



ZIEHL-ABEGG FANselect DLL API Programming Interface User Guide

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Introduction

The FANselect DLL serves as an Application Programming Interface to FANselect. It requires a request string as input and outputs a response string.

Both request and response strings can be formatted as JSON or XML. It is up to the calling application to create the required input and parse the API's output.

This API can be:

Downloaded (as a Windows DLL) by clicking on the link www.ziehl-abegg.com/fileadmin/de/de/05_Support/Software/FANselect/FANselect_DLL.zip or accessed through the web via <http://fanselect.net:8079/FSWebService>

You can register here <https://www.ziehl-abegg.com/digitale-loesungen/software/fanselect> for the required FANselect login to use the DLL.

The downloadable FANselect DLL folder can be placed anywhere on your machine. It is important to keep the folder intact and up to date. Your application would need to access the fanselect.dll file inside this folder.

To update your version of the DLL:

1. Download the new DLL folder from the URL above
2. Delete your actual DLL folder
3. place the new DLL folder in that location vacated by your previous DLL folder

The FANselect web API is always update and hence does not require the user to update.

In every DLL folder there is a test tool, called ZADIIITest.exe or ZADIIITest64.exe, with which you can test input and output strings.

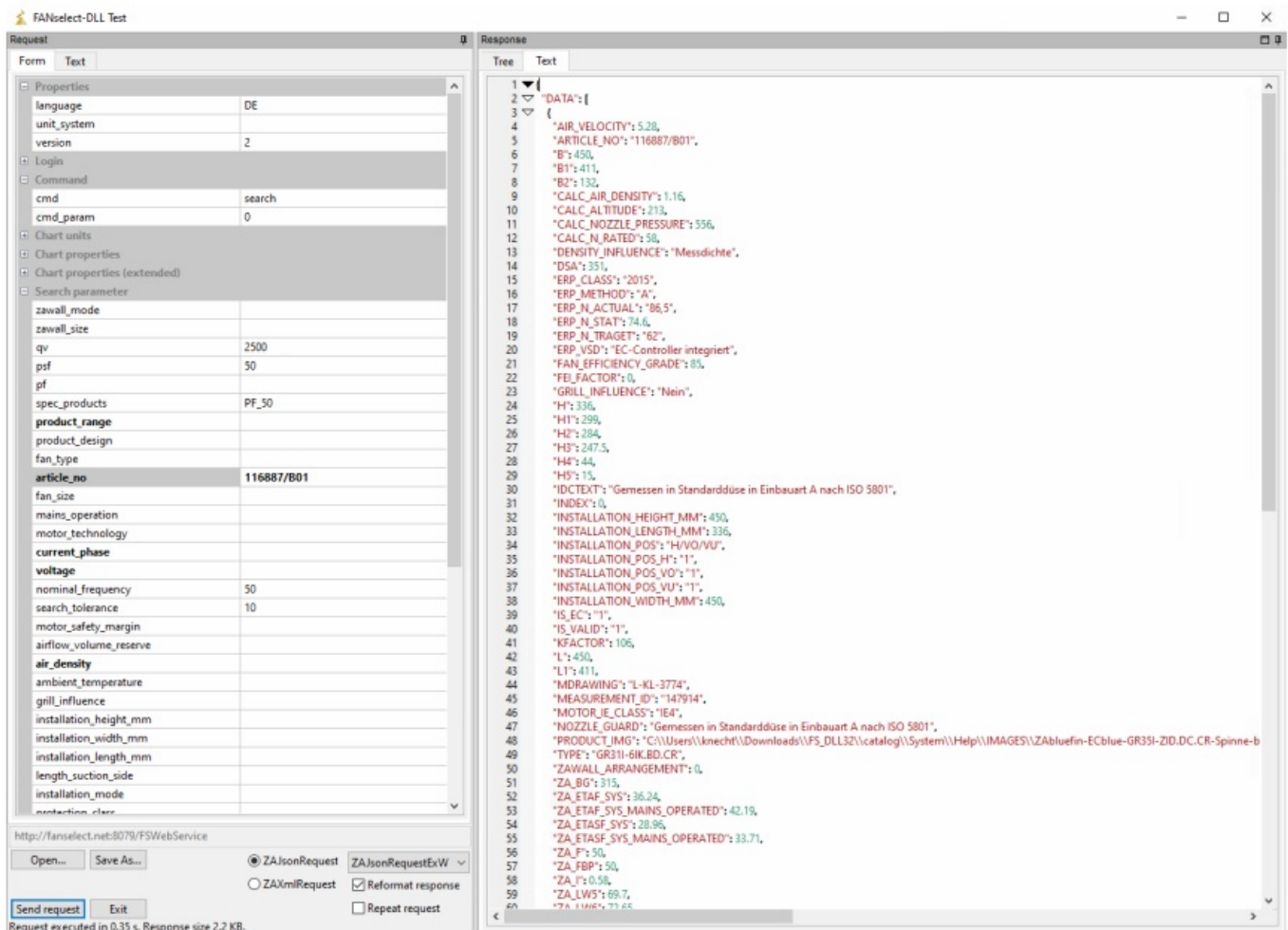


Image 1: Left is the input area whereas the right side contains the outputs produced by the DLL. Click on the tab Text on the top left side to see the request string generated.

