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COMPANY***

Raychem



Gel Products

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AMP



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INSULATORS

Table of Content

1. KGEL-JNT - IP68 Rated inline and branch style cable joints suitable to 1kV
2. KGEL-STUB - Gel filled stub connectors suitable for cable connections to 600V
3. KGEL-IP68 - IP68 rated, self repairing gel & accessories for void filling to 400V
4. KGEL-PIT - Submersible, range taking in-pit connector suitable to 1kV
5. KGEL-WRAP - Cable re-jacketing & splice sleeve suitable for pit & direct burial up to 1kV
6. KGEL-IPCJNT - Insulation Piercing 4 & 5 core gel filled joint for pit & direct burial up to 1kV
7. KGEL-FLEX - Flexible setting insulating compound for void filling to 36kV

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KGEL-JNT

IP68 Rated inline and branch style cable joints suitable to 1KV

Electrical installers now have the full range of branching capabilities from 2 x 1.5 mm² up to 5 x 16 mm² with four different joint types only. It is easier than ever to install cable connections for underground, direct buried, and overhead applications.



Application:

- Street, garden and pool lighting
- Connection of outdoor equipment like pumps, filters, garage door openers, loudspeakers, door intercom systems, etc.
- Frost protection systems
- Cable trays and cable ducts
- Protection of small electronic boards

PowerGel sealing gel technology

The KGEL-JNT enclosure, with its revolutionary PowerGel sealing gel, covers and seals the joint quickly and easily, saving both time and effort. PowerGel sealing gel is rated to 90°C continuous temperature and is halogen-free with an unlimited shelf life. The KGEL-JNT joint series is yet another of TE Connectivity's fieldproven PowerGel filled products for the demanding requirements of the electrical power industry.

Application range:

Four sizes for straight and branch joints are available, ranging from 10 up to 50mm² single core- and multi-core cables from 1.5 up to 16mm². For details see Selection Table.

Features and benefits:

- Quick, easy and clean installation
- Reliable protection against humidity and water
- Suitable for outdoor and direct-buried applications (IP 68)
- Full branch capabilities without cutting of main cables
- Optimized joint design with integrated strain relief
- Easy to install, latchable connector blocks
- Qualified to international joint standard CENELEC EN 50393
- Halogen-free and UV-resistant
- Unlimited shelf life
- Environment-friendly and no subject to labeling requirements

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KGEL-JNT

IP68 Rated inline and branch style cable joints suitable to 1KV



Enclosure design

The halogen-free poly-propylene enclosure is designed to house straight and branch connections in one solution only. This helps to minimize the required stock level and serves a wide range of applications. KGEL-JNT joints can be snap-closed by hand due to its flexible wave-like gel barriers. A strain relief is integrated within the enclosure and quickly installed with two cable ties. All joints fulfil the requirement of ingress protection class IP68

Performance tests

KGEL-JNT joints are qualified to CENELEC EN 50393, the European specification for buried applications. This includes a three week heatcycling test with the joint immersed in one metre depth of water.

Easy to install

Closing the rugged KGEL-JNT enclosure is literally a snap. Its short length also allows installation in cramped locations. No special tools needed, no rip cords to break, and no trimming, mixing, pouring, or heating required; KGEL-JNT can be put into service immediately.

Kit content

PowerGel filled enclosure, universal connector block including sliding nut insertion tool and allen key (for KGEL-JNT 2/3 joints), tie wraps for a strain relief of the cables and illustrated installation instructions. All joints are available in one piece packaging.

Universal connector Block for KGEL-JNT 2/3 joints

With the unique universal connector block installation is very straightforward, as the block snaps into the bottom side of the enclosure. A supplementary tool helps to insert the sliding nuts and holds them in place until the connection is finalised.

