

Product type designation         Tyristor modules modules modules modules potentic type designation         CTL           General characteristics         Tyristor modules potenting voltage range         \$40759           Rated voltage (Poperating voltage range)         ½ 50.660           Operating frequency range         ½ 50.660           Rated current (le)         4 400 VAC         kvar           Rated current (le)         4400 VAC         kvar         50           Rated current (le)         4400 VAC         kvar         40           Rated average (PIV)         VAC         3600           Number of controlled phases         N. 2         2           Control circuit         Table (VAC)         (with optional card Exclude) in combination with controller purply voltage (VIV)         (with optional card Exclude) in combination with controller purply voltage (VIV)         (with optional card Exclude) in combination with controller purply voltage (VIV)         (average) (VIV)         (average) (VIV)         (average) (VIV)         (average) (VIV)				
Product type designation   Season and Characteristics   Season and Chara	Product designation			
Rated voltage	Product type designation			
Rated voltage   V   600680   Operating voltage range   340759   3407				DOTE
Separating voltage range			V	600690
Rated frequency   Hz   50/60     Operating frequency range   Hz   4565     Rated current (le)   3   400VAC     Rated current (le)   50   440VAC     Rated current (le)   440VAC     Rated current (le)   50   440VAC     Rated current (le)   640VAC     Rated auxiliary supply voltage Us     Rated auxiliary supply voltage Us     Rated auxiliary supply voltage Us     Rated auxiliary rated frequency   12   50/60     Power consumption Max   74   14.1     Power dissipation Max   75   12.24VDC     Poperating range   12.24VDC     Rated auxiliary supply voltage Us   13.1     Rated auxiliary supply voltage Us   14.1     Rat				340759
Rated current (le)			Hz	50/60
Step power at	Operating frequency range		Hz	4565
A00WAC   Kvar   50	Rated current (le)		Α	48
A40VAC   Kvar   37   480VAC   Kvar   44   480VAC   Kvar   44   480VAC   Kvar   44   480VAC   Kvar   44   480VAC   Kvar   50   480VAC   50   50   50   50   50   50   50   5	Step power at			
ABOVAC   Rivar   40		400VAC	kvar	50
Peak inverse voltage (PIV)		440VAC	kvar	37
Peak inverse voltage (PIV)			kvar	
Peak inverse voltage (PIV)			kvar	
Peak inverse voltage (PIV)         VAC         3600           Number of controlled phases         Nr.         2           Lead of the phases         12-24VDC input or free-voltage input or via RS485 serial port (with optional card EXC1042 in combination with controller DCR68F + EXP1012)           Auxiliary supply         EXP1012           Auxiliary supply voltage US         Texp1012           AC         min VAC         100 max VAC           Auxiliary rated frequency         Hz         50/60           Power consumption Max         VA         14.1           Power dissipation Max         VA         14.1           Power dissipation Max         CONTROL +/-           Rated voltage         2.24VDC           Operating range         830VDC           Digital inputs         C-IN1           Terminals         C-IN1           Applied voltage at contact (internal)         5VDC           Input current         mA         ≤10           Low input signal         VDC         ≥3.2           Input signal delay         ms         ≥50           NTC probe input           Terminals         NTC-NTC           Reasuring range         °C         -25+85           Maximum connection length         mt				
Number of controlled phases         Nr. 2           12-24VDC input or free-voltage input or via RS485 serial port (with optional card EXC1042 in combination with controller DCRG8F + EXP1012)           Auxiliary supply           Rated auxiliary supply voltage Us           AC         min VAC 100 Max VAC 240           Auxiliary rated frequency         Hz 50/60           Power consumption Max         VA 14.1           Power dissipation Max         W 5.8           Control input         CONTROL +/-           Terminals         CONTROL +/-           Rated voltage         12-24VDC           Operating range         830VDC           Digital inputs         C-IN1           Terminals         C-IN1           Applied voltage at contact (internal)         5VDC           Input current         mA 410           Low input signal         VDC 23.2           Input signal delay         ms ≥50           NTC probe input           Terminals         NTC -NTC           Sensor type         NTC cordering code NTC01)           Measuring range         °C -25+85           Maximum connection lenght         mt 3		690VAC		