You can test the input by entering the parameters you want into the form (Image 1). In the “Text” tap you can write or copy the json sting (example see 2.1.) in.

Connect to FANselect DLL

Minimal Required Inputs:

username: Your FANselect account’s username

password: Your FANselect account’s password

cmd: Search (explained in section 2.2)

qv: Duty point’s volumetric flow rate

psf: Duty point’s static pressure

spec_products: Portfolio containing required fans (explained in section 3.1)

language: Choose language for outputs to appear in (explained in section 3.1)

With these minimum inputs, your request string should look like the samples below:

JSON Request String example

```

{
  "username": "ZAFS19946"
  "password": "bnexg5",
  "cmd": "search",
  "qv": "2500",
  "psf": "50",
  "spec_products": "PF_00",
  "language": "EN",

```

```
}
```

Identical Request String as XML:

```
<?xml version="1.0" encoding="UTF-8"?>
<request>
<username> ZAFS19946</username>
<password> bnexg5</password>
<cmd>search</cmd>
<qv>2500</qv>
<psf>50</psf>
<spec_products>PF_00</spec_products>
<language>EN</language>
</request>
```

Programming a DLL Reader

You can access the DLL via one of three functions.

ZAJsonRequestW: For Unicode Strings

ZAJsonRequestA: For UTF-8 Strings

ZAJsonRequestBSTR: For OLE objects

Your DLL reader must pass the request string as an argument to one of the functions above, and then read the DLL's output.

DLL Reader function in Python

```
def za_dll_fan_selection(request_string, dll_path):
import ctypes
import json
fanselect_dll = ctypes.WinDLL(dll_path)
fanselect_dll_output = (ctypes.wstring_at(fanselect_dll.ZAJsonRequestW(request_string)))
return fanselect_dll_output
```

request_string is identical format to Request String example above, albeit with more inputs

dll_path: is the path to the FANselect DLL, e.g. C:\FANselect_DLL\FANselect_DLL\fanselect.dll

DLL Reader function in VBA

Private Declare Function ZAJsonRequestBSTR Lib

"C:\FANselect_DLL\FANselect_DLL\FANselect.dll" (ByVal sRequest As String) As String

Public Function vba_reader(ByVal input_request_string As String) As String

Dim request_string As String

Dim response_string As String

Dim request_string_unicode As Variant

Dim response_string_unicode As Variant

request_string = "{" + input_request_string + "}"

request_string_unicode = StrConv(request_string, vbUnicode)

response_string_unicode = ZAJsonRequestBSTR(request_string_unicode)

response_string = StrConv(response_string_unicode, vbFromUnicode)

vba_reader = response_string

End Function

Further Examples can be downloaded from the links below

C++ http://downloads.fanselect.net/fanselect/dll_examples/CPPConsoleApp.zip
C# http://downloads.fanselect.net/fanselect/dll_examples/VCS10StandardApp.zip
Delphi http://downloads.fanselect.net/fanselect/dll_examples/DelphiConsoleApp.zip
VB6 http://downloads.fanselect.net/fanselect/dll_examples/VB6StandardApp.zip
VB10 http://downloads.fanselect.net/fanselect/dll_examples/VB10StandardApp.zip

Connect to FANselect Web API

Accessing FANselect's web API is nearly identical to the process used to access the DLL.

The only difference is that you must send two requests:

1st Request: To obtain a Session ID

2nd Request: Usual request, which includes the session ID obtained in the first request

The major advantage of the web API is that it is (as mentioned before) always up to date and does not require to be downloaded. Please examine Internet reliability in your location and your machine's firewall / security settings, as these could hamper the web API's performance.

As with the downloadable DLL, requests to and responses from the web API can be sent as JSON or XML strings.

Both DLL and web API produce identical outputs, as both use the same selection and calculation algorithms. Any discrepancies between DLL and web API, are probably due to an outdated DLL.

