

TCD251



High-Bright 20.1" Tower Control Display

Main features

- 20.1" AMLCD
- 1280 x 1024, SXGA, 1.3MP resolution
- High brightness (640 cd/m², 185 ft)
- High contrast
- 1000:1 dimming ratio
- Removable backlight tray
- APA, continuous Automatic Phase Adjust
- Low life cycle cost
- Optional SAW touch screen interface
- Optional VESA mounting bracket

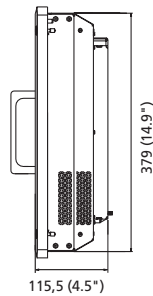
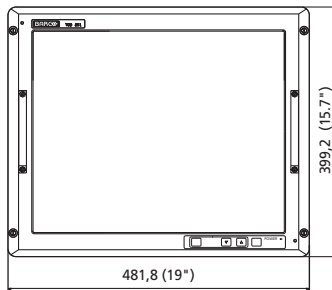
Tower control displays require high brightness, high contrast and wide dimming ratios to maintain readability under all circumstances. Barco's TCD251 displays, featuring a brightness of more than 600 cd/m² and a dimming ratio of 1000:1, have been especially designed for operation in these bright ambient daylight and dimmed night conditions. The displays are also equipped with Barco's Ambient Light Compensation for optimum brightness settings in changing ambient light conditions.

For superior optical performance, the TCD251 has a glass filter front bonded to the LCD, reducing ambient light reflections to a minimum. For very demanding applications, TCD251/2 offers a neutral density front filter (60%) to reduce even more ambient light reflections and stabilized backlight performance through optical feedback. Moreover, TCD251B and TCD251/2 include Barco's unique APA (Automatic Phase Adjust) function to avoid image artifacts. For use in more rugged environments, the TCD251BER is qualified for higher vibration.

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Technical specifications



Electro optical

| | |
|----------------------------------|-------------------------------------------------------------------------------------------|
| Panel type | LCD Active Matrix (Silicon TFT) / analog type |
| Panel diagonal | 20.1 inch / 51 cm |
| Pixel dimensions | 0.312 x 0.312 mm (vertical stripe RGB configuration) |
| Panel resolution | 1280 x 1024 pixels (SXGA) |
| Image dimensions | 401 x 322 mm / 15.8 x 12.7 inch |
| Screen specifications | 16 million colors / 256 grayscales per color |
| Protective front filter | Bonded chemically strengthened glass High efficiency anti-reflective coating, Gloss 70 |
| Front filter transparency | |
| TCD251B(ER) | > 90 % |
| TCD251/2 | Neutral Density Filter 60% |
| Reflection | |
| TCD251B(ER) | Specular: 0.76 % / Diffuse (incl haze): 1.72 % |
| TCD251/2 | Specular: 0.43 % / Diffuse (incl haze): 0.87 % |
| Light output | |
| TCD251B(ER) | 640 cd/m ² / 185 fL (at 10° to 30°C ambient) |
| TCD251/2 | 600 cd/m ² / 174 fL Stabilized, including backlight aging compensation |

Contrast ratio

| | |
|-------------|----------------------------------------|
| TCD251B(ER) | >7:1 at 10,000 lux lambertian ambient |
| TCD251/2 | >15:1 at 10,000 lux lambertian ambient |

Color temperature

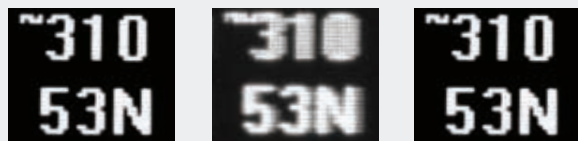
| | |
|-------------------------|--------------------------------------------|
| White uniformity | < 125% |
| Viewing angle | Horizontal and vertical: +/- 80° (CR = 10) |
| Dimming ratio | Up to 1000:1 |
| Light control | Dual Sensor Ambient Light Control |

Interfaces

| | |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------|
| Signal input | 1.3MP, SXGA input (automatic upscaling for lower resolutions) |
| Auto-sync | Separate H&V / Ext. Combined / Sync on Green |
| Connector type | BNC for Video DB9 for RS232 link DB9 for Barco Keypad RM12BRD-6S (HIROSE) for external analog brightness control |
| | TCD251/2 |

Operational

| | |
|-----------------------|---------------------------------------------------------------------------------------------|
| Standard | 4 control keys: select, up, down, stand-by |
| Remote control | RS232 link (Barco Protocol) / Barco Keypad external analog brightness control (TCD251/2) |
| OSD | Menu Driven On-Screen Display |



Barco's APA functionality avoids image artifacts as it automatically locks the LCD sampling clock to the (drifting) graphics generator pixel frequency

Power

Power supply Automatic selection: 115/230 Vac

Power consumption
TCD251B 130W nominal (max. 150W)
TCD251/2 160W nominal (max. 210W)

Frequency limits 45-65Hz

General Data

| | |
|--------------------|-----------------------------------------|
| Mounting | Console, 19 inch rack or arm mount |
| Weight | 12 kg / 26.5 lbs |
| MTR | less than 0.5 hrs |
| Maintenance | |
| Shop-replaceable | Backlight tray |
| Field-replaceable | Fan unit & Power supply (TCD251/2 only) |

Environmental

| | |
|--------------------|------------------------------------------------------------|
| Temperature | |
| Operating | |
| TCD251B | 0°C/+55°C (+32°F/+131°F) with reduced light output |
| TCD251/2 | 0°C/+55°C (+32°F/+131°F) |
| TCD251BER | -10°C/+55°C (+14°F/+131°F) with reduced light output |
| Storage | -20°C/+60°C (-4°F/+140°F) |
| Humidity | 85% max (non-condensing)@35°C (95°F) |
| Vibration | |
| TCD251B, TCD251/2 | 0.35g (10-100Hz random, 1 hr/axis, 3 axis) |
| TCD251BER | MIL-STD-167-1 type I |
| Shock | |
| TCD251BER | 30g, 12ms half sine, 3 per axis (MIL-STD-810E Meth. 516.4) |
| Altitude | |
| Operating | 15,000 ft |
| Storage | 35,000 ft |
| EMC | |
| Emission | FCC class A vol. II part 15 subpart J |
| Immunity | EN50082-2, EN55022 limit A |

Approvals

IEC 950, UL 1950, c-UL 950, CE 2001

Options

- Surface Acoustic Wave (SAW) touch screen
- Interface bracket for arm mounting
- MVDI interface for DBrite replacement
- CheckUP!™ remote maintenance software
- Contact factory for more details



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