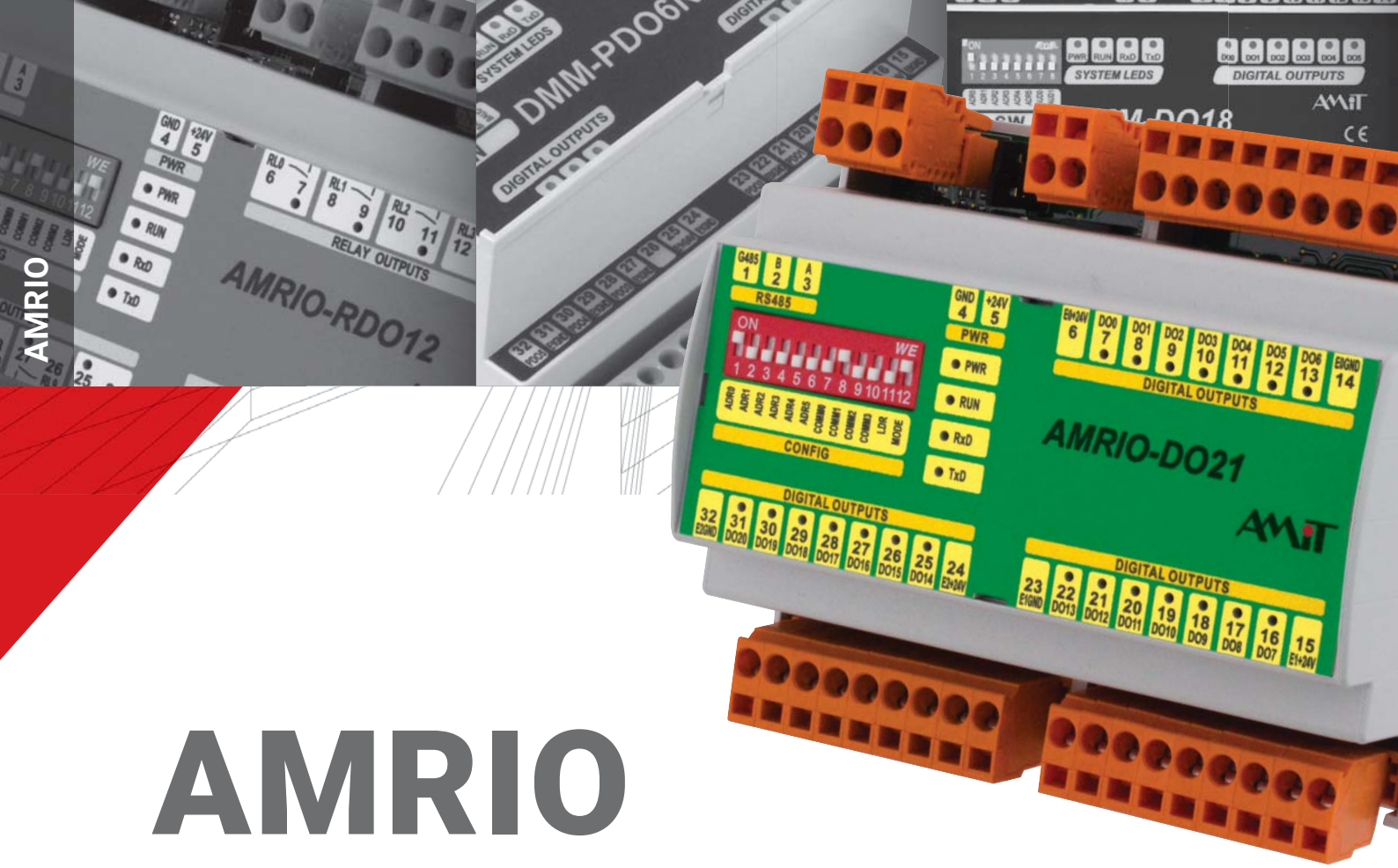

AMRIO

Remote I/O Modules

- communication via RS485
- support of MODBUS RTU and ARION protocols
- up to 63 modules can be connected to a single serial RS485 line
- freely programmable in the DetStudio IDE, custom stand-alone application
- built-in communication failure detection with ARION protocol
- system support of I/O extension in all AMiT control systems
- extended range of operating temperature (-20 °C to 70 °C)

