



50W Constant Power Mode with DALI-2 LED Driver **XLG-50-DA2** series



Features

- Constant Power mode output
- Metal housing design with functional Ground
- Built-in active PFC function
- Class 2 power unit(except for L type)
- Standby power consumption <0.5W
- IP67 rating for indoor or outdoor installations
- Surge protection with 6KV/4KV
- DALI-2 Dimming with minimum level 8%
- India (EESL) version with Input Over Voltage Protection can survive input voltage stress of 440Vac for 48 hours
- Typical lifetime>50000 hours
- 5 years warranty

Applications

- LED street lighting
- LED architectural lighting
- LED bay lighting
- LED floodlighting
- Type “HL” for use in Class I, Division 2 hazardous (Classified) location.

GTIN CODE

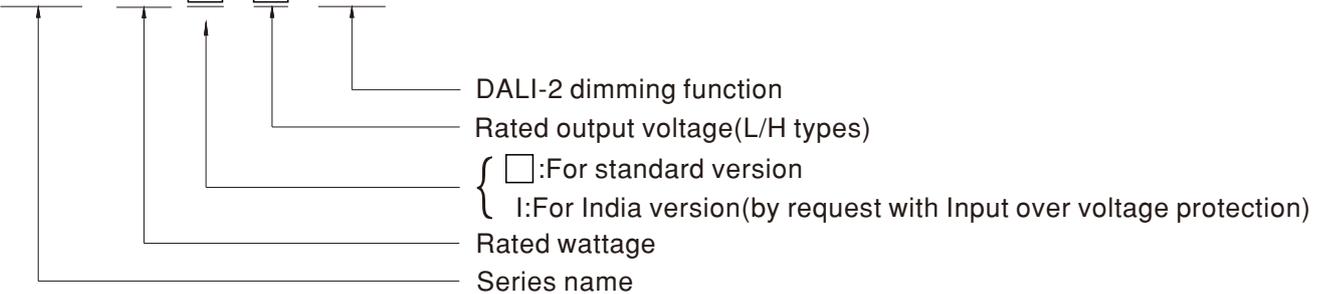
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

Description

XLG-50-DA2 series is a 50W AC/DC LED driver featuring the constant power mode output. XLG-50-DA2 operates from 90~305VAC. Thanks to the high efficiency up to 89%, the entire series is able to operate between -40℃~85℃ wide case temperature range with air convection. The design of metal housing and IP67 ingress protection level allows this series to fit both indoor and outdoor applications. XLG-50-DA2 is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system. XLG-50-DA2 series comply with the latest version of IEC61347/GB19510.1 and UL8750 international safety regulations. The output and dimming circuit are also completely in accordance with the new regulations with isolation to ensure the safety of both user and luminaire system during installation.

