

Drive Transition Guide

iV5 to iV5L



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1. Rating Summary

❖ Rating

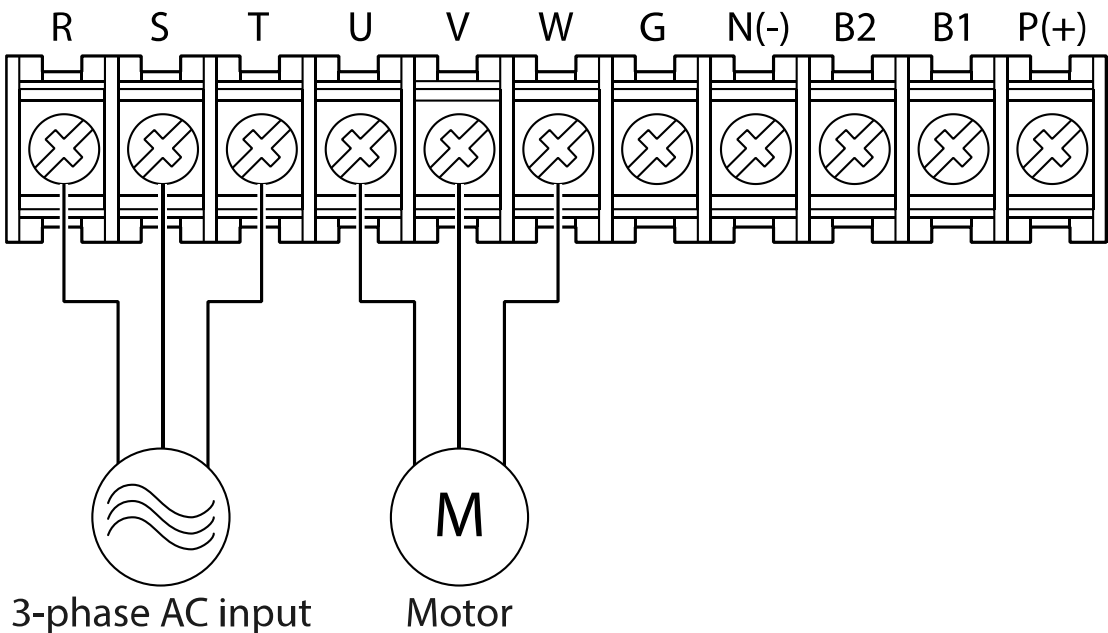
iV5							
Model iV5-4		055	075	110	150	185	220
Motor capacity	HP	7.5	10	15	20	25	30
	kW	5.5	7.5	11	15	18.5	22
Rated output	Rated power (kVA)	9.1	12.2	18.3	22.9	29.0	34.3
	Rated current (A)	12	16	24	30	39	45
	Output speed	0-3600 rpm					
	Output voltage (V)	0-380 V (480 V)					
Rated input	Working voltage (V)	3-Phase 380-480 VAC (-10%--+10%)					
	Input frequency	50-60 Hz (±5%)					
Weight (lbs (kg))		30 (14)	30 (14)	59 (27)	61 (28)	61 (28)	61 (28)

iV5L							
Model iV5L-4		055	075	110	150	185	220
Motor capacity	HP	7.5	10	15	20	25	30
	kW	5.5	7.5	11	15	18.5	22
Rated output	Rated power (kVA)	9.1	12.2	18.3	22.9	29.0	34.3
	Rated current (A)	12	16	24	30	39	45
	Output speed	0-3600 rpm					
	Output voltage (V)	0-380 V (480 V)					
Rated input	Working voltage (V)	3-Phase 380-480 VAC (-10%--+10%)					
	Input frequency	50-60 Hz (±5%)					
Weight (lbs (kg))		16.9 (7.7)	16.9 (7.7)	30.2 (13.7)	30.2 (13.7)	44.7 (20.3)	44.7 (20.3)

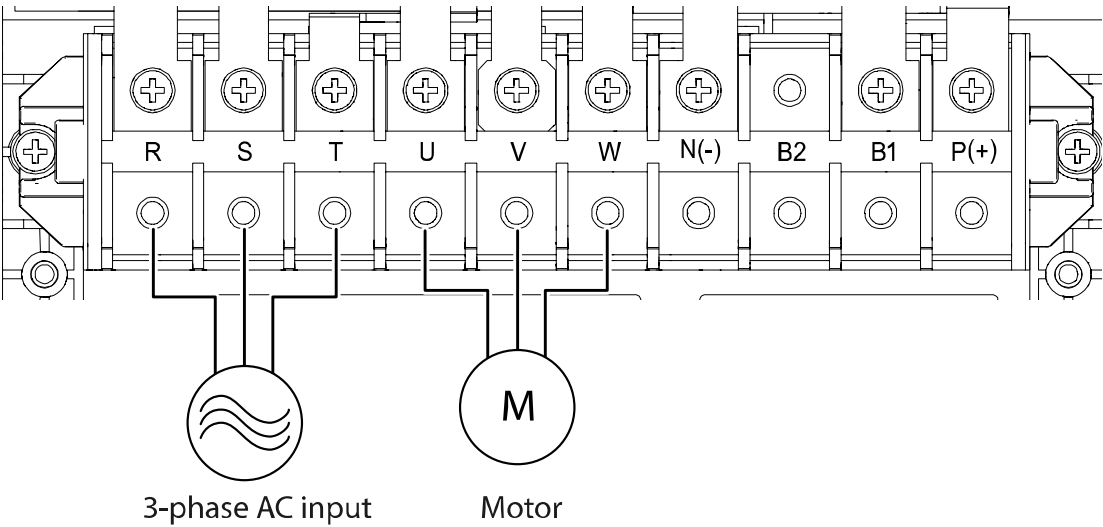
2. Terminals

❖ Main terminal arrangement

iV5, iV5L (5.5~7.5kW)



iV5L (5.5~7.5kW)



2. Terminals

❖ Main circuit terminals

Terminal		Comments
iV5	iV5L	
R, S, T		3-phase AC power connections.
U, V, W		3-phase motor (induction and synchronous motor) wiring connections.
G (2.2~22kW)	G (5.5~7.5kW)	Inverter frame ground connection.
B1, B2		Brake resistor wiring connections.
P(+)		DC link common connection.
N(-)		Brake unit connection.

❖ Control terminals

Terminal		Comments
iV5	iV5L	
FX		Stops when FX and RX are ON/OFF at the Same time
RX		
BX		Includes free run stop and deceleration stop.
RST		Fault status clears when the inverter is ON after the cause of the fault is reCode moved .
P1 (MM0) P2 (MM1) P3 (AT0) P4 (FHM) P5 (BAT) P6 (BRC) P7 (MCC)		Configurable for multifunction input.
CM		Common terminal for analog terminal input and output. Function is ON when each multifunction terminal and CM terminal are connected in NPN input mode.
VREF		Used to setup or modify a frequency reference via analog voltage or input current. Maximum output voltage: 10 V Potentiometer: 1–10 k Ω
Ai1		Used for input voltage and current applications, or motor NTC. Set jumper to change between voltage, current, or motor NTC input. - For input voltage Ai1, Ai2, Ai3: left side - For input current Ai1, Ai2: right side - For input motor NTC Ai3: right side
Ai2		
Ai3/Them		
5G		Common terminal for analog terminal input.

2. Terminals

❖ Control terminals

Terminal		Comments
iV5	iV5L	
PE		+5 V line drive power.
GE		0 V
A+ / A-		Phase A and B signals for the line drive encoder. Set the JP2 switch on the I/O board to “P5” and the JP4 switch to “LD”.
B+ / B-		
PE		+15 V open collector power.
GE		0 V
PA		Phase A and B signals for the complementary and open collector encoder. Set the JP2 switch on the I/O board to “P15” and the JP4 switch to “OC”.
PB		
Z+ (PZ)		Available only when using an encoder that provides a Phase Z pulse. Line drive type: Using Z+ and Z-. Set JP5 to “LD”. Open collector output: Using PZ. Set JP5 to “OC”.
Z-		
RA		The encoder output signals at Phases A and B are open collector outputs.
GE		
RB		
GE		
AO1		Analog output 1
AO2		Analog output 2
5G		Common terminal for analog terminal inputs.
1A / 1B		Multifunction output contact 1 (Form A contact)
2A / 2B		Multifunction output contact 2 (Form A contact)
OC1 / EG		Multifunction open collector output
30A		Output signal is generated when a fault occurs. Does not output when the emergency stop is activated.
30B		
30C		Common terminal for output contacts A and B.
JP1		LD (Line Drive) / OC (open collector or complementary)
JP2		Select between DC +5 V, DC +12 V, and DC +15 V.
JP4		Select PNP/NPN input mode.

