New for 2019 . . .

**smarty dw240 series**

the world’s most advanced Universal Automation Controller

Full featured PLC
Advanced Motion Control
Smart Process Control

Distributed, deterministic processing over Ethernet

Homogeneous integration for drives, HMIs, remote I/O

savvy system design tools

Right for the IIoT future

Easy, intuitive, affordable, expandable

For systems of any size or complexity

Bardac drives
The NEW **smarty dw240 series** controller consists of a “cassette” that connects directly to system field wiring via four alternative, passive “terminal carriers”. *This means big installation savings!*

### smarty1
**basic UAC - 37 terminals - Analog & Digital I/O**

**Generic Stock Build Includes:**
- 100baseTX Ethernet, auto-negotiating, USB microB
- Power: 24VDC
- dw build options -04 -05 -25 -26, Clamp Terminals, DIN Rail Mounting

- **8 AI** analog in, -11V to +11VDC, 100KΩ, up to 1 KHz (can be used as digital inputs)
- **8 AO** analog out, ~0.2 to +10.5VDC, 10mA, up to 1KHz (can be used as DO or reference voltages)
- **8 DI** digital in, 100KΩ, 8V threshold, ±3V hysteresis, 50V max, up to 1 KHz (can also be used as event inputs)
- **8 DO** digital out, 24V source, up to 350mA (shared), over current protected

### smarty2
**advanced UAC - 37 terminals - Analog & Digital I/O**

**Generic Stock Build Includes:**
- 100baseTX Ethernet, auto-negotiating, USB microB
- XIO Port for extended I/O options
- Battery back up for realtime clock
- Port options for CAN & ModbusRTU
- Power: 24VDC
- dw build options -04 -05 -06 -10 -25 -26 -29 -39,
  - Master Modbus RTU (unisolated), Clamp Terminals, DIN Rail Mounting

- **8 AI** analog in, -11V to +11VDC, 100KΩ, up to 1 KHz (can be used as digital inputs)
- **8 AO** analog out, ±10.5VDC, 10mA, up to 1KHz (can be used as DO or reference voltages)
- **8 DI** digital in, 100KΩ, 8V threshold, ±3V hysteresis, 50V max, up to 1 KHz (can also be used as event inputs)
- **8 DO** digital out, 24V source, up to 350mA (shared), over current protected
**smarty3** advanced UAC - 61 terminals - with encoder & steppers

*Generic Stock Build Includes:* 100baseTX, auto-negotiating, USB microB | XIO Port for extended I/O options | Battery back up for realtime clock

Port options for CAN & ModbusRTU | Power: 24VDC | dw build options -04 -05 -06 -10 -25 -26 -29 -39 | Master Modbus RTU (unisolated)

Clamp Terminals | DIN Rail Mounting

- 8 AI: Analog input, -11V to +11VDC, 100KΩ, up to 1KHz (can be used as digital inputs)
- 8 AO: Analog output, ±10.5VDC, 10mA, up to 1KHz (can be used as DO or reference voltages)
- 8 DI: Digital input, 100KΩ, 8V threshold, ±3V hysteresis, 50V max, up to 1KHz (can be used as event inputs)
- 8 DO: Digital output, 24V source, up to 350mA (shared) internally current limited

- 4 FT: Frequency/Timing
  - Frequency/event input: 5V max, up to 100KHz
  - Frequency/Stepper output: 5V sinking, up to 350mA (shared)
  - F inputs can be used as event inputs or digital inputs
  - F outputs can be used to generate frequency, control stepper amplifiers or as digital outputs

- 1 AB: Encoder, differential inputs (5.5V max), up to 1MHz

---

**smarty4** advanced UAC - 103 terminals - with encoders, steppers & more!

*Generic Stock Build Includes:* 100baseTX Ethernet, auto-negotiating, USB microB | XIO Port for extended I/O options

Battery back up for realtime clock | Port options for CAN & ModbusRTU | Power: 24VDC | dw build options -04 -05 -06 -10 -25 -26 -29 -39

Master Modbus RTU (unisolated) | Clamp Terminals | DIN Rail Mounting

- 8 AI: Analog input, -11V to +11VDC, 100KΩ, up to 1KHz (can be used as digital inputs)
- 8 AO: Analog output, ±10.5VDC, 10mA, up to 1KHz (can be used as DO or reference voltages)
- 8 DI: Digital input, 100KΩ, 8V threshold, ±3V hysteresis, 50V max, up to 1KHz (can also be used as event inputs)
- 8 DO: Digital output, 24V source, up to 350mA (shared), internally current limited

- 2 CI: Current Input, 4-20mA, 0-20mA, 20-4mA, 20-0mA, 100Ω
- 6 FI: Frequency input: up to 100KHz, 30V max, 100KΩ with pull-up or pull-down. Can be event or digital inputs.
- 7 TO: Timing Output, up to 500KHz, 30V max, sinking, pull-up, up to 350mA (shared). For frequencies, steppers or DO

- 2 ABZ: Encoders, EIA-422/485 differential (5V max), up to 1MHz
- 2 AB: Reconnect terminals for encoders

---

**dw240-DM-C3CD**

- only 5.5” wide x 3.5” high x 3.1” deep
  (140mm x 87mm x 77mm)

**dw240-DM-C4CD**

- only 8.3” wide x 3.5” high x 3.1” deep
  (210mm x 87mm x 77mm)
<table>
<thead>
<tr>
<th>Feature</th>
<th>smarty¹</th>
<th>smarty²</th>
<th>smarty³</th>
<th>smarty⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Featured PLC Functions</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Advanced Process Control</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Basic Motion Control</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Advanced Motion Control</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>drive.web distributed control</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>100baseTX Ethernet</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Modbus TCP/IP &amp; EIP/PCCC</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>USB microB port</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>8 analog inputs</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>8 analog outputs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 analog outputs (unipolar outputs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 analog outputs (bipolar outputs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 digital inputs</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>8 digital outputs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 status LEDs</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>XIO extended I/O port</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Battery backup for clock</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>CANopen &amp; ModbusRTU ports</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Optional Drive Interface</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency Inputs/Outputs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 frequency inputs or timing outputs (2 steppers)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 frequency inputs + 7 timing outputs (3 steppers)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encoder</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 encoder, differential AB + reconnect terminals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 encoders, differential ABZ + reconnect terminals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Bardac Drives**

Even Faster
More Compact
More Versatile
More Memory
More I/O
Quicker, Easier Field Wiring
100% Compatible with all existing speedys, smartys, and savvyPanels!

Designed & built with ingenuity in the USA!

Bardac Drives, 40 Log Canoe Circle, Stevensville, MD 21666 (410) 604-3400 bardac.com driveweb.com