Model Encoding

XLG - 50 I - L - DA2

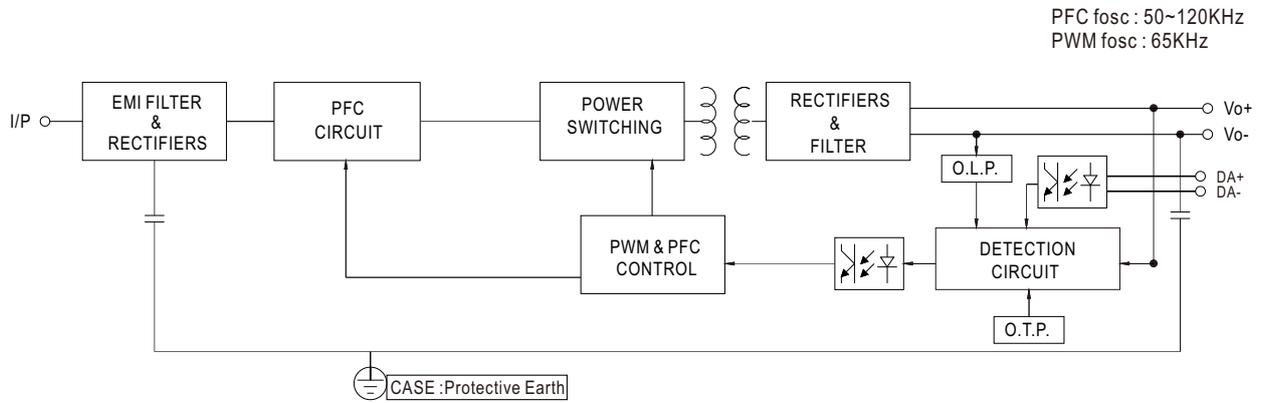


| Type | Function | Note |
|------|---|----------|
| DA2 | DALI-2 control technology with Io adjustable via built-in potentiometer | In Stock |