3. Cable & Braking resistor

❖ Ground and power cable specifications

iV5, iV5L						
Load (kW)		Ground cable	Power cables (input and output)			
		mm ²	mm ²		AWG	
			R/S/T	U/V/W	R/S/T	U/V/W
3-Phase 400 V	5.5	4	4	4	10	10
	7.5		4	4	10	10
	11	10	6	6	8	8
	15		10	10	6	6
	18.5	16	16	16	4	4
	22		16	16	4	4

❖ Terminal screw specifications

iV5, iV5L			
Product (kW)		Terminal screw size	Torque (Kg·c m/Nm)
3-Phase 400 V	5.5	M4	7.1~12.2 /0.7~1,2
	7.5		
	11	M5	30.6~38.2 /3~3.8
	15		
	18.5	M6	61.2~91.8/6~9
	22		

❖ Braking resistor specifications

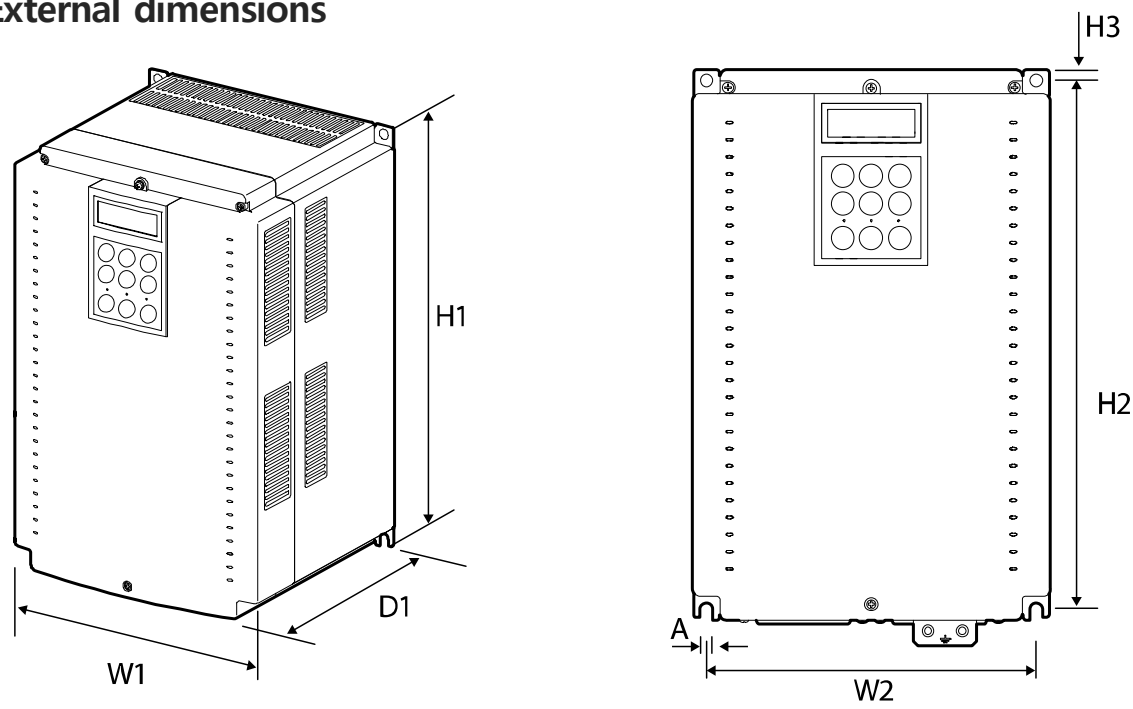
iV5, iV5L			
Product (kW)		Resistance (Ω)	Rated capacity (W)
3-Phase 400 V	5.5	85	800
	7.5	60	1200
	11	40	2400
	15	30	2400
	18.5	20	3600
	22	20	3600

❖ Braking resistor connections

iV5, iV5L			
Terminals on the braking resistor		Terminals on the inverter	Operation
B1/B2		B1/B2	-
P7/CM		Define one of multifunction input terminals (P1–P7) on the control terminal as “external trip signal contact B”.	The contact is ON in a room temperature and becomes OFF when overheated.

4. Dimensions

❖ External dimensions



iV5							
Item		W1	W2	H1	H2	D1	A
3-phase 400 V	LSLV055iV5-4	7.87	7.09	13.97	13.38	7.95	0.24
	LSLV075iV5-4	(200)	(180)	(355)	(340)	(202)	(6)
	LSLV110iV5-4	9.84	9.06	15.16	14.57	8.70	0.35
	LSLV150iV5-4	(250)	(230)	(385)	(370)	(221)	(9)
	LSLV185iV5-4	11.97	11.18	18.11	17.52	10.00	0.35
	LSLV220iV5-4	(304)	(284)	(460)	(445)	(254)	(9)

iV5L							
Item		W1	W2	H1	H2	D1	A
3-phase 400 V	LSLV055iV5L-4	7.87	7.09	13.97	13.38	7.95	0.24
	LSLV075iV5L-4	(200)	(180)	(355)	(340)	(202)	(6)
	LSLV110iV5L-4	9.84	9.06	15.16	14.57	8.70	0.35
	LSLV150iV5L-4	(250)	(230)	(385)	(370)	(221)	(9)
	LSLV185iV5L-4	11.97	11.18	18.11	17.52	10.00	0.35
	LSLV220iV5L-4	(304)	(284)	(460)	(445)	(254)	(9)

5. Parameter comparison

❖ DIS Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
DIS	0	Cmd. frequency	DIS	0	Cmd. frequency	DIS	0	Cmd. frequency	
DIS	1	User display1	DIS	1	User display1	DIS	1	User display1	
DIS	2	User display2	DIS	2	User display2	DIS	2	User display2	
DIS	3	User display3	DIS	3	User display3	DIS	3	User display3	
DIS	4	Proc Pilot Out				DIS	4	Proc Pilot Out	
			DIS	4	Theta Display.				Deleted
DIS	5	Faults	DIS	5	Faults	DIS	5	Faults	
						DIS	6	S/W Version	Additional
DIS	6	Usr Grp Disp	DIS	6	Usr Grp Disp	DIS	10	Usr Grp Disp	Code moved
DIS	12	S/W Date	DIS	12	S/W Date	DIS	7	S/W Date	Code moved
DIS	13	Init Theta	DIS	13	Init Theta	DIS	8	Init Theta	Code moved
DIS	14	Real Theta	DIS	14	Real Theta	DIS	9	Real Theta	Code moved
			DIS	15	lasAve	DIS	1		Included in the User display
			DIS	16	lbsAve	DIS	1		Included in the User display
			DIS	17	lcsAve	DIS	1		Included in the User display
DIS	18	ThetaOffset	DIS	18	ThetaOffset	MAK	54	ThetaOffset	Code moved
DIS	19	Sin Mid	DIS	19	Sin Mid	MAK	55	Sin Mid	Code moved
DIS	20	Cos Mid	DIS	20	Cos Mid	MAK	56	Cos Mid	Code moved

5. Parameter comparison

❖ PAR Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
PAR	0	Jump code	PAR	0	Jump code	PAR	0	Jump code	
PAR	1	Para. init	PAR	1	Para. init	PAR	1	Para. init	
PAR	2	Para. read	PAR	2	Para. read	PAR	2	Para. read	
PAR	3	Para. write	PAR	3	Para. write	PAR	3	Para. write	
PAR	4	Para. lock	PAR	4	Para. lock	PAR	4	Para. lock	
PAR	5	Password	PAR	5	Password	PAR	5	Password	
PAR	6	Inp. Volt	PAR	6	Inp. Volt				Deleted
						PAR	7	Control Mode	Group moved
						PAR	8	Application	Group moved
PAR	7	Motor select	PAR	7	Motor select	PAR	9	Motor select	Code moved
PAR	8	UserMotorSel	PAR	8	UserMotorSel	PAR	10	UserMotorSel	Code moved
PAR	9	Cooling Mtd	PAR	9	Cooling Mtd	PAR	22	Cooling Mtd	Code moved
PAR	10	Enc Pulse	PAR	10	Enc Pulse	PAR	24	Enc Pulse	Code moved
PAR	11	Enc Dir Set	PAR	11	Enc Dir Set	PAR	25	Enc Dir Set	Code moved
PAR	12	Enc Err Chk	PAR	12	Enc Err Chk	PRT	9	Enc Err Chk	Group moved
PAR	13	Enc LP F	PAR	13	Enc LP F	PRT	10	Enc LP F	Group moved
PAR	14	EncFault Time	PAR	14	EncFault Time	PRT	11	EncFault Time	Group moved
PAR	15	EncFault Perc	PAR	15	EncFault Perc	PRT	12	EncFault Perc	Group moved
PAR	16	Base Freq	PAR	16	Base Freq	PAR	13	Base Freq	Code moved
PAR	17	Base Speed	PAR	17	Base Speed	PAR	14	Base Speed	Code moved

