Technical Note

Electronic Products Comparison Chart

SEW-Eurodrive has a wide range of electronic products that offer customers many options for improving their machinery and production processes. These products are constantly changing along with the advances in technology.

Listed below is an Electronics Products Comparison Chart along with an explanation of terms. The chart details all products at a glance for ease in selecting the most applicable inverter.

Operating Modes

- V/f (Volts per hertz) - A simple, open loop control method that maintains a constant ratio between the output voltage and frequency. No feedback is required.

- VFC (Voltage Flux Control) – SEW's term for vector control. VFC yields better speed regulation and higher starting torque than V/f mode. VFC is normally open loop (sensorless) without feedback. However, it may also be closed loop with feedback when using the MOVIDRIVE® line of inverters and a non-SEW motor. The feedback device may be either an encoder or resolver.

- CFC (Current Flux Control) – SEW's servo control mode. CFC is closed loop and requires either an encoder or a resolver for feedback. CFC enables precise speed control, torque regulation, and extremely high dynamic response.

Positioning
SEW's closed loop inverters offer both motion control and PLC functionality. Available motion commands include homing, relative positioning, and absolute positioning. The PLC functionality reads I/O, performs interrupts, and communicates with other SEW inverters.

S-Bus
SEW's system bus is a serial communication method that allows S-Bus equipped inverters to exchange data. The S-Bus is CAN based and uses up to a 1Mbaud data exchange rate. It includes an integrated, switchable terminating resistor.

Movilink® Protocol
Movilink® is protocol used to communicate between SEW inverters. It is compatible with S-Bus and RS-485 serial communication methods.

Software
All software is available free of charge from SEW's website, www.seweurodrive.com.

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	Power Range	Input Voltages (Vac)	Operating Modes	Programmable Binary I/O				Analog I/O		Electronic Line Shafting (Synchronization)	Positioning	Movilink® Protocol	RS-485	S-Bus	Fieldbus Options	Software/Interface Options	Encoder/Resolver Options	Absolute Encoder Option	Keypad
				Std		Optional													
				In	Out	In	Out	In	Out										
Movidrive® A MDx60A	2 – 15 hp	3 × 200…240	VFC, CFC	5	2	16		1 Std or 2 w/ DIO	2 w/ DIO	w/ DRS or ISync	MDV, MDS	Yes	Yes	Yes	DeviceNet, Profibus, InterBus, CANOpen, CANbus	Movitools® USS21A UWS11A	MDV, MDS	w/ DIP	DBG11
	2 – 100 hp	3 × 380…500																	
Movidrive® A *Compact* MCx4xA	2 – 15 hp	3 × 200…240	VFC, CFC	5	*2	None		*2	*1	ISync	MCV, MCS	Yes	w/ USS21A option	Yes	DeviceNet, Profibus, Interbus, CANopen, CANbus	Movitools® USS21A	MCV, MCS	No	DBG11
	2 – 100 hp	3 × 380…500																	
Movidrive® B MDX60B MDX61B	2 – 40 hp	3 × 200…240	VFC, CFC	7	5	16		2 Std or 3 w/ DIO	2 w/ DIO	w/ DRS or ISync	w/ DEH or DER	Yes	Yes	Yes	DeviceNet, Profibus, Interbus, CANOpen, EtherNet	Movitools® USB11A UWS11A UWS21A	DEH, DER	w/ DIP	DBG60
	0.75 – 175 hp	3 × 380…500																	
Movimot® MM..A	0.5 – 2 hp	3 × 380…500	V/f	None		None		1 w/ MWA	None	No	No	Yes	Yes	No	DeviceNet, Profibus, InterBus	None	No	No	MKP, MBG, MLG
Movimot® MM..B	0.5 – 3 hp	3 × 200…240	VFC	None		None		1 w/ MWA	None	No	No	Yes	Yes	No	DeviceNet, Profibus, InterBus, CANOpen, AS-interface	None	No	No	MKP, MBG, MLG, MFG
	0.5 – 5 hp	3 × 380…500																	
Movimot® MM..C	0.5 – 5 hp	3 × 380…500	VFC	None		None		1 w/ MWA	None	No	w/ NV motor option	Yes	Yes	No	DeviceNet, Profibus, InterBus, CANOpen, AS-interface	Movitools® UWS21A	NV proximity sensor	No	MKP, MBG, MLG, MFG
Movidyn®	5 – 60 A	3 × 380…500	CFC	3	1	7	6	1	2 w/ AIO	No	(-50) version or w/ API /APA options	No	Yes	No	DeviceNet, Profibus, InterBus, CANbus	MCD_Tools® USS21A	Resolver	w/ APA	ABG

* For MCx: 1 input and 1 output are available as either an analog signal or as a binary signal.

Movi Yellow shading denotes discontinued product. Information is shown for replacement purpose only.

Movi Gray shading denotes currently marketed product.

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	Power Range	Input Voltages (Vac)	Operating Modes	Programmable Binary I/O				Analog I/O		Electronic Line Shafting (Synchronization)	Positioning	Movilink® protocol	RS-485	S-Bus	Fieldbus Options	Software/Interface Options	Encoder/resolver Options	Absolute Encoder Option	Keypad
				Std		Optional													
				In	Out	In	Out	In	Out										
Movitrac® MC31C	0.75 – 10 hp	3 × 200…240	V/f	5	1	up to 5	up to 6	1 Std or 2 w/ FEA	2 w/ FEA	w/ FRS	w/ FPI	No	w/ FEA, FIO, or USS21A	No	DeviceNet, Profibus, InterBus	MCD_Tools® USS21A	w/ FPI or FEN	No	FBG
	0.75 – 60 hp	3 × 380…500																	
Movitrac® MCLTEA	0.5 – 1.5 hp	1 × 115	V/f	3	1	None	1 w/OBLT-2ROUT	1 w/ OBLT-2ANIN or OBLT-PICON	1	No	No	No	No	No	None	None	No	No	Yes
	0.5 - 3 hp	1 × 220…240																	
	1 – 5 hp	3 × 380…480																	
Movitrac® MC07A	0.5 – 3 hp	1 × 200…240	V/f, VFC	4	2	None		1	None	No	No	Yes	Yes, for setup only w/ UWS21A	Yes	DeviceNet, Profibus, Interbus, CANOpen, CANbus	Movitools® USB11A UWS21A	No	No	Yes
	0.5 – 40 hp	3 × 200…240																	
	0.75 – 60 hp	3 × 380…500																	
Movitrac® B MC07B	0.4 – 3 hp	1 × 200…240	V/f, VFC	5	3	None		1 Std or 2 w/ FIO	1 w/ FIO	No	No	Yes	w/ FSC or w/ FIO	Yes (only w/ FSC)	Profibus, EtherNet, DeviceNet	MotionStudio USB11A UWS11A UWS21A	No	No	FBG or DBG60
	0.4 – 40 hp	3 × 200…240																	
	0.4 – 60 hp	3 × 380…500																	

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