

# Quick Guide to Cardholder Activated Terminals (CATs)

Quick Overview Guide to CATs and selecting the "best" one



# There are two primary classifications of Point of Sale Terminal Types: Attended and Unattended

Payment Terminals are classified into two major types, depending on situation:

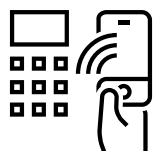
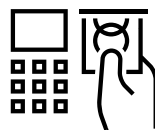
(a) Attended Terminals and (b) Unattended Terminals or **Cardholder Activated Terminals (CATs)**



A POS Transaction occurring at an **attended** POS Terminal is a face-to-face Transaction, **since a Sales Person or Representative is present at the time of the Transaction.**

A POS Transaction occurring at an **unattended** POS Terminal is a non-face-to-face Transaction, **as NO Sales Person or Representative is present at the time of the Transaction.** Examples of unattended POS Terminals include ticket dispensing machines, vending machines, automated fuel dispensers, toll booths, and parking meters.

A MasterCard POS Transaction that occurs at an unattended POS Terminal must be identified as a **Cardholder-Activated Terminal (CAT) Transaction**, as described in Appendix D of the Mastercard Transaction Processing Rules Manual. See overview below:



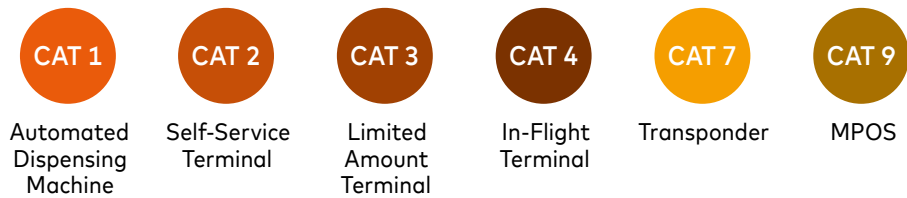
Level	Description
CAT 1	Automated Dispensing Machines
CAT 2	Self-Service Terminals
CAT 3	Limited Amount Terminals
CAT 4	In-Flight Terminals
CAT 6	Electronic Commerce
CAT 7	Transponders
CAT 9	Mobile Point of Sale (MPOS)

# The Following is a Helpful Guide to Selecting an Appropriate (CAT)

CAT 6 must be used to identify all electronic commerce transactions and digital secure remote payments (DSRP) – these will be covered separately

The CAT rules apply to Mastercard POS transactions only, as Maestro acceptance requires a PIN to verify the Cardholder identity, exceptions are:

- EMV or Chip based Maestro Contactless < EUR 25 for all contactless Maestro transactions
- EMV or Chip based Maestro Contact transactions at CAT 3 Terminals for limited amounts







	CAT 1	CAT 2	CAT 3	CAT 4	CAT 7	CAT 9
<b>1 My unattended Terminal:</b>						
must have a secure online connection	✓	✓	—	✓	✓	✓
is in a location where no online connection is possible	—	—	✓	—	—	—
must have a mag stripe reader as backup to CHIP	✓	—	—	—	✓	✓
Must have a secure PIN Pad	✓	—	Optional	Optional	—	✓
May be a contactless only* terminal, restricted to specific industries	✓	✓	✓	—	—	✓
<b>2 My Terminal should accept:</b>						
All Mastercard and Debit Mastercard	✓	✓	✓	✓	✓	✓
All Maestro or Maestro under certain restrictions	✓	✓	✓	✓	—	✓
<b>3 Certain Restrictions:</b>						
	No Restrictions	Maestro w/, CDCVM or Contactless < EUR 25	Limited to EUR 50 & Specific Industries only	Maestro w/PIN Pad, CDCVM or Contactless < EUR 25	—	Maestro w/PIN Pad, CDCVM or Contactless < EUR 25

\* Contactless only is limited to certain industries only  
Offline CHIP Authorization possible in Europe Region for < EUR 200

# Overview to select a CAT for your needs

The rules apply to Mastercard and Debit Mastercard POS transactions only, unless indicated and with the following exceptions:

- CAT 6 must be used to identify all electronic commerce transactions and digital secure remote payments (DSRP) these will be covered separately

	 CAT 1	 CAT 2	 CAT 3	 CAT 4
	Automated Dispensing Machines	Self-Service	Limited Amount Terminals	In-Flight Terminals
<b>Rule of Thumb</b>	Generally dispenses something of high-value	Generally dispenses something of low value – speed @ device important	Is only allowed for certain merchant types and the terminal is OFFLINE	Is only allowed for certain merchant types and is "In-Flight"
<b>Acceptable Mastercard Products</b>	All Mastercard & Maestro Cards	All Mastercard & restricted Maestro	All Mastercard & restricted Maestro	All Mastercard & restricted Maestro
<b>Maestro Acceptance Restrictions</b>	Accepts all Maestro if secure PIN entry possible or CDCVM for Contactless	<ul style="list-style-type: none"> <li>• Contactless &lt; EUR 25</li> </ul>	<ul style="list-style-type: none"> <li>• Contactless &lt; EUR 25</li> <li>• Contact See maximum amounts</li> </ul>	<ul style="list-style-type: none"> <li>• Contactless &lt; EUR 25</li> <li>• &gt; EUR 25, if Offline PIN possible</li> </ul>
<b>Maximum Amount</b>	No Maximum Transaction Amount	No Maximum Transaction Amount	<ul style="list-style-type: none"> <li>• MCC 4684: EUR 50</li> <li>• MCC 7523: EUR 50</li> <li>• MCC 7542: EUR 50</li> <li>• MCC 5499: EUR 25</li> </ul>	No Maximum Transaction Amount
<b>Recommended / Required Terminal Type</b>	Hybrid only Terminal	<ul style="list-style-type: none"> <li>• EMV Contact + Contactless</li> <li>• Contactless only possible</li> </ul>	<ul style="list-style-type: none"> <li>• EMV Contact + Contactless</li> <li>• Contactless only possible</li> </ul>	Hybrid or EMV Contact + Contactless
<b>Needs to be Online or Online Capable for Issuer Authorization</b>	Must authorize transaction online to issuer or may be authorized offline via CHIP (< EUR 200)	Must authorize transaction online to issuer or may be authorized offline via CHIP (< EUR 200)	Is OFFLINE only; may be authorized offline via the CHIP	Must authorize transaction online to issuer or may be authorized offline via CHIP (< EUR 200)
<b>Needs Cardholder Verification (i.e. PIN Pad &amp; PIN Entry)</b>	Needs a secure PIN Entry Device for online or offline PIN	NO CVM required	Optional for offline PIN verification, otherwise no CVM required	Optional for offline PIN verification, otherwise no CVM required
<b>No Cardholder Verification Required if:</b>	Contactless CDCVM enabled; or a Contactless Transaction is < CVM Limit	CDCVM enabled; or a Contactless Transaction < CVM Limit	CDCVM enabled; or a Contactless Transaction < CVM Limit	CDCVM enabled; or a Contactless Transaction < CVM Limit
<b>MCC or Industry Restrictions, if applicable</b>	None	None	<ul style="list-style-type: none"> <li>• 4684: Bridges, Tolls</li> <li>• 7523: Parking, Garages</li> <li>• 7542: Car Wash</li> <li>• 5499: Vending Machines</li> </ul>	<ul style="list-style-type: none"> <li>• 4899: Pay TV or Radio</li> <li>• 5309: Duty Free</li> <li>• 5964: Direct Marketing</li> <li>• 7299: Other Services</li> <li>• 7994: Video Games</li> </ul>



