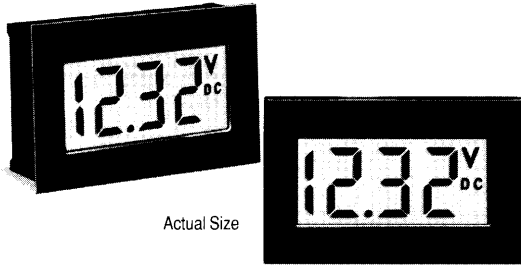


939-948  
939-950



## DMS-20LCD-DCM

Self-Powered, LCD, Positive Input, DC Voltage Monitors

### Features

- Self-powered, only two connections required
- +6.50-18.00Vdc (0.01V resolution) or +8.0-40.0Vdc (0.1V resolution) input ranges
- Ideal for battery-powered systems
- Reverse polarity protected
- Built-in "V<sub>DC</sub>" annunciator
- Large (0.37"/9.4mm) LCD display
- Subminiature 1.38" x 0.88" x 0.66" package
- Rugged, ABS package
- Low cost — made in the USA!

### Functional Specifications

#### Input

Voltage Range: ①

DMS-20LCD-0-DCM	+6.50 to +18.00Vdc
DMS-20LCD-1-DCM	+8.0 to +40.0Vdc

Current Consumption:

DMS-20LCD-0-DCM	3mA (max. at V <sub>IN</sub> =+12V)
DMS-20LCD-1-DCM	2.5mA (max. at V <sub>IN</sub> =+24V)

#### Performance

Sampling Rate 2.5 readings/second

Accuracy @ +25°C:

DMS-20LCD-0-DCM	±0.01V (typ.), ±0.03V (max.)
DMS-20LCD-1-DCM	±0.1V (typ.), ±0.2V (max.)

Temperature Drift (0 to +60°C):

DMS-20LCD-0-DCM	±0.4 counts/°C (max.)
DMS-20LCD-1-DCM	±0.04 counts/°C (max.)

#### Physical

Display Type:

DMS-20LCD-0-DCM	3½ digit LCD, 0.37"/9.4mm high
DMS-20LCD-1-DCM	3 digit LCD, 0.37"/9.4mm high

Weight 0.5 ounces (14 grams)

Case Material ABS

#### Environmental

Operating Temperature 0 to +60°C

Storage Temperature -20 to +75°C

Humidity (Non-condensing) 0 to 95%

① Operation and accuracy at voltages above or below this range are not specified.

### Ordering Information

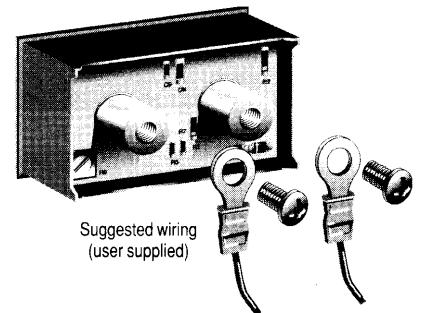
<b>DMS-20LCD-0-DCM</b>	+6.50-18.00Vdc (0.01V resolution) dc monitor
<b>DMS-20LCD-1-DCM</b>	+8.0-40.0Vdc (0.1V resolution) dc monitor
<b>DMS-20-CP</b>	Panel cutout punch
<b>DMS-BZL3</b>	Panel mount bezel
<b>DMS-BZL4</b>	Panel mount bezel with sealing gasket

Brass screws (6-32 thread) and a panel mount retaining clip are supplied with all models.

DATEL's new DMS-20LCD-DCM, self-contained, self-powered, dc voltage monitors set new standards for quality, performance, size and cost. Simply apply power to the two rear terminals and the unit is operational. No additional components are required! The large, 0.37"/9.4mm high, LCD display, with built-in "V<sub>DC</sub>" annunciator, can be easily read from 10 feet. Two models are available: one for 12Vdc nominal operation (+6.5-18V range, 0.01V resolution), the other for 24Vdc nominal operation (+8-40V range, 0.1V resolution). Reverse polarity protection is standard on both models.

The DMS-20LCD-DCM utilizes a precision analog-to-digital converter and ultra-stable passive components to achieve excellent performance

over the operating temperature range of 0 to +60°C. A rugged, ABS plastic package provides excellent protection against shock and vibration. DMS-20LCD-DCM is without a doubt the most rugged, LCD-display, digital voltmeter available anywhere, at any price.