Connector recommendation for KGEL-JNT 0/1 joints

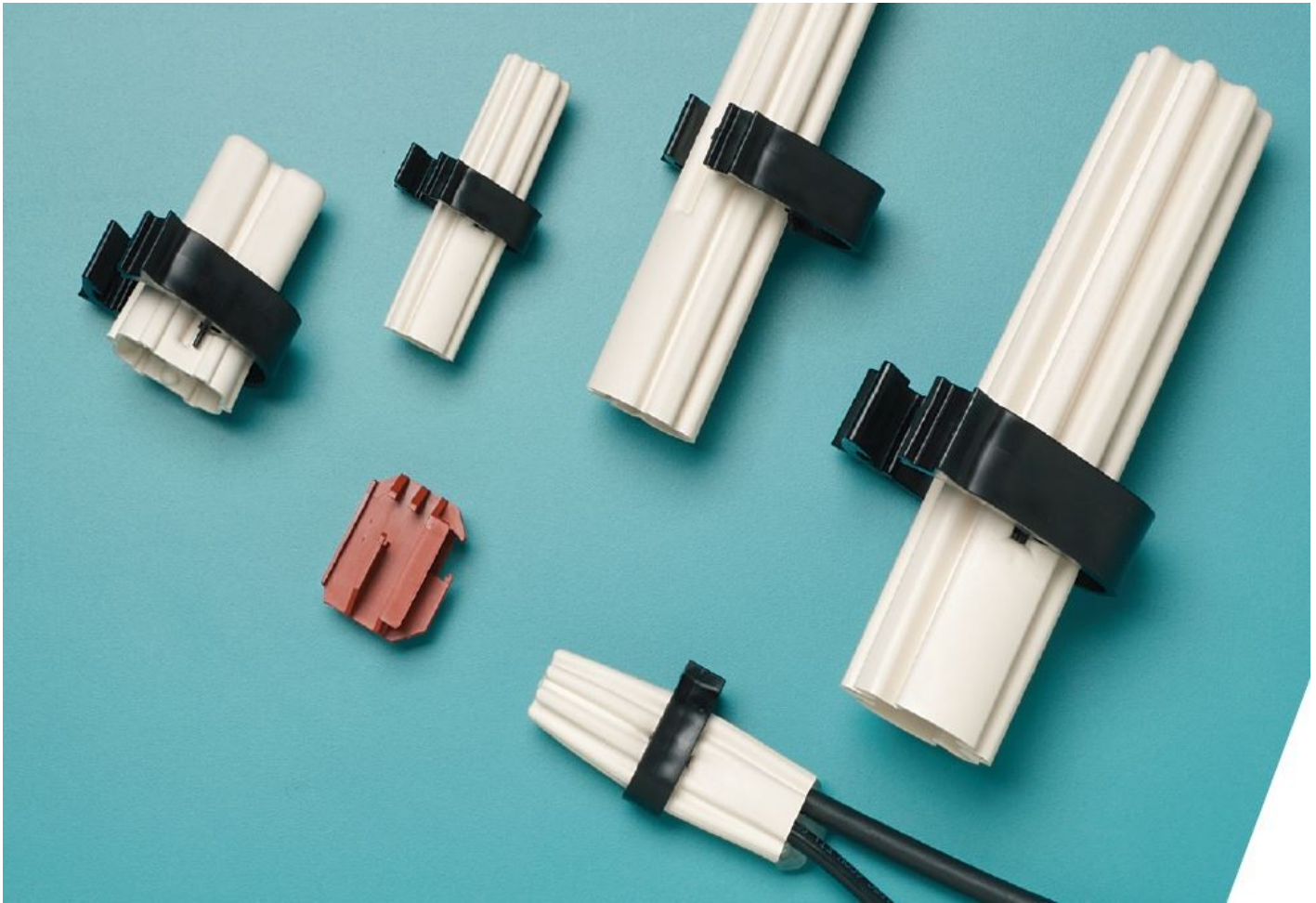
All types which dimensionally fit into the enclosure, such as terminal strips, push-wire connectors, mechanical blocks and C-crimp connectors.

CATALOGUE REFERENCE	APPLICATION RANGE		DIMENSIONS L X W X H	CONNCTOR SIZE MAX. L X W X H
	MAIN CABLE	BRANCH CABLE		
	MM2	MM2	MM	MM
WITHOUT CONNECTOR				
KGEL-JNT-00	2-3 x 1.5-2.5 (1 x 10-50)	2-3 x 1.5 (1 x 10-16)	100 x 37 x 24	26 x 24 x 16
KGEL-JNT-01	3-5 x 1.5-2.5 (1 x 10-50)	3-5 x 1.5 (1 x 10-16)	139 x 51 x 24	26 x 38 x 16
WITH CONNECTOR				
KGEL-JNT-02	3-5 x 1.5-6	3-5 x 1.5-6	233 x 78 x 40	INCLUDED
KGEL-JNT-03	3-5 x 6-16	3-5 x 6-16	313 x 90 x 47	INCLUDED

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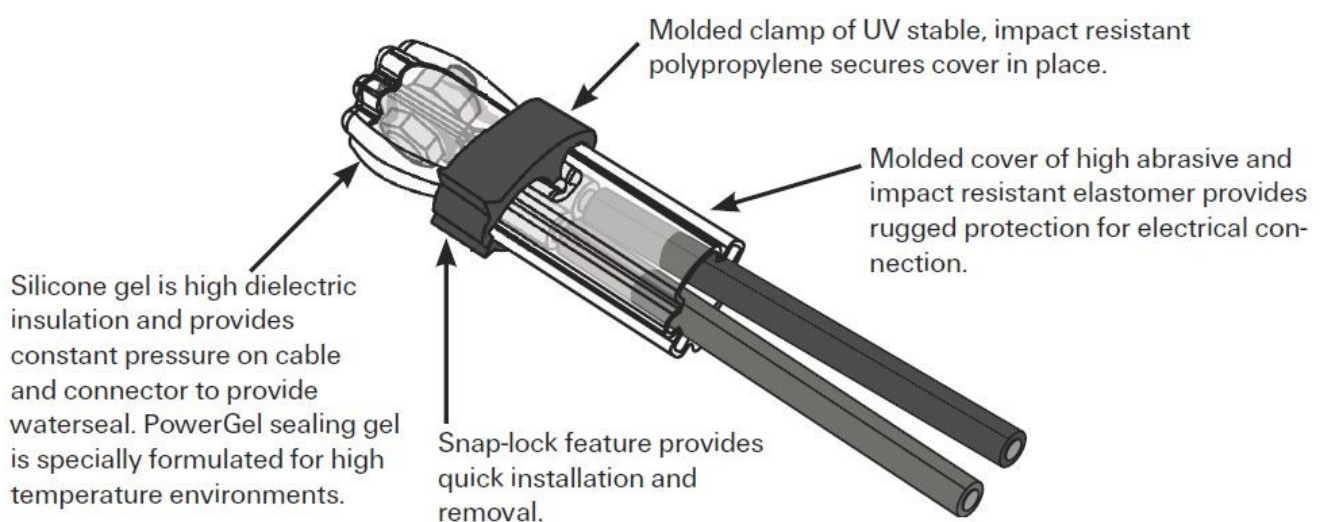
KGEL-STUB

