

# pro<sup>sense</sup> Digital Panel Meters - DPM1-P Series 1/32 DIN

These models in the ProSense DPM1-P series offer a simple, low cost digital display for frequency, tachometer, and rate applications. The DPM1-P has a 4-digit 10mm character height red LED display, accepts input from AC voltage, magnetic sensors, NPN/PNP sensors, NAMUR sensors, TTL/24V encoders, or switched contacts, and provides selectable sensor excitation voltages. The meter

is powered from an external AC or DC power supply. The 1/32 DIN housing takes up minimal panel space and the meter face has an IP65 rating. Configuration parameters can be locked out to prevent unauthorized or accidental changes to the meter's operation. ProSense digital panel meters are backed by a 3 year warranty.



## Features:

- 48 x 24mm 1/32 DIN
- 4 digit (0 to 9999) red LED display
- Frequency/Tachometer/Rate modes
  - AC voltage
  - Magnetic sensor
  - NAMUR sensor
  - NPN/PNP sensor
  - TTL/24V encoder
  - Switched contact
- Selectable decimal point
- AC or DC powered
- Selectable sensor excitation voltage
- Direct or reverse scaling in Rate Mode
- Total configuration lock out



## DPM1-P Series Panel Meters

| Model           | Description                                                                                                                                    | Weight (lbs) | Price    |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------|
| <b>DPM1-P-H</b> | ProSense digital panel meter, panel mount, 1/32 DIN, 10mm 4-digit red LED, pulse or frequency input, 85-265 VAC/100-300 VDC operating voltage. | 0.24         | \$119.00 |
| <b>DPM1-P-L</b> | ProSense digital panel meter, panel mount, 1/32 DIN, 10mm 4-digit red LED, pulse or frequency input, 21-53 VAC/10.5-70 VDC operating voltage.  | 0.24         | \$119.00 |

## Technical Specifications

|                               |                         |                                                                                                                        |
|-------------------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>Signal Input</b>           | Maximum Frequency       | 7kHz (tachometer rpm or rate modes)<br>9999Hz (frequency meter mode)                                                   |
|                               | Minimum Frequency       | 0.01Hz                                                                                                                 |
| <b>AC Voltage Input</b>       | Range                   | 10 to 600 VAC                                                                                                          |
| <b>Magnetic Sensor Input</b>  | Sensitivity             | Vin min. ≥ 30mV for f ≤ 120Hz<br>Vin min. ≥ 100mV for f ≥ 1kHz                                                         |
| <b>NAMUR* Sensor Input</b>    | R <sub>C</sub>          | 1.5 kΩ                                                                                                                 |
|                               | I <sub>ON</sub>         | < 1mA DC                                                                                                               |
|                               | I <sub>OFF</sub>        | > 3mA DC                                                                                                               |
| <b>NPN/PNP Sensors Input</b>  | R <sub>C</sub>          | 3.9kΩ (NPN) ; 1.5kΩ (PNP)                                                                                              |
|                               | Logic level "0"         | < 2.4 VDC                                                                                                              |
|                               | Logic level "1"         | > 2.6 VDC                                                                                                              |
| <b>TTL/24V Encoder Input</b>  | Logic level "0"         | < 2.4 VDC                                                                                                              |
|                               | Logic level "1"         | > 2.6 VDC                                                                                                              |
| <b>Switched Contact Input</b> | V <sub>C</sub>          | 5V (internal)                                                                                                          |
|                               | R <sub>C</sub>          | 3.9kΩ                                                                                                                  |
|                               | Cutoff frequency (Fc)   | 20Hz                                                                                                                   |
| <b>Accuracy at 23°C ±5°C</b>  | Maximum error           | ± (0.01% of reading +1digit)                                                                                           |
|                               | Temperature coefficient | 50ppm / °C                                                                                                             |
|                               | Warm-up time            | 5 minutes                                                                                                              |
| <b>Power Supply and Fuses</b> | DPM1-P-H                | 85-265VAC 50/60Hz or 100-300VDC<br>(Recommended fusing, 0.1A/250V, 5mm x 20mm glass miniature or DIN 41661 equivalent) |
|                               | DPM1-P-L                | 21-53VAC 50/60Hz or 10.5-70VDC<br>(Recommended fusing, 0.5A/250V, 5mm x 20mm glass miniature or DIN 41661 equivalent)  |

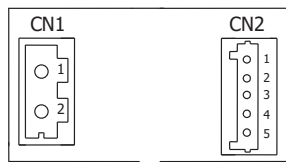
\* For more information about NAMUR sensors see [www.namur.net](http://www.namur.net).

