



## Keychain Buckle / Quick Disconnect



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### Summary

Don't need to carry all your keys at once? Put them on a separate loop and disconnect and reconnect them at will.



0.17 hrs



1 pcs



0.20 mm



0.40 mm



PET



1 g



Prusa MK4

[Household](#) > [Other House Equipment](#)

Tags: [small](#) [buckle](#) [keychain](#) [key](#) [quickconnect](#)

I hate any bulk to my keys. So, I only carry around the keys that I need. This buckle acts as a quick disconnect for some of your keys. Maybe for 1 key or for a whole set. Colour code them even! These are both smaller and lighter than the metal disconnects that I found at the dollar store.

Taking the car? House and mail + car keys.

Taking your bike? House and mail + bike keys.

Going for a walk? Leave everything at home except just the house and maybe mail keys.

Carry a USB drive or other utility piece on your keys that makes sense to disconnect when using? Connect it too with a buckle!

Other buckles are just too large for keys. This was designed to be as small as possible without being too fragile or loose. Recommend printing out of PETG and at 0.20mm layer height with a 0.4mm nozzle. 100% infill for strength. Different settings may make tolerances tighter or looser or weaker because wall widths are designed to be multiples of the 0.4mm nozzle width or 0.20mm layer height.

The female buckle prints better vertically but you may need a brim to get away with that depending on your bed adhesion. I didn't need a brim. No supports needed.

I printed it with the wide default wide connector, but I have 2 variants with a smaller hole either centered or off centered if you prefer. You can mix and match. I printed with Polymaker PolyLite Blue PETG.

Update: I've added my Fusion 360 file, and a picture with the primary settings for adjusting the tolerances. Mainly, parameter "a" in my testing has the biggest impact on fit of the buckle. Smaller values will be tighter. Smaller values for "hook\_radius" will be tighter as well. Larger values for "b" will be tighter. Change in 0.1mm steps one at a time. It took me about a dozen prints to get this to my default values that work for me.

## Model files

 **Offset loop** 2 files

 **key-buckle-offset-a.stl**

 **key-buckle-offset-b.stl**



## Small loop

2 files



**key-buckle-small-loop-a.stl**



**key-buckle-small-loop-b.stl**



**key-buckle-ab.3mf**

☐ A and B oriented to print at the same time



**key-buckle-a.stl**



**key-buckle-b.stl**



**key-buckle-v25.f3d**

☐ If you need to change a few parameters to adjust tolerances.

## Print files



**key-buckle-ab\_04n\_02mm\_petg\_mk4is\_10m.gcode**

PET 0.40 mm 0.20 mm 0.17 hrs 1 g Prusa MK4

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