Web API Reader function in Python

```
import json
dll_path = "http://fanselect.net:8079/FSWebService"
def za_api_fan_selection_0(request_string, dll_path):
    import requests
    fanselect_api_output = requests.post(url=dll_path, data=request_string)
    return fanselect_api_output
# Get Session ID
request_string = '{"cmd":'create_session', 'username' : 'USERNAME', 'password' : 'PASSWORD' }'
request_string = str(request_string)
dll_path = str(dll_path)
response_string = za_api_fan_selection_0(request_string, dll_path)
session_id = json.loads(response_string_raw.content)['SESSIONID']
```

Usual Request

```
request_string = "{"
request_string = request_string + "username" : 'USERNAME',"
request_string = request_string + "password" : 'PASSWORD',"
request_string = request_string + "language" : 'EN',"
request_string = request_string + "unit_system" : 'm',"
request_string = request_string + "cmd" : 'search',"
request_string = request_string + "cmd_param" : '0',"
request_string = request_string + "spec_products" : 'PF_00',"
request_string = request_string + "product_range" : 'BR_01',"
request_string = request_string + "qv" : '2500',"
request_string = request_string + "psf" : '50',"
request_string = request_string + "current_phase" : '3',"
request_string = request_string + "voltage" : '400',"
request_string = request_string + "nominal_frequency" : '50',"
request_string = request_string + "sessionid" : "" + session_id + ","
request_string = request_string + "full_octave_band" : 'true',"
request_string = request_string + "}"
```

```
request_string = str(request_string)
response_string_initial = za_api_fan_selection_0(request_string, dll_path)
```

Further Examples can be downloaded from the links below

C# http://downloads.fanselect.net/fanselect/dll_examples/VCS10WebService.zip

VB10 http://downloads.fanselect.net/fanselect/dll_examples/VB10WebService.zip

Inputs & Outputs

All Inputs Explained

language

Set language of outputs

input options:

CS: Czech **DA:** Danish **DE:** German **EN:** English

ES: Spanish **FR:** French **FI:** Finnish **HU:** Hungarian

IT: Italian **JA:** Japanese **NL:** Dutch **PL:** Polish

PT: Portuguese **RU:** Russian **SV:** Swedish **TR:** Turkish

ZH: Chinese

unit_system

unit system to be used in calculations.

Input options:

m: metric i: imperial

username

Your FANselect account's username.

password

Your FANselect account's password

Users who are only interested in a limited set of articles, can acquire one or more username / password combinations (logins). Each login would offer a specific set of articles – predefined by the user.

The user's application would then call the dll with one of these specific logins to select from a limited pool of articles. Advantages: Faster selection process and smaller number of articles among found set

cmd

cmd, short for command, is needed to instruct the DLL on the type of outputs required

Input Options:

search: selection by duty point + filters such as size, design etc.

status: Delivers username and software version. Web API also outputs SESSIONID.

create_session: Obtain SESSIONID. This cmd is only relevant for the web API

The following cmd's require an article number in article_no: select: Select by article number. Article's nominal data is output if duty point is not achieved

nominal_values: Obtain article's electric nominal values. This data also be obtained with your initial search request by setting insert_nominal_values to true

motor_data: Article motor data. Can also be obtained with search and insert_motor_data: true

geo_data: Article (geometric) dimensions. Get this data with search by setting insert_geo_data to true

accessories: Depict accessories associated with article

get_chart: Create charts for selected article

cmd_param

You can set the index of the article you wish

zawall_mode

Pick whether you want to select multiple fans, with either one of two options

ZAWALL: Select using multiple fans only

ZAWALL_PLUS: Select using multiple and single fans

zawall_size

Set the number of fans you want to use in your multiple fans array. Maximum number of fans is set to 20.

zawall_size can also be left empty. FANselect will automatically determine the number of fans required.

Selections without a pre-set number of fans usually come with a longer response time.

qv

Volumetric rate either in m³/h for unit_system choice m or CFM for unit_system choice i.

psf

Static pressure either in Pa for unit_system choice m or in wg for unit_system choice i.

pf

Total pressure either in Pa for unit_system choice m or in wg for unit_system choice i

In your request string, you either specify psf or pf.

spec_products

Fans in FANselect are placed in discrete portfolios, denoted by the PF codes listed below. It is mandatory to input a specific portfolio. Currently it is not possible to select across multiple portfolios.

