



# PTC-1<sup>®</sup> Remote Lamp Control System

## Minimising disruption & reducing costs

Traffic signal technology has developed over recent years with the addition of IP Communication protocols, web interfaces and much more.

The controller technology in its purest sense will no doubt continue to develop but at Dynniq, we recognised the need for technology to enable a reduction in cost and time over a complete traffic signal installation – civil infrastructure included.

RLCS is based on a distributed controller system which takes some of the core controller technology from a single point (the traditional controller) to the signal heads; removing the need for extensive cable infrastructure and its associated costs.

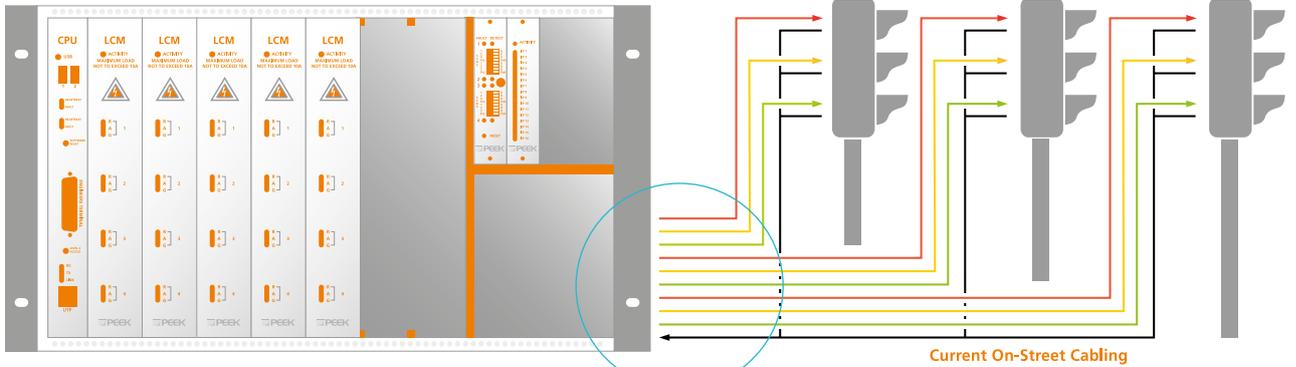
### What has not changed?

- Controller Safety Case (TR2500 Compliance)
- Compatibility with existing products (Peek Chameleon)
- Support; via the [remote] web pages (browser)
- Ability to link to second controller; conventional or RLCS (e.g. adding a linked RLCS pedestrian crossing to an existing [traditional] junction).

## Spot the difference

### Traditional signal installation

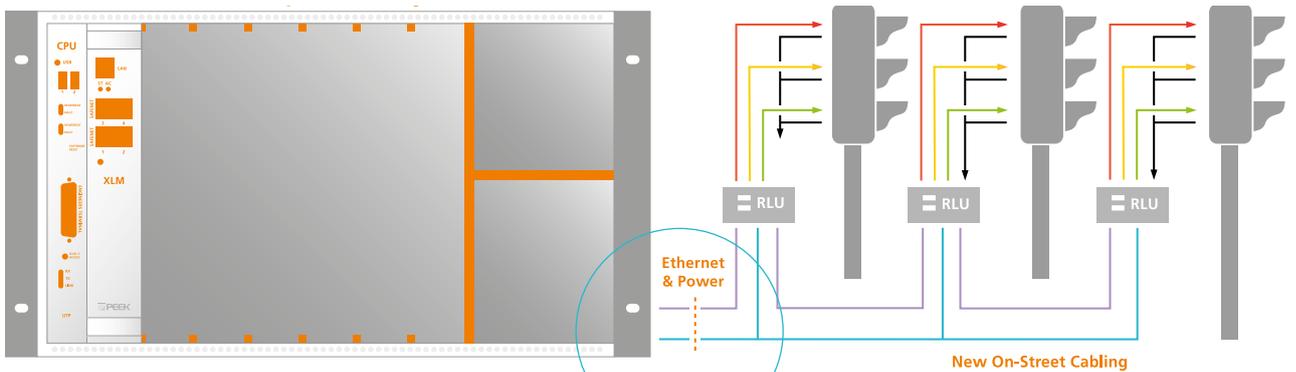
PTC-1®



Extensive cable infrastructure required; driving the need for civil works that also require more traffic management and create disruption for the travelling public.

### The RLCS system

PTC-1® with Remote Lamp Control System



Significant reduction in the cable infrastructure; minimising installation costs and disruption to the road user. This innovative solution enables the use of Ethernet and power cables in 20mm duct(s) which then allows for multiple installation options; micro-trenching, slot cutting, existing and new ducting systems (or a combination of both).

