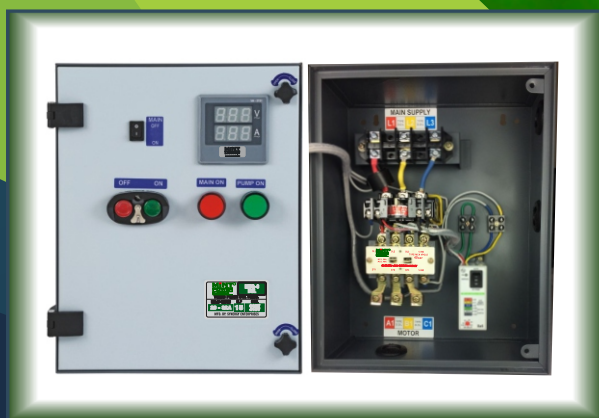


MINT[®]
POWER
ELECTRIC

MUG SERIES

MU-G6 DOL, MU-G7.5 DOL



MU-G10 DOL



MU-G20 SPP (FASD)



MU-G50 SPP (FASD)

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**POWERING PROGRESS
WITH INNOVATION**



MU-G6 DOL



TYPE. MU- G6 DOL, SUBMERSIBLE PUMP CONTROLLER (WITH WIDEBAND COIL)

CONTROL UNIT WITH VOLT-AMPERE METER AND SPP.

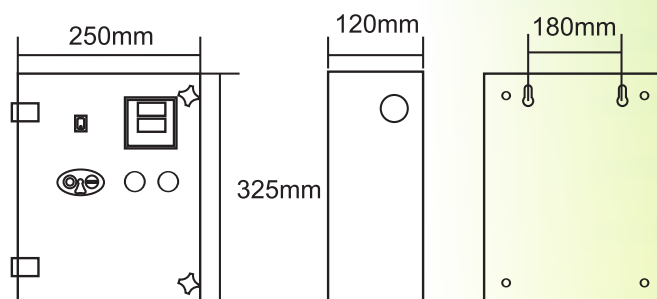
HS CODE 8536

CAT.NO.	Maximum Submersible Pump Rating at 3Ø,415V,50Hz	Relay Max. Range (A)	Contactor Type-MCH-4P	Coil Voltage 50Hz	Std. Pkg. Nos.
MU-G6 DOL 3HP	3HP	4-6.5A	20A	415V	4Pcs
MU-G6 DOL 5HP	5HP	6-10A	20A	415V	4Pcs
MU-G6 DOL 6HP	6HP	9-14A	20A	415V	4Pcs
MU-G6 DOL 7.5HP	7.5HP	9-14A	20A	415V	4Pcs

Features

- Protection from Overload Conditions
- Protection from Single Phasing
- Protection from Phase Reversal
- Protection from Phase Unbalance
- Auto Restart (with variable 30 Sec - 5 Min ON delay)
- Power ON & Pump ON indication
- Dual Voltmeter & Ammeter
- Easy replacement of Spares

MU-G7.5 DOL



MU-G7.5 DOL SUBMERSIBLE PUMP CONTROLLER (WITH WIDEBAND COIL)

HS CODE 8536

CONTROL UNIT WITH VOLT-AMPERE METER AND SPP.

CAT.NO.	Maximum Submersible Pump Rating at 3Ø,415V,50Hz	Relay Max. Range (A)	Contactor Type-MCH-4P	Coil Voltage 50Hz	Std. Pkg. Nos.
MU-G7.5 DOL 10HP	10HP	13-21A	25A	415V	4Pcs
MU-G7.5 DOL 15HP	15HP	20-32A	40A	415V	4Pcs

