	1602	1490	96.7	96.8	0.86	432	8.0	1.4	1.2	2.4	5.93	1450	IE2-W21R 315 L4	95.4
W21R 315 LX4	315	2020	1489	96.3	96.3	0.84	562	8.5	1.9	1.2	2.5	6.82	1630	IE2-W21R 315 LX4	95.4

Other pole numbers on request

CE 0637 ⟨Ex⟩ II 3G Ex nA II T1–T3

Energy saving motors acc. to CEMEP “High Efficiency” EFF1 and EN 60034-30 – IE2

Type of protection Non sparking “n”

Motors for operation in Zone 2 acc. to EN 60079-0 and IEC 60079-15

EFF 1 IE2

with surface ventilation, mode of operation S1, continuous duty

temperature class T1–T3

type of construction IM B3, degree of protection IP 55, thermal class 155

EC type examination certificate: IBExU03ATEXB004

Motor selection data — Design point 400 V, 50 Hz

Type	P_B	M_B	n_B	η_B (EN 60034-2)	$\eta_{3/4}$	cos φ_B	I_B 400 V	I_A/I_B	M_A/M_B	M_S/M_B	M_K/M_B	J	m	Type with IE-mark	η (EN 60034-2-1)
	kW	Nm	rpm	%	%	-	A	-	-	-	-	kgm²	kg		%
Synchronous speed 1000 rpm – 6-pole version															
W21R 132 S6	3.0	29.8	961	85.0	85.7	0.80	6.5	5.9	2.2	2.1	3.2	0.023	54	IE2-W21R 132 S6	83.5
W21R 132 M6	4.0	39.5	967	88.0	87.4	0.82	8.0	5.2	1.7	1.5	2.4	0.043	76	IE2-W21R 132 M6	85.5
W21R 132 MX6	5.5	54.2	969	87.5	87.5	0.78	11.5	5.5	2.5	2.0	3.0	0.053	85	IE2-W21R 132 MX6	86.0
W21R 160 M6	7.5	73.4	976	89.0	88.0	0.81	15.0	6.3	2.4	2.2	3.0	0.113	118	IE2-W21R 160 M6	87.2
W21R 160 L6	11.0	108	972	90.0	89.8	0.85	21.0	5.8	2.4	2.1	2.7	0.145	135	IE2-W21R 160 L6	88.7
W21R 180 L6	15.0	147	975	91.0	90.0	0.85	28.0	6.3	2.4	2.0	2.9	0.228	183	IE2-W21R 180 L6	89.7
W21R 200 L6	18.5	181	978	91.5	91.4	0.85	34.5	7.2	2.6	2.4	3.4	0.268	206	IE2-W21R 200 L6	90.5
W21R 200 LX6	22	215	979	92.5	92.3	0.87	39.5	6.9	2.6	2.1	3.2	0.443	278	IE2-W21R 200 LX6	91.3
W21R 225 M6	30	291	985	93.0	92.6	0.85	54.5	7.0	2.6	2.3	3.1	0.825	360	IE2-W21R 225 M6	92.0
W21R 250 M6	37	359	985	93.5	93.3	0.84	68.5	6.4	2.2	1.9	2.6	1.28	468	IE2-W21R 250 M6	92.2
W21R 280 S6	45	437	983	94.0	94.0	0.85	81.0	6.2	2.1	1.8	2.5	1.48	545	IE2-W21R 280 S6	93.0
W21R 280 M6	55	531	989	95.2	94.5	0.85	98.0	6.5	1.7	1.5	2.3	2.63	710	IE2-W21R 280 M6	93.5
W21R 315 S6	75	726	987	95.2	94.5	0.86	132	6.6	2.0	1.6	2.4	3.33	804	IE2-W21R 315 S6	93.9
W21R 315 M6	90	868	990	95.6	94.6	0.86	158	9.0	2.3	2.0	2.8	3.60	1148	IE2-W21R 315 M6	94.0
W21R 315 MX6	110	1061	990	96.1	95.9	0.87	190	8.0	2.4	1.8	2.5	6.00	1210	IE2-W21R 315 MX6	94.3
W21R 315 MY6	132	1273	990	95.3	94.9	0.88	227	7.5	2.0	1.7	2.4	6.00	1250	IE2-W21R 315 MY6	94.6
W21R 315 L6	160	1551	985	95.6	95.2	0.89	271	7.5	2.3	1.9	2.4	6.67	1250	IE2-W21R 315 L6	94.8
W21R 315 LX6	200	1929	990	95.4	95.1	0.85	356	7.5	2.0	1.5	2.4	8.60	1460	IE2-W21R 315 LX6	95.0
Synchronous speed 750 rpm – 8-pole version															
W21R 132 S8	2.2	29.4	715	81.5	81	0.70	5.6	5.5	2.0		3.0	0.0180	53	-	-
W21R 132 M8	3.0	40.0	717	84.8	84.3	0.74	6.9	4.4	1.5		2.4	0.0430	70	-	-
W21R 160 M8	4	53.2	718	85.7	85.2	0.72	9.3	4.6	1.6		2.5	0.0530	86	-	-
W21R 160 MX8	5.5	73.1	719	87.3	86.9	0.81	11	4.6	1.6		2.2	0.1130	114	-	-
W21R 160 L8	7.5	98.8	725	89.0	88.5	0.77	16	5.5	2.0		2.8	0.1450	136	-	-
W21R 180 L8	11	144	730	89.8	88.8	0.76	23	5.8	2.0		2.9	0.2280	175	-	-
W21R 200 L8	15	197	727	90.0	89.5	0.77	31	5.6	2.0		2.8	0.2680	200	-	-
W21R 225 S8	18.5	242	730	91.1	90.1	0.79	37	5.6	1.7		2.8	0.44	265	-	-
W21R 225 M8	22	287	733	91.7	90.5	0.78	44.5	5.6	1.8		2.6	0.83	360	-	-
W21R 250 M8	30	389	737	92.8	92.5	0.78	59.5	5.5	1.8		2.5	1.35	465	-	-
W21R 280 S8	37	480	736	93.0	92.5	0.79	72.5	5.4	1.8		2.4	1.55	520	-	-
W21R 280 M8	45	581	740	93.9	93.4	0.81	85	6.7	2.2		2.5	2.63	690	-	-
W21R 315 S8	55	710	740	94.6	94.1	0.81	104	6.9	2.3		2.6	3.33	800	-	-
W21R 315 M8	75	968	740	93.3	93	0.81	143	6	2		2.3	3.33	800	-	-
W21R 315 MX8	90	1161	740	93.5	93	0.81	172	6	1.9		2.2	3.6	880	-	-
W21R 315 MY8	110	1420	740	94.8	94.3	0.81	207	6.5	2.1		2.4	6	1050	-	-
W21R 315 L8	132	1704	740	95.3	94.7	0.83	241	6.3	2		2.1	6.76	1250	-	-
W21R 315 LX8	160	2062	740	95.5	95	0.79	306	7.2	2.2		2.5	8.71	1430	-	-

Other pole numbers on request

CE 0637 Ex II 2G Ex d/de IIC T3 – T6

Three-phase motors with squirrel-cage rotor
Type of protection Flameproof enclosure “d/de”
Motors for operation in Zone 1 acc. to EN 60079-0/60079-1

for rated voltage, temperature classes T3–T6
design for rated voltages of range A acc. to EN 60034-1
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155

Motor selection data — Design point 400 V, 50 Hz

Type	P	M	n	η	cos φ	I 400 V	I_A/I	M_A/M_B	M_K/M_B	J	m
	kW	Nm	rpm	%	-	A	-	-	-	kgm²	kg
Synchronous speed 3000 rpm – 2-pole version											
K82R 63 K 2 Ex de II C T4	0.18	0.59	2905	66	0.67	0.59	6.8	4.6	6.5	0.00028	16
K82R 63 L 2 Ex de II C T4	0.25	0.83	2860	70	0.75	0.69	5.8	3.4	4.7	0.00028	16
K82R 71 K 2 Ex de II C T4	0.37	1.26	2800	71.5	0.84	0.89	5.2	2.7	3.5	0.00028	16
K82R 71 L 2 Ex de II C T4	0.55	1.87	2810	72	0.84	1.31	5.5	2.8	3.6	0.00039	17
K82R 80 K 2 Ex de II C T4	0.75	2.57	2790	74	0.84	1.74	4.8	2.7	3.3	0.00058	24
K82R 80 L 2 Ex de II C T4	1.1	3.73	2820	78	0.85	2.4	5.5	2.8	3.5	0.0008	25
K82R 90 L 2 Ex de II C T4	1.5	5.04	2840	78.5	0.87	3.15	5.5	2.7	3.2	0.0013	31
K82R 90 LX 2 Ex de II C T4	2.2	7.37	2850	83	0.87	4.4	5.6	2.7	3.3	0.0018	35
K82R 100 L 2 Ex de II C T4	3	10.1	2850	85	0.87	5.9	6.8	2.7	3.3	0.0029	45
K82R 112 M 2 Ex de II C T4	4	13.3	2880	85.5	0.88	7.7	6.5	2.3	3.1	0.0051	53
K82R 132 S 2 Ex de II C T4	5.5	18.2	2880	87	0.88	10.4	6.4	2.5	3.3	0.0089	95
K82R 132 SX 2 Ex de II C T4	7.5	24.6	2910	88	0.89	13.8	6.8	2.7	3.5	0.0125	100
K82R 160 M 2 Ex de II C T4	11	35.9	2925	89	0.89	20	6.6	2.8	3.2	0.032	163
K82R 160 MX 2 Ex de II C T4	15	49.1	2920	89.5	0.92	26.5	6.8	2.8	3.2	0.043	173
K82R 160 L 2 Ex de II C T4	18.5	60.4	2925	90.5	0.92	32	6.8	2.6	3.1	0.052	188
K82R 180 M 2 Ex de II C T4	22	71.8	2925	91.5	0.92	37.5	6.9	2.5	3	0.075	196
K82R 200 L 2 Ex de II C T4	30	97.0	2955	92.5	0.90	52	7.2	2.6	2.9	0.13	254
K82R 200 LX 2 Ex de II C T4	37	120	2955	93.3	0.91	63	7.2	2.7	3	0.16	278
K82R 225 M 2 Ex de II C T4	45	145	2960	93.4	0.90	77	7.1	2.5	3	0.24	400
K82R 250 M 2 Ex de II C T4	55	177	2970	93.8	0.90	94	7.1	2.4	2.8	0.4	545
K82R 280 S 2 Ex de II C T4	75	241	2970	94.5	0.90	127	6.8	2.2	2.7	0.65	700
K82R 280 M 2 Ex de II C T4	90	289	2970	94.5	0.91	151	6.6	2.4	2.8	0.78	762
K82R 315 S 2 Ex de II C T4	110	353	2975	95	0.91	184	6.3	2	2.4	1.4	960
K82R 315 M 2 Ex de II C T4	132	424	2975	95.5	0.91	220	6.8	2.1	2.5	1.6	1025
K82R 315 L 2 Ex de II C T4	160	514	2975	95.7	0.91	265	6.9	2.4	2.7	1.7	1065
K82R 315 LX 2 Ex de II C T4	200	641	2980	95.8	0.92	330	6.9	2.3	2.6	2.2	1270
K82R 315 LY 2 Ex de II C T4	250	801	2980	96	0.92	410	7.2	1.7	2.7	2.8	1420
K82R 355 L 2 Ex de II C T4	315	1010	2980	96.6	0.92	510	6.7	1.5	2.8	4.5	1900
K82R 355 LX 2 Ex de II C T4	355	1136	2985	96.8	0.93	415	6.9	1.4	2.7	5	2050
K82R 355 LY 2 Ex de II C T4	400	1280	2985	96.8	0.93	640	7	1.3	2.7	5.5	2350
K82R 400 L 2 Ex de II C T4	450	1437	2990	97	0.94	710	7.2	1.1	2.8	8.5	3030
Synchronous speed 1500 rpm – 4-pole version											
K82R 63 K 4 Ex de II C T4	0.12	0.79	1445	67	0.60	0.43	5.6	3.9	3.9	0.00046	16
K82R 63 L 4 Ex de II C T4	0.18	1.21	1415	70	0.70	0.53	4.7	2.7	2.7	0.00046	16
K82R 71 K 4 Ex de II C T4	0.25	1.74	1370	68.5	0.80	0.66	3.9	2	2.5	0.00046	16
K82R 71 L 4 Ex de II C T4	0.37	2.56	1380	71	0.80	0.94	3.9	2.2	2.6	0.00063	17
K82R 80 K 4 Ex de II C T4	0.55	3.81	1380	73	0.80	1.36	3.8	2	2.3	0.00092	24
K82R 80 L 4 Ex de II C T4	0.75	5.12	1400	75.5	0.79	1.81	4.5	2.1	2.5	0.0013	25
K82R 90 L 4 Ex de II C T4	1.1	7.50	1400	77	0.83	2.5	4.8	2.1	2.5	0.0021	31
K82R 90 LX 4 Ex de II C T4	1.5	10.2	1405	79	0.82	3.35	5	2.3	2.7	0.0029	35
K82R 100 L 4 Ex de II C T4	2.2	14.8	1420	81	0.82	4.8	5.4	2.4	2.8	0.0046	44
K82R 100 LX 4 Ex de II C T4	3	20.2	1415	82.5	0.83	6.3	5.5	2.3	2.7	0.0056	46
K82R 112 M 4 Ex de II C T4	4	26.6	1435	85	0.84	8.1	6.8	2.7	3.2	0.011	59
K82R 132 S 4 Ex de II C T4	5.5	36.5	1440	87	0.85	10.7	6.2	2.5	2.7	0.022	100
K82R 132 M 4 Ex de II C T4	7.5	49.7	1440	88.2	0.86	14.3	6.5	2.7	2.8	0.03	110
K82R 160 M 4 Ex de II C T4	11	72.0	1460	89.5	0.85	21	6.6	2.5	2.8	0.057	168
K82R 160 L 4 Ex de II C T4	15	98.5	1455	90	0.86	28	6.5	2.8	3.1	0.079	184
K82R 180 M 4 Ex de II C T4	18.5	121	1460	91	0.85	34.5	6.6	2.9	3	0.13	198
K82R 180 L 4 Ex de II C T4	22	144	1460	91.5	0.86	41	6.9	3	3	0.155	217
K82R 200 L 4 Ex de II C T4	30	196	1460	92.5	0.88	53	6.8	2.6	2.9	0.25	274
K82R 225 S 4 Ex de II C T4	37	241	1465	93	0.88	65	6.7	2.7	2.6	0.4	372
K82R 225 M 4 Ex de II C T4	45	292	1470	93.5	0.88	79	6.5	2.7	2.6	0.48	402
K82R 250 M 4 Ex de II C T4	55	357	1470	93.9	0.89	95	7.1	2.9	2.9	0.75	573
K82R 280 S 4 Ex de II C T4	75	484	1480	94.3	0.86	133	6.8	2.6	2.5	1.25	740
K82R 280 M 4 Ex de II C T4	90	581	1480	94.7	0.86	160	6.9	2.8	2.6	1.48	820
K82R 315 S 4 Ex de II C T4	110	707	1485	95.2	0.86	194	6.7	2.5	2.6	2.2	1040
K82R 315 M 4 Ex de II C T4	132	849	1485	95.5	0.86	230	6.8	2.5	2.7	2.7	1120
K82R 315 L 4 Ex de II C T4	160	1029	1485	95.7	0.86	280	6.9	2.6	2.6	3.1	1210
K82R 315 LX 4 Ex de II C T4	200	1286	1485	95.9	0.87	345	6.9	2.6	2.6	3.9	1430
K82R 315 LY 4 Ex de II C T4	250	1602	1490	96.2	0.87	430	7.3	1.7	2.7	4.6	1565
K82R 355 L 4 Ex de II C T4	315	2019	1490	96.3	0.89	530	6.9	1.5	2.7	6.1	2050
K82R 355 LX 4 Ex de II C T4	355	2275	1490	96.6	0.90	590	6.9	1.6	2.8	6.7	2200
K82R 355 LY 4 Ex de II C T4	400	2564	1490	97	0.90	665	7	1.5	2.8	7.4	2430
K82R 400 M 4 Ex de II C T4	450	2875	1495	97	0.91	735	7.3	1.1	2.7	18	2850
K82R 400 L 4 Ex de II C T4	500	3194	1495	97.1	0.91	815	7.3	1.1	2.7	20	3230
K82R 450 M4 Ex de IIC T4	560	3577	1495	97.2	0.91	915	6.8	1	2.7	26	3500
K82R 450 L4 Ex de IIC T4	630	4024	1495	97.4	0.91	1025	6.8	1	2.7	31	3800

CE 0637 Ex II 2G Ex d/de IIC T3 – T6

Three-phase motors with squirrel-cage rotor
Type of protection Flameproof enclosure “d/de”
Motors for operation in Zone 1 acc. to EN 60079-0/60079-1

for rated voltage, temperature classes T3–T6
design for rated voltages of range A acc. to EN 60034-1
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155

