Emerson R290 Solutions
for Integral Display Cases

EMERSON

Emerson Solutions for Integral Display Cases with R290

Many end-users and equipment manufacturers are investigating ways to minimize their impact on the environment while adapting and improving their system architecture. The F-Gas Regulation is accelerating the commercial refrigeration market transition to future-proof refrigerants and improved new system architectures.

R290 (Propane) is one of the most-discussed refrigerants which has long been known for its good performance. R290 is a future-proof refrigerant with excellent thermodynamic properties and it is becoming an attractive natural refrigerant choice for distributed system architectures such as Integral display cases.

Emerson is investing in research and development activities in order to pro-actively support and guide the customers to go through the F-Gas transition phase. With already several tens-of-thousands of integral display case solutions installed in retail stores all over the world, Emerson is leading the way in providing the advanced technology solutions to the customers for R290 integral display cases.

Key benefits of Emerson R290 Solutions

Solution Provider

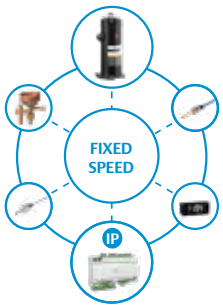
- Application & engineering experts team with in-depth know-how and experience
- Full technical support during development and possibility for customized solutions development
- Solution centre with system performance, sound & vibration, EMC testing and analytical engineering capabilities
- Proven pre-defined solutions for faster implementation and short time to market for OEMs

Safety and regulatory compliance

- Reduce complexity of regulations by providing state-of-the-art “pre-compliant” solution
- Allow easy & fast certification/compliance of the system according to relevant application standards
- Safety compliance – EN60335-2-89 / EN60079

Technology options for flexibility

- Solutions for multiple circuit and single circuit applications for cabinets with and without doors
- Fixed speed and variable speed modulation
- Parametric and programmable controller for customisation



