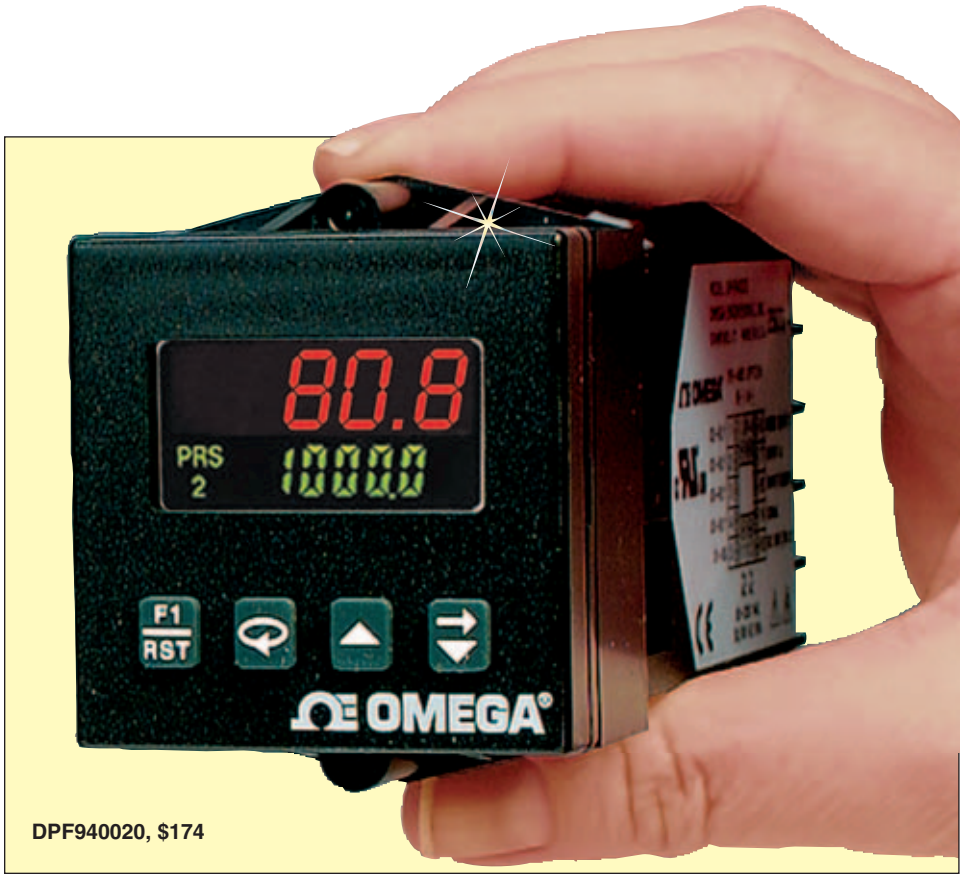
NEW 1/16 DIN COUNTERS AND BATCH CONTROLLERS

DPF940000 Series
Starts at
$148

1 YEAR WARRANTY

- **Compact 1/16 DIN Size**
- **Bi-Directional Counting, Up/Down Control**
- **2-Line, 6-Digit Display, Reflective or Backlit LCD, with Output Status Indicators**
- **Prescaler Output Available–Pulse Signal for Every Single or Every 10 Counts Registered on the Display**
- **Programmable User Inputs and Function Keys**
- **Programmable Access Privileges**
- **NEMA 4X (IP65) Sealed Bezel**
- **RS485 Communications Available**



DPF940020, $174

Available for either standard count or batch control, the DPF94 Series is available in three styles: single preset (setpoint); dual preset with dual outputs; and 3 preset batch models. Dual preset models are also available with a prescaler output, a variable width pulse that will turn off after a programmed number of count input pulses (1 thru 9). The prescaler output can also be programmed to activate on every 10 counts. Dual and 3 preset models are also available with optional RS485 communications. Each unit features a dual display, with either reflective or backlit color LCD. The main display indicates the count value (or the batch/total value when preset 3 or output 3 is viewed in the secondary display). The smaller, secondary display can be used to view the prescaler value, preset values, output time values or batch/total count values.

Single Preset
Models feature a solid-state output that operates in parallel with a relay output.

Dual Preset
Models feature two outputs that are activated from presets 1 or 2, respectively. Either relays or solid-state outputs are available.

Dual Preset with Prescaler
Models are dual preset counters with solid-state outputs. An additional output, configured as a prescaler output. A pulse signal is generated each time the display value increases. The pulse width is variable, in that the output will turn off after a programmed number of count input pulses has occurred (1 to 9). The prescaler can also be programmed to activate on every 10 counts. Prescale models are limited to two programmable count modes and prescale values of 1.00000 or less.

3 Preset Batch
Models feature a secondary counter that can be used for batch counting, or to keep a total count. This secondary counter can be programmed for one of 8 operating modes. The first two outputs are assigned to the primary process counter, while output 3 is assigned to the secondary counter.