# prosense® Digital Panel Meters - DPM1-P Series 1/32 DIN

## Technical Specifications Continued

|                                 |                                                 |                                 |
|---------------------------------|-------------------------------------------------|---------------------------------|
| <b>Power Consumption</b>        | 2.2W                                            |                                 |
| <b>Sensor Excitation</b>        | 5V@60mA, 8V@60mA and 12V@60mA (Menu selectable) |                                 |
| <b>Display</b>                  | Range                                           | 0 to 9999                       |
|                                 | Type                                            | 4-digit 10mm (0.4"), red        |
|                                 | Display refresh rate                            | 10 times per second             |
|                                 | Display / input overrange indication            | "OuE"                           |
| <b>Environmental Conditions</b> | Operating temperature                           | -10°C to +60°C (14°F to 140°F)  |
|                                 | Storage temperature                             | -25°C to +85°C (-13°F to 185°F) |
|                                 | Relative humidity (non-condensing)              | <95% @ 40°C (104°F)             |
|                                 | Maximum altitude                                | 2000m                           |
|                                 | Frontal protection degree                       | IP65                            |
| <b>Environmental Air</b>        | No corrosive gases permitted                    |                                 |
| <b>Agency Certifications</b>    | CE                                              |                                 |

## Wiring

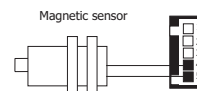
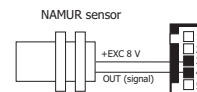
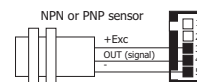
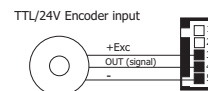
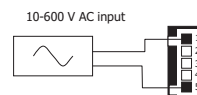


| Terminals             |                                                          |                                                          |
|-----------------------|----------------------------------------------------------|----------------------------------------------------------|
| Connector             | CN1                                                      | CN2                                                      |
| Wire cross section    | 0.08 to 2.5mm² (28 to 12 AWG)                            | 0.08 to 0.5mm² (28 to 20 AWG)                            |
| Strip length          | 8 to 9mm                                                 | 5 to 6mm                                                 |
| Manufacturer          | Wago 231-202/026-000                                     | Wago 733-105                                             |
| Cage clamp connection | Insertion tool or screwdriver with 0.5 mm x 3.0 mm blade | Insertion tool or screwdriver with 0.3 mm x 1.8 mm blade |

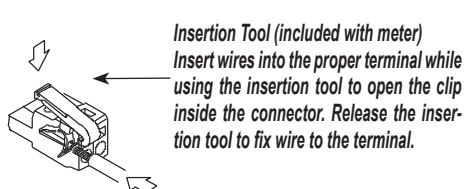
| CN1       |           |
|-----------|-----------|
| AC Supply | DC Supply |
| 1 Phase   | 1 -VDC    |
| 2 Neutral | 2 +VDC    |

| CN2          |                   |
|--------------|-------------------|
| Signal Input |                   |
| 1            | + IN (10-600V) AC |
| 2            | Not used          |
| 3            | + Excitation      |
| 4            | + IN (pulses)     |
| 5            | - IN (common)     |