12-24VDC input or free-voltage input or via RS485 serial port (with optional card EXC1042 in combination with controller DCRG8F + EXP1012)   Auxiliary supply   Rated auxiliary supply voltage Us				
Control circuit	Number of controlled phases		Nr.	
Control circuit   Season   S				
Control circuit         RŠ485 serial port (with optional corad EXC1042 in combination with controller DCRG8F + EXP1012)           Auxiliary supply           Rated auxiliary supply voltage Us         VAC         100 Max         VAC         240 C           Auxiliary rated frequency         Hz         50/60         50/60         60/60				•
Control circuit         (with optional card EXC1042 in card EXC1042 in combination with controller DCRG8F + EXP1012)           Auxiliary supply           Rated auxiliary supply voltage Us         FEXP1012           AC         min Max         VAC				
Control circuit				
Auxiliary supply	Control circuit			
Auxiliary supply           Rated auxiliary supply voltage Us           AC           min         VAC         100           Max         VAC         240           Auxiliary rated frequency         Hz         50/60           Power consumption Max         VA         14.1           Power dissipation Max         W         5.8           Control input         W         5.8           Control input         CONTROL +/-           Rated voltage         12-24VDC           Operating range         830VDC           Digital inputs         C-IN1           Applied voltage at contact (internal)         5VDC           Input current         mA         ≤10           Low input signal         VDC         ≤3.2           Input signal delay         ms         ≥50           NTC probe input           Terminals         NTC-NTC           Sensor type         NTC-OTTC           Measuring range         °C         -25+85           Maximum connection lenght         mt         3				combination with
EXP1012)           Auxiliary supply           Ac           min         VAC         100           Max         VAC         240           Auxiliary rated frequency         Hz         50/60           Power consumption Max         VA         14.1           Power dissipation Max         W         15.8           Control input         V         12.24VDC           CONTROL +/-           Rated voltage         12.24VDC           Operating range         830VDC           Digital inputs         C-IN1           Applied voltage at contact (internal)         5VDC           Input current         mA         ≤10           Low input signal         VDC         ≤0.8           High input signal         VDC         ≥3.2           Input signal delay         ms         ≥50           NTC-probe input         Terminals         NTC-NTC           Sensor type         NTC (ordering code NTCo1)         NTC (ordering code NTCo1)           Measuring range         °C         -25+85           Maximum connection lenght         mt         3				
Auxiliary supply           AC         min Max         VAC				
Rated auxiliary supply voltage Us           AC         min Max         VAC	A			EXP1012)
AC         min Max         VAC				
Auxiliary rated frequency         min Max         VAC				
Auxiliary rated frequency         Hz         50/60           Power consumption Max         VA         14.1           Power dissipation Max         W         5.8           Control input         Terminals         CONTROL +/-           Rated voltage         12-24VDC           Operating range         830VDC           Digital inputs         Terminals         C-IN1           Applied voltage at contact (internal)         5VDC           Input current         mA         ≤10           Low input signal         VDC         ≤0.8           High input signal delay         wm         ≥50           NTC probe input         Terminals         NTC-NTC           Sensor type         NTC (ordering code NTC01)           Measuring range         °C         -25+85           Maximum connection lenght         mt         3	Rated auxiliary supply voltage Us			
Auxiliary rated frequency         Hz         50/60           Power consumption Max         VA         14.1           Power dissipation Max         W         5.8           Control input         Terminals         CONTROL +/-           Rated voltage         12-24VDC           Operating range         830VDC           Digital inputs         Terminals         C-IN1           Applied voltage at contact (internal)         5VDC           Input current         mA         ≤10           Low input signal         VDC         ≤3.2           High input signal delay         ms         ≥50           NTC probe input         Terminals         NTC probe input           Terminals         NTC-NTC           Sensor type         NTC (ordering code NTC01)           Measuring range         °C         -25+85           Maximum connection lenght         mt         3	Rated auxiliary supply voltage Us	min	VAC	100
