



# DFM 600

## Defibrillator/Monitor

## Standard Configuration

ECG, RESP, Thermal Recorder

## Optional

12-Lead ECG, NIBP, TEMP, PR, EtCO<sub>2</sub>, IBP, SPO<sub>2</sub>

## Safety Standards

ISO 13485:2016 approved, CE marking according to MDD93/42/EEC

## Physical Characteristics

Size: 323 mm × 277 mm × 338 mm  
Weight: 7.2 kg  
Screen Size: 8.4" TFT Screen  
Resolution: 800 × 600  
Waveforms: 4 waveforms

## Operation Environment

Temperature: 0~45°C  
Humidity: 10%~95%, non-condensation  
Water Resistance: IP44 (without external power)  
Solids Resistance: IP4X  
Power requirement: 100-240 V~, 50/60 Hz±1 Hz  
Battery type: Rechargeable Lithium-ion battery  
Battery capacity: 4500 mAh, d.c.14.8 V  
Battery number: Max 2  
Battery recharging Time: Less than 2 hours to 80% and less than 3 hours to 100% with equipment power off

Battery backup: Monitoring Mode: 12 hours;  
(Two new, fully charged battery) Defib Mode: 420 times (360J charge at intervals of 1 minute without recording);  
Pacing Mode: 9 hours (50 Ω load impedance,  
Pacing rate: 80 bpm,  
Pacing output: 60 mA, without recording)

Brightness: Manual from 1 to 10

## Indicators

Two alarm indicators  
Power indicator  
Battery indicator  
Maintain indicator  
Error indicator  
QRS beep and alarm sound  
Operating key sound

## Interface

USB interface  
RJ45 interface  
AC power input  
VGA interface  
Multi-functional connector





### Data storage

|                    |                                                                                  |
|--------------------|----------------------------------------------------------------------------------|
| Alarm Event:       | 200 groups                                                                       |
| Patient profiles:  | 1000 groups                                                                      |
| Wave Review:       | 48 hours                                                                         |
| NIBP Review:       | 2000 groups                                                                      |
| Trend Graph:       | 160 hours                                                                        |
| Trend Table:       | 160 hours                                                                        |
| ECG report:        | 500 cases of 12-lead ECG diagnosis report (Up to 5 case reports per patient)     |
| Voice recording:   | Max 240 min in total; (Up to 60 min for each patient)                            |
| Marked events:     | Available                                                                        |
| Power-off storage: | Yes                                                                              |
| Alarm:             | User-adjustable High and Low 3-level Limits; Prioritized audio and visual alarms |
| Network:           | Connected to Central Monitoring System by hardwire/wireless                      |

### Recorder

|                      |                                    |
|----------------------|------------------------------------|
| Type:                | Built-in; Thermal array            |
| Channel:             | 4 channel waveforms                |
| Real-time recording: | 3s, 16s, 32s, auto                 |
| Speed:               | 12.5/25/50 mm/s                    |
| Record width:        | 80 mm                              |
| Resolution:          | 8 dot/mm (Horizontal and vertical) |
| Background grid:     | Configurable                       |
| External printer:    | Yes                                |

### Defibrillator

|                                          |                                                                                                                     |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Operating mode:                          | Manual Mode, AED Mode, Synchronous defibrillation                                                                   |
| Waveform:                                | Biphasic truncated exponential waveform, with impedance compensation                                                |
| Defibrillation pathway:                  | External defibrillation & Internal defibrillation                                                                   |
| Electrode type:                          | External defibrillation electrode plate, multifunctional electrode pads and internal defibrillation electrode plate |
| External defibrillation electrode plate: | Supports charging, discharging, energy selection and other operational functions; Charging completion indicator     |

|                                 |                                                                                                                                                                                                                       |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Charge Time:<br>(Battery power) | Less than 5 seconds to 200 Joules with a new, fully charged battery<br>Less than 8 seconds to 360 Joules with a new, fully charged battery                                                                            |
| Energy accuracy:                | $\pm 1.5J$ or $\pm 10\%$ of setting, whichever is higher, into $50\Omega \pm 2J$ or 15% of setting, whichever is higher, into 25 $\Omega$ , 75 $\Omega$ , 100 $\Omega$ , 125 $\Omega$ , 150 $\Omega$ , 175 $\Omega$ , |
| Patient Impedance Range:        | 25~300 $\Omega$ (External defibrillation); 15~250 $\Omega$ (Internal defibrillation)                                                                                                                                  |
| Defibrillation proof:           | Type CF: ECG, RESP, SpO <sub>2</sub> , NIBP, IBP, TEMP, PR;<br>Type BF: CO <sub>2</sub>                                                                                                                               |