Motor selection data — Design point 400 V, 50 Hz

Type	P	M	n	η	cos φ	I 400 V	I_A/I	M_A/M_B	M_K/M_B	J	m
	kW	Nm	rpm	%	-	A	-	-	-	kgm²	kg
Synchronous speed 1000 rpm – 6-pole version											
K82R 71 L 6 Ex de II C T4	0.25	2.60	920	62	0.71	0.82	3.5	2.2	2.6	0.0012	17
K82R 80 K 6 Ex de II C T4	0.37	3.82	925	67	0.71	1.12	4.1	2.5	2.8	0.0019	24
K82R 80 L 6 Ex de II C T4	0.55	5.68	925	69	0.72	1.6	4	2.4	2.7	0.0025	25
K82R 90 L 6 Ex de II C T4	0.75	7.87	910	67	0.75	2.15	3.4	1.8	2.1	0.0033	31
K82R 90 LX 6 Ex de II C T4	1.1	11.4	920	71	0.73	3.05	3.7	2	2.2	0.0046	35
K82R 100 L 6 Ex de II C T4	1.5	15.2	945	77	0.75	3.75	5	2.4	2.9	0.0095	46
K82R 112 M 6 Ex de II C T4	2.2	22.1	950	81	0.75	5.2	5.6	2.7	3.1	0.017	59
K82R 132 S 6 Ex de II C T4	3	29.7	965	84	0.78	6.6	6.3	2.7	3.1	0.031	100
K82R 132 M 6 Ex de II C T4	4	39.8	960	85	0.79	8.6	6	2.6	3	0.037	104
K82R 132 MX 6 Ex de II C T4	5.5	54.7	960	86	0.81	11.4	6.4	2.6	3	0.043	112
K82R 160 M 6 Ex de II C T4	7.5	74.6	960	86.8	0.85	14.7	6.8	2.5	3.3	0.087	170
K82R 160 L 6 Ex de II C T4	11	109	965	87.5	0.86	21	6.7	2.5	3.2	0.12	190
K82R 180 L 6 Ex de II C T4	15	148	965	90	0.84	28.5	6.9	2.4	3.2	0.19	215
K82R 200 L 6 Ex de II C T4	18.5	181	975	90.5	0.84	35	6.2	1.9	2.7	0.28	270
K82R 200 LX 6 Ex de II C T4	22	217	970	91	0.85	41	6.8	2.2	3	0.31	280
K82R 225 M 6 Ex de II C T4	30	294	975	92	0.84	56	6.6	2.8	2.5	0.69	404
K82R 250 M 6 Ex de II C T4	37	361	980	92.5	0.84	69	6.6	2.8	2.6	1.03	570
K82R 280 S 6 Ex de II C T4	45	436	985	93.5	0.83	84	5.8	2.8	2.4	1.35	720
K82R 280 M 6 Ex de II C T4	55	533	985	93.5	0.82	104	5.8	2.7	2.3	1.7	770
K82R 315 S 6 Ex de II C T4	75	723	990	94	0.87	132	6.4	2.6	2.4	4.3	995
K82R 315 M 6 Ex de II C T4	90	868	990	94.2	0.88	157	6.5	2.6	2.4	5	1050
K82R 315 L 6 Ex de II C T4	110	1061	990	94.5	0.88	191	6.5	2.7	2.5	6	1145
K82R 315 LX 6 Ex de II C T4	132	1273	990	94.7	0.88	230	6.7	2.7	2.5	7.3	1265
K82R 315 LY 6 Ex de II C T4	160	1543	990	95	0.88	275	6.8	2.6	2.5	8.3	1440
K82R 355 M 6 Ex de II C T4	200	1929	990	95.5	0.88	345	6.7	1.8	2.7	11.3	1750
K82R 355 L 6 Ex de II C T4	250	2412	990	95.9	0.88	430	6.7	1.8	2.7	13.8	1950
K82R 400 S 6 Ex de II C T4	315	3039	990	96	0.88	540	6.9	1.7	2.6	17.6	2300
K82R 400 M 6 Ex de II C T4	355	3411	994	96.6	0.89	595	6.6	1.1	2.7	27	2850
K82R 400 L 6 Ex de II C T4	400	3843	994	96.6	0.89	670	6.8	1.1	2.6	31	3230
K82R 450 M6 Ex de IIC T4	450	4319	995	96.6	0.89	755	6.8	1.2	2.8	46	3500
K82R 450 L6 Ex de IIC T4	500	4799	995	97	0.89	835	6.8	1.1	2.7	51	3800
Synchronous speed 750 rpm – 8-pole version											
K82R 71 L 8 Ex de II C T4	0.12	1.69	680	51	0.65	0.52	2.6	1.9	2.4	0.0012	17
K82R 80 K 8 Ex de II C T4	0.18	2.49	690	61	0.65	0.66	3.2	2.2	2.6	0.0019	24
K82R 80 L 8 Ex de II C T4	0.25	3.46	690	62	0.64	0.91	3.2	2.2	2.5	0.0025	25
K82R 90 L 8 Ex de II C T4	0.37	5.12	690	63	0.65	1.3	3	1.8	2.2	0.0033	31
K82R 90 LX 8 Ex de II C T4	0.55	7.61	690	67	0.64	1.85	3.1	1.8	2.2	0.0046	35
K82R 100 L 8 Ex de II C T4	0.75	10.1	710	71	0.66	2.3	4	2.4	2.6	0.008	44
K82R 100 LX 8 Ex de II C T4	1.1	15.1	695	69	0.73	3.15	3.8	2	2.4	0.0095	46
K82R 112 M 8 Ex de II C T4	1.5	20.2	710	78	0.67	4.15	4.6	2.2	2.8	0.017	59
K82R 132 S 8 Ex de II C T4	2.2	30.2	695	80	0.79	5	4.1	2	2.3	0.029	97
K82R 132 M 8 Ex de II C T4	3	40.6	705	81	0.77	6.9	4.6	2.4	2.7	0.036	113
K82R 160 M 8 Ex de II C T4	4	53.4	715	85	0.78	8.7	4.6	1.8	2.3	0.071	157
K82R 160 MX 8 Ex de II C T4	5.5	73.0	720	86	0.77	12	5.4	2.1	2.8	0.105	170
K82R 160 L 8 Ex de II C T4	7.5	99.5	720	86.5	0.77	16.3	5.6	2.2	2.9	0.136	190
K82R 180 L 8 Ex de II C T4	11	145	725	89	0.79	22.5	6.4	2.4	3	0.22	215
K82R 200 L 8 Ex de II C T4	15	196	730	89.5	0.80	30	6.9	2.4	3.2	0.4	280
K82R 225 S 8 Ex de II C T4	18.5	242	730	90	0.79	37.5	6.3	2.2	3	0.56	372
K82R 225 M 8 Ex de II C T4	22	288	730	91	0.79	44	6.6	2.2	3	0.69	404
K82R 250 M 8 Ex de II C T4	30	390	735	92.5	0.82	57	6.8	2	3	1.2	550
K82R 280 S 8 Ex de II C T4	37	481	735	92.8	0.82	70	6.2	2.1	2.8	1.9	740
K82R 280 M 8 Ex de II C T4	45	585	735	92.8	0.82	85	6.3	2	2.6	2.3	800
K82R 315 S 8 Ex de II C T4	55	710	740	92.5	0.83	103	6	2.5	2.6	4.3	995
K82R 315 M 8 Ex de II C T4	75	968	740	93	0.83	140	6.3	2.5	2.5	5	1050
K82R 315 L 8 Ex de II C T4	90	1162	740	93.2	0.83	168	6.6	2.6	2.6	6	1145
K82R 315 LX 8 Ex de II C T4	110	1420	740	93.2	0.82	210	6.8	2.7	2.7	7.3	1265
K82R 315 LY 8 Ex de II C T4	132	1715	735	93.4	0.82	250	6.3	2.5	2.5	8.3	1440
K82R 355 M 8 Ex de II C T4	160	2065	740	95.1	0.83	295	6.4	1.9	2.4	11.4	1750
K82R 355 L 8 Ex de II C T4	200	2564	745	95.5	0.82	370	6.6	1.7	2.5	13.9	1950
K82R 400 S 8 Ex de II C T4	250	3205	745	95.6	0.82	460	6.7	1.7	2.5	17.7	2300
K82R 400 M 8 Ex de II C T4	315	4038	745	96.2	0.83	570	6.2	1.2	2.4	30	3100
K82R 400 L 8 Ex de II C T4	355	4551	745	96.3	0.83	640	6.3	1.1	2.3	34	3440
K82R 450 M8 Ex de IIC T4	400	5128	745	96.6	0.84	710	6.1	1	2.2	51	3750
K82R 450 L8 Ex de IIC T4	450	5769	745	96.7	0.84	800	6.1	1	2.2	57	4050

CE 0637 Ex II 2G Ex d/de IIC T3 – T6

Three-phase motors with squirrel-cage rotor
Type of protection Flameproof enclosure “d/de”
Motors for operation in Zone 1 acc. to EN 60079-0/60079-1

for rated voltage, temperature classes T3–T6
design for rated voltages of range A acc. to EN 60034-1
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155

Motor selection data — Design point 460 V, 60 Hz

Type	P	M	n	η	cos φ	I 460 V	I_A/I	M_A/M_B	M_K/M_B	J	m
	kW	Nm	rpm	%	-	A	-	-	-	kgm²	kg
Synchronous speed 3600 rpm – 2-pole version											
K82R 63 K 2 Ex de II C T4	0.21	0.58	3485	66	0.68	0.59	6.8	4.6	6.5	0.00028	16
K82R 63 L 2 Ex de II C T4	0.29	0.81	3430	70	0.77	0.68	5.8	3.4	4.7	0.00028	16
K82R 71 K 2 Ex de II C T4	0.44	1.25	3360	71.5	0.84	0.92	5.2	2.7	3.5	0.00028	16
K82R 71 L 2 Ex de II C T4	0.65	1.84	3370	73	0.84	1.33	5.5	2.8	3.6	0.00039	17
K82R 80 K 2 Ex de II C T4	0.86	2.45	3350	74	0.84	1.74	4.8	2.7	3.3	0.00058	24
K82R 80 L 2 Ex de II C T4	1.26	3.55	3385	78	0.85	2.4	5.5	2.8	3.5	0.0008	25
K82R 90 L 2 Ex de II C T4	1.8	5.04	3410	79	0.86	3.35	5.5	2.7	3.2	0.0013	31
K82R 90 LX 2 Ex de II C T4	2.5	6.98	3420	82	0.86	4.45	5.6	2.7	3.3	0.0018	35
K82R 100 L 2 Ex de II C T4	3.6	10.1	3420	83	0.87	6.3	6.8	2.7	3.3	0.0029	45
K82R 112 M 2 Ex de II C T4	4.8	13.3	3455	85	0.88	8.1	6.5	2.3	3.1	0.0051	53
K82R 132 S 2 Ex de II C T4	6.6	18.2	3470	85	0.87	11.2	6	2.5	3.3	0.0089	95
K82R 132 SX 2 Ex de II C T4	9	24.6	3490	86.5	0.87	15	6.8	2.7	3.5	0.0125	100
K82R 160 M 2 Ex de II C T4	12.8	34.8	3510	88.5	0.89	20.5	6.6	2.8	3.2	0.032	163
K82R 160 MX 2 Ex de II C T4	17.5	47.7	3505	89.5	0.92	26.5	6.7	2.8	3.2	0.043	173
K82R 160 L 2 Ex de II C T4	22	59.9	3510	91	0.92	33	6.7	2.6	3.1	0.052	188
K82R 180 M 2 Ex de II C T4	26	70.7	3510	91.5	0.92	39	6.9	2.5	3	0.075	196
K82R 200 L 2 Ex de II C T4	36	97.0	3545	92.2	0.9	54	7.2	2.6	2.9	0.13	254
K82R 200 LX 2 Ex de II C T4	43	116	3545	92.7	0.9	65	7.2	2.7	3	0.16	278
K82R 225 M 2 Ex de II C T4	52	140	3550	92.7	0.89	79	7.1	2.5	3	0.24	400
K82R 250 M 2 Ex de II C T4	64	171	3565	93.5	0.89	97	7.1	2.4	2.8	0.4	545
K82R 280 S 2 Ex de II C T4	87	233	3565	94	0.9	129	6.8	2.2	2.7	0.65	700
K82R 280 M 2 Ex de II C T4	105	281	3565	94	0.9	156	6.6	2.4	2.8	0.78	762
K82R 315 S 2 Ex de II C T4	121	324	3570	94.5	0.9	179	6.6	2.1	2.5	1.4	960
K82R 315 M 2 Ex de II C T4	145	388	3570	95	0.9	215	7.2	2.2	2.6	1.6	1025
K82R 315 L 2 Ex de II C T4	176	471	3570	95.2	0.9	260	7.3	2.5	2.8	1.7	1065
K82R 315 LX 2 Ex de II C T4	220	588	3575	95.4	0.9	320	7.3	2.4	2.7	2.2	1270
K82R 315 LY 2 Ex de II C T4	275	734	3580	95.5	0.92	395	7.6	1.8	2.8	2.8	1420
K82R 355 L 2 Ex de II C T4	345									4.5	1900
K82R 355 LX 2 Ex de II C T4	390									5	2050
K82R 400 M 2 Ex de II C T4	440										
Synchronous speed 1800 rpm – 4-pole version											
K82R 63 K 4 Ex de II C T4	0.14	0.77	1735	67	0.60	0.44	5.6	3.9	3.9	0.00046	16
K82R 63 L 4 Ex de II C T4	0.21	1.18	1700	70	0.70	0.54	4.7	2.7	2.7	0.00046	16
K82R 71 K 4 Ex de II C T4	0.3	1.74	1645	66	0.80	0.71	3.9	2	2.5	0.00046	16
K82R 71 L 4 Ex de II C T4	0.44	2.54	1655	70	0.80	0.99	3.9	2.2	2.6	0.00063	17
K82R 80 K 4 Ex de II C T4	0.63	3.64	1655	73	0.80	1.35	3.8	2	2.3	0.00092	24
K82R 80 L 4 Ex de II C T4	0.86	4.89	1680	75	0.78	1.85	4.2	2.1	2.5	0.0013	25
K82R 90 L 4 Ex de II C T4	1.3	7.39	1680	76	0.84	2.55	4.8	2.1	2.5	0.0021	31
K82R 90 LX 4 Ex de II C T4	1.8	10.2	1685	79	0.83	3.45	5	2.3	2.7	0.0029	35
K82R 100 L 4 Ex de II C T4	2.6	14.6	1705	80	0.8	5.1	5.4	2.4	2.8	0.0046	44
K82R 100 LX 4 Ex de II C T4	3.6	20.2	1700	80.5	0.82	6.8	5.5	2.3	2.7	0.0056	46
K82R 112 M 4 Ex de II C T4	4.8	26.7	1720	85	0.84	8.4	6.8	2.7	3.2	0.011	59
K82R 132 S 4 Ex de II C T4	6.6	36.4	1730	86.5	0.86	11.1	6.2	2.5	2.7	0.022	100
K82R 132 M 4 Ex de II C T4	8.5	46.9	1730	88	0.86	14.1	6.5	2.7	2.8	0.03	110
K82R 160 M 4 Ex de II C T4	12.6	68.8	1750	89.5	0.85	21	6.6	2.5	2.8	0.057	168
K82R 160 L 4 Ex de II C T4	17.2	94.1	1745	90	0.86	28	6.5	2.8	3.1	0.079	184
K82R 180 M 4 Ex de II C T4	22	120	1750	91	0.84	36	6.6	2.9	3	0.13	198
K82R 180 L 4 Ex de II C T4	26	142	1750	91.5	0.85	42	6.9	3	3	0.155	217
K82R 200 L 4 Ex de II C T4	34.5	188	1750	92.5	0.88	53	6.8	2.6	2.9	0.25	274
K82R 225 S 4 Ex de II C T4	43	233	1760	93	0.89	65	6.7	2.7	2.6	0.4	372
K82R 225 M 4 Ex de II C T4	52	281	1765	93	0.89	79	6.5	2.7	2.6	0.48	402
K82R 250 M 4 Ex de II C T4	64	346	1765	93.8	0.89	96	7.1	2.9	2.9	0.75	573
K82R 280 S 4 Ex de II C T4	87	468	1775	94.5	0.86	134	6.8	2.6	2.5	1.25	740
K82R 280 M 4 Ex de II C T4	105	565	1775	94.5	0.86	162	6.9	2.8	2.6	1.48	820
K82R 315 S 4 Ex de II C T4	121	649	1780	95.1	0.86	186	7.1	2.6	2.7	2.2	1040
K82R 315 M 4 Ex de II C T4	145	778	1780	95.3	0.86	22	7.2	2.6	2.8	2.7	1120
K82R 315 L 4 Ex de II C T4	176	944	1780	95.6	0.87	265	7.3	2.7	2.7	3.1	1210
K82R 315 LX 4 Ex de II C T4	220	1180	1780	95.8	0.87	330	7.3	2.7	2.7	3.9	1430
K82R 315 LY 4 Ex de II C T4	275	1471	1785	96	0.89	405	7.7	1.8	2.8	4.6	1565
K82R 355 L 4 Ex de II C T4	345	1841	1790	96.3	0.89	505	7.3	1.6	2.8	6.1	2050
K82R 355 LX 4 Ex de II C T4	390	2081	1790	96.6	0.89	570	7.3	1.7	3	6.7	2200
K82R 400 S 4 Ex de II C T4	440	2342	1794	97	0.90	635	7.1	1.4	3	16	2650
K82R 400 M 4 Ex de II C T4	495	2635	1794	97	0.91	705	6.9	1.15	2.8	18	2850
K82R 450 S4 Ex de IIC T4	550	2928	1794	97.2	0.91	780	7.3	1.05	2.8	23	3300
K82R 450 M4 Ex de IIC T4	610	3247	1794	97.4	0.91	-	7.2	1.05	2.8	26	3500
K82R 450 L4 Ex de IIC T4	690	3673	1794	97.4	0.91	-	7.2	1.05	2.8	26	3800

CE 0637 Ex II 2G Ex d/de IIC T3 – T6

Three-phase motors with squirrel-cage rotor
Type of protection Flameproof enclosure “d/de”
Motors for operation in Zone 1 acc. to EN 60079-0/60079-1

for rated voltage, temperature classes T3–T6
design for rated voltages of range A acc. to EN 60034-1
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155

