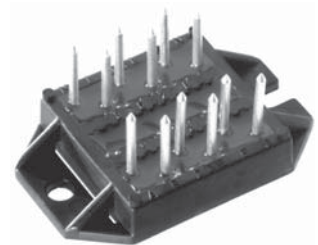
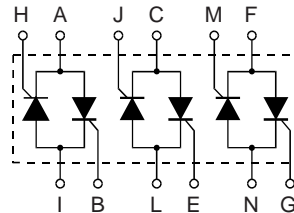


# AC Controller Modules

**$I_{RMS} = 3 \times 35 \text{ A}$**   
 **$V_{RRM} = 600-1200 \text{ V}$**

Preliminary data

$V_{RSM}$	$V_{RRM}$	Type
$V_{DSM}$	$V_{DRM}$	
V	V	
700	600	VWO 35-06ho7
900	800	VWO 35-08ho7
1300	1200	VWO 35-12ho7



Symbol	Conditions	Maximum Ratings	
$I_{RMS}$	$T_C = 85^\circ\text{C}$ , (per phase)	35	A
$I_{TAVM}$	$T_C = 85^\circ\text{C}$ ; (180° sine ; per thyristor)	16	A
$I_{TSM}$	$T_{VJ} = 45^\circ\text{C}$ ; $V_R = 0$	t = 10 ms (50 Hz), sine	200 A
		t = 8.3 ms (60 Hz), sine	210 A
$I^2t$	$T_{VJ} = T_{VJM}$ ; $V_R = 0$	t = 10 ms (50 Hz), sine	180 A
		t = 8.3 ms (60 Hz), sine	190 A
$(di/dt)_{cr}$	$T_{VJ} = 45^\circ\text{C}$ ; $V_R = 0$	t = 10 ms (50 Hz), sine	200 A <sup>2</sup> s
		t = 8.3 ms (60 Hz), sine	150 A <sup>2</sup> s
$(dv/dt)_{cr}$	$T_{VJ} = T_{VJM}$ ; $V_{DR} = 2/3 V_{DRM}$ ; $R_{GK} = \infty$ ; method 1 (linear voltage rise)	repetitive, $I_T = 20 \text{ A}$	100 A/μs
		non repetitive, $I_T = I_{TAVM}$	500 A/μs
$V_{RGM}$		10	V
$P_{GM}$	$T_{VJ} = T_{VJM}$ ; $I_T = I_{TAVM}$	$t_p = 30 \mu\text{s}$	≤ 5 W
		$t_p = 300 \mu\text{s}$	≤ 2.5 W
$P_{GAVM}$		0.5	W
$T_{VJ}$		-40...+125	°C
$T_{VJM}$		125	°C
$T_{sig}$		-40...+125	°C
$V_{ISOL}$	50/60 Hz, RMS $I_{ISOL} \leq 1 \text{ mA}$	t = 1 min	2500 V~
		t = 1 s	3000 V~
$M_d$	Mounting torque (M4)	1.5 - 2	Nm
		14 - 18	lb.in.
Weight	typ.	18	g

## Features

- Thyristor controller for AC (circuit W3C acc. to IEC) for mains frequency
- Soldering connections for PCB mounting
- Isolation voltage 3000 V~
- Planar passivated chips

## Applications

- Switching and control of three phase AC circuits
- Softstart AC motor controller
- Solid state switches
- Light and temperature control

## Advantages

- Easy to mount with two screws
- Space and weight savings
- Improved temperature and power cycling

Data according to IEC 60747 refer to a single thyristor/diode unless otherwise stated. IXYS reserves the right to change limits, test conditions and dimensions

Symbol	Conditions	Characteristic Values	
$I_{D}, I_{R}$	$T_{VJ} = T_{VJM}; V_{R} = V_{RRM}; V_{D} = V_{DRM}$	$\leq$	5 mA
$V_{T}$	$I_{T} = 20 \text{ A}; T_{VJ} = 25^{\circ}\text{C}$	$\leq$	1.6 V
$V_{T0}$	For power-loss calculations only		0.85 V
$r_{T}$			27 m $\Omega$
$V_{GT}$	$V_{D} = 6 \text{ V}; T_{VJ} = 25^{\circ}\text{C}$	$\leq$	1.5 V
	$T_{VJ} = -40^{\circ}\text{C}$	$\leq$	2.5 V
$I_{GT}$	$V_{D} = 6 \text{ V}; T_{VJ} = 25^{\circ}\text{C}$	$\leq$	25 mA
	$T_{VJ} = -40^{\circ}\text{C}$	$\leq$	50 mA
$V_{GD}$	$T_{VJ} = T_{VJM}; V_{D} = \frac{2}{3} V_{DRM}$	$\leq$	0.2 V
$I_{GD}$		$\leq$	3 mA
$I_{L}$	$T_{VJ} = 25^{\circ}\text{C}; t_{p} = 10 \mu\text{s}$ $I_{G} = 0.1 \text{ A}; di_{G}/dt = 0.1 \text{ A}/\mu\text{s}$	$\leq$	75 mA
$I_{H}$	$T_{VJ} = 25^{\circ}\text{C}; V_{D} = 6 \text{ V}; R_{GK} = \infty$	$\leq$	50 mA
$t_{gd}$	$T_{VJ} = 25^{\circ}\text{C}; V_{D} = \frac{1}{2} V_{DRM}$ $I_{G} = 0.1 \text{ A}; di_{G}/dt = 0.1 \text{ A}/\mu\text{s}$	$\leq$	2 $\mu\text{s}$
$R_{thJC}$	per thyristor; DC		1.3 K/W
	per module		0.22 K/W
$R_{thJK}$	per thyristor; DC		1.8 K/W
	per module		0.3 K/W
$d_{S}$	Creeping distance on surface		11.2 mm
$d_{A}$	Creepage distance in air		5.0 mm
$a$	Max. allowable acceleration		50 m/s <sup>2</sup>

**Dimensions in mm (1 mm = 0.0394")**
