



# How character encoding affects SMS message length

The way you create your SMS messages impacts the way your messages are sent and received by your customers.

Understanding a few key concepts will ensure your messages are delivered the way you expect and reduce the risk of unexpected costs.

SMS messages typically contain a maximum of 160 7-bit characters or 70 2-byte characters. If the allowed character count is exceeded, the SMS splits into multiple messages and additional costs are charged.

Message type	Max character count for GSM
Standard single SMS message	160
Two concatenated SMS messages	306
Three concatenated SMS messages	459
Four concatenated SMS messages	612
Five concatenated SMS messages	765
Six concatenated SMS messages	800

**Standard single SMS messages:** For GSM phones with 7-bit character encoding, a standard SMS message can contain a maximum of 160 characters.

When the message text goes over 160 GSM characters, the number of characters per text reduce.

**GSM-7 character** set supports most, but not all.

### GSM characters

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z a b c  
d e f g h i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9  
: ; < = > ? ¡ ¢ ! " # ¤ % & ( ) ' \* + , - . / Ä Ö Ñ Ü § ä ö ñ ü à  
@ £ \$ ¥ è é ù ì ò Ç Ø ø Å å Δ \_ Φ Γ Λ Ω Π Ψ Σ Θ Ξ Æ æ ß É

## **Non-standard UCS-2 characters can be invisible and can drop the character total significantly**

**Your PMS won't show the hidden characters and the true count is not reflected when creating or checking the templates.**

### **Best practices**

- Be aware that if you use a single character outside the GSM character set, your message will be split into multiple messages and the limit of characters is significantly reduced.
- Be mindful of unnecessary added spaces. These are also found after the end of the message.
- Be aware if you use Microsoft Office to compose your messages, standard characters can be converted to non-standard characters without you knowing.

Further information

<https://help.goacoustic.com/hc/en-us/articles/360043843154--How-character-encoding-affects-SMS-message-length>

# Character Checking Tool

<https://twiliodevd.github.io/message-segment-calculator/>

Example text template:

Kia ora #FirstName#, this is to remind you that you are booked into #AppointmentProviderName# on #AppointmentDate# at #StartTime#. Please call #PLAPrimaryPhone# if you are unable to make your session.

PMS character count showing as 200 (which is correct) and you would expect to be charged as 2 SMS.

When run through the checking tool it shows hidden non-standard characters that change how the message is sent and increases the total of messages.

Once the non-standard characters are removed it shows the correct 200 character. You can then copy from the tool back into your PMS and it will be fixed or alternatively remove the characters in your PMS.