Gel filled stub connectors suitable for cable connections to 600V



Tyco Electronics' GelCap motor connection kits provide quick installation, dependable performance, and easy Re-entry.

GelCap motor connection kits quickly and conveniently insulate, seal, and protect stub splice connections up to 1000 volts. The robust yet compact design was engineered to handle the harsh environment of motor connections. GelCap kits are equally well suited to many other connection applications including street light connections.



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KGEL-STUB

Gel filled stub connectors suitable for cable connections to 600V

Fast and easy installation

GelCap motor connection kits provide for fast installation. Simply push the cover down over the connection and snap the clamp closed. The PowerGel sealing gel is already in the cap, no extra material or grease is required.

Easy re-entry

The corner of the stub connection is easy to reenter as the PowerGel sealing gel pulls away leaving a clean connection. Reentry is also safer than other methods because no sharp objects or cutting tools are required for removal of the cap.

PowerGel sealing gel technology

The GelCap motor connection kits feature revolutionary PowerGel sealing gel which provides an excellent moisture seal over a wide temperature range (-40°C to 105°C). PowerGel sealing gel has excellent insulating properties and the added benefit of acting as a vibration damper.

Common uses

- Motor connections
- Street lighting
- Over wire nuts for sealing
- Irrigation systems
- HVAC
- Outdoor lighting

Figure 1:

Push cap onto connection.

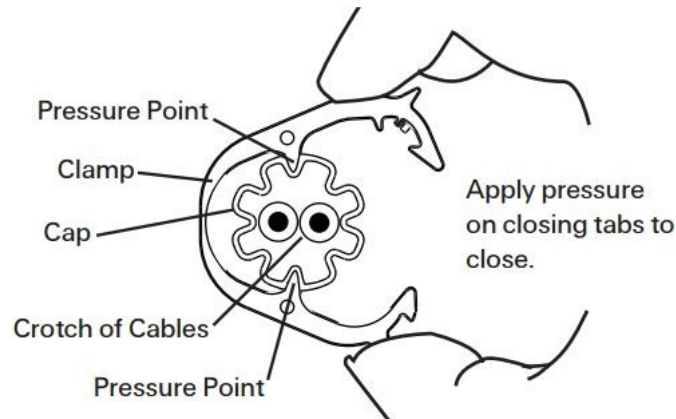
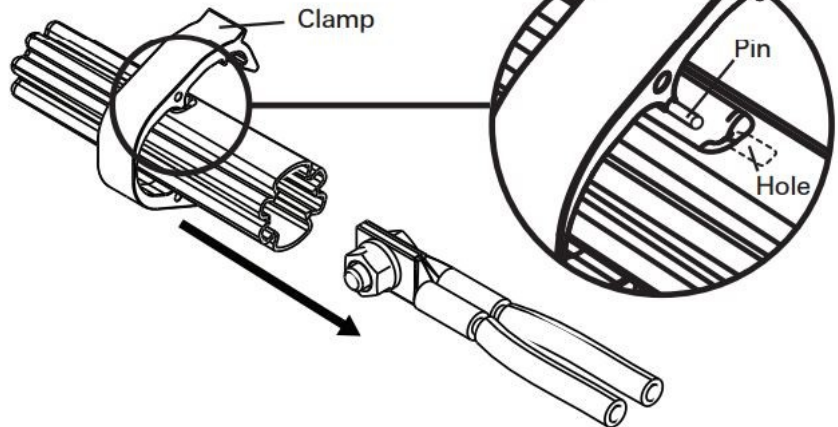


Figure 2:

Clamp pressure points should fit into opposing grooves of cap and apply pressure in crotch of cables. Snap clamp closed.