Motor selection data — Design point 460 V, 60 Hz

Type	P	M	n	η	cos φ	I 460 V	I_A/I	M_A/M_B	M_K/M_B	J	m
	kW	Nm	rpm	%	-	A	-	-	-	kgm²	kg
Synchronous speed 1200 rpm – 6-pole version											
K82R 71 L 6 Ex de II C T4	0.3	2.59	1105	62	0.71	0.86	3.5	2.2	2.6	0.0012	17
K82R 80 K 6 Ex de II C T4	0.42	3.61	1110	67	0.71	1.11	4.1	2.5	2.8	0.0019	24
K82R 80 L 6 Ex de II C T4	0.64	5.51	1110	69	0.72	1.62	4	2.4	2.7	0.0025	25
K82R 90 L 6 Ex de II C T4	0.9	7.88	1090	67	0.75	2.25	3.4	1.8	2.1	0.0033	31
K82R 90 LX 6 Ex de II C T4	1.3	11.2	1105	71	0.73	3.15	3.7	2	2.2	0.0046	35
K82R 100 L 6 Ex de II C T4	1.8	15.1	1135	77	0.75	3.9	5	2.4	2.9	0.0095	46
K82R 112 M 6 Ex de II C T4	2.6	21.8	1140	81	0.75	5.4	5.6	2.7	3.1	0.017	59
K82R 132 S 6 Ex de II C T4	3.6	29.6	1160	84	0.78	6.9	6.3	2.7	3.1	0.031	100
K82R 132 M 6 Ex de II C T4	4.8	39.9	1150	85	0.79	9	6	2.6	3	0.037	104
K82R 132 MX 6 Ex de II C T4	6.6	54.8	1150	86	0.81	11.9	6.4	2.6	3	0.043	112
K82R 160 M 6 Ex de II C T4	8.6	71.4	1150	86.8	0.85	14.6	6.8	2.5	3.3	0.087	170
K82R 160 L 6 Ex de II C T4	12.6	104	1160	87.5	0.86	21	6.7	2.5	3.2	0.12	190
K82R 180 L 6 Ex de II C T4	18	148	1160	90	0.84	30	6.9	2.4	3.2	0.19	215
K82R 200 L 6 Ex de II C T4	21.3	174	1170	90.5	0.84	35	6.2	1.9	2.7	0.28	270
K82R 200 LX 6 Ex de II C T4	26	213	1165	91	0.85	42	6.8	2.2	3	0.31	280
K82R 225 M 6 Ex de II C T4	35	286	1170	92	0.84	57	6.6	2.8	2.5	0.69	404
K82R 250 M 6 Ex de II C T4	44	358	1175	92.5	0.84	71	6.6	2.8	2.6	1.03	570
K82R 280 S 6 Ex de II C T4	52	421	1180	93.5	0.83	84	5.8	2.8	2.4	1.35	720
K82R 280 M 6 Ex de II C T4	64	518	1180	93.5	0.82	105	5.8	2.7	2.3	1.7	770
K82R 315 S 6 Ex de II C T4	87	698	1190	94	0.87	134	6.4	2.6	2.4	4.3	995
K82R 315 M 6 Ex de II C T4	105	843	1190	94.2	0.88	159	6.5	2.6	2.4	5	1050
K82R 315 L 6 Ex de II C T4	121	971	1190	94.5	0.88	183	6.9	2.8	2.6	6	1145
K82R 315 LX 6 Ex de II C T4	145	1164	1190	94.7	0.88	220	7.1	2.8	2.6	7.3	1265
K82R 315 LY 6 Ex de II C T4	176	1412	1190	95	0.88	265	7.2	2.7	2.6	8.3	1440
K82R 355 M 6 Ex de II C T4	220	1766	1190	95.5	0.88	330	7.1	1.9	2.8	11.3	1750
K82R 355 L 6 Ex de II C T4	275	2207	1190	95.9	0.88	410	7.1	1.9	2.8	13.8	1950
K82R 400 S 6 Ex de II C T4	345	2769	1190	96	0.88	515	7.3	1.8	2.7	17.6	2300
K82R 400 M 6 Ex de II C T4	390	3122	1193	96.6	0.89	570	7	1.15	2.8	27	2850
K82R 400 L 6 Ex de II C T4	440	3522	1193	96.6	0.89	640	7.3	1.05	2.7	31	3230
K82R 450 M6 Ex de IIC T4	495	3959	1194	96.6	0.89	725	7.2	1.3	3	46	3500
K82R 450 L6 Ex de IIC T4	550	4399	1194	97	0.89	800	7.2	1.15	2.8	51	3800
Synchronous speed 900 rpm – 8-pole version											
K82R 71 L 8 Ex de II C T4	0.14	1.64	815	52	0.67	0.5	2.4	1.9	2.4	0.0012	17
K82R 80 K 8 Ex de II C T4	0.21	2.42	830	61	0.65	0.66	3.2	2.2	2.6	0.0019	24
K82R 80 L 8 Ex de II C T4	0.3	3.45	830	62	0.64	0.95	3.2	2.2	2.5	0.0025	25
K82R 90 L 8 Ex de II C T4	0.44	4.94	850	63	0.65	1.35	3	1.8	2.2	0.0033	31
K82R 90 LX 8 Ex de II C T4	0.64	7.32	835	67	0.64	1.87	3.1	1.8	2.2	0.0046	35
K82R 100 L 8 Ex de II C T4	0.9	10.1	850	71	0.66	2.4	4	2.4	2.6	0.008	44
K82R 100 LX 8 Ex de II C T4	1.3	14.9	835	69	0.73	3.25	3.8	2	2.4	0.0095	46
K82R 112 M 8 Ex de II C T4	1.8	20.2	850	78	0.67	4.3	4.6	2.2	2.8	0.017	59
K82R 132 S 8 Ex de II C T4	2.6	29.7	835	80	0.79	5.2	4.1	2	2.3	0.029	97
K82R 132 M 8 Ex de II C T4	3.6	40.7	845	81	0.77	7.2	4.6	2.4	2.7	0.036	113
K82R 160 M 8 Ex de II C T4	4.6	51.1	860	85	0.78	8.7	4.6	1.8	2.3	0.071	157
K82R 160 MX 8 Ex de II C T4	6.5	71.8	865	86	0.77	12.3	5.4	2.1	2.8	0.105	170
K82R 160 L 8 Ex de II C T4	9	99.4	865	86.5	0.77	17	5.6	2.2	2.9	0.136	190
K82R 180 L 8 Ex de II C T4	13.2	145	870	89	0.79	23.5	6.4	2.4	3	0.22	215
K82R 200 L 8 Ex de II C T4	18	196	875	89.5	0.79	31.5	6.9	2.7	3.2	0.4	280
K82R 225 S 8 Ex de II C T4	22	240	875	90	0.79	39	6.3	2.2	3	0.56	372
K82R 225 M 8 Ex de II C T4	26	284	875	91	0.79	45.5	6.3	2.2	3	0.69	404
K82R 250 M 8 Ex de II C T4	36	388	885	92.5	0.82	60	6.8	2	3	1.2	550
K82R 280 S 8 Ex de II C T4	44	478	880	92.8	0.82	73	6.2	2.1	2.8	1.9	740
K82R 280 M 8 Ex de II C T4	52	564	880	92.8	0.83	85	6.3	2	2.6	2.3	800
K82R 315 S 8 Ex de II C T4	61	658	885	92.5	0.83	100	6	2.5	2.6	4.3	995
K82R 315 M 8 Ex de II C T4	87	939	885	93	0.83	141	6.3	2.5	2.5	5	1050
K82R 315 L 8 Ex de II C T4	105	1133	885	93.2	0.83	170	6.6	2.6	2.6	6	1145
K82R 315 LX 8 Ex de II C T4	121	1306	885	93.2	0.82	199	7.2	2.8	2.8	7.3	1265
K82R 315 LY 8 Ex de II C T4	145	1574	880	93.4	0.82	240	6.6	2.6	2.6	8.3	1440
K82R 355 M 8 Ex de II C T4	176	1889	890	95.1	0.83	280	6.7	2	2.5	11.4	1750
K82R 355 L 8 Ex de II C T4	220	2348	895	95.5	0.82	355	7	1.8	2.6	13.9	1950
K82R 400 S 8 Ex de II C T4	275	2934	895	95.6	0.82	440	7.1	1.8	2.6	17.7	2300
K82R 400 M 8 Ex de II C T4	345	3681	895	96.2	0.83	540	6.5	1.3	2.5	30	3100
K82R 400 L 8 Ex de II C T4	390	4162	895	96.3	0.84	610	6.4	1.05	2.4	34	3440
K82R 450 M8 Ex de IIC T4	440	4695	895	96.6	0.84	680	6.4	1.05	2.3	51	3750
K82R 450 L8 Ex de IIC T4	495	5282	895	96.7	0.84	765	6.4	1.05	2.3	57	4050

CE 0637 ⟨Ex⟩ 2G Ex d/de II (B+H_2) T4

Three-phase motors with squirrel-cage rotor with built-in brake
Type of protection Flameproof enclosure “d/de”
Motors for operation in Zone 1 acc. to EN 60079-0/60079-1

for mains operation, temperature class T4
design for rated voltages of range A acc. to EN 60034-1, 50 Hz
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155

Motor selection data

Type	output	ratet current at		speed	efficiency	power factor	starting torque	starting current	motor torque	braking torque [1]	moment of inertia	weight [2]	permissible switching cycles per hour for duty type S 4 15, 20, 40 oder 60 % ED			
		400 V	500 V													
	P_2	I	I	n	η	cos φ	M_A / M_N	I_A / I_N	M	M_B	J	m	Fl = 1,5	Fl = 2	Fl = 3	Fl = 4
	[kW]	[A]	[A]	[rpm]	[%]				[Nm]	[Nm]	[kgm²]	[kg]	[S/h]	[S/h]	[S/h]	[S/h]
n_s = 3000 rpm, 2p = 2																
B82R 80K 2	0.75	1.84	1.47	2790	70	0.84	2.7	4.8	2.57	10	0.000925	26	1110	935	710	570
B82R 80L 2	1.1	2.6	2.05	2820	75	0.82	2.8	5.5	3.7	10	0.00118	27	580	495	435	320
B82R 90L 2	1.5	3.25	2.6	2840	77	0.86	2.7	5.5	5	20	0.00193	38	130	115	90	80
B82R 90Lx 2	2.2	4.6	3.7	2850	81	0.85	2.7	5.6	7.4	20	0.00240	42	184	165	135	115
B82R 100L 2	3	6.1	4.85	2850	82	0.87	2.7	6.8	10.1	46	0.00365	51	71	65	54	47
B82R 112M 2	4	7.8	6.2	2880	84	0.88	2.3	6.5	13.3	46	0.00638	64	140	120	95	75
B82R 132S 2	5.5	10.9	8.7	2880	84	0.87	2.5	6.4	18.2	86	0.013	113	53	46	37	30
B82R 132Sx 2	7.5	14.6	11.7	2910	85	0.87	2.7	6.8	24.7	86	0.0159	118	70	60	45	40
n_s = 1500 rpm, 2p = 4																
B82R 80K 4	0.55	1.38	1.1	1380	72	0.8	2	3.8	3.8	10	0.0013	26	1340	1185	960	800
B82R 80L 4	0.75	1.85	1.48	1400	74	0.79	2.1	4.2	5.2	10	0.00168	27	1340	1170	930	640
B82R 90L 4	1.1	2.55	2.05	1400	75	0.83	2.1	4.8	7.5	20	0.003	38	230	205	170	145
B82R 90Lx 4	1.5	3.4	2.7	1405	78	0.82	2.3	5	10.3	20	0.00525	42	270	245	200	170
B82R 100L 4	2.2	5	4	1420	79	0.8	2.4	5.4	14.8	46	0.00688	51	235	215	185	165
B82R 100Lx 4	3	6.6	5.2	1415	79.5	0.83	2.3	5.5	20.1	46	0.007	54	110	105	90	80
B82R 112M 4	4	8.2	6.5	1435	84	0.84	2.7	6.8	26.5	46	0.0133	69	220	210	180	160
B82R 132S 4	5.5	11	8.8	1440	85	0.85	2.5	6.2	36.5	86	0.0263	118	100	95	75	65
B82R 132M 4	7.5	14.5	11.6	1440	87	0.86	2.7	6.5	50	86	0.0348	128	100	90	75	65
n_s = 1000 rpm, 2p = 6																
B82R 80K 6	0.37	1.12	0.9	925	67	0.71	2.5	4.1	3.8	10	0.0024	26	1120	950	725	590
B82R 80L 6	0.55	1.6	1.28	925	69	0.72	2.4	4	5.7	10	0.003	27	1145	980	765	620
B82R 90L 6	0.75	2.2	1.75	910	66	0.75	1.8	3.4	7.8	20	0.00445	38	675	605	500	425
B82R 90Lx 6	1.1	3.1	2.5	920	70	0.73	2	3.7	11.4	20	0.00573	42	125	115	100	85
B82R 100L 6	1.5	3.8	3.05	945	76	0.75	2.5	4.9	15.2	46	0.0113	54	240	215	175	145
B82R 112M 6	2.2	5.47	4.3	950	80	0.74	2.7	5.6	22.1	46	0.0198	69	595	530	425	355
B82R 132S 6	3	6.7	5.4	965	83	0.78	2.7	6.3	29.8	86	0.0347	118	390	350	290	250
B82R 132M 6	4	8.8	7	960	83.5	0.79	2.6	6	40	86	0.0415	124	215	195	160	140
B82R 132Mx 6	5.5	11.6	9.3	960	84.5	0.81	2.6	6.4	55	86	0.0498	133	125	110	95	80
n_s = 750 rpm, 2p = 8																
B82R 80K 8	0.18	0.66	0.52	690	61	0.65	2.2	3.2	2.5	10	0.0023	26	1125	940	710	580
B82R 80L 8	0.25	0.91	0.73	690	62	0.64	2.2	3.2	3.5	10	0.0029	27	1125	940	710	580
B82R 90L 8	0.37	1.3	1.04	690	63	0.65	1.8	3	5.1	20	0.0039	38	1285	1090	920	780
B82R 90Lx 8	0.55	1.92	1.54	690	64.5	0.64	1.8	3.1	7.6	20	0.0052	42	1160	980	830	690
B82R 100L 8	0.75	2.35	1.87	710	70	0.66	2.4	4	10.2	46	0.0094	51	970	820	690	570
B82R 100Lx 8	1.1	3.1	2.5	695	70	0.73	2	3.8	15.1	46	0.0109	54	880	750	630	520
B82R 112M 8	1.5	4.2	3.35	710	77	0.67	2.2	4.6	20.5	46	0.0198	69	680	560	480	406
B82R 132S 8	2.2	5	4	695	80	0.79	2	4.1	30	86	0.0331	113	650	550	460	380
B82R 132M 8	3	7	5.6	705	80.5	0.77	2.4	4.6	41	86	0.0401	122	630	520	450	360

[1] Tolerance -20 %/+40 % at 1 m/s friction speed
[2] Type of construction B3 with terminal box

CE 0637 ⟨Ex⟩ 2G Ex d/de II (B+H_2) T4

Three-phase motors with squirrel-cage rotor with built-in brake
Type of protection Flameproof enclosure “d/de”
Motors for operation in Zone 1 acc. to EN 60079-0/60079-1

for mains operation, temperature class T4
design for rated voltages of range A acc. to EN 60034-1, 50 Hz
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155

Motor selection data

Type	output	ratet current at		speed	efficiency	power factor	starting torque	starting current	motor torque	braking torque [1]	moment of inertia	weight [2]	permissible switching cycles per hour for duty type S 4 15, 20, 40 oder 60 % ED			
		400 V	500 V													
	P_2	I	I	n	η	cos φ	M_A / M_N	I_A / I_N	M	M_B	J	m	Fl = 1,5	Fl = 2	Fl = 3	Fl = 4
	[kW]	[A]	[A]	[rpm]	[%]				[Nm]	[Nm]	[kgm²]	[kg]	[S/h]	[S/h]	[S/h]	[S/h]
n_s = 750/1500 rpm, 2p = 8/4																
B82R 90L 8-4	0.4	1.62	1.3	690	57.5	0.62	1.6	2.9	5.7	20	0.0049	38	on request			
	0.6	1.46	1.17	1395	69	0.86	1.6	4.2	4.1							
B82R 90Lx 8-4	0.55	2.14	1.71	690	58	0.64	1.6	3	7.7	20	0.0069	42				
	0.8	1.9	1.52	1410	70	0.87	1.8	4.6	5.4							
B82R 100L 8-4	0.9	3	2.4	690	61	0.71	1.8	3.2	12.5	46	0.0098	51	on request			
	1.3	3	2.45	1400	69.5	0.89	1.5	4.2	8.9							
B82R 100Lx 8-4	1	3.2	2.55	700	65	0.7	1.8	3.7	13.6	46	0.0138	54				
	1.6	3.6	2.9	1400	71	0.9	1.6	4.5	10.9							
B82R 112M 8-4	1.5	4.4	3.5	700	72	0.69	2	4.4	30.5	46	0.0218	69	on request			
	2.5	5.3	4.25	1390	74.5	0.91	1.9	5	17.1							
B82R 132S 8-4	2.3	6.8	5.4	720	75	0.65	1.8	4.4	30.5	86	0.0353	127	on request			
	3.6	7.2	5.8	1440	81	0.89	1.8	5.4	23.8							
B82R 132M 8-4	3	8.5	6.7	720	78	0.66	2	4.6	40	86	0.0498	138				
	5	9.7	7.8	1440	82.5	0.9	1.9	5.8	33							
n_s = 750/3000 rpm, 2p = 8/2																
B82R 80K 8-2	0.1	0.5	0.4	685	46.5	0.62	1.5	2.3	1.4	10	0.0015	26	on request			
	0.4	1.07	0.86	2870	62.5	0.86	2.3	2.5	1.3							
B82R 80L 8-2	0.14	0.72	0.58	660	43	0.65	1.3	2.5	2	10	0.0019	27				
	0.56	1.58	1.26	2870	60.3	0.85	1.5	2.5	1.9							
B82R 90L 8-2	0.2	0.91	0.73	710	53	0.6	1.5	3	2.7	20	0.0035	38	on request			
	0.8	1.97	1.56	2885	65	0.9	1.4	6	2.6							
B82R 90Lx 8-2	0.3	1.29	1.04	710	54	0.62	1.6	3	4	20	0.0058	42				
	1.1	2.5	2	2885	69.3	0.91	1.5	6.2	3.6							
B82R 100L 8-2	0.33	1.42	1.14	715	54	0.62	1.6	3	4.4	46	0.0069	51	on request			
	1.3	2.9	2.3	2885	70	0.92	1.4	6	4.3							
B82R 100Lx 8-2	0.4	1.72	1.38	715	54	0.62	1.6	3	5.3	46	0.007	54				
	1.5	3.35	2.65	2885	70.8	0.92	1.5	6	5							
B82R 112M 8-2	0.55	2.1	1.67	715	59.3	0.64	1.5	3.5	7.3	46	0.011	69	on request			
	2.2	4.9	3.95	2920	71	0.9	2	6.9	7.2							
B82R 132S 8-2	0.8	3	2.4	720	59.8	0.65	1.7	3.2	10.6	86	0.0286	127	on request			
	3.2	6.7	5.4	2925	76.6	0.92	2.5	7.2	10.4							
B82R 132M 8-2	1.1	3.65	2.95	720	65.8	0.66	1.8	3	14.6	86	0.037	138				
	4.2	8.3	6.6	2935	78.9	0.93	2.6	7	13.7							