	MU- G6 DOL, MU-G7.5 DOL
Rating	MU-G6 Up to 7.5HP, MU-G7.5 Up to 15HP 415V, 3Ø
Contactors/AC3	MCH-3H 20A, MCH-3H 20A, MCH-3H 40A,
Contactors Electrical Life - AC3	1 Million
Mechanical Life	10 Million
Coil Voltage	415V-N(220V-460V) Wide band
Overload Relay	MK1
Relay Range	4 - 6.5A, 6 - 10A and 9 - 14A
Relay Type	Thermal Bimetallic Relay
Relay Trip Class	Class 10A
Pick-up Voltage	60% to 110% of U _c
Drop-off Voltage	20% to 50% of U _c
Measurement Offered	Ammeter (0-60A) Voltmeter (0-500 V)
Additional Protection Offered	Single Phasing, Phase Reversal, Phase unbalance (55 ± 5 V)
Protection Device (electronic)	SPPR type Sz5
Indicating Lamps	Supply ON Pump ON
Indicating Lamp Type	LED (415 V)
Rated Insulation Voltage	690 V
Rated Operational Voltage	360 V
Rated Impulse Withstand Voltage	8 kV
HV withstand capacity (for 60 Sec)	2 kV
Service Temperature	-5°C to 55°C
Terminal Capacity (Terminal Blocks)	10 sq.mm. with Lug
No.of full start	30 operations per Hour
Back-up Protection	Type 2 with HF fuses
Power Wiring	2.5 sq.mm
Control Wiring	1 sq.mm.
Degree of Protection	IP54 (Suitable for Humid Dusty and Hot Environment)
Copper Contacts Material	ETP Grade Copper 99.9% Pure
Hardware Plating	Zinc plated hardware with better corrosion resistance
Impact Capacity	IK6
Provision to connect Dry-run protection unit	Yes
Remote Operation	Possible using Mobile through externally connected M-POWER+ GSM Module



MU-G10 DOL



TYPE. MU-G10, SUBMERSIBLE PUMP CONTROLLER (WITH WIDEBAND COIL)

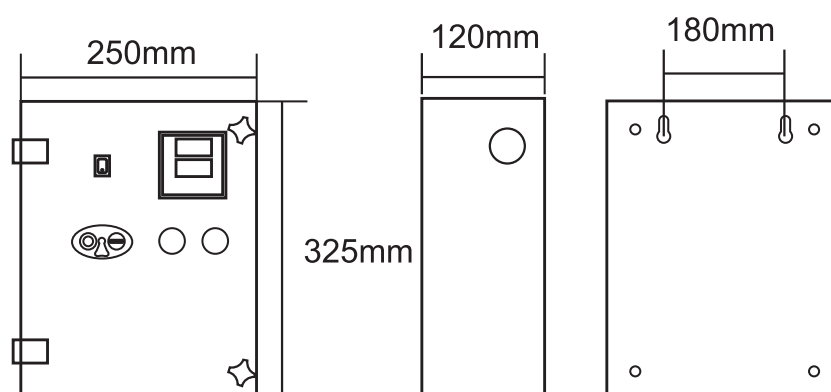
CONTROL UNIT WITH VOLT-AMPERE METER AND SPP (WITH SINGLE PHASE PREVENTER).

HS CODE 8536

CAT.NO.	Maximum Submersible Pump Rating at 3Q,415V,50Hz	Relay Max. Range (A)	KW	Cont. Type	Coil Voltage 50Hz	Std. Pkg. Nos.
MU-G10 DOL 3HP	3HP	4 - 6.5 A	2.2	MU1	415V	4Pcs
MU-G10 DOL 5HP	5HP	6 - 10 A	3.7	MU1	415V	4Pcs
MU-G10 DOL 6HP	6HPHP	9 - 14 A	5.5	MU1	415V	4Pcs
MU-G10 DOL 7.5HP	7.5HP	9 - 14 A	5.5	MU1	415V	4Pcs
MU-G10 DOL 10HP	10HP	13-21A	7.5	MU1	415V	4Pcs
MU-G10 DOL 10HP(H)	10HP(H)	13-21A	7.5	MU2	415V	4Pcs
MU-G10 DOL 15HP	15HP	20-32A	11	MU2	415V	4Pcs
MU-G10 DOL 15HP(H)	15HP(H)	20-32A	11	MU3	415V	4Pcs
MU-G10 DOL 20HP	20HP	28-42A	15	MU4	415V	4Pcs

Features

- Protection from Overload Conditions
- Protection from Single Phasing
- Protection from Phase Reversal
- Protection from Phase Unbalance
- Easy replacement of Spares
- Wide band coil operates from 50% to 110% of rated coil voltage
- Auto Restart (with variable 30 Sec - 5 Min ON delay)
- Power ON & Pump ON indication
- Dual Voltmeter & Ammeter