Power consumption Max         VA         14.1           Power dissipation Max         W         5.8           Control input         Secontrol input           Terminals         CONTROL +/-           Rated voltage         12-24VDC           Operating range         830VDC           Digital inputs         C-IN1           Applied voltage at contact (internal)         5VDC           Input current         mA         ≤10           Low input signal         VDC         ≤0.8           High input signal delay         yDC         ≥3.2           Input signal delay         ms         ≥50           NTC probe input         Terminals         NTC-NTC           Sensor type         NTC (ordering code NTC01)           Measuring range         °C         -25+85           Maximum connection lenght         mt         3	Rated auxiliary supply voltage Us			
Power dissipation Max         W 5.8           Control input         CONTROL +/-           Terminals         CONTROL +/-           Rated voltage         12-24VDC           Operating range         830VDC           Digital inputs         C-IN1           Applied voltage at contact (internal)         5VDC           Input current         mA ≤10           Low input signal         VDC ≤0.8           High input signal delay         VDC ≥3.2           Input signal delay         ms ≥50           NTC probe input         Terminals           Sensor type         NTC-NTC           Measuring range         °C -25+85           Maximum connection lenght         mt         3	Rated auxiliary supply voltage Us  AC		VAC	240
Control input           Terminals         CONTROL +/-           Rated voltage         12-24VDC           Operating range         830VDC           Digital inputs         Terminals         C-IN1           Applied voltage at contact (internal)         5VDC           Input current         mA ≤10           Low input signal         VDC ≤0.8           High input signal delay         VDC ≥3.2           Input signal delay         ms ≥50           NTC probe input         Terminals         NTC-NTC           Sensor type         NTC (ordering code NTC01)           Measuring range         °C -25+85           Maximum connection lenght         mt	Rated auxiliary supply voltage Us AC  Auxiliary rated frequency		VAC Hz	240 50/60
Terminals         CONTROL +/-           Rated voltage         12-24VDC           Operating range         830VDC           Digital inputs           Terminals           Applied voltage at contact (internal)         5VDC           Input current         mA ≤10           Low input signal         VDC ≤0.8           High input signal delay         vDC ≥3.2           Input signal delay         ms ≥50           NTC probe input         NTC-NTC           Sensor type         NTC (ordering code NTC01)           Measuring range         °C -25+85           Maximum connection lenght         mt 3	Auxiliary rated frequency Power consumption Max		VAC Hz VA	240 50/60 14.1
Rated voltage         12-24VDC           Operating range         830VDC           Digital inputs           Terminals         C-IN1           Applied voltage at contact (internal)         5VDC           Input current         mA ≤10           Low input signal         VDC ≤0.8           High input signal delay         ms ≥50           NTC probe input         Terminals           Sensor type         NTC-NTC           Sensor type         NTC (ordering code NTC01)           Measuring range         °C -25+85           Maximum connection lenght         mt 3	Rated auxiliary supply voltage Us AC  Auxiliary rated frequency Power consumption Max Power dissipation Max		VAC Hz VA	240 50/60 14.1
Operating range         830VDC           Digital inputs         C-IN1           Terminals         C-IN1           Applied voltage at contact (internal)         5VDC           Input current         mA ≤10           Low input signal         VDC ≤0.8           High input signal delay         ms ≥50           NTC probe input         Terminals         NTC-NTC           Sensor type         NTC (ordering code NTC01)           Measuring range         °C -25+85           Maximum connection lenght         mt 3	Rated auxiliary supply voltage Us AC  Auxiliary rated frequency Power consumption Max Power dissipation Max Control input		VAC Hz VA	240 50/60 14.1 5.8