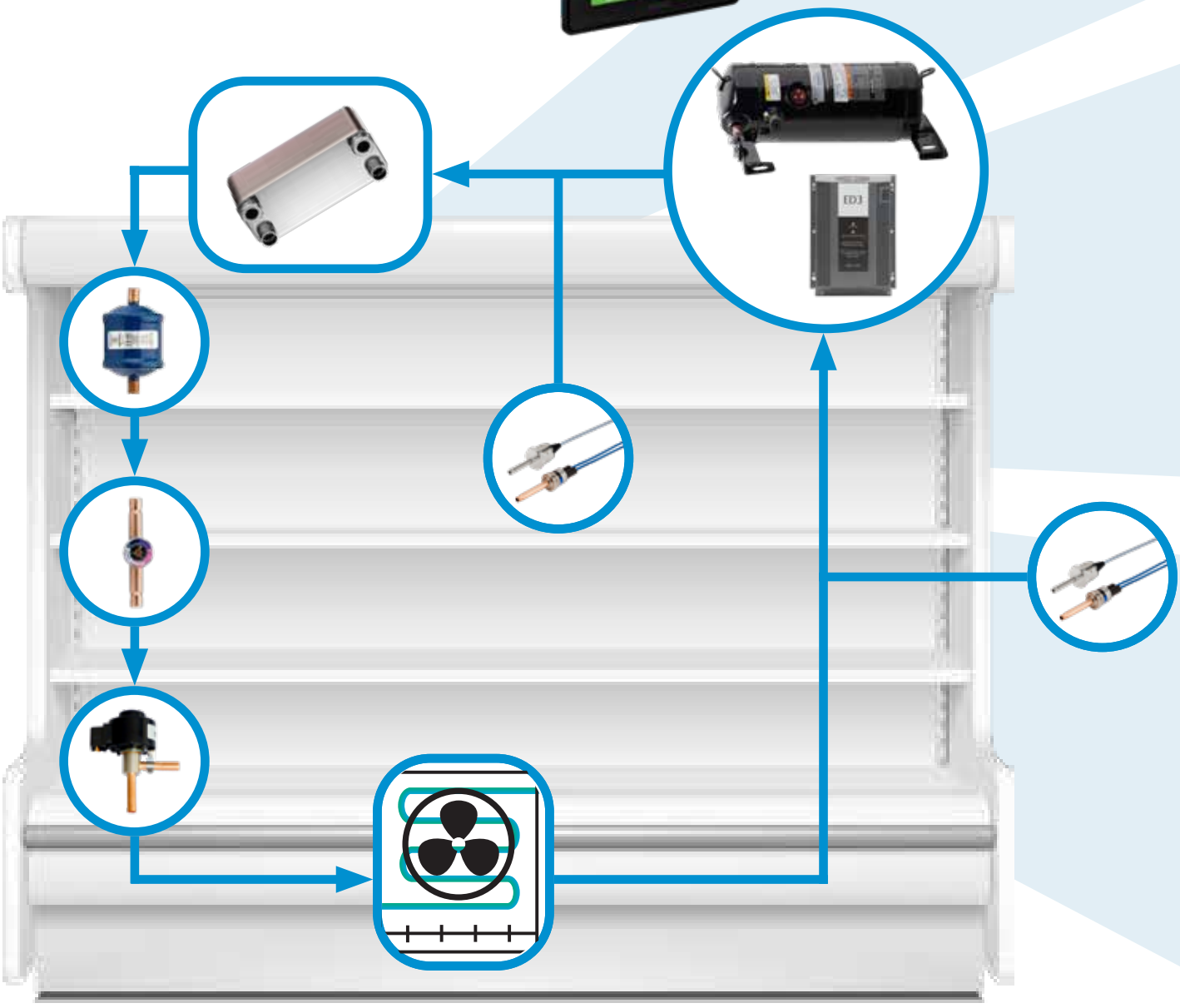
Intelligent electronics

- Advanced control features with Defrost synchronization schemes and Demand Defrost for higher system efficiency
- Variable speed compressor & system management
- Enable preventive maintenance & enhanced services with compressor & system data
- Deliver added value at system, facility and enterprise level

R290 variable speed solutions
For single circuit cabinet with high refrigerant charge

XWEB Monitoring System

System Controllers



Emerson Solution Benefits

Efficient Capacity Modulation

- Improved system seasonal performance
- Noise reduction at part load
- Compact compressor design (<200mm height)
- Versatile platform: MT & LT;
  from 1 to 7kW MT capacity and
  0.5 to 2.5kW LT capacity
- Plug & play inverter drive with large modulation range

