FUNK-ELECTRONIC
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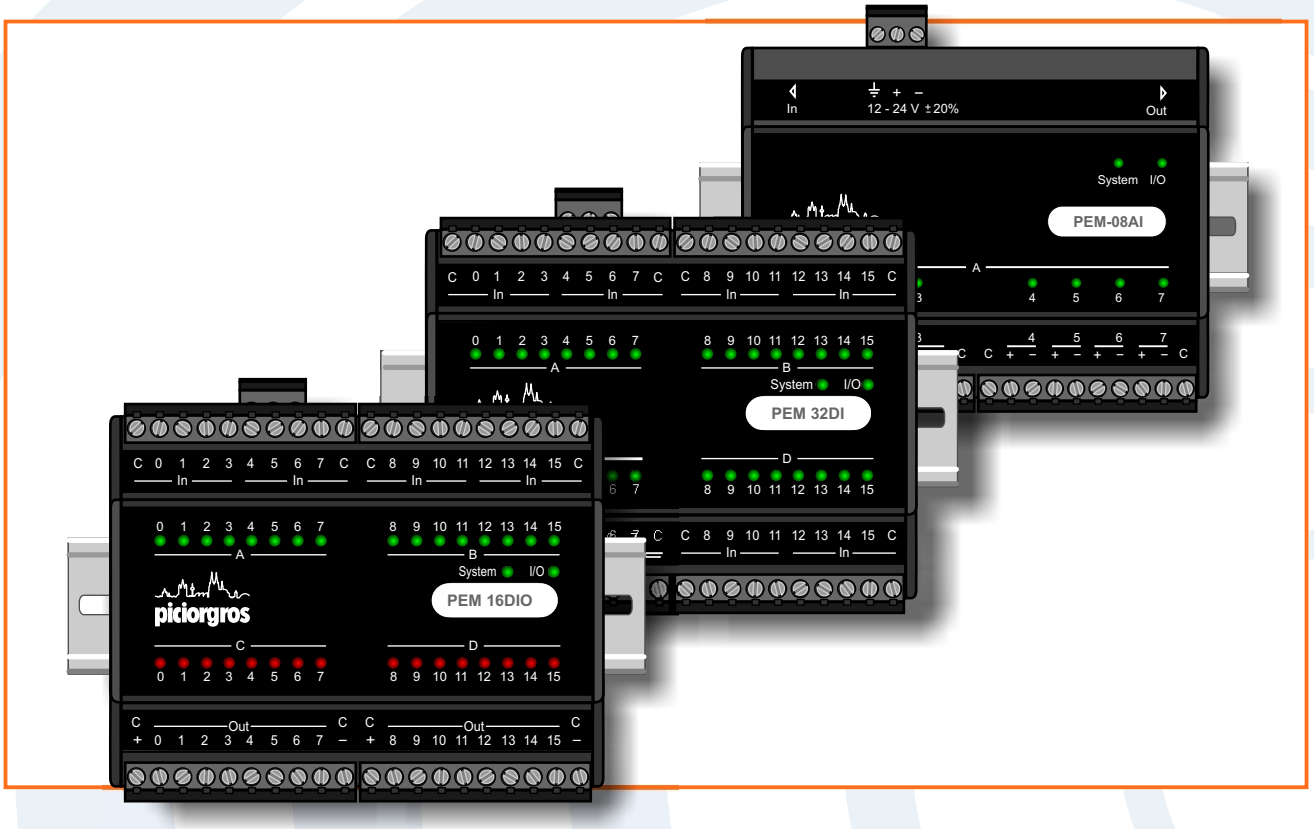
GMBH

PEM I/O Expansion Modules



Piciorgros Radio RTU Modules each have an I/O expansion interface (Intel BitBus) through which up to 16 PEM I/O Expansion Modules can be bus-connected. With this, radio RTU stations can be configured with a large number of on-off inputs and outputs, analog inputs and outputs, and pulse inputs. On-off input and output states are indicated by LED lamps on the front face of each module.

On-off inputs and outputs are opto-isolated. Analog inputs and outputs are electrically isolated using switched-capacitor analog isolators. It is nevertheless preferable that external isolation amplifiers be used with analog I/Os, and isolating relays with on-off I/Os.

All PEM I/O Expansion Modules can operate on 9.6 to 28.8 VDC supply, with the exception of the EM-04AO Analog Output Module.

The modules are housed in DIN rail mounting enclosures with tough extruded aluminum bodies and plastic end caps internally laminated with aluminum foil shielding.

PEM Modules are rugged industrial-duty products that can operate at temperatures in the range of -20ºC to +70ºC and tolerate wide supply voltage variations.

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PEM I/O Expansion Modules

Module Type	I/O Configuration
PEM-16 DI	16 on-off inputs
PEM-32 DI	32 on-off inputs
PEM-16 DO	16 on-off outputs - PNP
PEM-32 DO	32 on-off outputs - PNP
EM-UCL-08DO.R1	8 on-off outputs - relay
PEM-16DIO	16 on-off inputs + 16 on-off outputs
PEM-08.AI	8 analog inputs
EM-UCL-04.AO.D1	4 analog outputs
PEM-NT 24	Power supply module for I/O Expansion Modules

Note:

PEM I/O Expansion Modules can operate with 12 or 24 VDC (nominal) supply input, except for the EM-UCL-04.AO.D1 Analog Output Module which requires 12 VDC to be supplied through the Local Expansion Bus. If 12 VDC is supplied to the RTU, the PEM Modules can be supplied power through that RTU Module. If the available power supply is 24 VDC, then a PEM-NT24 Power Converter is required for providing the required voltage to the Expansion Modules.

If either the RTU has a supply input of 12 VDC, or the EM-UCL-04.D1 Analog Output Module is not installed, then the PEM-NT24 Power Converter is not needed.

If the supply input to the RTU is more than 14 VDC and even one EM-UCL-04.D1 Analog Output Module is to be installed, then the PEM-NT24 Power Converter becomes necessary.