Reserved























Transponder



Reserved



Hybrid

				
<b>Rule of Thumb</b>		Are Transponder type terminals, usually card is on-file		Same as a CAT 1 or attended Hybrid Terminal
<b>Acceptable Mastercard Products</b>		All Mastercard & restricted Maestro		All Mastercard and Maestro
<b>Maestro Acceptance Restrictions</b>		Contactless < EUR 25		Accepts all Maestro if secure PIN entry possible or CDCVM for Contactless
<b>Maximum Amount</b>		No Maximum Transaction Amount		No Maximum Transaction Amount
<b>Recommended / Required Terminal Type</b>		• EMV Contact or Contactless		• Hybrid Terminal • Contactless only
<b>Needs to be Online or Online Capable for Issuer Authorization</b>		Must authorize transaction online to issuer or offline via CHIP (< EUR 200)		Must authorize transaction online to issuer or offline via CHIP (< EUR 200)
<b>Needs Cardholder Verification (i.e. PIN Pad &amp; PIN Entry)</b>		Optional for offline PIN verification, otherwise no CVM required		Needs a secure PIN Entry Device for online or offline PIN
<b>No Cardholder Verification Required if:</b>		CDCVM enabled; or a Contactless Transaction < CVM Limit		Contactless CDCVM enabled; or a Contactless or QPS Transaction is < CVM Limit
<b>MCC or Industry Restrictions, if applicable</b>		None		None

\* Contactless only is limited to certain industries only  
Offline CHIP Authorization possible in Europe Region for < EUR 200

# Authorization Types, their Definitions and Requirements applicable to all Terminal Types

Merchants or Acquirers in the Europe Region must ensure that any authorization request for any amount greater than zero is identified as either a preauthorization or as a final authorization.\*

## Pre-Authorizations\*



In the Europe Region, a transaction should be identified as a Mastercard or Debit Mastercard POS Transaction authorization request or a Card-not-Present Maestro POS Transaction as a **preauthorization** if:



1. Authorization is requested for an estimated amount that is greater than zero;

**OR**

2. The Transaction might not be completed for reasons other than technical failure or lack of full Issuer approval; for example:
  - a. When the Cardholder will be offered the choice at a later time to complete the Transaction with another payment means (such as when checking out of a hotel or returning a rental car);
  - b. When the products ordered by the Cardholder might be later found to be out of stock; or
  - c. If the mobile phone number for which the Cardholder has requested a top-up is later found not to exist.



**NOTE:** All clearing messages corresponding to a preauthorization must be presented within **30 calendar days for a Mastercard or Debit Mastercard and 7 Calendar Days for a Maestro** of the authorization approval date

## Final Authorizations\*

In the Europe Region, any authorization request for an amount greater than zero is identified as a **final authorization** if:



1. The Transaction may no longer be cancelled after the authorization request is approved in full by the Issuer (excluding non-completion for technical reasons such as tele-communications failure or POS Terminal failure);

**AND**

2. The authorization being requested is for the final Transaction amount.



**NOTE:** All clearing messages corresponding to a final authorization for either Mastercard or Maestro must be presented within **7 Calendar Days** of the authorization approval date

\*See Transaction Processing Rules, Chapter 2.1, 2.5, 2.7 and, Europe Region Sections

# Sample Transaction Flows for Pre-Authorizations If you know the Final Amount, then use a Final Authorization

Pre-Authorizations are for estimated amounts. Incremental Pre-Authorizations extend or increase the original pre-authorization amount or time frame