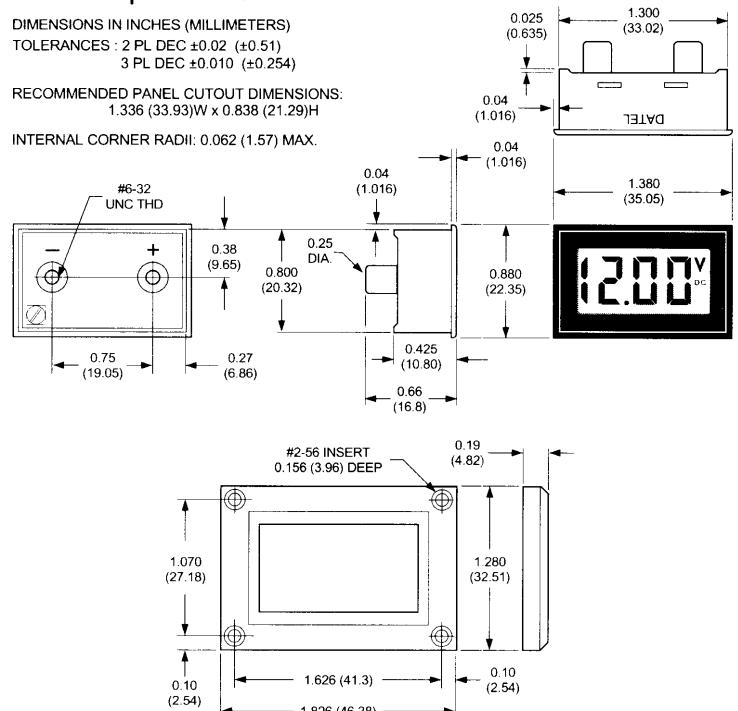


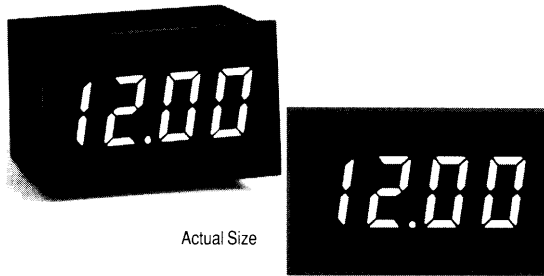
### Mechanical Specifications

DIMENSIONS IN INCHES (MILLIMETERS)  
TOLERANCES : 2 PL DEC ±0.02 (±0.51)  
3 PL DEC ±0.010 (±0.254)

RECOMMENDED PANEL CUTOUT DIMENSIONS:  
1.336 (33.93)W x 0.838 (21.29)H

INTERNAL CORNER RADII: 0.062 (1.57) MAX.





## DMS-20PC-0/1/2-DCM

Self-Powered, LED, Positive Input, DC Voltage Monitors

### Features

- Self-powered, only two connections required
- +4.5-20Vdc, +18-50Vdc and +30-264Vdc models
- Ideal replacements for analog panel meters
- Reverse polarity protected
- Ultra-low power consumption (8mA typ.)
- 0.37"/9.4mm high, bright red, LED display
- Subminiature 1.38" x 0.88" x 1.0" package
- Super reliable, epoxy-encapsulated, construction
- Low cost — made in the USA!

### Functional Specifications

#### DMS-20PC-0-DCM

Input Voltage Range ①	+4.5 to +19.99Vdc
Current Consumption	13.0mA (max.)
Measurement Resolution	0.01V
Measurement Accuracy @ +25°C	±0.01V (typ.), ±0.03V (max.)

#### DMS-20PC-1-DCM

Input Voltage Range ①	+18 to +50Vdc
Current Consumption	13.0mA (max.)
Measurement Resolution	0.1V
Measurement Accuracy @ +25°C	±0.1V (typ.), ±0.2V (max.)

#### DMS-20PC-2-DCM

Input Voltage Range ①	+30 to +264Vdc
Current Consumption	7.0mA (max.)
Measurement Resolution	1V
Measurement Accuracy @ +25°C	±1V (typ.), ±2V (max.)