Input Options

PF_50: Standard Worldwide PF_54: AMCA Thailand Products

PF_51: USA Standard Products PF_56: India Portfolio

PF_52: Brasil Portfolio PF_57: AMCA Germany Products

PF_53: AMCA USA Products PF_59: AMCA India Product Portfolio

PF_60: China PF_61: Europe

product_range

Fans are placed in clusters aka product ranges, denoted by the BR codes listed below.

product_range is not mandatory and can hold multiple BR codes separated by |, e.g. BR_01 | BR_57 | BR_59

product_design

Every article can come in one of a multitude of designs. Leave empty if design is not known

Input Options

Axial flow fans with airflow direction A: Air is sucked over motor

A-A: Axial fan consisting only of impeller

A-D: Axial fan sucking through grille

A-F: Tube axial fan with longer tube, round housing

A-L: Tube axial fan with shorter tube, round housing

A-Q: Tube axial fan with shorter tube, rectangular housing

A-W: Axial fan sucking through grille

Axial flow fans with airflow direction V: Air is blown over motor

V-A: Axial fan consisting only of impeller

V-E: Tube axial fan with shorter tube and sucking through contact protection

V-F: Tube axial fan with very long tube

V-H: Tube axial fan with shorter tube, round housing

V-H: Wall-mounted Tube axial fan with shorter tube and guide-vanes

V-L: Wall-mounted Tube axial fan with shorter tube and guide-vanes

V-Q: Wall-mounted Tube axial fan with shorter tube and guide-vanes

V-I: Axial fan blowing through grille
V-K: Axial fan blowing through grille
V-L: Tube axial fan with shorter tube, round housing
V-Q: Tube axial fan with shorter tube, rectangular housing
V-S: Axial fan blowing through grille, surrounding whole backside of fan

Centrifugal Fans

ER: Centrifugal plug fan design
GR-H: Wall mounted centrifugal fan design, horizontally mounted
GR-Vo: Wall mounted centrifugal fan design, vertically mounted facing upward
GR-Vu: Wall mounted centrifugal fan design, vertically mounted facing downward
GR: Wall mounted centrifugal fan design
RH: Centrifugal fan consisting only of impeller
WR: Centrifugal fan placed in cube design

fan_type

Filter by defining part of fan's type key. Wild cards are: * for multiple characters and ? for 1 character.
E.g.: GR56C*1C to get all size 560 C impellers in GR design, ER??I-4* to get all ZABluefin in ER design

article_no

Article number (if known) of the required fan.
Multiple article numbers can be input at once, each separated by a |, such as: 178125 | 178153 | 178113.

fan_size

fan size of required fans (if known)

mains_operation

Choose whether required fan should be connected to a controller or not.

Input Options:

NETZ: Fan directly connected to electric grid
FZ: Fan connected to frequency converter

motor_technology

Select the type of motor best suited for your application. Multiple choices can be input separated by a |
e.g.: ZAmotpremium IE2 | PMblue IE4 | ZAmotpremium IE3

Input Options:

AC ERM: External rotor AC motor
AMblue IE3: Internal rotor IE3 motor with controller
ECblue: External rotor EC motors
ECQ: External rotor EC motor
PMblue IE4: Permanent magnet IE4 internal rotor motor
PMblue Standalone: Permanent magnet IE4 internal rotor motor without controller
ZAmotbasic EX: Low cost internal rotor ATEX motor
ZAmotbasic IE2: Low cost internal rotor IE2 motor
ZAmotbasic IE3: Low Cost internal rotor IE3 motor
ZAmotpremium IE2: Premium internal rotor IE2 motor
ZAmotpremium IE3: Premium internal rotor IE3 motor
ZAmotpremium PE: Premium internal rotor Premium Efficiency (USA) motor

current_phase

Electric current phases.

Input Options:

1 or 3.

voltage

Electric voltage

Input Options:

230 400 460 690

nominal_frequency

Electric nominal frequency.

Input Options:

50 60

search_tolerance

Required selection tolerance

motor_safety_margin

Motor power reserve, if required

e.g. motor_safety_margin = 10 => 10 kW shaft power requires 11 kW motor

airflow_volume_reserve

Airflow volumetric reserve, if required

e.g. airflow_volum_reserve = 10 => 1000 m³/h required flow means fan must deliver 1100 m³/h

air_density

Fan operating air density. Fan selection and duty point calculations will adjust to the density.

ambient_temperature

Medium Temperature at which fan is operating

grill_influence

Only applicable to centrifugal fans

Input Options:

false: no grill considered

true: duty point calculations affecting fan performance and acoustics take grill into account

installation_height_mm

Height of enclosure in mm. Placing fans within enclosures requires the overall dimensions of these enclosures. The smaller the enclosure is relative to fan size the more detrimental it is to fan performance.

installation_width_mm

Width of enclosure in mm.

installation_length_mm

Length of enclosure in mm.

installation_mode

Enclosure performance losses are calculated by specific algorithms. FANselect offers multiple loss calculating algorithms for single fans, yet only one (RLT_2017) for multiple fan layouts

Input Options:

ZA: Inhouse developed algorithm

RLT_2017: Most recent Algorithm developed by the AHU Manufacturer's Association

protection_class

Input required protection class as an IPxx number.

erp_class

Input ERP (Energy Related Products-Directive) class ie 2015.

