



# MULTIDRIVE-3PH UNIVERSAL 3 PHASE THYRISTOR UNIT UP TO 500A



## GENERAL DESCRIPTION

- **MULTIDRIVE IS A FULL DIGITAL AND UNIVERSAL THYRISTOR UNIT BASED ON A VERY POWERFUL DEDICATED MICRO CONFIGURABLE VIA SERIAL COMMUNICATION PORT FOR ALL INPUTS, FIRING MODES, FEED BACK MODES AND LOADS TYPES.**
- **SUITABLE TO DRIVE RESISTIVE, INDUCTIVE, TRANSFORMER AND COMPLEX LOADS REQUIRING CURRENT LIMIT, POWER FEEDBACK OR PARTICULAR ALGORITHM.**
- **FRONTAL KEY PAD STANDARD TO CONFIGURE ALL THE INTERNAL FUNCTIONS AND PARAMETERS.**
- **FOUR ANALOG OUTPUT CONFIGURABLE**
- **SIX DIGITAL INPUT**
- **FOUR REALAY OUTPUT**
- **UNIVERSAL INPUT SIGNAL WITH AUTOMATIC ZERO/SPAN CALIBRATION.**
- **UNIVERSAL FIRING MODES, CUSTOMER CONFIGURABLE VIA KEY PAD OR COMMUNICATION PORT AS BURST FIRING AND PHASE ANGLE.**
- **UNIVERSAL FEED BACK MODES**
- **SOFT START CAN BE USED IN ADDITION TO BURST FIRING AND PHASE ANGLE.**
- **UNBALANCED LOAD AND HEATER BREAK ALARM.**
- **RS 485 PORT. MODBUS PROTOCOL**
- **COMPLY WITH EMC  AND **
- **IP20 PROTECTION**

## TECHNICAL SPECIFICATION

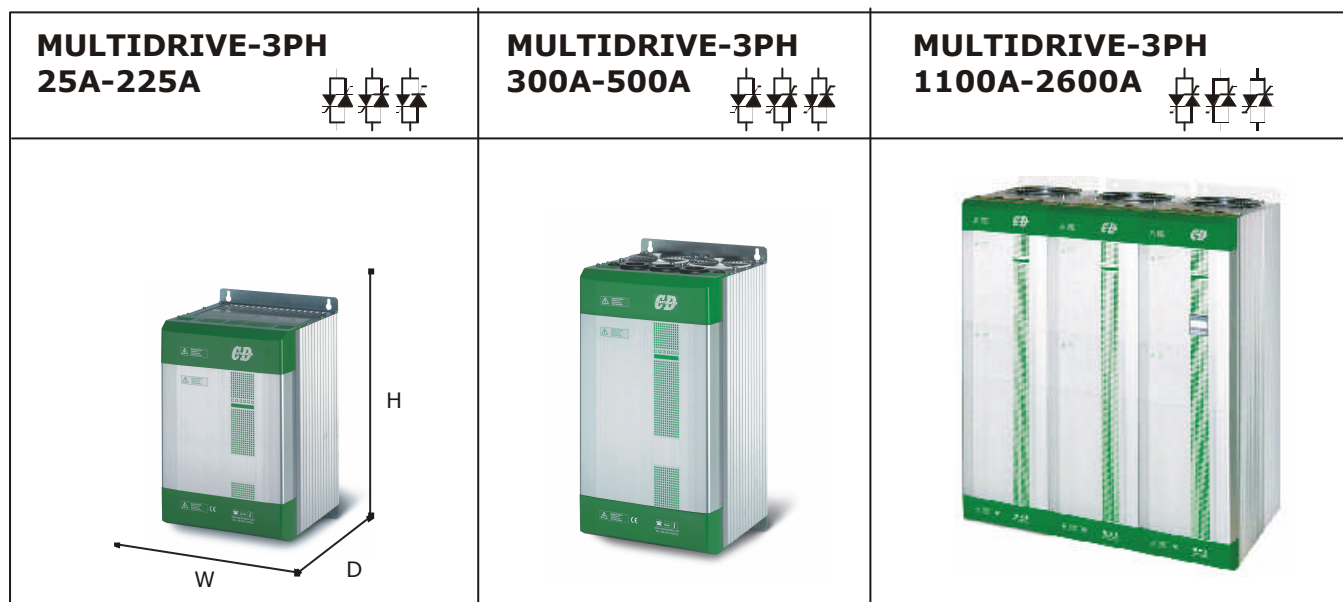
Operating temperature	0÷45°C for higher temperature see derating curve
Voltage power supply	Range 330V to 480V max and 600V on request, for other voltage ask to our support center.
Auxiliary voltage supply	90÷265V; 20VA power consumption. Fan voltage supply: 230V±15% as a standard and 110V on request.
Analog Input 1	Primary reference, SSR, 4÷20mA ,0 ÷10V, 10K Pot, Communication port
Analog Input 2	Secondary reference, SSR, 4÷20mA ,0 ÷10V, 10K Pot, C ommunication port
Analog Input 3	Current Limit Profiling, SSR, 4÷20mA ,0 ÷10V, 10K Pot, Communication port
Analog Output	Four analog output 0-10V (0÷20mA or 4÷20mA are as an option),to retransmitted One of this value: Current, Voltage or Power for each phases.
Digital Input	Six optoisalated digital input (12/24Vdc), for START, STOP, ENABLE, CALIBRATION, RESET ALARM and EXT ALARM
Relay Output	Three configurable relay output and one critical alarm
Universal Firing	One of these firing modes can be configured on line via serial port or frontal Keypad: Burst Firing BF; Single Cycle SC; Soft Start + Burst Firing S+BF; Phase Angle + Soft Start S+PA
Soft Start	Digital adjustable ramp rate can be used in up or/end down mode
Feedback	Voltage (V), Current (I) Power (VxI) and External feedback
Heater break alarm	Circuit microprocessor based to diagnose partial or total load failure and short circuit on Thyristors.
Unbalanced load	This protection allow to have Multidrive working up to 20% of unbalance on one of phases.
Communication	RS485 Port. Modbus communication protocol 9600 or 19200 bauds
Thermal protection	Available on forced ventilated units
Fuses	High speed fuses fitted internally