[1] Tolerance -20 %/+40 % at 1 m/s friction speed
[2] Type of construction B3 with terminal box

CE 0637 ⟨Ex⟩ II 2G Ex d/de IIC T4

Three-phase motors with squirrel-cage rotor with built-on brake
Type of protection Flameproof enclosure “d/de”
Motors for operation in Zone 1 acc. to EN 60079-0/60079-1

for mains operation, temperature class T4
design for rated voltages of range A acc. to EN 60034-1, 50 Hz
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155

Motor selection data

Type	output	ratet current at		speed	efficiency	power factor	starting torque	starting current	motor torque	braking torque [1]	braking type	moment of inertia	weight [2]	permissible switching cycles per hour for duty type S 4 15, 20, 40 oder 60 % ED			
		400 V	500 V														
	P_2	I	I	n	η	cos φ	M_A / M_N	I_A / I_N	M	M_B		J	m	Fl = 1,5	Fl = 2	Fl = 3	Fl = 4
	[kW]	[A]	[A]	[rpm]	[%]				[Nm]	[Nm]		[kgm²]	[kg]	[S/h]	[S/h]	[S/h]	[S/h]
n_S = 3000 rpm, 2p = 2																	
K82R 80K 2	0.75	1.74	1.39	2790	74	0.84	2.7	4.8	2.57	10	10	0.00083	39	on request			
K82R 80L 2	1.1	2.4	1.92	2820	78	0.85	2.7	5.5	3.73	10	10	0.00105	40				
K82R 90L 2	1.5	3.15	2.55	2840	78.5	0.87	2.7	5.5	5	20	11	0.00155	46				
K82R 90Lx 2	2.2	4.4	3.5	2850	83	0.87	2.7	5.6	7.4	20	11	0.00205	50				
K82R 100L 2	3	5.9	4.7	2850	85	0.87	2.7	6.8	10.1	50	13	0.00505	74				
K82R 112M 2	4	7.7	6.1	2880	85.5	0.88	2.3	6.5	13.3	50	13	0.00725	82				
K82R 132S 2	5.5	10.4	8.3	2880	87	0.88	2.5	6.4	18.2	50	13	0.01105	124				
K82R 132Sx 2	7.5	13.8	11.1	2910	88	0.89	2.7	6.8	24.6	100	16	0.01465	129				
K82R 160M 2	11	20	16	2925	89	0.89	2.8	6.6	36	150	19	0.0445	192				
K82R 160Mx 2	15	26.50	21	2920	89.5	0.92	2.8	6.8	49	150	19	0.0555	202				
K82R 160L 2	18.5	32.1	25.5	2925	90.5	0.92	2.6	6.8	60	150	19	0.0645	217				
K82R 180M 2	22	37.50	30.00	2925	91.5	0.92	2.5	6.9	72	150	19	0.0875	225				
K82R 180L 2	30	52	42	2955	92.5	0.9	2.6	7.2	97	270	24	0.1425	284				
K82R 200L 2	37	63	50	2955	93.3	0.91	2.7	7.2	120	270	24	0.1725	307				
n_S = 1500 rpm, 2p = 4																	
K82R 80K 4	0.55	1.36	1.09	1380	73	0.8	2	3.8	3.8	10	10	0.00117	39	1340	1010	670	500
K82R 80L 4	0.75	1.81	1.45	1400	75.5	0.79	2.1	4.5	5.1	10	10	0.00155	40	1340	1010	670	500
K82R 90L 4	1.1	2.5	1.99	1400	77	0.83	2.1	4.8	7.5	10	11	0.0024	46	230	170	110	90
K82R 90Lx 4	1.5	3.25	2.65	1405	79	0.82	2.3	5	10.2	20	11	0.0032	51	270	200	135	100
K82R 100L 4	2.2	4.8	3.8	1420	81	0.82	2.4	5.4	14.8	50	13	0.0049	66	235	175	120	90
K82R 100Lx 4	3	6.3	5.1	1415	82.5	0.83	2.3	5.5	20.2	50	13	0.0078	83	110	80	55	45
K82R 112M 4	4	8.1	6.5	1435	85	0.84	2.7	6.8	26.6	50	13	0.013	97	220	165	110	85
K82R 132S 4	5.5	10.7	8.6	1440	87	0.85	2.5	6.2	36.5	50	13	0.025	142	150	110	75	55
K82R 132M 4	7.5	14.3	11.4	1440	88.2	0.86	2.7	6.5	50	100	16	0.033	152	140	105	70	50
K82R 160M 4	11	21	16.7	1460	89.5	0.85	2.5	6.6	72	100	19	0.06	210	95	70	50	35
K82R 160L4	15	28	22.5	1455	90	0.86	2.8	6.5	98	150	19	0.092	251	60	45	30	25
K82R 180M 4	18.5	345	27.5	1460	91	0.85	2.9	6.6	121	150	19	0.143	243	70	50	35	25
K82R 180L 4	22	41	32.5	1460	91.5	0.85	3	6.9	144	270	24	0.168	277	60	45	30	20
K82R 200L 4	30	53	42.5	1460	92.5	0.88	2.6	6.8	196	270	24	0.26	344	40	50	20	15

[1] Marking for brakes up to 270 Nm:
II 2G EEx de IIC T5 and as option
II 2D IP67 T100°C;
DMT 02 ATEX E 122;
400 Nm stop brake on request
[2] Type of construction B3 with terminal box

CE 0637 ⟨Ex⟩ II 2G Ex d/de IIC T4

Three-phase motors with squirrel-cage rotor with built-on brake
Type of protection Flameproof enclosure “d/de”
Motors for operation in Zone 1 acc. to EN 60079-0/60079-1

for mains operation, temperature class T4
design for rated voltages of range A acc. to EN 60034-1, 50 Hz
with surface ventilation, mode of operation S1, continuous duty
degree of protection IP 55, thermal class 155

Motor selection data

Type	output	ratet current at		speed	efficiency	power factor	starting torque	starting current	motor torque	braking torque [1]	braking type	moment of inertia	weight [2]	permissible switching cycles per hour for duty type S 4 15, 20, 40 oder 60 % ED			
		400 V	500 V														
	P_2	I	I	n	η	cos φ	M_A / M_N	I_A / I_N	M	M_B		J	m	Fl = 1,5	Fl = 2	Fl = 3	Fl = 4
	[kW]	[A]	[A]	[rpm]	[%]				[Nm]	[Nm]		[kgm²]	[kg]	[S/h]	[S/h]	[S/h]	[S/h]
n_S = 1000 rpm, 2p = 6																	
K82R 80K 6	0.37	1.12	0.9	925	67	0.71	2.5	4.1	3.8	10	10	0.0012	39	1260	945	630	470
K82R 80L 6	0.55	1.6	1.28	925	69	0.72	2.4	4	5.7	10	10	0.0028	40	540	400	270	200
K82R 90L 6	0.75	2.15	1.72	910	67	0.75	1.8	3.4	7.9	10	11	0.0036	46	420	310	210	150
K82R 90Lx 6	1.1	3.05	2.45	920	71	0.73	2	3.7	11.4	20	11	0.0049	51	560	420	280	210
K82R 100L 6	1	3.75	3	945	77	0.75	2.4	5	15.2	20	13	0.0098	68	44	330	220	165
K82R 112M 6	2.2	5.2	4.2	950	81	0.75	2.7	5.6	22.1	50	13	0.02	97	240	180	120	90
K82R 132S 6	3	6.6	5.3	965	84	0.78	2.7	6.3	29.7	50	13	0.034	142	170	130	85	54
K82R 132M 6	4	8.6	6.9	960	85	0.79	2.6	6	40	50	13	0.04	164	240	180	120	90
K82R 132Mx 6	5.5	11.4	9.1	960	86	0.81	2.6	6.4	55	100	16	0.046	152	220	165	110	80
K82R 160M 6	7.5	14.7	11.7	960	86.8	0.85	2.5	6.8	75	100	19	0.09	212	290	220	145	110
K82R 160L 6	11	21	16.9	965	87.5	0.86	2.5	6.7	109	150	19	0.13	257	160	120	80	60
K82R 180L 6	15	28.5	23	965	90	0.84	2.4	6.9	148	270	24	0.2	285	130	100	65	50
K82R 200L 6	18.5	35	28	975	90.5	0.84	1.9	6.2	181	270	24	0.29	340	90	65	45	35
K82R 200Lx 6	22	41	33	970	91	0.85	2.2	6.8	217	270	24	0.32	350	80	60	40	30
n_S = 750 rpm, 2p = 8																	
K82R 80K 8	0.18	0.66	0.52	690	61	0.65	3.2	2.2	2.5	10	10	0.0021	39	960	720	480	360
K82R 80L 8	0.25	0.91	0.73	690	62	0.64	3.2	2.2	3.5	10	10	0.0028	40	720	540	360	270
K82R 90L 8	0.37	1.3	1.04	690	63	0.65	3	1.8	5.1	10	11	0.0036	46	560	420	280	210
K82R 90Lx 8	0.55	1.85	1.48	690	67	0.64	3.1	1.8	7.6	10	11	0.0049	51	530	400	265	200
K82R 100L 8	0.75	2.3	1.85	710	71	0.66	4	2.4	10.1	20	13	0.0083	65	500	375	250	190
K82R 100Lx 8	1.1	3.15	2.5	695	69	0.73	3.8	2	15.1	20	13	0.0098	68	700	530	350	260
K82R 112M 8	1.5	4.15	3.3	710	78	0.67	4.6	2.2	20.2	50	13	0.019	97	620	465	310	230
K82R 132S 8	2.2	5	4	695	80	0.79	4.1	2	30	50	13	0.031	139	230	170	115	90
K82R 132M 8	3	6.9	5.6	705	81	0.77	4.6	2.4	41	50	13	0.038	152	240	180	120	90
K82R 160M 8	4	8.7	7	715	85	0.78	4.6	1.8	53	100	19	0.073	201	150	110	75	55
K82R 160Mx 8	5.5	12	9.6	720	86	0.77	5.4	2.1	73	100	19	0.107	212	145	110	70	55
K82R 160L 8	7.5	16.3	13	720	86.5	0.77	5.6	2.2	99	150	19	0.149	257	145	110	70	55
K82R 180L 8	11	22.5	18.1	725	89	0.79	6.4	2.4	145	270	24	0.23	285	200	150	100	75
K82R 200L 8	15	31	24	730	89.5	0.8	6.9	2.4	196	270	24	0.41	350	100	75	50	35

[1] Marking for brakes up to 270 Nm:
II 2G EEx de IIC T5 and as option
II 2D IP67 T100°C;
DMT 02 ATEX E 122;
400 Nm stop brake on request
[2] Type of construction B3 with terminal box

Coil data for built-in and built-on brakes

Coil data for built-in brake (design ⟨Ex⟩ II2G Ex de II (B+H_2)T4)

Size Motor	Voltage U = [V]	Current I = [A]	Resistance R_{min} [Ω]	Voltage U ~ [V]	Current I ~ [A]
80	24	1.09	22	-	-
	103	0.29	369	230	0.46
	130	0.23	567	290	0.36
	176	0.19	910	400	0.3
90	24	1.5	16	-	-
	103	0.36	290	230	0.57
	130	0.35	376	290	0.55
	176	0.26	684	400	0.41
100 and 112	24	1.85	13	-	-
	103	0.42	244	230	0.66
	130	0.35	376	290	0.55
	176	0.31	575	400	0.49
132	24	2.93	8.58	-	-
	130	0.56	232	290	0.88
	176	0.49	360	400	0.77

Coil data for built-on brake (design ⟨Ex⟩ II2G Ex de II CT5)

Size Brake	Torque M [V]	Voltage U = [V]	Current I = [A]	Resistance R_{min} [Ω]	Voltage U ~ [V]	Current I ~ [A]
10/11	10 or 20	24	2.1	11.6	-	-
		98	0.55	177	110	0.61
		205	0.27	770	230	0.3
		215	0.225	954	240	0.25
		258	0.21	1197	270	0.23
		356	0.14	2571	400	0.16
13/16	50 or 100	24	2.93	8.2	-	-
		98	0.8	122.4	110	0.89
		205	0.39	536	230	0.44
		215	0.346	621	240	0.38
		258	0.31	838	270	0.34
		356	0.2	1685	400	0.24
19/24	150 or 270	24	3.08	7.8	-	-
		98	0.85	116	110	0.94
		205	0.4	516	230	0.45
		215	0.4	538	240	0.44
		356	0.25	1438	400	0.28

Type of protection Protection by enclosure “tD A21”

CE 0637 Ex II 2D Ex tD A21 IP 65 T125 °C

Energy saving motors acc. to CEMEP
“Improved Efficiency” EFF2
or acc. to EN 60034-30
“Standard Efficiency” IE1
Rated voltage range A
50 Hz, 2- to 8-pole
3000/1500/1000/750 rpm

Energy saving motors acc. to CEMEP
“High Efficiency” EFF1
or acc. to EN 60034-30
“High Efficiency” IE2
Rated voltage range A
50 Hz, 2- to 8-pole
3000/1500/1000/750 rpm

Type of protection Protection by enclosure “tD A22”

CE 0637 Ex II 3D Ex tD A22 IP 55 T125 °C

Energy saving motors acc. to CEMEP
“Improved Efficiency” EFF2
or acc. to EN 60034-30
“Standard Efficiency” IE1
Rated voltage range A
50 Hz, 2- to 8-pole
3000/1500/1000/750 rpm

Energy saving motors acc. to CEMEP
“High Efficiency” EFF1
or acc. to EN 60034-30
“High Efficiency” IE2
Rated voltage range A
50 Hz, 2- to 8-pole
3000/1500/1000/750 rpm

CE 0637 Ex II 2D Ex tD A21 IP 65 T125 °C

Energy saving motors acc. to EN 60034-30 – IE1
Motors for operation in Zone 21 acc. to EN 61241-0/EN 61241-1
Type of protection Protection by enclosure “tD A21”

EFF 2 **IE1**

Design for rated voltages of range A acc. to EN 60034-1
with surface ventilation, mode of operation S1, continuous duty
thermal class 155, degree of protection IP 65, max. surface temperature 125 °C
EC type examination certificate: IBExU 02 ATEX 1019