5. Parameter comparison

❖ PAR Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
PAR	17	Base Speed	PAR	17	Base Speed	PAR	14	Base Speed	Code moved
PAR	18	Rated Volt	PAR	18	Rated Volt	PAR	15	Rated Volt	Code moved
PAR	19	Pole number	PAR	19	Pole number	PAR	16	Pole number	Code moved
PAR	20	Efficiency	PAR	20	Efficiency	PAR	17	Efficiency	Code moved
PAR	21	Rated-Slip				PAR	18	Rated-Slip	Code moved
			PAR	21	ASR PI Ratio	CON	2	ASR PI Ratio	Group moved
PAR	22	Rated-Curr	PAR	22	Rated-Curr	PAR	19	Rated-Curr	Code moved
PAR	23	AC In Volt	PAR	23	AC In Volt	PAR	20	AC In Volt	Code moved
PAR	24	AutoTuneType	PAR	24	AutoTuneType	PAR	31	AutoTuneType	Code moved
						PAR	32	rKp for If	Group moved
						PAR	33	rKi for If	Group moved
PAR	25	Auto tuning				PAR	41	AsynAutoTune	Code moved / Renamed
			PAR	25	Auto tuning	PAR	51	SynAutoTune	Code moved / Renamed
PAR	26	Tune Torque	PAR	26	Tune Torque	PAR			Deleted
PAR	27	Flux-Curr	PAR	27	Flux-Curr	PAR	52	Flux-Curr	Group moved
PAR	28	Tr	PAR	28	Tr	PAR	53	Tr	Group moved
PAR	29	Ls				PAR	54	Ls	Group moved
PAR	30	Lsiga				PAR	55	Lsiga	Group moved
			PAR	29	Ld	PAR	58	Ld	Additional
			PAR	30	Lq	PAR	59	Lq	Additional

5. Parameter comparison

❖ PAR Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
PAR	31	Rs	PAR	31	Rs	PAR	55	Rs	Group moved
PAR	32	EncDiv Ratio	PAR	32	EncDiv Ratio	PAR	29	EncDiv Ratio	Code moved
PAR	33	EncDivFilter	PAR	33	EncDivFilter	PAR	30	EncDivFilter	Code moved
PAR	34	Enc Scale	PAR	34	Enc Scale	PAR	27	Enc Scale	Code moved
PAR	35	Inertia Tune	PAR	35	Inertia Tune	PAR	34	Inertia Tune	Code moved
PAR	36	Inertia	PAR	36	Inertia	PAR	56	Inertia	Code moved
PAR	37	J Spd Time	PAR	37	J Spd Time	PAR	35	J Spd Time	Code moved
PAR	38	Inertia LPF	PAR	38	Inertia LPF	PAR	36	Inertia LPF	Code moved
			PAR	39	DetAve Num	PAR	43	DetAve Num	Code moved
			PAR	40	MagDet Volt	PAR	44	MagDet Volt	Code moved
			PAR	41	MagDet Curr	PAR	45	MagDet Curr	Code moved
			PAR	42	SpdErr Level	PRT	13	SpdErr Level	Group moved
			PAR	43	SpdErr Time	PRT	14	SpdErr Time	Group moved
			PAR	44	MRL TripSel	PRT	8	Endat Func	Group moved / Renamed
			PAR	45	ReDet Num	PAR	42	ReDet Num	Code moved
			PAR	46	Enc Type	PAR	23	Enc Type	Code moved
			PAR	47	Enc Tuning	PAR	28	Enc Tuning	Code moved
			PAR	48	Use LoadCell	FUN	73	Use LoadCell	Group moved
			PAR	49	FullLoad Trq	FUN	74	FullLoad Trq	Group moved

5. Parameter comparison

❖ PAR Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
			PAR	50	FullLoad Ai	FUN	75	FullLoad Ai	Group moved
			PAR	51	Noload Trq	FUN	76	Noload Trq	Group moved
			PAR	52	Noload Ai	FUN	77	Noload Ai	Group moved
			PAR	53	Inv. Type				Deleted
			PAR	54	Zpulse Use				Deleted
			PAR	55	Dynamo Use				Deleted
			PAR	56	Dynamo lgain				Deleted
			PAR	58	EnDat Dir	PAR	26	EnDat Dir	Code moved
			PAR	59	TuneLvl LdLq	PAR	46	TuneLvl LdLq	Code moved
			PAR	60	TuneHz LdLq	PAR	47	TuneHz LdLq	Code moved
						PAR	60	Init Theta	Additional

5. Parameter comparison

❖ DIO Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
DIO	0	Jump code	DIO	0	Jump code	DIO	0	Jump code	Same
DIO	1	P1 Define	DIO	1	P1 Define	DIO	1	P1 Define	Same
DIO	2	P2 Define	DIO	2	P2 Define	DIO	2	P2 Define	Same
DIO	3	P3 Define	DIO	3	P3 Define	DIO	3	P3 Define	Same
DIO	4	P4 Define	DIO	4	P4 Define	DIO	4	P4 Define	Same
DIO	5	P5 Define	DIO	5	P5 Define	DIO	5	P5 Define	Same
DIO	6	P6 Define	DIO	6	P6 Define	DIO	6	P6 Define	Same
DIO	7	P7 Define	DIO	7	P7 Define	DIO	7	P7 Define	Same
DIO	8	Neg Func. In	DIO	8	Neg Func. In	DIO	8	Neg Func. In	Same
DIO	9	Terminal LPF	DIO	9	Terminal LPF	DIO	9	Terminal LPF	Same
DIO	10	Neg Func.Out	DIO	10	Neg Func.Out	DIO	10	Neg Func.Out	Same
DIO	41	AX1 Define	DIO	41	AX1 Define	DIO	11	AX1 Define	Code moved
DIO	42	AX2 Define	DIO	42	AX2 Define	DIO	12	AX2 Define	Code moved
DIO	43	OC1 Define	DIO	43	OC1 Define	DIO	13	OC1 Define	Code moved
DIO	44	OC2 Define	DIO	44	OC2 Define				Deleted
DIO	45	OC3 Define	DIO	45	OC3 Define				Deleted
DIO	46	Relay Mode	DIO	46	Relay Mode	DIO	16	Relay Mode	Code moved
DIO	47	ZSD Level	DIO	47	ZSD Level	DIO	17	ZSD Level	Code moved
DIO	48	ZSD Band	DIO	48	ZSD Band	DIO	18	ZSD Band	Code moved
DIO	49	SD Level	DIO	49	SD Level	DIO	19	SD Level	Code moved

5. Parameter comparison

❖ DIO Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
DIO	50	SD Band	DIO	50	SD Band	DIO	20	SD Band	Code moved
DIO	51	SA Band	DIO	51	SA Band	DIO	21	SA Band	Code moved
DIO	52	SEQ Band	DIO	52	SEQ Band	DIO	22	SEQ Band	Code moved
DIO	53	TD Level	DIO	53	TD Level	DIO	23	TD Level	Code moved
DIO	54	TD Band	DIO	54	TD Band	DIO	24	TD Band	Code moved
DIO	55	TimerOn Dly	DIO	55	TimerOn Dly	DIO	25	TimerOn Dly	Code moved
DIO	56	TimerOff Dly	DIO	56	TimerOff Dly	DIO	26	TimerOff Dly	Code moved
DIO	57	OL Level	DIO	57	OL Level	PRT	20	OL Level	Group moved
DIO	58	OL Time	DIO	58	OL Time	PRT	21	OL Time	Group moved
DIO	59	OLT Select	DIO	59	OLT Select	PRT	22	OLT Select	Group moved
DIO	60	OLT Level	DIO	60	OLT Level	PRT	23	OLT Level	Group moved
DIO	61	OLT Time	DIO	61	OLT Time	PRT	24	OLT Time	Group moved
DIO	62	IH Warn Temp	DIO	62	IH Warn Temp	PRT	25	IH Warn Temp	Group moved
DIO	63	IH Warn Band	DIO	63	IH Warn Band	PRT	26	IH Warn Band	Group moved
DIO	64	MH Warn Temp	DIO	64	MH Warn Temp	PRT	27	MH Warn Temp	Group moved
DIO	65	MH Warn Band	DIO	65	MH Warn Band	PRT	28	MH Warn Band	Group moved
DIO	66	MOP SAVE	DIO	75	MOP SAVE	DIO	27	MOP SAVE	Code moved /Hidden
DIO	67	MC Timer On	DIO	76	MC Timer On	DIO	28	MC Timer On	Code moved
DIO	68	MC Timer Off	DIO	77	MC Timer Off	DIO	29	MC Timer Off	Code moved