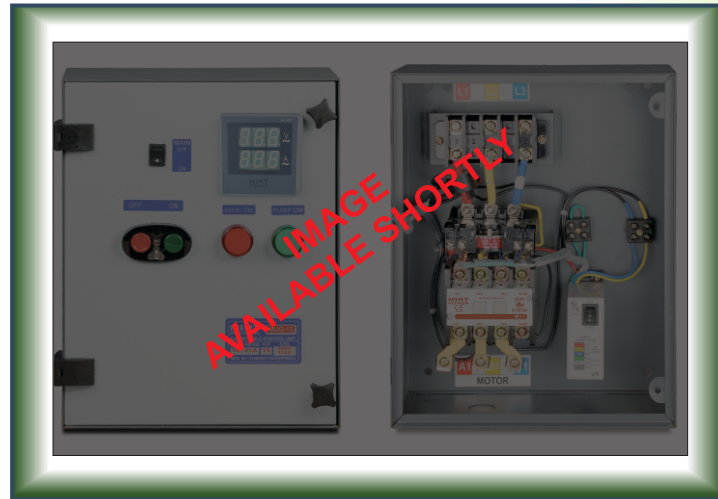


MU-G10 DOL

	MU-G10	MU-G10H
Rating	3HP to 10HP, 415V, 3Ø	10HP(H) to 15HP, 15HP(H),20HP
Contactors/AC3/AC1	MU1/16A/55A	MU2/25A/63A,MU3/32A/63A,MU4/40A/70A
Contactors Electrical Life - AC3	1 Million operations	1 Million operations
Mechanical Life	10 Million operations	10 Million operations
Coil Voltage	415 V, 360 V	415 V, 360 V
Overload Relay	TYPE-MU	TYPE-MU
Relay Range	4-6.5A, 6-10A, 9-14A and 13-21A	13 - 21A, 20 - 32A and 28 - 42A
Relay Type	Thermal Bimetallic Relay	Thermal Bimetallic Relay
Relay Trip Class	Class 10A	Class 10A
Pick-up Voltage	50% to 110% of U_c	50% to 110% of U_c
Drop-off Voltage	25% to 35% of U_c	25% to 35% of U_c
Measurement Offered	Ammeter (0-60A) Voltmeter (0-500 V)	Ammeter (0-60A) Voltmeter (0-500 V)
Additional Protection Offered	Single Phasing, Phase Reversal, Phase unbalance (55 ± 5 V)	Single Phasing, Phase Reversal, Phase unbalance (55 ± 5 V)
Protection Device (electronic)	SPPR type Sz5	SPPR type Sz5
Indicating Lamps	Supply ON Pump ON	Supply ON Pump ON
Indicating Lamp Type	LED (415 V)	LED (415 V)
Rated Insulation Voltage	690 V	690 V
Rated Operational Voltage	360 V	415 V
Rated Impulse Withstand Voltage	8 kV	8 kV
HV withstand capacity (for 60 Sec)	2 kV	2 kV
Service Temperature	-5°C to 55°C	-5°C to 55°C
Terminal Capacity (Terminal Blocks)	16 sq.mm. with Lug	16 sq.mm. with Lug
No.of full start	30 operations per Hour	30 operations per Hour
Back-up Protection	Type 2 with HF fuses	Type 2 with HF fuses
Power Wiring	4 sq.mm.	10 sq.mm.
Control Wiring	1 sq.mm.	1 sq.mm.
Degree of Protection	IP54 (Suitable for Humid Dusty and Hot Environment)	IP54 (Suitable for Humid Dusty and Hot Environment)
Copper Contacts Material	ETP Grade Copper 99.9% Pure	ETP Grade Copper 99.9% Pure
Hardware confirms to	Salt-spray test (144 hrs.)	Salt-spray test (144 hrs.)
Hardware Plating	Zinc plated hardware with better corrosion resistance	Zinc plated hardware with better corrosion resistance
Impact Test	IK6	IK6
Provision to connect dry run protection unit	Yes	Yes
Remote Operation	Possible using Mobile through externally connected M-POWER+ GSM Module	Possible using Mobile through externally connected M-POWER+ GSM Module



MU-G12 DOL



TYPE.MU-G12, SUBMERSIBLE PUMP CONTROLLER (WITH WIDEBAND COIL)