The ErP class defines the minimum efficiency a fan can have to be sold in certain markets

sfp_class

Input SFP (Specific Fan Performance) Class as a digit, ie 3, 4. SFP is basically the input electric power in relation to the output airflow.

full_octave_band

To display the full octave band with cmd: search, set this parameter to true.

insert_nominal_values

Set this parameter to true to show all the electrical nominal values with cmd: search.

insert_motor_data

Set this parameter to true to show relevant motor data with cmd: search.

insert_geo_data

Set this parameter to true to depict article's dimensions

focus_criteria

This parameter allows you to limit the found set to those fans with the best focus criteria you had set.

Input Options:

ZA_ETASF_SYS: Best ...% at system static efficiency

ZA_PSYS: Best ...% at system absorbed power

ZA_LWA5: Best ...% at suction side acoustics

ZA_LWA6: Best ...% at pressure side acoustics

ZA_BG: Best ...% at fan size

focus_tolerance

Setting this parameter to 0 would produce only one article, namely the one with the best preset focus_criteria.

Inputting a number X would produce the best fan for the preset focus_criteria plus all fans up to X% worse than the best fan.

e.g.: focus_criteria = ZA_ETASF_SYS and focus_tolerance = 7

yields: Fan with best system static efficiency + all fans up to 7% worse than that best fan

pricelist_name

By entering the name of the Excel sheet found in the DLL folder: Product_Price_Reference.xls, you can have the price appear among the DLL's outputs. Excel file has one spreadsheet with three columns.

Column 1: Customer article number. Here any number system can be used.

Column 2: Ziehl-Abegg article number, which is used for the selection calculations

Column 3: Price of this article

All Outputs Explained

ARTICLE_NO Article number
 CALC_AIR_DENSITY Air Density used in selection and calculation (kg/m³)
 CALC_ALTITUDE Altitude used in selection and calculation (m above sea level)
 CALC_LW5_OKT Suction side octave band, values separated by commas (dB)
 CALC_LW6_OKT Pressure side octave band, values separated by commas (dB)
 CALC_LWA5_OKT Suction side weighted octave band values (dBA)
 CALC_LWA6_OKT Pressure side weighted octave band values (dBA)
 CALC_NOZZLE_PRESSURE Pressure in nozzle, used to determine air flow (Pa)
 CALC_N_RATED Ratio of duty point fan rpm to maximum fan rpm (%)
 CALC_P1_MAX Maximum absorbed electrical power at duty point (W)
 CALC_PL_MAX Maximum absorbed shaft power at duty point (W)
 CALC_PSYS_MAX Maximum absorbed system power = motor + controller absorbed power (W)
 CALC_TEMP_C Medium temperature (°C)
 CAPACITOR_CAPACITANCE Capacitor capacitance (??F)
 CAPACITOR_VOLTAGE Capacitor voltage (V)
 CHART_VIEWER_URL URL to chart depicting fan curves
 CIRCUIT Type of electrical circuit
 COSPHI Fan motor Cosine Phi value
 CURRENT_PHASE Fan motor phases
 dim_... Dimensions of the fan
 dim_klischee Cliche name => simplified drawing with important dimensions
 DENSITY_INFLUENCE Density used in determining duty point measurement density => Selection at fan's measured density density => Selection at density different from measured density
 DRAWING_FILE Path to fan drawing
 EC_TYPE Output is 1 if fan is powered by an EC motor and an empty string if fan motor is not an EC motor
 EFFICIENCY_CLASS Efficiency Class of IEC motor. Parameters only shows up alongside fans powered by IEC motors
 EFFICIENCY_STAT Static efficiency of fan = Volumetric Rate X Static Pressure / Power Absorbed by System (%)
 EFFICIENCY_TOT Total efficiency of fan = Volumetric Rate X Static Pressure / Power Absorbed by System (%)
 ERP_CLASS Fan ERP class
 ERP_METHOD Method used to measure ERP class
 ERP_N_ACTUAL Actual normalized Degree of efficiency (Nist)
 ERP_N_STAT Static efficiency (hstatA)at duty point (%) according to measurement method A
 ERP_N_TRAGET Required standardized degree of efficiency (Nsoll)
 ERP_VSD Returns EC controller integrated if fan is so equipped. and an empty string for fans without an integrated speed control system
 FAN_EFFICIENCY_GRADE This is a factor assigned to individual fans and is only relevant for AMCA fans
 FEI_FACTOR This factor is calculated based on the duty point and is only relevant for AMCA fans
 GRILL_INFLUENCE Returns no if grill influence is not factored into calculations, and yes if grill's influence is taken into account.
 INCREASE_OF_CURRENT Current increase (%)
 INDEX Sequence number of fans in found set. First fan in found set would have index 0, second fan index 1 etc.
 INSTALLATION_HEIGHT_MM Height of Fan (mm)
 INSTALLATION_LENGTH_MM Length of fan (mm)
 INSTALLATION_POS Returns fan orientation(s): H: Horizontal VO: Vertical facing up VU: Vertical facing down
 INSTALLATION_POS_H Returns 1 for horizontally oriented fans (INSTALLATION_POS = H), and an empty string for remaining fans.
 INSTALLATION_POS_VO Returns 1 for vertical upwards facing fans (INSTALLATION_POS = VO) and an empty string for remaining fans
 INSTALLATION_POS_VU Returns 1 for vertical downwards facing fans (INSTALLATION_POS = VU) and an empty string for remaining fans
 INSTALLATION_WIDTH_MM Width of fan (mm)
 IS_EC Returns 1 if fan has EC motor and empty string for non-EC motors
 KFACTOR Fan's nozzle pressure
 MAX_CURRENT Fan's maximum current (A)
 MAX_FREQUENCY Fan's maximum frequency (Hz)
 MAX_TEMPERATURE_C Fan's maximum temperature (°C)

