



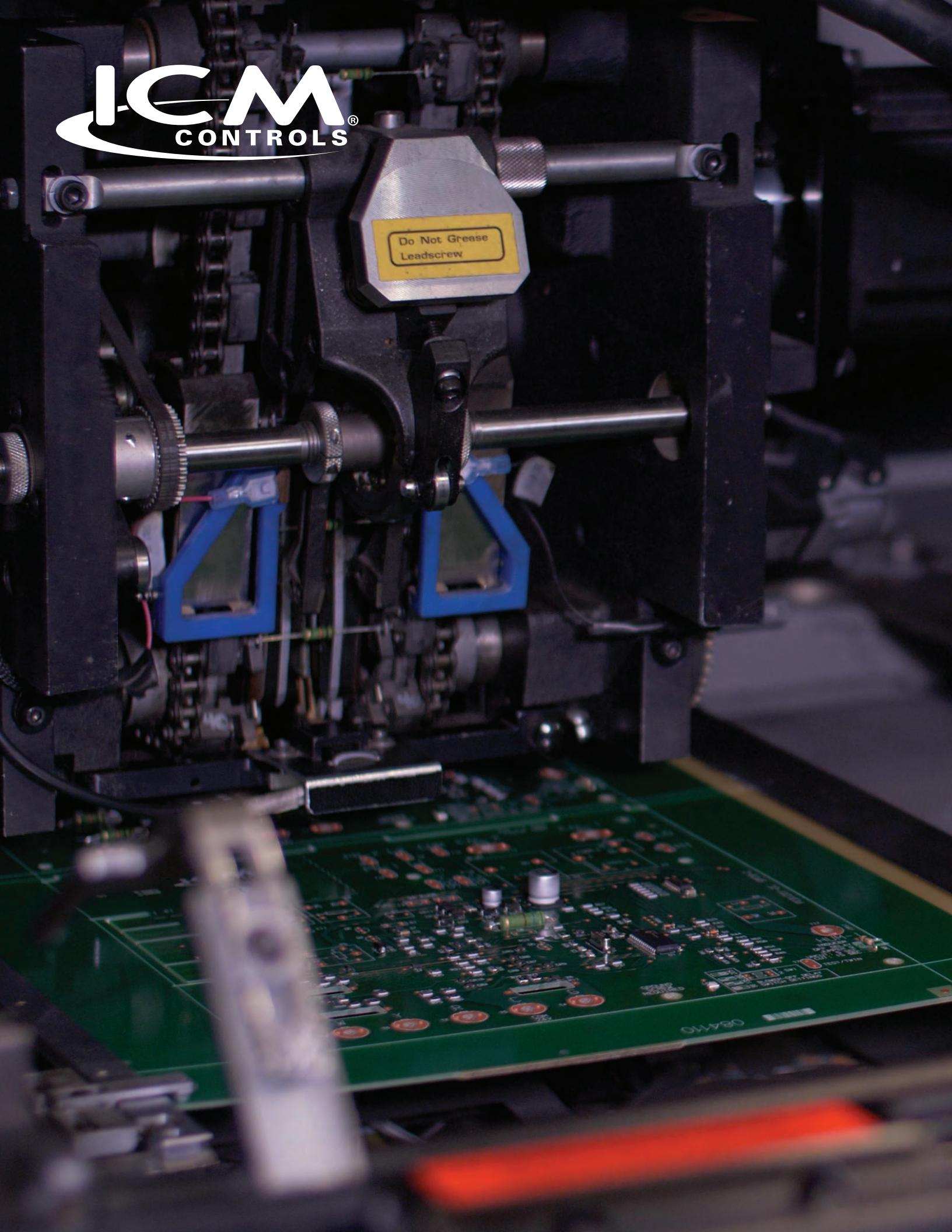
**I-CM**  
CONTROLS®



**HVAC-R Market**



Do Not Grease  
Leadscrew



## **Engineering. Manufacturing. Innovation.**

ICM Controls is a leader in the manufacture of electronic controls for the HVAC/R, Electrical, Pool & Spa, Appliance, Electric Vehicles and Transportation Industries. We have achieved this position through product and process innovation, and we strive to maintain this position through extensive capitalization, focusing on our greatest manufacturing strength: true vertical integration.

## **From concept to prototype to production.**

The ICM Controls manufacturing plant, located in North Syracuse, New York, is one of the most vertically integrated facilities in the country. Serving both the OEM and the aftermarket, our goal has been to provide our customers with the most technologically advanced products at the greatest value – without compromise in quality. The ability to quickly take a control from concept to prototype to production has become an ICM Controls trademark.

## **The American made solution.**

We are proud to be American made. ICM Controls personnel are committed to your satisfaction. Please do not hesitate to call us with your questions, comments, or special control application requirements.

## **ICM Controls' Sales, Customer Service, and Engineering teams remain at your service.**



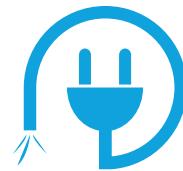
## ICM TABLE OF CONTENTS

Air Handling Controller .....	26	ICM Product Index .....	5
Bypass Timers .....	12	Industries We Serve.....	4
Control Accessories .....	40	International HVAC Aftermarket & OEM.....	7
Cross Reference Guide .....	8	Lockout Protection Relays .....	13
Defrost Controls .....	37	Motor Protection Controls .....	14
Delay on Break Timers .....	12	Motor Starters .....	22
Delay on Make Timers .....	11	Oil Burner Primaries .....	37
Dryout / New Construction Thermostats .....	41	SimpleComfort® Thermostat Accessories .....	43
ECM Controls .....	24	SimpleComfort® Thermostat Features .....	42
Fan Blower Controls .....	26	SimpleComfort® Non-Programmable Thermostats .....	42
Fan Coil Relay Control Boards .....	26	SimpleComfort® PRO Programmable Thermostats .....	42
Frost Sentry™ Garage Thermostats .....	43	Surge Protection Devices .....	18
Furnace Controls .....	28	Thermostat Quick Reference Guide .....	41
Gas Ignition Controls .....	32	U.S. HVAC Aftermarket Mfr's Reps .....	6
Head Pressure Controls .....	39	U.S. OEM – All Industries .....	7
i3™ Thermostat .....	41	UMSR – Universal Motor Starting Relay .....	24

## INDUSTRIES WE SERVE



**Appliance**



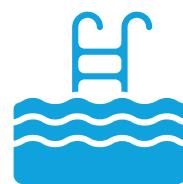
**Electrical**



**HVAC/R**



**Electric Vehicle**



**Pool & Spa**



**Transportation**

# ICM PRODUCT INDEX

ACHo45.....	41	ICM379 .....	40	ICM2807 .....	30
ACHo55.....	41	ICM380 .....	40	ICM2810 .....	30
ACHo60 .....	41	ICM401A .....	15	ICM2811 .....	31
ACHo65 .....	41	ICM402 .....	15	ICM2812 .....	31
ACHo70 .....	41	ICM441 .....	15	ICM2812-KIT.....	28
ACHo75.....	41	ICM442 .....	16	ICM2813 .....	31
ACHo85 .....	41	ICM450A .....	14	ICM2904 .....	33
FS1500L.....	43	ICM450A PLUS+.....	14	ICM2905 .....	33
ICM102 .....	11	ICM492 .....	16	ICM2906 .....	33
ICM102F.....	11	ICM493 .....	17	ICM2907 .....	34
ICM103 .....	11	ICM493-60A.....	17	ICM2909 .....	34
ICM104 .....	11	ICM495-30A/60A .....	20	ICM2910 .....	34
ICM175.....	12	ICM517A.....	19	ICM2911 .....	35
ICM203 .....	12	ICM518 .....	19	ICM2913 .....	35
ICM203F.....	12	ICM530 .....	20	ICM2914 .....	35
ICM206.....	12	ICM531.....	21	ICM2915 .....	35
ICM220.....	13	ICM532 .....	21	ICM2916 .....	36
ICM253 .....	27	ICM533 .....	21	ICM2918 .....	32
ICM255 .....	27	ICM550 .....	38	ICM2920 .....	36
ICM256 .....	27	ICM550-ENC .....	38	ICM6202 .....	26
ICM271.....	28	ICM708 .....	24	ICM6500-1 .....	26
ICM275 .....	28	ICM709 .....	24	ICM6501 .....	26
ICM277 .....	28	ICM711 .....	25	ICM6502 .....	26
ICM280.....	29	ICM713 .....	25	ICM6700 .....	36
ICM281 .....	29	ICM715 .....	25	ICM6701 .....	37
ICM282B.....	29	ICM716 .....	25	i2020WR-1 .....	41
ICM288.....	29	ICM855 .....	23	SC1600L .....	42
ICM289.....	30	ICM856 .....	23	SC2010L .....	42
ICM291 .....	32	ICM857 .....	23	SC5010 .....	42
ICM292A.....	32	ICM858 .....	23	SC5811.....	43
ICM318 .....	37	ICM859 .....	23	UMSR-50.....	24
ICM325A .....	38	ICM866U .....	22	UFPT-2 .....	13
ICM325HN.....	39	ICM870 9A .....	22	UFPT-5.....	13
ICM325HNV.....	39	ICM870 16A.....	22		
ICM326HN .....	39	ICM1501 .....	37		
ICM327HN.....	39	ICM1502 .....	37		
ICM333 .....	40	ICM1503 .....	37		
ICM334 .....	40	ICM2805A.....	30		



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ISO Certified, OEM & Aftermarket Products • Appliance • Electrical • HVAC-R • Marine • Pool & Spa • RV

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	<b>Amanda Hoffman</b>	Outside Sales	720-829-6217	amanda@vistasales.biz

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	<b>Josh Morris</b>	Houston, TX	832-515-7667	josh@bpdsales.com
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All features and specifications are subject to change without notice.



# ICM CONTROLS – CROSS REFERENCE GUIDE

OEM	OEM Part #	ICM Part #	Control Type	OEM	OEM Part #	ICM Part #	Control Type
5.2.1	CSR-U1	ICM866U	Motor Starters/Rapid Start	Erico (Critec)	TXD50C120/208, TXD50C120/240D	ICM530	Surge Protective Device
5.2.1	CSR-U2/U3	ICM866U	Motor Starters/Rapid Start	Erico (Critec)	TXD50C347/600	ICM532	Surge Protective Device
A-1	EAC-501-ADJ	ICM203	Delay On Break Timers	Essex	Independent Relays Series 84 and 93	ICM220	Lockout Protection Relays
A-1	7061	ICM103	Delay On Make Timers	EVO/ECM	VCU-36-MP	ICM708	ECM Controls
A-1	5893	ICM255	Fan Blower Controls	EVO™/ECM	4SPD	ICM709	ECM Controls
A-1	EAC-401, 402, 403, 404	ICM492, ICM493	Line Voltage Monitors	EVO™/ECM	ACU-4-S1	ICM711	ECM Controls
A-1	EAC-800, EAC-8000, EAC-8002	ICM450A, ICM450A PLUS+	Line Voltage Monitors	Fenwal	35-725200-005	ICM2910-200-005	Gas Ignition Controls
A-1	WSX-5	ICM855	Motor Starters/Rapid Start	Fenwal	35-725201-007	ICM2910-201-007	Furnace/Ignition Control Boards
A-1	WSX-6	ICM856	Motor Starters/Rapid Start	Fenwal	35-725201-501	ICM2910-201-501	Furnace/Ignition Control Boards
A-1	EAC-701-ADJ	ICM102	Delay On Make Timers	Fenwal	35-725201-505	ICM2910-201-505	Furnace/Ignition Control Boards
ABB	OVRLHLDX-120	ICM530	Surge Protective Device	Fenwal	35-725205-015	ICM2910-205-015	Furnace/Ignition Control Boards
ABB	OVRLHLDX-277	ICM531	Surge Protective Device	Fenwal	35-725205-017	ICM2910-205-017	Furnace/Ignition Control Boards
ACT	FM4000	ICM326HN	Head Pressure Controls	Fenwal	35-725205-021	ICM2910-205-021	Furnace/Ignition Control Boards
ACT	FM2000	ICM325HN	Head Pressure Controls	Fenwal	35-725205-115	ICM2910-205-115	Furnace/Ignition Control Boards
ACT	FM4000	ICM327HN	Head Pressure Controls	Fenwal	35-725205-521	ICM2910-205-521	Furnace/Ignition Control Boards
ASCO	420120S	ICM518	Split Phase Surge Protective Device	Fenwal	35-725206-515	ICM2910-206-515	Furnace/Ignition Control Boards
ASCO	420120Y, 420240D	ICM530	Surge Protective Device	Fenwal	35-725405-013	ICM2910-405-013	Furnace/Ignition Control Boards
ASCO	420240H	ICM533	Surge Protective Device	Fenwal	35-605939-337	ICM2919	Furnace/Ignition Control Boards
ASCO	420277Y, 420480D	ICM531	Surge Protective Device	Gemline	1C213	ICM102, ICM103	Delay On Make Timers
ASCO	420347Y, 420600D	ICM532	Surge Protective Device	Gemline	1C310	ICM102	Delay On Make Timers
Bard	8201-056	ICM255	Fan Blower Controls	Generac	G0073000	ICM518	Split Phase Surge Protective Device
Bristol	241680	ICM441	Line Voltage Monitors	Goodman	B1226008, PCBDM101(S)	ICM318	Defrost Controls
Carlton	48245	ICM1503	Oil Burner Primary Control	Goodman	B1370735S, PCBFM13S	ICM277	Fan Blower Controls
Carrier	325878-751	ICM282B	Furnace/Ignition Control Boards	Goodman	PCBFM103, PCBFM103S	ICM256	Fan Blower Controls
Carrier	302075-3, CES0110017, CES0110018	ICM271	Fan Blower Controls	Goodman	B18099-06, B18099-08, B18099-10, B18099-13, B18099-13S	ICM280	Furnace/Ignition Control Boards
Carrier	CES0110019	ICM275	Fan Blower Controls	Goodman	PCBBF110/S, PCBBF123/S, 0130F00005/S, PCBBF12/S, B18099-26/S	ICM2811	Furnace/Ignition Control Boards
Carrier	HH84AA001, HH84AA003, HH84AA005, HH84AA009, HH84AA014, HH84AA015, HH84AA021	ICM275	Fan Blower Controls	Goodman	PCBBF136, PCBBF140	ICM2810	Furnace/Ignition Control Boards
Carrier	HH84AA010, HH84AA011, HH84AA012, HH84AA013, HH84AA020, P771-7002	ICM271	Fan Blower Controls	Goodman/Amana	10207701, 10207704, 10207706, 10207710, 10207714, 10207717, 10207718, 10207719, 10207720, 0130F00005(S), 0130F00006(S), 102077-02, 102077-03, 102077-04, 102077-09, 10207720S, B1809926(S), PCB00109, PCBF109, PCBBF10(S), PCBBF12(S), PCBBF122(S), PCBBF123(S), PCBBF132(S), PCBBF134, PCBBF135, PCBBF136, PCBBF138	ICM2812-KIT	Furnace/Ignition Control Boards (Universal)
Carrier	CES0110057-00, CES0110057-01, CES0110057-00	ICM281	Furnace/Ignition Control Boards	Goodman	PCBAB123-D	ICM2920	Furnace/Ignition Control Boards
Carrier	CES0110020, CES0110048	ICM281	Furnace/Ignition Control Boards	Hoffman	880-ECM(10)SSHP	ICM713	ECM Controls
Carrier	HK42FZ017	ICM2807	Furnace/Ignition Control Boards	Hoffman	800, 800A, 800AA, 814-50, 816-10	ICM325HN, 326HN, 327HN	Head Pressure Controls
Carrier	HK42FZ-004, HK42FZ-007, HK42FZ-008, HK42FZ-009, HK42FZ-011, HK42FZ-013, HK42FZ-016, HK42FZ-34	ICM282B	Furnace/Ignition Control Boards	Honeywell	R8184G4009, R8184G1138, R8184G1427, R8184G4025	ICM1503	Oil Burner Primary Control
Carrier	HH84AA016	ICM281	Furnace/Ignition Control Boards	Honeywell	R8184G4066, R8184G1161, R8184G1294	ICM1501	Oil Burner Primary Control
Carrier	LH33WP003/3A	ICM291	Furnace/Ignition Control Boards	Honeywell	R8184G4074, R8184G1179, R8184G1302, R8184G4033	ICM1502	Oil Burner Primary Control
Carrier	HK42FZ004, HK42FZ007, HK42FZ008, HK42FZ009, HK42FZ011, HK42FZ016	ICM2812-KIT	Furnace/Ignition Control Boards (Universal)	Honeywell	TH6110D1005, TH6110D1021	SC5010	Thermostats (7-Day Programmable)
Coleman/Evcon/ Lennox/Luxaire/York	G951ADB-1401(C), G951ADB1402, G951ADB-1403, G951AEB-1403, 265901, 265902, 539617, 52537074000, 52537077000, 031-00662, 031-00662-700, 031-01250-700, 031-01266-700, 031-01284- 000, 031-01937-000, 031-09166-000, 031-01933-000, 331-01972-000, 331-09167- 000, S1-0310062000, S1-03101250000, S1-03101266000, S1-03101267000, S1-03101267001, S1-03101284000, S1-03101933000, S1-03101972000, S1-03101973000, S1-03101967000, S1- 33102956000, S1-33103010000,	ICM2812-KIT	Furnace/Ignition Control Boards (Universal)	Honeywell	TH6220D1002, TH6220D1028	SC5811	Thermostats (7-Day Programmable)
Copeland	071-0376-01, 071-0376-02, 071-0397-00, 071-0397-01, 071-0424-00, 071-0424-01, 071-9800-01, 071-9800-02	ICM441	Line Voltage Monitors	Honeywell	T8600D2028, TH4110D1007, TH2110D1099	SC5010	Thermostats (7-Day Programmable)
Copeland	085-0160-00	ICM450A, ICM450A PLUS+	Line Voltage Monitors	Honeywell	T8400, T8401 SERIES	SC2010L	Thermostats (Non-Programmable)
Diversified	AC-100-3	ICM206	Delay On Break Timers	Honeywell	T8775A1009, TH1100D1001	SC1600L	Thermostats (Non-Programmable)
Diversified	AC-100-5	ICM206	Delay On Break Timers	Honeywell	TH1110D1000, TH3110D1008	SC2010L	Thermostats (Non-Programmable)
Diversified	AC-503	ICM203	Delay On Break Timers	Honeywell	S8610U	ICM2918	Gas Ignition Controls
Diversified	AC-800	ICM102	Delay On Make Timers	Ice-o-matic	TD3001A	ICM103	Delay On Make Timers
Diversified	AC-2020, AC-301, AC-302	ICM450A, ICM450A PLUS+	Line Voltage Monitors	ICM	W1001-4	ICM318	Defrost Controls
Dometic Smart Start	340582	ICM870-16A	Soft Start	ICP	1171166	ICM291	Furnace/Ignition Control Boards
Dometic Smart Start	340583	ICM870-9A	Soft Start	ICP	1176943	ICM282B	Furnace/Ignition Control Boards
Eaton	SP1-240S, SP2-240S	ICM518	Split Phase Surge Protective Device	IEC	E025-71521506	ICM712	Ecm Controls
Eaton	SP1-208Y, SP1-240D, SP2-208Y, SP2-240D	ICM530	Surge Protective Device	Intermatic	AG3000	ICM517	Single Phase Surge Protection
Eaton	SP1-480Y, SP1-480D, SP2-480Y, SP2-480D	ICM531	Surge Protective Device	Intermatic	AG2401C3, IG1200RC3, IG1240RC3, IG3240RC3	ICM518	Split Phase Surge Protective Device
Eaton	SP1-600Y, SP1-600D, AP2-600Y	ICM532	Surge Protective Device	Intermatic	AG2403C3, L5F13D1DG1	ICM533	Surge Protective Device
Eaton	SPD052040H1	ICM533	Surge Protective Device	Intermatic	AG4803C3, L5F13Y2DG1	ICM531	Surge Protective Device
Erico (Critec)	TDX50C240	ICM518	Split Phase Surge Protective Device	Intermatic	AG6503, L5F13Y3DG1	ICM532	Surge Protective Device
Erico (Critec)	TDX50C277/480	ICM531	Surge Protective Device	Intermatic	AG2083C3 L5F13Y1DG1	ICM530	Surge Protective Device
Erico (Critec)				Intermatic/Grasslin	010-0011B, DT040, DT140, DTV40, DTAV40, DT-B, DTMV, DTSX	ICM550, ICM550-ENC	Defrost Controls
Jackson Systems	CL-45, CL-55, CL-75 (COOL)			Intermatic/Grasslin	010-0011B, DT040, DT140, DTV40, DTAV40, DT-B, DTMV, DTSX	ICM550, ICM550-ENC	Multi-Functional Timers
Jackson Systems	TS-60, TS-65 & TS-70 (HEAT)			Jackson Systems	ACH045, ACH055, ACH075	ACH045, ACH055, ACH075	Thermostats (Temporary)
Jackson Systems				Jackson Systems	TS-60, TS-65 & TS-70 (HEAT)	ACH060, ACH065, ACH070	Thermostats (Temporary)

