

FC36MV DUAL Mode Firing

110V, 230V, 400V

High Power Three Phase Thyristor Driver

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KEY FEATURES:

- ✓ Auto Phase Rotation Correction & Phase-Loss Detection.
- ✓ Switch-Selectable Phasing Reversal.
- ✓ **Versatile Control Modes: Phase-Angle, Burst-Fire, Combination**
- ✓ Opto-Isolated Analogue/Digital Input Options.
- ✓ **Load Type Selection Switch:** Tailors performance for resistive or inductive loads.
- ✓ **LED Status Indicators:** Provides real-time operational feedback.
- ✓ Current Limit & Over-Current Protection.
- ✓ **Adjustable Ramp Control:** Smooth startup with 0-30 seconds delay.

APPLICATIONS:

Universally compatible with AC, DC, resistive, or inductive loads via thyristor pairs in three-phase assemblies. Its SCR power handling capabilities provide smooth, proportional control across various industrial processes, including furnaces, electroplating, controlled rectifiers, and transformer management.


The **FC36MV Dual Mode Firing, High-Power 3-Phase Thyristor Driver** is a sophisticated, microprocessor-based firing circuit designed for seamless integration into three-phase power control assemblies. This populated PCB is ideal for controlling thyristors (SCRs) in high-power industrial applications. Available in various supply voltage configurations, the FC36MV minimises phase wiring complexity with its simplified gate/cathode outputs, eliminating the need for external phasing transformers. The versatile driver offers a wide array of selectable features, ensuring precision control and reliable performance.

Optimise your industrial power control solutions with the FC36MV, the ultimate high-power thyristor driver designed for precision and reliability in demanding environments.

TECHNICAL SPECIFICATIONS

Nominal Supply Voltages ($\pm 10\%$)	110V, 230V, 400V, or 440V AC @ 50/60Hz
Primary Fusing	Three HRC-F1A (ceramic 20 x 5mm)
Current Consumption	650mA (Full Conduction)
Initial Short Circuit Gate Current	750mA
Sustaining Short Circuit Gate Current	400mA
Initial Pulse Voltage	9V
Sustaining Pulse Voltage	5V
Pulse Train Frequency	25kHz
Trigger Mode – selected by input	Burst Fire and Phase Angle
Voltage Signal into 10K Ω /20K Ω	0-5V DC/10V DC
Current Signal into 270 Ω	4-20mA
Opto-isolated Inputs	5-24V DC
Adjustable Ramp Control from Power Up	0-30 seconds
Control Limit or Over-current Trip	0-5V DC
Load Type – selected by switch (SW4)	Resistive or Inductive
Operating and Storage Temperature Range	0°C to +65°C
Overall Dimensions	
Firing Circuit Board (PCB) only (L x W x H) (mm)	203 x 108 x 40
Fixing Centres of PCB (6 x M3.5mm holes)	2 rows (75mm apart) of 3 holes (96.5mm between each)
Firing Circuit with DIN-rail Enclosure (L x W x H) (mm)	207 x 128 x 70

YOU MUST READ THIS BEFORE INSTALLATION

 ELECTRICAL SAFETY WARNING: RISK OF ELECTRIC SHOCK Always consult the Installation & Maintenance Instructions before connecting this product to the power supply. WARNING: Disconnect Power Before Servicing Ensure the electrical supply is safely disconnected before connecting to any supply, load, or control terminals.	 INSTALLATION REQUIREMENTS WARNING: Installation by Qualified Personnel Only This product must only be installed or fitted by a competent, qualified installer familiar with the relevant electrical standards and installation practices.	 USER RESTRICTIONS WARNING: Not for Use by Vulnerable Individuals This product is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they are supervised or instructed by a person responsible for their safety.	 USAGE ENVIRONMENT WARNING: Industrial Use Only This is an industrial-grade product and is not intended for household use.	 HOT SURFACE WARNING WARNING: Hot Surfaces On certain models, surfaces marked with this symbol become hot during use. Avoid direct contact and follow all thermal safety precautions.
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Three Phase Thyristor Driver

RECOMMENDATIONS

FUSING

It is recommended to use semiconductor (fast acting) type fuses or circuit breakers (Semiconductor - MCB) for unit protection. On initial switch on some loads may need an increased Factor of Safety (F of S) for unit and/or device protection. See SRA datasheet for information.

DOCUMENTS

Other documents available on request, which may be appropriate for your application:

Code	Identity	Description
X10327	3-RFI	3-phase filter recommendations: Addressing the EMC Directive
X10213	ITA	Interaction: Uses for phase angle and for burst fire control
X10255	SRA	Safety Requirements: Addressing the Low Voltage Directive (LVD) including, Thermal Data/Cooling, Live Parts Warning, Earthing Requirements and Fusing Recommendations
X20006	FC36MV	FC36MV Operating User Manual
X10652	CM-FC36M/MV	Remote HMI programmer – Commander Module CM-(FC36M/MV)
AP02/4	COS	UAL Conditions of Sale

It is recommended that installation and maintenance of this equipment should be done with reference to the current edition of the I.E.T. regulations (BS7671) by suitably qualified/trained personnel. The regulations contain important requirements regarding the safety of electrical equipment. For International standards refer STANDARDS on D of C.

OPTIONAL EXTRAS

Product Code	Product Description
A30102	FC36MV DIN Housing Kit
J02001	RJ45 lead
A402131	Commander Module

United Automation can also supply Thyristors, fuse or Complete Assembled.
For more details, please contact us enquiries@united-automation.com

PRODUCT CODE AND RELATED PRODUCT CODE

For 110V

Product Code	Product Description
A34665	FC36MV (110V)
A34665-DIN	FC36MV (110V) c/w DIN housing

For 230V

Product Code	Product Description
A34433	FC36MV (230V)
A34433-DIN	FC36MV (230V) c/w DIN housing

For 400V

Product Code	Product Description
A34428	FC36MV (400V)
A34428-DIN	FC36MV (400V) c/w DIN housing



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