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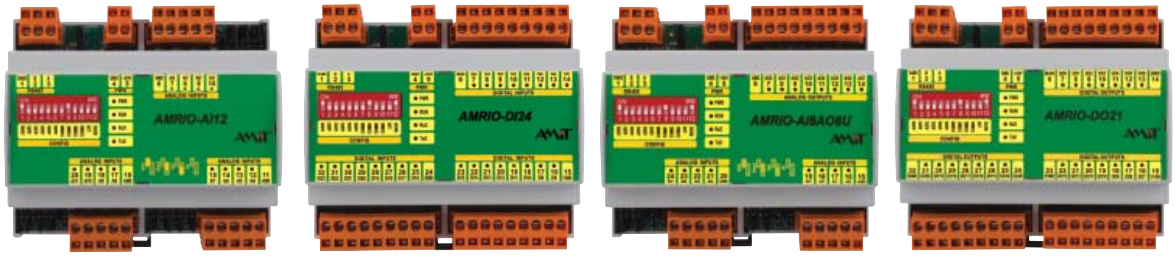
Remote I/O Modules

Remote I/O modules are used to extend the number of inputs and outputs of control systems and HMIs and for connecting remote signals to reduce cabling costs. Connecting the signals where they emerge also increases their disturbance immunity – especially in case of analogue signals. The values are transmitted via a protocol secured against data corruption. The performance capacity of control system CPUs is greater than the number of inputs and outputs the control system can physically handle. Extension modules are cheaper then control systems and can, therefore, reduce costs of certain solutions.

AMRIO modules support communication via the MODBUS RTU protocol and the ARION protocol (an open protocol developed by AMiT). Protocol is selected via a mechanical switch.



Overview of I/O extension modules

AMRIO-DI24	24× digital input 24 V DC/AC, with GI
AMRIO-DO21	21× digital output 24 V DC, 0.3 A, with GI
AMRIO-RDO12	12× normally open relay 250 V / 4 A
AMRIO-AI12	12× analogue input*), 12-bit resolution
AMRIO-AO8I	8× analogue output 0 to 20 mA, 12-bit resolution
AMRIO-AI8DO8	8× analogue input*), 8× digital output 24 V DC, 0.3 A, with GI
AMRIO-AI8RDO8	8× analogue input*), 8× normally open relay 230 V AC / 24 V DC/ 2 A
AMRIO-AI8AO8U	8× analogue input*), 8× analogue output 0 to 10 V, 12-bit resolution

AMRIO modules can be freely programmed in the DetStudio IDE. The user is therefore able to transform the module into a small control system to ensure local operation of inputs and outputs.

**) 0 to 5 V / 0 to 10 V / 0 to 20 mA / RTD / dry contact / digital input 24 V DC.*

Common technical specifications

Communication interface	RS485
Galvanically isolated line	Yes
Communication speed	9,600 Bd, 115,200 Bd
Number of modules in RS485 network	Max. 63
Communication protocol	MODBUS RTU / ARION (protocol is selected via a DIP switch)
Power supply	24 V DC ±20 %
Consumption	module type dependent, 0.024 A to 0.15 A
Signal connection	WAGO CAGE CLAMP connectors
Ingress protection rate	IP20
Operating temperature	-20 °C to 70 °C
Mounting	On a 35 mm DIN rail
Dimensions (w × h × d)	(106 × 101 × 62) mm
Programming	DetStudio/EsiDet

With AMRIO modules, any control system can be extended with up to 1,512 digital or 756 analogue inputs on a single serial RS485 line.

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