OEM	OEM Part #	ICM Part #	Control Type
Johnson Controls	P66BAB/BAD	ICM333 (FOR 2 TEMP OR 2 PRES INPUTS)	Head Pressure Controls
Kickstart	KS1	ICM866U	Motor Starters/Rapid Start
Kickstart	T05, KS8	ICM866U	Motor Starters/Rapid Start
Lennox	All BCC1, BCC2, BCC3 Circuit Boards, Including 48K98	ICM289	Furnace/Ignition Control Boards
Lennox	10M9301, 12L6901, 32M8801, 56L8401, 24L8501, 63K8901, 97L4801, 100925-01, 100925-03, 17W9201, 23W5101, 30W2501, 32M8801, 56L84, 56L8401, 69M08, 69M0801, 69M15, 69M1501, X4459, X445901,	ICM2813	Furnace/Ignition Control Boards
Lennox	1214201, 100925 (-01,-02,-03), 10M93, 10M9301, 12L6901, 17W92, 17W9201, 23W51, 23W5101, 30W25, 30W2501, 32M8801, 56L84, 56L8401, 69M08, 69M0801, 69M15, 69M1501, X4459, X445901,	ICM2812-KIT	Furnace/Ignition Control Boards (Universal)
Leviton	55240-ASA	ICM518	Split Phase Surge Protective Device
Leviton	55208-ASA	ICM530	Surge Protective Device
Leviton	55480-ASA	ICM531	Surge Protective Device
Mars	32395	ICM175	Bypass Timers
Mars	32001, 32387, 32392	ICM203	Delay On Break Timers
Mars	32382	ICM206	Delay On Break Timers
Mars	32019, 32391, 32367	ICM102	Delay On Break Timers
Mars	32394, 32396	ICM103	Delay On Break Timers
Mars	32574	ICM255	Fan Blower Controls
Mars	32536	ICM401, ICM402	Line Voltage Monitors
Mars	PFM-2000	ICM450A	Line Voltage Monitors
Mars	37300, 37302, 37304, 37306, 37322	ICM441	Motor Protection
Mars	32702, 35702	ICM856	Motor Starters/Rapid Start
Mars	32781	ICM857	Motor Starters/Rapid Start
Mars	83905	ICM518	Split Phase Surge Protective Device
Mars	32701, 35701	ICM855	Motor Starters/Rapid Start
Mitsubishi	MU09NW, MUH09NW, MU12NN, MU15NN, MU17NN, MUM18NW, MUM30NN, MUM30NN2	ICM326HM2	Head Pressure Controls
Modine	5H79749	ICM2911	Furnace/Ignition Control Boards
Motorsaver	455	ICM450A, ICM450A PLUS+	Line Voltage Monitors
N/A	N/A	ICM6202	Fan Coil Relay Control Boards
Nordyne	624631	ICM2805A	Furnace/Ignition Control Boards
Nordyne	624557, 624564, 624591, 624628, 902378, 902696, 903106, 624631(A), 624631(A), 701028A,	ICM2812-KIT	Furnace/Ignition Control Boards (Universal)
Paragon	8041, 8045, 8047, 8141, 8143, 8145, 8245, 8247	ICM550, ICM550-ENC	Defrost Controls
Paragon	8041, 8045, 8047, 8141, 8143, 8145, 8245, 8247	ICM550, ICM550-ENC	Multi-Functional Timers
Precision	6041, 6045, 6047, 6141, 6145	ICM550, ICM550-ENC	Defrost Controls
Precision	6041, 6045, 6047, 6141, 6145	ICM550, ICM550-ENC	Multi-Functional Timers
Qwik products	QWIKSWAPX1	ICM715	ECM Controls
Qwik Products	QWIKSWAPX3	ICM716	ECM Controls
Ranco	E31	ICM325/326/327HN	Head Pressure Controls
Reznor	195265	ICM2907	Gas Ignition Controls
Reznor	257009	ICM2904	Gas Ignition Controls
Reznor	257010	ICM2905	Gas Ignition Controls
Reznor	195573	ICM2906	Gas Ignition Controls
Rheem	62-23599-01, 62-23599-02, 62-23599-03, 62-23599-04, 62-23599-05	ICM2909	Furnace/Ignition Boards
Rheem	1157-100, 1157-110, 1157-120, 1157-121, 47-102684-01, 47-102684-02, 47-102684-03, 47-102684-04, 47-102684-08, 47-102685-02, 47-102685-04, 47-102685-05, 47-102685-06, 47-102685-07, 47-21517-22, DDL-122131-2RH	ICM3000	Demand Defrost Controls
Rheem	42-22515-01, 42-22515-02, 42-22515-03	ICM255	Fan Blower Controls
Rheem	1157-100, 1157-110, 1157-120, 1157-121, 47-102684-01, 47-102684-02, 47-102684-03, 47-102684-04, 47-102684-08, 47-102685-02, 47-102685-04, 47-102685-05, 47-102685-06, 47-102685-07, 47-21517-22, DDL-122131-2RH	ICM3000	Defrost Controls
Rheem	62-24140-04	ICM292A	Furnace/Ignition Control Boards
Rheem	62-24084-82	ICM288	Furnace/Ignition Control Boards
Rheem/Ruud	695-200, 62-22694-XX, 62-22732-XX, 62-24044-XX, 62-24045-01, 62-24046-01, 62-24048-82, 62-24268 (-01,-02,-03)	ICM2812-KIT	Furnace/Ignition Control Boards (Universal)
Robertshaw	3310-072	ICM203	Delay On Break Timers
Robertshaw	3310-183	ICM206	Delay On Break Timers
Robertshaw	3310-305	ICM206	Delay On Break Timers
Robertshaw	3310-068	ICM103	Delay On Break Timers

OEM	OEM Part #	ICM Part #	Control Type
Robertshaw	695-100	ICM271	Fan Blower Controls
Robertshaw	695-101	ICM275	Fan Blower Controls
Robertshaw	8625-1	ICM518	Split Phase Surge Protective Device
Robertshaw	300-229, 9615	SC5811	Thermostats (7-Day Programmable)
Robertshaw	8625-1	SC5811	Thermostats (7-Day Programmable)
Robertshaw	RS5110, RS6110	SC5010	Thermostats (7-Day Programmable)
Robertshaw	300-206	SC2010L	Thermostats (Non-Programmable)
Robertshaw	300-204	SC1600L	Thermostats (Non-Programmable)
Robertshaw	8400-1, 9400, 9500, RS2110	SC2010L	Thermostats (Non-Programmable)
Robertshaw	300-229, 9615	ICM518	Split Phase Surge Protective Device
Siemens	TPS3B	ICM533	Surge Protective Device
Siemens	TPS3D, TPS3C	ICM530	Surge Protective Device
Siemens	TPS3E, TPS3F	ICM531	Surge Protective Device
Siemens	TPS3L, TPS3G	ICM532	Surge Protective Device
Siemens	TPS3A	ICM518	Split Phase Surge Protective Device
Snyder General/ICP	1395336	ICM255	Fan Blower Controls
Square D	SDSA2040, SDSA2040D	ICM530	Surge Protective Device
Square D	SDSA2040D	ICM533	Surge Protective Device
Square D	SDSA3650, SDSA3650D	ICM532	Surge Protective Device
Square D	SDSA4040, SDSA4040D	ICM531	Surge Protective Device
SSAC	QLM, QLV	ICM450A, ICM450A PLUS+	Line Voltage Monitors
Suburban	35-533900-113, 521099	ICM6700	Furnace/Ignition Control Boards
Suburban	35-533900-113, 520814	ICM6701	Furnace/Ignition Control Boards
Supco	TD32	ICM175	Bypass Timers
Supco	TD72, TD73	ICM203	Delay On Break Timers
Supco	TD73W	ICM203F	Delay On Break Timers
Supco	TD74	ICM206	Delay On Break Timers
Supco	TL243	ICM206	Delay On Break Timers
Supco	TL245	ICM206	Delay On Break Timers
Supco	TD69	ICM102	Delay On Make Timers
Supco	TD69W	ICM102F	Delay On Make Timers
Supco	TMF-19, TMF-80	ICM103	Delay On Make Timers
Supco	TPMP2	ICM401, ICM402	Line Voltage Monitors
Supco	SPP-5	ICM855	Motor Starters/Rapid Start
Supco	SPP-5E	ICM866U	Motor Starters/Rapid Start
Supco	SPP-6	ICM856	Motor Starters/Rapid Start
Supco	SPP-6E	ICM866U	Motor Starters/Rapid Start
Supco	RCO210	ICM859	Motor Starters/Rapid Start
Supco	RCO410	ICM858	Motor Starters/Rapid Start
Supco	RCO810	ICM857	Motor Starters/Rapid Start
Supco	SCMPLUS, SCM150	ICM517	Single Phase Surge Protection
Supco	SUPR, APR5	UMSR50	Universal Motor Starting Relays
Supco	SPP-8, SPP-8E	ICM866U	Motor Starters/Rapid Start
Texas Instruments	41F-5	ICM280	Furnace/Ignition Control Boards
Texas Instruments	15AA1600B, 15AA1600C, 15AA1603B, 15AA1603C, 31AA1600E, 31AA1606E	ICM441	Motor Protection
Texas Instruments	41F-5, 61F3, 6DT(-1,-2), 350486, 350836	ICM2812-KIT	Furnace/Ignition Control Boards (Universal)
Time Mark	265	ICM450A, ICM450A PLUS+	Line Voltage Monitors
Trane	D330927P01, D330930P01, D330934P01, D340035P01, D340774P01, D341213P01, D341396P01	ICM2812-KIT	Furnace/Ignition Control Boards (Universal)
Trane	D674711P01	ICM2913	Furnace/Ignition Control Boards
Trane	D674712P01	ICM2914	Furnace/Ignition Control Boards
Trane	D674713P01	ICM2915	Furnace/Ignition Control Boards
Trane	D674712P02	ICM2916	Furnace/Ignition Control Boards
Trane/american standard	CNT02789, CNT02891, CNT03076, CNT03798, CNT03799, CNT05164, CNT05165, D341122P01, D341235P01, D341235P03, D341396P04, D341396P05, D341396P03	ICM2812-KIT	Furnace/Ignition Control Boards (Universal)
United TCH	1003-638A	ICM2904	Gas Ignition Controls
United TCH	1003-514	ICM2905	Gas Ignition Controls
United TCH	1097-211	ICM2906	Gas Ignition Controls
United TCH	1097-210	ICM2907	Gas Ignition Controls
United Technologies	1012-83-9336A, 1012-83-9337A, 1012-925 (A,B,C), 1012-933D	ICM2812-KIT	Furnace/Ignition Control Boards (Universal)
UTECH	1012-933D	ICM280	Furnace/Ignition Control Boards

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OEM	OEM Part #	ICM Part #	Control Type
Wagner/Diversitech	ADB-1	<b>ICM203</b>	Delay On Break Timers
Wagner/Diversitech	ADB-2	<b>ICM203F</b>	Delay On Break Timers
Wagner/Diversitech	ADM-1	<b>ICM102</b>	Delay On Make Timers
Wagner/Diversitech	ADM-2	<b>ICM102F</b>	Delay On Make Timers
Wagner/Diversitech	DSP-1	<b>ICM492</b>	Line Voltage Monitors
Wagner/Diversitech	DSP-1	<b>ICM493</b>	Line Voltage Monitors
Wagner/Diversitech	DTP-3, WPC-800	<b>ICM450A, ICM450A PLUS+</b>	Line Voltage Monitors
Wagner/Diversitech	DST-5	<b>ICM855</b>	Motor Starters/Rapid Start
Wagner/Diversitech	DST-6	<b>ICM856</b>	Motor Starters/Rapid Start
Whirlpool	8068142, 8068561, 8068563, 99958174, 99958175	<b>ICM2812-KIT</b>	Furnace/Ignition Control Boards (Universal)
White Rodgers	47D43-101-90, 47D43-111-01, 47D43-111-02, 47D43-111-03, 47D43-111-04, 47D43-811	<b>ICM3000</b>	Defrost Controls
White Rodgers	47D43-101-90, 47D43-111-01, 47D43-111-02, 47D43-111-03, 47D43-111-04, 47D43-811	<b>ICM3000</b>	Demand Defrost Controls
White Rodgers	50A55-743, 50A55-289, 50T5-289	<b>ICM2811</b>	Furnace/Ignition Control Boards
White-Rodgers	50A65-120, 50A65-121, 50A62-120, 50A62-121, 50A62-820, 21D83M-843, 50A66-122, 50A66-123	<b>ICM2813</b>	Furnace/Ignition Control Boards
White-Rodgers	50M6U-843	<b>ICM2812, ICM2812-KIT</b>	Furnace/Ignition control boards
White-Rodgers	50T35-730, 50T35-743	<b>ICM280</b>	Furnace/Ignition Control Boards
White-Rodgers	668-401	<b>ICM1503</b>	Oil Burner Primary Control
White-Rodgers	1F80-0471, 1F80-0671, 1F97-1277	<b>SC5010</b>	Thermostats (7-Day Programmable)
White-Rodgers	1F81-261, 1F85-0422	<b>SC5811</b>	Thermostats (7-Day Programmable)
White-Rodgers	1F86-344, 1F86-0244	<b>SC2010L</b>	Thermostats (Non-Programmable)
White-Rodgers	MECHANICAL 1F30-321, 1C20-102	<b>SC1600L</b>	Thermostats (Non-Programmable)
White-Rodgers	50A50-110, 50A50-111, 50A50-112, 50A50-113, 50A50-130, 50A50-131, 50A50-142, 50A50-143, 50A50-205, 50A50-206, 50A50-207, 50A50-208, 50A50-209, 50A50-210, 50A50-215, 50A50-216, 50A50-229, 50A50-230, 50A50-240, 50A50-241, 50A50-245, 50A50-285, 50A50-286, 50A50-288, PART NUMBER, 50A50-295, 50A50-296, 50A50-298, 50A50-405, 50A50-406, 50A50-407, 50A50-408, 50A50-438, 50A50-471, 50A50-472, 50A50-473, 50A50-474, 50A50-475, 50A50-571, 50A55-143, 50A55-241, 50A55-245, 50A55-250, 50A55-285, 50A55-286, 50A55-288, 50A55-289, 50A55-379, 50A55-438, 50A55-474, 50A55-476, 50A55-480, 50A55-486, 50A55-571, 50A55-743, 50A55-843, 50A56-242, 50A56-243, 50A56-956, 50A65-120, 50A65-121, 50A65-143, 50A65-288, 50A65-289, 50A65-474, 50A65-475, 50A65-476, 50A65-5165, 50A65-843, 50A66-122, 50A66-123, 50A66-743, 50M56-281, 50M56-289, 50M56-291, 50M56-743, 50T35-730, 50T35-743, 50T55-288, 50T55-289	<b>ICM2812-KIT</b>	Furnace/Ignition Control Boards (Universal)
Camstat	IPI-24-00	<b>ICM2918</b>	Ignition Control Module (Universal)
Fenwal	05-203025-005, 05-203026-005	<b>ICM2918</b>	Ignition Control Module (Universal)
Honeywell	S8610U, S86A1001, S86A1019, S86A1027, S86A1035, S86B1009, S86B1017, S86B1025, S86C1007, S86C1015, S86C1031, S86C1049, S86C1056, S86D1005, S86D1021, S86E1002, S86E1010, S86E1028, S86E1036, S86E1044, S86E1051, S86E1069, S86E1077, S86E1101, S86E1119, S86E1127, S86F1000, S86F1018, S86F1026, S86F1042, S86F1059, S86F1067, S86F1075, S86F1083, S86F1091, S86G1008, S86G1016, S86G1032, S86G1057, S86G1073, S86H1006, S86H1022, S86H1048, S86H1089, S86H1097, S86H1105, S86H1121, S86H1147, S90A1005, S90B1003, S90B1011, S8600A1001, S8600B1009, S8600C1015, S8600F1000, S8600F1034, S8600F1042, S8600H1006, S8600H1022, S8600H1048, S8600H1055, S8600H1089, S8600H1105, S8600M1005, S8600M1013, S8610A1009, S8610B1007, S8610B1015, S8610C1005, S8610F1008, S8610F1016, S8610F1024, S8610F1032, S8610H1012, S8610H1038, S8610H1046, S8610H1053, S8610H1079, S8610M1003, S8610M1029, S8620H1028	<b>ICM2918</b>	Ignition Control Module (Universal)