MAX_VOLTAGE Fan's maximum voltage (V)
 MDRAWING Name of drawing file
 MIN_CURRENT Fan's minimum current (A)
 MIN_TEMPERATURE_C Fan's minimum temperature (°C)
 MIN_VOLTAGE Fan's maximum voltage (V)
 MOTOR_DESIGN Type of motor design: (only for IEC motors)
 IMB 3: Foot mounted
 IMB 5: Flange mounted
 MOTOR_POLES Number of motor poles (for IEC powered fans)
 MOTOR_SHAFT IEC motor shaft description: number / diameter X length
 MOTOR_SIZE IEC motor size
 NOMINAL_CURRENT Fan motor nominal current (A)
 NOMINAL_FREQUENCY Fan motor nominal frequency (Hz)
 NOMINAL_IECMOTOR
 _EFFICIENCY IEC Motor nominal efficiency as a decimal number
 NOMINAL_SPEED Fan's nominal speed (1/min)
 NOMINAL_VOLTAGE Fan motor nominal voltage
 NOZZLE_GUARD Information on how fan was measured. Predominantly for axial fans
 NUMBER_OF_POLES IEC motor number of poles
 PHASE_DIFFERENCE Phase difference
 POWER_INPUT_KW Power required by motor (kW)
 POWER_INPUT_KW Power Output by motor (kW)
 PRODUCT_IMG Path to product image
 PROTECTION_CLASS_IP Protection class as IP number
 PROTECTION_CLASS_THCL Temperature protection class as THCL number
 RUBBER_MOT_DIAMETER Motor rubber damper diameter
 RUBBER_MOT_HEIGHT Motor rubber damper height
 SPRING_MOT_DIAMETER Motor spring damper diameter
 SPRING_MOT_HEIGHT Motor spring damper height
 TYPE Type key of fan
 VOLTAGE_TOLERANCE Voltage tolerance (%)
 ZAWALL_ARRANGEMENT Multiple fan layout. Returns 0 if no multiple fans are selected
 ZA_BG Fan nominal size
 ZA_COSPHI Fan motor Cos Phi
 ZA_ETAF Total efficiency of fan = Volumetric Rate X Total Pressure / Power Absorbed by System (%)
 ZA_ETAF_L Fan impeller total efficiency (%)
 ZA_ETAF_SYS System total efficiency (%)
 ZA_ETAM Motor efficiency (%)
 ZA_ETASF Static efficiency of fan = Volumetric Rate X Static Pressure / Power Absorbed by System (%)
 ZA_ETASF_L Fan impeller static efficiency (%)
 ZA_ETASF_SYS System static efficiency (%)
 ZA_F Fan nominal electrical frequency (Hz)
 ZA_FBP Fan electrical frequency at duty point (Hz)
 ZA_I Fan current at duty point (A)
 ZA_IN Fan nominal current (A)
 ZA_LW5 Duty point acoustic power level suction side (dB)
 ZA_LW6 Duty point acoustic power level pressure side (dB)
 ZA_LWA5 Duty point weighted acoustic power level suction side (dBA)
 ZA_LWA6 Duty point weighted acoustic power level pressure side (dBA)
 ZA_MAINS_SUPPLY Mains supply: phases, voltage and electric frequency
 ZA_N RPM at duty point (1/min)
 ZA_NMAX Maximum RPM of fan (1/min)
 ZA_PD Dynamic pressure at duty point (Pa)
 ZA_PF Total pressure of fan. $ZA_PF = ZA_PSF + ZA_PD$ (Pa)
 ZA_PF_MAINS_OPERATED Total Pressure of fan in mains operation (Pa)
 ZA_PSF Static pressure of fan (Pa)
 ZA_PSF_MAINS_OPERATED Static pressure of fan in mains operation (Pa)
 ZA_P1 Electrical power required at duty point (W)
 ZA_PD Duty point dynamic pressure (Pa)