Motor selection data — Design point 400 V, 50 Hz

Type	P	M	n	η (EN 60034-2)	cos φ	I 400 V	I_A/I	M_A/M_B	M_S/M_B	M_K/M_B	J	m	Type with IE-mark	η (EN 60034-2-1)
	kW	Nm	rpm	%	-	A	-	-	-	-	kgm^2	kg		%
Synchronous speed 3000 rpm – 2-pole version														
KPER 56 K2	0.09	0.3	2840	70.0	0.74	0.25	4.9	2.3	2.3	2.8	0.00013	4.4		
KPER 56 G2	0.12	0.4	2830	70.5	0.77	0.32	4.5	2.1	2.1	2.3	0.00013	4.5		
KPER 63 K2	0.18	0.62	2790	67.0	0.76	0.51	4.1	1.9	1.9	2.2	0.00013	4.9		
KPER 63 G2	0.25	0.85	2800	68.0	0.72	0.74	4.2	2.2	2.2	2.4	0.00015	5.2		
KPER 71 K2	0.37	1.27	2780	71.5	0.79	0.94	4.4	2.1	2.1	2.3	0.00025	6.7		
KPER 71 G2	0.55	1.89	2775	74.5	0.81	1.32	5.1	2.3	2.1	2.6	0.00032	7.6		
KPER 80 K2	0.75	2.54	2825	77.5	0.81	1.72	5.9	2.4	2.4	2.4	0.00057	10.7	IE1-KPER 80 K2	76.8
KPER 80 G2	1.1	3.71	2835	78.0	0.80	2.55	6.0	2.4	2.3	2.6	0.00072	11.5	IE1-KPER 80 G2	76.9
KPER 90 S2	1.5	5.04	2840	81.0	0.86	3.1	7.0	2.5	2.5	2.8	0.00132	16	IE1-KPER 90 S2	81.2
KPER 90 L2	2.2	7.37	2850	82.0	0.85	4.55	7.5	2.8	2.3	2.9	0.0017	19	IE1-KPER 90 L2	82.1
KPER 100 L2	3.0	10.0	2865	83.5	0.84	6.15	6.8	2.4	2.4	2.8	0.00275	25	IE1-KPER 100 L2	82.8
KPER 112 M2	4.0	13.2	2900	85.0	0.81	8.4	7.0	2.2	2.1	2.9	0.0045	32	IE1-KPER 112 M2	84.9
KPER 132 S2T	5.5	18.2	2890	86.5	0.84	11	7.5	2.4	2.2	3.0	0.0055	40	IE1-KPER 132 S2T	85.9
K21Q 132 S2	5.5	18.4	2860	85.7	0.86	11	5.5	1.8	1.6	2.2	0.0081	52	IE1-K21Q 132 S2	84.7
KPER 132 SX2T	7.5	24.9	2880	87.0	0.84	14.8	6.3				0.0068	48	IE1-KPER 132 SX2T	87.1
K21Q 132 SX2	7.5	24.7	2900	87.0	0.86	15	6.6	1.8	1.3	2.5	0.0110	57	IE1-K21Q 132 SX2	86.0
K21Q 160 M2	11.0	36.2	2900	88.5	0.90	20	7.0	2.4	2.0	3.0	0.0258	81	IE1-K21Q 160 M2	87.6
K21Q 160 MX2	15.0	48.9	2930	89.4	0.90	27	7.1	2.2	1.7	2.9	0.0575	118	IE1-K21Q 160 MX2	88.7
K21Q 160 L2	18.5	60.5	2920	90.5	0.92	32	7.2	2.1	1.6	2.8	0.0675	134	IE1-K21Q 160 L2	89.3
K21Q 180 M2	22	71.6	2935	91.8	0.92	37.5	6.8	1.7	1.4	2.6	0.1050	165	IE1-K21Q 180 M2	89.9
K21Q 200 L2	30	97.5	2940	92.8	0.92	50.5	7.3	2.0	1.6	2.9	0.1280	195	IE1-K21Q 200 L2	91.1
K21Q 200 Lx2	37	120	2940	93.0	0.90	64	7.0	1.8	1.3	2.4	0.1930	255	IE1-K21Q 200 Lx2	91.5
K21Q 225 M2	45	146	2940	93.7	0.91	76	7.5	1.8	1.4	2.7	0.2200	290	IE1-K21Q 225 M2	92.0
K21Q 250 M2	55	178	2955	93.7	0.91	93	7.5	2.0	1.5	2.6	0.3750	360	IE1-K21Q 250 M2	92.2
K21Q 280 S2	75	241	2970	94.6	0.92	124	7.5	2.0	1.6	2.6	0.6500	490	IE1-K21Q 280 S2	93.1
K21Q 280 M2	90	289	2970	94.7	0.91	151	8.5	2.2	1.8	2.8	0.6750	510	IE1-K21Q 280 M2	93.2
K21Q 315 S2	110	353	2975	95.4	0.91	183	8.5	1.5	1.3	2.5	1.210	720	IE1-K21Q 315 S2	93.5
K21Q 315 M2	132	424	2975	95.4	0.91	219	8.5	2.0	1.8	2.7	1.440	800	IE1-K21Q 315 M2	93.8
K21Q 315 MX2	160	514	2975	96.0	0.93	259	8.5	2.0	1.6	2.6	1.760	980	IE1-K21Q 315 MX2	94.0
K21Q 315 MY2	200	643	2970	96.0	0.92	327	8.2	2.6	2.0	2.6	2.820	1170	IE1-K21Q 315 MY2	94.0
K21Q 315 L2	250	803	2973	96.1	0.93	404	7.3	2.1	1.4	2.0	3.66	1460	IE1-K21Q 315 L2	94.1
K21Q 315 LX2	315	1011	2975	96.7	0.92	511	7.4	2.4	1.4	2.0	4.43	1630	IE1-K21Q 315 LX2	94.5
Synchronous speed 1500 rpm – 4-pole version														
KPER 56 K4	0.06	0.41	1410	60.5	0.60	0.24	3.1	2.3	2.3	2.7	0.00019	4.3		
KPER 56 G4	0.09	0.63	1375	62.0	0.68	0.31	3.2	1.9	1.9	2.2	0.00019	4.4		
KPER 63 K4	0.12	0.84	1370	57.5	0.68	0.44	3.2	1.9	1.8	2.2	0.00019	4.8		
KPER 63 G4	0.18	1.26	1360	61.0	0.66	0.65	3.3	2.0	2.0	2.3	0.00024	5.2		
KPER 71 K4	0.25	1.72	1385	64.5	0.72	0.78	3.6	1.8	1.8	2.1	0.00040	6.8		
KPER 71 G4	0.37	2.58	1370	68.0	0.74	1.06	3.8	2.0	2.0	2.2	0.00050	7.8		
KPER 80 K4	0.55	3.75	1400	71.5	0.69	1.60	4.1	2.1	2.0	2.3	0.00087	10.6		
KPER 80 G4	0.75	5.12	1400	73.5	0.70	2.10	4.6	2.2	2.1	2.3	0.00107	11.7	IE1-KPER 80 G4	73.6
KPER 90 S4	1.10	7.45	1410	76.5	0.79	2.62	5.5	2.3	2.2	2.5	0.00207	15.5	IE1-KPER 90 S4	76.7
KPER 90 L4	1.50	10.2	1400	79.0	0.81	3.40	5.5	2.5	2.4	2.6	0.00260	18	IE1-KPER 90 L4	78.6
KPER 100 L4	2.20	14.9	1410	81.0	0.79	4.95	6.0	3.0	2.7	3.1	0.00400	23.5	IE1-KPER 100 L4	80.2
KPER 100 LX4	3.00	20.0	1430	82.5	0.79	6.65	6.5	2.3	2.1	2.8	0.00725	30	IE1-KPER 100 LX4	82.4
KPER 112 M4	4.00	26.6	1435	84.0	0.78	8.80	6.9	2.6	2.5	3.2	0.00900	37	IE1-KPER 112 M4	84.1
KPER 132 S4T	5.5	37.0	1420	86.5	0.78	11.80	6.3	2.5	2.4	2.9	0.01100	47	IE1-KPER 132 S4T	85.2
K21Q 132 S4	5.5	36.5	1440	85.7	0.89	11	6.5	1.9	1.7	3.0	0.0150	50	IE1-K21Q 132 S4	84.9
K21Q 132 M4	7.5	49.4	1450	87.0	0.84	15	6.0	2.0	1.7	2.9	0.0280	70	IE1-K21Q 132 M4	86.5
K21Q 160 M4	11.0	72.5	1450	88.4	0.85	21.0	6.8	2.2	1.9	3.3	0.0350	92	IE1-K21Q 160 M4	88.0
K21Q 160 L4	15.0	97.8	1465	89.4	0.86	28.0	7.3	2.5	2.0	3.0	0.0780	120	IE1-K21Q 160 L4	88.7
K21Q 180 M4	18.5	121	1460	90.0	0.86	35	6.8	2.5	2.0	2.9	0.0900	136	IE1-K21Q 180 M4	89.3
K21Q 180 L4	22	143	1465	90.5	0.84	42	6.5	2.0	1.8	2.6	0.1380	170	IE1-K21Q 180 L4	89.9
K21Q 200 L4	30	196	1465	91.5	0.85	55.5	7.0	2.0	1.7	2.4	0.1680	200	IE1-K21Q 200 L4	90.7
K21Q 225 S4	37	240	1470	92.5	0.86	67	7.0	2.0	1.7	2.5	0.2750	270	IE1-K21Q 225 S4	91.2
K21Q 225 M4	45	292	1470	93.0	0.86	81	7.0	2.0	1.7	2.5	0.3130	300	IE1-K21Q 225 M4	91.7
K21Q 250 M4	55	356	1475	93.5	0.86	98.5	7.0	2.2	1.7	2.3	0.5250	375	IE1-K21Q 250 M4	92.3
K21Q 280 S4	75	484	1480	94.1	0.86	134	7.0	2.0	1.7	2.2	0.950	520	IE1-K21Q 280 S4	92.7
K21Q 280 M4	90	581	1480	94.6	0.86	160	7.0	2.1	1.6	2.2	1.100	580	IE1-K21Q 280 M4	93.3
K21Q 315 S4	110	707	1485	95.1	0.86	194	7.5	1.8	1.6	2.2	1.960	740	IE1-K21Q 315 S4	93.5
K21Q 315 M4	132	849	1485	95.1	0.86	233	7.0	1.8	1.5	2.2	2.270	840	IE1-K21Q 315 M4	93.5
K21Q 315 MX4	160	1032	1480	95.0	0.87	279	7.0	1.8	1.5	2.0	2.730	1000	IE1-K21Q 315 MX4	93.8
K21Q 315 MY4	200	1286	1485	96.0	0.88	342	7.5	2.0	1.8	2.4	4.820	1200	IE1-K21Q 315 MY4	94.3
K21Q 315 L4	250	1608	1485	96.1	0.90	417	8.0	2.0	1.6	2.3	5.93	1450	IE1-K21Q 315 L4	94.3
K21Q 315 LX4	315	2019	1490	96.5	0.88	535	8.6	1.9	1.5	2.5	6.82	1630	IE1-K21Q 315 LX4	94.5

Series K21Q also available as series K20Q; different max surface temperatures and coolant temperatures on request

Type of protection Protection by enclosure “tD A21”

CE 0637 Ex II 2D Ex tD A21 IP 65 T125 °C

Energy saving motors acc. to EN 60034-30 – IE1
Motors for operation in Zone 21 acc. to EN 61241-0/EN 61241-1
Type of protection Protection by enclosure “tD A21” IE1

Design for rated voltages of range A acc. to EN 60034-1
with surface ventilation, mode of operation S1, continuous duty
thermal class 155, degree of protection IP 65, max. surface temperature 125 °C
EC type examination certificate: IBExU 02 ATEX 1019

Motor selection data — Design point 400 V, 50 Hz

Type	P	M	n	η (EN 60034-2)	cos φ	I 400 V	I_A/I	M_A/M_B	M_S/M_B	M_K/M_B	J	m	Type with IE-mark	η (EN 60034-2-1)
	kW	Nm	rpm	%	-	A	-	-	-	-	kgm^2	kg		%
Synchronous speed 1000 rpm – 6-pole version														
KPER 63 K6	0.09	0.96	895	50.5	0.56	0.46	2.5	2.0	2.0	2.4	0.00024	4.9		
KPER 63 G6	0.12	1.30	880	52.0	0.56	0.59	2.5	2.0	2.0	2.3	0.00027	5.7		
KPER 71 K6	0.18	1.86	925	58.0	0.51	0.88	2.8	1.6	1.6	2.1	0.00045	7.4		
KPER 71 G6	0.25	2.61	915	60.0	0.55	1.10	2.9	2.0	2.0	2.2	0.00060	8.3		
KPER 80 K6	0.37	3.86	915	66.0	0.66	1.22	3.4	2.0	2.0	2.0	0.00130	11		
KPER 80 G6	0.55	5.74	915	68.0	0.67	1.73	3.7	2.2	2.2	2.4	0.00175	12.5		
KPER 90 S6	0.75	7.66	935	70.0	0.64	2.43	4.5	2.4	2.4	2.4	0.00325	16	IE1-KPER 90 S6	70.5
KPER 90 L6	1.10	11.2	935	73.0	0.69	3.15	4.6	2.2	2.2	2.4	0.00425	19	IE1-KPER 90 L6	73.4
KPER 100 L6	1.50	15.2	945	76.5	0.73	3.90	4.6	2.1	2.0	2.4	0.00625	24	IE1-KPER 100 L6	76.0
KPER 112 M6	2.20	22.1	950	80.0	0.74	5.35	5.3	2.2	2.1	2.7	0.01225	33.5	IE1-KPER 112 M6	78.1
KPER 132 S6T	3.00	30.6	935	82.0	0.75	7.05	5.2				0.01390	39	IE1-KPER 132 S6T	81.9
K21Q 132 S6	3.0	30.0	955	78.5	0.82	6.7	5.7	1.8	1.6	2.7	0.0180	46	IE1-K21Q 132 S6	79.7
K21Q 132 M6	4.0	40.0	955	80.0	0.80	9	6.0	2.2	2.0	3.1	0.0230	53	IE1-K21Q 132 M6	81.4
K21Q 132 MX6	5.5	55.0	955	83.0	0.83	11.5	5.0	1.8	1.5	2.3	0.0430	70	IE1-K21Q 132 MX6	83.3
K21Q 160 M6	7.5	74.6	960	85.0	0.82	15.5	5.5	2.0	1.6	2.5	0.0530	86	IE1-K21Q 160 M6	85.0
K21Q 160 L6	11.0	109	965	85.2	0.86	21.5	5.0	2.0	1.7	2.3	0.1130	114	IE1-K21Q 160 L6	86.4
K21Q 180 L6	15.0	148	965	86.0	0.83	30.5	6.0	2.4	2.1	2.7	0.1450	136	IE1-K21Q 180 L6	87.7
K21Q 200 L6	18.5	182	970	88.1	0.87	35.0	5.5	2.0	1.7	2.4	0.2280	175	IE1-K21Q 200 L6	88.6
K21Q 200 LX6	22	217	970	88.8	0.87	41	6.2	2.2	1.8	2.6	0.2680	200	IE1-K21Q 200 LX6	89.2
K21Q 225 M6	30	294	973	90.4	0.89	54	6.5	2.2	1.7	2.5	0.4430	265	IE1-K21Q 225 M6	90.2
K21Q 250 M6	37	362	975	91.0	0.89	66	6.5	2.2	1.7	2.3	0.8250	360	IE1-K21Q 250 M6	90.8
K21Q 280 S6	45	439	980	92.0	0.87	81	6.0	2.0	1.5	2.0	1.280	465	IE1-K21Q 280 S6	91.4
K21Q 280 M6	55	536	980	92.5	0.88	97.5	6.5	2.3	1.7	2.4	1.480	520	IE1-K21Q 280 M6	91.9
K21Q 315 S6	75	727	985	93.7	0.87	133	7.0	2.0	1.6	2.4	2.630	690	IE1-K21Q 315 S6	92.7
K21Q 315 M6	90	868	990	94.4	0.88	156	7.0	2.0	1.7	2.4	3.330	800	IE1-K21Q 315 M6	93.4
K21Q 315 MX6	110	1061	990	94.0	0.88	192	7.5	2.2	1.7	2.6	3.60	880	IE1-K21Q 315 MX6	93.3
K21Q 315 MY6	132	1273	990	95.0	0.88	228	7.5	2.0	1.7	2.4	6.00	1050	IE1-K21Q 315 MY6	94.0
K21Q 315 L6	160	1551	985	95.3	0.89	272	7.5	2.3	1.9	2.4	6.67	1250	IE1-K21Q 315 L6	94.3
K21Q 315 LX6	200	1929	990	95.0	0.87	349	8.3	2.2	2.0	2.7	8.60	1460	IE1-K21Q 315 LX6	94.2
Synchronous speed 750 rpm – 8-pole version														
KPER 71 K8	0.09	1.27	675	45.5	0.51	0.56	2.1	1.9	1.9	2.1	0.00050	6.6	-	-
KPER 71 G8	0.12	1.71	670	46.5	0.51	0.73	2.3	1.8	1.8	2.1	0.00060	8.1	-	-
KPER 80 K8	0.18	2.49	690	56.5	0.59	0.78	2.8	2.0	2.0	2.2	0.00130	10.5	-	-
KPER 80 G8	0.25	3.44	695	58.0	0.56	1.12	3.0	2.3	2.3	2.5	0.00175	12	-	-
KPER 90 S8	0.37	5.05	700	61.5	0.54	1.6	3.0	1.9	1.9	2.1	0.00300	15	-	-
KPER 90 L8	0.55	7.56	695	64.5	0.60	2.04	3.2	1.9	1.9	2.2	0.00375	18	-	-
KPER 100 L8	0.75	10.2	705	67.0	0.60	2.7	3.3	2.0	2.0	2.3	0.00625	23	-	-
KPER 100 LX8	1.1	14.9	705	73.0	0.67	3.25	4.0	2.0	2.0	2.4	0.00900	28	-	-
KPER 112 M8	1.5	20.3	705	75.5	0.70	4.1	4.4	2.2	2.1	2.5	0.01225	33.5	-	-
KPER 132 S8T	2.2	30.7	685	76.0	0.68	6.3	3.8				0.01390	39	-	-
K21Q 132 S8	2.2	29.8	705	75.5	0.76	5.5	4.5	1.7	1.6	2.3	0.0180	46	-	-
K21Q 132 M8	3.0	40.6	705	78.0	0.75	7.4	4.5	1.7	1.6	2.3	0.0230	53	-	-
K21Q 160 M8	4.0	53.8	710	79.3	0.78	9.3	4.0	1.6	1.3	1.9	0.0430	70	-	-
K21Q 160 MX8	5.5	74.0	710	81.4	0.78	12.5	4.5	1.7	1.6	2.1	0.0530	86	-	-
K21Q 160 L8	7.5	98.8	725	83.0	0.78	16.5	4.5	1.8	1.6	2.1	0.1130	114	-	-
K21Q 180 L8	11.0	146	720	85.0	0.78	24	4.5	2.0	1.7	2.1	0.1450	136	-	-
K21Q 200 L8	15.0	198	725	86.5	0.79	31.5	5.0	2.0	1.7	2.3	0.2280	175	-	-
K21Q 225 S8	18.5	244	725	89.2	0.83	36	5.5	2.0	1.6	2.2	0.4400	265	-	-
K21Q 225 M8	22	290	725	89.2	0.84	42.5	5.0	1.8	1.5	2.2	0.4400	265	-	-
K21Q 250 M8	30	392	730	90.2	0.79	61	5.5	2.2	1.8	2.2	0.8250	360	-	-
K21Q 280 S8	37	481	735	91.0	0.80	73.5	5.5	2.0	1.5	2.0	1.350	465	-	-
K21Q 280 M8	45	585	735	91.5	0.77	92	6.0	2.3	1.8	2.4	1.550	520	-	-
K21Q 315 S8	55	710	740	93.1	0.80	107	6.5	1.8	1.6	2.3	2.630	690	-	-
K21Q 315 M8	75	968	740	93.3	0.81	143	6.0	2.0	1.6	2.3	3.330	800	-	-
K21Q 315 MX8	90	1162	740	93.5	0.81	172	6.0	1.9	1.6	2.2	3.60	880	-	-
K21Q 315 MY8	110	1420	740	94.6	0.81	207	6.5	2.1	1.8	2.4	6.00	1050	-	-
K21Q 315 L8	132	1704	740	95.0	0.83	242	6.3	2.0	1.7	2.1	6.76	1250	-	-
K21Q 315 LX8	160	2065	740	95.2	0.79	307	7.2	2.2	1.9	2.5	8.71	1430	-	-

