

FerBuy API 2.0

1. Purchase

FerBuy purchase service is responsible for applying loans for web shop customers for the amount the web shop has requested. For web shops this service is just another payment method, and the actual loan application process is not visible for the web shops.


The web shop customers can choose FerBuy as payment method in the ordering phase, after which the customer is redirected to FerBuy purchase service. In this service customer fills-in his/her information and gets a loan decision. After this, the customer is redirected back to web shop, with ok or failed meta information.


1.2. Request from the shop to FerBuy

FerBuy purchase interface uses HTTP POST protocol to transfer merchant, transaction and customer information from web shop to the FerBuy service. All fields must be in UTF-8 format.

URL for the purchase interface can be found from the table in the end of this document.

Field name	Type	Mandatory?	Sample value	Description
api_version	char(2)	X	01	API version number
merchant_id	string	X	1001	Merchant identifier
merchant_secret	string	X	TESTSECRET	Not used directly in the request, but required to calculate checksum, see below in "1.2.1. Checksum calculation" for more details.
transaction_id	string	X	1234	Transaction identifier
transaction_currency	char(3)	X	EUR	International currency code (3 characters)
transaction_amount	float	X	45,00	Requested loan amount. Using comma as a decimal separator.
return_url_ok	string	X	https://www.shop.com/ok.php?sid=12345	URL to where the user should be redirected if the payment is ok
return_url_cancel	string	X	https://www.shop.com/cancel.php?sid=12345	URL to where the user should be redirected if the payment is cancelled (by the user, or because the user can't get a loan, or there is a system error.
checksum	string	X	469137938596890e3b8b13af8eeecb4cea80bc7	SHA1 checksum of the transaction. (For details, see below)
customer_id	string		123456-123A	Personal identity code
customer_firstname	string		Jack	Firstname
customer_lastname	string		Jones	Lastname
customer_mobilephone	string		050123467	Mobile phone number
customer_email	string		customer@foo.com	E-mail address
customer_address	string		mainstreet 1	Postal address
customer_zip	string		12345	Postal code
customer_city	string		Helsinki	City name
customer_country	string		UK	Customer country
customer_lang	char(2)		UK	Preferred language for the customer.


 Customer information fields are optional, those can be provided as convenience for the customer.

 **transaction_id** must be unique identifier, but can be freely generated by the web shop. After successful transaction, the same transaction_id is not accepted any more by FerBuy.

1.2.1. Checksum calculation

Checksum is calculated by taking SHA1 hash from the following fields, separated with '&' character:

api_version	merchant_id	transaction_id	purchase_currency	purchase_amount	merchant_secret
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 **Merchant secret**
merchant_secret field is a shared secret key between web shop and FerBuy. The same key is used in the request and in the response hash calculation.

1.2.2. Sample request

The web shop is responsible for generating following the form into the payment method page. The form contains the basic identification and payment information. The only field visible for the customer should be the submit button which can be styled using css or image.

Request fields

api_version	01
merchant_id	1001
transaction_id	1234
transaction_currency	EUR
transaction_amount	102,40
merchant_secret	SECRET

```
sha1("01&1001&1234&EUR&102,40&SECRET");
```

The code above gives us the following checksum: a16d181326e5778a17a07fc186050e00b8adf3f9

The HTML form to be placed into the payment page

```
<form method=post action="https://www.ferbuy.cz/api/purchase">
<input type="hidden" name="api_version" value="01"/>
<input type="hidden" name="merchant_id" value="1001"/>
<input type="hidden" name="transaction_id" value="1234"/>
<input type="hidden" name="transaction_currency" value="EUR"/>
<input type="hidden" name="transaction_amount" value="102,40"/>
<input type="hidden" name="return_url_ok"
value="https://www.shop.com/purchase.php?session_id=12345&status=ok"/>
<input type="hidden" name="return_url_cancel"
value="https://www.shop.com/purchase.php?session_id=12345&status=cancel"/>
<input type="hidden" name="checksum" value="a16d181326e5778a17a07fc186050e00b8adf3f9"/>
<input type="submit" value="Pay with FerBuy"/>
</form>
```


1.3. Response from FerBuy to the shop

After FerBuy process is completed (if its ok or cancelled) the user is redirected back to the web shop, into url the web shop has defined.

- On successful payment, the user is redirected to **return_url_ok** with addition HTTP POST parameters.
- On cancelled or failed payment, the user is redirected to **return_url_cancel**. No additional parameters are provided, possible causes for failure will be reported to the customer by FerBuy user interface.

