



Information on safety

! Implicitly read the manual. Manual along with information regarding safety and a copy of EU conformity declaration is available on website www.plummac.com under following link: https://plummac.com/en/project/int-s3_en/, link with QR code:

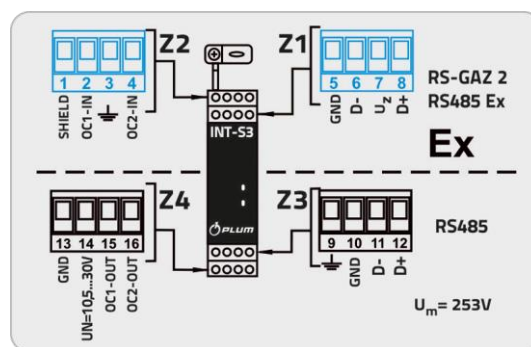


• Introduction

- INT-S3 (-S3/N) interface is the device installed out of the hazardous explosive zone to cooperate with devices installed inside. Interface meets the intrinsically safety rules. Before starting the installation read carefully informations below.



- Full version of the INT-S3 | -S3 / N instructions is located under the link from the QR code



• Figure 2: INT-S3 / INT-S3/N terminals description

• 1- Technical parameters

Ex marking	Ex II (2) G [Ex ib Gb] IIA – FTZU 04 ATEX 0309X certificate
Ingress Protection rating	IP40
Input voltage	10,5-30V DC
Output voltage	INT-S3: $U_Z \approx 5,7V$ INT-S3/N $U_Z \approx 7,6V$
Data transmission	Intrinsically safe side – RS485 Ex Intrinsically unsafe side– RS485 9600 - 115200b/s or 1200 – 4800b/s speed
Attachment	DIN bus(TS35)
Signals separation	Z1, Z2 terminals – intrinsically safe – marked with blue Z3, Z4 terminals – intrinsically unsafe – marked with black
Inputs/outputs	Two separated digital OC outputs Outputs maximum load – up to 200mA

• 2- INT-S3 / INT-S3/N interface assembly requirements



- Grounding the interface – clamp no. 3 connect to grounding bus in telemetric cabinet using wire minimum 1,5mm² cross-section. In case of appearing more than 30V voltage possibility clamp no. 9 connect to earth grounding using wire minimum 4mm² cross-section.
- Ex cables must be passed separately to the non-Ex cables. Wiring must meet the requirements of EN 60079-14 ch. 12.2.2.8: wires insulation should withstand 500V DC attempt voltage, and it can not be thinner than 0,1 mm (for polyethylene insulation 0,2mm)
- Wires and cables of Ex circuits should be rigidly placed and secured from mechanical factors
- LIYCY cables are highly recommended. Option for usage in intrinsically safe circuits – blue insulation.
- Permissible cable lengths: RS485 Ex – 150m for LIYCY 6x0,5mm² or 100m for LIYCY 6x0,34mm².
- Shielding of RS485 Ex cable connect to the GND terminal, and the earth grounding. Device shielding has to be separated from housing of connected EVC or other devices, to prevent grounding loops appearing.
- For longer than 30 meters connections it is recommended to ground the shield cable using surge protection device placed as close as possible to connected EVC, but not inside the explosive hazardous zone.
- Do not install the interface in vicinity of strong electrical or magnetic fields.