Series K21Q also available as series K20Q; different max surface temperatures and coolant temperatures on request

CE 0637 ⟨Ex⟩ II 2D Ex tD A21 IP 65 T125 °C
CE 0637 ⟨Ex⟩ II 3G Ex nA II T1–T3

Energy saving motors acc. to CEMEP
“High Efficiency” EFF1 and EN 60034-30 – IE2
Determination of efficiency acc. to EN 60034-2
Motors for operation in Zone 21 acc. to EN 61241-0/EN 61241-1
Type of protection Protection by enclosure “tD A21”
or type of protection “n” acc. to EN 60079-0/60079-15, IEC 60079-15

EFF 1 **IE2**

Design for rated voltages of range A acc. to EN 60034-1
with surface ventilation, mode of operation S1, continuous duty
thermal class 155, degree of protection IP 65, max. surface temperature 125 °C
EC type examination certificate: IBExU 04 ATEX 1118

Motor selection data — Design point 400 V, 50 Hz

Type	P_B	M_B	n_B	η_B (EN 60034-2)	$\eta_{3/4}$	cos φ_B	I_B 400 V	I_A/I_B	M_A/M_B	M_S/M_B	M_K/M_B	max. surface temp.	J	m	Type with IE-mark	η (EN 60034-2-1)
	kW	Nm	rpm	%	%	-	A	-	-	-	-	°C	kgm²	kg		%
Synchronous speed 3000 rpm – 2-pole version																
WE1R 132 S2	5.5	18.0	2915	88.9	88.6	0.86	10.5	7.3	2.2	1.5	2.9	135	0.01270	58	IE2-WE1R 132 S2	87.0
WE1R 132 SX2	7.5	24.6	2910	89.5	89.2	0.91	13.5	7.0	2.1	1.5	2.7	160	0.0168	75	IE2-WE1R 132 SX2	89.5
WE1R 160 M2	11.0	35.9	2930	90.5	89.9	0.88	20.0	8.5	2.7	2.1	3.6	150	0.0258	100	IE2-WE1R 160 M2	90.2
WE1R 160 MX2	15.0	48.8	2935	91.3	91.0	0.92	26.0	7.3	2.1	1.6	2.7	165	0.0675	140	IE2-WE1R 160 MX2	90.3
WE1R 160 L2	18.5	60.3	2930	91.8	91.7	0.91	32.0	7.5	2.2	1.6	2.8	160	0.0675	140	IE2-WE1R 160 L2	91.0
WE1R 180 M2	22	71.4	2942	92.7	92.8	0.90	38.0	6.6	1.8	1.4	2.6	165	0.105	175	IE2-WE1R 180 M2	91.3
WE1R 200 L2	30	97.4	2942	93.0	93.1	0.91	51.0	7.2	1.9	1.5	2.9	160	0.128	210	IE2-WE1R 200 L2	92.0
WE1R 200 LX2	37	120	2945	93.7	93.7	0.92	62.0	7.8	2.1	1.5	3.0	160	0.154	235	IE2-WE1R 200 LX2	92.5
WE1R 225 M2	45	146	2945	93.7	93.7	0.89	78.0	7.4	1.8	1.5	3.0	180	0.360	300	IE2-WE1R 225 M2	93.0
WE1R 250 M2	55	178	2957	94.5	94.4	0.89	94.5	8.4	2.4	2.0	3.1	150	0.375	385	IE2-WE1R 250 M2	93.2
WE1R 280 S2	75	241	2972	95.2	95.0	0.90	126	8.0	2.1	1.7	3.0	135	0.65	510	IE2-WE1R 280 S2	93.8
WE1R 280 M2	90	289	2970	95.2	95.1	0.91	150	7.4	1.9	1.6	2.7	155	0.68	550	IE2-WE1R 280 M2	94.5
W21R 315 S2	110	353	2970	95.9	95.9	0.89	186	8.3	1.7	1.6	2.6	150	1.21	730	IE2-W21R 315 S2	94.5
W21R 315 M2	132	424	2975	96.0	96.2	0.89	223	9.2	1.9	1.8	2.9	160	1.44	820	IE2-W21R 315 M2	95.0
W21R 315 MX2	160	515	2970	96.1	96.1	0.90	267	8.2	1.6	1.5	2.4	160	1.76	955	IE2-W21R 315 MX2	95.0
W21R 315 MY2	200	640	2984	96.0	95.8	0.88	342	9.4	2.5	1.9	2.8	150	2.82	1200	IE2-W21R 315 MY2	95.4
W21R 315 L2	250	801	2980	96.0	96.0	0.93	404	8.6	2.3	1.7	2.4	180	3.66	1450	IE2-W21R 315 L2	95.4
W21R 315 LX2	315	1010	2980	96.8	96.8	0.95	494	9.8	2.8	1.9	2.7	190	4.43	1630	IE2-W21R 315 LX2	95.4
Synchronous speed 1500 rpm – 4-pole version																
WE1R 132 S4	5.5	35.9	1465	89.6	89.4	0.86	10.5	7.4	2.3	1.8	3.2	135	0.035	90	IE2-WE1R 132 S4	88.5
WE1R 132 M4	7.5	48.7	1470	90.3	89.9	0.82	14.5	8.5	2.8	2.2	4.0	160	0.035	92	IE2-WE1R 132 M4	89.0
WE1R 160 M4	11.0	71.4	1472	91.0	90.4	0.83	21.0	8.5	2.8	2.3	3.4	135	0.078	124	IE2-WE1R 160 M4	91.0
WE1R 160 L4	15.0	97.5	1470	91.8	91.5	0.88	27.0	8.5	2.8	2.2	3.3	135	0.115	165	IE2-WE1R 160 L4	90.8
WE1R 180 M4	18.5	120	1477	93.0	92.7	0.86	33.5	7.0	1.9	1.7	2.9	180	0.168	210	IE2-WE1R 180 M4	91.5
WE1R 180 L4	22	142	1478	93.0	92.5	0.82	42.0	7.7	2.3	1.9	3.3	180	0.168	210	IE2-WE1R 180 L4	92.0
WE1R 200 L4	30	194	1479	93.4	93.0	0.81	57.0	7.8	2.2	2.0	3.1	140	0.275	280	IE2-WE1R 200 L4	92.5
WE1R 225 S4	37	240	1475	93.7	93.5	0.84	68.0	7.3	2.3	1.9	2.9	160	0.313	320	IE2-WE1R 225 S4	93.0
WE1R 225 M4	45	290	1480	94.8	94.7	0.84	81.5	8.1	2.0	1.9	2.6	135	0.525	390	IE2-WE1R 225 M4	93.6
WE1R 250 M4	55	353	1485	95.0	94.7	0.82	102	8.0	1.9	1.8	2.4	135	0.95	535	IE2-WE1R 250 M4	94.0
WE1R 280 S4	75	483	1483	95.4	95.5	0.82	138	7.4	1.7	1.6	2.2	170	0.95	550	IE2-WE1R 280 S4	94.5
WE1R 280 M4	90	579	1484	95.5	95.5	0.82	166	7.9	2.2	1.9	2.4	160	1.10	605	IE2-WE1R 280 M4	94.5
W21R 315 S4	110	707	1485	95.7	95.8	0.81	204	8.4	1.8	1.5	2.7	160	1.96	760	IE2-W21R 315 S4	94.8
W21R 315 M4	132	849	1484	96.2	96.3	0.83	239	7.9	1.8	1.6	2.5	160	2.27	850	IE2-W21R 315 M4	95.0
W21R 315 MX4	160	1031	1482	95.8	96.0	0.84	289	7.4	1.6	1.5	2.2	150	2.73	975	IE2-W21R 315 MX4	95.0
W21R 315 MY4	200	1282	1490	96.2	96.2	0.88	341	8.3	1.7	1.2	2.4	150	4.82	1270	IE2-W21R 315 MY4	95.1
W21R 315 L4	250	1602	1490	96.7	96.8	0.86	432	8.0	1.4	1.2	2.4	180	5.93	1450	IE2-W21R 315 L4	95.4
W21R 315 LX4	315	2020	1489	96.3	96.3	0.84	562	8.5	1.9	1.2	2.5	190	6.82	1630	IE2-W21R 315 LX4	95.4

Different pole numbers on request, different max surface temperatures and coolant temperatures on request

Type of protection Protection by enclosure “tD A21”

CE 0637 ⟨Ex⟩ II 2D Ex tD A21 IP 65 T125 °C
CE 0637 ⟨Ex⟩ II 3G Ex nA II T1–T3

Energy saving motors acc. to CEMEP
“High Efficiency” EFF1 and EN 60034-30 – IE2
Determination of efficiency acc. to EN 60034-2
Motors for operation in Zone 21 acc. to EN 61241-0/EN 61241-1
Type of protection Protection by enclosure “tD A21”
or type of protection “n” acc. to EN 60079-0/60079-15, IEC 60079-15

EFF 1 IE2

Design for rated voltages of range A acc. to EN 60034-1
with surface ventilation, mode of operation S1, continuous duty
thermal class 155, degree of protection IP 65, max. surface temperature 125 °C
EC type examination certificate: IBExU 04 ATEX 1118

Motor selection data — Design point 400 V, 50 Hz

Type	P_B	M_B	n_B	η_B (EN 60034-2)	$\eta_{3/4}$	cos φ_B	I_B 400 V	I_A/I_B	M_A/M_B	M_S/M_B	M_K/M_B	max. surface temp.	J	m	Type with IE-mark	η (EN 60034-2-1)
	kW	Nm	rpm	%	%	-	A	-	-	-	-	°C	kgm²	kg		%
Synchronous speed 1000 rpm – 6-pole version																
W21R 132 S6	3.0	29.8	961	85.0	85.7	0.80	6.5	5.9	2.2	2.1	3.2	130	0.023	54	IE2-W21R 132 S6	83.5
W21R 132 M6	4.0	39.5	967	88.0	87.4	0.82	8.0	5.2	1.7	1.5	2.4	130	0.043	76	IE2-W21R 132 M6	85.5
W21R 132 MX6	5.5	54.2	969	87.5	87.5	0.78	11.5	5.5	2.5	2.0	3.0	140	0.053	85	IE2-W21R 132 MX6	86.0
W21R 160 M6	7.5	73.4	976	89.0	88.0	0.81	15.0	6.3	2.4	2.2	3.0	150	0.113	118	IE2-W21R 160 M6	87.2
W21R 160 L6	11.0	108	972	90.0	89.8	0.85	21.0	5.8	2.4	2.1	2.7	165	0.145	135	IE2-W21R 160 L6	88.7
W21R 180 L6	15.0	147	975	91.0	90.0	0.85	28.0	6.3	2.4	2.0	2.9	180	0.228	183	IE2-W21R 180 L6	89.7
W21R 200 L6	18.5	181	978	91.5	91.4	0.85	34.5	7.2	2.6	2.4	3.4	170	0.268	206	IE2-W21R 200 L6	90.5
W21R 200 LX6	22	215	979	92.5	92.3	0.87	39.5	6.9	2.6	2.1	3.2	180	0.443	278	IE2-W21R 200 LX6	91.3
W21R 225 M6	30	291	985	93.0	92.6	0.85	54.5	7.0	2.6	2.3	3.1	180	0.825	360	IE2-W21R 225 M6	92.0
W21R 250 M6	37	359	985	93.5	93.3	0.84	68.5	6.4	2.2	1.9	2.6	165	1.28	468	IE2-W21R 250 M6	92.2
W21R 280 S6	45	437	983	94.0	94.0	0.85	81.0	6.2	2.1	1.8	2.5	155	1.48	545	IE2-W21R 280 S6	93.0
W21R 280 M6	55	531	989	95.2	94.5	0.85	98.0	6.5	1.7	1.5	2.3	155	2.63	710	IE2-W21R 280 M6	93.5
W21R 315 S6	75	726	987	95.2	94.5	0.86	132	6.6	2.0	1.6	2.4	140	3.33	804	IE2-W21R 315 S6	93.9
W21R 315 M6	90	868	990	95.6	94.6	0.86	158	9.0	2.3	2.0	2.8	140	3.60	1148	IE2-W21R 315 M6	94.0
W21R 315 MX6	110	1061	990	96.1	95.9	0.87	190	8.0	2.4	1.8	2.5	165	6.00	1210	IE2-W21R 315 MX6	94.3
W21R 315 MY6	132	1273	990	95.0	94.7	0.88	228	7.5	2.0		2.4	165	6.00	1250	IE2-W21R 315 MY6	94.6
W21R 315 L6	160	1551	985	95.3	95.0	0.89	272	7.5	2.3		2.4	180	6.67	1250	IE2-W21R 315 L6	94.8
W21R 315 LX6	200	1929	990	95.0	94.7	0.87	349	8.3	2.2		2.7	190	8.60	1460	IE2-W21R 315 LX6	95.0
Synchronous speed 750 rpm – 8-pole version																
W21R 132 S8	2.2	29.4	715	81.5	81	0.70	5.6	5.5	2.0		3.0	125	0.0180	53	-	-
W21R 132 M8	3.0	40.0	717	84.8	84.3	0.74	6.9	4.4	1.5		2.4	135	0.0430	70	-	-
W21R 160 M8	4	53.2	718	85.7	85.2	0.72	9.3	4.6	1.6		2.5	140	0.0530	86	-	-
W21R 160 MX8	5.5	73.1	719	87.3	86.9	0.81	11	4.6	1.6		2.2	140	0.1130	114	-	-
W21R 160 L8	7.5	98.8	725	89.0	88.5	0.77	16	5.5	2.0		2.8	150	0.1450	136	-	-
W21R 180 L8	11	144	730	89.8	88.8	0.76	23	5.8	2.0		2.9	165	0.2280	175	-	-
W21R 200 L8	15	197	727	90.0	89.5	0.77	31	5.6	2.0		2.8	160	0.2680	200	-	-
W21R 225 S8	18.5	242	730	91.1	90.1	0.79	37	5.6	1.7		2.8	175	0.44	265	-	-
W21R 225 M8	22	287	733	91.7	90.5	0.78	44.5	5.6	1.8		2.6	175	0.83	360	-	-
W21R 250 M8	30	389	737	92.8	92.5	0.78	59.5	5.5	1.8		2.5	165	1.35	465	-	-
W21R 280 S8	37	480	736	93.0	92.5	0.79	72.5	5.4	1.8		2.4	155	1.55	520	-	-
W21R 280 M8	45	581	740	93.9	93.4	0.81	85	6.7	2.2		2.5	155	2.63	690	-	-
W21R 315 S8	55	710	740	94.6	94.1	0.81	104	6.9	2.3		2.6	130	3.33	800	-	-
W21R 315 M8	75	968	740	93.3	93	0.81	143	6	2		2.3	140	3.33	800	-	-
W21R 315 MX8	90	1161	740	93.5	93	0.81	172	6	1.9		2.2	160	3.6	880	-	-
W21R 315 MY8	110	1420	740	94.6	94.1	0.81	207	6.5	2.1		2.4	165	6	1050	-	-
W21R 315 L8	132	1704	740	95	94.5	0.83	242	6.3	2		2.1	180	6.76	1250	-	-
W21R 315 LX8	160	2065	740	95.2	94.7	0.79	307	7.2	2.2		2.5	190	8.71	1430	-	-

Different pole numbers on request, different max surface temperatures and coolant temperatures on request

CE 0637 Ex II 3D Ex tD A22 IP 55 T125 °C

Energy saving motors acc. to EN 60034-30 – IE1
Motors for operation in Zone 22 acc. to EN 61241-0/EN 61241-1
Type of protection Protection by enclosure “tD A22”

EFF 2 **IE1**

Design for rated voltages of range A acc. to EN 60034-1
with surface ventilation, mode of operation S1, continuous duty
thermal class 155, degree of protection IP 55, max. surface temperature 125 °C

