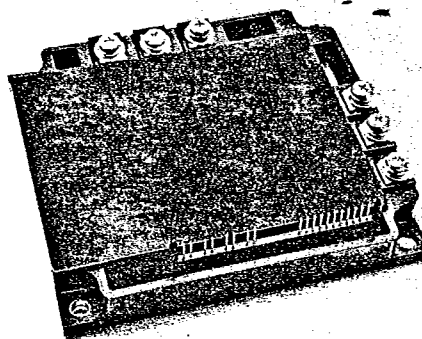


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**FUJI  
ELECTRIC**

**IPM**  
**Intelligent  
Power  
Modules**

600V  
1200V



**IPM advantages:**

- Simplify controller design
- Shorten development time

**IPMs are used in:**

- Servo systems
- General-purpose drives
- Heat pump/compressor drives

**IPMs are designed for:**

- 240VAC (600V) systems
- 480VAC (1200V) systems (1992)
- Current ranges from 10A to 150A
- Typical switching frequencies of 1kHz (BJT) to 20kHz (IGBT)

Fuji's Intelligent Power Modules are state-of-the-art power electronics. A complete output section, in the form of a 3-phase inverter (six transistors) and a shunt regulator (one transistor), is included. Users need provide only four floating power supplies (9.5V at 100mA). Base (gate) drive, isolation, protection and diagnostics are included. The IPM is self-protected against over-current and over-temperature.

**IPM**  
**Intelligent Power Modules**

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**Collmer Semiconductor, Inc.**

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FAX 214/233-0481

# IPM Intelligent Power Modules

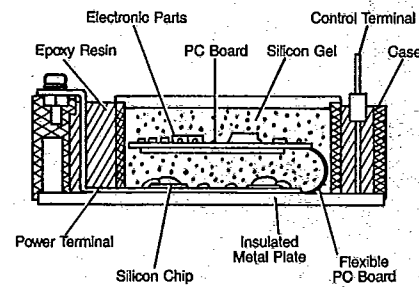
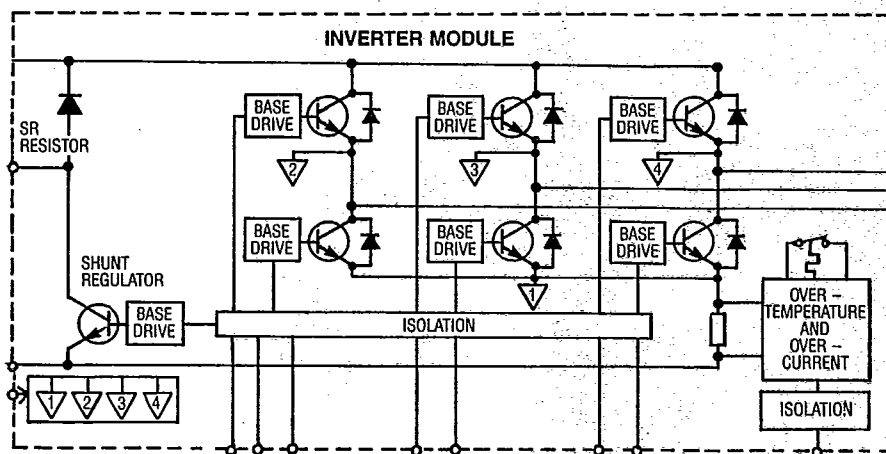
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COLLMER SEMICONDUCTOR INC 34E D ■ 2238792 0001566-2 ■ COL