5. Parameter comparison

❖ DIO Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
						DIO	30	BK On Delay	Group moved
						DIO	31	BKOpen Time	Group moved
						DIO	32	BKOpen Spd	Group moved
						DIO	33	Release Curr	Group moved
						DIO	34	BK Off Delay	Group moved
						DIO	36	BKClose Spd	Group moved
DIO	69	A3 Start Time				PRT	30	A3 Start Time	Group moved
DIO	70	A3 Stop Time				PRT	31	A3 Stop Time	Group moved
DIO	95	Inv Number	DIO	95	Inv Number	PAR	95	Inv Number	Group moved / Code Deleted
DIO	96	485 BaudRate	DIO	96	485 BaudRate	PAR	96	485 BaudRate	Group moved / Code Deleted
DIO	97	Lost Command	DIO	97	Lost Command	PAR	97	Lost Command	Group moved / Code Deleted
DIO	98	Comm. Timer	DIO	98	Comm. Timer	PAR	98	Comm. Timer	Group moved / Code Deleted

5. Parameter comparison

❖ DIO Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
						DIO	30	BK On Delay	Group moved
						DIO	31	BKOpen Time	Group moved
						DIO	32	BKOpen Spd	Group moved
						DIO	33	Release Curr	Group moved
						DIO	34	BK Off Delay	Group moved
						DIO	36	BKClose Spd	Group moved
DIO	69	A3 Start Time				PRT	30	A3 Start Time	Group moved
DIO	70	A3 Stop Time				PRT	31	A3 Stop Time	Group moved
DIO	95	Inv Number	DIO	95	Inv Number	PAR	95	Inv Number	Group moved / Code Deleted
DIO	96	485 BaudRate	DIO	96	485 BaudRate	PAR	96	485 BaudRate	Group moved / Code Deleted
DIO	97	Lost Command	DIO	97	Lost Command	PAR	97	Lost Command	Group moved / Code Deleted
DIO	98	Comm. Timer	DIO	98	Comm. Timer	PAR	98	Comm. Timer	Group moved / Code Deleted

5. Parameter comparison

❖ AIO Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
AIO	0	Jump code	AIO	0	Jump code	AIO	0	Jump code	Same
AIO	1	Ai1 Define	AIO	1	Ai1 Define	AIO	1	Ai1 Define	Same
AIO	2	Ai1 Source	AIO	2	Ai1 Source	AIO	2	Ai1 Source	Same
AIO	3	Ai1 In X1	AIO	3	Ai1 In X1	AIO	3	Ai1 In X1	Same
AIO	4	Ai1 Out Y1	AIO	4	Ai1 Out Y1	AIO	4	Ai1 Out Y1	Same
AIO	5	Ai1 In X2	AIO	5	Ai1 In X2	AIO	5	Ai1 In X2	Same
AIO	6	Ai1 Out Y2	AIO	6	Ai1 Out Y2	AIO	6	Ai1 Out Y2	Same
AIO	7	Ai1 -In X1	AIO	7	Ai1 -In X1	AIO	7	Ai1 -In X1	Same
AIO	8	Ai1 -Out Y1	AIO	8	Ai1 -Out Y1	AIO	8	Ai1 -Out Y1	Same
AIO	9	Ai1 -In X2	AIO	9	Ai1 -In X2	AIO	9	Ai1 -In X2	Same
AIO	10	Ai1 -Out Y2	AIO	10	Ai1 -Out Y2	AIO	10	Ai1 -Out Y2	Same
AIO	11	Ai1 L PF	AIO	11	Ai1 L PF	AIO	11	Ai1 L PF	Same
AIO	12	Ai1 Wbroken	AIO	12	Ai1 Wbroken	AIO	12	Ai1 Wbroken	Same
AIO	13	Ai2 Define	AIO	13	Ai2 Define	AIO	13	Ai2 Define	Same
AIO	14	Ai2 Source	AIO	14	Ai2 Source	AIO	14	Ai2 Source	Same
AIO	15	Ai2 In X1	AIO	15	Ai2 In X1	AIO	15	Ai2 In X1	Same
AIO	16	Ai2 Out Y1	AIO	16	Ai2 Out Y1	AIO	16	Ai2 Out Y1	Same
AIO	17	Ai2 In X2	AIO	17	Ai2 In X2	AIO	17	Ai2 In X2	Same
AIO	18	Ai2 Out Y2	AIO	18	Ai2 Out Y2	AIO	18	Ai2 Out Y2	Same
AIO	19	Ai2 -In X1	AIO	19	Ai2 -In X1	AIO	19	Ai2 -In X1	Same
AIO	20	Ai2 -Out Y1	AIO	20	Ai2 -Out Y1	AIO	20	Ai2 -Out Y1	Same

5. Parameter comparison

❖ AIO Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
AIO	21	Ai2 -In X2	AIO	21	Ai2 -In X2	AIO	21	Ai2 -In X2	Same
AIO	22	Ai2 -Output Y2	AIO	22	Ai2 -Output Y2	AIO	22	Ai2 -Output Y2	Same
AIO	23	Ai2 L PF	AIO	23	Ai2 L PF	AIO	23	Ai2 L PF	Same
AIO	24	Ai2 Wbroken	AIO	24	Ai2 Wbroken	AIO	24	Ai2 Wbroken	Same
AIO	25	Ai3 Define	AIO	25	Ai3 Define	AIO	25	Ai3 Define	Same
AIO	26	Ai3 Source	AIO	26	Ai3 Source	AIO	26	Ai3 Source	Same
AIO	27	Ai3 In X1	AIO	27	Ai3 In X1	AIO	27	Ai3 In X1	Same
AIO	28	Ai3 Output Y1	AIO	28	Ai3 Output Y1	AIO	28	Ai3 Output Y1	Same
AIO	29	Ai3 In X2	AIO	29	Ai3 In X2	AIO	29	Ai3 In X2	Same
AIO	30	Ai3 Output Y2	AIO	30	Ai3 Output Y2	AIO	30	Ai3 Output Y2	Same
AIO	31	Ai3 -In X1	AIO	31	Ai3 -In X1	AIO	31	Ai3 -In X1	Same
AIO	32	Ai3 -Output Y1	AIO	32	Ai3 -Output Y1	AIO	32	Ai3 -Output Y1	Same
AIO	33	Ai3 -In X2	AIO	33	Ai3 -In X2	AIO	33	Ai3 -In X2	Same
AIO	34	Ai3 -Output Y2	AIO	34	Ai3 -Output Y2	AIO	34	Ai3 -Output Y2	Same
AIO	35	Ai3 L PF	AIO	35	Ai3 L PF	AIO	35	Ai3 L PF	Same
AIO	36	Ai3 Wbroken	AIO	36	Ai3 Wbroken	AIO	36	Ai3 Wbroken	Same
AIO	37	Ai4 Define	AIO	37	Ai4 Define				Deleted
AIO	38	Ai4 Source	AIO	38	Ai4 Source				Deleted
AIO	39	Ai4 In X1	AIO	39	Ai4 In X1				Deleted
AIO	40	Ai4 Output Y1	AIO	40	Ai4 Output Y1				Deleted

5. Parameter comparison

❖ AIO Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
AIO	41	Ai4 In X2	AIO	41	Ai4 In X2				Deleted
AIO	42	Ai4 Out Y2	AIO	42	Ai4 Out Y2				Deleted
AIO	43	Ai4 -In X1	AIO	43	Ai4 -In X1				Deleted
AIO	44	Ai4 -Out Y1	AIO	44	Ai4 -Out Y1				Deleted
AIO	45	Ai4 -In X2	AIO	45	Ai4 -In X2				Deleted
AIO	46	Ai4 -Out Y2	AIO	46	Ai4 -Out Y2				Deleted
AIO	47	Ai4 L PF	AIO	47	Ai4 L PF				Deleted
AIO	48	Ai4 Wbroken	AIO	48	Ai4 Wbroken				Deleted
AIO	49	Ai5 Define	AIO	49	Ai5 Define				Deleted
AIO	50	Ai5 Source	AIO	50	Ai5 Source				Deleted
AIO	51	Ai5 In X1	AIO	51	Ai5 In X1				Deleted
AIO	52	Ai5 Out Y1	AIO	52	Ai5 Out Y1				Deleted
AIO	53	Ai5 In X2	AIO	53	Ai5 In X2				Deleted
AIO	54	Ai5 Out Y2	AIO	54	Ai5 Out Y2				Deleted
AIO	55	Ai5 -In X1	AIO	55	Ai5 -In X1				Deleted
AIO	56	Ai5 -Out Y1	AIO	56	Ai5 -Out Y1				Deleted
AIO	57	Ai5 -In X2	AIO	57	Ai5 -In X2				Deleted
AIO	58	Ai5 -Out Y2	AIO	58	Ai5 -Out Y2				Deleted
AIO	59	Ai5 L PF	AIO	59	Ai5 L PF				Deleted
AIO	60	Ai5 Wbroken	AIO	60	Ai5 Wbroken				Deleted

