

ATEX / IECEx
INSTRUCTION GUIDE
concerning the use of M340
Industrial Programmable Controllers
for applications in potentially
explosive atmosphere
(zones 2/22)



INSTRUCTION GUIDE

concerning the use of M340 Industrial Programmable Controllers for applications in potentially explosive atmosphere (Zones 2/22)

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Type examination certificate: INERIS 12ATEX3002U
IECEX Certificate of Conformity: IECEX INE12.0031U

SAFETY INFORMATION

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a Danger safety label indicates that an electrical hazard exists, which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates an imminently hazardous situation, which, if not avoided, **will result** in death or serious injury.

WARNING

WARNING indicates a potentially hazardous situation, which, if not avoided, **can result** in death, serious injury, or equipment damage.

CAUTION

CAUTION indicates a potentially hazardous situation, which, if not avoided, **can result** in injury or equipment damage.

PLEASE NOTE

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

SCOPE

The present document applies when the modules bear the Ex marking and provides important information for M340 automation system used in hazardous areas.

It is supplied in English only with ATEX and IECEx certified M340 power supply modules (BMXCPS3020H). It is also downloadable from www.schneider-electric.com.

If any translation is needed, you can contact your local Schneider Electric support.

CERTIFIED ATEX AND IECEx M340 MODULES

Certified modules are listed on the ATEX attestation (INERIS 12ATEX3002U), IECEx certificate (IECEx INE12.0031U), on Schneider Electric website and in the M340 catalogue.

RELEVANT STANDARDS

These modules have been manufactured in accordance with:

- Standard EN 60079-0 (2009) and IEC 60079-0 Ed6 (2011): Explosive atmospheres - Part 0: Equipment - General requirements.
- Standard EN 60079-15 (2010) and IEC 60079-15 Ed4 (2010): Explosive atmospheres - Part 15: Equipment protection by type of protection "n".
- Standard EN 60079-31 (2009) and IEC 60079-31 Ed1 (2008): Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t".

 **DANGER**


EXPLOSIVE POTENTIAL

Install, use, and maintain these modules in accordance with:

- Standard IEC 60079-14 Ed4 (2007): Explosive atmospheres - Part 14: Electrical installations design, selection and erection.
- Standard EN 60079-17 (2007): Inspection and maintenance of electrical installations in hazardous areas.
- Standard EN 61241-14 (2004): Electrical apparatus for use in the presence of combustible dust, Part 14: Electrical apparatus protected by enclosures. Selection, installation and maintenance.
- Edicts, by-laws, laws, directives, circulars, standards, regulations and any other document relating to where the apparatus is installed.

Failure to follow these instructions will result in death or serious injury.

PERMITTED ZONES OF APPLICATION

M340 modules installed in zones 2 and 22 hazardous areas must be certified and bear the  marking.

The ATEX and IECEx certified M340 modules are equipments suitable for hazardous areas zones 2 and 22 if the special conditions of chapter "Installation, Start-up, Operation and Maintenance" are fulfilled.

ATEX and IECEx certified M340 modules			Suitable for hazardous area
Equipment category According to European ATEX directive 94/9/EC	Equipment protection level According to international standards IEC 60079-x	Type of protection	
3G	Gc	Non-sparking 'nA' Sparkling 'nC'	Zone 2 (Gas)
3D	Dc	Enclosure 't'	Zone 22 (Dust)

When certified M340 modules are selected for hazardous areas, make sure with the marking on modules that they are compatible with the conditions permitted for the hazardous area at the site where it is being used.

INSTALLATION, START-UP, OPERATION AND MAINTENANCE

Before any use of certified M340 modules in zones 2 and 22 hazardous areas:

- Follow the recommendations in the M340 Hardware Reference Guide (35012676).
- Install the certified M340 modules according to Schneider Electric specifications and use them within their specified ratings.
- Properly connect the power supply module and the backplane to ground.
- Wire the field wiring terminal blocks according to the recommendations in the M340 Hardware Reference Guide.
- Only use fuses that are non-rewirable and non-indicating cartridge types.