Fields for ok response


Field name	Type	Mandatory?	Description
ferbuy_version	string	X	FerBuy API Version, currently "01"
ferbuy_merchant_id	string	X	Merchant id (same as in the request).
ferbuy_transaction_id	string	X	Transaction id defined by the merchant (same as in the request).
ferbuy_reference	string	X	FerBuy payment reference. Unique.
ferbuy_amount	float	X	Paid amount (same as in the request)
ferbuy_currency	char(3)	X	Currency used in the payment (same as in the request)
ferbuy_checksum	string	X	Checksum calculated from other parameters

 If the web shop has defined HTTP GET fields in the **return_url_ok**, then those are included in the response as such (HTTP GET parameters).

1.3.1. Response checksum calculation

Checksum is calculated by taking SHA1 hash from the following fields, separated with '&'-character:

ferbuy_version	ferbuy_transaction_id	ferbuy_merchant_id	ferbuy_reference	ferbuy_amount	ferbuy_currency	merchant_secret
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 **Merchant secret**
merchant_secret field is a shared secret key between web shop and FerBuy. The same key is used in the request and in the response hash calculation.

1.3.2. Sample

This sample shows how the return fields are generated from the following parameters:


return_url_ok	https://www.shop.com/purchase.php?session_id=12345&status=ok
ferbuy_version	01
ferbuy_merchant_id	1001
ferbuy_transaction_id	1234
ferbuy_reference	fb123543
ferbuy_amount	102,40
ferbuy_currency	EUR
merchant_secret	SECRET

```
sha1("01&1001&12343&fb123543&102,40&EUR&SECRET");
```

The code above gives us the following checksum: 469137938596890e3b8b13af8eeecb4cea80bc7

And the final HTTP form would be:

```
<form method="post" action="https://www.shop.com/purchase.php?session_id=12345&status=ok">
<input type="hidden" name="ferbuy_version" value="01" />
<input type="hidden" name="ferbuy_merchant_id" value="1001" />
<input type="hidden" name="ferbuy_transaction_id" value="1234" />
<input type="hidden" name="ferbuy_reference" value="fb123543" />
<input type="hidden" name="ferbuy_amount" value="102,40" />
<input type="hidden" name="ferbuy_currency" value="EUR" />
<input type="hidden" name="checksum" value="469137938596890e3b8b13af8eeecb4cea80bc7" />
<input type="submit" value="Go back to web shop" />
</form>
```

 This form is actually generated by FerBuy, and the web shop is only responsible for receiving the form.

1.3.3. Validating response

When the web shop handles the OK response from FerBuy, it should first validate the checksum in the URL.

The web shop should calculate the checksum like it is done in the example above, then compare the checksum to the checksum URL parameter. If these checksums do match, the web shop can trust that the other parameters in the URL are also valid.

2. Pre-approval


Pre-approval is an **optional phase** for the customer to check whether he/she is able to get a loan for a certain amount (or to acquire the maximum loan amount he/she can get).

FerBuy pre-approval API is provided for web shops in case they want to provide a pre-filled pre-approval form for the customers. The web shop is free to provide a link without parameters or a link with amount+currency given. In any case, any number of customer information fields can be given.

URL for the pre-approval interface can be found from the table in the end of this document.

Following fields are supported by pre-approval. The service uses HTTP GET protocol, and all data should be in UTF-8 format.

Field	Type	Mandatory?	Sample value	Description
amount	float		102,40	Loan amount in local currency, or in currency specified in the request
currency	char(3)		EUR	Currency used
customer_id	string		123456-123A	Personal identity code in local format
customer_firstname	string		Jack	Firstname
customer_lastname	string		Jones	Lastname
customer_mobilephone	string		050123467	Mobile phone number
customer_email	string		customer@foo.com	E-mail address
customer_address	string		mainstreet 1	Postal address
customer_zip	string		12345	Postal code
customer_city	string		Helsinki	City name
customer_country	string		UK	Customer country
customer_lang	char(2)		UK	Preferred language for the customer.

 If amount is given, also currency is required.



No checksum calculation needed

Because pre-approval is a convenience feature for the customer, there is no need to transfer merchant data or calculate checksums from the parameters. In any case, the customer is free to modify the parameters in the pre-approval form. The final loan decision is made in the purchase service.

4. Country specific URL:s

Country	Purchase	Pre-approval
Czech	https://secure.ferratum.com/ferbuy.cz/api/purchase	https://secure.ferratum.com/ferbuy.cz/pre-approval