5. Parameter comparison

❖ AIO Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
AIO	61	Ai6 Define	AIO	61	Ai6 Define				Deleted
AIO	62	Ai6 Source	AIO	62	Ai6 Source				Deleted
AIO	63	Ai6 In X1	AIO	63	Ai6 In X1				Deleted
AIO	64	Ai6 Out Y1	AIO	64	Ai6 Out Y1				Deleted
AIO	65	Ai6 In X2	AIO	65	Ai6 In X2				Deleted
AIO	66	Ai6 Out Y2	AIO	66	Ai6 Out Y2				Deleted
AIO	67	Ai6 -In X1	AIO	67	Ai6 -In X1				Deleted
AIO	68	Ai6 -Out Y1	AIO	68	Ai6 -Out Y1				Deleted
AIO	69	Ai6 -In X2	AIO	69	Ai6 -In X2				Deleted
AIO	70	Ai6 -Out Y2	AIO	70	Ai6 -Out Y2				Deleted
AIO	71	Ai6 L PF	AIO	71	Ai6 L PF				Deleted
AIO	72	Ai6 Wbroken	AIO	72	Ai6 Wbroken				Deleted
AIO	73	Time Out	AIO	73	Time Out	AIO	37	Time Out	Code moved
AIO	74	AO1 Define	AIO	74	AO1 Define	AIO	40	AO1 Define	Code moved
AIO	75	AO1 Source	AIO	75	AO1 Source	AIO	41	AO1 Source	Code moved
AIO	76	AO1 Bias	AIO	76	AO1 Bias	AIO	42	AO1 Bias	Code moved
AIO	77	AO1 Gain	AIO	77	AO1 Gain	AIO	43	AO1 Gain	Code moved
AIO	78	AO1 -Bias	AIO	78	AO1 -Bias	AIO	44	AO1 -Bias	Code moved
AIO	79	AO1 -Gain	AIO	79	AO1 -Gain	AIO	45	AO1 -Gain	Code moved
AIO	80	AO1 ABS	AIO	80	AO1 ABS	AIO	46	AO1 ABS	Code moved

5. Parameter comparison

❖ AIO Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
AIO	81	AO2 Define	AIO	81	AO2 Define	AIO	47	AO2 Define	Code moved
AIO	82	AO2 Source	AIO	82	AO2 Source	AIO	48	AO2 Source	Code moved
AIO	83	AO2 Bias	AIO	83	AO2 Bias	AIO	49	AO2 Bias	Code moved
AIO	84	AO2 Gain	AIO	84	AO2 Gain	AIO	50	AO2 Gain	Code moved
AIO	85	AO2 -Bias	AIO	85	AO2 -Bias	AIO	51	AO2 -Bias	Code moved
AIO	86	AO2 -Gain	AIO	86	AO2 -Gain	AIO	52	AO2 -Gain	Code moved
AIO	87	AO2 ABS	AIO	87	AO2 ABS	AIO	53	AO2 ABS	Code moved

5. Parameter comparison

❖ FUN Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
FUN	0	Jump code	FUN	0	Jump code	FUN	0	Jump code	Same
FUN	1	Run/Stop Src	FUN	1	Run/Stop Src	FUN	1	Run/Stop Src	Same
FUN	2	Spd Ref Sel	FUN	2	Spd Ref Sel	FUN	2	Spd Ref Sel	Same
FUN	3	Stop mode	FUN	3	Stop mode	FUN	3	Stop mode	Same
FUN	4	Max Speed	FUN	4	Max Speed	PAR	11	Max Speed	Group moved
FUN	5	Min Speed	FUN	5	Min Speed	PAR	12	Min Speed	Group moved
FUN	6	DcBr Freq	FUN	6	DcBr Freq	FUN	6	DcBr Freq	Same
FUN	7	DcBlk Time	FUN	7	DcBlk Time	FUN	7	DcBlk Time	Same
FUN	8	DcBr Value	FUN	8	DcBr Value	FUN	8	DcBr Value	Same
FUN	9	DcBr Time	FUN	9	DcBr Time	FUN	9	DcBr Time	Same
FUN	10	DcSt Value	FUN	10	DcSt Value	FUN	10	DcSt Value	Same
FUN	11	DcSt Time	FUN	11	DcSt Time	FUN	11	DcSt Time	Same
FUN	12	Speed 0	FUN	12	Speed 0	FUN	12	Speed 0	Same
FUN	13	Speed 1	FUN	13	Speed 1	FUN	13	Speed 1	Same
FUN	14	Speed 2	FUN	14	Speed 2	FUN	14	Speed 2	Same
FUN	15	Speed 3	FUN	15	Speed 3	FUN	15	Speed 3	Same
FUN	16	Speed 4	FUN	16	Speed 4	FUN	16	Speed 4	Same
FUN	17	Speed 5	FUN	17	Speed 5	FUN	17	Speed 5	Same
FUN	18	Speed 6	FUN	18	Speed 6	FUN	18	Speed 6	Same
FUN	19	Speed 7	FUN	19	Speed 7	FUN	19	Speed 7	Same
FUN	20	Jog Speed	FUN	20	Jog Speed	FUN	20	Jog Speed	Same

5. Parameter comparison

❖FUN Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
FUN	21	Dwell Speed	FUN	21	Dwell Speed	FUN	21	Dwell Speed	Same
FUN	22	Dwell Time	FUN	22	Dwell Time	FUN	22	Dwell Time	Same
FUN	23	Speed Limit	FUN	23	Speed Limit	FUN	23	Speed Limit	Same
FUN	24	Spd Limit L	FUN	24	Spd Limit L	FUN	24	Spd Limit L	Same
FUN	25	Spd Limit H	FUN	25	Spd Limit H	FUN	25	Spd Limit H	Same
FUN	26	Jump Speed	FUN	26	Jump Speed	FUN	26	Jump Speed	Same
FUN	27	Jump Lo 1	FUN	27	Jump Lo 1	FUN	27	Jump Lo 1	Same
FUN	28	Jump Hi 1	FUN	28	Jump Hi 1	FUN	28	Jump Hi 1	Same
FUN	29	Jump Lo 2	FUN	29	Jump Lo 2	FUN	29	Jump Lo 2	Same
FUN	30	Jump Hi 2	FUN	30	Jump Hi 2	FUN	30	Jump Hi 2	Same
FUN	31	Jump Lo 3	FUN	31	Jump Lo 3	FUN	31	Jump Lo 3	Same
FUN	32	Jump Hi 3	FUN	32	Jump Hi 3	FUN	32	Jump Hi 3	Same
FUN	33	Acc/Dec Ref	FUN	33	Acc/Dec Ref	FUN	33	Acc/Dec Ref	Same
FUN	34	Acc. Pattern	FUN	34	Acc. Pattern			Acc. Pattern	Code Deleted
FUN	35	Dec. Pattern	FUN	35	Dec. Pattern			Dec. Pattern	Code Deleted
FUN	36	Acc S Start	FUN	36	Acc S Start	FUN	36	Acc S Start	Same
FUN	37	Acc S End	FUN	37	Acc S End	FUN	37	Acc S End	Same
FUN	38	Dec S Start	FUN	38	Dec S Start	FUN	38	Dec S Start	Same
FUN	39	Dec S End	FUN	39	Dec S End	FUN	39	Dec S End	Same
FUN	40	Time scale	FUN	40	Time scale	FUN	40	Time scale	Same
FUN	41	Acc Time-1	FUN	41	Acc Time-1	FUN	41	Acc Time-1	Same

5. Parameter comparison

❖FUN Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
FUN	42	Dec Time-1	FUN	42	Dec Time-1	FUN	42	Dec Time-1	Same
FUN	43	Acc Time-2	FUN	43	Acc Time-2	FUN	43	Acc Time-2	Same
FUN	44	Dec Time-2	FUN	44	Dec Time-2	FUN	44	Dec Time-2	Same
FUN	45	Acc Time-3	FUN	45	Acc Time-3	FUN	45	Acc Time-3	Same
FUN	46	Dec Time-3	FUN	46	Dec Time-3	FUN	46	Dec Time-3	Same
FUN	47	Acc Time-4	FUN	47	Acc Time-4	FUN	47	Acc Time-4	Same
FUN	48	Dec Time-4	FUN	48	Dec Time-4	FUN	48	Dec Time-4	Same
FUN	49	Use 0 Dec T	FUN	49	Use 0 Dec T	FUN	49	Use 0 Dec T	Same
FUN	50	0 Dec Time	FUN	50	0 Dec Time	FUN	50	0 Dec Time	Same
FUN	51	MOP Inc Time	FUN	51	MOP Inc Time			MOP Inc Time	Code Deleted
FUN	52	BX Time	FUN	52	BX Time	FUN	52	BX Time	Same
FUN	53	PreExct Time	FUN	53	PreExct Time	FUN	53	PreExct Time	Same
FUN	54	Hold Time	FUN	54	Hold Time	FUN	54	Hold Time	Same
FUN	55	ETH Select	FUN	55	ETH Select	PRT	1	ETH Select	Group moved
FUN	56	ETH 1 min	FUN	56	ETH 1 min	PRT	2	ETH 1 min	Group moved
FUN	57	ETH Cont	FUN	57	ETH Cont	PRT	3	ETH Cont	Group moved
FUN	58	PWM Freq	FUN	58	PWM Freq	PAR	21	PWM Freq	Group moved
FUN	59	Power-on Run	FUN	59	Power-on Run	FUN	55	Power-on Run	Same
FUN	60	RST Restart	FUN	60	RST Restart	PRT	4	RST Restart	Group moved
FUN	61	Retry Number	FUN	61	Retry Number	PRT	5	Retry Number	Group moved
FUN	62	Retry Delay	FUN	62	Retry Delay	PRT	6	Retry Delay	Group moved