### General Specifications

Display Type	3 and 3½ digit, red LED
	0.37"/9.4mm high
Sampling Rate	2.5 readings/second
<b>Environmental</b>	
Operating /Storage Temperature	-25 to +60°C/-40 to +75°C
Humidity (Non-condensing)	0 to 95%

### Mechanical

Dimensions	1.38" x 0.88" x 1.00"
Weight	1 ounce (28 grams)

① Operation and accuracy at voltages above or below this range are not specified.

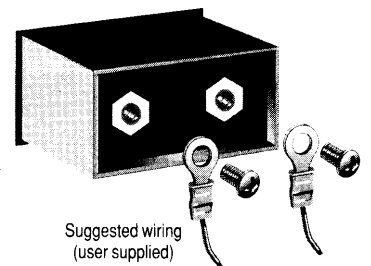
### Ordering Information

DMS-20PC-0-DCM	+4.5 to +19.99Vdc input range dc monitor
DMS-20PC-1-DCM	+18 to +50Vdc input range dc monitor
DMS-20PC-2-DCM	+30 to +264Vdc input range dc monitor
DMS-20-CP	Panel cutout punch
DMS-BZL3	Panel mount bezel assembly
DMS-BZL4	Panel mount bezel with sealing gasket

Brass screws (6-32 thread) and a panel mount retaining clip are supplied with all models.

DATEL's new DMS-20PC-DCM Series of self-powered, positive-reading, digital dc voltage monitors are perfect replacements for older, hard-to-read, analog panel meters. Simply connect a positive dc voltage across the two rear terminals and the meter is fully operational — no additional components or power supplies are required! The large, 0.37"/9.4mm high, bright red, LED display can be easily read from 12 feet away. Three input-voltage versions are available: one for +4.5-19.99Vdc (0.01 Volt resolution), one for +18-50Vdc (0.1 Volt resolution), and one for +30-264Vdc (1 Volt resolution). Built-in reverse polarity protection on all models assures simple, trouble-free installation.

All DMS-20PC-DCM's feature a high-resolution, 3½ digit analog-to-digital converter and precision metal-film resistors to achieve outstanding performance over their entire operating temperature range of -25 to +60°C. A rugged, epoxy-encapsulated, polycarbonate case (available only from DATEL!) provides excellent protection against moisture, shock and vibration. The DMS-20PC-DCM's are designed to fit into the same size panel cutout as DATEL's popular DMS-20PC-1-LM ac line voltage monitor.

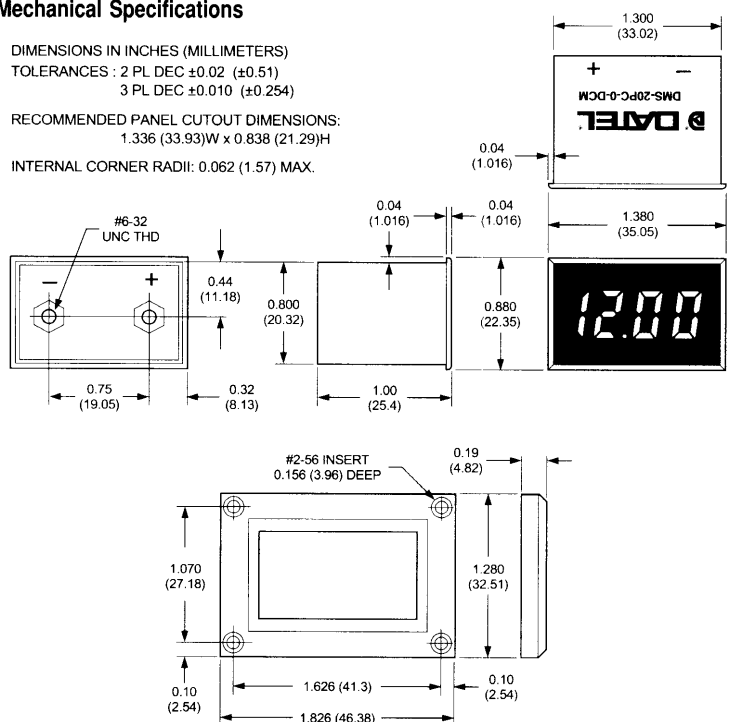


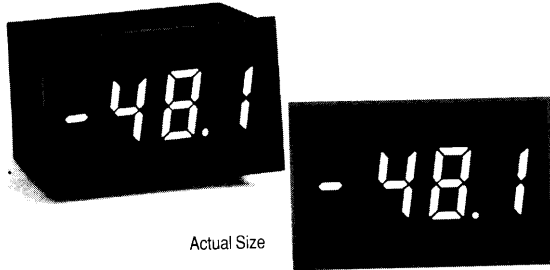
### Mechanical Specifications

DIMENSIONS IN INCHES (MILLIMETERS)  
TOLERANCES : 2 PL DEC ±0.02 (±0.51)  
3 PL DEC ±0.010 (±0.254)

