EUROPEAN CENTRAL BANK

EUROSYSTEM

Digital Euro Scheme Rulebook – Annex D2 Back-end implementation specification #8 Data dictionary

IMPORTANT NOTICE:

This rulebook is an interim draft of the digital euro rulebook developed by RDG

A separate set of pilot documentation has been developed that can be found here.

Although the pilot documentation is based on the draft rulebook, the draft rulebook should not be used for pilot or implementation purposes.

Rulebook version:	0.91
Status:	DRAFT
Date:	02/07/2026

DISCLAIMERS FOR DRAFT RULEBOOK v0.91

Preliminary and non-binding nature of version 0.91

This document represents a preliminary draft version (version 0.91) of the digital euro scheme rulebook and reflects the ECB's continuous effort to develop a draft rulebook in close cooperation with the

Rulebook Development Group (RDG)[1], comprising senior representatives from European associations representing both the supply and demand side of the retail payments market. Version 0.91 is non-binding and does not necessarily reflect the final views of the ECB, the Eurosystem, the RDG, or any of its members or their constituencies.

No reliance for implementation

Due to its preliminary nature, the draft rulebook version 0.91 is not intended for use as a basis for implementing any systems, processes, or policies related to the digital euro or to the beta digital euro in a Digital Euro Pilot context.Any such actions, prior to the publication of the officially approved rulebook, are under actors' own responsibility.

[1] For more information on the RDG, refer to:
https://www.ecb.europa.eu/euro/digital_euro/timeline/rulebook/html/index.en.html

PREAMBLE

The draft digital euro scheme rulebook is being developed by the Eurosystem together with the support from the digital euro scheme rulebook development group (RDG). The current draft rulebook (v0.91) has been further developed compared to the last version 0.9 of the draft rulebook, which was commented by the RDG and its constituencies. The current draft has been advanced in both structure and content based on the RDG comments received, further elaborations and discussions, and benefited from the various RDG workstreams.

The current version of the rulebook is based on the European Commission's 2023 proposal for a regulation on the establishment of the digital euro (2023/0212/COD) and the Regulation on the provision of digital euro services by payment services providers incorporated in Member States whose currency is not the euro (2023/0211/COD). Given both proposals are currently progressing through the legislative process, and subject to amendments from the EU co-legislators, the rulebook will require updates once both regulations have been finalised for adoption. Additionally, other areas of the rulebook will be further developed in line with ongoing elaborations on subject matters and decisions by the Governing Council of the ECB or are dependent on the work of service providers.

As a result, all along this draft rulebook, text highlighted in yellow refers to placeholders to be updated at later stage when associated decisions or developments are made. It is worth noting that the draft rulebook assumes a single-account set-up for individual digital euro end-users, which deviates from the possibility of having multiple digital euro payment accounts as implied by the European Commission's 2023 proposal for a regulation on the establishment of the digital euro.

The Eurosystem is also cognisant that political agreement has been achieved on the Payment Services Regulation (PSR) and the Third Payment Services Directive (PSD3). The agreed measures must be formally adopted by the European Parliament and the Council of the European Union before they enter into force. The rulebook will be updated accordingly.

The purpose of the current draft is to update the RDG and its constituencies on the progress made following the market consultation, coordinated by the RDG and concluded on 31 October 2025, and to serve as a basis for the further development of the draft rulebook. This document represents a preliminary draft version which has not yet been subject to a general language and editorial review.

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1. Introduction

This document specifies the data dictionary to support the digital euro services described in Annex D2. Future updates of the Annex D2, including additional services not covered in this release, will rely on this data dictionary; however, they may also introduce additional data types.

This document covers complex data types[2] in Section 2, generic data types[3] in Section 3, code lists in Section 4 and finally other ISO related basic types in Section 5. The data types used have been based on **ISO20022** whenever possible, with additional data types created for cases where no corresponding data type was found ISO20022.

For more information on data elements definitions and annotation, please refer to Section 3 of *Introduction* section in Annex D2.

2. Complex data types

Account reference

Attribute	Type	Condition	Description
DEAN	DEAN	{Or - Optional	To be used for digital euro payment accounts. Reference to an account using either a DEAN or an IBAN. Two values are mutually exclusive
IBAN	IBAN	Or - Optional}	To be used for non-digital euro payment accounts. Reference to an account using either a DEAN or an IBAN. Two values are mutually exclusive

Account owner

Attribute	Type	Condition	Description
accountOwner	Max140Text	Mandatory	The name of the owner of the account

[2] A complex data type (in ISO20022 often referred to as a complex business component or message component) is a structured, hierarchical data element composed of multiple sub-elements. It allows for the grouping of related data, such as a full postal address or detailed party information, and can contain both primitive types and other nested complex types.

[3] Generic types in ISO20022 hold a single value like a string or a number.

Additional party information

Attribute	Type	Condition	Description
tradeName	Trade name	Optional	Trade name of the related party
merchantCategoryCode	Merchant category code	Optional	Merchant category code as assigned by ISO:
logoUrl	Max2048Text	Optional	A hyperlink to the logo of the party.
geoLocation	GEO location	Optional	The geo location of the related party.