SPECIFICATION

| MODEL | | XLG-50□-L-DA2 | XLG-50□-H-DA2 | | |
|--|---|--|--------------------------------------|--|---------------------|
| OUTPUT | RATED CURRENT (Default) | 700mA | 1050mA | | |
| | RATED POWER | 50W | 50W | | |
| | CONSTANT CURRENT REGION <small>Note.2</small> | 60 ~ 142V | 27 ~ 56V | | |
| | FULL POWER CURRENT RANGE | 350~700mA | 900~1400mA | | |
| | OPEN CIRCUIT VOLTAGE (max.) | 160V | 60V | | |
| | CURRENT ADJ. RANGE | (Via the built-in potentiometer) 300~700mA / 500~1400mA | | | |
| | CURRENT RIPPLE | 5.0%(@ full load) | | | |
| | CURRENT TOLERANCE | ±5% | | | |
| | SET UP TIME | 500ms/230VAC, 1200ms/115VAC | | | |
| INPUT | VOLTAGE RANGE <small>Note.4</small> | 90 ~ 305VAC 127 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section) | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | |
| | POWER FACTOR | PF ≥ 0.97/115VAC, PF ≥ 0.95/230VAC, PF ≥ 0.92/277VAC@full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section) | | | |
| | TOTAL HARMONIC DISTORTION | THD < 10% (@load ≥ 50%/115VAC, 230VAC; @load ≥ 75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section) | | | |
| | EFFICIENCY (Typ.) <small>Note.15</small> | 90% | 89% | | |
| | AC CURRENT | 0.57A / 115VAC 0.29A / 230VAC 0.24A/277VAC | | | |
| | INRUSH CURRENT(Typ.) | COLD START 50A(twidth=350µs measured at 50% Ipeak) at 230VAC; Per NEMA 410 | | | |
| | MAX. No. of PSUs on 16A CIRCUIT BREAKER | 7 units (circuit breaker of type B) / 12 units (circuit breaker of type C) at 230VAC | | | |
| | LEAKAGE CURRENT | <0.75mA / 277VAC | | | |
| | STANDBY POWER CONSUMPTION | Standby power consumption <0.5W (Dimming OFF)(For standard version) | | | |
| PROTECTION | SHORT CIRCUIT | Hiccup mode or Constant current limiting, recovers automatically after fault condition is removed | | | |
| | OVER TEMPERATURE | Stage 1: Derating to 75% loading; stage 2: Derating to 50% loading. recovers automatically after fault condition is removed | | | |
| | INPUT OVER VOLTAGE <small>Note.7</small> | 320 ~ 370VAC (Shut down output voltage when the input voltage exceeds protection voltage,recovers automatically after fault condition is removed) Can survive input voltage stress of 440Vac for 48 hours | | | |
| ENVIRONMENT | WORKING TEMP. | Tcase=-40 ~ +85°C (Please refer to " OUTPUT LOAD vs TEMPERATURE" section) | | | |
| | MAX. CASE TEMP. | Tcase=+85°C | | | |
| | WORKING HUMIDITY | 20 ~ 95% | | | |
| | STORAGE TEMP. | -40 ~ +80°C | | | |
| | TEMP. COEFFICIENT | ±0.03%/°C (0 ~ 60°C) | | | |
| | VIBRATION | 10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes | | | |
| SAFETY & EMC | SAFETY STANDARDS | UL8750(type"HL"), CSA C22.2 No. 250.13-12; ENEC AS/NZS IEC BS EN/EN61347-1, BS EN/EN61347-2-13 (EL) appendix J suitable for emergency installations(DC Input: 176-280Vdc) independent, AS/NZS BS EN/EN61347-2-13 , BS EN/EN62384;IP67; GB19510.1, GB19510.14, EAC TP TC 004 approved | | | |
| | DALI STANDARDS | Comply with IEC62386-101, 102, 207, 251 for DA2 Type only, Device type 6(DT6) | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3.75KVAC I/P-FG:2.0KVAC O/P-FG:1.5KVAC | | | |
| | ISOLATION RESISTANCE | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH | | | |
| | EMC EMISSION | Parameter | Standard | Test Level/Note | |
| | | | Conducted | BS EN/EN55015(CISPR15) ,GB/T17743 | ----- |
| | | | Radiated | BS EN/EN55015(CISPR15) ,GB/T17743 | ----- |
| | | | Harmonic Current | BS EN/EN61000-3-2 ,GB/T17625.1 | Class C @load ≥ 50% |
| | | | Voltage Flicker | BS EN/EN61000-3-3 | ----- |
| | EMC IMMUNITY | Parameter | Standard | Test Level/Note | |
| ESD | | | BS EN/EN61000-4-2 | Level 3, 8KV air ; Level 2, 4KV contact | |
| Radiated | | | BS EN/EN61000-4-3 | Level 3 | |
| EFT/Burst | | | BS EN/EN61000-4-4 | Level 3 | |
| Surge | | | BS EN/EN61000-4-5 | 4KV/Line-Line 6KV/Line-Earth | |
| Conducted | | | BS EN/EN61000-4-6 | Level 3 | |
| Magnetic Field | | | BS EN/EN61000-4-8 | Level 4 | |
| Voltage Dips and Interruptions | | | BS EN/EN61000-4-11 | >95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods | |
| OTHERS | MTBF | 2352.4K hrs min. Telcordia SR-332 (Bellcore) | 207.3K hrs min. MIL-HDBK-217F (25°C) | | |
| | DIMENSION | 105*63*30mm (L*W*H) | | | |
| | PACKING | 0.42Kg;24pcs/ 11Kg/0.81CUFT | | | |
| NOTE | <ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature. Please refer to "DRIVING METHODS OF LED MODULE". Tolerance : includes set up tolerance, line regulation and load regulation. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time. Based on IEC 62386-101/102 DALI power on timing and interruption regulations,the set up time needs to test with a DALI controller which can support for DALI power on function, otherwise the set up time will be longer than 500ms. Input over voltage only for XLG-50L series, and I series without UL/CSA certificate. The driver is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-quality EMC Directive on the complete installation again. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft). Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com This series meets the typical life expectancy of >50,000 hours of operation when Tcase, particularly (Tc) point (or TMP, per DLC), is about 75°C or less. Products sourced from the Americas regions may not have the CCC/PSE/BIS/KC logo. Please contact your MEAN WELL sales for more information. For any application note and IP water proof function installation caution, please refer our user manual before using. https://www.meanwell.com/Upload/PDF/LED_EN.pdf H type : RCM is on a voluntary basis. Non IC classification Independent LED control gear is not suitable for residential installations. L type : RCM is on a voluntary basis and meets relevant IEC or AS/NZS standards complying with AS/NZS 4417.1 The efficiency will drop 1% based on India version To fulfill requirements of the latest ErP regulation for lighting fixture, this LED driver can only be used behind a switch without permanently connected to the mains. | | | | |
| <p>⊗ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p> <p style="text-align: right;">File Name:XLG-50-DA2-SPEC 2023-05-08</p> | | | | | |