### Manual Mode

|                            |                                                                                                                    |
|----------------------------|--------------------------------------------------------------------------------------------------------------------|
| External defibrillation:   | 1J~360J                                                                                                            |
| Internal defibrillation:   | 1J~50J                                                                                                             |
| Synchronous Cardioversion: | Energy transfer begins within 60ms of the QRS peak; Energy transfer begins within 25ms of the External Sync signal |

### AED

|                   |                   |
|-------------------|-------------------|
| Output Energy:    | User configurable |
| AED Shock Series: | Configurable      |

### Ambulance Fixing Bracket (Optional)



DFM 600 Ambulance Fixing Bracket (It is used together with DFM 600 Packet)





### Noninvasive Pacing

|                |                                                                 |
|----------------|-----------------------------------------------------------------|
| Waveform:      | Monophasic square wave pulse                                    |
| Pulse Width:   | 20 ms                                                           |
| Accuracy:      | ±5%                                                             |
| Pacing Mode:   | Demand or fixed                                                 |
| Pacing rate:   | 40 bpm to 170 bpm                                               |
| Accuracy:      | ±1 bpm or ±1.5%<br>(whichever is higher)                        |
| Pacing output: | 0 mA to 200 mA                                                  |
| Accuracy:      | ±5% or ±5 mA, whichever is higher                               |
| 4:1 pacing:    | Pacing pulse frequency reduced<br>by factor of 4 when activated |

### Monitoring ECG

|                                         |                                                                                                                                                          |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lead Type:                              | 3 lead ECG, 5 lead ECG, 12<br>leads ECG, AUTO                                                                                                            |
| Lead selection:                         | 12-Lead I; II; III; aVR; aVL; aVF;<br>V1~V6<br>5-lead: I; II; III; aVR; aVL;<br>aVF; V<br>3-lead: I; II; III                                             |
| Multi-lead<br>synchronization analysis: | Available ECG size: Auto, 1.25<br>mm/mV (×0.125), 2.5 mm/mV (×0.25),<br>5 mm/mV (×0.5), 10 mm/mV (×1),<br>20 mm/mV (×2), 40 mm/mV (×4),<br>Less than ±5% |
| Accuracy:                               | 625mm/s, 125mm/s, 25mm/s, 50mm/s                                                                                                                         |
| Sweep speed:                            | Less than ±10% Heart Rate                                                                                                                                |
| Accuracy:                               |                                                                                                                                                          |
| Measurement &<br>alarm range:           | Adult: 15~300bpm<br>Pediatric/Neonate: 15~350 bpm                                                                                                        |
| Resolution:                             | 1 bpm                                                                                                                                                    |
| Accuracy:                               | ±1% or ±1bpm (whichever is higher)                                                                                                                       |
| Bandwidth:                              | MON: 0.5~40 Hz<br>DIA: 0.05~150 Hz<br>Treat: 1~20 Hz<br>ST: 0.05~40 Hz                                                                                   |
| CMRR:                                   | MON: >105 dB<br>DIA: >90 dB<br>Treat: >105 dB<br>ST: >105 dB                                                                                             |
| Input Impedance:                        | ≥5 MΩ                                                                                                                                                    |
| Input signal range:                     | ±8 mV                                                                                                                                                    |
| HR trigger value:                       | 200 μV                                                                                                                                                   |
| Lead off detection current:             | Measuring electrode: <0.1 μA<br>Driving electrode: <1 μA                                                                                                 |
| Pacemaker pulse<br>suppression switch:  | Manual selection when the<br>pacemaker is turned on                                                                                                      |
| Analog output:                          | Magnification: 1:1000;<br>Accuracy: ±5%<br>Bandwidth: 0.5 Hz~40 Hz<br>Delay: ≤35 ms                                                                      |
| ST Detection:                           | -2.0 mV~+2.0 mV                                                                                                                                          |

|                      |                                                                         |
|----------------------|-------------------------------------------------------------------------|
| Resolution:          | 0.01 mV                                                                 |
| Accuracy:            | -0.8 mV ~ +0.8 mV: $\pm 0.02$ mV<br>or $\pm 10\%$ ; Others: Unspecified |
| System noise:        | Less than 25 $\mu$ V                                                    |
| Calibration voltage: | 1 mV;                                                                   |
| Accuracy:            | $\pm 5\%$                                                               |
| Arrhythmia Analysis: | 26 Types                                                                |
| Pacemaker detection: | Detectable                                                              |