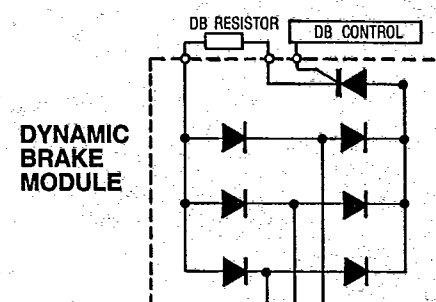
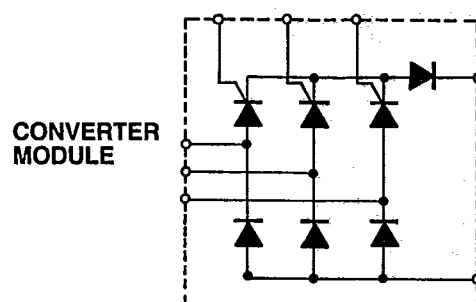
Type	Part Number	Power Transistor									Pre-Driver	Over-Heating Protection	Over-Current Protection	Alarm Output	Pkg.		
		Inverter						Shunt Regulator									
		V <sub>CC</sub> (V)	I <sub>C</sub> (A)	P <sub>C</sub> (W)	t <sub>on</sub> (μs)	t <sub>stg</sub> (μs)	t <sub>f</sub> (μs)	V <sub>CC</sub> (V)	I <sub>C</sub> (A)	P <sub>C</sub> (W)						V <sub>gd</sub> (V)	I <sub>pd</sub> (mA)
BJT	6D10A-050EJR	450	10	40	3	10	2	-	-	-	10	200	90	15	50	10-30	1
	6D15A-050EJR	450	15	60	3	10	2	-	-	-	10	200	90	23	50	10-30	1
	6D20A-050EJR	450	20	80	3	10	2	-	-	-	10	200	90	30	50	10-30	1
BJT	7D30A-050EHR	450	30	150	8	13	3	450	20	100	9	200	90	45	50	10-30	2
	7D50A-050EHR	450	50	200	8	13	3	450	20	100	9	200	90	75	50	10-30	2
	7D75A-050EHR	450	75	240	8	13	3	450	20	100	9	200	90	113	50	10-30	2
	7D100A-050EHR	450	100	350	8	15	3	450	50	150	9	200	90	150	50	10-30	3
	7D150A-050EHR	450	150	400	8	15	3	450	50	150	9	200	90	225	50	10-30	3
IGBT	7MB30A-050EHR	450	30	150	6	6	1	450	20	100	15	30	90	45	20	10-30	NEW
	7MB50A-050EHR	450	50	200	6	6	1	450	20	100	15	30	90	75	20	10-30	NEW
	7MB75A-050EHR	450	75	240	6	6	1	450	20	100	15	30	90	113	20	10-30	NEW

## INTEGRATED FUNCTIONS

Functions	Components or Circuits	No
Power Devices	Power Transistors for Inverter	6
	Fast-Recovery Diodes for Free Wheeling	6
	Power Transistor for DC Link Dynamic Brake	1
	Snubber Diode for DC Link Dynamic Brake	1
Base Drive	Forward Base Drive Circuit	7
	Reverse Base Drive Circuit	7
Sensor	Current Sensor	1
	Temperature Sensor	3
Isolation	Opto-Coupler	8
Power Supply	Reverse Base Drive Power Supply	4
	Series Regulator For Logic Circuits	1
Protection	Over-Current Trip Circuit	1
	Over-Heating Trip Circuit	1
Self Diagnosis	Alarm Signal Output and Latch Circuit	1
	Self-Reset Circuit	1