Address

Attribute	Type	Condition	Description
streetName	Max70Text	Optional	Name of the street
buildingNumber	String	Optional	The number identifying the building on the street
townName	String	Optional	Name of the town or city. This data attribute might be mandated by ASPSP (account servicing payment service providers) for certain payment products, e.g. SEPA products, following regulatory requirements.
postCode	String	Optional	Postcode of the address
country	Country code	Mandatory	Country of the address, expressed as an ISO country code

Agent description 1

Attribute	Type	Condition	Description
financialInstitutionId	Financial institution identification	Mandatory	

Amount

Attribute	Type	Condition	Description

currency	Currency code	Mandatory	ISO 4217 Alpha 3 currency code
amount	String	Mandatory	The amount given with fractional digits, where fractions must be compliant to the currency definition. Up to 14 significant figures. Negative amounts are signed by minus. The decimal separator is a dot. Example: Valid representations for eur with up to two decimals are: 1056 5768.2 -1.50 5877.78

DEAN

Attribute	Type	Condition	Description
DEAN	Max18Text	Mandatory	Unique identifier of a digital euro payment account

Entry

Attribute	Type	Condition	Description
Entry ID	Tbd	Mandatory	Unique identification of the user's digital euro holding in the ledger.

Financial institution identification1

Attribute	Type	Condition	Description
bicfi	BICFI	Mandatory	Code allocated to a financial institution. BIC11 should be used.

Hashed technical proof

Attribute	Type	Condition	Description
hashedTechnicalProof	STR (tbd)	Mandatory	The hashed technical proof is generated by the PSP and submitted to DESP. It is required for the

			emergency switching function.

Indicator digit

Attribute	Type	Condition	Description
indicatorDigit	IndicatorDigit	Mandatory	Indicates whether the requested DEAN is intended for personal/household or commercial/professional use.

Payment identification 1

Attribute	Type	Condition	Description
endToEndId	Max35Text	Optional	Unique identification, as assigned by the initiating user, to unambiguously identify the transaction. This identification is passed on, unchanged, throughout the entire end-to-end chain.

Payment identification 2

Attribute	Type	Condition	Description
UETR	UETR	Optional	Unique end-to-end transaction reference, a unique, unalterable reference which allows a payment to be located at any time, by any of the parties in the chain. Set by the instructing PSP.

Party description

Attribute	Type	Condition	Description
name	Max140Text	Optional	Name of the party
postalAddress	Postal address	Optional	Postal address of the party
identification	Party identification	Optional	Unique and unambiguous identification of a party
additionalPartyInformation	Additional party information	Optional	

Party description 1

Attribute	Type	Condition	Description
name	Max140Text	Optional	Name of the party

Party description 2

Attribute	Type	Condition	Description
name	Max140Text	Optional	Name of the party
postalAddress	Postal Address	Optional	Postal address of the party

Party identification 1

Attribute	Type	Condition	Description
privateId	Private identification	Mandatory	A scheme name defined in a proprietary way.

Person identification

Attribute	Type	Condition	Description
identification	Max35Text	Mandatory	Unique and unambiguous identification of an oersib[4].
schemeNameCode	Person identification code	{Or - Optional	An entry provided by an external ISO code list
schemeNameProprietary	Max35Text	Or – Optional}	A scheme name defined in a proprietary way.
issuer	Max35Text	Optional	Issuer of the identification

[4] Definition, including the interesting word oersib, taken literally from Berlin Group Definition

Postal Address

Attribute	Type	Condition	Description
addressLine	Array of Max140Text	{Or - Optional	At most seven entries are permitted. May only be used, if none of the structured address elements "streetName", "buildingNumber", "postcode" or "townName" is used.
department	Max70Text	Or -Optional}	Identification of a division of a large organisation or building.
subDepartment	Max70Text		Identification of a sub-division of a large organisation or building.
streetName	Max70Text		Name of a street or thoroughfare.
buildingNumber	Max16Text		Number that identifies the position of a building on a street.
buildingName	Max35Text		Name of the building or house.
floor	Max70Text		Floor or storey within a building.
postBox	Max16Text		Numbered box in a post office, assigned to a person or organisation, where letters are kept until called for.
room	Max70Text		Building room number.
postCode	Max16Text		Identifier consisting of a group of letters and/or numbers that is added to a postal address to assist the sorting of mail.

townName	Max35Text		Name of a built-up area, with defined boundaries, and a local government. Usage rule: If address lines are not used, this attribute is mandatory.
townLocationName	Max35Text		Specific location name within the town.
districtName	Max35Text		Identifies a subdivision within a country sub-division.
countrySubDivision	Max35Text		Identifies a subdivision of a country such as state, region, county.
country	Country Code	Optional	Nation with its own government. Usage rule: If address lines are not used, this attribute is mandatory.