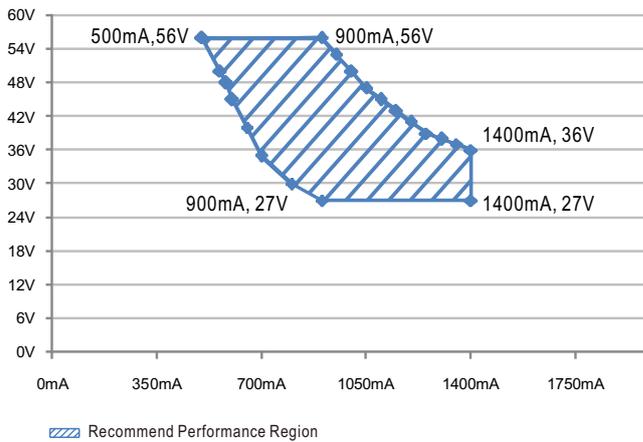
Block Diagram



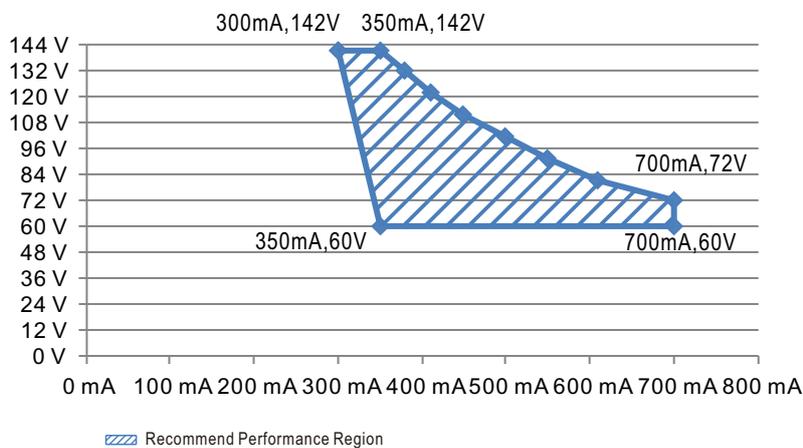
DRIVING METHODS OF LED MODULE

※ I-V Operating Area

◎ XLG-50-H-DA2



◎ XLG-50-L-DA2



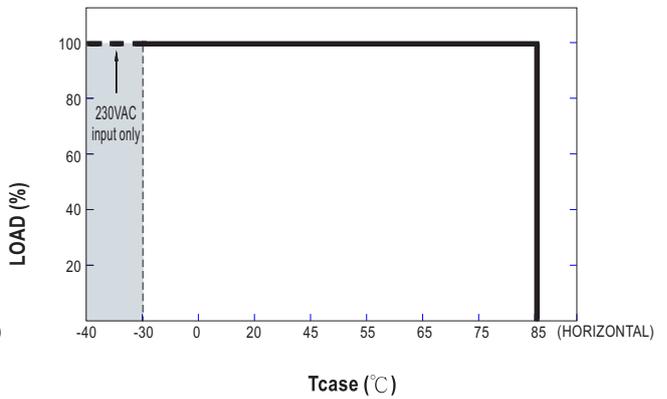
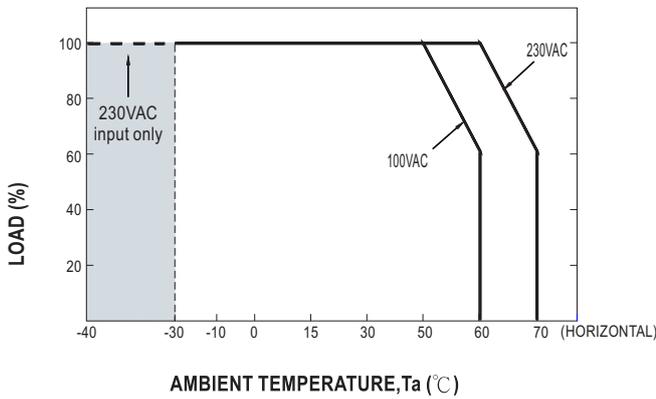
■ DIMMING OPERATION