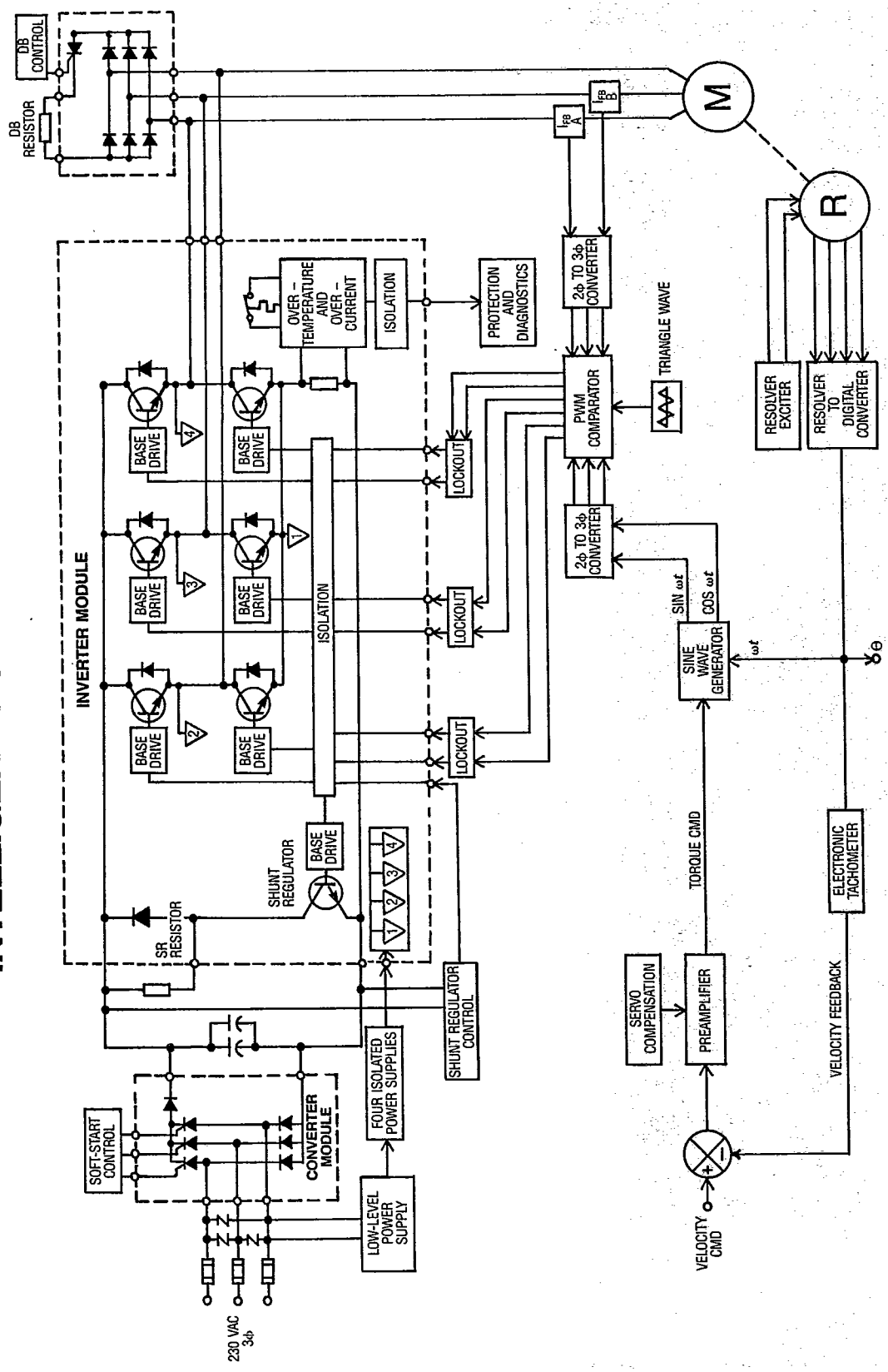
CONVERTER AND DYNAMIC BRAKE MODULES			
Part Number	V <sub>RRM</sub> (V)	I <sub>O(AV)</sub> (A)	PKG
4R3T120Y-080	800	20	4
4R3T130Y-080	800	30	4
4R3T160Y-080	800	60	4
6R1T130Y-080	800	30	4