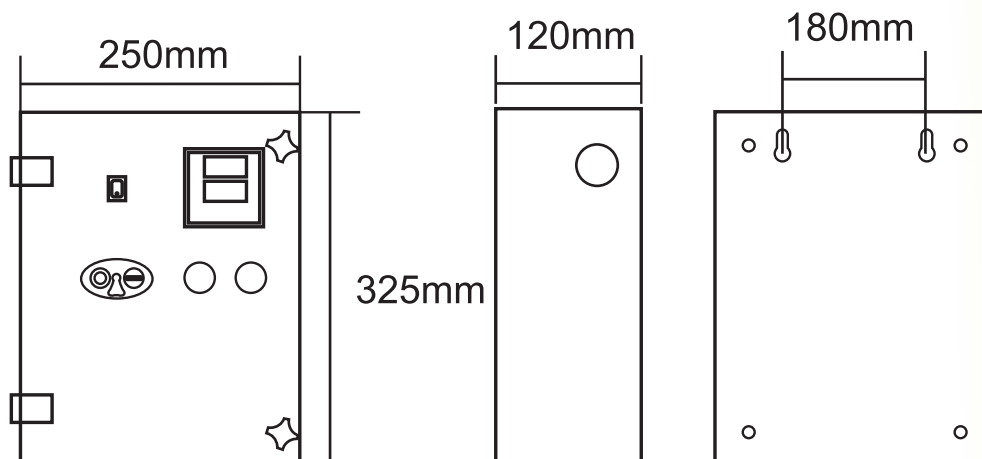
CONTROL UNIT WITH VOLT-AMPERE METER AND SPP (WITH SINGLE PHASE PREVENTER).

HS CODE 8536

CAT.NO.	Maximum Submersible Pump Rating at 3Ø,415V,50Hz	Relay Max. Range (A)	KW	Cont. Type	Coil Voltage 50Hz	Std. Pkg. Nos.
MU-G12 DOL 10HP(H)	10HP(H)	13-21A	7.5	MU6	415V	4Pcs
MU-G12 DOL 15HP	15HP	20-32A	11	MU6	415V	4Pcs
MU-G12 DOL 15HP(H)	15HP(H)	20-32A	11	MU8	415V	4Pcs
MU-G12 DOL 20HP	20HP	28-42A	15	MU8	415V	4Pcs
MU-G12 DOL 25HP	25HP	40-63A	18.5	MU10	415V	4Pcs

Features

- Protection from Overload Conditions
- Protection from Single Phasing
- Protection from Phase Reversal
- Protection from Phase Unbalance
- Easy replacement of Spares
- Wide band coil operates from 50% to 110% of rated coil voltage
- Auto Restart (with variable 30 Sec - 5 Min ON delay)
- Power ON & Pump ON indication
- Dual Voltmeter & Ammeter



	MU-G12 DOL
Rating	Up to 20HP 415V, 3Ø
Contactor/AC3	MU6,MU8,MU10
Contactor Electrical Life - AC3	1 Million
Mechanical Life	10 Million
Coil Voltage	415V-N(220V-460V) Wide band
Overload Relay	ML2
Relay Range	20 - 32A, 28 - 42A, 40 - 63A
Relay Type	Thermal Bimetallic Relay
Relay Trip Class	Class 10A
Pick-up Voltage	60% to 110% of Uc
Drop-off Voltage	20% to 50% of Uc
Measurement Offered	Ammeter (0-60A) Voltmeter (0-500 V)
Additional Protection Offered	Single Phasing, Phase Reversal, Phase unbalance (55 ± 5 V)
Protection Device (electronic)	SPPR type Sz5
Indicating Lamps	Supply ON Pump ON
Indicating Lamp Type	LED (415 V)
Rated Insulation Voltage	690 V
Rated Operational Voltage	360 V
Rated Impulse Withstand Voltage	8 kV
HV withstand capacity (for 60 Sec)	2 kV
Service Temperature	-5°C to 55°C
Terminal Capacity (Terminal Blocks)	10 sq.mm. with Lug
No.of full start	30 operations per Hour
Back-up Protection	Type 2 with HF fuses
Power Wiring	2.5 sq.mm
Control Wiring	1 sq.mm.
Degree of Protection	IP54 (Suitable for Humid Dusty and Hot Environment)
Copper Contacts Material	ETP Grade Copper 99.9% Pure
Hardware Plating	Zinc plated hardware with better corrosion resistance
Impact Capacity	IK6
Provision to connect Dry-run protection unit	Yes
Remote Operation	Possible using Mobile through externally connected M-POWER+ GSM Module



TYPE-MU-G20 SPP, FASD FULLY AUTOMATIC STAR DELTA SUBMERSIBLE PUMP CONTROLLER (WITH WIDEBAND COIL)