### Defibrillation ECG

|                                      |                                                    |
|--------------------------------------|----------------------------------------------------|
| Lead Type:                           | Single lead ECG                                    |
| Heart Rate measurement& alarm range: | Adult: 15~300 bpm<br>Pediatric/Neonate: 15~350 bpm |
| Resolution:                          | 1 bpm                                              |
| Accuracy:                            | $\pm 1\%$ or $\pm 1$ bpm (whichever is higher)     |
| Bandwidth:                           | Defib: 1~20 Hz                                     |
| CMRR:                                | Defib: $>105$ dB                                   |
| Input Impedance:                     | $\geq 5$ M $\Omega$                                |
| Input signal range:                  | $\pm 8$ mV                                         |
| HR trigger value                     | 200 $\mu$ V                                        |
| Arrhythmia Analysis:                 | 5 Types                                            |

### Respiration

|                       |                                                                                       |
|-----------------------|---------------------------------------------------------------------------------------|
| Method:               | RA-LL Impedance Method                                                                |
| RR measurement range: | Adult: 0~120 bpm<br>Pediatric/Neonate: 0 ~150 bpm                                     |
| Accuracy:             | 7~150 rpm: $\pm 2$ rpm or $\pm 2\%$<br>(whichever is greater)<br>0~6 rpm: unspecified |
| Apnea Alarm:          | Adult: 10s~60s Ped/Neo: 10s~20s                                                       |
| Accuracy:             | $\pm 5s$                                                                              |
| Alarm:                | Audible and visual alarm; alarm events reviewable                                     |

### NIBP

|                              |                                                                                    |
|------------------------------|------------------------------------------------------------------------------------|
| Method                       | Automatic oscillometric                                                            |
| Work mode:                   | Manual / Automatic/Continuous                                                      |
| Measurement Time:            | Adjustable (1~720min)                                                              |
| Maximum measurement time:    | Adu/Ped: 120s; Neo: 85s                                                            |
| Measurement Unit:            | mmHg / kPa selectable                                                              |
| Measurement types:           | Systolic, Diastolic, Mean                                                          |
| Range of systolic pressure:  | Adult Mode: 40~270 mmHg<br>Pediatric Mode: 40~200 mmHg<br>Neonate Mode 40~135 mmHg |
| Range of diastolic pressure: | Adult Mode: 10~215 mmHg<br>Pediatric Mode: 10~150 mmHg<br>Neonate Mode 10~100 mmHg |
| Range of mean pressure:      | Adult Mode: 20~235 mmHg<br>Pediatric Mode: 20~165 mmHg<br>Neonate Mode 20~110 mmHg |
| Over pressure protection:    | Both Hardware and software over pressure protection                                |
| Accuracy:                    | $\pm 3\%$ or $\pm 3$ bpm, whichever is greater                                     |
| Resolution:                  | 1 bpm                                                                              |
| Alarm:                       | Systolic, Diastolic, Mean PR form                                                  |
| NIBP:                        | 40 bpm~240 bpm                                                                     |

### Nellcor SpO<sub>2</sub>

|                       |                                                                                                       |
|-----------------------|-------------------------------------------------------------------------------------------------------|
| Measurement range:    | 0~100%                                                                                                |
| Resolution:           | 1%                                                                                                    |
| Accuracy:             | $\pm 2\%$ (70~100%, Adu/Ped, motionless)<br>$\pm 3\%$ (70~100%, Neo, motionless)<br>1~69% unspecified |
| Alarm range:          | 20~100%                                                                                               |
| PR Measurement Range: | 20~300 bpm                                                                                            |
| Resolution:           | 1 bpm                                                                                                 |
| Accuracy:             | $\pm 3$ bpm (20~250 bpm)<br>Unspecified (251~300 bpm)                                                 |
| Alarm range:          | 20~350 bpm                                                                                            |

### Masimo SpO<sub>2</sub>

|                          |                                                                                                        |
|--------------------------|--------------------------------------------------------------------------------------------------------|
| Measurement&alarm range: | 1~100%                                                                                                 |
| Resolution:              | 1%                                                                                                     |
| Accuracy:                | $\pm 2\%$ (70~100%, Ped/Adu, non-motion)<br>$\pm 3\%$ (70~100%, Neo, motionless);<br>1~69% unspecified |
| Alarm range              | 1~100%                                                                                                 |
| PR Measurement Range:    | 25~240 bpm                                                                                             |
| Resolution:              | 1 bpm                                                                                                  |
| Accuracy:                | $\pm 3\%$ (non-motion) $\pm 5\%$ (in motion);                                                          |
| Alarm range:             | 20~350 bpm                                                                                             |
| PI value: Resolution:    | 0.02~20%<br>0.01% (0.02%~9.99%)<br>0.1% (10.0%~20.0%)                                                  |
| Accuracy:                | Unspecified                                                                                            |
| SIQ:                     | Available                                                                                              |

