System Backbones

Distributed Power and Communications

DESCRIPTION

The MAQ®20 system backbone resides within the DIN-rail used for module mounting and provides power to and interface between the communications module and the I/O modules. Standard backbones provide for one communication module and 4, 8, 16, or 24 I/O modules. The longest backbone, which accommodates 24 I/O modules, fits in an industry standard 19" rack. Each backbone utilizes a pluggable connector system on each end such that varying system channel counts can be configured using the standard backbones. As a result of this pluggable system, the main part of a system, including the communications module, can be installed in one location while other sets of I/O modules installed in remote locations connect to the main system through a wire harness.

Modules mount on industry-standard 35x7.5mm gull-wing DIN-rails.

Once a system is established with a system backbone and a communications module, system configuration is accomplished by applying power and installing the I/O modules. These are hot swappable and true 'plug and run'. When an I/O module is plugged into any backbone position, the communications module automatically recognizes that it has been added to the system, registers it in the system configuration record, and makes it immediately available in the host software for use in data acquisition and control, and test and measurement applications. Similarly, when a module is removed from any backbone position, the communications module recognizes that it has been unplugged, removes it from the system configuration, and disables it in the software.

FEATURES

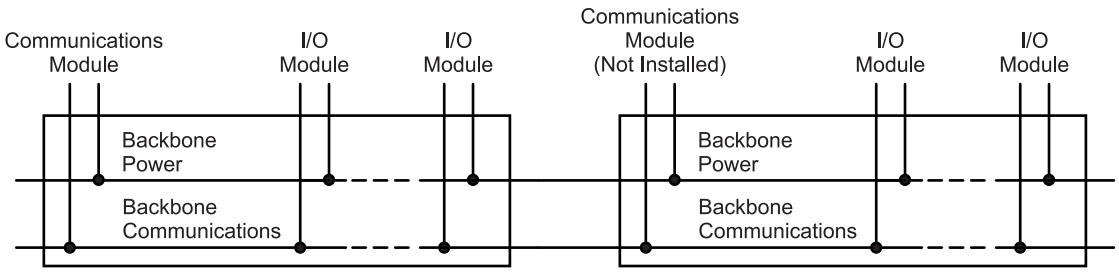
- Compact Mounting in DIN-rail Channel
- Distributed Power and Communications
- 4-, 8-, 16- and 24-position Models
- Simplify System Wiring
- Expandable for Local or Distributed Installation
- Prevent Reverse Installation
- Long-Life, Durable, Vibration Resistant Contacts
- Modules are Hot Swappable and True "Plug and Run"
- Heavy Industrial CE Compliant
- UL/cUL (Class I, Div 2, Groups A, B, C, D) File E232858
- ATEX Compliance Pending
- Manufactured per RoHS III Directive 2015/863

BENEFITS

- Highly Compact
- Low Cost per Channel
- Modular
- On-vehicle/-mobile Use Possible (Wide Power Supply Voltage)
- Open Software Platform Options
- Easy and Fast Setup/Installation

APPLICATIONS

- Process Control
- Factory Measurement and Control
- Machine Automation
- Military and Aerospace
- Scientific Measurement and Monitoring
- Battery Management