5. Parameter comparison

❖ FUN Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
FUN	63	Restart Time	FUN	63	Restart Time	PRT	7	Restart Time	Group moved
FUN	64	OverSpdLevel	FUN	64	OverSpdLevel	PRT	15	OverSpdLevel	Group moved
FUN	65	OverSpd Time	FUN	65	OverSpd Time	PRT	16	OverSpd Time	Group moved
FUN	66	BKOpen Time	FUN	66	BKOpen Time	DIO	31	BKOpen Time	Group moved
FUN	67	BKOpen Spd	FUN	67	BKOpen Spd	DIO	32	BKOpen Spd	Group moved
FUN	68	Release Curr	FUN	68	Release Curr	DIO	33	Release Curr	Group moved
FUN	69	BKClose Time	FUN	69	BKClose Time			BKClose Time	Code Deleted
FUN	70	BKClose Spd	FUN	70	BKClose Spd	DIO	36	BKClose Spd	Group moved
FUN	71	RegenAvd Sel	FUN	71	RegenAvd Sel	FUN	62	RegenAvd Sel	Code moved
FUN	72	RegenAvd Lvl	FUN	72	RegenAvd Lvl	FUN	63	RegenAvd Lvl	Code moved
FUN	73	CompFreq Lmt	FUN	73	CompFreq Lmt	FUN	64	CompFreq Lmt	Code moved
FUN	74	RegenAvd P	FUN	74	RegenAvd P	FUN	65	RegenAvd P	Code moved
FUN	75	RegenAvd I	FUN	75	RegenAvd I	FUN	66	RegenAvd I	Code moved
FUN	76	Batt. Speed	FUN	76	Batt. Speed	FUN	67	Batt. Speed	Code moved
FUN	77	Batt. Volt	FUN	77	Batt. Volt	FUN	68	Batt. Volt	Code moved
						FUN	69	ALLS Enable	Additional
						FUN	70	ALLS DirChgT	Additional
						FUN	71	ALLS Time	Additional
						FUN	72	ALLS LoadCkT	Additional
						FUN	73	Use LoadCell	Group moved
						FUN	74	FullLoad Trq	Group moved

5. Parameter comparison

❖ FUN Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
						FUN	75	FullLoad Ai	Group moved
						FUN	76	Noload Trq	Group moved
						FUN	77	Noload Ai	Group moved
FUN	78	PhInOpenChk	FUN	78	PhInOpenChk	PRT	17	PhInOpenChk	Group moved
FUN	79	PhInOpenLvl	FUN	79	PhInOpenLvl	PRT	18	PhInOpenLvl	Group moved
FUN	80	PhOutOpenChk	FUN	80	PhOutOpenChk	PRT	19	PhOutOpenChk	Group moved
FUN	81	AuxSpeedMax							Deleted
FUN	82	AuxSpeedType							Deleted
FUN	83	AuxAccTime							Deleted
FUN	84	AuxDecTime							Deleted
FUN	85	AuxSpeedMod							Deleted
FUN	86	ShortFlrSpd	FUN	81	ShortFlrSpd	FUN	56	ShortFlrSpd	Code moved
FUN	87	ShortFlrTime	FUN	82	ShortFlrTime	FUN	57	ShortFlrTime	Code moved
FUN	88	LV2 Enable	FUN	83	LV2 Enable	PRT	29	LV2 Enable	Group moved
FUN	89	BrChkSel							Deleted
FUN	89	BrChkTime							Deleted
FUN	90	BrChkStop							Deleted
FUN	91	BK On Delay				DIO	30	BK On Delay	Group moved
FUN	92	BK Off Delay				DIO	34	BK Off Delay	Group moved
FUN	93	Fast Bx Sel	FUN	84	Fast Bx Sel				Deleted
FUN	94	Neg. Bx Sel				DIO	8	Neg Fun c. In	Deleted
						FUN	51	BX Time	New

5. Parameter comparison

❖ CON Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
CON	0	Jump code	CON	0	Jump code	CON	0	Jump code	Same
CON	1	Control Mode	CON	1	Control Mode	PAR	7	Control Mode	Group moved
CON	2	Application	CON	2	Application	PAR	8	Application	Group moved
CON	3	ASR P Gain1	CON	3	ASR P Gain1	CON	3	ASR P Gain1	Same
CON	4	ASR I Gain1	CON	4	ASR I Gain1	CON	4	ASR I Gain1	Same
CON	5	ASR L PF1	CON	5	ASR L PF1	CON	5	ASR L PF1	Same
CON	6	ASR P Gain2	CON	6	ASR P Gain2	CON	6	ASR P Gain2	Same
CON	7	ASR I Gain2	CON	7	ASR I Gain2	CON	7	ASR I Gain2	Same
CON	8	ASR L PF2	CON	8	ASR L PF2	CON	8	ASR L PF2	Same
CON	9	ASR R AMP	CON	9	ASR R AMP	CON	10	ASR R AMP	Same
CON	10	ASR T arSpd	CON	10	ASR T arSpd	CON	11	ASR T arSpd	Code moved
CON	11	Proc PID Ref	CON	11	Proc PID Ref			Proc PID Ref	Deleted
CON	12	Proc PIDRamp	CON	12	Proc PIDRamp			Proc PIDRamp	Deleted
CON	13	Proc PosiRef	CON	13	Proc PosiRef				Deleted
CON	14	Proc PID Kp	CON	14	Proc PID Kp			Proc PID Kp	Deleted
CON	15	Proc PID Ki	CON	15	Proc PID Ki			Proc PID Ki	Deleted
CON	16	Proc PID Kd	CON	16	Proc PID Kd			Proc PID Kd	Deleted
CON	17	Proc Pos Lmt	CON	17	Proc Pos Lmt			Proc Pos Lmt	Deleted
CON	18	Proc Neg Lmt	CON	18	Proc Neg Lmt			Proc Neg Lmt	Deleted
CON	19	Proc Out LPF	CON	19	Proc Out LPF			Proc Out LPF	Deleted
CON	20	Proc OutGain	CON	20	Proc OutGain			Proc OutGain	Deleted

5. Parameter comparison

❖ CON Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
CON	21	Proc PID Src	CON	21	Proc PID Src			Proc PID Src	Deleted
CON	22	PID SpeedSet	CON	22	PID SpeedSet			PID SpeedSet	Deleted
CON	23	Proc PID Enb	CON	23	Proc PID Enb			Proc PID Enb	Deleted
CON	24	PIDHoldTime	CON	24	PIDHoldTime			PIDHoldTime	Deleted
CON	25	Draw %	CON	25	Draw %				Deleted
CON	26	Droop %	CON	26	Droop %				Deleted
CON	27	Droop Src	CON	27	Droop Src				Deleted
CON	28	Droop Time	CON	28	Droop Time				Deleted
CON	29	Droop MinSpd	CON	29	Droop MinSpd				Deleted
CON	30	Droop MinTrq	CON	30	Droop MinTrq				Deleted
CON	31	Trq Ref Src	CON	31	Trq Ref Src	CON	31	Trq Ref Src	Same
CON	32	Torque Ref	CON	32	Torque Ref	CON	32	Torque Ref	Same
CON	33	Trq Lmt Src	CON	33	Trq Lmt Src	CON	33	Trq Lmt Src	Same
CON	34	Pos Trq Lmt	CON	34	Pos Trq Lmt	CON	34	Pos Trq Lmt	Same
CON	35	Neg Trq Lmt	CON	35	Neg Trq Lmt	CON	35	Neg Trq Lmt	Same
CON	36	Reg Trq Lmt	CON	36	Reg Trq Lmt	CON	36	Reg Trq Lmt	Same
CON	37	Trq Bias Src	CON	37	Trq Bias Src	CON	37	Trq Bias Src	Same
CON	38	Trq Bias	CON	38	Trq Bias	CON	38	Trq Bias	Same
CON	39	Trq Bias FF	CON	39	Trq Bias FF	CON	39	Trq Bias FF	Same
CON	40	Trq Balance	CON	40	Trq Balance	CON	40	Trq Balance	Same
CON	41	Torque boost	CON	41	Torque boost	CON	41	Torque boost	Same