Testing:	Test Conditions:
Chemical Resistance	ASTM D543, Sulfuric acid, Sodium hydroxide, Transformer & motor oil
Ozone Resistance	ASTM D1149, 120 hours@40C, 50pphm
Accelerated Aging	ASTM D2671
UV Resistance	ASTM G53, UVB, 4000 hours, 4 hours on/off cycle
Abrasion Resistance	2040gm wt., 4000 cycles, 5% max thickness loss

Part #:	Conductor Size:
KGEL-STUB-01*	1.5-5mm ²
KGEL-STUB-02	8-35mm ²
KGEL-STUB-03	35-105mm ²
KGEL-STUB-04	125-250mm ²

* For wire sizes 1.5mm² – 5mm² the unique design of the "KGEL-STUB-01" kit saves space by allowing all three phase connections to be installed in one cover. Product sizes 02, 03 & 04 include one cap per phase.

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KGEL-IP68

IP68 rated, self repairing gel & accessories for void filling to 400V

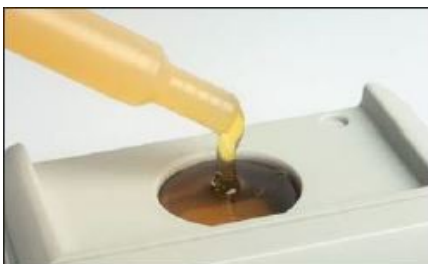


Application:

The GUROSIL Gel filled OBO Junction Box T40 is designed to protect electrical connections from the ingress of water used in rooms with high humidity effects as well as in outdoor applications. GUROSIL Gel is a soft-elastic hardening, amber cold casting compound that is based on hydrocarbon resins. Quick and clean casting is simple with the help of customary caulking guns, so no special tools are required. It is easy to remove, repairable and self-resealing. Electrical connections can be tested and repaired quickly where required, even after installation had been finished.

Features and Benefits:

- IP68 proven casting system
- Provides reliable protection against humidity, mechanical shock and vibration
- Quick, easy and clean to install using standard caulking guns
- Very good electrical insulation
- Soft-elastic, transparent, self-repairing and self-resealing
- Easy to remove (GUROSIL Gel)
- Halogen-, silicon- and isocyanate-free
- Environment-friendly and not subject to labeling requirements



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KGEL-IP68

IP68 rated, self repairing gel & accessories for void filling to 400V

This gel can be purchased as the gel on its own or complete with the junction box and terminal strips. This means you can use the Gurosil gel independently of the junction box in an application where the Junction Box is not suitable. We also supply the mixer nozzle on its own so that the gel cartridge can be reused if the full 250ml isn't dispensed in the application.

TECHNICAL DATA	
Application:	Rooms with high humidity effect or outdoor use
Protection Class:	IP68, tested up to 18M water depth for over 1000h
Nominal Voltage:	400V
Dielectric Strength:	>20kV/mm
Cable Diameter:	6 x 1mm ² , 5 x 1.4mm ² or 4 x 2.5mm ² per connection
Cable Entry:	7 x M25 including plug-in seals for cable diameter 4-20mm
Terminal System:	Terminal block 4mm ² , 5-poles, pluggable
Enclosure Material:	Shock-resistant and flame retardant plastic material
Enclosure Colour:	Light grey (RAL 7035)
Dimensions:	L x W x H: 90 x 90 x 52mm

KGEL-IP68-RF



KGEL-IP68-JB



KGEL-IP68-NOZZLE



ORDERING OPTIONS	
Part Number	Description
KGEL-IP68-RF	GUROSIL Gel Cartridge (250ml) Including Mixer Nozzle
KGEL-IP68-JB	GUROSIL Gel Cartridge (250ml) Including Mixer Nozzle, Terminal Strip & Junction Box
KGEL-IP68-NOZZLE	Turbo Mixer Nozzle for Re-use of Partial Portion of KGEL-IP68-RF

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KGEL-PIT

Submersible, range taking in-pit connector suitable to 1KV



Fast, reliable installation - every time

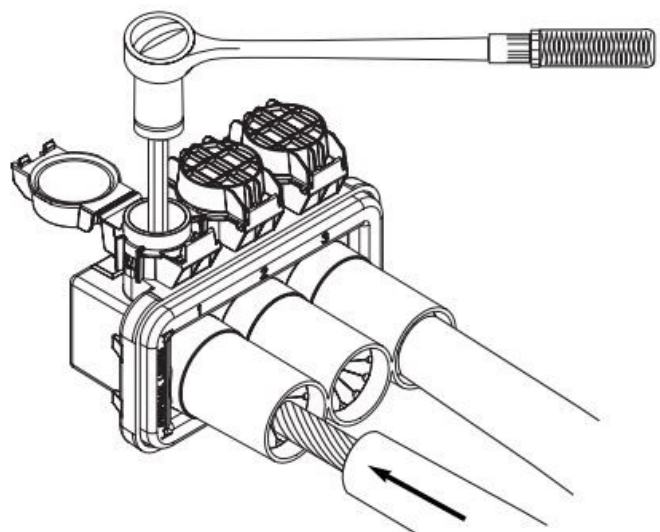
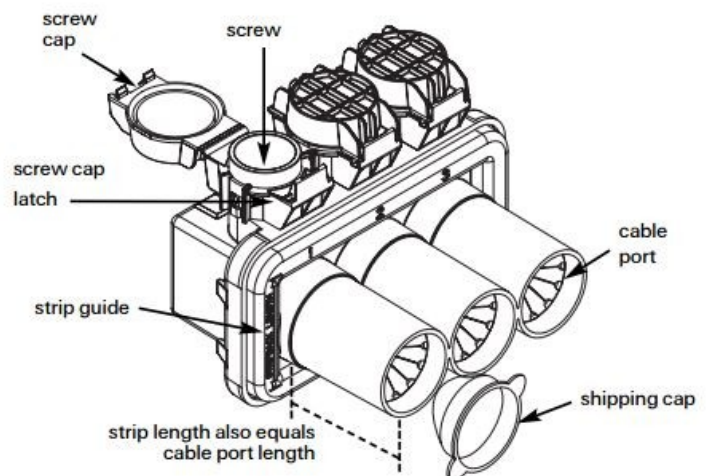
The GelPort connection system represents a revolutionary product for secondary connectors. Strip the cable and push it into the gel-filled cable port. The cable is encapsulated in gel and instantly sealed. It's that simple.