OEM	OEM Part #	ICM Part #	Control Type
HSC	1003-3, 1003-300	<b>ICM2918</b>	Ignition Control Module (Universal)
Penn-Johnson	CSA35A-617R, CSA35A-618R, CSA42A-600R, CSA42A-601R, CSA42A-603R, CSA42A-604R, CSA43A-600R, CSA44A-600R, CSA45A-601R, CSA45A-602R, CSA46A-600R, CSA48A-600R, CSA49A-600R, CSA49A-601R, CSA52A-600R, G60AAA-1, G60AAG-1, G60AAG-3, G60AAG-4, G60AAG-5, G60AAG-6, G60CAA-1, G60CAA-3, G60CAG-1, G60CAG-2, G60CAG-3, G60CAG-4, G60CAG-5, G60CAG-6, G60CAG-7, G60CAG-8, G60CAG-9, G60CBA-1, G60CBA-3, G60CBG-1, G60CBG-10, G60CBG-11, G60CBG-14, G60CBG-16, G60CBG-17, G60CBG-3, G60CBG-4, G60CBG-9, G60CCA-1, G60CCG-1, G60CPG-1, G60DBG-1, G60DCG-1, G60DCG-2, G60PAG-1, G60PAG-2, G60PAG-3, G60PAG-4, G60PAG-5, G60PAG-6, G60PAJ-1, G60PAK-1, G60PAK-2, G60PFH-1, G60PH-2, G60PFL-1, G60PFL-1, G60PV-1, G60QAG-2, G60QAG-3, G60QAK-1, G60QBG-1, G60QBG-2, G60QBG-3, G60QBG-4, G60QBG-5, G60QBG-6, G60QBG-7, G60QBG-8, G60QBG-9, G60QBH-1, G60QBK-1, G60QBK-3, G60QBL-1, G60QBL-2, G60QCG-1, G60QCJ-1, G60QCL-1, G60QDG-1, G60QFL-1, G60QHL-1, G60QL-1, G60QLG-1, G60QLP-1, G60QRH-1, G60QRL-1, G60QRL-2, G60QRL-3, G60QSL-1, G60QTH-1, G60QTL-1, G60RAG-1, G60RAK-1, G60RBG-1, G60RBG-2, G60RBG-3, G60RBK-1, G60RBK-2, G60RCG-2, G60RCI-1, G60RDG-1, G60RDK-1, G60RGL-1, G60RHL-1, G60RHP-1, G60RPL-1, G60RSL-1, G60ZAG-1, G65BBG-1, G65BBG-2, G65BBG-3, G65BBG-4, G65BBG-5, G65BBG-6, G65BBG-7, G65BBG-8, G65BBM-1, G65BBM-2, G65BBM-3, G65BBM-4, G65BCG-1, G65BCM-1, G65BFG-1, G65BFM, G65BKG-1, G65BKG-2, G65BKG-3, G65BKM-1, G65BKM-2, G65BKM-3, G65DBG, G65DBM-1, G65DBM-3, G65DCM-1, G65DFG, G65DFM-1, G65DKG, G65DKM, G65FBG, G65FFG, G65FKG, G66AG-1, G66BG-1, G66MG-1, G66NG-1, G67AG-3, G67AG-4, G67AG-7, G67AG-8, G67BG-2, G67BG-3, G67BG-4, G67BG-5, G67MG-1, G67MG-4, G67NG-2, G600AX-1, G600AY-1, G600MX-1, G600NX-1, G600RX-1, G670AW-1, G770MGA-1, G770MGA-2, G770MGC-1, G770MGC-2, G770MGC-3, G770MHA-1, G770NGA-1, G770NGC-4, G770NGC-5, G770NGC-6, G770NGC-7, G770RGA-1, G770RHA-1, G770MHA-2, G770MHC-1, G770NHA-1, G770NHC-1, G770RHA-2	<b>ICM2918</b>	Ignition Control Module (Universal)
Robertshaw	780-715, 780-735, 780-737, SP715, SP715A, SP735, SP735D, SP735L, USI 715U	<b>ICM2918</b>	Ignition Control Module (Universal)

# TIME DELAY RELAYS

## DELAY ON MAKE TIMERS

Ideal for compressor staging and stagger starting multiple motors and other equipment. Helps to reduce power surges. When power is applied to the input, the time delay begins. After the time delay is complete, the load energizes.

### ICM102, ICM102F

Delay on Make Timer (ICM102),  
With 6" Wire Leads (ICM102F)



### ICM103

Delay on Make Timer



### ICM104

Delay on Make Timer



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## FEATURES/BENEFITS

- Universal voltage operation
- Higher 1.5 amp power rating
- Knob-adjustable time delays
- Works with anticipator-type thermostats
- One model replaces many in field
- Ideal for compressor staging
- Simple 2-wire hookup
- "F" suffix denotes **6"** wire leads

## SPECIFICATIONS

- **Voltage:** 18-240 VAC
  - 1.5 amps • 15 amp inrush
  - 40 mA holding current
- **Frequency:** 50/60 Hz
- **Adjustable delay:** .03-10 min (1.8-600 secs)
- **Voltage drop:** 2.5 V @ 1.5 amps
- **Dimensions:** 2.00" x 2.00" x 1.25"

## REPLACES

### ICM102

- **A-1:** EAC-701-ADJ • **Diversified:** AC-800
- **Gemline:** 1C310, 1C213
- **Mars:** 32019, 32391, 32367
- **Supco:** TD69
- **Wagner/DiversiTech:** ADM-1

### ICM102F

- **Supco:** TD69W
- **Wagner/DiversiTech:** ADM-2

## FEATURES/BENEFITS

- Highly precise digital timing
- Switch-settable time delays
- Ideal for ice machine applications
- Universal voltage operation
- Repeat accuracy .5% over voltage and temperature range

## SPECIFICATIONS

- **Voltage:** 18-240 VAC
  - 1 amp • 10 amp inrush
  - 40 mA holding current
- **Frequency:** 50/60 Hz
- **Switch-settable delays:** Range from 1-1,023 sec.
- **Voltage drop:** 2.5 V @ 1 amp
- **Dimensions:** 2.00" x 2.00" x 1.25"

## REPLACES

- **A-1:** 7061 • **Gemline:** 1C213
- **Ice-O-Matic:** TD3001A
- **Mars:** 32394, 32396
- **Robertshaw:** 3310-068
- **Supco:** TMF-19, TMF-80

## FEATURES/BENEFITS

- Highly precise digital circuitry
- High power, SPDT relay output
- Input to output isolation
- Works with anticipator-type thermostats
- Repeat accuracy .5% over voltage and temperature range
- Rugged, compact package

## SPECIFICATIONS

- **Control voltage:** 18-30 VAC
- **Frequency:** 50/60 Hz
- **Output:**
  - N.O.: 20 amps @ 240 VAC
  - N.C.: 10 amps @ 240 VAC
- **Form:** SPDT, 1 form C
- **Knob-adj. time delay:** 10-1,000
- **Dimensions:** 2.00" x 3.00" x 1.25"

## REPLACES

- **Mars:** 32394/32398



## DELAY ON BREAK TIMERS

Helps to protect your equipment from damage which may be caused by the rapid short cycling of compressors. Upon application of power, the load is energized. When the thermostat or other switch opens or there is a loss of power, the load is de-energized and the delay period begins. The compressor will not start again during the delay period. Restart occurs after the delay period has elapsed.

### ICM203, ICM203F

Delay on Break Timer (ICM203),  
With 6" Wire Leads (ICM203F)



#### FEATURES/BENEFITS

- Universal voltage operation
- Higher 1.5 amp power rating
- Compressor lockout/anti-short cycle timer
- Helps to protect compressors from damage caused by rapid short cycling
- Simple, 2-wire hookup
- "F" suffix denotes 6" wire leads

#### SPECIFICATIONS

- **Voltage:** 18-240 VAC
  - 1.5 amps, 15 amp inrush
- **Frequency:** 50/60 Hz
- **Knob-adjustable delays:** .03-10 min. (1.8-600 sec.)
- **Voltage drop:** 3.5 V typical, 4.5 V max. @ 1.5 amps
- **Holding current min.:** 40 mA
- **Dimensions:** 2.00" x 2.00" x 1.25"

#### REPLACES

- ICM203**
- A-1: EAC-501-ADJ • **Diversified:** AC-503
  - **Mars:** 32001, 32387, 32392
  - **Robertshaw:** 3310-072 • **Supco:** TD72, TD73 • **Wagner/DiversiTech:** ADB-1
- ICM203F**
- **Supco:** TD73W
  - **Wagner/DiversiTech:** ADB-2

### ICM206

Delay on Break Timer



#### FEATURES/BENEFITS

- Brownout protection
- UL 873 recognition as compressor controller
- Helps prevent scroll compressor reversal
- Fast response time: 16 ms
- Compressor lockout/anti-short cycle timer
- Eliminates relay chatter due to thermostat bounce or tampering
- Works with anticipator-type thermostats

#### SPECIFICATIONS

- **Voltage:** 18-30 VAC
  - 1.5 amps, 15 amp inrush
- **Frequency:** 50/60 Hz
- **Time delays:** 3 to 10-minute adjustable time delay
- **Holding current min.:** 40 mA
- **Dimensions:** 2.00" x 2.00" x 1.25"

#### REPLACES

- A-1: EAC-426-ADJ • **Supco:** TD74

## BYPASS TIMERS

Designed to bypass a control or device during startup. Typically used to bypass a low pressure switch during compressor heat pump startup or to bypass an oil pressure switch upon startup. Helps to eliminate nuisance lockouts. With power applied to the input, the load energizes immediately and remains energized for the length of the time delay, regardless of the state of the switch being bypassed. At the end of the time delay, the condition of the load is determined by the state of the switch.

### ICM175 Bypass Timer



#### FEATURES/BENEFITS

- Designed to bypass a low pressure switch or other device during startup
- Ideal for low ambient startups
- Key component for "winter start" kits
- Helps to reduce nuisance lockouts
- Universal AC voltage operation
- Knob-adjustable time delay
- Epoxy-encapsulated circuitry

#### SPECIFICATIONS

- **Voltage:** 18-240 VAC
  - 1 amps • 10 amp inrush
  - 40 mA holding current
- **Frequency:** 50/60 Hz
- **Knob adjustable time delay:** 10-1,000 sec.
- **Dimensions:** 2.00" x 2.00" x 1.25"

#### REPLACES

- **Mars:** 32395 • **Supco:** TD32

## UNIVERSAL FIELD PROGRAMMABLE TIMERS

### UFPT-2 & UFPT-5

Universal Time Delay Relays



**ICM-UFPT-2**



**ICM-UFPT-5**

#### FEATURES/BENEFITS

- Universal input voltage 24 -240VAC
- 40mA min load requirement (2-wire only)
- Reduce truck stock inventory
- Includes a 5 Amp dry contact output relay for controlling a load directly - no minimum load requirement (5-wire only)
- Compatible with over 85 legacy ICM timers
- NFC technology allows for the user to change timer application on the fly using a smart phone to set up all functionality of the timer including mode and delay time.
- Installation instructions, wiring diagrams, and timing diagrams conveniently displayed on the App
- Easy installation

**USES NEAR FIELD COMMUNICATION IN CONJUNCTION WITH A SMART PHONE APP TO ALLOW THE USER TO SELECT FROM SIX DIFFERENT TIMER MODES**

- On delay
- Off delay (5-wire model only)
- Interval
- Anti-Short Cycle
- Repeat Cycle
- Single shot (5-wire model only)

#### NEW UNIVERSAL CONTROLS VIA NFC TECHNOLOGY



#### LOCKOUT PROTECTION RELAYS

Monitors various switch inputs to help protect your compressor. Upon application of power with the safety switches closed, the load will energize. If any of the safety switches open for longer than 600 ms, the fault light will come on and the load will stay de-energized regardless of the state of the safety switches. Power must then be removed for 100 ms and safety switches must be closed in order to re-energize the load, upon which the fault light will be off.

### ICM220

Lockout Protection Relay



#### FEATURES/BENEFITS

- UL 873 recognition as compressor controller
- Low cost lockout relay
- Helps eliminate nuisance lockouts typical of Series 84 and 93 impedance relays
- Ideal for use with safety/interlock switches
- Replaces impedance relays Series 84 and 93

#### SPECIFICATIONS

- **Voltage:** 18-30 VAC
- **Frequency:** 50/60 Hz
- **Power consumption:** 2 watts maximum @ lockout
- **Relay:** 1 form C
- **Contacts:** 2 amps @ 30 VAC resistive
- **Dimensions:** 2.00" x 2.00" x 1.25"

#### REPLACES

- **Essex:** Impedance Relays Series 84 and 93



# MOTOR PROTECTION CONTROLS

## 3-PHASE LINE VOLTAGE MONITORS • FULL PERFORMANCE

ICM's full performance line voltage monitors offer complete system protection by monitoring both the line (front) and load (back) side of the system including the power, motor and contactor lines. In addition, an integral "delay on break timer" guards against rapid short cycling at both the control circuit and the 3-phase lines. Provides highly reliable protection for your valuable equipment.

### ICM450A & ICM450A PLUS+

Programmable 3-Phase Line Voltage Monitors



**ICM450A**

UL  
LISTED  
E53944



**ICM450A  
PLUS+**

#### FEATURES

	ICM450A	ICM450A PLUS+
✓ Backlit LCD	•	•
✓ Simultaneous 3-phase true RMS voltage monitoring	•	•
✓ Factory calibrated	•	•
✓ 3-phase voltages simultaneously displayed on LCD	•	•
✓ Fault memory	•	•
✓ Fault monitoring: High / low voltage, voltage unbalance, phase loss, phase reversal	•	•
✓ Real time clock, date and time stamped events		•
✓ Simple configuration	•	•
✓ Fully adjustable variables	•	•
✓ Modbus RS485 communication port		•
✓ LED indicators	•	•
✓ Common 1/4" quick connect terminations	•	•
✓ English or Spanish menu options	•	•

## SPECIFICATIONS

### INPUT

- **Line voltage:** Universal, 190-600 VAC
- **Frequency:** 50-60 Hz
- **Load side monitoring:** Optional
- **Voltage:** 18-240 VAC

### OUTPUT

- **Type:** Relay, SPDT
- **Voltage:** 277 VAC @ 6A maximum

### CONTROL OPERATING TEMPERATURE

- **Operating temperature:** -40°F to +149°F (-40°C to +65°C)
- **Storage temperature:** -40°F to +185°F (-40°C to +85°C)

### MECHANICAL

- **Mounting:** Surface mount using (2) #8 screws
- **Terminations:** 1/4" quick connects
- **Weight:** 12 ounces (341 grams)
- **ModBus:** RS485 Communication (ICM450A plus+)
- **Dimensions:** 6.50" x 4.75" x 1.09"

### ORDERING INFORMATION

- **ICM450A:** Supersedes ICM450
- **ICM450A PLUS+:** Supersedes ICM450, ICM455

## REPLACES

- **A-1:** EAC-800, EAC-8000, EAC-8002
- **Copeland:** 085-0160-00
- **Diversified:** AC-2020, AC-301, AC-302
- **Mars:** PFM-2000
- **Motorsaver:** 455
- **SSAC:** QLM, QLV
- **Time Mark:** 265
- **Wagner/DiversiTech:** DTP-3, WPC-800

## PHASE LOSS AND REVERSAL PROTECTION • ULTRA LOW COST

### ICM401A

3-Phase Motor Protection Control



### ICM402

3-Phase Motor Protection Control



#### FEATURES/BENEFITS

- Low cost 3-phase protection for single side
- Monitors for phase reversal
- Bright LED indicators for ON and FAULT
- Universal 3-phase input: 180-600 VAC
- Control voltage: 18-32 VAC
- Epoxy-encapsulated for moisture protection
- Patented: U.S. Patent No. 5,337,206

#### SPECIFICATIONS

- **Voltage:** 180-600 VAC
- **Frequency:** 50/60 Hz
- **Control:** 18-32 VAC
- **Output:**
  - **Relay:** SPDT
  - **N.O.:** 6 amps @ 32 VAC max
- **Dimensions:** 3.00" x 3.25" x 1.00"

#### REPLACES

- **Mars:** 32536
- **Supco:** TPMP2

#### FEATURES/BENEFITS

- Low cost 3-phase protection for single side
- Monitors for phase reversal and phase loss
- Bright LED indicators for ON and FAULT
- Universal 3-phase input: 190-600 VAC
- Highly reliable passive electronics
- Epoxy coated for added protection
- Patented: U.S. Patent No. 5,337,206

#### SPECIFICATIONS

- **Voltage:** 190-600 VAC
- **Frequency:** 50/60 Hz
- **Control:** 115 or 208/230 VAC
- **Output:**
  - **Relay:** SPST
  - **N.O.:** 30 amps
- **Dimensions:** 3.00" x 3.20" x 1.35"

#### REPLACES

- **Mars:** 32536
- **Supco:** TPMP2

## 3-PHASE MOTOR PROTECTORS

### ICM441

3-Phase Motor Protection



#### FEATURES/BENEFITS

- Protects Against:
  - Under voltage
  - Over temperature
  - Power interruptions
  - Rapid short cycling
- Shorted temperature sensor
- Open temperature sensor
- Control duty, SPST relay layout
- Anti-short cycle time delay, 4 minutes (nominal)
- 1-second manual bypass

#### SPECIFICATIONS

- **Control Voltages:** 24 - 240 VAC
- **3-Phase Line Voltage:** 208/460 VAC
- **Frequency:** 50/60 Hz
- **Output:**
  - **Relay:** SPST
  - **N.O.:** 6 amps resistive
- **Dimensions:** 3.00" x 3.20" x 1.35"

#### REPLACES

- **Bristol:** 241680
- **Copeland:** 071-0376-01, 071-0376-02, 071-0397-00, 071-0397-01, 071-0424-00, 071-0424-01, 071-9800-00, 071-9800-01
- **Mars:** 37300, 37302, 37304, 37306, 37322
- **Texas Instruments:** 15AA1600 B, 15AA1600 C, 15AA1603 B, 15AA1603 C, 31AA1600 E, 31AA1606 E