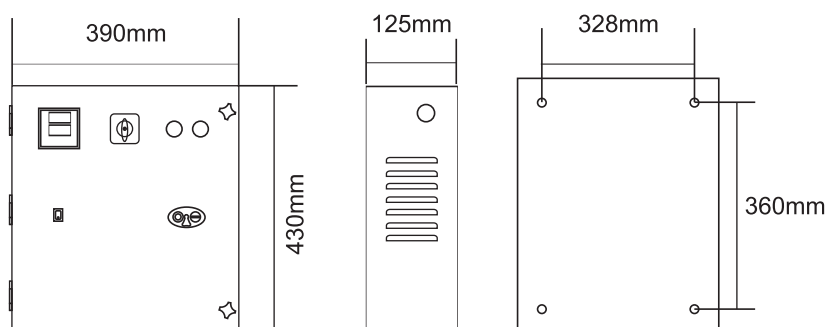
CONTROL UNIT WITH VOLT-AMPERE METER, TIMER AND SPP (WITH SINGLE PHASE PREVENTER).

HS CODE 8536

CAT.NO.	Maximum Submersible Pump Rating at 3Ø,415V,50Hz	Relay Max. Range (A)	KW	Coil Voltage 50Hz/60Hz	Std. Pkg. Nos.
MU-G20 SPP 10HP	10HP	9-14	7.5	360V/415V	1Pcs
MU-G20 SPP 15HP	15HP	13-21	11	360V/415V	1Pcs
MU-G20 SPP 20HP	20HP	13-21	15	360V/415V	1Pcs
MU-G20 SPP 20HP(H)	20HP(H)	20-32	15	360V/415V	1Pcs
MU-G20 SPP 25HP	25HP	20-32	18.5	360V/415V	1Pcs
MU-G20 SPP 30HP	30HP	20-32A	22.5	360V/415V	1Pcs
MU-G20 SPP 40HP	40HP	28-42A	30	360V/415V	1Pcs

Features

- Protection from Overload Conditions
- Protection from Single Phasing
- Protection from Phase Reversal
- Protection from Phase Unbalance
- Wide band coil operates from 50% to 110% of rated coil voltage
- Selector switch to view voltage of three phases
- Auto Restart (with variable 30 Sec - 5 Min ON delay)
- Power ON & Pump ON indication
- Dual Voltmeter & Ammeter
- Easy replacement of Spares





Features

- Protection from Overload Conditions
- Protection from Single Phasing
- Protection from Phase Reversal
- Protection from Phase Unbalance
- Wide band coil operates from 50% to 110% of rated coil voltage
- Selector switch to view voltage of three phases
- Auto Restart (with variable 30 Sec - 5 Min ON delay)
- Power ON & Pump ON indication
- Dual Voltmeter & Ammeter
- Easy replacement of Spares

MU-G15 to MU-G40

Rating	UP TO 40HP, 415 V, 3 Ø
Type of Contactor	MU1,MU2,MU3,MU4
Contactors Electrical Life - AC3	1 Million Operations
Mechanical Life	10 Million Operations
Coil Voltage	415 V, 360 V
Overload Relay Size	MU2
Relay Range	9 - 14A and 28-42A
Relay Type	Thermal Bimetallic Relay
Relay Trip Class	Class 10A
Pick-up Voltage	50% to 110% of Uc
Drop-off Voltage	25% to 35% of Uc
Measurement Offered	Ammeter (0-60A) Voltmeter (0-500 V) with selector switch
Additional Protection Offered	Single Phasing, Phase Reversal, Phase unbalance (55 ± 5 V)
Protection Device (electronic)	SPPR Type SDz5 (360 V, 415 V)
In-built Star-Delta timer	3 to 30 sec
Indicating Lamps	Supply ON Pump ON
Indicating Lamp Type	LED (415 V)
Rated Insulation Voltage	690 V
Rated Operational Voltage	415 V
Rated Impulse Withstand Voltage	8 kV
HV withstand capacity (for 60 Sec)	2 kV
Service Temperature	-5°C to 55°C
Terminal Capacity (Terminal Blocks)	16 sq.mm. with Lug
Back-up Protection	Type 2 with HF fuses
Power Wiring	Solid Copper Wire.
Control Wiring	1 sq.mm.
Copper Contacts Material	ETP Grade Copper 99.9% Pure
Hardware Plating	Zinc plated hardware with better corrosion resistance
Provision to connect Dry-run protection device	Yes
Remote Operation	Possible using Mobile through externally connected M-POWER+ GSM Module