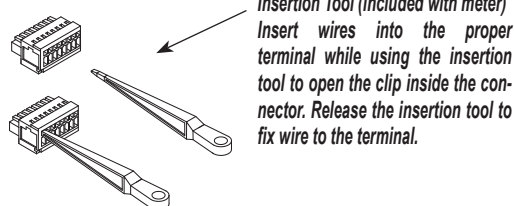
## Input Wiring Diagrams



### CN1 Terminals



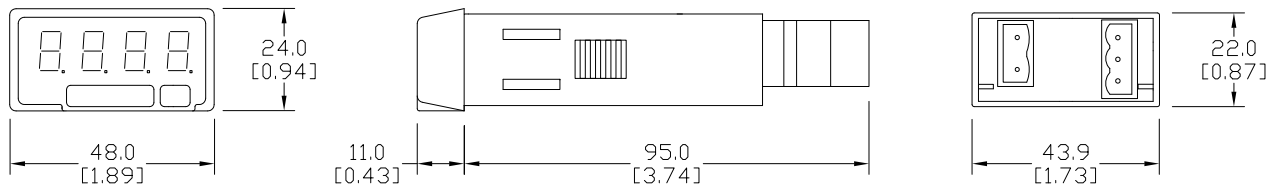
### CN2 Terminals



# prosense® Digital Panel Meters - DPM1-P Series 1/32 DIN

## Dimensions

mm [inches]



### Installation

|                      |                                         |
|----------------------|-----------------------------------------|
| <b>Dimensions</b>    | 48 x 24 x 70mm (1/32 DIN)               |
| <b>Panel Cutout</b>  | 45 x 22mm<br>(Max. panel thickness 7mm) |
| <b>Case Material</b> | Polycarbonate UL 94 V-0                 |

See our website [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete Engineering drawings.

### Insert



Scan or click the above QR code  
to be taken to the DPM1-P Series  
Quick Start Guide

# prosense® Digital Panel Meters DPM Series

## Description

The ProSense DPM family of digital panel meters includes both 1/32 DIN and 1/8 DIN meter sizes with simple menu-driven pushbutton configuration. A wide variety of input signals can be accepted for process, temperature, load cell, voltage, current, pulse, frequency, and other applications. Available output options include alarm relays, analog signal retransmission, and sensor excitation voltage. Backed by a 3-year warranty, ProSense digital panel meters offer outstanding features and performance at an incredible price point.



Type DPM1-A-LP



Type DPM1-A-T



Type DPM1-A-2R



Type DPM2



Type DPM2L



Type DPM3

Click on the thumbnail or go to  
<https://www.automationdirect.com/VID-PS-0007> for a  
 short video on Digital Panel Meters