PowerGel sealing gel

PowerGel sealing gel was specifically developed for the electrical power industry. It consists of a chemically cross-linked silicone elastomer with silicone oil. PowerGel sealing gel is hydrophobic and provides an excellent moisture seal over a wide operating temperature range (-40°C to 95°C). It is compatible with solid dielectric cable insulation and connector deoxidizing greases and has excellent insulation properties.

Demand the best

- Corrosion resistance
- No loose parts due to one piece housing
- Gel-filled cable entry ports provide a reliable cable seal
- PowerGel sealing gel seals out harsh environments
- Rugged, impact-resistant housing stands up to rough installations
- Clear view back allows for easy positive visual indication of wire position in connector



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KGEL-PIT

Submersible, range taking in-pit connector suitable to 1KV



Clear back



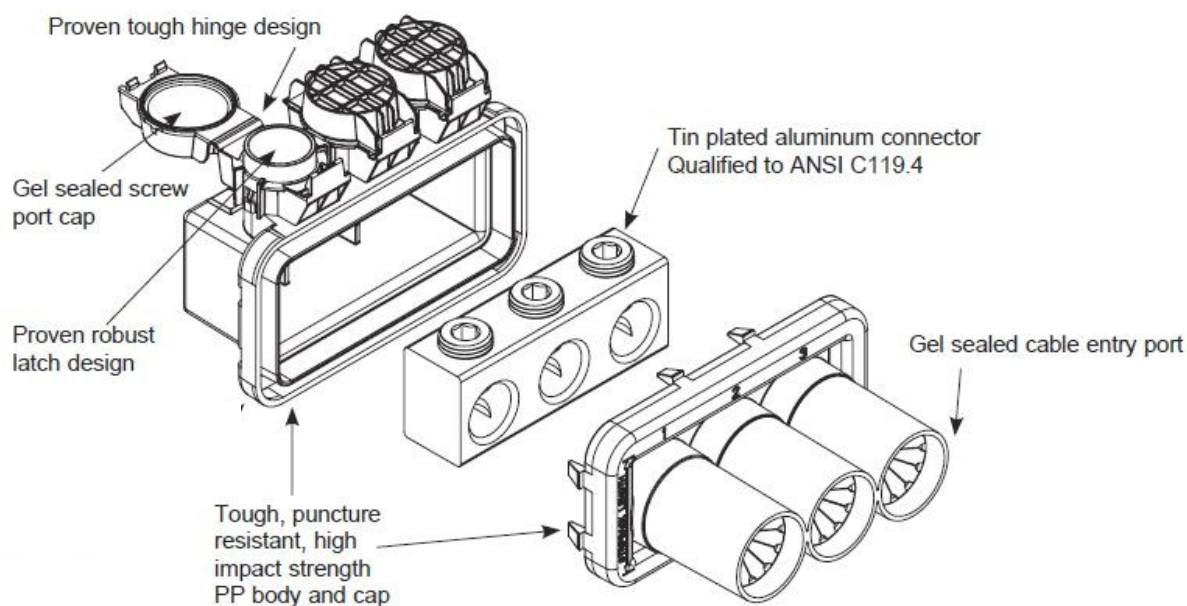
Hinged cap



Gel-filled ports



Submersible performance



TESTING	TEST CONDITIONS
Complete unit	ANSI C119.1, 2002, REPORT: EDR-5379, EDR-5409, EDR-5427
Connector	ANSI C119.4, 2003, REPORT: 502-47264, 502-47302, 502-47308
Chemical Resistance	ASTM D543 to the following liquids: Sulfuric Acid, Sodium Sulfate, Sodium Chloride, Sodium Hydroxide, Ethylene Glycol
UV Resistance	ASTM G-53-95, ASTM-D-638-95