## 3-PHASE MOTOR PROTECTORS

### ICM442

3-Phase Motor Protection



### FEATURES/BENEFITS

- Protects against over temperature in motor windings
- Uses up to four (4) 100 Ohm thermistors in series

### SPECIFICATIONS

- **3-Phase Input Voltage:** 200-575 VAC
- **Frequency:** 50/60 Hz
- **Voltage unbalance:** Adjustable: 2-25%
- **Control:** 115-277 VAC
- **Heavy duty SPST relay output:** 10 amps, 250 VAC
- **Thermistors:** Four (4) 100Ω thermistors in series
- **Relay rating:** 250 VAC at 10 A
- **Dimensions:** 3.00" x 3.20" x 1.35"

## SINGLE PHASE VOLTAGE MONITORS

### ICM492

Single Phase Digital Line Voltage Monitor



### FEATURES/BENEFITS

- Protects against over and under voltage, and rapid short cycling caused by transient faults and power interruptions
- Easy-view, backlit digital display
- Adjustable voltage set point
- Adjustable anti-short cycle time delay
- Adjustable response time
- Control mode (optional)
- 5-fault memory
- Universal line voltage input
- Heavy duty SPDT relay output
- Universal control voltage input (for integrating a thermostat)

### SPECIFICATIONS

- User adjustable settings:
- **Line voltage set point:** 80-300 VAC
  - **Anti-short cycle time delay:** 0-720 seconds
  - **Over/under voltage setting:** 5-25%
  - **Control mode:** ON and OFF
  - **Response time:** 0.1-10 seconds
  - **Line voltage:** 80-300 VAC
  - **Frequency:** 50/60 Hz
  - **Accuracy:** ±2%
  - **Low power consumption:**
    - Maximum 50 mA @ 120 VAC
    - Maximum 100 mA @ 240 VAC
  - **Control voltage:** 18-240 VAC
  - **Relay type:** Dry relay contacts
  - **Form:** SPDT
  - **Relay contact ratings:**
    - **N.C. contacts:** 10A resistive @ 277 VAC
    - **N.O. contacts:** 10A resistive @ 277 VAC
  - **Dimensions:** 3.00" x 3.20" x 1.35"

### REPLACES

- Wagner/DiversiTech: DSP-1

## SINGLE-PHASE VOLTAGE MONITORS WITH SURGE PROTECTION

### ICM493

Single Phase Line Monitor with Built-In Surge Suppression



LISTED

#### FEATURES/BENEFITS

- Protects against over and under voltage, rapid short cycling caused by transients, and high-power surges
- Fault history feature records and retains the five most recently occurred faults in non volatile memory
- Ideal for mini-splits or other condensing units
- Easy to view, backlit digital display
- Bank of five L-L surge arresters
- Built-in 40A contactor
- NEMA Type 3R rated metal enclosure for outdoor use
- Easy installation and setup

#### SPECIFICATIONS

- **Voltage set point:** 200-240 VAC
- **Over/under voltage setting:** 5% - 10%, adjustable
- **Anti-short cycle delay:** 0.5-10 min.
- **# of surge arresters required for operation:** 0-5
- **Accuracy:** +/- 2%, user calibration
- **Contactor ratings:** 40A FLA, 240A LRA
- **Number of trials:** 1-5, auto
- **Line voltage:** 195-264 VAC
- **Frequency:** 50/60 Hz
- **Type:** Contactor, 2-pole
- **Dimensions:** 8.00" x 8.25" x 4.30"

### ICM493-60A

Single Phase Line Monitor with Built-In Surge Suppression



LISTED

#### FEATURES/BENEFITS

- Protects against over and under voltage, rapid short cycling caused by transients, and high-power surges
- Fault history feature records and retains the five most recently occurred faults in non volatile memory
- Ideal for mini-splits or other condensing units
- Easy to view, backlit digital display
- Bank of five L-L surge arresters
- Built-in 60A contactor
- NEMA Type 3R rated metal enclosure for outdoor use
- Easy installation and setup

#### SPECIFICATIONS

- **Input:** 195-264 VAC, 50/60Hz
- **Voltage:** 240 VAC
- **FLA:** 60A, **LRA:** 360A
- **Operating/storage/LCD temperature:** -40°F to 167°F
- **Enclosure:** Weather resistant, NEMA 3R rated for outdoor installation
- **ASC time delay:** 0.5-10 minutes
- **# of trials:** 1-5, auto,
- **# of movistors:** 0-5
- **Dimensions:** 8.00" x 10.00" x 6.00"



## COMMON CAUSES OF POWER SURGES:

- Lightning storms
- Downed power lines
- Substandard / incorrect wiring
- Power outages/system recovery grid overload
- Large appliances turning On/Off
- Old electrical components
- Short circuits
- Loose wiring



# ICM SURGE PROTECTIVE DEVICES



### Why do you need protection?

All homes are constantly under attack from power surges and spikes, even though they may not always be apparent. These energy irregularities can be caused from just about anything, including weather, poor wiring, old parts, not to mention an aging power grid that has difficulty handling today's energy demands. Over time, these repeated energy surges will wear down your equipment and reduce its life expectancy. It is common for homeowners to place surge protectors on their televisions, personal computers and appliances. However, people often forget about their HVAC system, which represents your home's most valuable electronic investment.

### Why ICM Controls?

You can't see the harmful surges and transients in your power lines, but ICM's products can! For more than 30 years, ICM Controls has been a recognized leader for manufacturing controls that protect your valuable HVAC equipment against today's most common and severe power threats. From basic surge protective devices to line voltage monitors to combination devices, ICM Controls has you covered. Consult your local HVAC contractor to determine which control is right for your application.

Located in North Syracuse, NY, ICM's quality products are proudly manufactured in the USA.

# SURGE PROTECTION DEVICES

## SINGLE-PHASE SPDs

### ICM517A

Surge Protection Device



### FEATURES/BENEFITS

- Easy installation
- Low cost, high performance
- Rugged, reliable
- UL Listed, Type 2 device
- NEMA Type 3R metal enclosure
- TMOV (Thermally Protected Metal Oxide Varistor) Technology
- LED indicator for operational status
- 100 kA maximum surge current protection

### SPECIFICATIONS

- **Service voltage:** 120/240 volt, single phase
- **Maximum surge current:** 100,000 Amps
- **Maximum energy dissipation:** 1,020 Joules
- **Installation point:** Electrical panel/disconnect
- **Diagnostics:** Green light indicates surge suppression present
- **AC protection modes:** L-L, L-N, L-G, N-G
- **Conduit connection:** 3/4"
- **Weight:** 0.55 lbs.
- **Dimensions:** 5.0" x 2.78" x 2.16"

## SPLIT PHASE SPDs

### ICM518

240 VAC Split Phase  
Surge Protective Device



### FEATURES/BENEFITS

- 240 VAC split surge protective device
- Easy 3-wire installation
- 3/4" conduit connection
- Green LED indicator tells whether the device is operational
- Low cost, high performance
- Rugged and reliable
- UL Listed Type 1 or Type 2 SPD
- NEMA Type 4X watertight enclosure for indoor/outdoor use
- Limited Lifetime Protection Warranty
- 100 kA maximum surge current protection

### SPECIFICATIONS

- **Service voltage:** Split 240 VAC
- **Maximum surge current:** 100 kA
- **Short Circuit Current Rating (SCCR):** 200 kA
- **Nominal discharge current (In):** 20 kA
- **Protection mode:** L1-L2, L1-N, L2-N
- **Maximum Continuous Operation Voltage (MCOV):**
  - L-L: 300 VAC
  - L-N: 150 VAC
- **VPR:**
  - L-L: 1200 VAC
  - L-N: 700 VAC
- **SPD type:** Type 1 (can also be used in Type 2 apps)
- **Surge protection technology:** TFMOV
- **Input power frequency:** 50/60 Hz
- **Dimensions:** 4.30" x 4.10" x 2.30"

### REPLACES

- **ASCO:** 420120S
- **Eaton:** SP1-240S, SP2-240S
- **ERICO (Critec):** TDX50C240
- **Generac:** G0073000
- **Intermatic:** AG2401C3, IG1200RC3, IG1240RC3, IG3240RC3
- **Leviton:** 55240-ASA
- **MARS:** 83905
- **Siemens:** TPS3A
- **Ditek:** DTK 120/240HD2
- **Citel:** MLPXUVG



# ICM495-30A/60A

Disconnect with  
Internal Surge Protection



## FEATURES/BENEFITS

- 240 VAC split phase surge protective device
- Easy 3-wire installation
- 3/4" conduit connection
- Green LED indicator tells whether the device is operational
- Low cost, high performance
- Rugged and reliable
- UL Listed Type 2 SPD
- UL Type 3R / NEMA 3R enclosure for indoor/outdoor use
- Surge protection technology: Thermally protected MOVs (TFMOV)
- Easy installation and setup
- Protects against surges up to 100kA maximum surge current

## SPECIFICATIONS

### INPUT:

- **Voltage:** Split phase 240 VAC
- **Frequency:** 50/60Hz

### CONTACT RATINGS:

- **Voltage:** 240 VAC
- **FLA:** 30A/60A (depending on model)
- **LRA:** 360A

### PARAMETERS:

- **Short Circuit Current Rating (SCCR):** 10kA
- **Nominal discharge current (In):** 20kA
- **Protection mode:** L1-L2, L1-N, L2-N
- **Maximum Continuous Operation Voltage (MCOV):**
  - L-L: 300 VAC
  - L-N: 150 VAC
- **VPR:**
  - L-L: 1200 VAC
  - L-N: 700 VAC
- **SPD type:** Type 2
- **Surge protection technology:** TFMOV

## REPLACES

- All standard disconnect boxes rated for equal voltage and current configurations
- **30A – MARS:** 83916, **RectorSeal:** RSH-50 96417
- **60A – MARS:** 83915, **RectorSeal:** RSH-50 96419

## 3-PHASE SPDs

# ICM530

3-Phase Surge Protective Device  
for 3-Phase Delta 240 VAC or  
Wye 120/208 VAC



## FEATURES/BENEFITS

- 240 VAC or Wye 120/208 VAC
- Delta or Wye Configuration
- NEMA Type 4X watertight plastic enclosure for outdoor and indoor installation
- Green LED indicates surge protection present
- Easily connects to electrical panel or disconnect for indoor and outdoor apps
- UL Listed Type 1 or Type 2 SPD
- Limited Lifetime Protection Warranty
- 150 kA maximum surge current protection

## SPECIFICATIONS

- **Service voltage (3-phase):** 240 VAC Delta or 120/208 VAC Wye
- **Maximum surge current:** 150 kA
- **Short Circuit Current Rating (SCCR):** 200 kA
- **Nominal discharge current (In):** 20 kA
- **Protection mode:**
  - 3 for Delta configuration
  - 6 for Wye configuration (neutral tied to ground)
- **Maximum Continuous Operation Voltage (MCOV):**
  - L-L: 300 VAC
  - L-N: (for Wye configuration only): 150 VAC
- **VPR:**
  - Delta L-L: 1200 VAC
  - Wye L-L: 1200 VAC
  - Wye L-N: 700 VAC
- **SPD type:** Type 1 (can also be used in Type 2 apps)
- **Surge protection technology:** TFMOV
- **Input power frequency:** 50/60 Hz
- **Dimensions:** 4.30" x 4.10" x 2.30"

## REPLACES

- **ABB:** OVRHLDxx-120
- **ASCO:** 420120Y, 420240D
- **Eaton:** SP1-208Y, SP1-240D, SP2-208Y, SP2-240D
- **ERICO (Critec):** TXD50C120/208, TXD50C120/240D
- **Intermatic:** AG2083C3 L5F13Y1DG1
- **Leviton:** 55208-ASA
- **Siemens:** TPS3D, TPS3C
- **Square D:** SDSA2040, SDSA2040D

# ICM531

3-Phase Surge Protective Device for 3-Phase Delta 480 VAC or Wye 277/480 VAC



# ICM532

3-Phase Surge Protective Device for 3-Phase Delta 600 VAC or Wye 347/600 VAC



# ICM533

3-Phase Surge Protective Device for 3-Phase Delta High Leg 120/240 VAC



## FEATURES/BENEFITS

- 480 VAC or Wye 277/480 VAC
- Delta or Wye Configuration
- NEMA Type 4X watertight plastic enclosure for outdoor and indoor installation
- Green LED indicates surge protection present
- Easily connects to electrical panel or disconnect for indoor and outdoor apps
- UL Listed Type 1 or Type 2 SPD
- Limited Lifetime Protection Warranty
- 150 kA maximum surge current protection

## SPECIFICATIONS

- Service voltage (3-phase): 480 VAC Delta or 277/480 VAC Wye
- Maximum surge current: 150 kA
- Short Circuit Current Rating (SCCR): 200 kA
- Nominal discharge current (In): 20 kA
- Protection mode:
  - 3 for Delta configuration
  - 6 for Wye configuration (neutral tied to ground)
- Maximum Continuous Operation Voltage (MCOV):
  - L-L: 700 VAC
  - L-N: (for Wye configuration only): 350 VAC
- VPR:
  - Delta L-L: 2500 VAC • Wye L-L: 2500 VAC
  - Wye L-N: 1200 VAC
- SPD type: Type 1 (can also be used in Type 2 apps)
- Surge protection technology: TFM OV
- Input power frequency: 50/60 Hz
- Dimensions: 4.30" x 4.10" x 2.30"

## REPLACES

- ABB: OVRHLDxx-277
- ASCO: 420277Y, 420480D
- Eaton: SP1-480Y, SP1-480D, SP2-480Y, SP2-480D
- ERICO (Critec): TDX50C277/480
- Intermatic: AG4803C3, L5F13Y2DG1
- Leviton: 55480-ASA
- Siemens: TPS3E, TPS3F
- Square D: SDSA4040, SDSA4040D

## FEATURES/BENEFITS

- 600 VAC or WYE 347/600 VAC
- Delta or Wye Configuration
- NEMA Type 4X watertight plastic enclosure for outdoor and indoor installation
- Green LED indicates surge protection present
- Easily connects to electrical panel or disconnect for indoor and outdoor apps
- UL Listed Type 1 or Type 2 SPD
- Limited Lifetime Protection Warranty
- 150 kA maximum surge current protection

## SPECIFICATIONS

- Service voltage (3-phase): 600 VAC Delta or 347/600 VAC Wye
- Maximum surge current: 150 kA
- Short Circuit Current Rating (SCCR): 200 kA
- Nominal discharge current (In): 20 kA
- Protection mode:
  - 3 for Delta configuration
  - 6 for Wye configuration (neutral tied to ground)
- Maximum Continuous Operation Voltage (MCOV):
  - L-L: 920 VAC
  - L-N: (for Wye configuration only): 460 VAC
- VPR:
  - Delta L-L: 2500 VAC • Wye L-L: 2500 VAC
  - Wye L-N: 1500 VAC
- SPD type: Type 1 (can also be used in Type 2 apps)
- Surge protection technology: TFM OV
- Input power frequency: 50/60 Hz
- Dimensions: 4.30" x 4.10" x 2.30"

## REPLACES

- ASCO: 420347Y, 420600D • Eaton: SP1-600Y, SP1-600D, AP2-600Y • ERICO (Critec): TDX50C347/600
- Intermatic: AG6503, L5F13Y3DG1 • Siemens: TPS3L, TPS3G • Square D: SDSA3650, SDSA3650D

## FEATURES/BENEFITS

- High Leg 120/240 VAC
- Delta High-Leg Configuration
- NEMA Type 4X watertight plastic enclosure for outdoor and indoor installation
- Green LED indicates surge protection present
- Easily connects to electrical panel or disconnect for indoor and outdoor applications
- UL Listed Type 1 or Type 2 SPD
- Limited Lifetime Protection Warranty
- 150 kA maximum surge current protection

## SPECIFICATIONS

- Service voltage (3-phase): 120/240 VAC Delta High-Leg
- Maximum surge current: 150 kA
- Short Circuit Current Rating (SCCR): 200 kA
- Nominal discharge current (In): 20 kA
- Protection mode: 3 for Delta configuration
- Maximum Continuous Operation Voltage (MCOV):
  - L-L: 300 VAC • H-L: 450 VAC
  - L-N: 150 VAC • H-N: 300 VAC
- VPR:
  - L-L: 1200 VAC • H-L: 1500 VAC
  - L-N: 700 VAC • H-N: 900 VAC
- SPD type: Type 1 (can also be used in Type 2 apps)
- Surge protection technology: TFM OV
- Input power frequency: 50/60 Hz
- Dimensions: 4.30" x 4.10" x 2.30"

## REPLACES

- ASCO: 420240H • Eaton: SPD050240H1
- Intermatic: AG2403C3, L5F13D1DG1
- Siemens: TPS3B • Square D: SDSA2040D



**PHONE:** 1-800-365-5525 **FAX:** 315-233-5276 **WEB:** WWW.ICMCONTROLS.COM

All features and specifications are subject to change without notice.

# MOTOR STARTERS

## SOFT START CONTROLS

### ICM870-9A/ICM870-16A

Soft Start Controls



#### FEATURES/BENEFITS

- Starting current reduction and self-learning algorithm
- Built-in start capacitor
- Over/under voltage monitoring
- Over-current protection
- Diagnostic indicators
- Sealed enclosure
- 9A Model – Order: **ICM870-9A**
- 16A Model – Order: **ICM870-16A**

#### SPECIFICATIONS

- **Inputs:** L1 & L2
- **Nominal voltage:** 120 VAC, 240 VAC
- **Over voltage limits:**  
120 VAC nominal = 140 VAC  
240 VAC nominal = 250 VAC
- **Under voltage limits:**  
120 VAC nominal = 95 VAC  
240 VAC nominal = 195 VAC
- **Outputs:** Compressor
- **Current:** Maximum nominal = 9 A, 16A, 32A
- **Over current limits:**  
ICM870-9A = 11.25A  
ICM870-16A = 20A
- **Operating temp.:** -40°F to 131°F (-40°C to 55°C)
- **Storage temp.:** -40°F to 149°F (-40°C to 65°C)
- **Humidity:** 0-95% non-condensing
- **Enclosure:** IP65/Type 4X
- **Dimensions:** 7.60" x 3.20" x 2.10"

#### VOLTAGE SENSING

ICM's differential voltage sensing products employ patented circuitry which monitors differential compressor auxiliary voltage, determines the state of the motor and precisely engages and disengages the start capacitor.