RECOMMENDED PANEL CUTOUT DIMENSIONS:  
1.336 (33.93)W x 0.838 (21.29)H

INTERNAL CORNER RADI: 0.062 (1.57) MAX.





## DMS-20PC-4/5/6-DCM

Self-Powered, LED, Negative Input, DC Voltage Monitors

### Features

- Self-powered, only two connections required
- -4.5 to -20Vdc, -18 to -50Vdc, and -30 to -264Vdc models
- Great for -48Vdc Telecom power monitoring
- Can be used with positive-reading DMS-20PC-DCM's
- Ultra-low power consumption (8mA typ.)
- Reverse polarity protected
- 0.37"/9.4mm high, bright red, LED display
- Subminiature 1.38" x 0.88" x 1.0" package

### Functional Specifications

<b>DMS-20PC-4-DCM</b>	
Input Voltage Range ①	-4.5 to -19.99Vdc
Current Consumption	13.0mA (max.)
Measurement Resolution	0.01V
Measurement Accuracy @ +25°C	±0.01V (typ.), ±0.03V (max.)

<b>DMS-20PC-5-DCM</b>	
Input Voltage Range ①	-18 to -50Vdc
Current Consumption	13.0mA (max.)
Measurement Resolution	0.1V
Measurement Accuracy @ +25°C	±0.1V (typ.), ±0.2V (max.)

<b>DMS-20PC-6-DCM</b>	
Input Voltage Range ①	-30 to -264Vdc
Current Consumption	7.0mA (max.)
Measurement Resolution	1V
Measurement Accuracy @ +25°C	±1V (typ.), ±2V (max.)

### General Specifications

Display Type	3 and 3½ digit, red LED
Sampling Rate	0.37"/9.4mm high
Environmental	2.5 readings/second
Operating/Storage Temperature	-25 to +60°C/-40 to +75°C
Humidity (Non-condensing)	0 to 95%

### Mechanical

Dimensions	1.38" x 0.88" x 1.00"
Weight	1 ounce (28 grams)

① Operation and accuracy at voltages above or below this range are not specified.

### Ordering Information

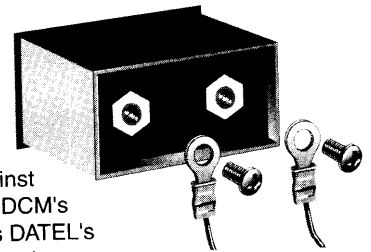
<b>DMS-20PC-4-DCM</b>	-4.5 to -19.99Vdc input range dc monitor
<b>DMS-20PC-5-DCM</b>	-18 to -50Vdc input range dc monitor
<b>DMS-20PC-6-DCM</b>	-30 to -264Vdc input range dc monitor
<b>DMS-20-CP</b>	Panel cutout punch
<b>DMS-BZL3</b>	Panel mount bezel assembly
<b>DMS-BZL4</b>	Panel mount bezel with sealing gasket

Brass screws (6-32 thread) and a panel mount retaining clip are supplied with all models.

DATEL's new DMS-20PC-DCM Series of self-powered, negative-reading, digital dc voltage monitors are perfect replacements for older, hard-to-read, analog panel meters. Simply connect a negative dc voltage across the two rear terminals and the meter is fully operational! Negative-input DCM's can be easily combined with positive-reading DMS-20PC-DCM's for monitoring dual-polarity power supplies.

Three input-voltage versions are available: one for -4.5 to -19.99Vdc (0.01 Volt resolution), one for -18 to -50Vdc (0.1 Volt resolution), and one for -30 to -264Vdc (1 Volt resolution). Their large, 0.37"/9.4mm high, bright red LED display can be easily read from 12 feet away. Built-in reverse polarity protection on all models assures simple, trouble-free installation.