## DPM Series Digital Panel Meters Process Input Selection Guide

| Model                          | Size                                                                       | Display                                                   | Inputs                                                                                                          | Outputs                                                                                                                                             | Power                               | Price                              |
|--------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------------------|
| <a href="#">DPM1-A-LP</a>      | 1/32 DIN                                                                   | 10mm, Red LED*, -1999 to 9999<br>Selectable decimal point | 4-20mA                                                                                                          | None                                                                                                                                                | Loop Powered                        | \$104.00                           |
| <a href="#">DPM1-A-H</a>       |                                                                            |                                                           | ±20mA, ±100mV<br>±10V, ±20V<br>±200V                                                                            |                                                                                                                                                     | 85-265 VAC, 50/60 Hz<br>100-300 VDC | \$119.00                           |
| <a href="#">DPM1-A-L</a>       |                                                                            |                                                           |                                                                                                                 |                                                                                                                                                     | 21-53 VAC, 50/60 Hz<br>10.5-70 VDC  | \$119.00                           |
| <a href="#">DPM1-T-H</a>       |                                                                            | 10mm, Red LED, -1999 to 9999                              | RTD Pt100 (3-wire)<br>TC Type J, K, T or N                                                                      |                                                                                                                                                     | 85-265 VAC, 50/60 Hz<br>100-300 VDC | \$119.00                           |
| <a href="#">DPM1-T-L</a>       |                                                                            |                                                           |                                                                                                                 |                                                                                                                                                     | 21-53 VAC, 50/60 Hz<br>10.5-70 VDC  | \$119.00                           |
| <a href="#">DPM1-A-2R-H</a>    |                                                                            | 8mm, Red LED, -1999 to 9999<br>Selectable decimal point   | ±20mA, ±100mV<br>±10V, ±60V                                                                                     | 2 Relays<br>Form A SPST<br>Normally Open                                                                                                            | 85-265 VAC, 50/60 Hz<br>100-300 VDC | \$132.00                           |
| <a href="#">DPM1-A-2R-L</a>    |                                                                            |                                                           |                                                                                                                 |                                                                                                                                                     | 21-53VAC 50/60 Hz<br>10.5-70VDC     | \$132.00                           |
| <a href="#">DPM1-A-A2R-H</a>   |                                                                            |                                                           |                                                                                                                 | 2 Relays<br>Form A SPST<br>Normally Open<br>4-20mA                                                                                                  | 85-265 VAC, 50/60 Hz<br>100-300 VDC | \$145.00                           |
| <a href="#">DPM1-A-A2R-L</a>   |                                                                            |                                                           |                                                                                                                 |                                                                                                                                                     | 21-53 VAC, 50/60 Hz<br>13.5-70 VDC  | \$145.00                           |
| <a href="#">DPM2-AT-HL</a>     |                                                                            | 1/8 DIN                                                   | DPM2: 14mm, Red LED, -9999 to 9999<br>DPM2L: 20mm, Red LED, -1999 to 9999<br>Selectable decimal point           | ±20mA, ±10V<br>±200V, 100-100k Ohm<br>potentiometer,<br>1k-50k Ohm resistance,<br>RTD Pt100 (3-wire)<br>RTD Pt1000 (4-wire)<br>TC Type J, K, T or N | None                                | 20-265 VAC, 50/60 Hz<br>11-265 VDC |
| <a href="#">DPM2L-AT-HL</a>    | 2 Relays<br>Form C SPDT                                                    |                                                           |                                                                                                                 |                                                                                                                                                     | \$149.00                            |                                    |
| <a href="#">DPM2-AT-2R-HL</a>  |                                                                            |                                                           |                                                                                                                 |                                                                                                                                                     | \$152.00                            |                                    |
| <a href="#">DPM2L-AT-2R-HL</a> |                                                                            |                                                           |                                                                                                                 |                                                                                                                                                     | \$164.00                            |                                    |
| <a href="#">DPM3-AT-H</a>      | 14mm, Red, Green, Amber LED<br>-19999 to 39999<br>Selectable decimal point |                                                           | ±20mA, ±10V<br>RTD Pt100 (3-wire)<br>TC Type J, K, T or N<br>Load Cell ±15mV, ±30mV,<br>±150mV<br>Potentiometer | None                                                                                                                                                | 85-265 VAC, 50/60Hz<br>100-300 VDC  | \$173.00                           |
| <a href="#">DPM3-AT-2R-H</a>   |                                                                            |                                                           |                                                                                                                 | 2 Relays<br>Form C SPDT                                                                                                                             |                                     | \$195.00                           |
| <a href="#">DPM3-AT-4R-H</a>   |                                                                            |                                                           |                                                                                                                 | 4 Relays Form<br>A Normally<br>Open with<br>shared<br>common                                                                                        |                                     | \$210.00                           |
| <a href="#">DPM3-AT-A-H</a>    |                                                                            |                                                           |                                                                                                                 | 4-20mA                                                                                                                                              |                                     | \$195.00                           |
| <a href="#">DPM3-AT-A2R-H</a>  |                                                                            |                                                           |                                                                                                                 | 2 Relays<br>Form C SPDT<br>4-20mA                                                                                                                   |                                     | \$217.00                           |
| <a href="#">DPM3-AT-L</a>      |                                                                            |                                                           |                                                                                                                 | None                                                                                                                                                | 22-53 VAC, 50/60 Hz<br>10.5-70 VDC  | \$173.00                           |
| <a href="#">DPM3-AT-2R-L</a>   |                                                                            |                                                           |                                                                                                                 | 2 Relays<br>Form C SPDT                                                                                                                             |                                     | \$195.00                           |
| <a href="#">DPM3-AT-4R-L</a>   |                                                                            |                                                           |                                                                                                                 | 4 Relays Form<br>A Normally<br>Open with<br>shared<br>common                                                                                        |                                     | \$210.00                           |
| <a href="#">DPM3-AT-A-L</a>    |                                                                            |                                                           |                                                                                                                 | 4-20mA                                                                                                                                              |                                     | \$195.00                           |
| <a href="#">DPM3-AT-A2R-L</a>  |                                                                            |                                                           |                                                                                                                 | 2 Relays<br>Form C SPDT<br>4-20mA                                                                                                                   |                                     | \$217.00                           |

\* Illumination based on available loop current and will not be as bright as the powered Digital Panel Meters