ZA_PF Duty point total pressure (Pa)
ZA_PL Calculated shaft power at duty point (W)
ZA_PSF Duty point static pressure (Pa)
ZA_PSYS Absorbed power by system (W)
ZA_QV Duty point volumetric flow rate (m³/h)
ZA_QV_MAINS_OPERATED Duty point volumetric flow rate in mains operation (m³/h)
ZA_SFP SFP number of fan
ZA_SFP_CLASS Fan's SFP class
ZA_U Fan voltage at duty point (V)
ZA_UN Fan nominal voltage (V)
ZA_WEIGHT Mass of fan

Outputs of each cmd

cmd: search Outputs

ARTICLE_NO	CALC_AIR_DENSITY	CALC_ALTITUDE
CALC_NOZZLE_PRESSURE	CALC_N_RATED	DENSITY_INFLUENCE
DRAWING_FILE	ERP_CLASS	ERP_METHOD
ERP_N_ACTUAL	ERP_N_STAT	ERP_N_TRAGET
ERP_VSD	FAN_EFFICIENCY_GRADE	FEI_FACTOR
GRILL_INFLUENCE	INDEX	INSTALLATION_HEIGHT_M M
INSTALLATION_LENGTH_M M	INSTALLATION_POS	INSTALLATION_POS_H
INSTALLATION_POS_VO	INSTALLATION_POS_VU	INSTALLATION_WIDTH_MM
IS_EC	IS_VALID	KFACTOR
NOZZLE_GUARD	PRODUCT_IMG	TYPE
ZAWALL_ARRANGEMENT	ZA_BG	ZA_COSPHI
ZA_ETAF_SYS	ZA_ETAF_SYS_MAINS_OPERATED	ZA_F
ZA_FBP	ZA_I	ZA_LW5
ZA_LW6	ZA_LWA5	ZA_LWA6
ZA_MAINS_SUPPLY	ZA_N	ZA_NMAX
ZA_PD	ZA_PF	ZA_PF_MAINS_OPERATED
ZA_PSF	ZA_PSF_MAINS_OPERATE D	ZA_PSYS
ZA_QV	ZA_QV_MAINS_OPERATED	ZA_SFP
ZA_SFP_CLASS	ZA_U	ZA_UN
ZA_WEIGHT		

cmd: select Outputs

This cmd requires that you input an article number in article_no.

ARTICLE_NO	CALC_AIR_DENSITY	CALC_ALTITUDE
------------	------------------	---------------

CALC_LW5_OKT	CALC_LW6_OKT	CALC_LWA5_OKT
CALC_LWA6_OKT	CALC_NOZZLE_PRESSURE	CALC_N_RATED
CAPACITOR_CAPACITANCE	CAPACITOR_VOLTAGE	CHART_VIEWER_URL
CIRCUIT	COSPHI	CURRENT_PHASE
DENSITY_INFLUENCE	DRAWING_FILE	EC_TYPE
EFFICIENCY_STAT	EFFICIENCY_TOT	ERP_CLASS
ERP_METHOD	ERP_N_ACTUAL	ERP_N_STAT
ERP_N_TRAGET	ERP_VSD	FAN_EFFICIENCY_GRADE
FEI_FACTOR	GRILL_INFLUENCE	INCREASE_OF_CURRENT
INSTALLATION_HEIGHT_MM	INSTALLATION_LENGTH_MM	INSTALLATION_POS
INSTALLATION_POS_H	INSTALLATION_POS_VO	INSTALLATION_POS_VU
INSTALLATION_WIDTH_MM	IS_EC	IS_VALID
KFACTOR	MAX_CURRENT	MAX_TEMPERATURE_C
MAX_VOLTAGE	MIN_CURRENT	MIN_TEMPERATURE_C
MIN_VOLTAGE	NOMINAL_FREQUENCY	NOMINAL_SPEED
NOMINAL_VOLTAGE	NOZZLE_GUARD	PHASE_DIFFERENCE
POWER_INPUT_KW	PRODUCT_IMG	PROTECTION_CLASS_IP
PROTECTION_CLASS_THCL	TYPE	VOLTAGE_TOLERANCE
ZAWALL_ARRANGEMENT	ZA_BG	ZA_COSPHI
ZA_ETAF_SYS	ZA_ETAF_SYS_MAINS_OPERATED	ZA_ETASF_SYS
ZA_ETASF_SYS_MAINS_OPERATED	ZA_F	ZA_FBP
ZA_I	ZA_LW5	ZA_LW6