A timed safety circuit is provided in the event the motor fails to start within 2 seconds.

### ICM866U Motor Starter



#### FEATURES/BENEFITS

- Patented circuitry with differential voltage sensing technology
- Monitors differential compressor auxiliary voltage
- Not affected by ambient temperatures
- Recycles instantly
- Self-adjusting to changes in voltages
- Extends motor life
- Rated for 1/12 to 5 HP applications
- Reduces inventory, saves money – One model is all you need
- Simple, two-wire installation
- Multi-voltage operation for 115 or 230 VAC motors
- Precisely engages/disengages the start capacitor
- Does not rely on relay with preset, factory default ranges
- Faster install time and minimizes risk of accidental miswires

#### SPECIFICATIONS

- **Voltage:** 90-240 VAC
- **Recommended range:** 1/12 to 5 HP
- **Capacitor:** 145-175 Mfd. 330 V
- **Dimensions:** 7.90" x 1.50" x 2.25"

#### REPLACES

- **5-2-1:** CSR-U1, CSR-U2, CSR-U3
- **DiversiTech:** DST-5, DST-6
- **Kickstart:** KS1-KS5 & KS8
- **Mars:** 32708, SS1, SS5, 32703, 32704, 32701, 32702
- **Supco:** SPP5, SPP6, SPP5E, SPP6E, SPP7E, SPP8E, SPP9E, SPP10E
- **Watsco:** WSX1

## ICM855

PTCR  
Hard Start  
Capacitor



### FEATURES/BENEFITS

- Increases torque up to 300%
- Positive Temperature Coefficient (PTC) technology
- Easy to install
- Low cost motor starting device

### SPECIFICATIONS

- **Voltage:** 115-288 VAC
- **Capacitor:** 43-52 Mfd, 330 V
- **Range:** 1/2 to 10 HP
- **Dimensions:** 2.50" x 1.75" x 6.25"

### REPLACES

- A-1: WXS-5 • MARS: 32701, 35701
- Supco: SPP-5
- Wagner/DiversiTech: DST-5

## ICM856

PTCR  
Hard Start  
Capacitor



### FEATURES/BENEFITS

- Increases torque up to 500%
- Positive Temperature Coefficient (PTC) technology
- Easy to install
- Low cost motor starting device

### SPECIFICATIONS

- **Voltage:** 115-288 VAC
- **Capacitor:** 130-156 Mfd, 330 V
- **Range:** 1/2 to 10 HP
- **Dimensions:** 2.00" x 2.00" x 6.50"

### REPLACES

- A-1: WXS-6 • MARS: 32702, 35702
- Supco: SPP-6
- Wagner/DiversiTech: DST-6

## ICM857

Relay,  
Overload  
and  
Start  
Capacitor



### FEATURES/BENEFITS

- For single-phase commercial and domestic capillary refrigeration systems and freezers
- Pre-wired for fast installation
- Overload: 12A
- 145-175 mfd
- For 1/12 to 1/5 HP motors

### SPECIFICATIONS

- **Voltage:** 120 VAC
- **Maximum voltage:** 180 VAC
- **Maximum current:** 12A
- **Retry time:** Within 90 seconds
- **Dimensions:** 2.30" x 2.00" x 5.15"

### REPLACES

- Mars: 32781 • Supco: RCO810

## ICM858

Relay,  
Overload  
and  
Start  
Capacitor



### FEATURES/BENEFITS

- For single-phase commercial and domestic capillary refrigeration systems and freezers
- Pre-wired for fast installation
- Overload: 22A
- 243-292 mfd
- For 1/4 to 1/3 HP motors

### SPECIFICATIONS

- **Voltage:** 120 VAC
- **Maximum voltage:** 180 VAC
- **Maximum current:** 12A
- **Retry time:** Within 90 seconds
- **Dimensions:** 2.30" x 2.00" x 5.75"

### REPLACES

- Mars: 32741 • Supco: RCO410

## ICM859

Relay,  
Overload  
and  
Start  
Capacitor



### FEATURES/BENEFITS

- For single-phase commercial and domestic capillary refrigeration systems and freezers
- Pre-wired for fast installation
- Overload: 30A
- 243-292 mfd
- For 1/3 to 1/2 HP motors

### SPECIFICATIONS

- **Voltage:** 120 VAC
- **Maximum voltage:** 180 VAC
- **Maximum current:** 12A
- **Retry time:** Within 90 seconds
- **Dimensions:** 2.60" x 2.20" x 6.25"

### REPLACES

- Supco: RCO210



# UMSR – UNIVERSAL MOTOR STARTING RELAY

ICM's Universal Motor Starting Relay incorporates patented differential voltage sensing and a non-positional mounting configuration to offer a single replacement for all standard potential relays. Ideal for A/C, commercial refrigeration, heat pump or any single-phase motor application up to 10 HP.

## UMSR-50

Universal Motor Starting Relay



### FEATURES/BENEFITS

- Replacement for all standard potential relays
- Patented differential voltage sensing
- No user-adjustments required
- Non-positional mounting configuration
- 50A switching capabilities
- Universal mounting bracket for easy installation
- .250" quick connect termination
- Safety timer



### SPECIFICATIONS

- **Voltage rating:** 110-270 VAC, single phase
- **Max. voltage contact rating:** 502 VAC (absolute)
- **Motor power rating:** Up to 10 HP
- **Operating position:** Non-positional
- **Safety time out:** Approximately 1-second per 100 microfarads
- **Consumption:** 5 VA maximum
- **Contact rating:** 50A (break only)
- **Dimensions:** 2.00" x 2.00" x 1.75"

### REPLACES

- All standard potential relays
- **Supco:** APR5, SUPR

## ECM CONTROLS

# ELECTRONICALLY COMMUTATED MOTOR

ICM's controllers provide a line of form, fit and functional OEM replacements for efficiently controlling a motor's speed. Manual or automated control of an ECM is available (model dependent), while monitoring and displaying the RPM/CFM of the motor.

## ICM708

ECM Control



### FEATURES/BENEFITS

A low current pulse width modulated signal for controlling the speed of a GE 2.3 ECM based on a user settable potentiometer.

#### RPM Feedback

On-board LED diagnostics for a visual indication of the motor's status.

### SPECIFICATIONS

- **Power supply:** 18-30 VAC
- **RPM input:** 5 VDC
- **PWM & ON/OFF outputs:** 14 VDC (PWM 80 Hz)
- **Dimensions:** 4.25" x 2.35" x 1.50"

### REPLACES

- EVO™/ECM-VCU-36-mp

## ICM709

ECM Control



### FEATURES/BENEFITS

A low current pulse width modulated signal for controlling the speed of a GE 2.3 ECM based on user settable potentiometers (SET<sub>0</sub> - SET<sub>4</sub>) and a thermostat's requested call.

#### RPM Feedback

On-board LED diagnostics for a visual indication of the motor's status.

### SPECIFICATIONS

- **Power supply:** 18-30 VAC
- **RPM input:** 15 VDC
- **Thermostat inputs:** (SPD<sub>1</sub> - SPD<sub>4</sub>): 18-30 VAC
- **PWM & ON/OFF outputs:** 14 VDC (PWM 80 Hz)
- **Dimensions:** 3.25" x 3.00" x 0.75"

### REPLACES

- EVO™/ECM-4Spd

# ICM711

## ECM Control



### FEATURES/BENEFITS

The **ICM711** is used to control the speed of an Electronically Commutated Motor (**ECM**) by automated control systems via a 0-10 VAC input (**SIGNAL & COMMON**), or manually via potentiometer (**SET SPEED**). The **ICM711** will also provide motor speed feedback via visual LED indication (**MOTOR RPM**) as well as a 0-10 VAC output (**RPM & COMMON**) to supply an automated control system.

### SPECIFICATIONS

- **Power supply:** 18-30 VAC, 60 Hz
- **Signal & common:** 0-10 VDC → 0-100% PWM request
- **ECM supplied feedback:** 5 VDC (motor at rest or not connected)
- **PWM supplied to ECM:** 18 VDC (10mA max)
- **ON/OFF supplied to ECM:** 18 VDC (10mA max)
- **RPM & common:** 0-10 VDC (5mA max) → 0 to 2000 RPM (10 RPM increments)
- **Dimensions:** 4.25" x 2.35" x 1.50"

### REPLACES

- EVO™/ECM-ACU+-S1

# ICM713

## ECM Control



### FEATURES/BENEFITS

- Single or dual temperature inputs
- Heat pump bypass circuitry
- Low current pulse width modulated output
- Lead free design

### SPECIFICATIONS

- **Voltage:** 18-30 VAC
- **Frequency:** 50/60 Hz
- **Output:** 13.5 VDC, 10mA max., 80 Hz, 0-100%
- **Operating temperature:** -40°F to 158°F
- **Storage temperature:** -40°F to 185°F
- **Temperature probes:** 10 KOhm (NTC, J-Curve)
- **Dimensions:** 5.00" x 3.25" x 1.50"

### REPLACES

- Hoffman: 880-ECM(10)SSH

# ICM715

## ECM Control



### FEATURES/BENEFITS

- Provides a single, user selected motor speed when replacing an OEM constant torque electronically commutated motor
- Simple installation
- Works on constant torque blower motor such as X13 or SelecTech constant torque electronically commutated motor up to 1 HP
- User selectable 3 minute delay on break option

### SPECIFICATIONS

- **Motor voltage:** 120 VAC or 208-240 VAC
- **Input voltage:** 24 VAC
- **Frequency:** 50-60 Hz
- **Horse power:** 1 HP max.
- **Dimensions:** 4.00" x 2.25" x 1.25"

### REPLACES

- QwikSwapX1

# ICM716

## ECM Control



### FEATURES/BENEFITS

- Provides a means to replace an X13 or SelecTech constant torque ECM with a single phase PSC motor
- Eliminates costly ECM repairs
- 3 High power relay outputs for automated speed selection
- 3 LED's indicate selected speed
- LED indicator illuminates when OFF delay is active
- User selectable 60, 120, or 180 second OFF delay

### SPECIFICATIONS

- **Motor voltage:** 120 VAC or 208-240 VAC
- **Input voltage:** 24 VAC
- **Frequency:** 50-60 Hz
- **Horse power:** 1 HP max.
- **Dimensions:** 5.00" x 3.75" x 1.25"

### REPLACES

- QwikSwapX3



# FAN COIL RELAY CONTROL BOARDS

## ICM6202

Three-Speed  
Fan Coil Control



### FEATURES/BENEFITS

- Ability to operate line voltage 3-speed fan motor with low Compatible with 4-pipe and 2-pipe systems with auto-changeover
- Suitable for 1/8 HP motors
- 1/4" Quick connect terminals
- Mounts with standard 3" track

### SPECIFICATIONS

#### Input:

- Transformer primary:** 115 VAC/230 VAC; 50/60 Hz
- Fan inputs HI, MED, LOW:** Nominal 17mA @ 24 VAC
- Heat & cool:** 0.83A @ 24 VAC

#### Output:

- Transformer secondary:** 24 VAC, 20 VA
- Relay outputs H, M, L:** 1/8HP @ 115 VAC, 10A @ 240 VAC resistive
- Heat & cool valves:** 0.83A @ 24 VAC
- Dimensions:** 5.85" x 3.00" x 1.75"

## FAN BLOWER CONTROLS

### AIR HANDLING CONTROLLERS

## ICM6500-1

Air Handling Controller



### FEATURES/BENEFITS

- Multi-functional control
- Microprocessor controlled
- Precision timing
- Low cost solution

### SPECIFICATIONS

- Voltage:** 24 VAC, 120/240 VAC
- Frequency:** 50/60 Hz
- Valve output:** 24 VAC, 50/60 Hz, 5A
- Blower fan:** 120/240 VAC, 50/60 Hz, 13A/6.5A
- Water pump:** 120/240 VAC, 50/60 Hz, 1.5A/1.5A
- Boiler:** 24 VAC, 50/60 Hz, 5A
- ECM Output:** 24 VAC, 5A
- Dimensions:** 2.00" x 7.00" x 1.25"

### REPLACES

- Vtronics:** R200A

## ICM6501

Air Handling Replacement Controls



### FEATURES/BENEFITS

- Air handler control board operates with hot water heating systems
- Features both preheat and post-purge fan blower delays

### SPECIFICATIONS

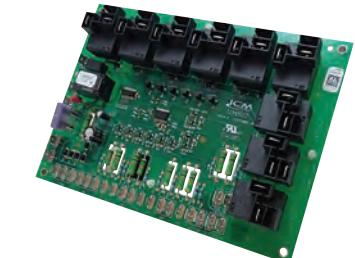
- Voltage:** 120 VAC or 208-240 VAC
- Control voltage:** 24 VAC
- Frequency:** 50-60 Hz
- Hi/Lo Blower:** 120/240 VAC, 9.8 FLA
- Water Pump:** 120/240 VAC, 1.5 FLA
- Dimensions:** 4.00" x 2.25" x 1.25"

### REPLACES

- ClimaTek/First Company:** CB201

## ICM6502

Air Handling  
Replacement Controls



### FEATURES/BENEFITS

- Power interruption protection for the compressor
- Random Start delay
- 6-minute anti-short cycle timer
- 2 stages of heating
- Low outdoor ambient compressor lockout
- Steady state cooling
- Low indoor coil temperature cooling shut down
- Low outdoor coil defrost lockout (defrost mode)
- Low indoor room ambient (RS) auxiliary heat mode
- Front Desk shut down switch input
- Speed up test mode reduces timing for field testing of the board

### SPECIFICATIONS

- Input:**
- Voltage:** 208-240 VAC
- Control voltage:** 24 VAC
- Frequency:** 50-60 Hz
- Dimensions:** 7.50" x 5.50" x 1.50"

#### Output:

- Compressor:** 10 FLA @240 Vac
- Low Speed Evap. Fan:** 2FLA @40 Vac
- High Speed Evap. Fan:** 2FLA @240 Vac
- Auxiliary Heat Stg #1:** 21A Resistive @ 240 VAC
- Auxiliary Heat Stg #2:** 21A Resistive @240VAC
- Reversing Valve:** 24 Vac 5VA
- Condenser Fan:** 24 Vac 1A Pilot Duty

### REPLACES

- ClimaTek/First Company:** CB1025, CB1026

## POST PURGE, OFF DELAY TIMER

Controls the circulating fan in heat pump, air conditioning and forced air systems. OFF delay timing function continues to run the fan at the end of the heating/cooling cycle, thereby purging ducts of residual air and increasing system efficiency. Power must be applied before and during the time delay period. When the initiate contact closes, the load energizes and remains energized as long as the initiate contact is closed. The time delay begins when the initiate contact opens. At the end of the time delay period, the load is turned off. If the initiate contact recloses during the time delay period, the load remains energized and the time delay is reset to zero. Removal of the input power during the delay turns off the load and resets the time delay to zero. A one-second interrogation delay is provided to avoid nuisance trips due to thermostat bounce or tampering.

### ICM253

Post Purge, OFF Delay Timer



#### FEATURES/BENEFITS

- UL 873 recognition for compressor applications
- Post-purge fan delay timer
- OFF delay purges ducts of residual air at the end of the heating/cooling cycle
- Interrogation delay eliminates nuisance trips due to thermostat bounce/tampering

#### SPECIFICATIONS

- **Voltage:** 18-30 VAC
  - 1 amp maximum
  - 40 mA minimum
  - 10 amp inrush
- **Adjustable time delay:**
  - **OFF:** 12-390 seconds
- **Dimensions:** 2.00" x 3.00" x 1.25"

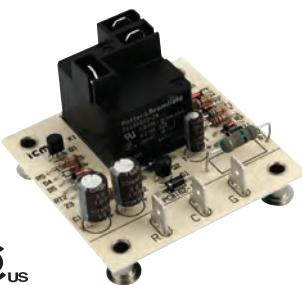
#### REPLACES

- **Field Controls:** 46144700
- **Gemline:** 1C216
- **Mars:** 32393

## OFF DELAY ON BREAK

### ICM255

Fan Blower Control



#### FEATURES/BENEFITS

- Low cost open board design
- High power, relay output
- Dual function fan delay timer
- Controls the circulating fan in heat pump, A/C and forced air systems
- OFF delay purges ducts of residual air

#### SPECIFICATIONS

- **Voltage:** 18-30 VAC
- **Contact ratings:**
  - N.O.: 20 amps @ 240 VAC
  - N.C.: 20 amps @ 240 VAC
- **Time delays fixed:**
  - **ON:** 1 second • **OFF:** 60 seconds
- **Dimensions:** 2.50" x 2.50" x 1.50"

#### REPLACES

- **A-1:** 5893 • **Bard:** 8201-056
- **Mars:** 32574 • **Rheem:** 42-22515-01, 42-22515-02, 42-22515-03
- **Snyder General/ICP:** 1395336

## FORM, FIT AND FUNCTIONAL OEM REPLACEMENT PARTS

### ICM256

OFF Delay on Break Control



#### FEATURES/BENEFITS

- Fan post purge timer to control circulating fan in forced air systems
- Dual function 7 second ON delay / 65 second OFF delay
- Speed up terminals for test mode
- Fuse protected control voltage
- High power relay output

#### SPECIFICATIONS

- Input:**
- **Control voltage:** 18-30 VAC
  - **Frequency:** 50/60 Hz
- Output:**
- **Type:** Relay • **Form:** SPST N.O.
  - **Rating:** 25 amps @ 240 VAC
- Time Delays:**
- **ON delay:** 7 seconds
  - **OFF delay:** 65 seconds
- Speed Up Options:**
- **Speed up to C** = Reduced delay (3 seconds ON, 5 seconds OFF)
  - **Speed up to R** = No delay
- Dimensions:** 2.85" x 2.00" x 2.00"

#### REPLACES

- **Goodman:** PCBFM-103



# ICM271

## Fan Blower Control



# ICM275

## Fan Blower Control



# ICM277

## Fan Blower Post Purge Time Delay



### FEATURES/BENEFITS

- Reliable solid state fan blower control
- Pin selectable blower delays
- High power, relay output
- Dual function fan delay timer
- Controls the circulating fan in HP, A/C and forced air systems
- OFF delay purges ducts of residual air
- ON delay allows air to reach the proper comfort level prior to energizing the fan

### SPECIFICATIONS

- **Control voltage:** 18-30 VAC
- **Contact ratings:**
  - N.O.: 20 amps • N.C.: 10 amps
- **Time delays:** Heat ON delay: 75 seconds, Heat OFF delay: 105 seconds, Cool OFF delay: 90 seconds
- **Dimensions:** 5.30" x 5.05" x 1.00"