※ **DALI Interface**

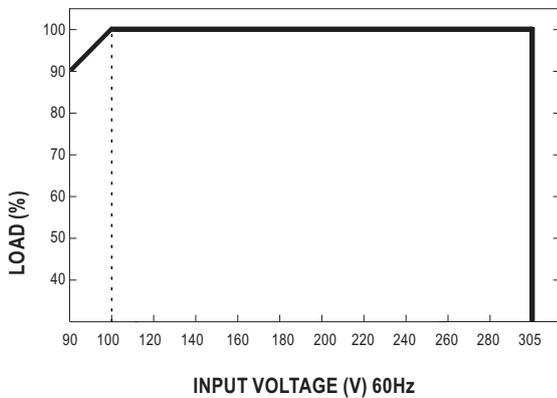
- Apply DALI signal between DA+ and DA-.
- DALI protocol comprises 16 groups and 64 addresses.
- First step is fixed at 8% of output.

■ OUTPUT LOAD vs TEMPERATURE



Note: 1. The output current must be derated at ultra-high ambient temperature.
 2. Below 120VAC@-30°C may has restart situation within 5s after power-on.

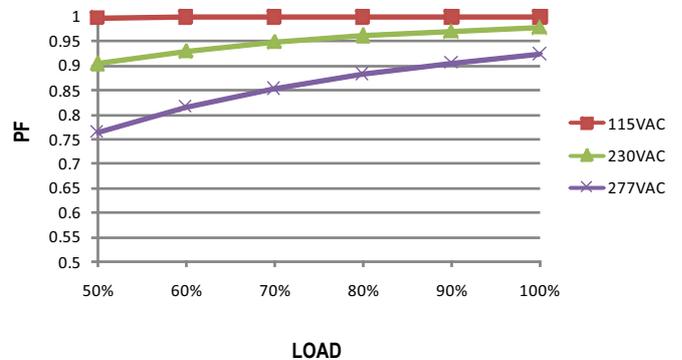
■ STATIC CHARACTERISTIC



※ De-rating is needed under low input voltage.

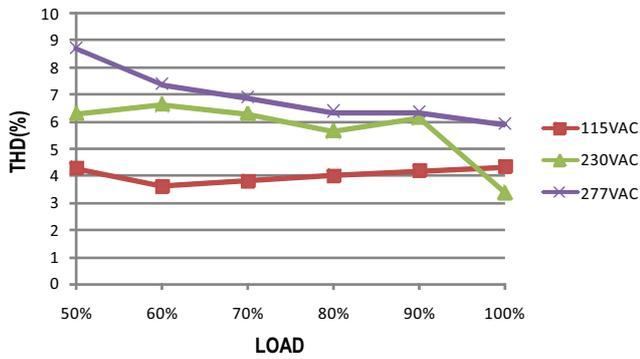
■ POWER FACTOR (PF) CHARACTERISTIC

※ Tcase at 75°C
Constant Current Mode



TOTAL HARMONIC DISTORTION (THD)

