



Nema 17 / GX12 Socket End Caps



GreatOldOne

[VIEW IN BROWSER](#)

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Summary

End-caps for Nema 17 stepper motors to add GX12 locking circular connectors



7.19 hrs



5 pcs



0.20 mm



0.40 mm



PET



59 g



Prusa
MK3/S/S+

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Tags: [stepper](#) [nema](#) [connector](#) [stepermotor](#) [nema17](#)
[endcap](#) [gx12](#)

4 endcaps for Nema 17 sized stepper motors, allowing the use of GX12 (12mm diameter) locking circular multi pin connectors. More robust than the usual 6 pin JST connector or straight wires coming from the coils, both of which are prone to fatigue & breakages

Two are sized to cover a motor that has a JST connector, the others just the coil pair wires. Each type has a variation for top or side orientation of the GX12 connector.

To install:

Remove the screws that hold the metal rear motor bearing on.

In the case of motors with just wires, leave enough slack in them to allow you to pass them through the GX12 locking nut & the cap, then solder the wires to the connector.

In the case of motors with JST connectors, ensure you have enough wire coming from the JST to allow you to put the cap on once you have the other end soldered to the GX12.

Push the GX12 in to the cap, put the nut on the back and spin the connector to draw the nut up.

Put the cap on the back of the motor, and secure with M3 cap-head screws of sufficient length. The motor in the pics had 26mm screws originally; the ones securing the end cap and motor bearing now are 30mm so I'd suggest at least 4mm longer than the ones taken out.

Don't put too long a screws in though, as you will lose some (or all) of the threads available at the front of the motor for mounting.

Printing Tips:

Print in PETG, with one of the angled faces with the mounting holes down on the print bed - this way you can print without any support structure.

Update 14/03/2022:

Added a new cap, with an offset top exit for motors with JST connectors. I put this together for use with my OAT focuser to allow the connector to clear the rear support of the mount - but it might be handy in other situations.

<https://www.prusaprinters.org/prints/150513-openastrotracker-focuser>

Model files



nema17endjstsidev3.stl

☐ Side exit, for motors with JST connector



nema17endwiressidev3.stl

☐ Side exit, for motors with just coil wires



nema17endwirestop.stl

☐ Top exit, for motors with just coil wires



nema17endjsttop.stl

☐ Top exit, for motors with JST connector



nema17endplugofftopexit.stl

Print files



nema17endjstside_02mm_petg_mk3s_1h30m.gcode

🌀 PET 📏 0.40 mm 📐 0.20 mm ⌚ 1.50 hrs ⚖️ 12 g 🖨️ Prusa MK3/S/S+



nema17endjsttop_02mm_petg_mk3s_1h28m.gcode

🌀 PET 📏 0.40 mm 📐 0.20 mm ⌚ 1.47 hrs ⚖️ 12 g 🖨️ Prusa MK3/S/S+



nema17endwiresside02mm_petg_mk3s_1h20m.gcode

🌀 PET 📏 0.40 mm 📐 0.20 mm ⌚ 1.33 hrs ⚖️ 11 g 🖨️ Prusa MK3/S/S+



nema17endwirestop_02mm_petg_mk3s_1h21m.gcode

🌀 PET 📏 0.40 mm 📐 0.20 mm ⌚ 1.35 hrs ⚖️ 11 g 🖨️ Prusa MK3/S/S+



nema17endplugofftopexit_02mm_petg_mk3s_1h33m.gcode

🌀 PET 📏 0.40 mm 📐 0.20 mm ⌚ 1.54 hrs ⚖️ 13 g 🖨️ Prusa MK3/S/S+

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