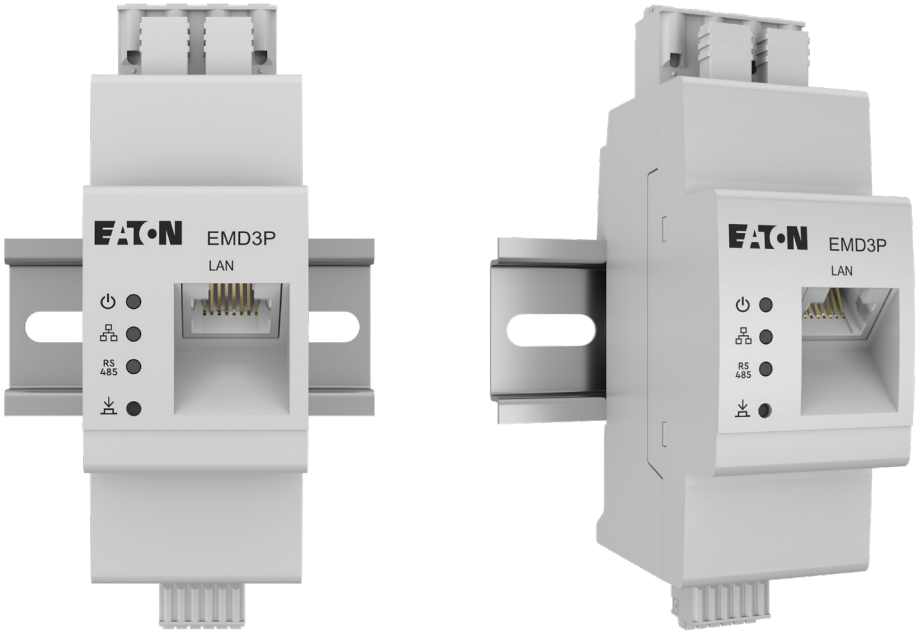
Manual **MN005003EN** Effective June 2025

EMD3P How-to-do IP address setting: DHCP vs fixed IP and finding device on network



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Option 1:

DHCP server exists and feature enabled in EMD3P. (Default)

- The configuration interface of the DHCP server usually has a corresponding submenu, e.g. “Client List” or similar, where the assigned IP addresses are listed.
- Here the device reports with <product name> <serial number>.
- The product name for Eaton devices is “EMD3P-CTx” (x: 63 for 63A, 600 for 600A version).

DHCP Name:
→ The device reports to the DHCP with its name (see above).
→ This means that the device can also be reached directly via ping EMD3P-12345678.

mDNS
→ The IP address of the device assigned by the DHCP server can be determined via mDNS.

Option 2:

No DHCP server available and DHCP function enabled in EMD3P

- It tries to get an IP address from the DHCP server for about 10s.
- If no DHCP server is available, EMD3P uses the Auto-IP function and assigns a pseudo-random address, e.g. IPv4: **169.254.x.x,** Mask: 255.255.0.0, Gw: 0.0.0.0.
- This means that the EMD3P can be reached in a network **169.254.x.x** at this IP address.

Note:
→ It cannot be ensured that two devices on the same network do not have the same IP address.
→ For this reason, the assigned addresses (link local) are not routed by network devices by default.
→ This means that the remote station must be in the same network segment.

mDNS
→ The AUTO IP address of the devices can be determined via mDNS.
→ The device is also found by mDNS if the IP address / netmask does not match, but access is not possible.

Option 3:

no DHCP server, DHCP function disabled in EMD3P

- Thus, it is irrelevant whether a DHCP server exists in the network or not.
- If the DHCP function is deactivated in the EMD3P, the EMD3P reports by default under IPv4: 192.168.0.101, Mask: 255.255.255.0.

mDNS
→ The static IP address of the devices can also be determined via mDNS.

Finding an IP address via mDNS:

Windows:
e.g. Bonjour Browser for Windows (Hobbyist Software) (free)

Linux:
avahi-browse - Browse for mDNS/DNS-SD services
using the Avahi daemon (free)

iOs Apple:
e.g. Discovery - DNS-SD Browser on the App Store (free)

Android:
Service Browser - Apps on Google Play (free)

Set fixed IP address via Modbus TCP:

1. Identify the IP address in one of the ways mentioned.
2. Select Modbus TCP SW for the operating system used

   Windows e.g.
   - Gineers Modbus tester (free)
   - QModMaster (free)
   - Modbus Poll (License 129 U$)

3. Relevant Modbus registers:
   Configuration Register

Description		Register Addr	Example
IP-address	Octet 1	259	192
IP-address	Octet 2	260	168
IP-address	Octet 3	261	0
IP-address	Octet 4	262	88
Subnet Mask	Octet 1	263	255
Subnet Mask	Octet 2	264	255
Subnet Mask	Octet 3	265	255
Subnet Mask	Octet 4	266	0
DHCP client	On=1/Off =0	267	0
Restart device	(=1)	61615	1

Write the registers
- for IP address
  (e.g. 192.168.0.88) and subnet mask (e.g. 255.255.255.0)
- for DHCP with “0”
- for device restart with “1”

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