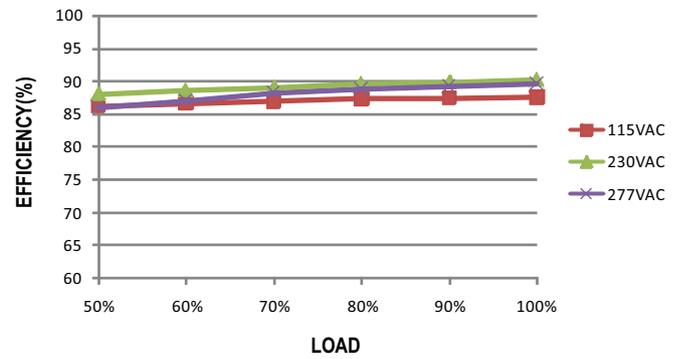
※ XLG-50-H-DA2 Model, Tcase at 75°C



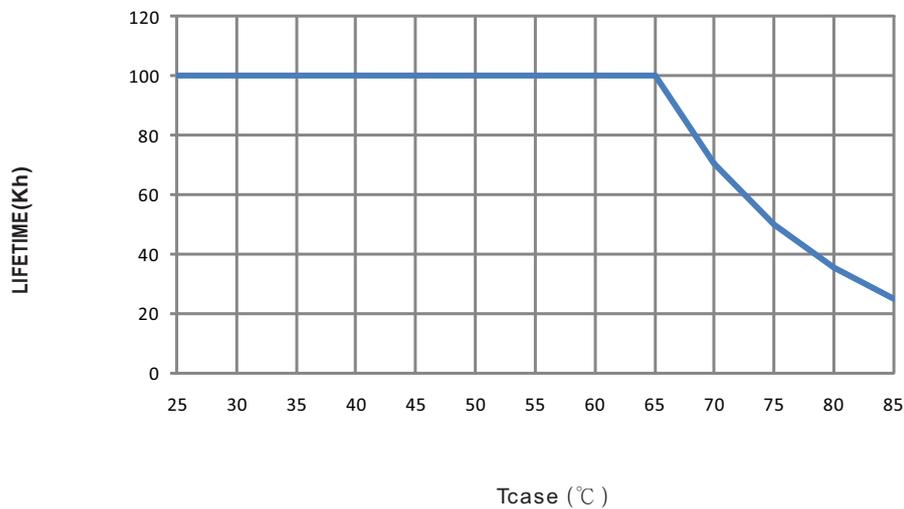
EFFICIENCY vs LOAD

XLG-50-DA2 series possess superior working efficiency that up to 89% can be reached in field applications.

※ XLG-50-H-DA2 Model, Tcase at 75°C



LIFE TIME





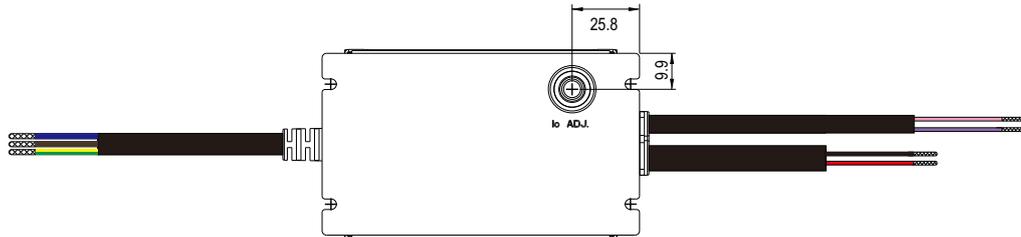
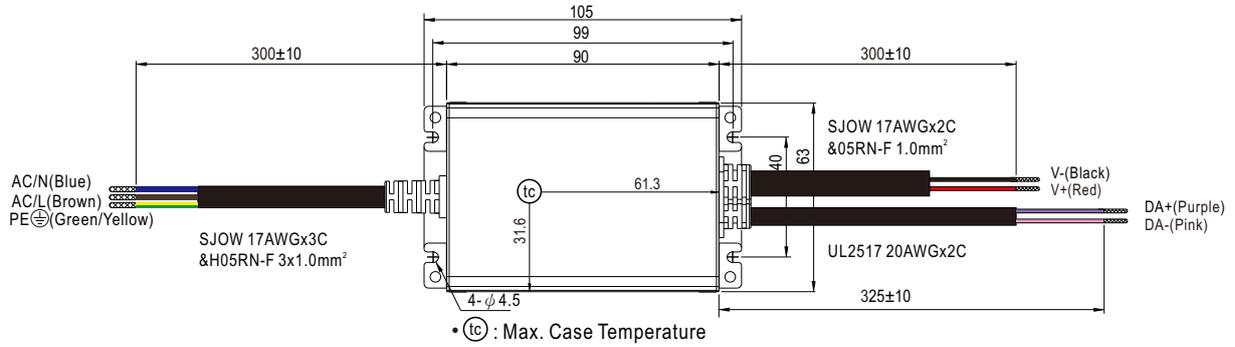
50W Constant Power Mode with DALI-2 LED Driver **XLG-50-DA2** series

■ Mechanical Specification

※ DA2-Type

CASE NO.: 268A

Unit:mm



■ Installation Manual

Please refer to : <http://www.meanwell.com/manual.html>