Private identification

Attribute	Type	Condition	Description
birthDate	IsoDate	Optional	Date of birth
provinceOfBirth	Max35Text	Optional	Province of birth
countryOfBirth	Country Code	Optional	Country of birth
others	array of Person Identification	Optional	Other information

Proxy Account Identification

Attribute	Type	Condition	Description
aliasType	ExternalProxyAccountType1Code	Mandatory	Type of proxy used to identify an account (e.g. phone number, email address)
identification	Max2048Text	Mandatory	Proxy value used to identify the account

Remittance

Attribute	Type	Condition	Description
reference	Max35Text	Mandatory	The actual remittance reference
referenceType	Max35Text	Optional	Type of the remittance reference
referenceIssuer	Max35Text	Optional	Issuer of the remittance reference

Status reason

Attribute	Type	Condition	Description
statusReasonCode	ExternalStatusReasonCode1	Mandatory	Machine readable reason code
statusReasonAdditionalInformation	Max140Text	Optional	Human readable explanation

Terminal ID

Attribute	Type	Condition	Description
terminalId	Max8Text	Mandatory	Unique identifier of the terminal used to initiate the transaction

Transaction status

Attribute	Type	Condition	Description
status	StatusCode	Mandatory	Indicates the outcome of the request
statusReason	StatusReason	Optional	Provides detailed reason information

UETR

Attribute	Type	Condition	Description
UETR	UUID (v7)	Mandatory	Universally unique identifier to provide an end-to-end reference of a payment transaction.

User Identification

Attribute	Type	Condition	Description
userId	UUID (v7)	Mandatory	Unique user ID generated by PSP based on a subset of

			mandatory attributes (tbd).

3. Generic data types

This specification is only using the basic data elements "String", "Boolean", "ISODateTime", "ISODate", "UUID" and "Integer" (with a byte length of 32 bits) and ISO based code lists.

Max35Text, Max70Text, Max140Text Max500Text, Max1000Text are defining strings with a maximum length of 35, 70, 140, 500 and 1000 characters respectively.

4. Code lists

Credit transfer payment method code

This code set corresponds to ISO 20022 PaymentMethod3Code:

Code	Description
TRF	Credit transfer

Indicator digit

Code	Description
0	DEAN used for personal or household capacity
1	DEAN used for commercial or professional purposes

Payment type

This code set can be considered exhaustive

Code	Description
BP01	B2P payment
DF01	Defunding
FU01	Funding
PB01	POI payment (POS / eCOM)
PP01	P2P payment

Report mode

Code	Description
DELT	Delta report
FULL	Full report

Report type

Code	Description
ADMR	Account data maintenance report
DIRE	Dispute report
FECR	Fee calculation report

FRMA	Fraud management - Situation awareness and intelligence report
REDR	Repository data report
RDMR	Repository data maintenance report
TRRE	Transactions report

Status code

Code	Code name	Code definition
ACCP	AcceptedCustomerProfile	Preceding the check of technical validation was successful. The customer profile check was also successful.
ACSC	AcceptedSettlementCompletedDebitorAccount	Settlement is completed. Usage: this can be used by a market infrastructure reporting to infrastructure participant or an account servicer to account owner to report that the transaction account entry has been completed.
ACTC	AcceptedTechnicalValidation	Authentication and syntactical and semantical validation are successful
RCVD	Received	Payment instruction has been received.
RJCT	Rejected	Payment instruction has been rejected.

Status reason code

Code	Description
ExternalStatusReasonCode1	Status reason code

User type

Code	Description
BUSI	Business user
INDI	Individual user

5. Other ISO-related basic types

The following codes and definitions are used from **ISO 20022**:

- Purpose code: ExternalPurpose1Code
- Category purpose code: ExternalCategoryPurpose1Code
- Cash account type: ExternalCashAccountType1Code

- BICFI: BICFIIdentifier (BIC11)
- IBAN: IBAN2007Identifier
  Pattern: [A-Z]{2}[0-9]{2}[A-Z0-9]{1-30}
- Phone number: PhoneNumber
- Merchant category code: Category code conform to ISO 18245
- Service level code: ExternalServiceLevel1Code
- Status reason code: ExternalStatusReasonCode1
- Alias type: ExternalProxyAccountTypeCode1

The following code is a concatenated code from ISO20022:

- BankTransactionCode: This code type is concatenating the three ISO20022 codes domain code, family mode and subfamiliy vode by hyphens, resulting in “DomainCode”-“FamilyCode”-“SubFamilyCode”.

For all codes used in JSON structures, not the abbreviation defined for XML encoding, but the name of the code is used as a value.

The following codes are used from **other ISO standards**:

- Currency code: Codes following ISO 4217 Alpha 3
- Country code: Two characters as defined by ISO 3166

Further **basic ISO data types**:

- ISODateTime: A particular point in the progression of time defined by a mandatory date and a mandatory time component, expressed in either UTC time format (YYYY-MM-DThh:mm:ss.sssZ), local time with UTC offset format (YYYY-MMDDThh:mm:ss.sss+/-hh:mm), or local time format (YYYY-MM-DDThh:mm:ss.sss). These representations are defined in "XML Schema Part 2: Datatypes Second Edition - W3C Recommendation 28 October 2004" which is aligned with ISO 8601. Strong Recommendation: Only use UTC or UTC offset format.
- ISODate: A particular point in the progression of time in a calendar year expressed in the YYYY-MM-DD format.