### Okuman SpO<sub>2</sub>

|                          |                                                                                                        |
|--------------------------|--------------------------------------------------------------------------------------------------------|
| Measurement&alarm range: | 0~100%                                                                                                 |
| Resolution:              | 1%                                                                                                     |
| Accuracy:                | $\pm 2\%$ (70~100%, Ped/Adu, non-motion)<br>$\pm 3\%$ (70~100%, Neo, non-motion);<br>0~69% unspecified |
| PR Measurement Range:    | 20~254 bpm                                                                                             |
| Resolution:              | 1 bpm                                                                                                  |
| Accuracy:                | $\pm 2$ bpm                                                                                            |
| Alarm range:             | 20~350 bpm                                                                                             |
| PI value:                | 0.05~20%                                                                                               |
| Resolution:              | 0.01% (0.05%~9.99%)<br>0.1% (10.0%~20.0%)                                                              |
| Accuracy:                | Unspecified                                                                                            |
| SIQ:                     | Available                                                                                              |

### Temperature (Dual Channel)

|                            |                                               |
|----------------------------|-----------------------------------------------|
| Measurement & alarm range: | 0~50°C                                        |
| TEMP sensor:               | Standard configuration- skin TEMP sensor      |
| Resolution:                | 0.1°C                                         |
| Accuracy:                  | $\pm 0.1^\circ\text{C}$ (except sensor error) |
| Channel type:              | T1, T2, TD (Temperature Difference)           |

### MASIMO EtCO<sub>2</sub> (Sidestream)

|                    |                                 |
|--------------------|---------------------------------|
| Measurement range: | 0~190 mmHg, 0~25% (at 760 mmHg) |
| Accuracy:          | ± (2.25 mmHg +4% of reading)    |
| Resolution:        | 1 mmHg                          |
| awRR range:        | 0~150 rpm                       |
| awRR accuracy:     | ±1 rpm                          |
| Response time:     | <240 msec (10% to 90%)          |
| Delay time:        | <2s                             |

### Respironics EtCO<sub>2</sub> (Sidestream)

|                    |                                                                                                                              |
|--------------------|------------------------------------------------------------------------------------------------------------------------------|
| Measurement range: | 0~150 mmHg, 0 to 25% (at 760 mmHg)                                                                                           |
| Accuracy:          | ± 2 mmHg (0 – 40 mmHg)<br>± 5% of reading (41 – 70 mmHg)<br>± 8% of reading (71 –100 mmHg)<br>±10% of reading (101~150 mmHg) |
| Resolution:        | 1 mmHg                                                                                                                       |
| awRR range:        | 0~150 rpm                                                                                                                    |
| awRR accuracy:     | ±1 rpm                                                                                                                       |
| Response time:     | <240 msec (10% to 90%)                                                                                                       |
| Delay time:        | <2s                                                                                                                          |

