

Translation

EU-Type Examination Certificate Supplement 1

Equipment intended for use in potentially explosive atmospheres
Directive 2014/34/EU

EU-Type Examination Certificate Number: **BVS 16 ATEX E 131 X**

Product: **Motor type * 63- * /***Ex****

Manufacturer: **WILO SE**

Address: **Wilopark 1, 44263 Dortmund, Germany**

This supplementary certificate extends EC-Type Examination Certificate No. BVS 16 ATEX E 131 X to apply to products designed and constructed in accordance with the specification set out in the appendix of the said certificate but having any acceptable variations specified in the appendix to this certificate and the documents referred to therein.

DEKRA Testing and Certification GmbH, Notified Body number 0158, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in the confidential Report No. BVS PP 17.2044 EU.

The Essential Health and Safety Requirements are assured in consideration of:

EN IEC 60079-0:2018 **General requirements**
EN 60079-1:2014/AC:2018 **Flameproof enclosure "d"**

If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Special Conditions for Use specified in the appendix to this certificate.

This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

The marking of the product shall include the following:

 **II 2G Ex db IIB T3 Gb**

DEKRA Testing and Certification GmbH
Bochum, 2021-06-08

Signed: Jörg-Timm Kilisch

Managing Director

13 **Appendix**
 14 **EU-Type Examination Certificate**

**BVS 16 ATEX E 131 X
 Supplement 1**

15 **Product description**

15.1 **Subject and type**

Motor type * 63- * /***Ex**

15.2 **Description**

The Motor type * 63- * /***Ex** is used to drive submersible pumps and is built in type of protection Flameproof Enclosure „d“.

The motor can be equipped with PTC-thermistors 160 °C (DIN 44081-160) or bimetal thermostats (break contact, response temperature 160 °C) at the winding head.

The temperature sensors are connected for this purpose functionally tested control unit.

Reason for the supplement:

- Updating to the standard EN IEC 60079-0:2018 and EN 60079-1:2014/AC:2018
- Change of the manufacturer address

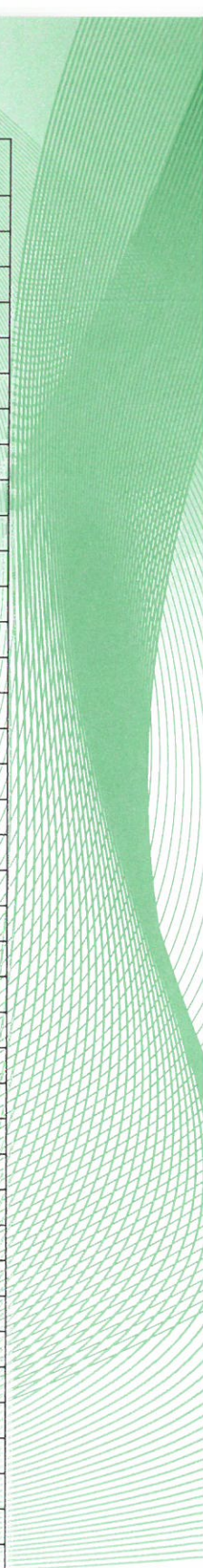
15.3 **Parameters**

15.3.1 **Electrical data**

Motor type	T 63.1	T 63.2	FKT 63.1	FKT 63.2
Rated voltage	200 bis 690 V			
Rated current at 400V/50Hz	820 A	900 A	740 A	840 A
Rated frequency	50 / 60 Hz			
Rated speed	590 – 1490 min ⁻¹ (50 Hz) 710 – 1790 min ⁻¹ (60 Hz)			
Duty type	S1 submerged / not immersed intermittent duty		S1 submerged / not immersed	

Motor type	Poles	Package length	f (Hz)	Upper limits of ambient temperature range ¹⁾ (°C)	Max. power P1 (KW)
T 63.1	6	55	50	40	295
T 63.1	6	56	50	40	325
T 63.1	6	60	50	40	355
T 63.1	6	66	50	40	385
T 63.1	6	70	50	40	420
T 63.1	8	65	50	40	270
T 63.1	8	66	50	40	300
T 63.1	8	69	50	40	325
T 63.1	8	70	50	40	360
T 63.1	8	75	50	40	380
T 63.1	8	79	50	40	410
T 63.1	10	55	50	40	265
T 63.1	10	56	50	40	290

