

Annexe to: IECEx SIR 10.0085X Issue 1
Applicant: Phoenix Contact GmbH & Co. KG
Apparatus: IB IL EX-IS PWR IN-PAC



The IB IL EX-IS PWR IN-PAC Module is a rail-mounted unit, housed in a plastic enclosure that provides voltage-limited outputs for powering other modules on the rail.

Inputs

Top-mounted connector block (CN1) – power

Um = 253 V
Nominal input: 19-30 Vdc

3-way side connector on left side, male (CN3) - External Interbus Network

Um = 253 V
Nominal input: 5 Vdc

Voltage-limited outputs

The 7-way connector on the right side on the unit has seven female connections, numbered CN2 1 to 7 starting from the rear. There is also a 3-way connector at the rear of the unit (CN3).

7-way connector on right side of unit, female, CN2 pins 1, 2, 3 - Vout_logic, non-isolated

Uo = 7 Vdc
Io = Unlimited supply – See 'Special Conditions for Safe Use'
Po = Unlimited supply – See 'Special Conditions for Safe Use'

7-way connector on right side of unit, female, CN2 pins 4, 5, 6 - Vout_IO, isolated

Uo = 28 Vdc
Io = Unlimited supply – See 'Special Conditions for Safe Use'
Po = Unlimited supply – See 'Special Conditions for Safe Use'

7-way connector on right side of unit, female, CN2 pin 7, is shield/screen

3-way connector on right side of unit, female (CN3) - Interbus_Network_Out

Uo = 7 Vdc
Io = Unlimited supply – See 'Special Conditions for Safe Use'
Po = Unlimited supply – See 'Special Conditions for Safe Use'

The outputs are voltage limited to level of protection 'ia' but have no significant current or power limitation. The output of the IB IL EX-IS PWR IN-PAC Module (PWR Module) shall only be connected to certified equipment whose certificate specifically calls up the PWR Module. Intrinsic safety depends on the attached device limiting the current, terminal capacitance and inductance, as well as providing galvanic isolation for the non-isolated output from the PWR Module.

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Conditions of Certification

1. The output of the IB IL EX-IS PWR IN-PAC Module (PWR Module) shall only be connected to certified equipment whose certificate specifically calls up the PWR Module. This is because the PWR Module provides voltage clamping meeting the requirements for intrinsic safety 'ia' but the output current is unregulated and is therefore not intrinsically safe. Intrinsic safety depends on the attached device limiting the current, terminal capacitance and inductance, as well as providing galvanic isolation for the non-isolated output from the PWR Module.
2. If the module is installed in a zone 2 hazardous area, it shall be housed in an enclosure that is coded Ex nA, Ex e, Ex d or Ex p. If the module is installed in a zone 22 or 21 hazardous area, it shall be housed in an enclosure that is coded Ex tD or Ex t. For some types of enclosure, additional certification will be required to permit the installation of the module within the enclosure. Reference should be made to the enclosure certificate. The installer shall ensure that the maximum ambient temperature of the module when installed is not exceeded.
3. If the module is installed in a non-hazardous area, the enclosure or location shall provide suitable protection. This may either be by the use of an enclosure approved for use in zones 1, 2, 21 or 22 or otherwise meet the following requirements:
 - Non-metallic enclosures must be capable of withstanding the thermal endurance requirements of IEC 60079-0, prior to impact and IP54 testing.
 - Any enclosure must be capable of withstanding an impact of 7J or the module otherwise protected from impact.
 - The enclosure or location must provide an ingress protection of at least IP54.
 - If exposed to sunlight, non-metallic enclosures shall be capable of meeting the requirements of IEC 60079-0 clause 26.10 regarding resistance to light.
4. All enclosures or locations shall provide a microenvironment that is at least pollution degree 2 which IEC 60664-1:2002 clause 2.5.1 defines as follows "only non-conductive pollution occurs except that occasionally a temporary conductivity caused by condensation is to be expected".
5. When the module is mounted in a zoned area, connection and disconnection of the module from the rail while live is only permitted if the potentially explosive atmosphere is shown to be absent.