All DMS-20PC-DCM's employ a high-resolution, 3½ digit analog-to-digital converter and precision metal-film resistors to achieve outstanding performance over their entire operating temperature range of -25 to +60°C. A rugged, epoxy-encapsulated, polycarbonate case (a feature available only from DATEL!) provides excellent protection against moisture, shock and vibration. DMS-20PC-DCM's have the same panel cutout dimensions as DATEL's popular DMS-20PC-1-LM ac line voltage monitors.



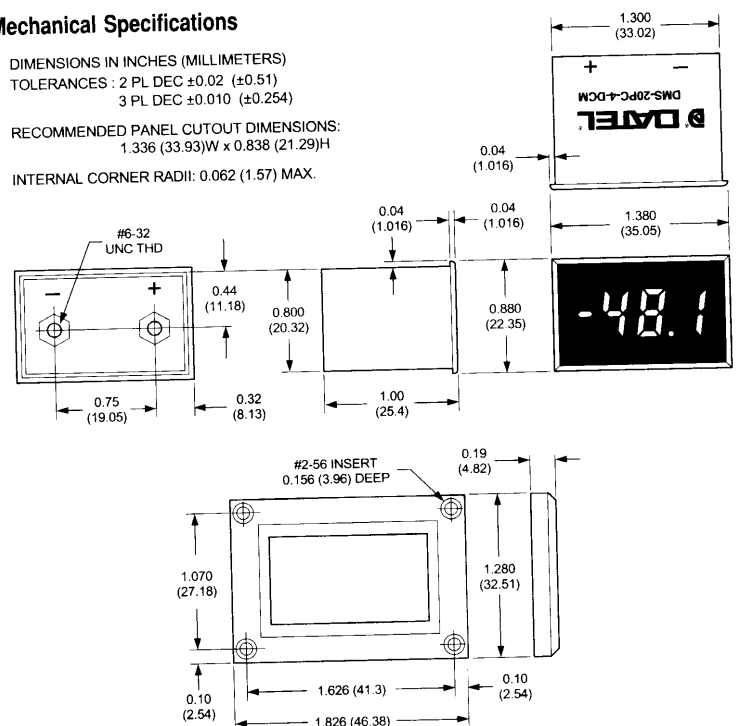
Suggested wiring (user supplied)

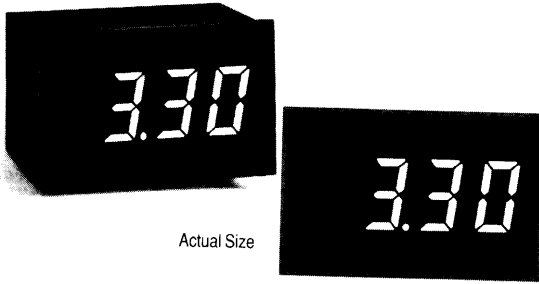
### Mechanical Specifications

DIMENSIONS IN INCHES (MILLIMETERS)  
TOLERANCES : 2 PL DEC ±0.02 (±0.51)  
3 PL DEC ±0.010 (±0.254)

RECOMMENDED PANEL CUTOUT DIMENSIONS:  
1.336 (33.93)W x 0.838 (21.29)H

INTERNAL CORNER RADIUS: 0.062 (1.57) MAX.





# DMS-20PC-3-DCM

## +2 to +6Vdc, Self-Powered LED Display, Voltage Monitor

### Features

- Self-powered, only two connections required
- +2 to +6Vdc input range
- 0.01V resolution;  $\pm 0.05\%$  accuracy
- Ideal for low-voltage (3.3V) power supply monitoring
- Digital replacement for analog panel meters
- 0.37"/9.4mm high, bright red, LED display
- Subminiature 1.38" x 0.88" x 1.0" package
- Super reliable, epoxy-encapsulated, construction
- Reverse polarity protected
- -25 to +60°C temperature range
- Low power consumption

### Functional Specifications

#### DMS-20PC-3-DCM

Input Voltage Range ①	+2 to +6Vdc
Current Consumption @ 2.0Vdc	55mA (max.)
Current Consumption @ 3.0Vdc	80mA (max.)
Current Consumption @ 6.0Vdc	50mA (max.)
Measurement Resolution	0.01V
Measurement Accuracy @ +25°C	$\pm 0.01V$ (typ.), $\pm 0.02V$ (max.)