Motor type	Poles	Package length	f (Hz)	Upper limits of ambient temperature range ¹⁾ (°C)	Max. power P1 (KW)
T 63.1	10	60	50	40	310
T 63.1	10	66	50	40	330
T 63.1	10	70	50	40	355
T 63.1	10	75	50	40	380
T 63.1	10	80	50	40	400
FKT 63.1	6	55	50	40	240
FKT 63.1	6	56	50	40	285
FKT 63.1	6	60	50	40	315
FKT 63.1	6	66	50	40	345
FKT 63.1	6	70	50	40	380
FKT 63.1	6	75	50	40	410
FKT 63.1	8	65	50	40	235
FKT 63.1	8	66	50	40	285
FKT 63.1	8	70	50	40	315
FKT 63.1	8	75	50	40	335
FKT 63.1	8	79	50	40	370
FKT 63.1	8	80	50	40	400
FKT 63.1	10	55	50	40	220
FKT 63.1	10	56	50	40	245
FKT 63.1	10	60	50	40	270
FKT 63.1	10	66	50	40	290
FKT 63.1	10	70	50	40	310
FKT 63.1	10	75	50	40	335
FKT 63.1	10	80	50	40	355
T 63.1	6	55	60	40	315
T 63.1	6	56	60	40	345
T 63.1	6	60	60	40	375
T 63.1	6	66	60	40	420
T 63.1	8	65	60	40	285
T 63.1	8	66	60	40	315
T 63.1	8	69	60	40	345
T 63.1	8	70	60	40	380
T 63.1	8	75	60	40	400
T 63.1	10	55	60	40	305
T 63.1	10	56	60	40	330
T 63.1	10	60	60	40	340
T 63.1	10	66	60	40	375
T 63.1	10	70	60	40	405
FKT 63.1	6	55	60	40	260
FKT 63.1	6	56	60	40	300
FKT 63.1	6	60	60	40	335
FKT 63.1	6	66	60	40	365
FKT 63.1	6	70	60	40	405
FKT 63.1	8	65	60	40	245
FKT 63.1	8	66	60	40	300
FKT 63.1	8	70	60	40	335



Motor type	Poles	Package length	f (Hz)	Upper limits of ambient temperature range ¹⁾ (°C)	Max. power P1 (KW)
FKT 63.1	8	75	60	40	355
FKT 63.1	8	79	60	40	390
FKT 63.1	10	55	60	40	250
FKT 63.1	10	56	60	40	280
FKT 63.1	10	60	60	40	310
FKT 63.1	10	66	60	40	330
FKT 63.1	10	70	60	40	355
FKT 63.1	10	75	60	40	380
T 63.1	6	55	50	60	245
T 63.1	6	56	50	60	275
T 63.1	6	60	50	60	300
T 63.1	6	66	50	60	325
T 63.1	6	70	50	60	350
T 63.1	8	65	50	60	225
T 63.1	8	66	50	60	255
T 63.1	8	69	50	60	275
T 63.1	8	70	50	60	300
T 63.1	8	75	50	60	315
T 63.1	8	79	50	60	340
T 63.1	10	55	50	60	220
T 63.1	10	56	50	60	240
T 63.1	10	60	50	60	260
T 63.1	10	66	50	60	280
T 63.1	10	70	50	60	295
T 63.1	10	75	50	60	315
T 63.1	10	80	50	60	335
FKT 63.1	6	55	50	60	200
FKT 63.1	6	56	50	60	235
FKT 63.1	6	60	50	60	265
FKT 63.1	6	66	50	60	290
FKT 63.1	6	70	50	60	315
FKT 63.1	6	75	50	60	340
FKT 63.1	8	65	50	60	195
FKT 63.1	8	66	50	60	235
FKT 63.1	8	70	50	60	265
FKT 63.1	8	75	50	60	280
FKT 63.1	8	79	50	60	305
FKT 63.1	8	80	50	60	330
FKT 63.1	10	55	50	60	185
FKT 63.1	10	56	50	60	205
FKT 63.1	10	60	50	60	225
FKT 63.1	10	66	50	60	240
FKT 63.1	10	70	50	60	260
FKT 63.1	10	75	50	60	280
FKT 63.1	10	80	50	60	300
T 63.1	6	55	60	60	260