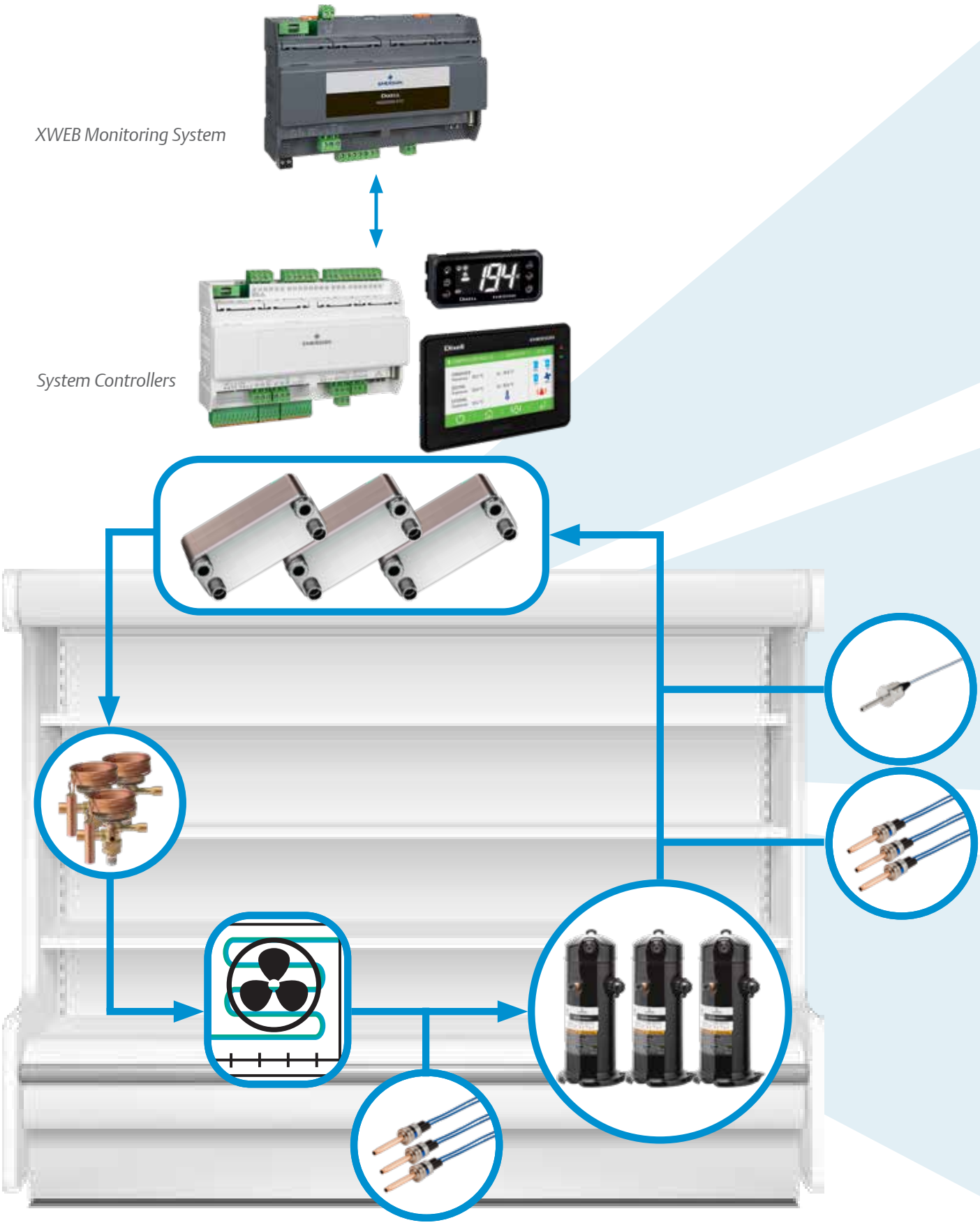
Programmable Controller

- Scalable electronic platform
- Pre-set compressor & drive parameters and envelopes
- Validated case management, compressor & superheat control
- Built-in diagnostic & alarm management
- Fault detection enabled by inverter data
- Envelope protection for reliability & efficiency

Pre-Compliant Solution

- EN603335-2-89 or ATEX ready components
- Safety compliant sensors & switches
- Electronic expansion valves qualified per EN60335-2-89
- Pre-matched compressor-drive package according to EN60335-2-34 & EN55014
- Reduced complexity allowing easy & fast certification

R290 fixed speed solutions
For multiple circuit cabinet with low refrigerant charge



Emerson Solution Benefits

Optimized Medium Temperature Scroll Design

- High scroll efficiency with tailored application envelope
- Reduced inner volume & oil quantity
- Dedicated design for lower refrigerant charge below 150g
- Fully hermetic design - safe compressor for R290 refrigerant
- Compact 3-feet fully hermetic design
- Molded plug option for easy service

System Management Electronics

- Temperature control
- Lights & fans management
- Case safety & protection
- VDE & UL ready design
- User display
- Defrost optimization
- Alarm management and enhanced communication

R290 Ready Flow Controls

- Best-in-class controls
- Safety compliant sensors & switches
- Optimized expansion valves

About Emerson

Emerson (NYSE: EMR), headquartered in St. Louis, Missouri (USA), is a global technology and engineering company providing innovative solutions for customers in industrial, commercial, and residential markets. Our Emerson Automation Solutions business helps process, hybrid, and discrete manufacturers maximize production, protect personnel and the environment while optimizing their energy and operating costs. Our Emerson Commercial and Residential Solutions business helps ensure human comfort and health, protect food quality and safety, advance energy efficiency, and create sustainable infrastructure. For more information, visit emerson.com

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