Motor selection data — Design point 400 V, 50 Hz

Type		P	M	n	η (EN 60034-2)	cos φ	I 400 V	I_A/I	M_A/M_B	M_S/M_B	M_K/M_B	J	m	Type with IE-mark	η (EN 60034-2-1)
		kW	Nm	rpm	%	-	A	-	-	-	-	kgm^2	kg		%
Synchronous speed 3000 rpm – 2-pole version															
K21R 56 K2		0.09	0.30	2840	70.0	0.74	0.25	4.9	2.3	2.3	2.8	0.00013	4.4		
K21R 56 G2		0.12	0.40	2830	70.5	0.77	0.32	4.5	2.1	2.1	2.3	0.00013	4.5		
K21R 63 K2	K20R 56 K2	0.18	0.62	2790	67.0	0.76	0.51	4.1	1.9	1.9	2.2	0.00013	4.9		
K21R 63 G2	K20R 56 G2	0.25	0.85	2800	68.0	0.72	0.74	4.2	2.2	2.2	2.4	0.00015	5.2		
K21R 71 K2	K20R 63 K2	0.37	1.27	2780	71.5	0.79	0.94	4.4	2.1	2.1	2.3	0.00025	6.7		
K21R 71 G2	K20R 63 G2	0.55	1.89	2775	74.5	0.81	1.32	5.1	2.3	2.1	2.6	0.00032	7.6		
K21R 80 K2	K20R 71 K2	0.75	2.54	2825	77.5	0.81	1.72	5.9	2.4	2.4	2.4	0.00057	10.7	IE1-KPER 80 K2	76.8
K21R 80 G2	K20R 71 G2	1.1	3.71	2835	78.0	0.80	2.55	6.0	2.4	2.3	2.6	0.00072	11.5	IE1-KPER 80 G2	76.9
K21R 90 S2	K20R 80 K2	1.5	5.04	2840	81.0	0.86	3.1	7.0	2.5	2.5	2.8	0.00132	16	IE1-KPER 90 S2	81.2
K21R 90 L2	K20R 80 G2	2.2	7.37	2850	82.0	0.85	4.55	7.5	2.8	2.3	2.9	0.0017	19	IE1-KPER 90 L2	82.1
K21R 100 L2	K20R 90 L2	3.0	10.0	2865	83.5	0.84	6.15	6.8	2.4	2.4	2.8	0.00275	25	IE1-KPER 100 L2	82.8
K21R 112 M2	K20R 100 S2	4.0	13.2	2900	85.0	0.81	8.4	7.0	2.2	2.1	2.9	0.0045	32	IE1-KPER 112 M2	84.9
K21R 132 S2T		5.5	18.2	2890	86.5	0.84	11	7.5	2.4	2.2	3.0	0.0055	40	IE1-KPER 132 S2T	85.9
K21Q 132 S2		5.5	18.4	2860	85.7	0.86	11	5.5	1.8	1.6	2.2	0.0081	52	IE1-K21Q 132 S2	84.7
K21R 132 SX2T		7.5	24.9	2880	87.0	0.84	14.8	6.3				0.0068	48	IE1-KPER 132 SX2T	87.1
K21R 132 SX2	K20R 112M 2	7.5	24.7	2900	87.0	0.86	15	6.6	1.8	1.3	2.5	0.0110	57	IE1-K21Q 132 SX2	86.0
K21R 160 M2	K20R 132 M2	11.0	36.2	2900	88.5	0.90	20	7.0	2.4	2.0	3.0	0.0258	81	IE1-K21Q 160 M2	87.6
K21R 160 MX2	K20R 160 S2	15.0	48.9	2930	89.4	0.90	27	7.1	2.2	1.7	2.9	0.0575	118	IE1-K21Q 160 MX2	88.7
K21R 160 L2	K20R 160 M2	18.5	60.5	2920	90.5	0.92	32	7.2	2.1	1.6	2.8	0.0675	134	IE1-K21Q 160 L2	89.3
K21R 180 M2	K20R 180 S2	22	71.6	2935	91.8	0.92	37.5	6.8	1.7	1.4	2.6	0.1050	165	IE1-K21Q 180 M2	89.9
K21R 200 L2	K20R 180M 2	30	97.5	2940	92.8	0.92	50.5	7.3	2.0	1.6	2.9	0.1280	195	IE1-K21Q 200 L2	91.1
K21R 200 Lx2	K20R 200M 2	37	120	2940	93.0	0.90	64	7.0	1.8	1.3	2.4	0.1930	255	IE1-K21Q 200 Lx2	91.5
K21R 225 M2	K20R 200L 2	45	146	2940	93.7	0.91	76	7.5	1.8	1.4	2.7	0.2200	290	IE1-K21Q 225 M2	92.0
K21R 250 M2	K20R 225M 2	55	178	2955	93.7	0.91	93	7.5	2.0	1.5	2.6	0.3750	360	IE1-K21Q 250 M2	92.2
K21R 280 S2	K20R 250S 2	75	241	2970	94.6	0.92	124	7.5	2.0	1.6	2.6	0.6500	490	IE1-K21Q 280 S2	93.1
K21R 280 M2	K20R 250M 2	90	289	2970	94.7	0.91	151	8.5	2.2	1.8	2.8	0.6750	510	IE1-K21Q 280 M2	93.2
K21R 315 S2	K20R 280 S2	110	353	2975	95.4	0.91	183	8.5	1.5	1.3	2.5	1.210	720	IE1-K21Q 315 S2	93.5
K21R 315 M2	K20R 280 M2	132	424	2975	95.4	0.91	219	8.5	2.0	1.8	2.7	1.440	800	IE1-K21Q 315 M2	93.8
K21R 315 MX2	K20R 315 S2	160	514	2975	96.0	0.93	259	8.5	2.0	1.6	2.6	1.760	980	IE1-K21Q 315 MX2	94.0
K21R 315 MY2	K20R 315 M2	200	643	2970	96.0	0.92	327	8.2	2.6	2.0	2.6	2.820	1170	IE1-K21Q 315 MY2	94.0
K21R 315 L2	K20R 315 L2	250	803	2973	96.1	0.93	404	7.3	2.1	1.4	2.0	3.66	1460	IE1-K21Q 315 L2	94.1
K21R 315 LX2	K20R 315 LX2	315	1011	2975	96.7	0.92	511	7.4	2.4	1.4	2.0	4.43	1630	IE1-K21Q 315 LX2	94.5
Synchronous speed 1500 rpm – 4-pole version															
K21R 56 K4		0.06	0.41	1410	60.5	0.60	0.24	3.1	2.3	2.3	2.7	0.00019	4.3		
K21R 56 G4		0.09	0.63	1375	62.0	0.68	0.31	3.2	1.9	1.9	2.2	0.00019	4.4		
K21R 63 K4	K20R 56 K4	0.12	0.84	1370	57.5	0.68	0.44	3.2	1.9	1.8	2.2	0.00019	4.8		
K21R 63 G4	K20R 56 G4	0.18	1.26	1360	61.0	0.66	0.65	3.3	2.0	2.0	2.3	0.00024	5.2		
K21R 71 K4	K20R 63 K4	0.25	1.72	1385	64.5	0.72	0.78	3.6	1.8	1.8	2.1	0.00040	6.8		
K21R 71 G4	K20R 63 G4	0.37	2.58	1370	68.0	0.74	1.06	3.8	2.0	2.0	2.2	0.00050	7.8		
K21R 80 K4	K20R 71 K4	0.55	3.75	1400	71.5	0.69	1.60	4.1	2.1	2.0	2.3	0.00087	10.6		
K21R 80 G4	K20R 71 G4	0.75	5.12	1400	73.5	0.70	2.10	4.6	2.2	2.1	2.3	0.00107	11.7	IE1-KPER 80 G4	73.6
K21R 90 S4	K20R 80 K4	1.10	7.45	1410	76.5	0.79	2.62	5.5	2.3	2.2	2.5	0.00207	15.5	IE1-KPER 90 S4	76.7
K21R 90 L4	K20R 80 G4	1.50	10.2	1400	79.0	0.81	3.40	5.5	2.5	2.4	2.6	0.00260	18	IE1-KPER 90 L4	78.6
K21R 100 L4	K20R 90 L4	2.20	14.9	1410	81.0	0.79	4.95	6.0	3.0	2.7	3.1	0.00400	23.5	IE1-KPER 100 L4	80.2
K21R 100 LX4	K20R 100 S4	3.00	20.0	1430	82.5	0.79	6.65	6.5	2.3	2.1	2.8	0.00725	30	IE1-KPER 100 LX4	82.4
K21R 112 M4	K20R 100 L4	4.00	26.6	1435	84.0	0.78	8.80	6.9	2.6	2.5	3.2	0.00900	37	IE1-KPER 112 M4	84.1
K21R 132 S4T		5.5	37.0	1420	86.5	0.78	11.80	6.3	2.5	2.4	2.9	0.01100	47	IE1-KPER 132 S4T	85.2
K21R 132 S4	K20R 112 M4	5.5	36.5	1440	85.7	0.89	11	6.5	1.9	1.7	3.0	0.0150	50	IE1-K21Q 132 S4	84.9
K21R 132 M4	K20R 132 S4	7.5	49.3	1450	87.0	0.84	15	6.0	2.0	1.7	2.9	0.0280	70	IE1-K21Q 132 M4	86.5
K21R 160 M4	K20R 132 M4	11.0	72.4	1450	88.4	0.85	21.0	6.8	2.2	1.9	3.3	0.0350	92	IE1-K21Q 160 M4	88.0
K21R 160 L4	K20R 160 S4	15.0	97.8	1465	89.4	0.86	28.0	7.3	2.5	2.0	3.0	0.0780	120	IE1-K21Q 160 L4	88.7
K21R 180 M4	K20R 160 M4	18.5	121	1460	90.0	0.86	35	6.8	2.5	2.0	2.9	0.0900	136	IE1-K21Q 180 M4	89.3
K21R 180 L4	K20R 180 S4	22	143	1465	90.5	0.84	42	6.5	2.0	1.8	2.6	0.1380	170	IE1-K21Q 180 L4	89.9
K21R 200 L4	K20R 180 M4	30	196	1465	91.5	0.85	55.5	7.0	2.0	1.7	2.4	0.1680	200	IE1-K21Q 200 L4	90.7
K21R 225 S4	K20R 200 M4	37	240	1470	92.5	0.86	67	7.0	2.0	1.7	2.5	0.2750	270	IE1-K21Q 225 S4	91.2
K21R 225 M4	K20R 200 L4	45	292	1470	93.0	0.86	81	7.0	2.0	1.7	2.5	0.3130	300	IE1-K21Q 225 M4	91.7
K21R 250 M4	K20R 225 M4	55	356	1475	93.5	0.86	98.5	7.0	2.2	1.7	2.3	0.5250	375	IE1-K21Q 250 M4	92.3
K21R 280 S4	K20R 250 S4	75	484	1480	94.1	0.86	134	7.0	2.0	1.7	2.2	0.950	520	IE1-K21Q 280 S4	92.7
K21R 280 M4	K20R 250 M4	90	581	1480	94.6	0.86	160	7.0	2.1	1.6	2.2	1.100	580	IE1-K21Q 280 M4	93.3
K21R 315 S4	K20R 280 S4	110	707	1485	95.1	0.86	194	7.5	1.8	1.6	2.2	1.960	740	IE1-K21Q 315 S4	93.5
K21R 315 M4	K20R 280 M4	132	849	1485	95.1	0.86	233	7.0	1.8	1.5	2.2	2.270	840	IE1-K21Q 315 M4	93.5
K21R 315 MX4	K20R 315 S4	160	1032	1480	95.0	0.87	279	7.0	1.8	1.5	2.0	2.730	1000	IE1-K21Q 315 MX4	93.8
K21R 315 MY4	K20R 315 M4	200	1286	1485	96.0	0.88	342	7.5	2.0	1.8	2.4	4.820	1200	IE1-K21Q 315 MY4	94.3
K21R 315 L4	K20R 315 L4	250	1607	1485	96.1	0.90	417	8.0	2.0	1.6	2.3	5.93	1450	IE1-K21Q 315 L4	94.3
K21R 315 LX4	K20R 315 LX4	315	2019	1490	96.5	0.88	535	8.6	1.9	1.5	2.5	6.82	1630	IE1-K21Q 315 LX4	94.5

Different pole numbers on request, different max surface temperatures and coolant temperatures on request

Type of protection Protection by enclosure “tD A22”

CE 0637 Ex II 3D Ex tD A22 IP 55 T125 °C

Energy saving motors acc. to EN 60034-30 – IE1
Motors for operation in Zone 22 acc. to EN 61241-0/EN 61241-1
Type of protection Protection by enclosure “tD A22”

IE1

Design for rated voltages of range A acc. to EN 60034-1
with surface ventilation, mode of operation S1, continuous duty
thermal class 155, degree of protection IP 55, max. surface temperature 125 °C

Motor selection data — Design point 400 V, 50 Hz

Type		P	M	n	η (EN 60034-2)	cos φ	I 400 V	I_A/I	M_A/M_B	M_S/M_B	M_K/M_B	J	m	Type with IE-mark	η (EN 60034-2-1)
		kW	Nm	rpm	%	-	A	-	-	-	-	kgm^2	kg		%
Synchronous speed 1000 rpm – 6-pole version															
K21R 63 K6	K20R 56 K6	0.09	0.96	895	50.5	0.56	0.46	2.5	2.0	2.0	2.4	0.00024	4.9		
K21R 63 G6	K20R 56 G6	0.12	1.30	880	52.0	0.56	0.59	2.5	2.0	2.0	2.3	0.00027	5.7		
K21R 71 K6	K20R 63 K6	0.18	1.86	925	58.0	0.51	0.88	2.8	1.6	1.6	2.1	0.00045	7.4		
K21R 71 G6	K20R 63 G6	0.25	2.61	915	60.0	0.55	1.10	2.9	2.0	2.0	2.2	0.00060	8.3		
K21R 80 K6	K20R 71 K6	0.37	3.86	915	66.0	0.66	1.22	3.4	2.0	2.0	2.0	0.00130	11		
K21R 80 G6	K20R 71 G6	0.55	5.74	915	68.0	0.67	1.73	3.7	2.2	2.2	2.4	0.00175	12.5		
K21R 90 S6	K20R 80 K6	0.75	7.66	935	70.0	0.64	2.43	4.5	2.4	2.4	2.4	0.00325	16	IE1-KPER 90 S6	70.5
K21R 90 L6	K20R 80 G6	1.10	11.2	935	73.0	0.69	3.15	4.6	2.2	2.2	2.4	0.00425	19	IE1-KPER 90 L6	73.4
K21R 100 L6	K20R 90 L6	1.50	15.2	945	76.5	0.73	3.90	4.6	2.1	2.0	2.4	0.00625	24	IE1-KPER 100 L6	76.0
K21R 112 M6	K20R 100 L6	2.20	22.1	950	80.0	0.74	5.35	5.3	2.2	2.1	2.7	0.01225	33.5	IE1-KPER 112 M6	78.1
K21R 132 S6T		3.00	30.6	935	82.0	0.75	7.05	5.2				0.01390	39	IE1-KPER 132 S6T	81.9
K21R 132 S6	K20R 112 M6	3.0	30.0	955	78.5	0.82	6.7	5.7	1.8	1.6	2.7	0.0180	46	IE1-K21Q 132 S6	79.7
K21R 132 M6	K20R 112 MX6	4.0	40.0	955	80.0	0.80	9	6.0	2.2	2.0	3.1	0.0230	53	IE1-K21Q 132 M6	81.4
K21R 132 MX6	K20R 132 S6	5.5	55.0	955	83.0	0.83	11.5	5.0	1.8	1.5	2.3	0.0430	70	IE1-K21Q 132 MX6	83.3
K21R 160 M6	K20R 132 M6	7.5	74.6	960	85.0	0.82	15.5	5.5	2.0	1.6	2.5	0.0530	86	IE1-K21Q 160 M6	85.0
K21R 160 L6	K20R 160 S6	11.0	109	965	85.2	0.86	21.5	5.0	2.0	1.7	2.3	0.1130	114	IE1-K21Q 160 L6	86.4
K21R 180 L6	K20R 160 M6	15.0	148	965	86.0	0.83	30.5	6.0	2.4	2.1	2.7	0.1450	136	IE1-K21Q 180 L6	87.7
K21R 200 L6	K20R 180 S6	18.5	182	970	88.1	0.87	35.0	5.5	2.0	1.7	2.4	0.2280	175	IE1-K21Q 200 L6	88.6
K21R 200 LX6	K20R 180 M6	22	217	970	88.8	0.87	41	6.2	2.2	1.8	2.6	0.2680	200	IE1-K21Q 200 LX6	89.2
K21R 225 M6	K20R 200 M6	30	295	973	90.4	0.89	54	6.5	2.2	1.7	2.5	0.4430	265	IE1-K21Q 225 M6	90.2
K21R 250 M6	K20R 225 M6	37	362	975	91.0	0.89	66	6.5	2.2	1.7	2.3	0.8250	360	IE1-K21Q 250 M6	90.8
K21R 280 S6	K20R 250 S6	45	439	980	92.0	0.87	81	6.0	2.0	1.5	2.0	1.280	465	IE1-K21Q 280 S6	91.4
K21R 280 M6	K20R 250 M6	55	536	980	92.5	0.88	97.5	6.5	2.3	1.7	2.4	1.480	520	IE1-K21Q 280 M6	91.9
K21R 315 S6	K20R 280 S6	75	727	985	93.7	0.87	133	7.0	2.0	1.6	2.4	2.630	690	IE1-K21Q 315 S6	92.7
K21R 315 M6	K20R 280 M6	90	868	990	94.4	0.88	156	7.0	2.0	1.7	2.4	3.330	800	IE1-K21Q 315 M6	93.4
K21R 315 MX6	K20R 315 S6	110	1061	990	94.0	0.88	192	7.5	2.2	1.7	2.6	3.600	880	IE1-K21Q 315 MX6	93.3
K21R 315 MY6	K20R 315 M6	132	1273	990	95.0	0.88	228	7.5	2.0	1.7	2.4	6.000	1050	IE1-K21Q 315 MY6	94.0
K21R 315 L6	K20R 315 L6	160	1551	985	95.3	0.89	272	7.5	2.3	1.9	2.4	6.67	1250	IE1-K21Q 315 L6	94.3
K21R 315 LX6	K20R 315 LX6	200	1929	990	95.0	0.87	349	8.3	2.2	2.0	2.7	8.60	1460	IE1-K21Q 315 LX6	94.2
Synchronous speed 750 rpm – 8-pole version															
K21R 71 K8	K20R 63 K8	0.09	1.27	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	1.71	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	2.49	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	3.44	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	5.05	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	7.56	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	10.2	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	14.9	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	20.3	705	75.5	0.70	4.1	4.4	2.2	2.1	2.5	0.01225	33.5	-	-
K21R 132 S8T		2.2	30.7	685	76.0	0.68	6.3	3.8				0.01390	39	-	-
K21R 132 S8	K20R 112 M8	2.2	29.8	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	40.6	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	53.8	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	74.0	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	98.8	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	146	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	168	725	86.5	0.79	31.5	5.0	2.0	1.7	2.3	0.2280	175	-	-
K21R 225 S8		18.5	244	725	89.2	0.83	36	5.5	2.0	1.6	2.2	0.4400	265	-	-
K21R 225 M8	K20R 200 M8	22	290	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	392	730	90.2	0.79	61	5.5	2.2	1.8	2.2	0.8250	360	-	-
K21R 280 S8	K20R 250 S8	37	481	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	585	735	91.5	0.77	92	6.0	2.3	1.8	2.4	1.550	520	-	-
K21R 315 S8	K20R 280 S8	55	710	740	93.1	0.80	107	6.5	1.8	1.6	2.3	2.630	690	-	-
K21R 315 M8	K20R 280 M8	75	968	740	93.3	0.81	143	6.0	2.0	1.6	2.3	3.330	800	-	-
K21R 315 MX8	K20R 315 S8	90	1162	740	93.5	0.81	172	6.0	1.9	1.6	2.2	3.60	880	-	-
K21R 315 MY8	K20R 315 M8	110	1420	740	94.6	0.81	207	6.5	2.1	1.8	2.4	6.00	1050	-	-
K21R 315 L8	K20R 315 L8	132	1704	740	95.0	0.83	242	6.3	2.0	1.7	2.1	6.76	1250	-	-
K21R 315 LX8	K20R 315 LX8	160	2065	740	95.2	0.79	307	7.2	2.2	1.9	2.5	8.71	1430	-	-

