

ELECTRIC FIRE PUMP CONTROLLER

**MODELS: FCA-EP-XXKW-MK2
(CONFIGURATION DEPENDENT)**

Built for Protection. Engineered for Compliance. Trusted When It Matters.

The Guardian MK2 Electric Fire Pump Controller range is purpose-designed for electrically driven fire pumps, delivering high reliability, operational transparency, and compliance with **AS 2941:2013** and **AS/NZS 3000:2018**.

The MK2 platform incorporates **dual PLCs operating in a master-slave configuration**, providing redundant control and continuous cross-monitoring of system functions. The control architecture is reinforced by a SIL-designed start circuit utilising IEC-certified safety relays, with **continuous self-monitoring** to ensure system availability.

In the event of controller failure, the **system falls back to automatic hardwired pressure switch control**, ensuring continued pump operation independent of the PLC platform.

Integrated anti-surge protection, EMC filtering, and an advanced dual PLC-based control platform position the Guardian as the most robust and technically advanced electric fire pump controller available in its class.



SPECIFICATIONS

MECHANICAL

- IP65-rated 2 mm galvanised steel enclosure, powder-coated RAL3020 (Traffic Red)
- Dimensions (see ordering table below)

POWER & MOTOR CONTROL

- Designed for electrically driven fire pumps utilising Direct-On-Line (DOL), Star/Delta, Soft Starter, or VSD motor control methods
- Magnetic-only trip circuit breakers selected to comply with AS/NZS 3000:2018 fire pump motor protection requirements (125% FLC continuous, 600% FLC for 20 seconds)
- Premium industrial motor control components selected for electrical endurance, fault tolerance, and suitability for fire pump duty applications
- Motor control architecture engineered specifically for fire pump duty in accordance with AS 2941:2013

ELECTRICAL

- Incoming supply – 415 VAC, 3 Phase + Neutral + Earth, 50 Hz
- Maximum standby current – 3 A @ 240 VAC, 1 A @ 12 VDC (battery)
- 12 VDC battery input with dedicated outputs for external signaling devices (bell and strobe)
- 24 VDC outputs for Power On, Pump Run, and Fault indication
- 7 × volt-free outputs as standard (3 assignable)

CONTROL & EMBEDDED FEATURES

- Dual PLC architecture (master-slave configuration) providing redundant control and continuous monitoring
 - Fallback to automatic hardwired pressure switch control in the event of complete controller failure
- SIL-designed control and start architecture utilising IEC-certified safety relays
- Continuous self-diagnostic monitoring of control integrity and critical interlocks
- Integrated anti-surge protection and EMC filtering
- Mean Well power supply and battery charger with short circuit, overload, over-voltage, and reverse polarity protection providing 4 kV galvanic isolation
- Large 7" permanently illuminated HMI displaying operational status in accordance with AS 2941:2013
- Integrated VNC capability for local and full remote monitoring (requires local network connection)
- Advanced event logging, trend monitoring, and downloadable logs
- Modbus TCP/IP and Ethernet/IP communication for site connection

ORDERING INFORMATION

DIRECT-ON-LINE (DOL) CONFIGURATIONS		
SKU	Supported Motor kW	Dimensions
FCA-EP-5.5KW-MK2-DOL	5.5 kW Motor	535W × 620H × 200D mm
FCA-EP-18KW-MK2-DOL	7.5–18 kW Motor	535W × 620H × 200D mm

STAR/DELTA (S/D) CONFIGURATIONS		
SKU	Supported Motor kW	Dimensions
FCA-EP-55KW-MK2-S/D	15–55 kW Motor	600W × 800H × 200D mm
FCA-EP-75KW-MK2-S/D	75 kW Motor	600W × 800H × 200D mm
FCA-EP-90KW-MK2-S/D	90 kW Motor	700W × 840H × 200D mm

SOFT STARTER CONFIGURATIONS		
SKU	Supported Motor kW	Dimensions
FCA-EP-55KW-MK2-SS	15–55 kW Motor	Confirmed at time of order
FCA-EP-75KW-MK2-SS	75 kW Motor	Confirmed at time of order
FCA-EP-90KW-MK2-SS	90 kW Motor	Confirmed at time of order
FCA-EP-110KW-MK2-SS	110 kW Motor	Confirmed at time of order
FCA-EP-132KW-MK2-SS	132 kW Motor	Confirmed at time of order

Note – Larger KW models available on request.

VSD CONFIGURATIONS		
SKU	Supported Motor kW	Dimensions
FCA-EP-7.5KW-MK2-VSD	5.5–7.5 kW Motor	Confirmed at time of order
FCA-EP-22KW-MK2-VSD	11–22 kW Motor	Confirmed at time of order
FCA-EP-55KW-MK2-VSD	37–55 kW Motor	Confirmed at time of order
FCA-EP-90KW-MK2-VSD	75–90 kW Motor	Confirmed at time of order
FCA-EP-110KW-MK2-VSD	110 kW Motor	Confirmed at time of order

Note – Larger KW models available on request.