MU-G15 to MU-G40 Contactor Slection Chart

H.P	S	D	M	RELAY-RANGE
MU-G20 SPP 10HP	MU1	MU1	MU1	9-14A
MU-G20 SPP 15HP	MU1	MU1	MU1	13-21A
MU-G20 SPP 20HP	MU1	MU2	MU2	13-21A
MU-G20 SPP 20HP(H)	MU2	MU2	MU2	20-32A
MU-G20 SPP 25HP	MU2	MU3	MU3	20-32A
MU-G20 SPP 30HP	MU3	MU3	MU3	20-32A
MU-G20 SPP 40HP	MU4	MU4	MU4	28-42A



MU-G50 SPP (FASD)

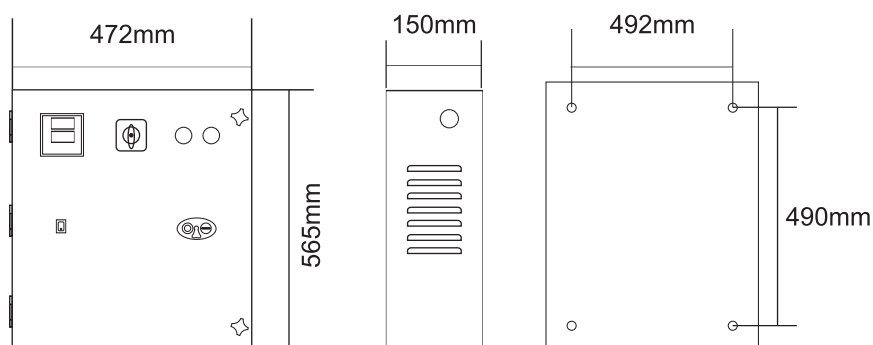


TYPE-MU-G50 SPP, FASD FULLY AUTOMATIC STAR DELTA SUBMERSIBLE PUMP CONTROLLER (WITH WIDEBAND COIL)
CONTROL UNIT WITH VOLT-AMPERE METER, TIMER AND SPP (WITH SINGLE PHASE PREVENTER). **HS CODE 8536**

CAT.NO.	Maximum Submersible Pump Rating at 3Ø,415V,50Hz	Relay Max. Range (A)	KW	Coil Voltage 50Hz/60Hz	Std. Pkg. Nos.
MU-G50 SPP 50HP	50HP	40 - 63	37	360V/415V	1Pcs
MU-G50H SPP 50HP(H)	50HP(H)	40 - 63	37	360V/415V	1Pcs
MU-G60 SPP 60HP	60HP	45 - 75	45	360V/415V	1Pcs
MU-G60H SPP 60HP(H)	60HP(H)	45 - 75	45	360V/415V	1Pcs
MU-G80 SPP 80HP	80HP	60 - 90	60	360V/415V	1Pcs

Features

- Protection from Overload Conditions
- Protection from Single Phasing
- Protection from Phase Reversal
- Protection from Phase Unbalance
- Wide band coil operates from 50% to 110% of rated coil voltage
- Selector switch to view voltage of three phases
- Auto Restart (with variable 30 Sec - 5 Min ON delay)
- Power ON & Pump ON indication
- Dual Voltmeter & Ammeter
- Easy replacement of Spares



Maximum Submersible Pump Rating at 3Ø,415V,50Hz	S	D	M
50HP	MU4	MU6	MU6
50HP(H)	MU6	MU8	MU8
60HP	MU4	MU8	MU8
60HP(H)	MU6	MU10	MU10
80HP	MU10	MU10	MU10