### REPLACES

- **Carrier:** 302075-3, CES0110017, CES0110018, HH84AA010, HH84AA011, HH84AA012, HH84AA013, HH84AA020, P771-7002
- **Robertshaw:** 695-100

### FEATURES/BENEFITS

- Form, fit and functional OEM replacement control
- Heavy duty heat relay
- Purges ducts of residual air
- Integral short cycle protection

### SPECIFICATIONS

- **Control voltage:** 18-30 VAC
- **Contact ratings:** High: 20 amps @ 240 VAC, Low: 10 amps @ 240 VAC
- **Time delays:** Heat ON delay: 60 seconds, Heat OFF delay: 60-240 seconds, Cool OFF delay: 90 seconds
- **Dimensions:** 5.43" x 5.25" x 1.00"

### REPLACES

- **Carrier:** CES0110019, HH84AA001, HH84AA003, HH84AA005, HH84AA009, HH84AA014, HH84AA015, HH84AA021
- **Robertshaw:** 695-101

### FEATURES/BENEFITS

- Microprocessor-based fan blower
- For circulating fan in heat pump, A/C and forced air systems

### SPECIFICATIONS

- **Control voltage:** 18-30 VAC
- **Contact ratings:**
  - N.O.: 20 amps • N.C.: 10 amps
- **Time delays:** Blower ON: 7 seconds, Blower OFF: 65 seconds
- **Dimensions:** 4.50" x 2.00" x 1.25"

### REPLACES

- **Goodman:** B1370735S, PCBFM131S

## FURNACE CONTROLS

*ICM offers low cost, form, fit and functional replacement furnace controls for many popular OEM models. Our furnace controls come standard with many safety features including 100% gas shutoff in case of ignition failure.*

# ICM2812-KIT

Universal Furnace Control Board



### FEATURES/BENEFITS

- Furnace control module
- Hot Surface Ignition (HSI) control board
- Microprocessor-based
- Monitors timing, trial for ignition, system switches, flame sensing and lockout and 100% lockout safety feature
- Compatible with LP or natural gas
- LED indication for status and fault codes to aid in troubleshooting
- Includes cable harnesses



See Full  
Replaces List  
Here

### SPECIFICATIONS

- **Control voltage:** 18-30 VAC (24 VAC)
- **Line voltage:** 120 VAC
- **Operating temperature:** -40°F to 176°F (-40°C to 80°C)
- **HSI Hot Surface Ignitor:** 6 amp @ 120 VAC
- **Gas valve:** 1.5 amp @ 24 VAC
- **Inducer draft motor:** 2.2 FLA @ 120 VAC
- **Blower motor:** 14.5 FLA @ 120 VAC
- **Humidity range:** 5 to 95% RH (non-condensing)
- **Dimensions:** 5.75" x 8.25" x 1.50"

### REPLACES

The ICM2812-KIT includes cable harnesses that make it a replacement for more than 200+ competitive part numbers.

# ICM280

Furnace Control



# ICM281

Furnace Control Board



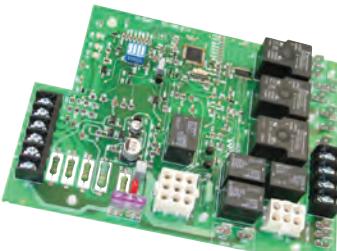
# ICM282B

Furnace Control Board



# ICM288

Furnace Control Board



## FEATURES/BENEFITS

- Controls gas valve, ignitor, blower motor, inducer.
- Microprocessor-based
- Status LED for fault codes
- Twinning compatible with another ICM280 board

## SPECIFICATIONS

- **Line voltage:** 120 VAC @ 60 Hz
- **Control voltage:** 24 VAC
- **Fan:** 2 HP @ 240 VAC
- **Inducer motor:** 7 amps @ 250 VAC
- **Gas valve:** 1 amp @ 24 VAC
- **Ignitor:** 5 amps @ 120 VAC
- **Dimensions:** 5.80" x 4.50" x 1.00"

## REPLACES

- **Goodman:** B180999-06, B180999-08, B180999-10, B180999-13, B180999-13S
- **UTEC:** 1012-933D
- **Texas Instruments:** 41F-5
- **White-Rodgers:** 50T35-730, 50T35-743

## FEATURES/BENEFITS

- Control gas valve, ignitor, blower motor, inducer, humidifier and air cleaner
- Microprocessor-based
- Designed for 100% gas shutoff in case of ignition failure
- Model selection of 80+ and 90+ furnace operation
- Reverse polarity protection
- Secondary brownout voltage protection
- Heating and cooling fan functions in response to standard thermostat
- Provides diagnostic LEDs to aid in troubleshooting
- Twinning compatible with another ICM281 board

## SPECIFICATIONS

- **Line voltage:** 120 VAC @ 60 Hz
- **Control voltage:** 24 VAC
- **Operating temp.:** -40°F to 176°F (-40°C to 75°C)
- **Ignitor:** 5A @ 120 VAC
- **Cool blower:** 30A, 2HP, 240 VAC
- **Heat:** 5A, 1/2 HP, 240 VAC
- **Inducer motor:** 4A, FLA-8.0 LRA @ 120 VAC
- **Gas valve:** 1.5A @ 30 VAC
- **Dimensions:** 8.50" x 7.50" x 1.00"

## REPLACES

- **Carrier:** CES0110020, CES0110048, CES0110057-00, CES0110057-01, CES0110057-02, HH84AA016

## FEATURES/BENEFITS

- Control gas valve, ignitor, blower motor, inducer, humidifier and air cleaner
- Microprocessor-based
- Designed for 100% gas shutoff in case of ignition failure
- Reverse polarity protection
- Secondary brownout voltage protection
- Heating and cooling fan functions in response to standard thermostat
- Provides diagnostic LEDs to aid in troubleshooting
- Includes adapter harness (not shown)
- Twinning compatible with another ICM282B board

## SPECIFICATIONS

- **Line voltage:** 120 VAC @ 60 Hz
- **Control voltage:** 24 VAC
- **Operating temp.:** -40°F to 176°F (-40°C to 75°C)
- **Ignitor:** 5A @ 120 VAC
- **Cool blower:** 30A, 2HP, 240 VAC
- **Heat:** 5A, 1/2 HP, 240 VAC
- **Inducer motor:** 4A, FLA-8.0 LRA @ 120 VAC
- **Gas valve:** 1.5A @ 30 VAC
- **Dimensions:** 8.25" x 5.50" x 1.50"

## REPLACES

- **Carrier:** HK42FZ004, HK42FZ007, HK42FZ008, HK42FZ009, HK42FZ011, HK42FZ013, HK42FZ016, HK42FZ034, 325878-751
- **ICP:** 1176943

## FEATURES/BENEFITS

- Microprocessor-based precision
- Monitors pressure, roll-out and limit switches
- Controls gas valve, inducer draft motor, circulating blower and hot surface ignitor
- Reverse polarity detection
- Twinning compatible with another ICM288 board
- Diagnostic LEDs to aid in testing/troubleshooting

## SPECIFICATIONS

- **Line voltage:** 120 VAC @ 60 Hz
- **Control voltage:** 24 VAC
- **Ignitor:** 5A, 120 VAC
- **Cool blower:** 10A, 2HP, 240 VAC
- **Heat:** 5A, 1/2 HP, 250 VAC
- **Inducer blower:** 4A, 120 VAC
- **Gas valve:** 1A, 24 VAC
- **Humidifier motor:** 0.5A, 24 VAC
- **Electronic air cleaner:** 1A, 120 VAC
- **Dimensions:** 7.50" x 5.75" x 1.50"

## REPLACES

- **Rheem:** 62-24084-82



# ICM289

Furnace Control Board



## FEATURES/BENEFITS

- Controls inducer fan motor, blower fan and monitors limit switches
- Microprocessor based design
- Functions with all 24 VAC thermostats

## SPECIFICATIONS

- Line voltage: 120 VAC @ 60 Hz
- Control voltage: 24 VAC
- Cool blower: 20A @ 120 VAC
- Heat blower: 20A @ 120 VAC
- Inducer motor: 5A @ 120 VAC
- Cool blower ON delay: 1 second
- Cool blower OFF delay: 1 second
- Heat blower ON delay: 45 seconds
- Heat blower OFF delay: 90, 150, 210 or 270 secs
- Dimensions: 5.60" x 4.25" x 1.50"

## REPLACES

- Lennox: Replaces all BCC1, BCC2 and BCC3 circuit boards, including 48K98 and 45K48.

# ICM2805A

Furnace Control Board



## FEATURES/BENEFITS

- Controls gas valve, inducer draft motor, circulating blower and hot surface ignitor
- Monitors timing, trial for ignition, flame sensing, lockout, plus pressure, roll out and limit switches
- Microprocessor-based precision
- Twinning compatible with another ICM2805A furnace control
- Diagnostic LEDs aid in testing and troubleshooting in troubleshooting

## SPECIFICATIONS

- Line voltage: 120 VAC @ 60 Hz
- Control voltage: 24 VAC
- Ignitor: 5A, 120 VAC
- Cool blower: 10A, 2HP, 240 VAC
- Heat: 5A, 1/2 HP, 250 VAC
- Inducer blower: 4A, 120 VAC
- Gas valve: 1A, 24 VAC
- Humidifier motor: 0.5A, 24 VAC
- Electronic air cleaner: 1A, 120 VAC
- Dimensions: 6.00" x 4.50" x 1.50"

## REPLACES

- Nordyne: 624631/624631B

# ICM2807

Furnace Control Board



## FEATURES/BENEFITS

- Controls gas valve, ignitor, blower motor, inducer, humidifier and air cleaner
- Microprocessor-based precision
- Designed for 100% gas shutoff in case of ignition failure
- Twinning compatible with another ICM2807 control
- Reverse polarity protection
- Secondary brownout voltage protection
- Compatible with 24 VAC standard thermostats
- Continuous blower speed jumper
- Provides diagnostic LEDs to aid in troubleshooting

## SPECIFICATIONS

- Line voltage: 120 VAC @ 60 Hz
- Control voltage: 24 VAC
- Ambient temperature:
  - Operating: -40°F to 176°F
  - Storage: -40°F to 185°F
- Ignitor: 5A @ 120 VAC
- Humidity: 5% to 95% R.H. (non-condensing) @ 131°F
- Cool blower: 10 HP, 120 VAC
- Low heat: 5A, 1/2 HP, 120 VAC
- High heat: 10A, 1 HP, 120 VAC
- Inducer motor: 4A, FLA-8.0 LRA @ 120 VAC
- Gas valve: 1.5A @ 30 VAC
- EAC: 1A@120 VAC
- Humidifier: 0.5A & 24 VAC
- Dimensions: 7.00" x 6.50" x 1.50"

## REPLACES

- Carrier: HK42FZ017

# ICM2810

Furnace Control Board



## FEATURES/BENEFITS

- Microprocessor-based precision
- Controls inducer and blower fan motor, hot surface ignitor, and gas valve
- Monitors timing, trial for ignition, flame sensing, pressure and limit switches, and lockout
- Designed for 100% gas shutoff in case of ignition failure
- Twinning compatible with another ICM2810
- Compatible with LP or natural gas
- Diagnostic LED to aid in testing/troubleshooting

## SPECIFICATIONS

- Line voltage: 120 VAC @ 60 Hz
- Control voltage: 24 VAC
- Blower: 10 FLA, 25 LRA @ 120 VAC
- Inducer motor: 2.8 FLA, 3.5 LRA @ 120 VAC
- Ignitor: 1.2A @ 120 VAC
- Dimensions: 6.00" x 4.50" x 1.00"

## REPLACES

- Goodman: CBBF136, PCBBF140

# ICM2811

Furnace Control Board



# ICM2812

Furnace Control Board



# ICM2813

Furnace Control Board



## FEATURES/BENEFITS

- Controls the gas valve, inducer draft motor, circulating blower and hot surface ignitor
- Monitors system pressure and limit switches
- Microprocessor based precision
- Twinning compatible with another **ICM2811** control board
- Diagnostic LEDs aid in testing and troubleshooting

## SPECIFICATIONS

- **Line voltage:** 120 VAC @ 60 Hz
- **Control voltage:** 18-30 VAC
- **Frequency:** 50/60 Hz
- **Igniter current:** 6.0 amp @ 120 VAC 50/60 Hz (resistive)
- **Inducer relay:** 2.2 FLA-3.5 LRA @ 120 VAC
- **Blower relay:** 14.5 FLA-25.0 LRA @ 120 VAC (2spd-H/C)
- **Gas valve relay:** 1.5 amp @ 25 VAC 50/60 Hz 0.6 pf
- **Operating temperature:** -40°F to 176°F (-40°C to 80°C)
- **Humidity range:** 5 to 95% RH (non-condensing)
- **Dimensions:** 5.75" x 4.50" x 1.25"

## REPLACES

- **Goodman:** PCBBF110/S, CBBF123/S, 0130F00005/S, PCBBF112/S, B18099-26/S
- **ICM:** ICM286 • **White-Rodgers:** 50A55-743, 50A55-289, 50T55-289

## FEATURES/BENEFITS

- Furnace control module
- Hot Surface Ignition (HSI) control board
- Microprocessor-based
- Monitors timing, trial for ignition, system switches, flame sensing and lockout and 100% lockout safety feature
- Compatible with LP or natural gas
- LED indication for status and fault codes to aid in troubleshooting

## SPECIFICATIONS

- **Control voltage:** 18-30 VAC (24 VAC)
- **Line voltage:** 120 VAC
- **Operating temperature:** -40°F to 176°F (-40°C to 80°C)
- **HSI Hot Surface Ignitor:** 6 amp @ 120 VAC
- **Gas valve:** 1.5 amp @ 24 VAC
- **Inducer draft motor:** 2.2 FLA @ 120 VAC
- **Blower motor:** 14.5 FLA @ 120 VAC
- **Humidity range:** 5 to 95% RH (non-condensing)
- **Dimensions:** 5.75" x 8.25" x 1.50"

## REPLACES

The **ICM2812** is a universal board only replacement for the White-Rodgers 50M56U-843.

## FEATURES/BENEFITS

- Controls the gas valve, inducer draft motor, circulating blower and hot surface ignitor
- Monitors system pressure and limit switches
- Microprocessor based precision
- Diagnostic LEDs aid in testing and trouble shooting

## SPECIFICATIONS

- **Control voltage:** 18-30 VAC
- **Line voltage:** 120 VAC @ 60 Hz
- **Frequency:** 50/60 Hz
- **Igniter current:** 2.0 amp @ 80 VAC 50/60 Hz (resistive)
- **Inducer relay:** 2.2 FLA-3.5 LRA @ 120 VAC
- **Blower relay:** 14.5 FLA-25.0 LRA @ 120 VAC (2spd-H/C)
- **Gas valve relay:** 1.5 amp @ 25 VAC 50/60 Hz 0.6 pf
- **Operating temperature:** -40°F to 176°F (-40°C to 80°C)
- **Humidity range:** 5 to 95% RH (non-condensing)
- **Dimensions:** 5.75" x 7.50" x 1.25"

## REPLACES

- **Lennox:** 10M9301, 12L6901, 32M8801, 56L8401, 24L8501, 63K8901, 97L4801, 100925-01, 100925-03, 17W9201, 23W5101, 30W2501, 69Mo801, 69M1501, 83Moo
- **White-Rodgers:** 21D83M-843, 50A65-120, 50A65-121, 50A62-120, 50A62-121, 50A62-820, 50A66-122, 50A66-123



# GAS IGNITION CONTROLS

## ICM291 Furnace Control



### FEATURES/BENEFITS

- Direct Spark Ignition (DSI) control board
- Microprocessor-based
- Controls combustion, blower and indoor motor; spark ignitor and gas valve
- Monitors timing, trial for ignition, flame sensing and lockout
- 100% lockout safety feature
- Compatible with LP or natural gas
- Status LED for fault codes to aid in troubleshooting

### SPECIFICATIONS

- **Line voltage:** 208/230 VAC, 60 Hz
- **Control voltage:** 24 VAC (18-30 VAC), 60 Hz
- **Power cons:** 0.3A plus gas valve current @ 24 VAC
- **Operating temp.:** -40°C (-40°F) to 75°C (176°F)
- **Pre-purge:** 45 seconds
- **Trial for ignition:** 5+2 seconds
- **Retry period:** Every 20 seconds for 15 mins
- **Lockout:** manual reset
- **Post-purge:** 45 seconds
- **LED indicators**
  - **Red LED:** *Steady ON* – normal operation, *Flashing* – fault codes
- **Dimensions:** 5.00" x 7.00" x 2.25"

### REPLACES

- Carrier: LH33WP003/3A • ICP: 1171166

## ICM292A Furnace Control Board



### FEATURES/BENEFITS

- Direct Spark Ignition (DSI) control board
- Microprocessor-based
- Controls induced draft and indoor blower motor; humidifier output, spark ignitor and gas valve
- Monitors timing, trial for ignition, flame sensing and lockout
- 100% lockout safety feature
- Compatible with LP or natural gas
- Status LEDs for fault codes to aid in troubleshooting

### SPECIFICATIONS

- **Line voltage:** 115 VAC, 60 Hz
- **Control voltage:** 24 VAC (18-30 VAC), 60 Hz
- **Power cons:** 0.3A plus gas valve current at 24 VAC
- **Operating temp.:** -40°F to 176°F (-40°C to 75°C)
- **Pre-purge:** 30 seconds
- **Trial for ignition:** 7 sec.
- **Lockout:** 1 hour • **Power:** 24 VAC and COM
- **Post-purge:** 90, 120, 160 and 180 seconds
- **Thermostat interface:** R, W, Y and G
- **Retries:** 2 groups of 2, 30 seconds delay within the group and 3 minutes delay between groups
- **System switches:** Vent pressure and limit switches (main and over-temperature switches in series)
- **LED indicators:**
  - **Power, green LED:** PWR
  - **Status, green LED:** OK
  - **Flame status, yellow LED:** FLAME
- **Dimensions:** 6.60" x 5.75" x 2.25"

### REPLACES

- Rheem: 62-24140-04

## ICM2918 Universal Intermittent Pilot Ignition Control



**Universal**



See Full  
Replaces List  
Here

### FEATURES/BENEFITS

- Universal intermittent pilot gas ignition control
- Provides ignition sequence, flame monitoring and safety shutoff for single/dual rod intermittent pilot control applications
- For gas fired furnaces, boilers and other heating applications
- Switch selectable pre-purge and ignition trials with permanent lock
- Works with or without vent damper connected
- Works with both Natural gas and LP gas systems

