



Manufacturer

Customer

**VEM motors GmbH - Werk Wernigerode**  
**Carl-Friedrich-Gauß-Straße 1**

**38855 WERNIGERODE**  
**Deutschland**

**Three-phase motors with squirrel cage rotor, inverter feeding**  
**inverter output voltage up to 420 V**

Type	IE3-W41R 315 L4 FBW IGR KTY NS LL IL HW	
Mains supply		
Duty type	S1	
Design output	( kW )	250
Design torque	( Nm )	1602
Design current	[ A ]	431.0
Class IE	[ - ]	IE3-96,2%
Efficiency determination	[ - ]	EN 60034-2-1
Design frequency	( Hz )	50
Design speed	[ rpm ]	1490
Design voltage	( V )	400
Connection	[ - ]	D
Power factor	[ - ]	0,87
Efficiency100/75/50 %	[ % ]	96,2 / 96,2 / 96
Th. cl.		155(F)

**inverter output voltage up to 420 V**

Inverter input 50 Hz

Duty type	S9	
Design output	( kW )	250
Design torque	( Nm )	1602
Design current	[ A ]	431.0
Max. torque (50Hz)	( Nm )	3028
Max. current	[ A ]	896.0
Coolant temperature	( °C )	-20...+40
Altitude above sea level	( m )	2500m
Degree of protection IP	IP55	
Moment of inertia	( kgm <sup>2</sup> )	5,93
Motor weight	( kg )	1483
Bearing, D-side	6320 C3	
Bearing, N-side	6317 MC3 VL0241	
Relubrication interval	( h )	4000
Grease type	ASONIC GHY 72	
Grease amount	[ cm <sup>3</sup> ]	78/57
Forced-ventilation	FBW 315 ILI	
Output	( W )	330 / 254
Voltage	( V )	200-400 / 346-525 D/Y
Current (at 400V)	[ A ]	1,34 / 0,42
available power at Temperature of cooling medium -20...+40 and Altitude above sea level 2500m	: 225.0 kW	

**Impulse voltage insulation class IVIC acc. to IEC 60034-18-41**

**C (strong)**

U <sub>pk/pk</sub> Ph-Ph (phase-phase)	( V )	2380
U <sub>pk/pk</sub> Ph-Earth (phase-earth)	( V )	1680
t <sub>r</sub> pulse rise time	[ μs ]	> 0,3

**Options**

Type of mounting	IM B3
Flange	-
Terminal box	Standard
Position of terminal box	on the top
Cable gland	Sealing plug
Position of cable entry	right
Shaft	Standard, 1 shaft end
Bearing	Relubrication device, easybearing arrangement
Special details to bearings	Fixed bearing, N-side
	Insulated bearing, N-side
Winding protection	KTY 84-130, 1 piece

# Data sheet

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Limit values to vibration velocity	Class A
Colour system	Balancing with half key
Speed sensor	01 Moderate (KK C2),RAL 7031 blue-grey
Type of external ventilator	ITD 40
Delivery conditions and/or official regulations:	Connector for ITD 40
	IC416 unit of WISTRO
	IEC / EN 60034-1

This document was produced electronically, all specifications are valid only after confirmation of the manufacturer

## Spare parts summary Asynchronous motors with squirrel-cage or slipring rotor

Item No.	Designation
1.01	End shield D-end
1.02	Bearing cover, D-end, external
1.03	Bearing cover, D-end, internal
1.04	Disc spring/wave washer, D-end, not for roller bearings
1.05	Antifriction bearing D-end
1.06	V-ring D-end
1.07	Flange end shield
1.08	Felt ring D-end
2.01	End shield N-end
2.02	Bearing cover, N-end, external
2.03	Bearing cover, N-end, internal
2.04	Antifriction bearing N-end
2.05	V-ring N-end
2.06	Disc spring
2.08	Felt ring N-end
3.01	1 pair of motor feet
3.02	Fan
3.03	Fan cowl, plastics
3.04	Fan cowl, sheet steel
3.05	Fan cowl with canopy
3.06	Lifting eye bolt
4.01/4.02	Terminal box cover
4.03/4.04	Terminal box cover gasket
4.05/4.06	Terminal box base
4.07	Terminal box base gasket
4.08	Terminal plate
4.09	Cable gland
4.10	Screw plug
4.11	Cable gland for thermal winding protection
4.12	Terminal for thermal winding protection
4.13	Clamp
4.14	Sealing components
4.15	Adapter plate
4.16	Flat terminal box
4.17	Standard parts bag
5.01	Rotor, complete
6.01	Grease thrower ring, D-end
6.02	Grease thrower ring, N-end
6.03	Labyrinth gland, D- and N-end
6.04	Guide disc, D-end
6.05	Guide disc, N-end
7.01	Slip-ring rotor with slip rings
8.01	Brush holders
8.02	Brush system support with brush bolts
8.03	Cover for slipring compartment
8.04	Gasket for cover
8.05	Cover for fan cowl
9.01	Terminal box cover for rotor terminal box
9.02	Terminal box cover gasket for rotor terminal box
9.03	Terminal plate for rotor connection
9.04	Terminal box base for rotor connection
9.05	Cable gland for rotor connection
9.06	Adapter flange for rotor terminal box
9.07	Blind plug for rotor connection

### Three-phase asynchronous motor, basic version K1.R/K2.R 112 – 355

(example, delivered version may differ in details)