SPECIFICATIONS

Display: 2-line by 6-digit LCD display, positive image reflective or negative image transmissive with red (top line) and green (bottom line) backlighting
Main Display: 7.62 mm (0.3") high digits
Secondary Display: 5.08 mm (0.2") high digits
Annunciators:
Value: PRS, 1, 2, and 3
Output: 01, 02, and 03
Power Requirements:
AC Power Units: 85 to 250 Vac, 50/60 Hz, 9 VA max or 11 to 14 Vdc@150 mA max (Non PNP output models)
DC Power Units: 18 to 36 Vdc; 5.5 W max or 24 Vac (±10%); 50/60 Hz; 7 VA max

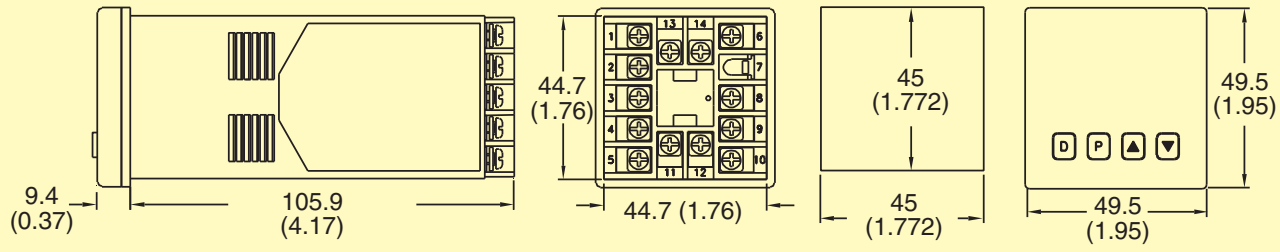
Peak (Start-Up Current):
AC or DC Power: 500 mA for 10 msec max
DC Out (Terminal 10): For units which do not have PNP current sourcing outputs, this terminal provides a DC output for sensor power (12 Vdc ±15%). The maximum sensor current is 100 mA. For units with PNP current sourcing outputs,this terminal serves a dual purpose depending on the applications PNP output voltage level and current requirements. If a higher PNP output voltage level or additional output sourcing current is desired, an external DC supply may be connected. This supply will determine the PNP output voltage level, and must be in the range of 13 to 30 Vdc. The maximum current rating of 100 mA per individual output must not be exceeded, regardless of external supply capacity.

Memory: Nonvolatile EEPROM retains all programmable parameters and count values
Sensor Power: 12 Vdc (±15%) @ 100 mA max
Count Inputs A and B: Accepts count pulses from a variety of sources, DIP switch selectable
Current Sourcing: 3.9 kΩ pull-down, VIN max = 30 Vdc
Current Sinking: 7.8 kΩ pull-up to 12 Vdc; ISNK = 1.8 mA max
Debounce: 50 Hz max
Lo Bias: VIL = 1.5 Vdc max, VIH = 3.75 Vdc min
Hi Bias: VIL = 5.5 Vdc max, VIH = 7.5 Vdc min
Maximum Count Rate: Model dependent.
Note: *See operator's manual for details*

User Inputs: Configurable as current sinking (active low) or current sourcing (active high) inputs via a single plug jumper
Current Sinking: VIL = 1.5 Vdc max, 22 kΩ pull-up to 5 Vdc
Current Sourcing: VIH = 3.5 Vdc min, VIN max = 30 Vdc; 22 kΩ pulldown
Response Time: 10 msec max Inhibit
Response Time: 250 msec max
Outputs (Output Type and Quantity, Model Dependent):
Solid-State:
NPN Open Collector: ISNK = 100 mA max @ VOL = 1.1 Vdc max; VOH = 30 Vdc max
PNP Open Collector: ISRC = 100 mA max (See note); VOH = 12 Vdc ±15% (using internal supply); VOH = 13 to 30 Vdc (using external supply)
Relay: Form A contact, Rating = 5 A @ 250 Vac, 30 Vdc (resistive load), 1/10 HP @ 120 Vac (inductive load)
Relay Life Expectancy: 100,000 cycles min at max load rating
Programmable Timed Output: User selectable output time resolution
0.01 Second Resolution: 0.01 to 99.99 sec, ± 0.01% + 20 msec max (prescalers less than 2)
0.1 Second Resolution: 0.1 to 999.9 sec, ±0.01% + 100 msec (Prescalers less than 2)
Note: *For prescaler values above 2, the timed delay output is affected by the count speed (rate).*
RS485 Serial Communications (Optional): Up to 32 units can be connected
Baud Rate: Programmable from 1200 to 9600 baud
Address: Programmable from 0 to 99

