Moltec International

🛄 QUICK-FIT **3**





Highly efficient lighting interconnect systems for today's wind turbine towers

Since 2006, Moltec International has designed and manufactured modular wind power lighting and electrical utility services for wind turbine tower and nacelle applications throughout North America and abroad. Our fully interconnected systems were the industry's first pre-engineered, pre-assembled, and pre-tested solutions ready to install out of the box as a plug and play system. This innovation eliminated the need for skilled electrical labor and tools significantly reducing installation time and costs.

Our commitment to providing customers with innovative and industry-leading solutions has led to the evolution of our system. Introducing our most efficient and cost-effective system ever - Quik-Fit 3.0 with unprecedented advances in plug and play interconnecting tower lighting and electrical services.

A Truly Modular System

The simplicity and ease of installation of the Quik-Fit 3.0 system is attributable to the modular design which incorporates a specialized connector utilized on all trunk-lines, interconnects, and devices. These connectors are constructed with a non-metallic watertight design and feature a keyed push-in termination with anti-back off and vibration-proof connection. Consistent with our earlier designs, installation of Quik-Fit 3.0 is achieved without specialized and costly skilled labor, in-field wiring or tools. The connectors are mated in seconds with a simple and effortless push in action. The bayonet-style locking element makes an audible 'click' sound as the connectors are mated indicating a secure termination. Simple to follow instructions are included and available in several languages.

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Quality Construction

The trunk lines are constructed of non-metallic, corrugated nylon conduit offering a rugged yet very flexible construction. Its materials exceed agency requirements for smoke, flame, and toxicity ratings, operating down to -40°C [-40°F]. The Quik-Fit 3.0 trunk lines can also be constructed with common TC rated, jacketed multi-conductor cables. Electrical materials and components used in the construction of the Quik-Fit 3.0 systems are UL Listed or Recognized and/or CSA/US Certified, and some instances are CE Certified. Engineering and fabrication are completed in Moltec's ISO 9001-2015 facility with strict adherence to its Total Quality Management Certification, assuring consistent long-term quality and performance.

Simple Design Layouts

The Quik-Fit 3.0 system makes design layout very simple. In-line, "T" and "X" trunk-lines are available in virtually any length and allow for placement of Moltec light fixtures, power utility boxes, switches, and power input assemblies wherever the tower or nacelle layout requires. Just place the lights and other devices to be interconnected into your elevation drawing, calculate the distance between, then specify the trunk line interconnect harness lengths for each circuit. Next, calculate the distance from the trunk line 'T' or "X" interconnect to the devices in a branched system, or from device to device in an inline system design.

Finally, simply specify the trunk-line interconnect harness lengths and you're done.

Additionally, Moltec offers engineering and design-in support services and can develop your entire layout for you in 3-D modeling formats.

Simple to Buy and Easy to Handle

Tower fabricators can choose to have the modular components kitted by tower section which makes purchasing, material handling, and of course the installation much faster. When the towers arrive at the construction site even more savings will be realized as installation technicians need only make one fast and simple push-in connection between tower sections. Power outlets and lighting can operate in minutes reducing the tower construction process.



The Quik-Fit 3.0 Advantage:

- Pre-engineered system fits first time... every time
- Pre-assembled components provide consistent results
- Pre-tested in the Moltec factory, field test kits provided
- Modular, plug and play Installation no hand wiring or special tools required
- No skilled labor or hand wiring required for Installation
 - Extremely low labor content

WIRE & CABLE PROTECTION

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Traditional Build on Site Disadvantage:

- Extensive Bill of Materials item purchasing
- High material handling & logistics costs
- Multiple vendor management
- Substantial man-hour content using higher cost skilled labor
- Hand wiring of all lights and devices in various environments.
- Material waste, troubleshooting, re-work, and inconsistent results
- Minimal material handling & logistics with kits
- Proven lower installed cost vs. traditional hand wired systems





Summary:

Quik Fit 3.0 is your solution to reducing high cost and time-consuming tower lighting and electrical utility interconnecting. Installers are no longer required to cut and strip cables and wires to complete the hand wiring of devices such as light fixtures and/or outlet boxes. Quik-Fit 3.0 systems provided in a kitted format will save significant time, reducing the installed cost of any tower lighting system while providing consistent quality and long-term dependability. In fact, Quik-Fit 3.0 carries a limited Five-Year Warranty to assure that the customer is confident in its selection of the system.

