



BENSHAW
Applied Motor Controls

Product Comparison

MVRNX



It's Genius
by Benshaw

MVRXE



MANUFACTURER - SERIES	BENSHAW - MVRNX	BENSHAW - Legacy MVRMX
HMI & Communications		
Human Machine Interface (HMI)	Full-color LCD HMI with graphical backlit screen (sunlight-readable for outdoor installations)	LCD display, 2-line, alphanumeric
Multi-language menus and displays	English, Spanish, German, French, Brazilian Portuguese, Russian, Italian & Chinese (selectable)	English (Spanish is optional)
Passcode Protection	•	•
Bluetooth Low Energy (BLE)	•	
Read/Write Parameters	•	
Read Log Files	•	
Upgrade Firmware	•	
BLE Security	•	
RTD - 8 and 16 channel	Optional	Optional
Modbus RTU (RS-485)	Standard	Standard
DeviceNet		Optional
Profibus-DP	Optional	Optional
ProfiNET-DP	Optional	Optional
Ethernet/IP	Optional	Optional
ProfiNet	Optional	Optional
Modbus TCP	Optional	Optional
USB-A socket	•	
Download waveform capture files	•	
Upgrade Firmware	•	
Read/Write Parameter Sets	•	
Read Event Logs	•	

Next Gen MVRNX vs MVRMX

MANUFACTURER - SERIES	BENSHAW - MVRNX	BENSHAW - Legacy MVRMX
User IO		
Digital Inputs	Six (6) configurable digital inputs, Seven (7) fixed digital inputs	One (1) Fixed, Eight (8) programmable
Outputs	Four (4) relay outputs (2-Form "A " and 2-Form "C"), Five (5) fixed outputs	Six (6) Programmable
Analog Output	Digital offset and span adjustment	1
Control Power		
DC Control Power	4V DC (power the PC boards, digital inputs, relays, etc	
AC Control Power	120 or 240VAC, single phase (+10% /-20%)	120VAC , single phase (+10% /-20%)
Soft Starter Control Signals		
MV Voltage Measurement Inputs	•	
MV Phase Current Measurement Inputs	•	
MV Zero Sequence Fault Current Measurement Input	•	
Bypass Contactor Control Output	•	
PFC Contactor Control Output	•	
Fan Control Output	Optional	
Environmental Performance Requirements		
Environmental Gas Exposure	As defined by IEC 60721-3-3, Class 3C3	
Operating Temperature Rating	-10 to 50°C (14 to 122°F)	-10 to 40°C (14 to 104°F)
Storage Temperature Rating	-20 to 70°C (-4 to 158°F)	
Expandable Communication Bus - Max Length	20 meters (65 feet)	
Metering Accuracy	±3% of full scale	
Electromagnetic Compatibility (EMC)	IEC 60947-4-2 Class A	
Seismic (UBC Rating)	IBC, CBC UBC	
Motor Control Modes		
Auto Start/Stop (start after power-on or reset)	•	
Soft Start Control Methods	Supports two motor sets	Supports two motor sets
Constant Current	• (Future)	•
Current Ramp	•	•
Kick Start	•	•
Adaptive Control for Starting	• (Future)	
Torque Control	• (Future)	•
Power Ramp Control	• (Future)	•
Time Voltage Ramp Control	•	•
Stop Control Methods		
Coast to Stop	•	•
TVR Soft Stop	•	•
Adaptive Stop	• (Future)	
Light Duty Brake	• (Future)	
Standard Duty Brake	• (Future)	Optional
Torque Control Stop	•	•
DC Brake	• (Future)	•
Plugging Brake	• (Future)	
Motor Jog	•	•

Next Gen MVRNX vs MVRMX



MANUFACTURER - SERIES	BENSHAW - MVRNX	BENSHAW - Legacy MVRMX
Starter Protection Features		
Input Phase Loss	•	•
Loss of Sync	•	•
Current at stop	•	•
No Current at Run	•	•
SCR Protection	•	•
Heatsink Overtemperature	•	•
Starter Overcurrent2/Instantaneous Overcurrent (IOC)	•	•
Inline/Main Contactor Feedback	•	•
Bypass Contactor Feedback	•	•
Disconnect Switch Feedback	•	•
Blower Failure Detection (if provided)	•	
Fieldbus Network Loss	•	•
Internal Starter Supervision	•	
Internet of Things (IoT) Support		
MQTT	Optional	
OPCUA	Optional	
Parameters		
User and Factory	•	
Passcode Protection	•	•
Resetting to Defaults	•	
Flash Drive Transfer	•	
BLE Parameter Transfer	•	
Motor Sets	•	
Voltage Representation	•	
Real-Time Information		
Starter Statistics	•	•
Metering	•	
Pre-Start Checks	•	
Fault Handling		
Alarm Indication	•	•
Fault Action	•	•
Controlled Fault Shutdown / Soft Trip	•	•
Auto Reset Function	•	•
Fault Log	32,768 Events	99 Events
Alarm Active State Settings	•	
Maintenance Reminders		
Filter Minder (if included)	•	
Disconnect Switch Minder	•	
Self Test	•	•
Factory Test	•	•
Run Simulation	•	•
Injection Test Mode	•	

Next Gen MVRNX vs MVRMX

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Maintenance Reminders		
Debug Functions	•	
Waveform Capture	•	
Meter Value Continuous Log	•	
Meter Value Snapshot	•	
Safety		
Relay Outputs	•	•
Failsafe	•	
Powerup and Powerdown stability	•	
Warranty	3 Years (with factory commissioning)	3 Years (with factory commissioning)
Standards		
CE Directives	•	
IEC Standards	IEC 60470, IEC 60529, IEC 60604, IEC 60129, IEC 62271-102, IEC 62271-200	
NEMA Standards	NEMA ICS 3 (Parts 1&2)	NEMA ICS 3 (Parts 1&2)
UL Standards	UL347	UL347
RoHS compliant	•	
Other Standards	ISO 9001, CBC 2022, IBC 2021, NFPA 70, NFPA 70E	



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