ZA_LWA5	ZA_LWA6	ZA_MAINS_SUPPLY
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ZA_N	ZA_NMAX	ZA_PD
ZA_PF	ZA_PF_MAINS_OPERATED	ZA_PSF
ZA_PSF_MAINS_OPERATED	ZA_PSYS	ZA_QV
ZA_QV_MAINS_OPERATED	ZA_SFP	ZA_SFP_CLASS
ZA_U	ZA_UN	ZA_WEIGHT

cmd: nominal_values Outputs

This cmd requires an article number in article_no.

The outputs below can also be output using cmd search by setting insert_nominal_values to true

ARTICLE_NO	CAPACITOR_CAPACITANCE	CAPACITOR_VOLTAGE
CIRCUIT	COSPHI	CURRENT_PHASE
EC_TYPE	EFFICIENCY_STAT	EFFICIENCY_TOT
INCREASE_OF_CURRENT	MAX_CURRENT	MAX_FREQUENCY
MAX_SPEED	MAX_TEMPERATURE_C	MAX_VOLTAGE
MIN_CURRENT	MIN_PSF	MIN_TEMPERATURE_C
MIN_VOLTAGE	NOMINAL_CURRENT	NOMINAL_FREQUENCY
NOMINAL_SPEED	NOMINAL_VOLTAGE	PHASE_DIFFERENCE
POWER_INPUT_HP	POWER_INPUT_KW	POWER_OUTPUT_HP
POWER_OUTPUT_KW	PROTECTION_CLASS_IP	PROTECTION_CLASS_THCL
VOLTAGE_TOLERANCE		

cmd: get_chart Outputs

This cmd requires an article number in article_no, and produces the outputs below and fan's curves

BOTTOM_MARGIN	CHART_FILE	CHART_MAX_X
CHART_MAX_Y	CHART_MIN_X	CHART_MIN_Y
LEFT_MARGIN	MEASUREMENT_ID	RIGHT_MARGIN
TOP_MARGIN		

cmd: motor_data Outputs

For EC Motors:

CIRCUIT	NOMINAL_VOLTAGE	PROTECTION_CLASS_IP
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FOR IEC Motors:

CIRCUIT	EFFICIENCY_CLASS	MOTOR_DESIGN
MOTOR_SHAFT	MOTOR_SIZE	NOMINAL_CURRENT
NOMINAL_VOLTAGE	NUMBER_OF_POLES	POWER_OUTPUT_KW
PROTECTION_CLASS_IP	RUBBER_MOT_DIAMETER	RUBBER_MOT_HEIGHT
SPRING_MOT_DIAMETER	SPRING_MOT_HEIGHT	

cmd: status Outputs

This cmd is useful to obtain the DLL's version and the user's username

USERNAME	VERSION
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cmd: create_session Outputs

This cmd is used to create a session, before calling the web DLL

USERNAME	VERSION
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Help and Support

Contact Information

Please feel free to contact us, should you need further help or council on how to integrate the FANselect API into your application.

Contact
FANselect Support
Ventilation Technology
Heinz-Ziehl-Straße – 74653 Künzelsau
fansselect@ziehl-abegg.com
www.fansselect.net
www.ziehl-abegg.com

Links

Ziehl-Abegg
www.ziehl-abegg.com
FANselect DLL Download
www.ziehl-abegg.com/fileadmin/de/de/03_Produktwelten/DigitaleLösungen/Software/FANselect/FANselect_DLL.zip
FANselect Web API
fansselect.net:8079/FSWebService
Article Images and Drawings
http://www.ziehl-abegg.com/fileadmin/de/de/05_Support/Software/FANselect/catalog.zip

Document history

04.11.2019

- First release

12.08.2021

- New design of the document
- Update ERP_... description
- Add new portfolios
- Add new description of output variables for dimensions



Documents / Resources

	ZIEHL-ABEGG FANselect DLL API Programming Interface [pdf] User Guide FANselect DLL, FANselect DLL API Programming Interface, API Programming Interface, Programming Interface
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References

- [:: abegg.com ::](http://abegg.com)
- [FANselect](#)
- fanselect.net:8079/FSWebService
- [FANselect](#)
- [FANselect](#)
- [ZIEHL-ABEGG | Industrieventilatoren | Aufzugstechnik](#)
- [ZIEHL-ABEGG | Industrieventilatoren | Aufzugstechnik](#)
- [Welchen Ventilator kaufen? | Einfache Auswahl mit FANselect](#)