# prosense® Digital Panel Meters DPM Series

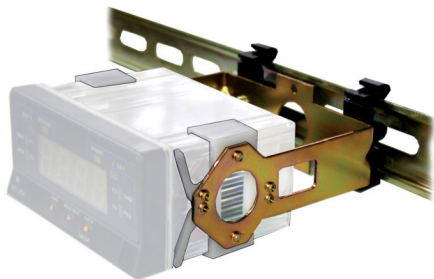
## DPM Series Digital Panel Meters Electrical Input Selection Guide

| Model                               | Size     | Display                                                                    | Inputs                                                                                                                  | Outputs                           | Power                               | Price    |
|-------------------------------------|----------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------|----------|
| <a href="#"><u>DPM1-E-H</u></a>     | 1/32 DIN | 10mm, Red LED, -1999 to 9999<br>Selectable decimal point                   | 100 / 600 VAC or VDC<br>1A / 5AAC or DC                                                                                 | None                              | 85-265 VAC, 50/60 Hz<br>100-300 VDC | \$119.00 |
| <a href="#"><u>DPM1-E-L</u></a>     |          |                                                                            |                                                                                                                         |                                   | 21-53 VAC, 50/60Hz<br>10.5-70 VDC   | \$119.00 |
| <a href="#"><u>DPM2-E-HL</u></a>    | 1/8 DIN  | 14mm, Red LED, -9999 to 9999                                               | 600 / 200 / 20 VAC or VDC<br>1A / 5A / shunt 60mV /<br>shunt 100mV AC or DC                                             | None                              | 20-265 VAC, 50/60 Hz<br>11-265 VDC  | \$139.00 |
| <a href="#"><u>DPM2-E-2R-HL</u></a> |          |                                                                            |                                                                                                                         | 2 Relays<br>Form C SPDT           |                                     | \$152.00 |
| <a href="#"><u>DPM3-E-H</u></a>     |          | 14mm, Red, Green, Amber LED<br>-19999 to 19999<br>Selectable decimal point | 600 / 200 / 20 / 2 VAC True<br>RMS or VDC<br>1A / 5A / shunt 50mV /<br>shunt 60mV / shunt 100mV<br>AC<br>True RMS or DC | None                              | 85-265 VAC<br>100-300 VDC           | \$202.00 |
| <a href="#"><u>DPM3-E-A2R-H</u></a> |          |                                                                            |                                                                                                                         | 2 Relays<br>Form C SPDT<br>4-20mA |                                     | \$239.00 |
| <a href="#"><u>DPM3-E-L</u></a>     |          |                                                                            |                                                                                                                         | None                              | 22-53 VAC<br>10.5-70 VDC            | \$202.00 |
| <a href="#"><u>DPM3-E-A2R-L</u></a> |          |                                                                            |                                                                                                                         | 2 Relays<br>Form C SPDT<br>4-20mA |                                     | \$239.00 |