Different pole numbers on request, different max surface temperatures and coolant temperatures on request

CE 0637 ⟨Ex⟩ II 3D Ex tD A22 IP 55 T125 °C
CE 0637 ⟨Ex⟩ II 3G Ex nA II T1–T3

Energy saving motors acc. to CEMEP
“High Efficiency” EFF1 and EN 60034-30 – IE2
Determination of efficiency acc. to EN 60034-2
Motors for operation in Zone 22 acc. to EN 61241-0/EN 61241-1
Type of protection Protection by enclosure “tD A22”
or type of protection “n” acc. to EN 60079-0/60079-15, IEC 60079-15

EFF 1 **IE2**

Design for rated voltages of range A acc. to EN 60034-1
with surface ventilation, mode of operation S1, continuous duty
thermal class 155, degree of protection IP 55, max. surface temperature 125 °C

Motor selection data — Design point 400 V, 50 Hz

Type	P_B	M_B	n_B	η_B (EN 60034-2)	$\eta_{3/4}$	cos φ_B	I_B 400 V	I_A/I_B	M_A/M_B	M_S/M_B	M_K/M_B	max. surface temp.	J	m	Type with IE-mark	η (EN 60034-2-1)
	kW	Nm	rpm	%	%	-	A	-	-	-	-	°C	kgm²	kg		%
Synchronous speed 3000 rpm – 2-pole version																
WE1R 132 S2	5.5	18.0	2915	88.9	88.6	0.86	10.5	7.3	2.2	1.5	2.9	135	0.01270	58	IE2-WE1R 132 S2	87.0
WE1R 132 SX2	7.5	24.6	2910	89.5	89.2	0.91	13.5	7.0	2.1	1.5	2.7	160	0.0168	75	IE2-WE1R 132 SX2	89.5
WE1R 160 M2	11.0	35.9	2930	90.5	89.9	0.88	20.0	8.5	2.7	2.1	3.6	150	0.0258	100	IE2-WE1R 160 M2	90.2
WE1R 160 MX2	15.0	48.8	2935	91.3	91.0	0.92	26.0	7.3	2.1	1.6	2.7	165	0.0675	140	IE2-WE1R 160 MX2	90.3
WE1R 160 L2	18.5	60.3	2930	91.8	91.7	0.91	32.0	7.5	2.2	1.6	2.8	160	0.0675	140	IE2-WE1R 160 L2	91.0
WE1R 180 M2	22	71.4	2942	92.7	92.8	0.90	38.0	6.6	1.8	1.4	2.6	165	0.105	175	IE2-WE1R 180 M2	91.3
WE1R 200 L2	30	97.4	2942	93.0	93.1	0.91	51.0	7.2	1.9	1.5	2.9	160	0.128	210	IE2-WE1R 200 L2	92.0
WE1R 200 LX2	37	120	2945	93.7	93.7	0.92	62.0	7.8	2.1	1.5	3.0	160	0.154	235	IE2-WE1R 200 LX2	92.5
WE1R 225 M2	45	146	2945	93.7	93.7	0.89	78.0	7.4	1.8	1.5	3.0	180	0.360	300	IE2-WE1R 225 M2	93.0
WE1R 250 M2	55	178	2957	94.5	94.4	0.89	94.5	8.4	2.4	2.0	3.1	150	0.375	385	IE2-WE1R 250 M2	93.2
WE1R 280 S2	75	241	2972	95.2	95.0	0.90	126	8.0	2.1	1.7	3.0	135	0.65	510	IE2-WE1R 280 S2	93.8
WE1R 280 M2	90	289	2970	95.2	95.1	0.91	150	7.4	1.9	1.6	2.7	155	0.68	550	IE2-WE1R 280 M2	94.5
W21R 315 S2	110	354	2970	95.9	95.9	0.89	186	8.3	1.7	1.6	2.6	150	1.21	730	IE2-W21R 315 S2	94.5
W21R 315 M2	132	424	2975	96.0	96.2	0.89	223	9.2	1.9	1.8	2.9	160	1.44	820	IE2-W21R 315 M2	95.0
W21R 315 MX2	160	515	2970	96.1	96.1	0.90	267	8.2	1.6	1.5	2.4	160	1.76	955	IE2-W21R 315 MX2	95.0
W21R 315 MY2	200	640	2984	96.0	95.8	0.88	342	9.4	2.5	1.9	2.8	150	2.82	1200	IE2-W21R 315 MY2	95.4
W21R 315 L2	250	802	2980	96.0	96.0	0.93	404	8.6	2.3	1.7	2.4	180	3.66	1450	IE2-W21R 315 L2	95.4
W21R 315 LX2	315	1010	2980	96.8	96.8	0.95	494	9.8	2.8	1.9	2.7	190	4.43	1630	IE2-W21R 315 LX2	95.4
Synchronous speed 1500 rpm – 4-pole version																
WE1R 132 S4	5.5	35.9	1465	89.6	89.4	0.86	10.5	7.4	2.3	1.8	3.2	135	0.035	90	IE2-WE1R 132 S4	88.5
WE1R 132 M4	7.5	48.7	1470	90.3	89.9	0.82	14.5	8.5	2.8	2.2	4.0	160	0.035	92	IE2-WE1R 132 M4	89.0
WE1R 160 M4	11.0	71.4	1472	91.0	90.4	0.83	21.0	8.5	2.8	2.3	3.4	135	0.078	124	IE2-WE1R 160 M4	91.0
WE1R 160 L4	15.0	97.5	1470	91.8	91.5	0.88	27.0	8.5	2.8	2.2	3.3	135	0.115	165	IE2-WE1R 160 L4	90.8
WE1R 180 M4	18.5	120	1477	93.0	92.7	0.86	33.5	7.0	1.9	1.7	2.9	180	0.168	210	IE2-WE1R 180 M4	91.5
WE1R 180 L4	22	142	1478	93.0	92.5	0.82	42.0	7.7	2.3	1.9	3.3	180	0.168	210	IE2-WE1R 180 L4	92.0
WE1R 200 L4	30	194	1479	93.4	93.0	0.81	57.0	7.8	2.2	2.0	3.1	140	0.275	280	IE2-WE1R 200 L4	92.5
WE1R 225 S4	37	240	1475	93.7	93.5	0.84	68.0	7.3	2.3	1.9	2.9	160	0.313	320	IE2-WE1R 225 S4	93.0
WE1R 225 M4	45	290	1480	94.8	94.7	0.84	81.5	8.1	2.0	1.9	2.6	135	0.525	390	IE2-WE1R 225 M4	93.6
WE1R 250 M4	55	354	1485	95.0	94.7	0.82	102	8.0	1.9	1.8	2.4	135	0.95	535	IE2-WE1R 250 M4	94.0
WE1R 280 S4	75	483	1483	95.4	95.5	0.82	138	7.4	1.7	1.6	2.2	170	0.95	550	IE2-WE1R 280 S4	94.5
WE1R 280 M4	90	579	1484	95.5	95.5	0.82	166	7.9	2.2	1.9	2.4	160	1.10	605	IE2-WE1R 280 M4	94.5
W21R 315 S4	110	707	1485	95.7	95.8	0.81	204	8.4	1.8	1.5	2.7	160	1.96	760	IE2-W21R 315 S4	94.8
W21R 315 M4	132	849	1484	96.2	96.3	0.83	239	7.9	1.8	1.6	2.5	160	2.27	850	IE2-W21R 315 M4	95.0
W21R 315 MX4	160	1031	1482	95.8	96.0	0.84	289	7.4	1.6	1.5	2.2	150	2.73	975	IE2-W21R 315 MX4	95.0
W21R 315 MY4	200	1282	1490	96.2	96.2	0.88	341	8.3	1.7	1.2	2.4	150	4.82	1270	IE2-W21R 315 MY4	95.1
W21R 315 L4	250	1603	1490	96.7	96.8	0.86	432	8.0	1.4	1.2	2.4	180	5.93	1450	IE2-W21R 315 L4	95.4
W21R 315 LX4	315	2020	1489	96.3	96.3	0.84	562	8.5	1.9	1.2	2.5	190	6.82	1630	IE2-W21R 315 LX4	95.4

Different pole numbers on request, different max surface temperatures and coolant temperatures on request

Type of protection Protection by enclosure “tD A22”

CE 0637 ⟨Ex⟩ II 3D Ex tD A22 IP 55 T125 °C
CE 0637 ⟨Ex⟩ II 3G Ex nA II T1–T3

Energy saving motors acc. to CEMEP
“High Efficiency” EFF1 and EN 60034-30 – IE2
Determination of efficiency acc. to EN 60034-2
Motors for operation in Zone 22 acc. to EN 61241-0/EN 61241-1
Type of protection Protection by enclosure “tD A22”
or type of protection “n” acc. to EN 60079-0/60079-15, IEC 60079-15

EFF 1 **IE2**

Design for rated voltages of range A acc. to EN 60034-1
with surface ventilation, mode of operation S1, continuous duty
thermal class 155, degree of protection IP 55, max. surface temperature 125 °C

Motor selection data — Design point 400 V, 50 Hz

Type	P_B	M_B	n_B	η_B (EN 60034-2)	$\eta_{3/4}$	cos φ_B	I_B 400 V	I_A/I_B	M_A/M_B	M_S/M_B	M_K/M_B	max. surface temp.	J	m	Type with IE-mark	η (EN 60034-2-1)
	kW	Nm	rpm	%	%	-	A	-	-	-	-	°C	kgm²	kg		%
Synchronous speed 1000 rpm – 6-pole version																
W21R 132 S6	3.0	29.8	961	85.0	85.7	0.80	6.5	5.9	2.2	2.1	3.2	130	0.023	54	IE2-W21R 132 S6	83.5
W21R 132 M6	4.0	39.5	967	88.0	87.4	0.82	8.0	5.2	1.7	1.5	2.4	130	0.043	76	IE2-W21R 132 M6	85.5
W21R 132 MX6	5.5	54.2	969	87.5	87.5	0.78	11.5	5.5	2.5	2.0	3.0	140	0.053	85	IE2-W21R 132 MX6	86.0
W21R 160 M6	7.5	73.4	976	89.0	88.0	0.81	15.0	6.3	2.4	2.2	3.0	150	0.113	118	IE2-W21R 160 M6	87.2
W21R 160 L6	11.0	108	972	90.0	89.8	0.85	21.0	5.8	2.4	2.1	2.7	165	0.145	135	IE2-W21R 160 L6	88.7
W21R 180 L6	15.0	147	975	91.0	90.0	0.85	28.0	6.3	2.4	2.0	2.9	180	0.228	183	IE2-W21R 180 L6	89.7
W21R 200 L6	18.5	181	978	91.5	91.4	0.85	34.5	7.2	2.6	2.4	3.4	170	0.268	206	IE2-W21R 200 L6	90.5
W21R 200 LX6	22	215	979	92.5	92.3	0.87	39.5	6.9	2.6	2.1	3.2	180	0.443	278	IE2-W21R 200 LX6	91.3
W21R 225 M6	30	291	985	93.0	92.6	0.85	54.5	7.0	2.6	2.3	3.1	180	0.825	360	IE2-W21R 225 M6	92.0
W21R 250 M6	37	359	985	93.5	93.3	0.84	68.5	6.4	2.2	1.9	2.6	165	1.28	468	IE2-W21R 250 M6	92.2
W21R 280 S6	45	437	983	94.0	94.0	0.85	81.0	6.2	2.1	1.8	2.5	155	1.48	545	IE2-W21R 280 S6	93.0
W21R 280 M6	55	531	989	95.2	94.5	0.85	98.0	6.5	1.7	1.5	2.3	155	2.63	710	IE2-W21R 280 M6	93.5
W21R 315 S6	75	726	987	95.2	94.5	0.86	132	6.6	2.0	1.6	2.4	140	3.33	804	IE2-W21R 315 S6	93.9
W21R 315 M6	90	869	990	95.6	94.6	0.86	158	9.0	2.3	2.0	2.8	140	3.60	1148	IE2-W21R 315 M6	94.0
W21R 315 MX6	110	1061	990	96.1	95.9	0.87	190	8.0	2.4	1.8	2.5	165	6.00	1210	IE2-W21R 315 MX6	94.3
W21R 315 MY6	132	1273	990	95.0	94.7	0.88	228	7.5	2.0		2.4	165	6.00	1250	IE2-W21R 315 MY6	94.6
W21R 315 L6	160	1551	985	95.3	95.0	0.89	272	7.5	2.3		2.4	180	6.67	1250	IE2-W21R 315 L6	94.8
W21R 315 LX6	200	1929	990	95.0	94.7	0.87	349	8.3	2.2		2.7	190	8.60	1460	IE2-W21R 315 LX6	95.0
Synchronous speed 750 rpm – 8-pole version																
W21R 132 S8	2.2	29.4	715	81.5	81	0.70	5.6	5.5	2.0		3.0	125	0.0180	53	-	-
W21R 132 M8	3.0	40.0	717	84.8	84.3	0.74	6.9	4.4	1.5		2.4	135	0.0430	70	-	-
W21R 160 M8	4	53.2	718	85.7	85.2	0.72	9.3	4.6	1.6		2.5	140	0.0530	86	-	-
W21R 160 MX8	5.5	73.1	719	87.3	86.9	0.81	11	4.6	1.6		2.2	140	0.1130	114	-	-
W21R 160 L8	7.5	98.8	725	89.0	88.5	0.77	16	5.5	2.0		2.8	150	0.1450	136	-	-
W21R 180 L8	11	144	730	89.8	88.8	0.76	23	5.8	2.0		2.9	165	0.2280	175	-	-
W21R 200 L8	15	197	727	90.0	89.5	0.77	31	5.6	2.0		2.8	160	0.2680	200	-	-
W21R 225 S8	18.5	242	730	91.1	90.1	0.79	37	5.6	1.7		2.8	175	0.44	265	-	-
W21R 225 M8	22	287	733	91.7	90.5	0.78	44.5	5.6	1.8		2.6	175	0.83	360	-	-
W21R 250 M8	30	389	737	92.8	92.5	0.78	59.5	5.5	1.8		2.5	165	1.35	465	-	-
W21R 280 S8	37	480	736	93.0	92.5	0.79	72.5	5.4	1.8		2.4	155	1.55	520	-	-
W21R 280 M8	45	581	740	93.9	93.4	0.81	85	6.7	2.2		2.5	155	2.63	690	-	-
W21R 315 S8	55	710	740	94.6	94.1	0.81	104	6.9	2.3		2.6	130	3.33	800	-	-
W21R 315 M8	75	968	740	93.3	93	0.81	143	6	2		2.3	140	3.33	800	-	-
W21R 315 MX8	90	1162	740	93.5	93	0.81	172	6	1.9		2.2	160	3.6	880	-	-
W21R 315 MY8	110	1420	740	94.6	94.1	0.81	207	6.5	2.1		2.4	165	6	1050	-	-
W21R 315 L8	132	1704	740	95	94.5	0.83	242	6.3	2		2.1	180	6.76	1250	-	-
W21R 315 LX8	160	2065	740	95.2	94.7	0.79	307	7.2	2.2		2.5	190	8.71	1430	-	-

Different pole numbers on request, different max surface temperatures and coolant temperatures on request

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VEM motors GmbH
Carl-Friedrich-Gauß-Straße 1
38855 Wernigerode
Germany
Phone: +49 (0)39 43/68 0
Fax: +49 (0)39 43/68 24 40
E-mail: motors@vem-group.com
www.vem-group.com

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