Data Format: 10 bit frame, 1 start bit, 7 or 8 data bits, 1 or no parity bit, and 1 stop bit
Parity: Programmable for odd (7 data bits), even (7 data bits), or none (8 data bits)
Electromagnetic Compatability: Refer to EMC Installation Guidelines section of the manual
Environmental Conditions:
Operating Temperature: 0 to 50°C (32 to 122°F)
Storage Temperature: -40 to 70°C (-40 to 158°F)
Operating and Storage Humidity: 85% max relative humidity (non-condensing) from 0 to 50°C
Altitude: Up to 2000 meters (6562')
Electrical Connections: Wire clamping screw terminals
Construction: Black plastic case with collar style panel latch. The panel latch can be installed for horizontal or vertical stacking. Black plastic textured bezel with clear display viewing window. Unit assembly with circuit boards can be removed from the case without removing the case from the panel or disconnecting the wiring. Front panel meets NEMA 4X (IP65) requirements for indoor use, when properly installed. Installation Category II, Pollution Degree 2
Weight: 170 g (6.0 oz)

Dimensions: mm (in)



SINGLE PRESET MODELS

DPF940611

DPF940620

MOST POPULAR MODELS HIGHLIGHTED!

To Order ***(Specify Model Number)***

AC Power Model No.	Price	DC Power Model No.	Price	Display Type (LCD)	Output(s)
DPF940600	**$148**	**DPF940601**	**$148**	Reflective	Relay and NPN
DPF940610	**168**	**DPF940611**	**180**	Reflective	Relay and PNP
DPF940620	**180**	**DPF940621**	**190**	Color backlit	Relay and NPN
DPF940630	**180**	**DPF940631**	**190**	Color backlit	Relay and PNP

Ordering Example: DPF940600, *single preset counter with reflective LCD relay and NPN outputs,* ***$148.***

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DUAL PRESET COUNTERS/ BATCH CONTROLLERS

DPF940221

DPF940230

MOST POPULAR MODELS HIGHLIGHTED!

AC Power Model No.	Price	DC Power Model No.	Price	Display Type (LCD)	Output(s)
DPF940200	$184	DPF940201	$184	Reflective	Dual relay
DPF940210	211	DPF940211	221	Reflective	Dual NPN, RS485
DPF940220	213	DPF940221	223	Reflective	Dual relay, RS485
DPF940230	193	DPF940231	204	Color backlit	Dual NPN
DPF940240	193	DPF940241	204	Color backlit	Dual PNP
DPF940250	195	DPF940251	206	Color backlit	Dual relay
DPF940260	221	DPF940261	233	Color backlit	Dual NPN, RS485
DPF940270	221	DPF940271	233	Color backlit	Dual PNP, RS485
DPF940280	223	DPF940281	235	Color backlit	Dual relay, RS485

Ordering Example: DPF940250, *dual preset counter backlit LCD with 2 relay outputs,* ***$195.***

DUAL PRESET WITH PRESCALER COUNTERS/ BATCH CONTROLLERS

DPF940420

DPF940411

AVAILABLE FOR FAST DELIVERY!

AC Power Model No.	Price	DC Power Model No.	Price	Display Type (LCD)	Output(s)
DPF940400	$193	DPF940401	$204	Reflective	Dual PNP
DPF940410	221	DPF940411	233	Reflective	Dual NPN, RS485
DPF940420	204	DPF940421	214	Color backlit	Dual NPN
DPF940430	204	DPF940431	214	Color backlit	Dual PNP
DPF940440	233	DPF940441	243	Color backlit	Dual NPN, RS485

Note: *Prescaler output models are limited to two programmable count modes and prescaler values of 1.00000 or less.*

Ordering Example: DPF940410, *dual preset counter with reflective LCD, AC power, 2 NPN outputs and RS485 communications,* ***$221.***

THREE PRESET COUNTERS/ BATCH CONTROLLERS

DPF940011

DPF940080

MOST POPULAR MODELS HIGHLIGHTED!

AC Power Model No.	Price	DC Power Model No.	Price	Display Type (LCD)	Output 1	Other Outputs
DPF940010	$193	DPF940011	$204	Reflective	PNP	Dual PNP
DPF940020	174	-	-	Reflective	NPN	Dual relay
DPF940030	195	DPF940031	185	Reflective	PNP	Dual relay
DPF940040	221	-	-	Reflective	NPN	Dual NPN, RS485
DPF940050	223	-	-	Reflective	NPN	Dual relay, RS485
DPF940060	223	DPF940061	235	Reflective	PNP	Dual relay, RS485
DPF940070	204	DPF940071	214	Color backlit	NPN	Dual NPN
DPF940080	204	DPF940081	214	Color backlit	PNP	Dual PNP
DPF940090	206	-	-	Color backlit	NPN	Dual relay
DPF940100	206	DPF940101	216	Color backlit	PNP	Dual relay
DPF940110	233	-	-	Color backlit	NPN	Dual NPN, RS485
DPF940120	235	-	-	Color backlit	NPN	Dual relay, RS485
DPF940130	235	DPF940131	245	Color backlit	PNP	Dual relay, RS485

Ordering Example: DPF940030, *3 preset batch controller with reflective LCD, PNP and dual relay outputs,* ***$195.***

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