Part #:	Number of ports	Range of Conductor	Length (MM)	Width (MM)	Height (MM)
KGEL-PIT-3P	3	4 - 150mm ²	117	97	89
KGEL-PIT-4P	4	4 - 150mm ²	149	97	89
KGEL-PIT-5P	5	4 - 150mm ²	180	97	89
KGEL-PIT-6P	6	4 - 150mm ²	212	97	89
KGEL-PIT-8P	8	4 - 150mm ²	276	97	89

NOTE: some items are available as special order only, please speak with one of our friendly sales team to confirm availability

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KGEL-WRAP

Cable re-jacketing & splice sleeve suitable for in-pit & direct burial up to 1KV



Tyco Electronic's GelWrap closure sleeves quickly and conveniently insulate and seal buried electrical connections rated up to 1000 volts. The robust, yet compact, design is engineered to handle the harsh environments of direct burial and manhole applications. GelWrap sleeves are equally well suited for insulation and jacket repair.

Features & Benefits

Installers will appreciate the simple wraparound design and dependable gel sealing performance. Simply wrap and snap the sleeve on any cable in the use range. The gel in the sleeve seals on contact. Installation is literally a snap.

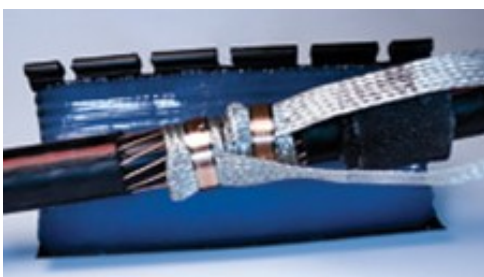
The factory cured silicone gel sealant in the GelWrap sleeve completely encapsulates the connection. Moisture cannot enter the splice.

PowerGel sealing gel was specifically developed for the electrical power industry. PowerGel sealing gel is hydrophobic and provides an excellent moisture seal over a wide operating temperature range (-40°C to 95°C).

It is compatible with solid dielectric cable insulations.

Other common uses for GelWrap sleeves

- LV cable repair splices
- MV cable jacket repair
- MV splice re-jacketing
- Elbow sealing sleeve

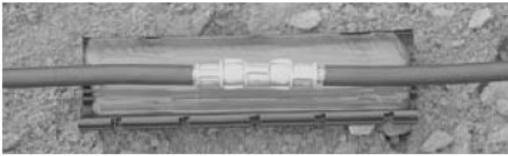


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KGEL-WRAP

Cable re-jacketing & splice sleeve suitable for in-pit & direct burial up to 1KV

Installation Instructions



1. Center GelWrap sleeve over connector.



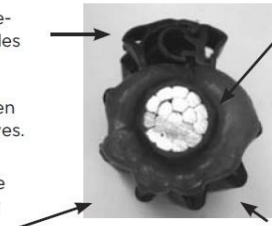
2. Wrap sleeve around connector and shut snap locks over entire length of sleeve.



3. Install cable ties at outermost notches of snap lock. Splice is complete.

Snap-lock made of impact resistant polypropylene provides secure installation. Latch is geometrically designed to provide easy installation, even when wearing insulated gloves.

Both the gel and housing are UV resistant and suitable for overhead applications.



Silicone gel is a high dielectric strength insulation that completely encapsulates the connection. The result is an excellent water seal. PowerGel sealing gel is specially formulated for high temperature environments.

Elastomer cover material combines outstanding tear strength, abrasion resistant, and chemical resistance with excellent flexibility and range-taking.

Testing

Test Conditions

ANSI C119.1 – 1986	600V insulated underground
Chemical Resistance	Fluid immersion, 168 hours @23c, 75% elongation retention min. <ul style="list-style-type: none"> 10W-40 motor oil 10% hydrochloric acid 15% sodium hydroxide ETC 60280 antifreeze (1000 hours)
Accelerated Aging	1000 hours @135C <ul style="list-style-type: none"> 93% retention tensile strength 82% retention elongation at break