### IBP

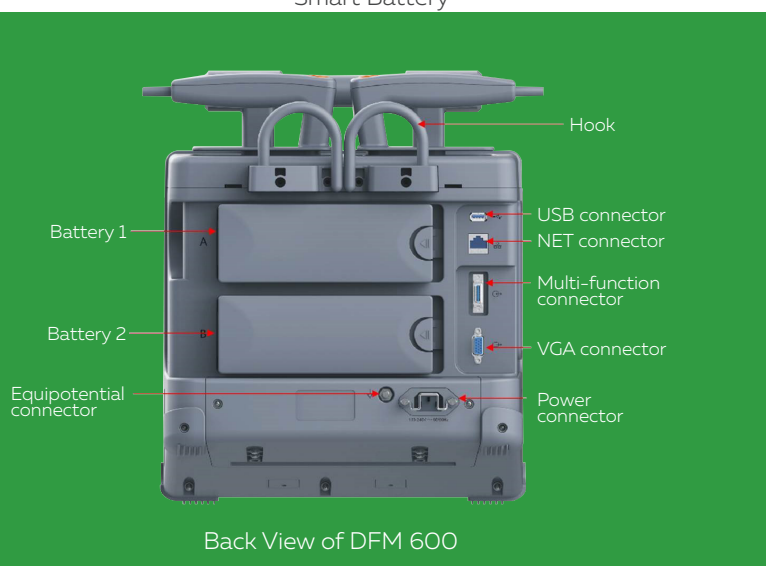
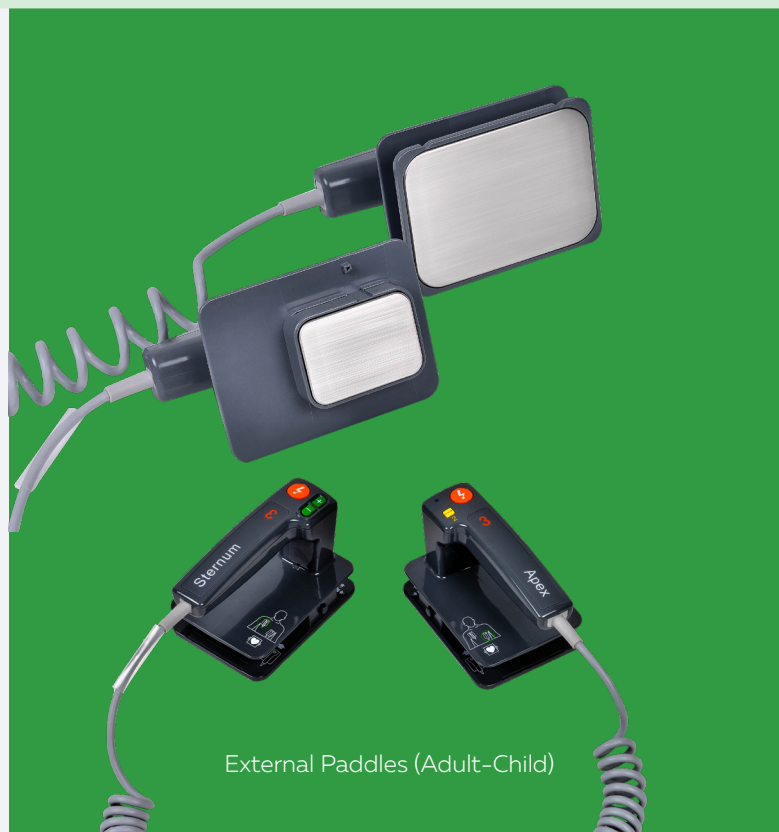
|                    |                                                                              |
|--------------------|------------------------------------------------------------------------------|
| Channel:           | 2 Channels                                                                   |
| Measured Pressure: | ART, PA, CVP, RAP, LAP, ICP, LV, AO, UAP, BAP, FAP, UVP, IAP, P1, P2, P3, P4 |

|                    |                                          |
|--------------------|------------------------------------------|
| Measurement Unit:  | mmHg/ kPa/ cmH <sub>2</sub> O selectable |
| Measurement range: | ART: 0~300mmHg                           |

|      |             |
|------|-------------|
| PA:  | -6~120 mmHg |
| CVP: | -10~40 mmHg |
| RAP: | -10~40 mmHg |
| LAP: | -10~40 mmHg |
| ICP: | -10~40 mmHg |
| LV:  | 0~300 mmHg  |

|         |              |
|---------|--------------|
| AO:     | 0~300 mmHg   |
| UAP:    | 0~300 mmHg   |
| BAP:    | 0~300 mmHg   |
| FAP:    | 0~300 mmHg   |
| UVP:    | -10~ 40 mmHg |
| IAP:    | -10~40 mmHg  |
| P1, P2: | -50~300 mmHg |

|                      |                                        |
|----------------------|----------------------------------------|
| Accuracy:            | ±2% or ±1 mmHg (whichever is greater)  |
| Resolution:          | 0.1 kPa or 1 mmHg (-50 mmHg~+300 mmHg) |
| Alarm Range:         | -50 mmHg~+300 mmHg                     |
| PR from IBP:         | 20 bpm~350 bpm                         |
| Resolution:          | 1 bpm                                  |
| Accuracy:            | ±1% or ±1 bpm, whichever is higher     |
| PPV/SPV measurement: | Available                              |
| PAWP measurement:    | Available                              |





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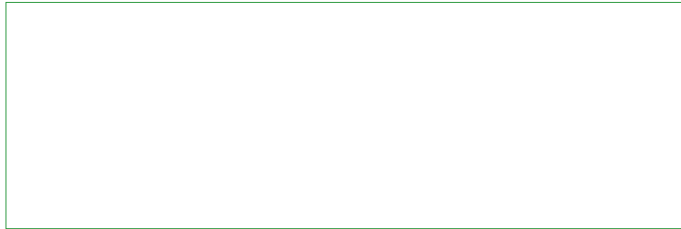
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