## DPM Series Digital Panel Meters Pulse, Frequency Input Selection Guide

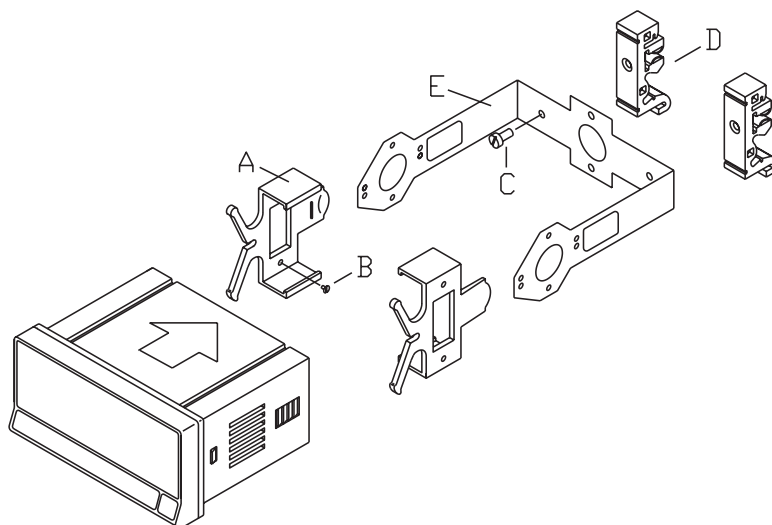
| Model                               | Size     | Display                                                                                                       | Inputs                                                                                      | Outputs                                            | Power                     | Price    |
|-------------------------------------|----------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------|----------|
| <a href="#"><u>DPM1-P-H</u></a>     | 1/32 DIN | 10mm, Red LED, 0 to 9999<br>Selectable decimal point                                                          | 7kHz (tachometer rpm or<br>rate modes)<br>9999Hz (frequency meter<br>mode)                  | None                                               | 85-265 VAC<br>100-300 VDC | \$119.00 |
| <a href="#"><u>DPM1-P-L</u></a>     |          |                                                                                                               |                                                                                             |                                                    | 1-53 VAC<br>10.5-70 VDC   | \$119.00 |
| <a href="#"><u>DPM1-P-A2R-H</u></a> |          | 8mm, Red LED, 0 to 9999<br>Selectable decimal point                                                           | 12kHz (tachometer rpm or<br>rate modes)<br>9999Hz (frequency mode)<br>100Hz (duty/PWM mode) | 2 Relays<br>Form A SPST<br>Normally Open<br>4-20mA | 85-265 VAC<br>100-300 VDC | \$145.00 |
| <a href="#"><u>DPM1-P-A2R-L</u></a> |          |                                                                                                               |                                                                                             |                                                    | 21-53 VAC<br>13.5-70 VDC  | \$145.00 |
| <a href="#"><u>DPM2-P-HL</u></a>    | 1/8 DIN  | 14mm, Red LED, 0 to 9999, 0 to 999999<br>Totalizer<br>Selectable decimal point                                | 7.5 kHz (counter mode)<br>25kHz (tachometer rpm or<br>rate modes)                           | None                                               | 20-265 VAC<br>11-265 VDC  | \$139.00 |
| <a href="#"><u>DPM2-P-2R-HL</u></a> |          |                                                                                                               |                                                                                             | 2 Relays<br>Form C SPDT                            |                           | \$152.00 |
| <a href="#"><u>DPM3-P-H</u></a>     |          | 14mm Red, Green, Amber LED<br>-99999 to 99999, -9999999 to 9999999<br>Totalizer<br>Programmable decimal point | 19kHz (without totalizer)<br>9.9 kHz (with totalizer)                                       | None                                               | 85-265 VAC<br>100-300 VDC | \$173.00 |
| <a href="#"><u>DPM3-P-A2R-H</u></a> |          |                                                                                                               |                                                                                             | 2 Relays<br>Form C SPDT<br>4-20mA                  |                           | \$217.00 |
| <a href="#"><u>DPM3-P-L</u></a>     |          |                                                                                                               |                                                                                             | None                                               | 22-53 VAC<br>10.5-70 VDC  | \$173.00 |
| <a href="#"><u>DPM3-P-A2R-L</u></a> |          |                                                                                                               |                                                                                             | 2 Relays<br>Form C SPDT<br>4-20mA                  |                           | \$217.00 |

# prosense® Digital Panel Meter Accessories



## Panel Meter Accessories

| Model                           | Description                                                                                                      | Weight (lbs) | Drawing Link               | Price   |
|---------------------------------|------------------------------------------------------------------------------------------------------------------|--------------|----------------------------|---------|
| <a href="#"><u>DPM-BKT1</u></a> | ProSense panel mount bracket, for use with DPM2 and DPM3 series 1/8 DIN digital panel meters. Hardware included. | 0.3          | <a href="#"><u>PDF</u></a> | \$22.50 |



The DPM-BKT1 kit includes:

- A. 2 mounting clips.
  - B. 4 screws M3 x 6 DIN 963 to attach the clips to the inside of the arms of part E.
  - C. 2 screws M4 x 8 DIN 84 to attach DIN rail clips to part E.
  - D. 2 DIN rail clips (DIN rail EN50022 or EN50035).
  - E. 1 metal bracket.
- (Panel Meter not included)

### Insert



Scan or click the above QR code to be taken to the [DPM-BKT1](#) Insert

See our website [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete Engineering drawings.