• Figure 1: INT-S3 / INT-S3/N



3 - INT-S3 and INT-S3/N interface connection schemes

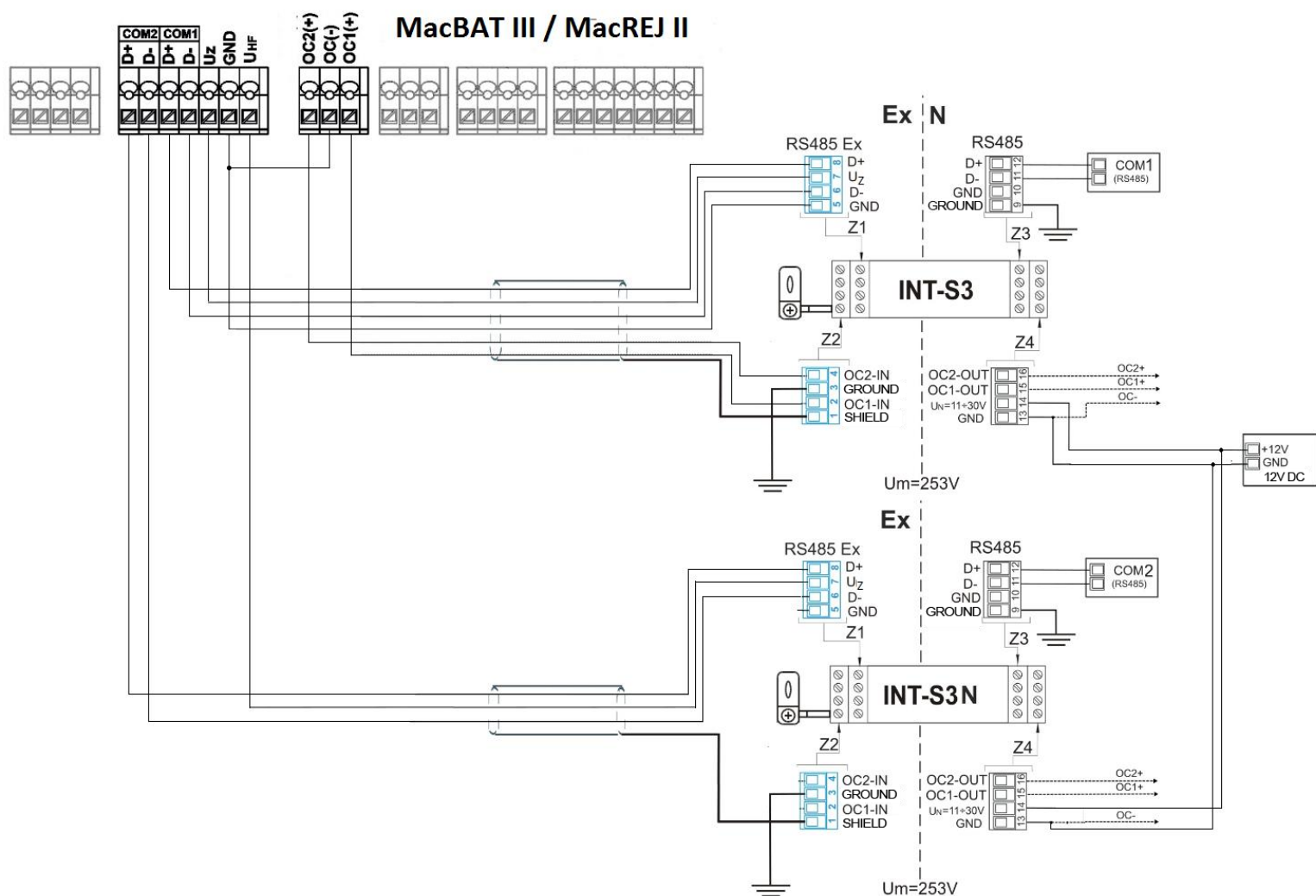


Figure 3: MacBAT III or MacREJ II connection scheme. INT-S3/N connected as an option to separate the second COM port and to supply the NAMUR standard input.

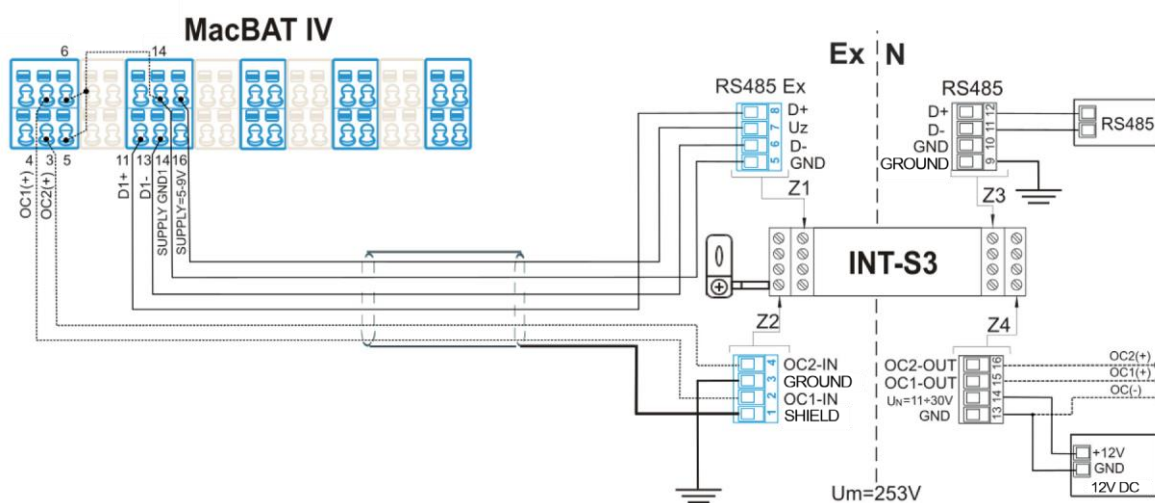


Figure 4: MacBAT IV connection scheme