### General Specifications

Display Type	3 digit, red LED
Sampling Rate	0.37"/9.4mm high
Environmental	2.5 readings/second
Operating Temperature	-25 to +60°C
Storage Temperature	-40 to +75°C
Humidity (Non-condensing)	0 to 95%

### Mechanical

Dimensions	1.38" x 0.88" x 1.00"
Weight	1 ounce (28 grams)

① Operation and accuracy at voltages above or below this range are not specified.

### Ordering Information

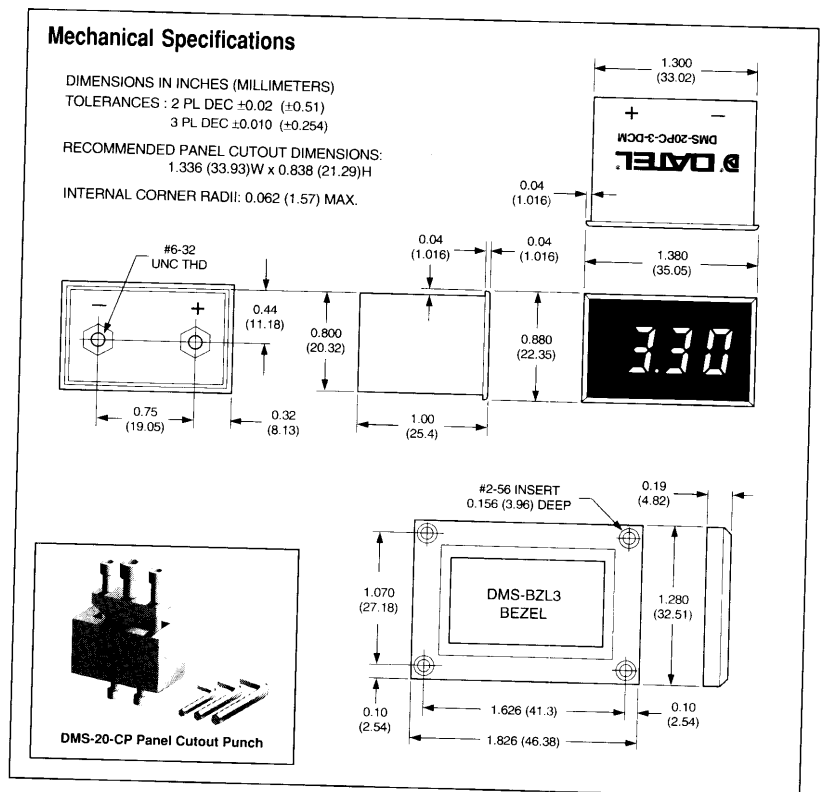
<b>DMS-20PC-3-DCM</b>	+2 to +6Vdc input range dc monitor
<b>DMS-20-CP</b>	Panel cutout punch
<b>DMS-BZL3</b>	Panel mount bezel assembly
<b>DMS-BZL4</b>	Panel mount bezel with sealing gasket

Brass screws (6-32 thread) and a panel mount retaining clip are supplied with all models.

DATEL's new DMS-20PC-3-DCM self-powered dc voltage monitor is perfect for precision monitoring of all low-voltage power supplies. Simply connect a positive dc voltage to its two rear terminals and the meter is fully operational — no additional components are required! A measurement resolution of 0.01Vdc enables precise adjustment of power supply outputs. The large, 0.37"/9.4mm high, bright red, LED display, unlike most LCD's, can be easily read from 12 feet away under virtually any lighting conditions. Built-in reverse polarity protection assures quick, trouble-free installation.

The DMS-20PC-3-DCM utilizes a high-resolution, 3 digit analog-to-digital converter and precision metal-film resistors to achieve outstanding performance over its operating temperature range of -25 to +60°C. A rugged, epoxy-encapsulated, polycarbonate case provides excellent protection against moisture, shock and vibration.

The DMS-20PC-3-DCM uses the same panel cutout dimensions as all DMS-20 Series panel voltmeters and monitors; this feature assures uniform displays in multiple-meter applications.



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DS-0351A 05/97

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