## Pre-Authorizations\*

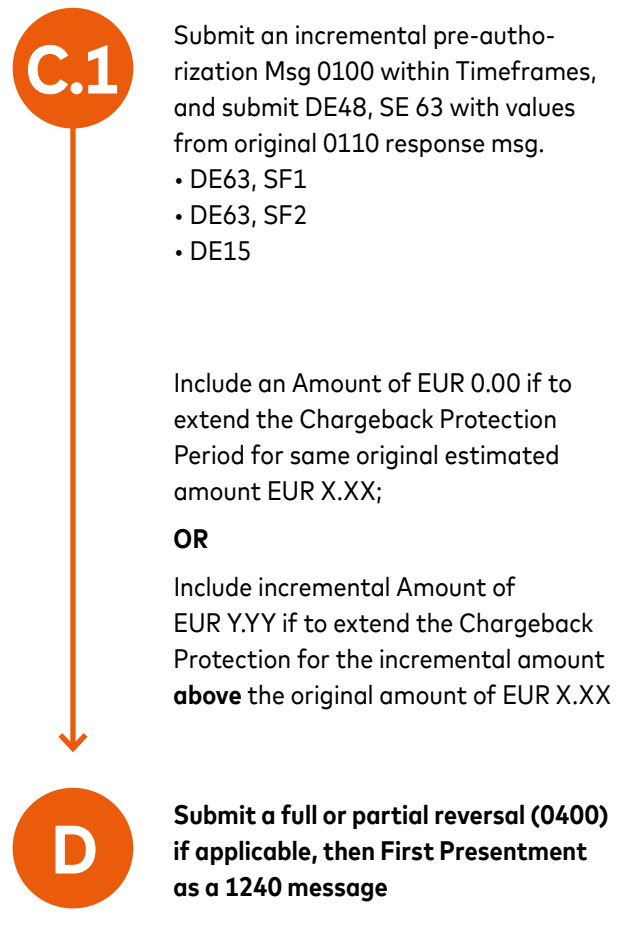


## Incremental Pre-Authorization\*

An incremental pre-authorization "extends" the original pre-authorization Chargeback Protection period for either:

- The originally estimated amount;
- OR**
- Incrementally increases the original amount by an incremental amount

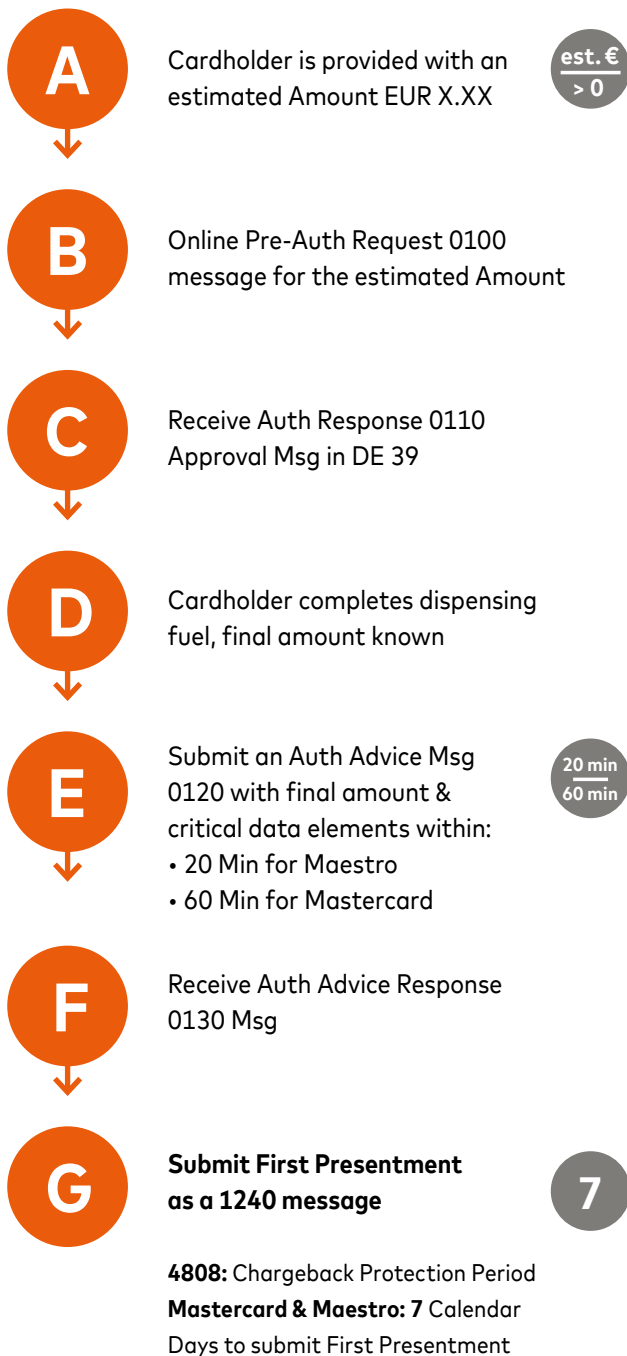
**4808:** Chargeback Protection Period extension if submitted within the original timeframes AND for the same original estimated amount or an incremental amount – see below