### SPECIFICATIONS

- **Control voltage:** 18-30 VAC
- **Frequency:** 50/60 Hz
- **Trial for ignition:** 15 or 90 seconds (switch)
- **Operating temp.:** -40°F to 165°F (-40°C to 74°C)
- **Relative humidity:** 5% - 95% (non-condensing) at +55°C
- **Pre-purge time:** 0 seconds or 15 seconds (switch settable)
- **Green status LED:** System status and error codes
- **Yellow flame LED:** Flame presence and flame strength
- **Dimensions:** 5.50" x 4.00" x 2.00"

### REPLACES

- ICM290A, Honeywell S8610U & over 280 other models

# ICM2904

Intermittent Pilot Gas Ignition Control Module



## FEATURES/BENEFITS

- Intermittent pilot gas ignition control module
- For use with intermittent pilot boilers, furnaces and other heating appliances
- Microprocessor-based
- Remote flame sensing
- Compatible with LP or natural gas

## SPECIFICATIONS

- **Control voltage:** 18-30 VAC
- **Frequency:** 50/60 Hz
- **Pilot valve:** 2A @ 24 VAC
- **Main gas valve:** 2A @ 24 VAC
- **Current draw:** 100mA maximum
- **Pre-purge delay:** 0 seconds
- **Operating temp.:** -40°F to 167°F
- **Humidity:** 5%-95% R.H. (non-condensing) @ +55°C
- **Dimensions:** 5.50" x 4.00" x 2.00"

## REPLACES

- Reznor: 257009
- United TCH: 1003-638A

# ICM2905

Intermittent Pilot Gas Ignition Control Module



## FEATURES/BENEFITS

- For use with intermittent pilot boilers, furnaces and other heating appliances
- Microprocessor-based. Monitor timing, trial for ignition, flame sensing & lockout
- Remote flame sensing
- 2 min. trial for ignition
- 60 minute lock out if pilot flame is not sensed in 2 minutes
- Compatible with LP or natural gas
- Damper control input

## SPECIFICATIONS

- **Control voltage:** 18-30 VAC
- **Frequency:** 50/60 Hz
- **Trial for ignition:** 2 minutes
- **Operating temp.:** -40°F to 167°F
- **Pilot valve:** 2A @ 24 VAC
- **Main gas valve:** 2A @ 24 VAC
- **Current draw:** 100 mA maximum
- **Pre-purge delay:** 0 seconds
- **Lock out time:** 60 minutes
- **Humidity:** 5%-95% R.H. (non-condensing) @ +55°C
- **Dimensions:** 5.50" x 4.00" x 2.00"

## REPLACES

- Reznor: 257010 • United TCH: 1003-514

# ICM2906

Direct Spark Ignition (DSI) Control Board



## FEATURES/BENEFITS

- Cooling and heating fan outputs
- Microprocessor-based
- Controls inducer & blower motor, air cleaner (if equipped), spark ignitor & gas valve
- Monitors timing, trial for ignition, system switches, flame sensing and lockout
- Compatible with LP or natural gas
- LED indication for status and fault codes to aid in troubleshooting

## SPECIFICATIONS

- **Control voltage:** 18-30 VAC
- **Line voltage:** 120 VAC @ 60 Hz
- **Frequency:** 60 Hz
- **Inducer blower type:** Relay
- **Rating:** 1/6 HP @125 VAC
- **Gas valves type:** Relay
- **Rating:** 1A @ 24 VAC
- **Heat blower type:** Relay
- **Rating:** 1/4 HP @125 VAC
- **Cool blower type:** Relay
- **Rating:** 1 HP @125 VAC
- **Operating temp.:** -40°F to 165°F
- **Dimensions:** 5.00" X 5.75" X 2.00"

## REPLACES

- Reznor: 195573
- United TCH: 1097-211



# ICM2907

Direct Spark Ignition (DSI)  
Control Board



## FEATURES/BENEFITS

- Microprocessor-based
- Controls inducer & blower motor, air cleaner (if equipped), spark ignitor & gas valve
- Monitors timing, trial for ignition, system switches, flame sensing and lockout
- Compatible with LP or natural gas
- LED indication for status and fault codes to aid in troubleshooting

## SPECIFICATIONS

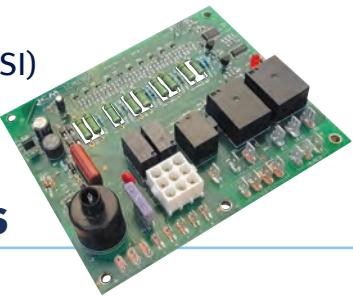
- **Control voltage:** 18-30 VAC
- **Line voltage:** 120 VAC @ 60 Hz
- **Frequency:** 60 Hz
- **Inducer blower type:** Relay
- **Rating:** 1/6 HP @125 VAC
- **Blower type:** Relay
- **Rating:** 1/4 HP @125 VAC
- **Gas valves type:** Relay
- **Rating:** 1A @ 24 VAC
- **Operating temp.:** -40°F to 165°F
- **Dimensions:** 5.00" x 5.75" x 2.00"

## REPLACES

- Reznor: 195265 • United TCH: 1097-210

# ICM2909

Direct Spark Ignition (DSI)  
Control Board



## FEATURES/BENEFITS

- Microprocessor-based
- Monitors timing, trial for ignition, system switches, flame sensing and lockout.
- 100% lockout safety feature
- Compatible with LP or natural gas
- LED indication for status and fault codes to aid in troubleshooting

## SPECIFICATIONS

- **Inputs – Line voltage:** 208-230 VAC, 50/60 Hz, **Control voltage:** 18-30 VAC, 50/60 Hz, **System switches:** Vent pressure, limit & MRLC (Manual Reset Limit Control)
- **Outputs –**  
**Heat N.C.:** 16FLA/30 LRA @ 277 VAC, 30K @ 85°C,  
**Cool N.O.:** 15FLA/36 LRA @ 277 VAC, 100K @ 85°C,  
**Inducer:** 9.8FLA/58.8LRA, 1/2HP @ 120 VAC, 6K @ 75°C,  
**Gas valve:** 2.3 A PILOT DUTY @ 240 VAC, 6K @ 75°C
- **Fan operation – Heat blower ON:** 1 second,  
**Heat Blower OFF:** 1 second
- **Lockout Timing – Auto reset lockout:** 60 minutes
- **Dimensions:** 6.60" x 5.75" x 2.25"

## REPLACES

- Rheem: 62-23599-01, 62-23599-02, 62-23599-03, 62-23599-04, 62-23599-05

# ICM2910

Ignition Control



## FEATURES/BENEFITS

- Series of 11 Fenwal OEM replacement controls
- Direct Spark Ignition (DSI) control modules
- Microprocessor-based
- Controls spark ignitor and gas valve
- Monitors timing, trial for ignition, flame sensing and lockout
- Compatible with LP or natural gas
- Redundant gas valve design conforms to ANSI Z21.20
- Conforms to UL STDs 60730-1 and 60730-2-5
- Certified to CSA STD E60730-1 & CSA STD C22.2#60730-2-5

## SPECIFICATIONS

- **Voltage:** 102-138 VAC
- **Flame current:** 1uA minimum
- **Current draw:** 50mA maximum
- **Gas valve:** 1.5A@120 VAC
- **Flame failure response time:** 0.8 sec. maximum
- **Operating temp.:** -40°F to 175°F (-40°C to 80°C)
- **Mounting:** Surface mount using (2) #8 screws
- **Dimensions:** 5.23" x 2.53" x 1.86"

ICM P/N	Replaces Fenwal P/N	# Ignition Trials	Pre-Purge Time	Inter-Purge Time	Trial for Ignition Time
ICM2910-200-005	35-725200-005	1	None	None	10S
ICM2910-201-007	35-725201-007	1	None	None	15S
ICM2910-201-501	35-725201-501	1	5S	None	4S
ICM2910-201-505	35-725201-505	1	5S	None	10S
ICM2910-205-015	35-725205-015	3	None	15S	10S
ICM2910-205-017	35-725205-017	3	None	15S	15S
ICM2910-205-021	35-725205-021	3	None	25S	4S
ICM2910-205-115	35-725205-115	3	15S	15S	10S
ICM2910-205-521	35-725205-521	3	5S	25S	4S
ICM2910-206-515	35-725206-515	3	5S	15S	10S
ICM2910-405-013	35-725405-013	3	None	15S	7S

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# ICM2911

Direct Spark Ignition (DSI)  
Control Board



## FEATURES/BENEFITS

- Microprocessor-based
- Monitors system timing, trial for ignition, system switches, flame sensing and lockout
- 100% lockout safety feature monitors for repeated over-temperature faults or flame losses and disables the heat operation for safety
- Continuously monitors the gas valve output
- Compatible with LP or natural gas
- LED indication for status and fault codes to aid in troubleshooting
- Twinning feature allows two furnace boards to be controlled with a single thermostat
- Field test mode

## SPECIFICATIONS

- **Line voltage:** 120 VAC, 50/60 Hz
- **Control voltage:** 18-30 VAC, 50/60 Hz
- **Spark ignition:** 12kV O.C.V., 60Hz
- **Heat blower:** 15 FLA/30 LRA @ 277 VAC
- **Inducer fan:** ½ HP, 9.8FLA/58.8LRA @120 VAC
- **Gas valve:** 2.3A Pilot Duty @ 240 VAC
- **Operating temperature:** -40°F to 175°F (-40°C to 80°C)
- **Dimensions:** 6.50" x 5.25" x 3.00"

## REPLACES

- Modine Spark Ignition Control: 5H79749

# ICM2913

Direct Spark Ignition (DSI)  
Control Board



## FEATURES/BENEFITS

- Controls blower motors, gas valve, & spark ignitor in sequence
- Protects against short cycling
- Selectable Heat/Cool blower off-delay time
- Flash codes from the onboard LED indicate specific problems for easier troubleshooting
- Repeated ignition failures or flame losses will disable heat operation for safety

## SPECIFICATIONS

- **Line voltage:** 240 VAC
- **Line frequency:** 50/60 Hz
- **Control voltage:** 18-30 VAC
- **Circulator blower:** 10 FLA, 30 LRA @ 240 VAC
- **Inducer blower:** 0.7 FLA, 1.5 LRA @ 240 VAC
- **Combined gas valve load:** 1.5 A @ 24 VAC
- **Minimum flame signal threshold:** 0.75 uA
- **Dimensions:** 5.50" x 4.75" x 1.50"

## REPLACES

- Trane Spark Ignition Control: D674711P01

# ICM2914

Direct Spark Ignition (DSI)  
Control Board



## FEATURES/BENEFITS

- Controls blower motors, gas valve, & spark ignitor in sequence
- Protects against short cycling
- Selectable Heat/Cool blower off-delay time
- Flash codes from the onboard LED indicate specific problems for easier troubleshooting
- Repeated ignition failures or flame losses will disable heat operation for safety

## SPECIFICATIONS

- **Line voltage:** 460 VAC
- **Line frequency:** 50/60 Hz
- **Control voltage:** 18-30 VAC
- **Circulating blower:** 4 FLA @ 277 VAC
- **Hi-efficiency blower:** 10mA @ 24 VAC
- **Inducer blower:** 10mA @ 24 VAC
- **Combined gas valve load:** 1.5 A @ 24 VAC
- **Minimum flame signal threshold:** 0.75 uA
- **Dimensions:** 5.50" x 4.75" x 1.50"

## REPLACES

- Trane Spark Ignition Control: D674712P01

# ICM2915

Direct Spark Ignition (DSI)  
Control Board



## FEATURES/BENEFITS

- Controls blower motors, gas valve, & spark ignitor in sequence
- Protects against short cycling
- Selectable Heat/Cool blower off-delay time
- Flash codes from the onboard LED indicate specific problems for easier troubleshooting
- Repeated ignition failures or flame losses will disable heat operation for safety
- **2-stage low heat and high heat**

## SPECIFICATIONS

- **Line voltage:** 240 VAC
- **Line frequency:** 50/60 Hz
- **Control voltage:** 18-30 VAC
- **Circulating blower:** 4 FLA @ 277 VAC
- **Hi-efficiency blower:** 10 mA @ 24 VAC
- **Inducer blower:** 0.7 FLA, 1.5 LRA @ 24 VAC
- **Combined gas valve load:** 1.5 A @ 24 VAC
- **Minimum flame signal threshold:** 0.75 uA
- **Dimensions:** 5.50" x 4.75" x 1.50"

## REPLACES

- Trane Spark Ignition Control: D674713P01



# ICM2916

Direct Spark Ignition (DSI) Control Board



## FEATURES/BENEFITS

- Controls blower motors, gas valve, & spark ignitor in sequence
- Protects against short cycling
- Selectable Heat/Cool blower off-delay time
- Flash codes from the onboard LED indicate specific problems for easier troubleshooting
- Repeated ignition failures or flame losses will disable heat operation for safety

## SPECIFICATIONS

- **Line voltage:** 240 VAC
- **Line frequency:** 50/60 Hz
- **Control voltage:** 18-30 VAC
- **Circulating blower:** 4 FLA @ 277 VAC
- **Hi-efficiency blower:** 10mA @ 24 VAC
- **Inducer blower:** 0.7 FLA, 1.5 LRA @ 240 V
- **Combined gas valve load:** 1.5 A @ 24 VAC
- **Minimum flame signal threshold:** 0.75 uA
- **Dimensions:** 5.50" x 4.75" x 1.50"

## REPLACES

- **Trane Spark Ignition Control:** D674712Po2

# ICM2920

Integrated Furnace Control Board



## FEATURES/BENEFITS

- Controls blower motors, gas valve, & spark ignitor in sequence
- Powers a cooling compressor & protects against short-cycling
- Selectable heat blower off-delay time
- Control can be used for 2-stage cooling by removing a tab
- Flash codes from the onboard LED indicate specific problems for easier troubleshooting
- Repeated ignition failures or flame losses will disable heat operation for safety

## SPECIFICATIONS

- **Line voltage:** 240 VAC (RMS)
- **Line frequency:** 50/60 Hz
- **Control voltage:** 18-30 VAC, 0.15A maximum
- **Fuse rating:** 3 A
- **Relay contact ratings:**
  - **Heat/cool N.O.:** 15A FLA, 30A LRA @230 VAC
  - **Heat/cool N.C.:** 16A FLA, 36A LRA @230 VAC
- **Inducer:** 4A FLA, 4A LRA @ 230 VAC
- **Gas valve:** 1.5A @ 24VAC pilot duty
- **Compressor contactor:** 1.0 A @ 24 VAC
- **Dimensions:** 6.50" x 5.15" x 3.00"

## REPLACES

- **Goodman:** PCBAG123, PCBAG123S direct spark ignition controls

# ICM6700

12 VDC Direct Spark Ignition (DSI) Control



## FEATURES/BENEFITS

- Works on all Suburban 12V furnaces and Suburban water heater model 520820
- Features both preheat and post-purge fan blower delays

## SPECIFICATIONS

### INPUT

- **Voltage:** 12 VDC
- **Current Draw:** 100mA max.

### OUTPUT

- **Gas Valve:** N.O.: 0.5A@12 VDC
- **Inducer Blower:** 3.7A@12 VDC

### TIME DELAY

- **Trial for Ignition:** 7 seconds
- **ON Delay:** 15 seconds
- **OFF Delay:** 90 seconds

## REPLACES

- **Suburban:** 521099, 35-533900-113
- **Fenwal:** 06-236879-002

# ICM6701

Water Heater Direct Spark Ignition (DSI) Control



## FEATURES/BENEFITS

- Direct Spark Ignition (DSI) control board
- Monitors timing, Trial for ignition, flame sensing and lockout
- Microprocessor-based precision
- Designed for 100% gas shutoff in the case of ignition failure

## SPECIFICATIONS

### INPUT

- **Voltage:** 12 VDC
- **Current Draw:** 100mA max.