## ORDERING CODE

Model	Current (A)	Oper. Voltage	Max Voltage	Load connections	Auxiliary Voltage	Load type	Firing mode	Feedback mode	Main input	Secon. Input	External curr. profil	Retransmission Code	Options
Multidrive 3PH	25	24V min	480V	3D 3 Wire	110V	RES	SC Single Cycle	W Power	0÷10V	0÷10V	0÷10V	W10 Power	NO-HB
	45		600V	Delta	230V	Resistive	BF Burst Firing	V Voltage	4÷20mA	4÷20mA	4÷20mA	0÷10V	UL (cUL us Listed)
	75			3S 3 Wire		TRA	S+BF Soft Start	I Current	10 Kpot	10 Kpot	10 Kpot	I10 Current	CD-KP External
	100			Star		Transformer	+ Burst Firing	EX Ext	Comm	Comm	Comm	0÷10V	Key-Pad
	125			6D 6 Wire			PA Phase Angle	0÷10V	SSR	SSR	SSR	W020 Power	
	150			Open Delta			S+PA Soft Start					0÷20mA	
	225			4S Star with			+ Phase Angle					I020 Current	
	300			neutral								0÷20mA	
	350											W420 Power	
	400											4÷20mA	
	450											I420 Current	
	500						Note: for Burst					4÷20mA	
	1100						Firing specify						
	1600						the desired n° of						
	2100						cycles ON at 50%						
	2600						of power demand						

### EXAMPLE CODE

Multidrive 3PH	150A/	400V/	480V/	3D/	230V/	RES/	BF008/	W/	4-20mA/	4-20mA/	NO/	W10/	UL
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## DIMENSIONS

	W	H	D		W	H	D		W	H	D		W	H	D
25A	262	440	270	125A	262	440	270	350A	262	520	270	1100	500	720	410
45A	262	440	270	150A	262	440	270	400A	262	520	270	1600	570	920	410
75A	262	440	270	225A	262	440	270	450A	262	520	270	2100	736	920	520
100A	262	440	270	300A	262	520	270	500A	262	520	270	2600	300	1040	515

## FUSES

Internal Fuses are standard on Multidrive.

## INPUT FEATURES

Input signal	Input impedance
0÷10V	8200W
4÷20mA	100W
10K Pot.	8200W

Auxiliary Power Supply
90-265Vac

## OUTPUT FEATURES

Voltage	Voltage range (V)	Ripetitive peak reverse voltage (480V)	Latching current (mAeff)	Max peak one cycle (10msec.) (A)	Leakage current (mAeff)	I2T value for fusing tp=10msec	Frequency range (V)	Power loss I=Inom (W)	Isolation Voltage Vac
25A	330÷480 V	1200	450	500	15	1030	47÷70	90	2500
45A	330÷480 V	1200	450	1000	15	4750	47÷70	162	2500
75A	330÷480 V	1200	450	1000	15	4810	47÷70	270	2500
100A	330÷480 V	1200	450	1540	15	11300	47÷70	360	2500
125A	330÷480 V	1200	450	2000	15	19100	47÷70	450	2500
150A	330÷480 V	1200	450	2000	15	19100	47÷70	540	2500
225A	330÷480 V	1200	300	4800	15	108000	47÷70	810	2500
300A	330÷480 V	1200	300	5250	15	128000	47÷70	1080	2500
350A	330÷480 V	1200	200	7800	15	300000	47÷70	1260	2500
400A	330÷480 V	1200	200	8000	15	306000	47÷70	1440	2500
450A	330÷480 V	1200	1000	17800	15	1027000	47÷70	1620	2500
500A	330÷480 V	1200	1000	17800	15	1027000	47÷70	1800	2500

Over 500A Informations availables on request