DANGER

EXPLOSIVE POTENTIAL

- Confirm that the location is free from explosively hazardous gases or dust before connecting or disconnecting equipment, using any USB connection, replacing or wiring modules, replacing any fuses, using the reset button.
- Confirm that the power supply has been turned OFF before disconnecting, replacing or wiring modules.
- Securely lock any external interface connected to the certified M340 modules.
- Install the certified M340 modules in a protective enclosure providing at least IP54 protection when applied in zone 2 environments and IP6x when applied in zone 22 environments.
This protective enclosure must be certified for hazardous areas zone 2 or 22.
- Make sure that the operating temperature in protective enclosure never exceeds 60 °C (140 °F) or 70 °C (158 °F) depending on installed modules.

Failure to follow these instructions will result in death or serious injury.

INTERCONNECTION BETWEEN ZONES

M340 offer is an automation platform based on modules which are connected with field instruments or human machine interfaces.

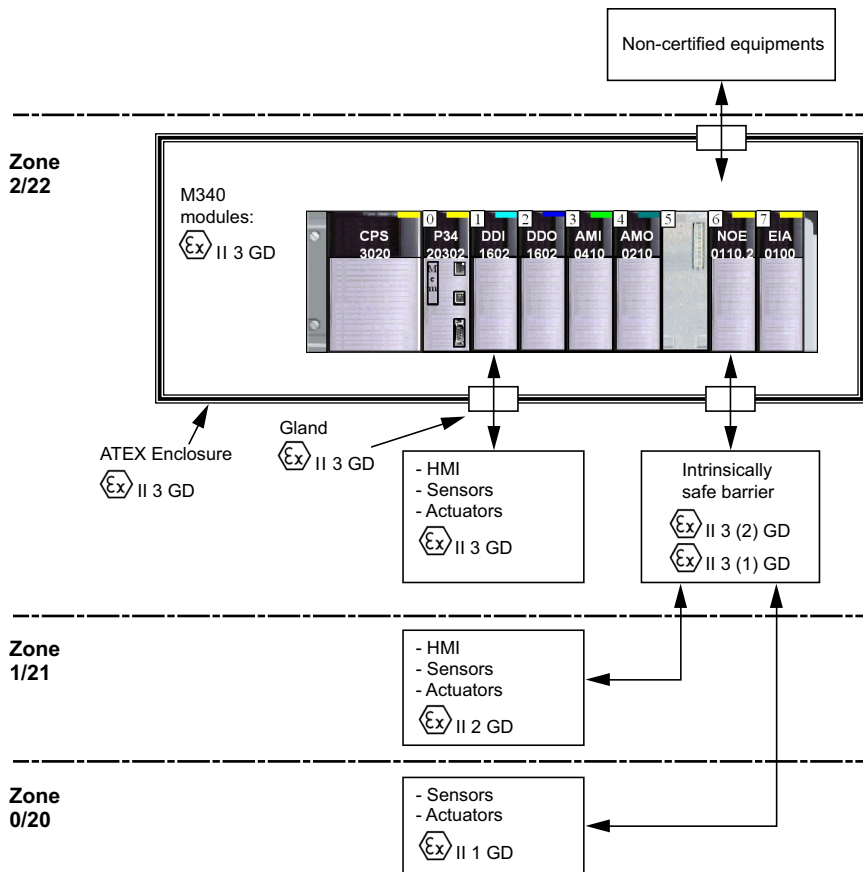
ATEX and IECEx certified modules are connected via cables that can be interfaced outside the protective enclosure.

You have to refer to the manufacturer's enclosure installation guide for choosing your cable connection (conduit adapter, gland requirements...).

Certified M340 modules intended to be connected in hazardous areas zone 1/21 or 0/20 must be used with external intrinsically safe barriers.

ARCHITECTURE EXAMPLE

Out of Atex Zone



MARKINGS

ATEX and IECEx markings, applied to the M340 modules, are as follows:

Schneider Electric

F-06516 Carros

IECEX INE12.0031U

Ex nA nC IIC Gc

Ex tc IIC Dc



II 3 G D

INERIS 12ATEX3002U

WARNING – Do not disconnect while circuit is live