### OUTPUT

- **Gas Valve:** N.O.: 0.5A@12 VDC

### TIME DELAY

- **Trial for Ignition:** 7 seconds
- **ON Delay:** 15 seconds
- **Dimensions:** 4.90" x 2.50" x 1.75"

### REPLACES

- **Suburban:** 35-525900-113, 520814
- **Fenwal:** 35-525900-113

## OIL BURNER PRIMARIES

# ICM1500 SERIES: ICM1501, ICM1502 & ICM1503

Oil Primary Control



## FEATURES/BENEFITS

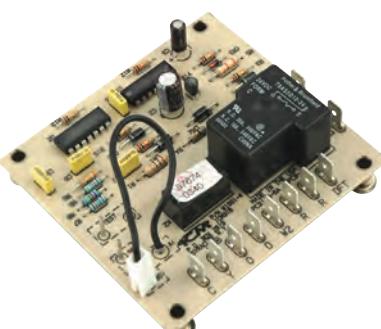
- Controls oil burner, oil valve (if desired) and the ignition transformer in response to a call for heat
- Solid state flame sensing circuit
- LED on terminal strip indicates system lockout
- Enclosed safety switch with external reset button
- C554A Cadmium Sulfide flame detector required
- Form, fit and functional replacement for popular competitive models

### REPLACES

ICM P/N	Safety Timing	Replaces
ICM1501	15 Seconds	Honeywell: R8184G4066, R8184G1161, R8184G1294
ICM1502	30 Seconds	Honeywell: R8184G4074, R8184G1179, R8184G1302, R8184G4033
ICM1503	45 Seconds	Carlin: 48245 Honeywell: R8184G4009, R8184G1138, R8184G1427, R8184G4025 Tempstar/Heil: 1147017 White Rodgers: 668-401

## DEFROST CONTROLS

# ICM318 Defrost Control



## FEATURES/BENEFITS

- Low cost, time and temperature defrost
- Time and temperature terminate
- Test pins reduce test time by 256x
- HOLD input tracks compressor run times

## SPECIFICATIONS

- **Voltage:** 18-30 VAC
- **Frequency:** 50/60 Hz
- **Outdoor fan relay output:** 1/2 HP fan @ 240 VAC
- **Strip heat, reversing valve outputs:** 1 amp @ 30 VAC
- **High power output:** 1/2 HP fan @ 240 VAC
- **Defrost time:** 10-minute fixed
- **Interval times:** Pin-selectable 30/60/80 min.
- **Dimensions:** 3.75" x 3.25" x 1.25"

### REPLACES

- **Goodman:** B1226008
- **ICM:** W1001-4



# UNIVERSAL CLOCK TIMER

## ICM550 Multi-Functional Timer



**Universal**

## ICM550-ENC Enclosed Multi-functional Weatherproof Timer



### FEATURES/BENEFITS

- 24-hour multi-functional timer
- Timed or manual termination
- Adjustable 15 min to 23 hours 45 min defrost cycle
- High power relay outputs
- 100% monitoring of inputs and outputs
- Simple to use, drag & drop replacement for popular models
- User-friendly time clock
- Order: **ICM550**

### FEATURES/BENEFITS

- Enclosed 24-hour multi-functional timer
- Timed or manual termination
- Adj. 15 min to 23 hours 45 min defrost cycle
- High power relay outputs
- 100% monitoring of inputs and outputs
- Simple to use, drag & drop replacement for popular models
- User-friendly time clock
- Enclosure not sold separately
- Weatherproof Enclosure Ratings
- Rugged, NEMA/TYPE 4X rated plastic, weatherproof enclosure
- Easy to mount and lockable
- Helps to protect controls from harsh environmental conditions such as temperature, shock, humidity and vibration
- Order: **ICM550-ENC**

### SPECIFICATIONS

#### ELECTRICAL RATING

- **Voltage:** 120-240VAC • **Frequency:** 60 Hz

#### OUTPUT

- **Type:** Relay
- **Form:** SPDT, SPST
- **Rating:**
  - [2] & [4]: 30A R, 1HP @ 120 VAC, 2HP @ 240 VAC
  - [1] & [3]: 40A R, 1HP @ 120 VAC, 2HP @ 240 VAC
  - [1] & [F]: 30A R, 1HP @ 120 VAC, 2HP @ 240 VAC

#### TIMING

- **Minimum cycle time:** 15 min
- **Maximum cycle time:** 23 hr 45 min
- **Terminate cycle:** Cycle can be terminated by shorting "X to N"

#### STATUS LED

- **Cycle mode:** (Red LED)
- **Normal mode:** (Green LED)

#### DIMENSIONS

- **ICM550:** 4.50" x 3.12" x 6.00"
- **ICM550-ENC:** 8.75" x 6.50" x 2.75"

#### REPLACES

- **Intermatic/Grasslin:** 010-0011B, DT040, DT140, DTAV40, DTAV40M, DT-B, DTMV, DTSX
- **Paragon:** 8041, 8045, 8047, 8141, 8143, 8145, 8245, 8247
- **Precision:** 6041, 6045, 6047, 6141, 6145

# HEAD PRESSURE CONTROLS

## ICM325A

Universal Head Pressure Control

**Universal**

### FEATURES/BENEFITS

- Near field communication using the **NFC App**
- Inputs for two temperature sensors or two pressure sensors
- Heat pump bypass for full speed operation in heating mode
- Jumper selectable heat active reversing valve enabling
- Jumper selectable control voltage enabling
- Universal input voltage 120-600 VAC
- Universal Control voltage 24-240 VAC (jumper enabled)



**NEW UNIVERSAL CONTROLS  
VIA NFC TECHNOLOGY**



### SPECIFICATIONS

- **Line voltage:** 120 - 600 VAC
- **Control voltage:** 24-240 VAC (jumper enabled)
- **Frequency:** 50-60 Hz
- **Operating temperature:** -40°F to +176°F (-40°C to +75°C)
- **Temperature sensors:** 10K ohms at 77°F (25°C)
- **Heat pump reversing valve input:** 24-240 VAC (Cool active default / jumper enabled heat active option)

#### REPLACES

- **ACT:** FM2000 • **Hoffman:** 800, 800A, 800AA, 814-50, 816-10 • **Ranco:** E31Series
- **Johnson Controls:** P66AAB / P66AAD • **ICM:** ICM325H, ICM325HN, ICM326HM2, ICM326HN, ICM327HN, ICM333, ICM334

# HEAD PRESSURE CONTROLS

## ICM325HN (120-480 VAC) & ICM325HNV (600 VAC)

Head Pressure Controls with Optional Heat Pump Bypass



### FEATURES/BENEFITS

- Integral heat pump bypass circuitry allows electronic bypass of speed control
- Eliminates overshoots common to on/off and pressure switch controls
- Helps prevent evaporator freeze-ups, low pressure cut outs and liquid-slugged compressors in low ambient conditions
- Hard start, low temperature cutoff, isolated 24 VAC supply
- Controls up to 3 refrigerant circuits
- Typical application: A/C and heat pumps

### SPECIFICATIONS

- **Input:**
  - Line input: 18-30 VAC
  - Frequency: 50/60 Hz, 1.8 VA max.
- **Line input:**
  - (ICM325HN) 120-480 VAC
  - (ICM325HNV) 600 VAC
- **Output:**
  - Maximum: 10 amps
  - Minimum: 100 mA
- **Modulation:** 70°F to 100°F
- **Dimensions:** 4.50" x 3.00" x 1.75"

### REPLACES

- ACT: FM2000
- Hoffman: 800, 800A, 800AA, 814-50, 816-10
- Ranco: E31Series

## ICM326HN (120 OR 208/240 VAC)

Head Pressure Controls with Optional Heat Pump Bypass



### FEATURES/BENEFITS

- Integral heat pump bypass circuitry allows electronic bypass of speed control
- Built in transformer eliminates cost, reduces installation time and simplifies wiring
- Helps prevent evaporator freeze-ups, low pressure cut outs and liquid-slugged compressors in low ambient conditions
- Hard start, low temperature cutoff
- Ideal for line voltage air conditioning & refrigeration
- For line voltage reversing valves only

### SPECIFICATIONS

- **Input:**
  - Line input: 120 or 208/240 VAC
  - Frequency: 50/60 Hz
- **Output:**
  - Maximum: 10 amps
  - Minimum: 100 mA
- **Modulation:** 70°F to 100°F
- **Dimensions:** 4.50" x 3.0" x 2.0"

### REPLACES

- ACT: FM4000
- Hoffman: 800, 800A, 800AA, 814-50, 816-10
- Ranco: E31 Series

## ICM327HN (480 VAC)

Head Pressure Controls with Optional Heat Pump Bypass



### FEATURES/BENEFITS

- Integral heat pump bypass circuitry allows electronic bypass of speed control
- Built in transformer eliminates cost, reduces installation time and simplifies wiring
- Helps prevent evaporator freeze-ups, low pressure cut outs and liquid-slugged compressors in low ambient conditions
- Hard start, low temperature cutoff
- Ideal for line voltage air conditioning & refrigeration
- For line voltage reversing valves only

### SPECIFICATIONS

- **Input:**
  - Control: 480 VAC
  - Frequency: 50/60 Hz
- **Output:**
  - Maximum: 10 amps
  - Minimum: 100 mA
- **Modulation:** 70°F to 100°F
- **Dimensions:** 4.50" x 3.0" x 2.0"

### REPLACES

- ACT: FM4000
- Hoffman: 800, 800A, 800AA, 814-50, 816-10
- Ranco: E31 Series



**PHONE:** 1-800-365-5525 **FAX:** 315-233-5276 **WEB:** WWW.ICMCONTROLS.COM

All features and specifications are subject to change without notice.

# ICM333 (120-600 VAC)

Head Pressure Control



## FEATURES/BENEFITS

- Support for dual temperature OR dual pressure probes
- 120-600 VAC
- Integral heat pump bypass circuitry allows for electronic bypass of speed control
- Dial temperature or pressure set point: 70°F to 140°F, 35-465 psig
- Helps prevent evaporator freeze-ups, low pressure cut outs and liquid slugged compressors in low ambient conditions
- Hard start, low temperature cutoff

## SPECIFICATIONS

- **Control voltage:** 18-30 VAC
- **Line voltage:** 120, 208, 240, 277, 480 & 600 VAC
- **Frequency:** 50/60 Hz
- **Operating temperature:** -40°F to +176°F
- **Probes:**
  - **Temperature:** Thermistor, 10K ohm at 77°F
  - **Pressure:** ICM380 (ordered separately)
- **Heat pump override:** 24 VAC, N.C./N.O.
- **Mounting:** Surface mount using (2) #8 screws
- **Dimensions:** 4.75" x 3.25" x 2.00"

## REPLACES

- Johnson Controls: P66AAB / P66AAD

# ICM334 (208-600 VAC)

3-Phase ON/OFF Head Pressure Control



## FEATURES/BENEFITS

- 3-phase ON/OFF control
- One temperature and two pressure inputs
- Integral heat pump bypass circuitry
- Solid 10 amp load carrying capability
- Hard Start – 10 second hard start
- 120-600 VAC
- Heat pump bypass
- Applies full voltage to the motor under normal conditions

## SPECIFICATIONS

- **Control voltage:** 18-30 VAC
- **Line voltage:** 120-600 VAC
- **Frequency:** 50/60 Hz
- **Operating temp.:** -40°F to +140°F
- **Probes:**
  - **Temperature:** ICM379 thermistor, 10K ohm at 77°F
  - **Pressure:** ICM380 (ordered separately)
- **Heat pump override:** 24 VAC, N.C./N.O.
- **Mounting:** Surface mount using (2) #8 screws
- **Dimensions:** 4.00" x 3.25" x 1.75"

## CONTROL ACCESSORIES

### ICM379 PROBE

Head Pressure Control Accessory



## FEATURES/BENEFITS

- Probe for use with **ALL** head pressure controls with optional heat pump bypass feature

## SPECIFICATIONS

- 70°F to 100°F (21°C to 38°C)
- **Dimensions:** 79.0" x 0.12" x 0.75"

### ICM380

Head Pressure Control Accessory



## FEATURES/BENEFITS

- Optional pressure transducer for **ICM333** & **ICM334** head pressure controls

## SPECIFICATIONS

- **Length:** 72"
- 0-500 psi
- 1/4" SAE female flare with Schraeder deflator
- **Dimensions:** 39.0" x 2.00" x 0.75"

## i3™ THERMOSTATS

# Through innovation, comes affordability!

Designed around capacitive touch sensing technology, the new and innovative i3™ Series Touch Thermostat from ICM Controls feature huge displays and a patent-pending dynamic interface for intuitive programming that uses familiar icons that illuminate only when they are needed.



P/N	WI-FI	HUMIDITY	TERMINATIONS
i2020WR-1	Y	N	RC, RH, C, W1/O/B, W2, Y1, Y2, G, S1, S2, SC

### SPECIFICATIONS

- 6 (1A) relay outputs
- 7-Day, 5-2-Day, or 5-1-1 day programmable
- Configurable for multiple systems
- Large display with backlight
- Selectable Celsius or Fahrenheit
- Icon indicator lights
- Relay outputs – minimum voltage drop in thermostat
- Remote sensor compatible
- Ideally suited for:
  - Residential (new construction/replacement)
  - Light commercial
- Works with two-transformer systems

## DRYOUT / NEW CONSTRUCTION THERMOSTATS

The ACH045 to ACH085 series thermostats are low-cost, single set point thermostats intended for use as temporary devices to provide heating or cooling to allow drywall to dry during construction. They also can be used as a low ambient cutoff switch.



### FEATURES/BENEFITS

- Two-wire installation
- Seven fixed set point models to choose from: 45°F to 85°F
- Temporary use for dryout applications
- Can be used as a low ambient cutoff switch

### SPECIFICATIONS

- Input: 18-30 VAC
- Output: 2 amp maximum
- Temperature control range: 45°F to 85°F ( $\pm 9^\circ$ F)

## Ordering Information

Part Number	ACH045	ACH055	ACH060	ACH065	ACH070	ACH075	ACH085
Temperature Range*	45°F $\pm 9^\circ$	55°F $\pm 9^\circ$	60°F $\pm 9^\circ$	65°F $\pm 9^\circ$	70°F $\pm 9^\circ$	75°F $\pm 9^\circ$	85°F $\pm 9^\circ$
2-Wire	✓	✓	✓	✓	✓	✓	✓
Heat			✓	✓	✓		
Cool	✓	✓				✓	✓

\* Consult factory for other set points



# SIMPLECOMFORT® THERMOSTATS

## SimpleComfort® Thermostat Features

	Thermostat Model Number	Exclusive Patented Thermal Intrusion Barrier	1-Stage	2-Stage	3-Stage Heat	Heat Pump	Heat - gas/oil	Cool	Battery	Hard Wired	Auto Changeover - soft switch	Dual Fuel	Backlit	Remote Sensor	Permanent Memory	Field Temperature Calibration	Maximum Heat Set point	Minimum Cool Set point	Adj. Temperature Differential for Each Stage	Freeze Protection	High Temperature Protection	Programmable Fan	Temporary Override	Keypad Lockout	Millivolt Compatible	4 or 5 wire	Status LEDs	Comfort/Energy Savings Mode
Non Programmable	SC1600L	● ●					●		●			●	●						● ● ●					●				
	SC2010L	● ●				●	● ● ●	● ● ●	● ● ●	● ● ●		●	●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●		
Programmable	SC5010	● ●					● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●		● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	
	SC5811	●	●	●		●	● ● ●	● ● ●	● ● ●	● ● ●		● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●

## SIMPLECOMFORT® NON-PROGRAMMABLE THERMOSTATS

### SC1600L

Non-programmable Thermostat



#### FEATURES/BENEFITS

- Single-stage heat thermostat
- ICM patented thermal intrusion barrier
- Large backlit LCD display
- Battery operated with low battery indicator
- Millivolt compatible
- Freeze protection feature
- Remote sensor compatible
- Compatible with gas, oil and hydronic systems
- Selectable °F and °C

#### SPECIFICATIONS

- **Electrical rating:**
  - 24 VAC (18-30 VAC)
  - 1 amp maximum per terminal
- **Temperature control ranges:** 45°F to 90°F, Accuracy ± 1°F

#### TERMINATIONS

R, W, S1, S2

### SC2010L

Non-programmable, Dual Powered Thermostat



#### FEATURES/BENEFITS

- For single-stage heat/cool or single-stage heat pump
- ICM patented thermal intrusion barrier
- Large display with backlight
- Adjustable temperature differential
- Easy access terminal block
- Field adjustable calibration
- 4- or 5-wire compatible
- Dual powered
- Permanent memory
- Selectable °F and °C
- Manual changeover
- Freeze protection
- Keypad lockout

#### SPECIFICATIONS

- **Electrical rating:**
  - 24 VAC (18-30 VAC)
  - 1 amp maximum per terminal
- **Temperature control ranges:** 45°F to 90°F, Accuracy ± 1°F

#### TERMINATIONS

RC, RH, C, W, Y, O, B, G

## SIMPLECOMFORT® PRO PROGRAMMABLE THERMOSTATS

### SC5010 PRO

Programmable Thermostat



#### FEATURES/BENEFITS

- For single-stage heat/cool or single-stage heat pump
- 7-day, 5-2-day and 5-1-1-day programming
- ICM patented thermal intrusion barrier
- Manual or auto changeover
- Large display with backlight
- Permanent memory
- Dual powered (battery or hardwire)

#### SPECIFICATIONS

- **Electrical rating:**
  - 24 VAC (18-30 VAC)
  - 1 amp max. per terminal
- **Easy access terminal block**
- **Temperature control ranges:** 45°F to 90°F, Accuracy ± 1°F

#### TERMINATIONS

RC, RH, C, W/O/B, Y, G, S1, S2

## SIMPLECOMFORT® PRO PROGRAMMABLE THERMOSTATS

### SC5811 PRO

Programmable Thermostat



#### FEATURES/BENEFITS

- For two-stage heat/cool or two-stage heat pump
- 7-day, 5-2-day and 5-1-1-day programming
- Hardwired
- ICM patented thermal intrusion barrier
- Large backlit LCD display
- Auto or manual changeover
- Adjustable temperature differential for each stage
- Permanent memory

#### SPECIFICATIONS

- Electrical rating:
  - 24 VAC (18-30 VAC)
  - 1 amp max. per terminal
- Easy access terminal block
- Temperature control ranges:  
45°F to 90°F, Accuracy ± 1°F

#### TERMINATIONS

R, C, W1/O/B, Y1, W2, Y2, G, S1, S2

## FROST SENTRY™ GARAGE THERMOSTATS

When it comes to freezing cold temperatures, you can relax knowing that ICM's Frost Sentry™ is on guard. These low-cost thermostats are perfect for areas where protection from extreme cold is essential. Its special foam backing improves accuracy by providing separation from the wall at installation, while sealing up any unsightly wiring holes. This insulated backing helps eliminate the risk of "wall effect" (wall temperature causing false temperature readings). Ideal for storage areas, garages, workshops, crawl spaces and other critical areas.

### FS1500L

Non-programmable Thermostat



#### FEATURES/BENEFITS

- Controls single stage heating systems
- Millivolt, hydronic (water or steam) system, gas and electric systems
- Battery operated
- Backlit display
- Mercury-free, environmentally safe
- Remote sensor compatible ACC-RT104
- Perfect for use with unit heaters

#### SPECIFICATIONS

- Electrical rating:
  - 24 VAC (18-30 VAC)
  - 1 amp maximum per terminal
  - Easy access terminal block
- Temperature control ranges:  
35°F to 75°F, Accuracy ±1°F

#### TERMINATIONS

R, W, G, S1, S2

## SIMPLECOMFORT® THERMOSTATS ACCESSORIES

### REMOTE SENSOR

Thermostat Accessories

**Need to monitor the temperature away from the thermostat?**

**Choose an ICM remote sensor.**



#### The fast, easy solution for temperature sensing problems.

- For tamper-prone areas
- Poor air flow areas
- Troubled applications
- Foam gasket prevents drafts through wall opening
- Mounts to standard 2" x 4" outlet box
- Order: ACC-RT103 – 2 3/4" x 4 1/2"  
ACC-RT104 – 2 3/4" x 4 1/2"

*Remote Sensor Compatible with the Following Thermostats*

ACC-RT103

ACC-RT104

SC5811

SC1600L/VL

SC5010

FS1500L i3 SERIES

### WALL PLATES

Thermostat Accessories

**Need more wall coverage?**

**Choose an ICM insulated wall plate.**



#### The fast, easy solution for hiding wall problems.

- Rugged, flexible construction
- Foam gasket prevents drafts through wall opening
- Hidden mounting screws (included) for a sleek appearance
- Order: ACC-WPo3 – 5 19/32" x 7 1/2"  
ACC-WPo4 – 5 27/32" x 5 15/16"

ACC-WPo3

ACC-WPo4





ENGINEERING. MANUFACTURING. INNOVATION.



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