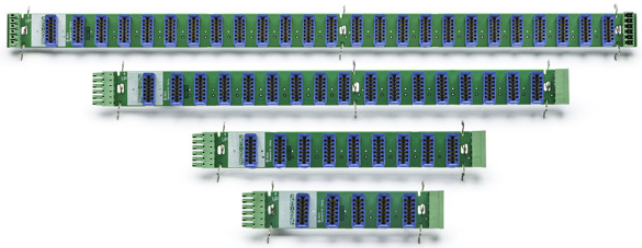
MAQ20 Backbone Block Diagram

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Specifications

Module	Description
MAQ20-BKPL4	DIN-rail Backbone, Accepting 1 COM Module plus 4 I/O Modules
MAQ20-BKPL8	DIN-rail Backbone, Accepting 1 COM Module plus 8 I/O Modules
MAQ20-BKPL16	DIN-rail Backbone, Accepting 1 COM Module plus 16 I/O Modules
MAQ20-BKPL24	DIN-rail Backbone, Accepting 1 COM Module plus 24 I/O Modules
Expansion and Distributed Installation	
Mechanical	Male/Female pluggable terminal blocks at each end of the backbone allow direct interconnection or remote installation using the accessory expansion cable.
Expansion Distance	100ft (30m) (max)
Mounting	
Physical	Spring clips hold the backbone in the DIN-rail. When modules are installed, the backbone is secured to the DIN-rail.
Reverse Protection	Mechanical interface prevents reverse module installation.
Electrical	
Circuitry	Passive
Inter-Module Communications	RS-485
Dimensions (h)x(w)x(d)	
MAQ20-BKPL4	5.05” x 0.94” (127.1mm x 3.9mm)
MAQ20-BKPL8	7.53” x 0.94” (191.1mm x 3.9mm)
MAQ20-BKPL16	12.63” x 0.94” (320.9mm x 3.9mm)
MAQ20-BKPL24	17.41” x 0.94” (442.1mm x 3.9mm)
Environmental	
Operating Temperature	–40°C to +85°C
Storage Temperature	–40°C to +85°C
Relative Humidity	0 to 95% Noncondensing
Certifications	Heavy Industrial CE Compliant UL/cUL (Class I, Division 2, Groups A, B, C, D) File E232858 ATEX Compliance Pending

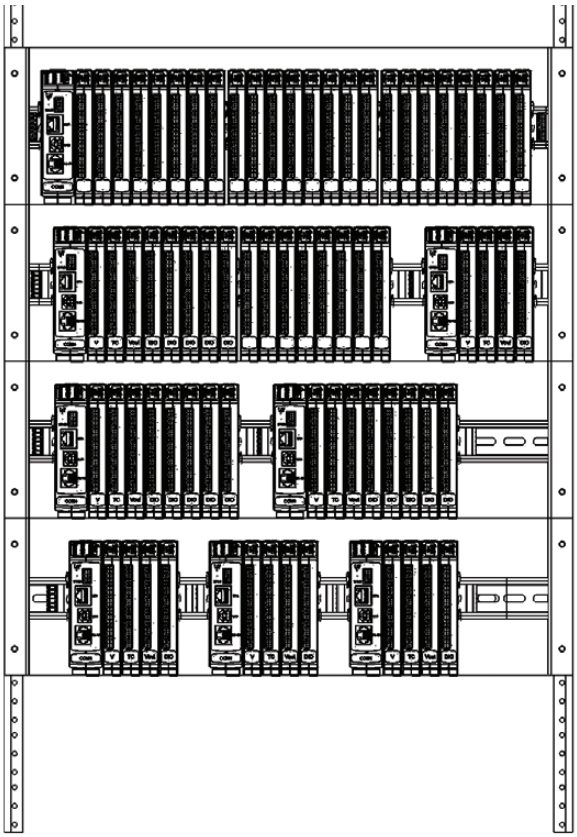


MAQ20 Backbones for 4-, 8-, 16-, and 24-I/O Modules

For input connections and full details on module operation, refer to:
MA1040 – MAQ20 Communications Module Hardware User Manual

Ordering Information

Model	Description
MAQ20-BKPL4	DIN-rail Backbone; Accepting 1 COM Module Plus 4 I/O Modules
MAQ20-BKPL8	DIN-rail Backbone; Accepting 1 COM Module Plus 8 I/O Modules
MAQ20-BKPL16	DIN-rail Backbone; Accepting 1 COM Module Plus 16 I/O Modules
MAQ20-BKPL24	DIN-rail Backbone; Accepting 1 COM Module Plus 24 I/O Modules



Flexible Backbone System Allows Configuration with Communications Module and 4-, 8-, 16-, and 24-I/O Modules in 19” Rack Space

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