Digital inputs         C-IN1           Applied voltage at contact (internal)         5VDC           Input current         mA ≤10           Low input signal         VDC ≤0.8           High input signal delay         vDC ≥3.2           Input signal delay         ms ≥50           NTC probe input         NTC-NTC           Sensor type         NTC (ordering code NTC01)           Measuring range         °C -25+85           Maximum connection lenght         mt 3	Auxiliary rated frequency Power consumption Max Power dissipation Max Control input Terminals		VAC Hz VA	240 50/60 14.1 5.8 CONTROL +/-
Terminals         C-IN1           Applied voltage at contact (internal)         5VDC           Input current         mA ≤10           Low input signal         VDC ≤0.8           High input signal delay         VDC ≥3.2           Input signal delay         ms ≥50           NTC probe input         Terminals           Sensor type         NTC-NTC           Measuring range         °C -25+85           Maximum connection lenght         mt 3	Rated auxiliary supply voltage Us AC  Auxiliary rated frequency Power consumption Max Power dissipation Max  Control input Terminals Rated voltage		VAC Hz VA	240 50/60 14.1 5.8 CONTROL +/- 12-24VDC
Input current mA ≤10   Low input signal VDC ≤0.8   High input signal delay VDC ≥3.2   Input signal delay ms ≥50   NTC probe input Terminals NTC-NTC   Sensor type NTC (ordering code NTC01)   Measuring range °C -25+85   Maximum connection lenght mt 3	Rated auxiliary supply voltage Us AC  Auxiliary rated frequency Power consumption Max Power dissipation Max  Control input Terminals Rated voltage Operating range		VAC Hz VA	240 50/60 14.1 5.8 CONTROL +/- 12-24VDC
Low input signal VDC ≤0.8   High input signal VDC ≥3.2   Input signal delay ms ≥50   NTC probe input Terminals NTC-NTC   Sensor type NTC (ordering code NTC01)   Measuring range °C -25+85   Maximum connection lenght mt 3	Rated auxiliary supply voltage Us AC  Auxiliary rated frequency Power consumption Max Power dissipation Max Control input Terminals Rated voltage Operating range Digital inputs		VAC Hz VA	240 50/60 14.1 5.8 CONTROL +/- 12-24VDC 830VDC
High input signal VDC ≥3.2 Input signal delay ms ≥50  NTC probe input  Terminals  Sensor type  NTC (ordering code NTC01)  Measuring range  Maximum connection lenght  NDC ≥3.2  NTC Probe ≥50  NTC-NTC  NTC (ordering code NTC01)  NTC (ordering code NTC01)  Measuring range  nt 3	Rated auxiliary supply voltage Us AC  Auxiliary rated frequency Power consumption Max Power dissipation Max Control input Terminals Rated voltage Operating range Digital inputs Terminals		VAC Hz VA	240 50/60 14.1 5.8 CONTROL +/- 12-24VDC 830VDC
Input signal delay ms ≥50   NTC probe input Terminals NTC-NTC   Sensor type NTC (ordering code NTC01)   Measuring range °C -25+85   Maximum connection lenght mt 3	Rated auxiliary supply voltage Us		VAC Hz VA W	240 50/60 14.1 5.8 CONTROL +/- 12-24VDC 830VDC C-IN1 5VDC
NTC probe inputTerminalsNTC-NTCSensor typeNTC (ordering code NTC01)Measuring range°C -25+85Maximum connection lenghtmt 3	Rated auxiliary supply voltage Us		VAC Hz VA W	240 50/60 14.1 5.8 CONTROL +/- 12-24VDC 830VDC C-IN1 5VDC ≤10
NTC probe inputTerminalsNTC-NTCSensor typeNTC (ordering code NTC01)Measuring range°C -25+85Maximum connection lenghtmt 3	Rated auxiliary supply voltage Us		VAC Hz VA W  mA VDC	240 50/60 14.1 5.8 CONTROL +/- 12-24VDC 830VDC C-IN1 5VDC ≤10 ≤0.8
Sensor typeNTC (ordering code NTC01)Measuring range°C -25+85Maximum connection lenghtmt 3	Rated auxiliary supply voltage Us		MAC Hz VA W  mA VDC VDC	240 50/60 14.1 5.8 CONTROL +/- 12-24VDC 830VDC C-IN1 5VDC ≤10 ≤0.8 ≥3.2
Measuring range  Code NTC01)  Measuring range  Code NTC01)  mt 3	Rated auxiliary supply voltage Us		MAC Hz VA W  mA VDC VDC	240 50/60 14.1 5.8 CONTROL +/- 12-24VDC 830VDC C-IN1 5VDC ≤10 ≤0.8 ≥3.2
Measuring range  **C -25+85  Maximum connection lenght  mt 3	Rated auxiliary supply voltage Us		MAC Hz VA W  mA VDC VDC	240 50/60 14.1 5.8  CONTROL +/- 12-24VDC 830VDC  C-IN1 5VDC ≤10 ≤0.8 ≥3.2 ≥50  NTC-NTC
Maximum connection lenght mt 3	Rated auxiliary supply voltage Us		MAC Hz VA W  mA VDC VDC	240 50/60 14.1 5.8  CONTROL +/- 12-24VDC 830VDC  C-IN1 5VDC ≤10 ≤0.8 ≥3.2 ≥50  NTC-NTC NTC (ordering
	Rated auxiliary supply voltage Us		MAC Hz VA W  mA VDC VDC ms	240 50/60 14.1 5.8  CONTROL +/- 12-24VDC 830VDC  C-IN1 5VDC ≤10 ≤0.8 ≥3.2 ≥50  NTC-NTC  NTC (ordering code NTC01)
Fan power supply	Rated auxiliary supply voltage Us		MAC Hz VA W  MA VDC VDC ms	240 50/60 14.1 5.8  CONTROL +/- 12-24VDC 830VDC  C-IN1 5VDC ≤10 ≤0.8 ≥3.2 ≥50  NTC-NTC  NTC (ordering code NTC01) -25+85
	Rated auxiliary supply voltage Us		MAC Hz VA W  MA VDC VDC ms	240 50/60 14.1 5.8  CONTROL +/- 12-24VDC 830VDC  C-IN1 5VDC ≤10 ≤0.8 ≥3.2 ≥50  NTC-NTC  NTC (ordering code NTC01) -25+85

