NGDR-07C-NGDR-07-FF1400R12IP4

01 / Assembly identity and engineering boundary

Supplied configuration

ABB NGDR-07C-NGDR-07-FF1400R12IP4 is supplied with the NGDR driver board and FF1400R12IP4 power module for converter power-stage service.

Distinct component roles

NGDR driver board	Gate-control pulse amplification
FF1400R12IP4	Power switching in a half-bridge arrangement

Supply together does not establish suitability for every converter using an NGDR board.

Semiconductor snapshot

Power-module topology	Half-bridge
Module collector-emitter voltage	1200 V
Module nominal collector current	1400 A
Power-module package	PrimePACK 3
Power-module technology	IGBT4 - P4

The listed electrical ratings describe the power module, not the complete drive or driver supply.

Product and installation enquiries

sales13@apterpower.com | +86 18030235313

Apply manufacturer instructions and approved site procedures.

02 / Interfaces and technical interpretation

Gate-control interface

Preserve the installed control-pulse path, gate/emitter connections and protection circuit. Compare the board and power-module identities together.

Thermal interface

The mounting surface, thermal interface and cooling arrangement form part of the approved converter configuration. Check their condition when replacing the assembly.

Component-level facts

Supplied board reference	NGDR-07C / NGDR-07
Supplied power module	FF1400R12IP4
Power-module manufacturer	Infineon Technologies
NGDR family function	IGBT gate-control pulse amplification
Module VCE(sat), typical at Tvj = 25 deg C	1.75 V
Power-module qualification	Industrial

Use the applicable converter instructions for installed configuration and operating limits.

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03 / Application context

High-current inverter stages

The FF1400R12IP4 is a 1200 V, 1400 A half-bridge component. Use the installed converter design to set the operating duty and cooling requirements.

Industrial motor converters

Coordinate the NGDR gate-drive path with the motor converter power stage. Preserve the module selection, control harness and protective functions during replacement.

Uninterruptible-power converters

A suitable UPS converter may use the FF1400R12IP4 power-module topology. Verify its DC-link conditions, commutation path and gate-drive arrangement before selecting the complete assembly.

Traction-converter engineering

Apply the module only within the approved traction-converter design. Electrical, thermal and mechanical integration must be established for the complete driver-and-module configuration.

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04 / Installation and service decisions

Match both component identities

Check NGDR-07C / NGDR-07 and FF1400R12IP4 together with the installed converter records. Do not replace either component solely because the connector or package appears similar.

Isolate stored energy

Disconnect the relevant supplies, follow the drive discharge procedure and verify the absence of hazardous voltage before touching the DC link or power terminals.

Preserve the gate circuit

Record the gate and emitter connections, control harnesses and protection path. Restore the approved arrangement and do not infer driver supply limits from the IGBT voltage rating.

Restore the thermal path

Inspect the mounting surface, cooling arrangement and thermal interface. Use the applicable module and converter instructions for fastening and thermal-interface preparation.

Protect interfaces during handling

Use ESD-safe handling, keep connectors clean and prevent mechanical stress on the board, terminals and module connections. Check insulation and clearance before closing the converter.

Commission under the approved procedure

Verify wiring, cooling, protection and diagnostic status before the controlled functional test. Use the installed drive acceptance limits rather than treating module maximum ratings as operating setpoints.

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05 / Unit verification and references

Physical and identity review

Request current driver-board, semiconductor-label, gate-connection and mounting views. Confirm both component identities and any additional revision markings.

Lifecycle and replacement

The current manufacturing and support phase of the complete offered reference is unconfirmed. Obtain current manufacturer guidance for the complete configuration; seller availability is a separate matter.

Technical basis

ABB ACA 6xx hardware manual, 3AFY 63700118 R0125, revision E; Infineon FF1400R12IP4 product information.

Other ABB drive references

ABB SDCS-CON-1

ABB NDNA-02 NDNA-02-KIT

ABB YPC111B

Navigation only. These references do not establish interchangeability or inclusion with this assembly.

Release criterion

Match the complete configuration and retain accepted electrical, protection and thermal checks with the service record.

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