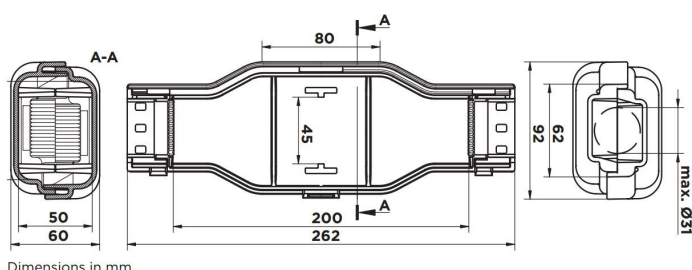
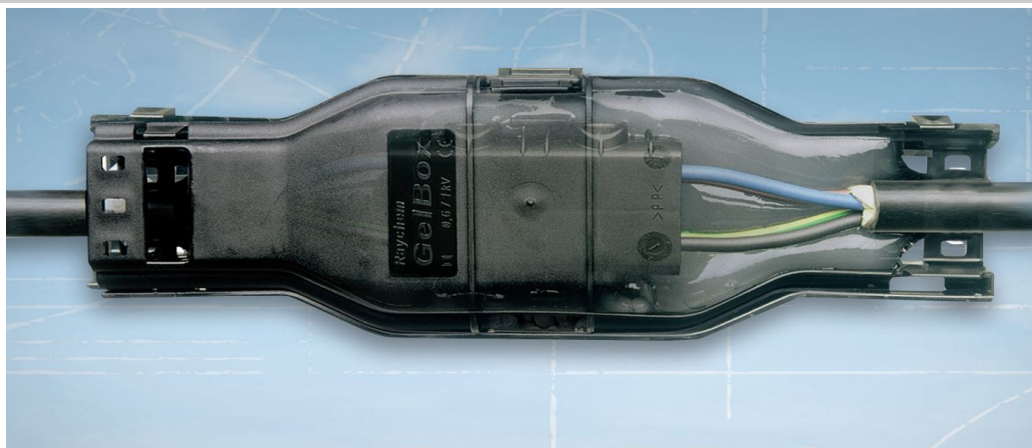
Part #:	Application Range	Sleeve Length	Conductor Size	Max Connector Length
	MM (OD)	MM	MM2	MM
KGEL-WRAP-4/18-100	4-18	100	4-95	25
KGEL-WRAP-4/18-150	4-18	150	4-95	75
KGEL-WRAP-4/18-200	4-18	200	4-95	125
KGEL-WRAP-4/18-250	4-18	250	4-95	175
KGEL-WRAP-4/18-300	4-18	300	4-95	225
KGEL-WRAP-10/33-150	10-33	150	35-240	50
KGEL-WRAP-10/33-200	10-33	200	35-240	100
KGEL-WRAP-10/33-250	10-33	250	35-240	150
KGEL-WRAP-10/33-300	10-33	300	35-240	200
KGEL-WRAP-10/33-350	10-33	350	35-240	250
KGEL-WRAP-20/50-200	20/50	200	250-750	50
KGEL-WRAP-20/50-250	20/50	250	250-750	100
KGEL-WRAP-20/50-300	20/50	300	250-750	150
KGEL-WRAP-20/50-350	20/50	350	250-750	200
KGEL-WRAP-20/50-400	20/50	400	250-750	250

NOTE: some items are available as special order only, please speak with one of our friendly sales team to confirm availability

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KGEL-IPCJNT

Insulation Piercing 4 & 5 core gel filled joint for pit & direct burial up to 1KV



Excellent cold applied seal

The Raychem GelBox offers a state-of-the-art sealed joint for underground and direct-buried applications.

PowerGel sealing gel technology

The GelBox closure and the connector block, with their Revolutionary PowerGel sealing gel, cover and seal the joint quickly and easily, saving both time and effort. PowerGel sealing gel is rated to 90°C continuous temperature with an unlimited shelf life.

History

The GelBox joint is yet another one of Raychem's field-proven PowerGel filled products for the demanding requirements of the electrical power industry.

Capacity

The Raychem GelBox covers a wide application range of 4-core cables from 6 to 25mm² for both aluminium and copper conductors, stranded or solid and in addition 35mm² with round solid aluminium conductors. Size transitions or transitions from copper to aluminium are also possible.

Performance tests

The GelBox is qualified to CENELEC HD623, the European specification for buried applications. This includes a three week heat-cycling test with the joint immersed in one metre depth of water. A test report with detailed information is available on request.

Easy to install

Closing the rugged GelBox closure is literally a snap. No special tools needed, no rip cords to break, and no trimming, mixing, pouring, or heating is required. The GelBox can immediately be put into service.

Kit content

GelBox closure, connector block, 2 tie wraps and illustrated installation instruction.

Connector included

Easy to install connector block: No insulation cutback - insulation piercing technology. Shear bolts always guarantee the optimum contact force. Sealed core entries take care of possible water in between conductor strands. The connector block is fully qualified to IEC-61238-1. Test Report is available on request.

ORDERING OPTIONS

Part Number:	Application Range:
KGEL-IPCJNT-01	4C X 6 - 25MM ² (Cu/Al rm/re) 4 X 6 - 35MM ² (Al/re)
KGEL-IPCJNT-02	5C X 6-16MM ²

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KGEL-FLEX

Flexible setting insulating compound for void filling to 36kV



TE's GUROFLEX MV has undergone extensive testing based on the requirements of CENELEC cable accessory performance standard HD 629.1 (including the requirements of IEC 60502-4) for rated voltages up to 36 kV. Additional testing has included impulse voltage withstand at 250 kV (prescribed level for 52 kV cable systems).

TE Connectivity's (TE) GUROFLEX-MV is a two-component cold-pour insulating compound. After mixing and pouring it cures to a soft rubbery solid that will not melt or flow. It has excellent electrical characteristics and is suitable for a wide range of bulk insulation applications in medium voltage electrical power equipment.

Because GUROFLEX-MV is a cold pour material there are none of the serious hazards associated with the heating and pouring of conventional bitumen or oil-based insulating compounds. One of the outstanding advantages of its chemical make-up is that GUROFLEX-MV is nonhazardous and does not contribute to environmental problems. The liquid components are not subject to any safety classification.