# Sample Transaction Flows for Pre-Authorizations If you know the Final Amount, then use a Final Authorization

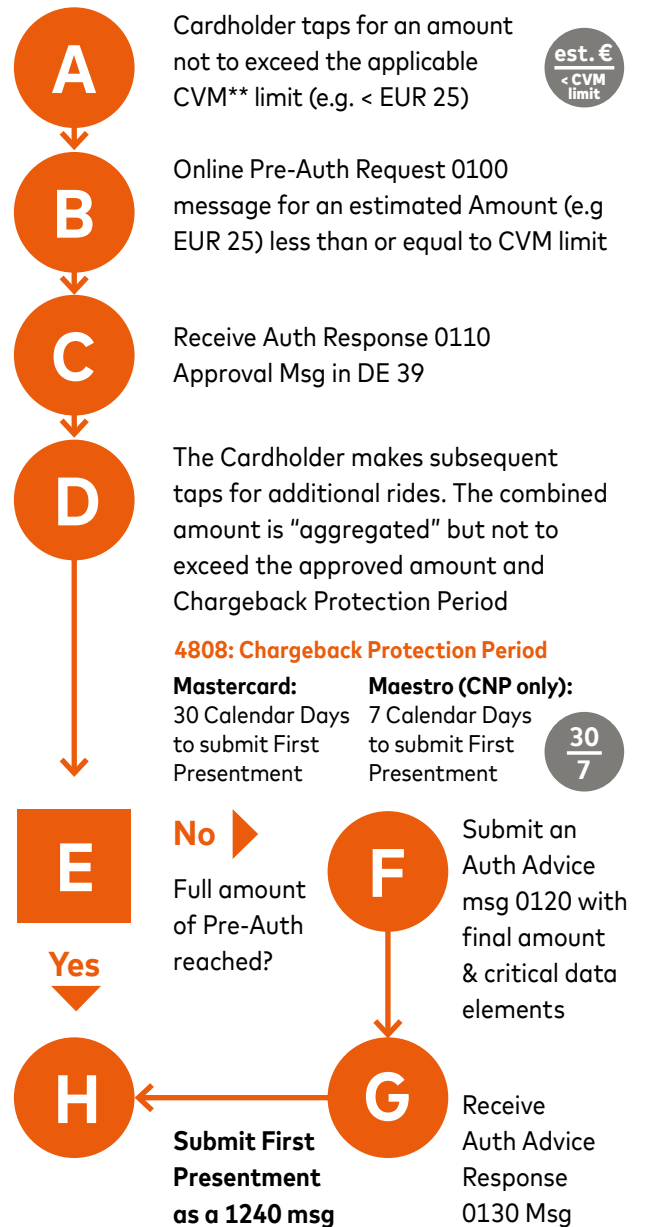
There are two unique pre-authorization process flows for Automated Fuel Dispensers and Contactless Transit Transactions

## CAT 1: Automated Fuel Dispenser



## Transit: Aggregated Contactless Transit

These transit transactions are limited to MCC 4111, 4131 and 4784 and combine one or more contactless taps performed with one contactless account number and with one transit merchant



\*\*See most recent Mastercard Quick Reference Booklet for then actual CVM limits



# Final Authorization Flows for a Final Amount

Final Authorizations are for a final amount. These may also be used for Mastercard Transit Transactions where there is pre-funding or real-time approval

## Pre-Authorizations



Final

7




## Transit: Pre-Funded or Real-Time

These transit transactions are similar to the Final Authorization:

Final

**A** **Pre-Funded Transit Transactions**  
Occurs when a cardholder purchases value redeemable for future travel with a transit merchant. The purchased value is held by the transit merchant in a separate account. The merchant sends a Final Authorization Request 0100 for the full amount of the transaction.

**B** **Real-time Authorized Transit Transactions**  
Occurs when the transit operator generates a Final Authorization Request 0100 message each time a cardholder uses their card or device at a transit terminal for the full amount of the transaction.



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