Features

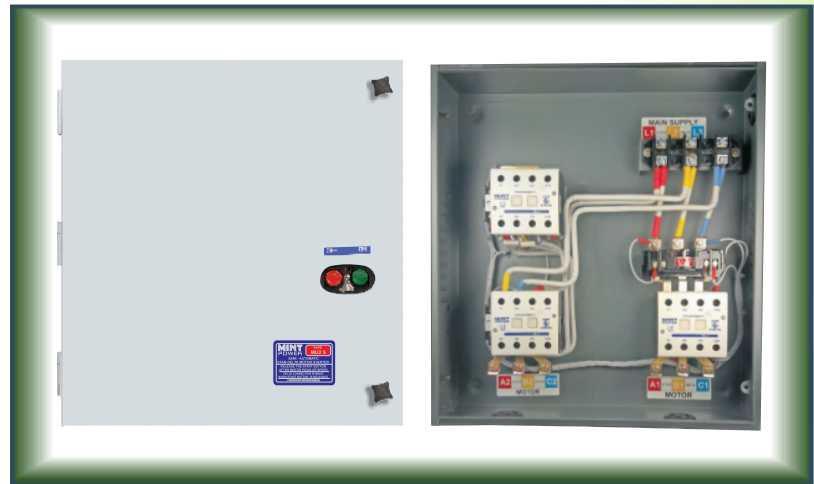
- Protection from Overload Conditions
- Protection from Single Phasing
- Protection from Phase Reversal
- Protection from Phase Unbalance
- Wide band coil operates from 50% to 110% of rated coil voltage
- Selector switch to view voltage of three phases
- Auto Restart (with variable 30 Sec - 5 Min ON delay)
- Power ON & Pump ON indication
- Dual Voltmeter & Ammeter
- Easy replacement of Spares

MU-G50 to MU-G80

Rating	UP TO 80HP, 415 V, 3 Ø
Type of Contactor	MU6,MU8,MU10
Contactors Electrical Life - AC3	1 Million Operations
Mechanical Life	10 Million Operations
Coil Voltage	415 V, 360 V
Overload Relay Size	ML2
Relay Range	40 - 63A and 60 - 90A
Relay Type	Thermal Bimetallic Relay
Relay Trip Class	Class 10A
Pick-up Voltage	50% to 110% of Uc
Drop-off Voltage	25% to 35% of Uc
Measurement Offered	Ammeter (0-60A) Voltmeter (0-500 V) with selector switch
Additional Protection Offered	Single Phasing, Phase Reversal, Phase unbalance (55 ± 5 V)
Protection Device (electronic)	SPPR Type SDz5 (360 V, 415 V)
In-built Star-Delta timer	3 to 30 sec
Indicating Lamps	Supply ON Pump ON
Indicating Lamp Type	LED (415 V)
Rated Insulation Voltage	690 V
Rated Operational Voltage	415 V
Rated Impulse Withstand Voltage	8 kV
HV withstand capacity (for 60 Sec)	2 kV
Service Temperature	-5°C to 55°C
Terminal Capacity (Terminal Blocks)	16 sq.mm. with Lug
Back-up Protection	Type 2 with HF fuses
Power Wiring	Solid Copper Wire.
Control Wiring	1 sq.mm.
Copper Contacts Material	ETP Grade Copper 99.9% Pure
Hardware Plating	Zinc plated hardware with better corrosion resistance
Provision to connect Dry-run protection device	Yes
Remote Operation	Possible using Mobile through externally connected M-POWER+ GSM Module

MU-G50 to MU-G80 Contactor Slection Chart

H.P	S	D	M	RELAY-RANGE
MU-G50 SPP 50HP	MU4	MU6	MU6	40 - 63A
MU-G50(H) SPP 50HP	MU6	MU8	MU8	40 - 63A
MU-G60 SPP 60HP	MU4	MU8	MU8	45 - 75A
MU-G60 SPP 60HP(H)	MU6	MU10	MU10	45 - 75A
MU-G80 SPP 80HP	MU10	MU10	MU10	60 - 90A



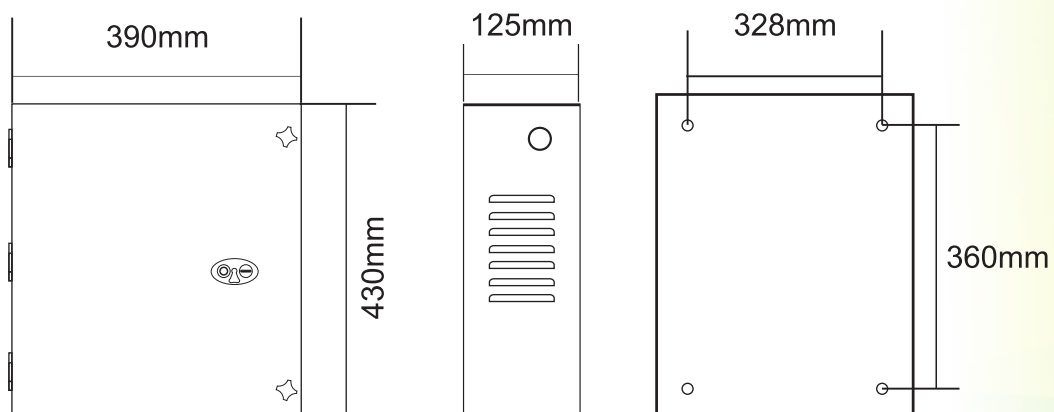
HS CODE 8536

TYPE-MU-SASD, SEMI AUTOMATIC STAR DELTA STATERS (WITH WIDEBAND COIL)