The principal application for GUROFLEX-MV is as a filling compound for cable termination boxes and bus bar enclosures associated with transformers, switchgear and motors. It is the ideal solution for non-airclearance cable boxes where the phase metalwork cannot be satisfactorily insulated with heat-shrink components or other applied insulation. The curing reaction of GUROFLEX-MV is insensitive to temperature, making it feasible to mix and pour the compound in very cold or hot ambient conditions. The cured compound can be cut out of the enclosure if connections have to be changed at a later date. No heat is required.

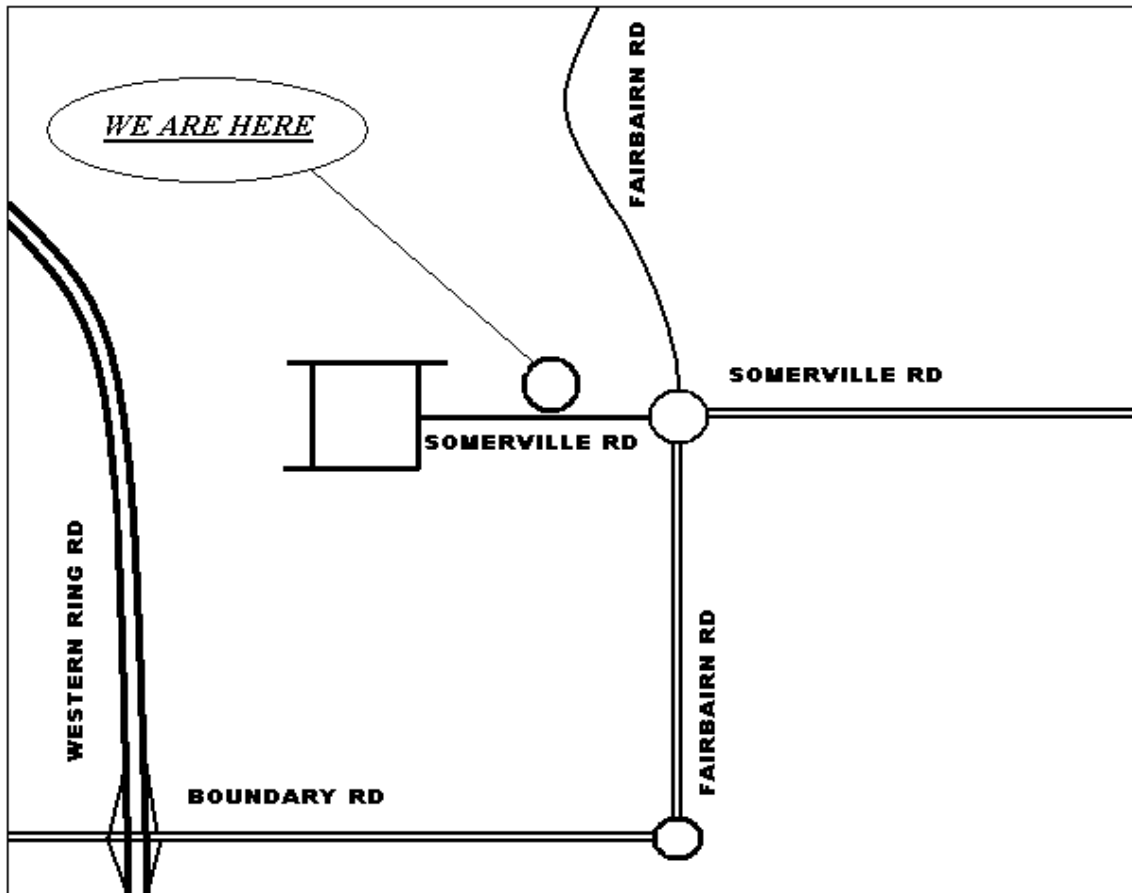
Key Features:

- Suitable for LV & MV Applications
- Not subject to special handling consideration
- Isocyanate and solvent free
- Easy to use
- No temperature rise during curing
- Cures to a soft-solid, no leakage problems
- Storage temperature from -20C (frost resistant) up to +40C
- Installation possible down to -10C

Technical Data	
Colour	Blue
Shelf life	24 Months
Reaction temp.	None
Storage temp.	-20C min / 40C max
Hardness	10 Shore A
Tensile strength	0.5 MPa
Elongation @ break	140%
Dielectric strength	25 kV/mm

ORDERING OPTIONS

Part Number	Description
KGEL-FLEX-1L	GUROSIL Gel Cartridge (250ml) Including Mixer Nozzle
KGEL-FLEX-5.3L	GUROSIL Gel Cartridge (250ml) Including Mixer Nozzle, Terminal Strip
KGEL-FLEX-10L	Turbo Mixer Nozzle for Re-use of Partial Portion of KGEL-IP68-RF



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for
Technical Help, Quotes, Pricing and all other enquires