Motor type	Poles	Package length	f (Hz)	Upper limits of ambient temperature range ¹⁾ (°C)	Max. power P1 (KW)
T 63.2	10	80	60	40	455
FKT 63.2	6	75	60	40	435
FKT 63.2	6	80	60	40	470
FKT 63.2	8	80	60	40	425
FKT 63.2	8	80	60	40	490
T 63.2	6	70	50	60	350
T 63.2	6	75	50	60	375
T 63.2	6	80	50	60	400
T 63.2	6	81	50	60	435
T 63.2	8	79	50	60	340
T 63.2	8	80	50	60	365
FKT 63.2	6	75	50	60	340
FKT 63.2	6	80	50	60	365
FKT 63.2	6	80	50	60	400
T 63.2	6	70	60	60	360
T 63.2	6	75	60	60	400
T 63.2	6	80	60	60	425
T 63.2	8	79	60	60	360
T 63.2	8	80	60	60	380
T 63.2	8	81	60	60	435
T 63.2	8	81	60	60	450
T 63.2	10	75	60	60	340
T 63.2	10	80	60	60	380
FKT 63.1	6	75	60	60	360
FKT 63.1	6	80	60	60	390
FKT 63.1	8	80	60	60	355
FKT 63.1	8	80	60	60	410

¹⁾ The maximum permissible temperature of the water to be pumped complies with the respective maximum ambient temperature.

For the supply with a frequency converter the max. values given on the marking plate must not be exceeded. It is recommended to have a safety factor of 5-7 % from nominal load to reduce the temperature rise by converter feeding.

Electrical parameters (Converter)		
Maximum permitted input voltage	Rated voltage of the motor	V
Minimum switching frequency	4	kHz
Current limiting value	1.5 x I _N	
Maximum overload time / permitted time for operation below the minimum output frequency ²⁾	60	s
Output frequency	Rated frequency of the motor or lower	Hz
If the motor runs with a converter, the converter is designed as intermediate circuit voltage converter with pulse width modulation		

²⁾ The maximum overload time and the permitted time for operation below the minimum output frequency are in relation with a period of 10 minutes.

15.3.2 Thermal parameters

Thermistor circuit

Rated voltage 7.5 V

Bimetal-thermostat circuits

Voltage 250 V

Current 2.5 A

Leakage detector

Voltage max. 30 V_{res}
(60 V_{peak})

Current max. 5 mA

Max. permissible submersion depth 20 m

Ambient temperature range 20 °C up to +40/60 °C

Maximum temperature of the water to be pumped +40/60 °C

16 Report Number

BVS PP 17.2044 EU, as of 2021-06-08

17 Special Conditions for Use

17.1 Special conditions for use to be listed in EU Type Examination Certificate

17.1.1 The motor must be protected directly by Temperature sensors in the stator winding or in the coil end in connection with a functionally tested control unit, additional to the motor protection switch.

In case of supply by a frequency converter the temperature shall be controlled directly by Temperature sensors in the stator winding or in the coil end in connection with a functionally tested control unit. Alternatively, equipped with temperature sensors (bimetal thermostats (break contact, response temperature 160 °C) in the stator winding.

17.1.2 The yield stress of the fasteners which are part of the flameproof enclosure has to be higher than 700 N/mm².

17.1.3 The dimensions of the flameproof joints are in parts other than the relevant minimum or maximum values of EN 60079-1:2014/AC:2018. For information on the dimensions of the flameproof joints contact the manufacturer.

17.1.4 For the use of the motor type * 63- * /***Ex** in areas with gas group IIA or IIB, the max. enclosure paint thickness must be limited to max. 2 mm according table 9 (EN IEC 60079-0:2018).

17.1.5 The motor may only be allowed to operate with the frequency converter using pulse width modulation (PVM) to keep the parameters according clause 4.1.

17.1.6 Before setting-up operation it has to be ensured that no inadmissible over voltage caused by converter supply may occur at the terminals of the motor does not exceed 3000 V. The insulating system of the motor may require an additional limitation of a periodic over voltage.

17.2 Additional conditions

None

18 Essential Health and Safety Requirements

The Essential Health and Safety Requirements are covered by the standards listed under item 9.

Drawings and Documents

Drawings and documents are listed in the confidential report.

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

DEKRA Testing and Certification GmbH
Bochum, 2021-06-08
BVS-Pz/MGR A20210300



Managing Director