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# INTELLIGENT POWER MODULE



## PM SYNCHRONOUS AC MOTOR CONTROLLER (ONE OF MANY IMPLEMENTATIONS)

FUJICOLLMER

# Intelligent Power Modules

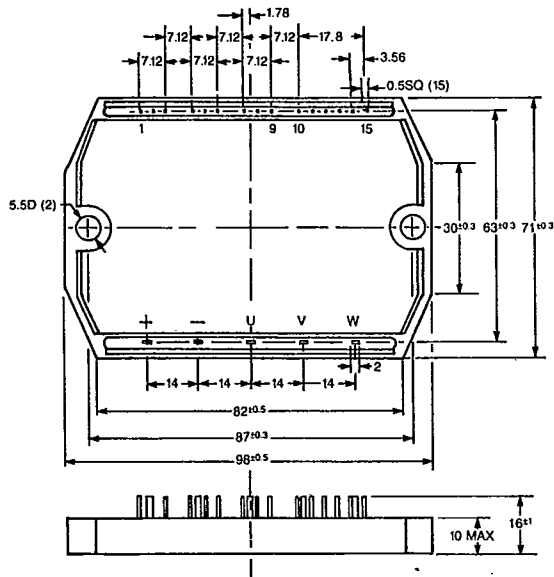
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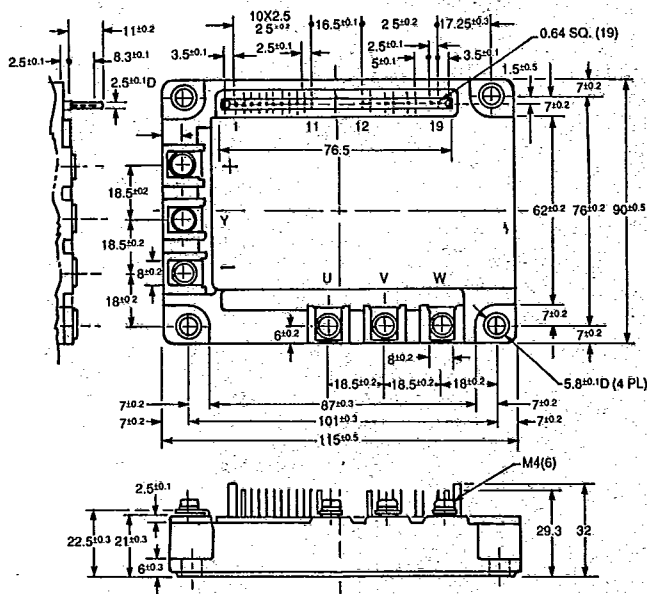
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## OUTLINE DRAWINGS

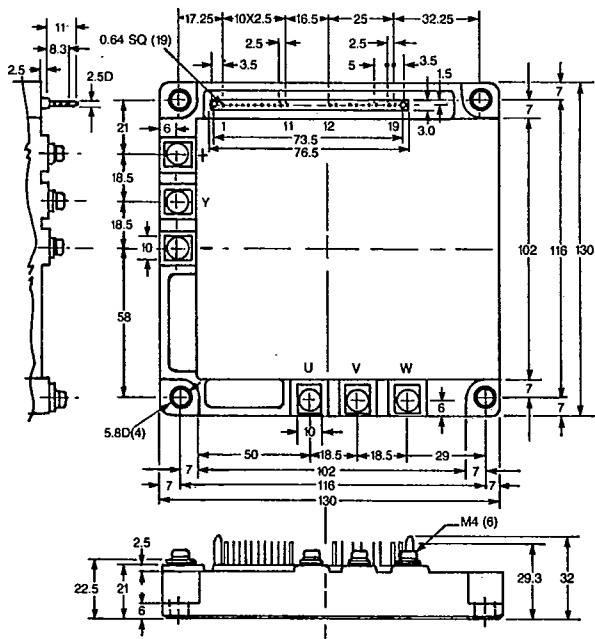
## DIMENSIONS IN MILLIMETERS



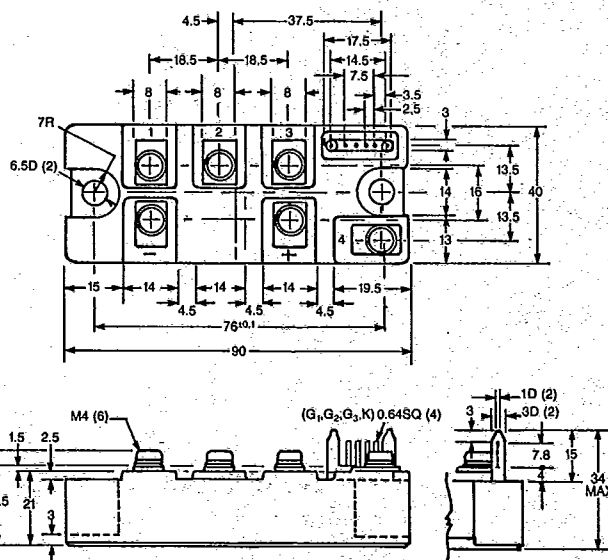
PKG.1



PKG.2



PKG.3



PKG.4

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