5. Parameter comparison

❖ CON Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
CON	42	Fwd boost	CON	42	Fwd boost	CON	42	Fwd boost	Same
CON	43	Rev boost	CON	43	Rev boost	CON	43	Rev boost	Same
CON	44	V/F pattern	CON	44	V/F pattern	CON	48	V/F pattern	Code moved
CON	45	User freq 1	CON	45	User freq 1	CON	49	User freq 1	Code moved
CON	46	User volt 1	CON	46	User volt 1	CON	50	User volt 1	Code moved
CON	47	User freq 2	CON	47	User freq 2	CON	51	User freq 2	Code moved
CON	48	User volt 2	CON	48	User volt 2	CON	52	User volt 2	Code moved
CON	49	User freq 3	CON	49	User freq 3	CON	53	User freq 3	Code moved
CON	50	User volt 3	CON	50	User volt 3	CON	54	User volt 3	Code moved
CON	51	User freq 4	CON	51	User freq 4	CON	55	User freq 4	Code moved
CON	52	User volt 4	CON	52	User volt 4	CON	56	User volt 4	Code moved
CON	53	Volt control	CON	53	Volt control	CON	57	Volt control	Code moved
CON	54	Speed Search	CON	54	Speed Search				Deleted
CON	55	SS Sup-Curr	CON	55	SS Sup-Curr				Deleted
CON	56	SS P-gain	CON	56	SS P-gain				Deleted
CON	57	SS I-gain	CON	57	SS I-gain				Deleted
CON	60	Energy Save	CON	60	Energy Save				Deleted
CON	61	Current +V/F	CON	61	Current +V/F				Deleted
CON	62	Total GD^2	CON	62	Total GD^2	CON	58	Total GD^2	Code moved
CON	63	Load Comp fc	CON	63	Load Comp fc	CON	59	Load Comp fc	Code moved
CON	64	LoadCompGain	CON	64	LoadCompGain	CON	60	LoadCompGain	Code moved

5. Parameter comparison

❖ CON Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
CON	65	Use D/A out	CON	65	Use D/A out				Deleted
CON	66	D/A1 Def.	CON	66	D/A1 Def.				Deleted
CON	67	D/A1 range	CON	67	D/A1 range				Deleted
CON	68	D/A2 Def.	CON	68	D/A2 Def.				Deleted
CON	69	D/A2 range	CON	69	D/A2 range				Deleted
CON	70	D/A3 Def.	CON	70	D/A3 Def.				Deleted
CON	71	D/A3 range	CON	71	D/A3 range				Deleted
CON	72	D/A4 Def.	CON	72	D/A4 Def.				Deleted
CON	73	D/A4 range	CON	73	D/A4 range				Deleted
CON	74	DI Valid T	CON	74	DI Valid T				Deleted
CON	75	SS Time	CON	75	SS Time				Deleted
CON	76	SS P Gain	CON	76	SS P Gain				Deleted
CON	77	SS I Gain	CON	77	SS I Gain				Deleted
CON	78	SS LP F	CON	78	SS LP F				Deleted
CON	79	Spd Lmt Src	CON	79	Spd Lmt Src	CON	61	Spd Lmt Src	Code moved
CON	80	SpdLmtBias	CON	80	SpdLmtBias	CON	62	SpdLmtBias	Code moved
CON	81	Stall Prev.							Deleted
CON	82	Stall Level1							Deleted
CON	83	Stall Freq 1							Deleted
CON	84	Stall Level2							Deleted
CON	85	Stall Freq 2							Deleted

5. Parameter comparison

❖ CON Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
CON	86	Stall Level3							Deleted
CON	87	Stall Frequency 3							Deleted
CON	88	Stall Level4							Deleted
CON	89	SlipCompFreq				CON	63	SlipCompFreq	Code moved
CON	90	SlipGain_MH				CON	64	SlipGain_MH	Code moved
CON	91	SlipGain_GH				CON	65	SlipGain_GH	Code moved
CON	92	SlipGainFrq				CON	66	SlipGainFrq	Code moved
CON	93	SlipGain_ML				CON	67	SlipGain_ML	Code moved
CON	94	SlipGain_GL				CON	68	SlipGain_GL	Code moved
CON	95	Slip Filter				CON	69	Slip Filter	Code moved
CON	96	ATB Frequency				CON	44	ATB Frequency	Code moved
CON	97	ATB Filter				CON	45	ATB Filter	Code moved
CON	98	ATB Gain_M				CON	46	ATB Gain_M	Code moved
CON	99	ATB Gain_G				CON	47	ATB Gain_G	Code moved
			CON	81	Trq Obs Time	CON	70	Trq Obs Time	Additional
			CON	82	ARF Time	CON	71	ARF Time	Additional
			CON	83	ARF ASR_P	CON	72	ARF ASR_P	Additional
			CON	84	ARF ASR_I	CON	73	ARF ASR_I	Additional
			CON	85	ARF ASR_P	CON	74	ARF ASR_P	Additional
			CON	86	Jm	PAR	56	Inertia	Group moved / Code Combined
			CON	87	AntiOVSGain	CON	9	ASR FF Gain	Additional

5. Parameter comparison

❖ EL Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
Same									
						E/L	67	2ndAutoSpd	Additional
						E/L	68	ELMC On Time	Additional
						E/L	69	ELMC OffTime	Additional

❖ PRT Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
						PRT	0	Jump code	
						PRT	1	ETH Select	Group moved
						PRT	2	ETH 1 min	Group moved
						PRT	3	ETH Count	Group moved
						PRT	4	RST Restart	Group moved
						PRT	5	Retry Number	Group moved
						PRT	6	Retry Delay	Group moved
						PRT	7	Restart Time	Group moved
						PRT	8	SyncTrippSel	Group moved
						PRT	9	Enc Err Chk	Group moved
						PRT	10	Enc LP F	Group moved
						PRT	11	EncFaultTime	Group moved
						PRT	12	EncFaultPerc	Group moved
						PRT	13	SpdErr Level	Group moved

5. Parameter comparison

❖ PRT Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
						PRT	14	SpdErr Time	Group moved
						PRT	15	OverSpdLevel	Group moved
						PRT	16	OverSpd Time	Group moved
						PRT	17	PhInOpenChk	Group moved
						PRT	18	PhInOpenLvl	Group moved
						PRT	19	PhOutOpenChk	Group moved
						PRT	20	OL Level	Group moved
						PRT	21	OL Time	Group moved
						PRT	22	OLT Select	Group moved
						PRT	23	OLT Level	Group moved
						PRT	24	OLT Time	Group moved
						PRT	25	IH Warn Temp	Group moved
						PRT	26	IH Warn Band	Group moved
						PRT	27	MH Warn Temp	Group moved
						PRT	28	MH Warn Band	Group moved
						PRT	29	LV2 Enable	Group moved
						PRT	30	A3 Start Time	Group moved
						PRT	31	A3 Stop Time	Group moved
						PRT	32	FAN Control	Additional
						PRT	33	Fan Trip Sel	Additional
						PRT	34	Safety Sel	Additional

5. Parameter comparison

❖ COM Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
EXT	0	Jump code	EXT	0	Jump code	COM	0	Jump code	Group renamed
EXT	1	Opt B /D	EXT	1	Opt B /D	COM	1	Opt B /D	Group renamed
EXT	2	Opt Version	EXT	2	Opt Version	COM	2	Opt Version	Group renamed
EXT	3	Station ID	EXT	3	Station ID	COM	3	Station ID	Group renamed
EXT	4	Baud Rate	EXT	4	Baud Rate	COM	4	Baud Rate	Group renamed
EXT	5	MAC ID	EXT	5	MAC ID	COM	5	MAC ID	Group renamed
EXT	6	Out Instance	EXT	6	Out Instance	COM	6	Out Instance	Group renamed
EXT	7	In Instance	EXT	7	In Instance	COM	7	In Instance	Group renamed
EXT	9	Profi MAC ID	EXT	9	Profi MAC ID	COM	9	Profi MAC ID	Group renamed
EXT	10	Output Num	EXT	10	Output Num	COM	10	Output Num	Group renamed
EXT	11	Output 1	EXT	11	Output 1	COM	11	Output 1	Group renamed
EXT	12	Output 2	EXT	12	Output 2	COM	12	Output 2	Group renamed
EXT	13	Output 3	EXT	13	Output 3	COM	13	Output 3	Group renamed
EXT	14	Output 4	EXT	14	Output 4	COM	14	Output 4	Group renamed
EXT	15	Output 5	EXT	15	Output 5	COM	15	Output 5	Group renamed
EXT	16	Output 6	EXT	16	Output 6	COM	16	Output 6	Group renamed
EXT	17	Output 7	EXT	17	Output 7	COM	17	Output 7	Group renamed
EXT	18	Output 8	EXT	18	Output 8	COM	18	Output 8	Group renamed
EXT	19	Input Num	EXT	19	Input Num	COM	19	Input Num	Group renamed
EXT	20	Input 1	EXT	20	Input 1	COM	20	Input 1	Group renamed
EXT	21	Input 2	EXT	21	Input 2	COM	21	Input 2	Group renamed