CAT.NO.			Max. Motor Output at 415V, 3-Ph		Relay Max. Range (A)	Coil Voltage 50Hz/60Hz	Std. Pkg. Nos.
			HP	KW			
MU1	SASD	15	15 HP	11	13 - 21	360V/415V	1Pcs
MU2	SASD	20	20 HP	15	13 - 21	360V/415V	1Pcs
MU2	SASD	20(H)	20 HP(H)	15	20 - 32	360V/415V	1Pcs
MU3	SASD	25	25 HP	18.5	20 - 32	360V/415V	1Pcs
MU3	SASD	30	30 HP	22.5	20 - 32	360V/415V	1Pcs
MU4	SASD	40	40 HP	30	28 - 42	360V/415V	1Pcs

Features

- Enclosure is dust, moisture and vermin proof with cord packing in the cover
- Latch to prevent accidental starting
- Tested for millions of operations without failure
- Robust silver tipped contacts
- Reliable protection against overload





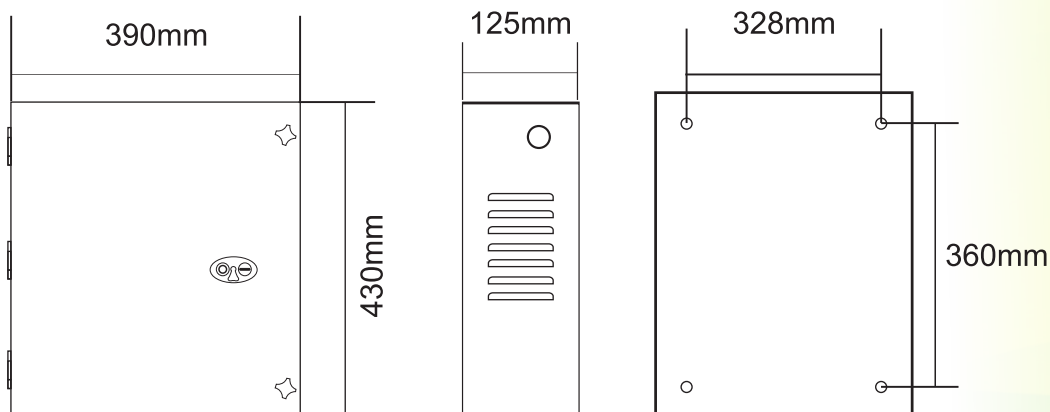
HS CODE 8536

TYPE-MU-FASD, FULLY AUTOMATIC STAR DELTA STATERS (WITH WIDEBAND COIL)

CAT.NO.	Max. Motor Output at 415V, 3-Ph		Relay Max. Range (A)	Coil Voltage 50Hz/60Hz	Std. Pkg. Nos.
	HP	KW			
MU1 FASD 15	15 HP	11	13 - 21	360V/415V	1Pcs
MU2 FASD 20	20 HP	15	13 - 21	360V/415V	1Pcs
MU2 FASD 20(H)	20 HP(H)	15	20 - 32	360V/415V	1Pcs
MU3 FASD 25	25 HP	18.5	20 - 32	360V/415V	1Pcs
MU3 FASD 30	30 HP	22.5	20 - 32	360V/415V	1Pcs
MU4 FASD 40	40 HP	30	28 - 42	360V/415V	1Pcs

Features

- Enclosure is dust, moisture and vermin proof with cord packing in the cover
- Latch to prevent accidental starting
- Tested for millions of operations without failure
- Robust silver tipped contacts
- Reliable protection against overload





**INNOVATION BUILT INTO
EVERY DESIGN**

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Since the very beginning Synergy Enterprises has imbibed the best standards of the business to produce benchmark products. By fulfilling the market requirements, innovating future solutions and offering best customer support. Synergy Enterprises has become the most recognised and preferred name in the industry.



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We have a vision to establish synergy enterprises as a reckoned and reliable name in the industry, thereby developing a brand name for self.

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At synergy enterprises, we adhere to our unwavering commitment and offer world class products to our clients across the world.

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