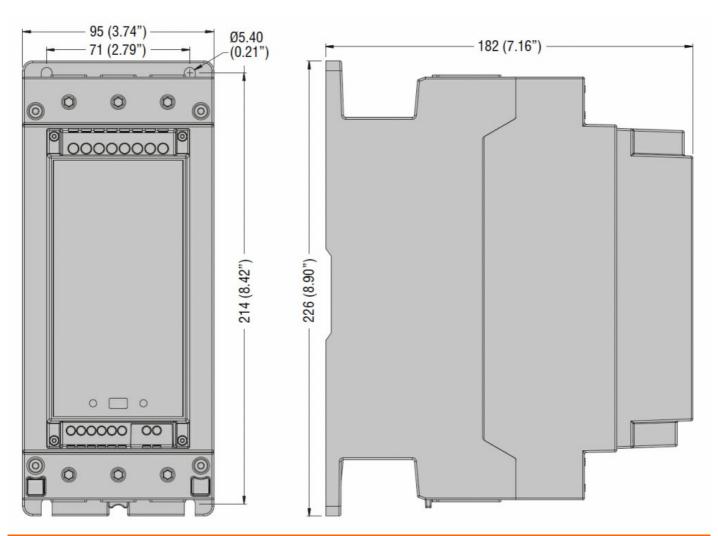


Terminals			FAN +/-
Supply voltage (internal)			5VDC (provided by DCTL)
Fan type			2 built-in fans type EXP8004
Relay outputs			type Extrooo+
Number of relay output		Nr.	1
Contact arrangement			1 C/O-SPDT
Rated current			NO contact: AC1 5A 250VAC / 5A 30VDC NC contact: AC1 3A 250VAC / 3A 30VDC D300
UL/CSA and IEC/EN 60947-5-1 designation		VAC	250
Maximum switching voltage		VAC	NO contact:
Electrical life (with rated load)		cycles	10x10³ NC contact: 20x10³
Mechanical life		cycles	107
Insulations			
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Connections - power terminals			F: 1 1 11
Type of terminal			Fixed - double lock clamp
Conductor cross section			lock clarrip
Conductor cross section	min	mm²	2 x 2.5
	Max	mm²	2 x 35
	min	AWG	2 x 18
	Max	AWG	2 x 2
Tightening torque (Max)			
		Nm	5.5-6.5
		lbin/lbft	4.06-4.79 lbft
Connections - relay output			
Type of terminal			Screw
Conductor cross section			
	min	mm²	0.2
	Max	mm²	4
	min	AWG	26
T: 1 ( ) ( ) ( )	Max	AWG	10
Tightening torque (Max)		Nima	0.0
		Nm Ibin	0.8 7
Connections - fan and digital input		IDIII	/
Type of terminal			Screw
Conductor cross section			Colow
	min	mm²	0.2
	Max	mm²	2.5
	min	AWG	24
	Max	AWG	12
Tightening torque (Max)			
			0.44
		Nm	0.44
		Nm Ibin	0.44 4



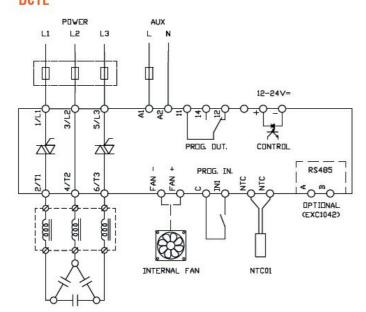
Ambient conditions			
Temperature			
Operating temperature			
	min	°C	-20
	max	°C	+45°C without derating (up to 55°C with
			derating)
Storage temperature			
	min	°C	-30
	max	°C	+80
Relative humidity		%	<80%
Maximum Pollution degree			2
Overvoltage category			III
Max altitude		m	2000m wihtout derating
Climatic sequence			Z/ABDM (IEC/EN 60068-2-61)
Shock resistance			15g (IEC/EN 60068-2-27)
Vibration resistance			0.7g (IEC/EN 60068-2-6)
Housing			
Execution			Internal panel version
Material			Polycarbonate
Mounting			Screw fixing or DIN-rail (IEC/EN 60715) with optional accessory EXP8003
Degree of protection			IP00
Dimensions (W x H x D)		mm	95 x 226 x 182
Weight		g	2840
Dimensions			





## Wiring diagrams

## DCTL



## Certifications and compliance

Compliance

IEC/EN 60947-4-3

IEC/EN 61000-6-2

IEC/EN 61000-6-4





晶闸管,50KVAR/400VAC,额定工作电压690VAC,带电流检测 **ENERGY AND AUTOMATION** 

Certificates

cULus

ETIM classification

EC002055 -ETIM 8.0 Solid state relay