If reduced costs and high-quality dependability are important to you, Quik-Fit 3.0 is your only choice. Backed by years of industry experience and success with plug and play interconnect and lighting systems, Moltec Windpower Products stands ready to be of service. Give us a call or send us an email and we'll arrange to have an in-depth discussion with you so you can modernize and reduce the installed cost of your tower lighting and electrical utility systems.

LED Lighting Products:

Moltec offers a new range of modern and very cost-effective LED Light Fixtures that can be interconnected with its Quik-Fit 3.0 Interconnect Systems. Check out these purpose-built light fixtures in our web site. Ask us about these fixtures for even more installed cost savings for your tower lighting needs.

- Exclusive Sabre LED Light Fixtures
- --- Common Shop Type LED Light Fixtures
- ---- UFO LED Long Reach Tower Light Fixtures
- OEM Specific LED Light Fixtures
- Custom LED Light Fixtures



Technical Specifications:

Part Number	Description	Number of contacts	Contact Type	Wire Gauge
QF3CONN-F-2	QF3 2P Female connector	2	pin	12aw g - 16aw g
QF3CONN-M-2	QF3 2S Male connector	2	socket	12aw g - 16aw g
QF3CONN-F-3	QF3 3P Female connector	3	pin	12aw g - 16aw g
QF3CONN-M-3	QF3 3S Male connector	3	socket 12aw g - 16aw g	
QF3CONN-F-4	QF3 4P Female connector	4	pin 12aw g - 16aw g	
QF3CONN-M-4	QF3 4S Male connector	4 socket 12aw g - 16aw g		

Туре	Rating	Description	
Ingress Protection	IP66	• QF3 system: designed to provide an ingress protection rating of IP66 (Nema 4X) ensuring protection against dust penetration and low-pressure water jets	
	IP67	QF3 connectors: designed to be water-tight and are rated up to IP67	
Fire Rating	UL94-V0	 QF3 connectors: carry UL94-V0 rating The UL94 standard determines the material's tendency to either extinguish or spread the flame once the specimen has been ignited. The classification V0 states that burning stops within 10 seconds on a vertical specimen; drips of particles allowed as long as they are not inflamed 	
Current Rating	20A	QF3 system: designed to carry a maximum current of 20A	
Voltage Rating	300V	QF3 system: designed to operate on a maximum voltage of 300V	
Withstanding Voltage	1500V	QF3 connectors: can withstand voltage up to 1500V for a short duration of time before malfunctioning	
Wire Size	16awg to 12awg	 QF3 can carry various conductor sizes up to a maximum of 12awg The appropriate conductor size is dependent on the total current draw by system devices 	
Temperature Range	-40°C to 105°C	Normal operating temperature range of the system	
Contacts	2 Contacts	- QF3 connectors with 2 conductors (pin/socket) available for lighting devices with no grounding	
	3 Contacts	- QF3 connectors with 3 conductors (pin/socket) available for lighting devices with grounding	
	4 Contacts	QF3 connectors with 4 conductors (pin/socket) available for lighting devices with grounding and emergency backup	
Locking System	Push-in locking	Push-in locking — QF3 connectors: feature a push-in locking mechanism which emits an audible 'click' and tactile feedback to indicate a secure connection — Disconnection is achieved with a simple quarter turn and pulling motion	

Mating Connection:







Twist + Disengage to Disconnect