5. Parameter comparison

❖ COM Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
EXT	22	Input 3	EXT	22	Input 3	COM	22	Input 3	Group renamed
EXT	23	Input 4	EXT	23	Input 4	COM	23	Input 4	Group renamed
EXT	24	Input 5	EXT	24	Input 5	COM	24	Input 5	Group renamed
EXT	25	Input 6	EXT	25	Input 6	COM	25	Input 6	Group renamed
EXT	26	Input 7	EXT	26	Input 7	COM	26	Input 7	Group renamed
EXT	27	Input 8	EXT	27	Input 8	COM	27	Input 8	Group renamed
EXT	28	D-in Mode	EXT	28	D-in Mode	COM	28	D-in Mode	Group renamed
EXT	29	Digital Ftr	EXT	29	Digital Ftr	COM	29	Digital Ftr	Group renamed
EXT	30	Parity/Stop	EXT	30	Parity/Stop	COM	30	Parity/Stop	Group renamed
EXT	31	Delay Time	EXT	31	Delay Time	COM	31	Delay Time	Group renamed
EXT	32	Int485 St ID	EXT	32	Int485 St ID	COM	32	Int485 St ID	Group renamed
EXT	33	Int485 Baud	EXT	33	Int485 Baud	COM	33	Int485 Baud	Group renamed
EXT	34	Int485 Mode	EXT	34	Int485 Mode	COM	34	Int485 Mode	Group renamed
EXT	35	Int485 Delay	EXT	35	Int485 Delay	COM	35	Int485 Delay	Group renamed
EXT	36	Int485 LostC	EXT	36	Int485 LostC	COM	36	Int485 LostC	Group renamed
EXT	37	Int485 LostT	EXT	37	Int485 LostT	COM	37	Int485 LostT	Group renamed
EXT	61	Opt Para-1	EXT	61	Opt Para-1	COM	61	Opt Para-1	Group renamed
EXT	62	Opt Para-2	EXT	62	Opt Para-2	COM	62	Opt Para-2	Group renamed
EXT	63	Opt Para-3	EXT	63	Opt Para-3	COM	63	Opt Para-3	Group renamed
EXT	64	Opt Para-4	EXT	64	Opt Para-4	COM	64	Opt Para-4	Group renamed
EXT	65	Opt Para-5	EXT	65	Opt Para-5	COM	65	Opt Para-5	Group renamed

5. Parameter comparison

❖ COM Group

Before						After			Note
General Ver3.30			MRL V6.00			IV5L V1.00			
Group	Code	Message	Group	Code	Message	Group	Code	Message	
EXT	66	Opt Para-6	EXT	66	Opt Para-6	COM	66	Opt Para-6	Group renamed
EXT	98	SWAP Sel	EXT	98	SWAP Sel	COM	98	SWAP Sel	Group renamed
EXT	99	Comm UpDate	EXT	99	Comm UpDate	COM	99	Comm UpDate	Group renamed

❖ M2 Group

Before			After			Note
General Ver3.30			IV5L V1.00			
Group	Code	Message	Group	Code	Message	
2nd	0	Jump code	M2	0	Jump code	Same
2nd	1	2nd Ctl Mode	M2	1	M2 Ctl Mode	Same
2nd	2	2nd Max Spd	M2	4	M2 Max Spd	Code moved
2nd	3	2nd Min Spd	M2	5	M2 Min Spd	Code moved
2nd	4	2nd Spd 0	M2	6	M2 Spd 0	Code moved
2nd	5	2nd Acc S St	M2	7	M2 Acc S St	Code moved
2nd	6	2nd Acc S Ed	M2	8	M2 Acc S Ed	Code moved
2nd	7	2nd Dec S St	M2	9	M2 Dec S St	Code moved
2nd	8	2nd Dec S Ed	M2	10	M2 Dec S Ed	Code moved
2nd	9	Time scale2	M2	11	Time scale2	Code moved
2nd	10	2nd Acc time	M2	12	M2 Acc time	Code moved
2nd	11	2nd Dec time	M2	13	M2 Dec time	Code moved
2nd	12	2nd Cool Mtd	M2	27	M2 Cool Mtd	Code moved
2nd	13	2nd Enc #	M2	28	M2 Enc #	Code moved
2nd	14	2nd Enc Dir	M2	29	M2 Enc Dir	Code moved
2nd	15	2nd Enc Chk	M2	30	M2 Enc Chk	Code moved

❖ M2 Group

Before			After			Note
General Ver3.30			IV5L V1.00			
Group	Code	Message	Group	Code	Message	
2nd	16	2nd Enc LPF	M2	31	M2 Enc LPF	Code moved
2nd	17	2nd BaseFreq	M2	14	M2 BaseFreq	Code moved
2nd	18	2nd Base Spd	M2	15	M2 Base Spd	Code moved
2nd	19	Motor select	M2	2	Motor select	Code moved
2nd	20	UserMotorSel	M2	3	UserMotorSel	Code moved
2nd	21	2nd R-Volt	M2	16	M2 R-Volt	Code moved
2nd	22	2nd Pole #	M2	17	M2 Pole #	Code moved
2nd	23	2nd Mot Eff.	M2	18	M2 Mot Eff.	Code moved
2nd	24	2nd R-Slip	M2	19	M2 R-Slip	Code moved
2nd	25	2nd R-Curr	M2	20	M2 R-Curr	Code moved
2nd	26	2nd Flx Cur	M2	21	M2 Flx Cur	Code moved
2nd	27	2nd Mot Tr	M2	22	M2 Mot Tr	Code moved
2nd	28	2nd Mot Ls	M2	23	M2 Mot Ls	Code moved
2nd	29	2nd Mot sLs	M2	24	M2 Mot sLs	Code moved
2nd	30	2nd Mot Rs	M2	25	M2 Mot Rs	Code moved
2nd	31	2nd V/F	M2	32	M2 V/F	Code moved
2nd	32	2nd F-boost	M2	33	M2 F-boost	Code moved
2nd	33	2nd R-boost	M2	34	M2 R-boost	Code moved
2nd	34	2nd Stall				Deleted
2nd	35	2nd ETH 1min	M2	35	M2 ETH 1min	Code moved
2nd	36	2nd ETH cont	M2	36	M2 ETH cont	Code moved
2nd	37	2nd Inertia	M2	26	M2 Inertia	Code moved

Before			After			Note
General Ver3.30			IV5L V1.00			
Group	Code	Message	Group	Code	Message	
Same						

5. Parameter comparison

❖ SLS Group

Before			After			Note
General Ver3.30			IV5L V1.00			
Group	Code	Message	Group	Code	Message	
SLS	0	Jump Code	SLS	0	Jump Code	Same
SLS	1	Flux BD Time	SLS	1	Flux BD Time	Same
SLS	2	FlxEst PGain	SLS	2	FlxEst PGain	Same
SLS	3	FlxEst IGain	SLS	3	FlxEst IGain	Same
SLS	4	ASR Cut-Off	SLS	4	ASR Cut-Off	Same
SLS	5	ASR P Gain1	SLS	5	ASR P Gain1	Same
SLS	6	ASR I Gain1	SLS	6	ASR I Gain1	Same
SLS	7	ASR LPF1	SLS	7	ASR LPF1	Same
SLS	8	ASR P Gain2	SLS	8	ASR P Gain2	Same
SLS	9	ASR I Gain2	SLS	9	ASR I Gain2	Same
SLS	10	ASR LPF2	SLS	10	ASR LPF2	Same
SLS	11	ASR RAMp	SLS	11	ASR RAMp	Same
SLS	12	ASR TarSpd	SLS	12	ASR TarSpd	Same
SLS	13	SpdEst PGainn	SLS	13	SpdEst PGainn	Same
SLS	14	SpdEst IGainn	SLS	14	SpdEst IGainn	Same
SLS	15	ACR Cut-off	SLS	15	ACR Cut-off	Same
SLS	16	ZeroAvd Sel	SLS	16	ZeroAvd Sel	Same
SLS	17	SensoredKp	SLS	17	SensoredKp	Same
SLS	18	SensoredKi	SLS	18	SensoredKi	Same
SLS	19	SensorlessKp	SLS	19	SensorlessKp	Same
SLS	20	SensorlessKi	SLS	20	SensorlessKi	Same
SLS	21	FluxEst Ref	SLS	21	FluxEst Ref	Same
SLS	22	FluxEst Fbk	SLS	22	FluxEst Fbk	Same
SLS	23	Rs Scale	SLS	23	Rs Scale	Same

6. References

❖ References

NO.	Document title	Release date
1	[AC Drive] iV5L English User's Manual	2015.06.16
2	[INV] SV-iV5 NEW CONTROL English User's Manual	2013.01.17
3	[AC Drive] SV-iV5 (MRL)	2008.01.29