## Benefits

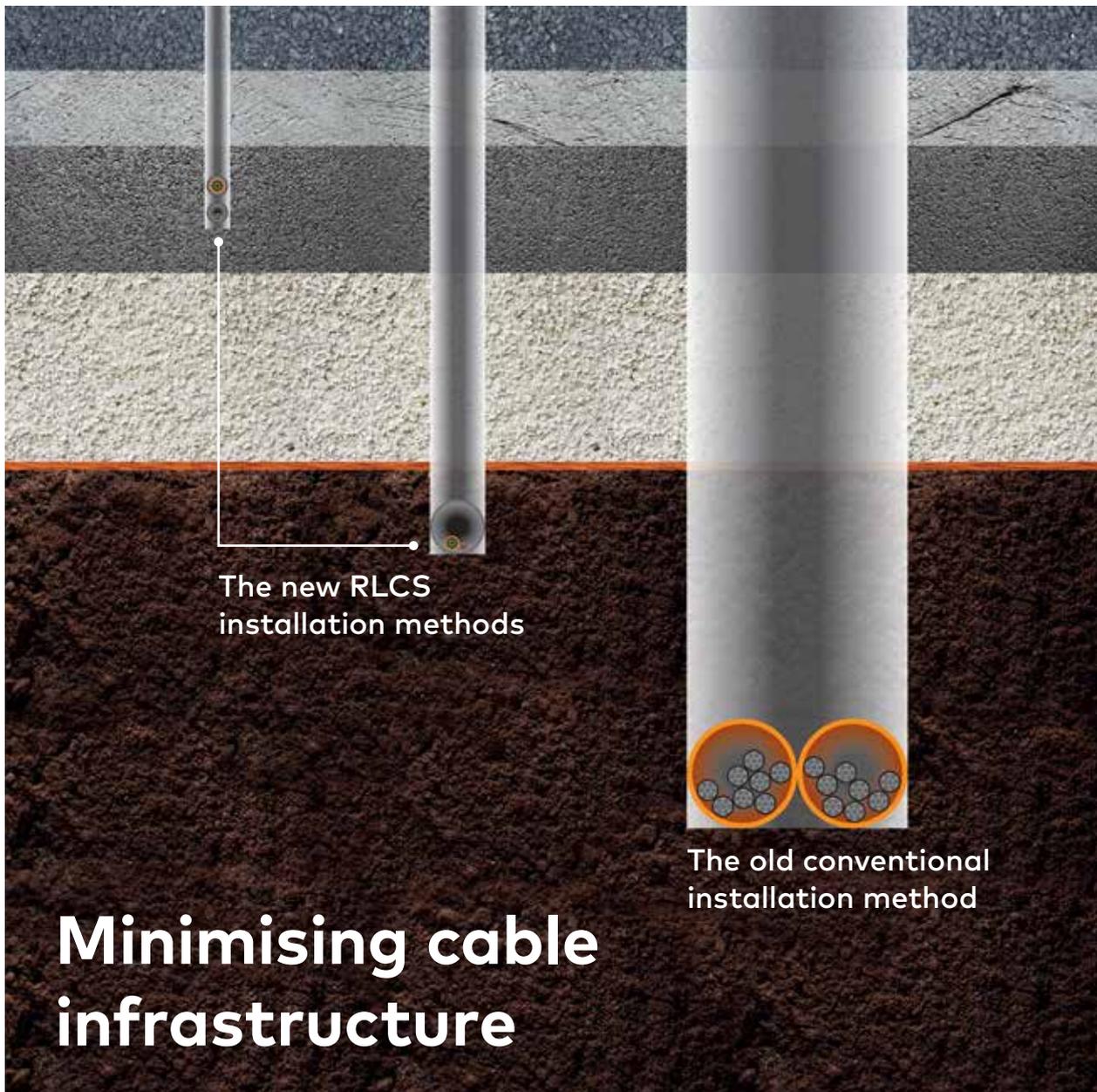


**Cost reduction of up to 30% on the overall scheme;**

- Civil Engineering – ducting and infrastructure
- Traffic Management
- Time to install is faster
- Cable – saving copper.

**Minimise congestion & disruption to road users;**

- Reduced Traffic Management
- Reduced on-site safety risks
- Reduced environmental impact.





Installation of the 2 x 20mm sub-ducts



Cutting through the kerb stones and into ducts

### **Why a Remote Lamp Control System?**

Dynniq looked at its traditional controller technology and how it might be further developed to support the need for more cost and time savings on a full traffic signal installation. We reviewed the time and cost associated with the overall site (using various scenarios) and worked with some of our civils contractors to calculate costings and therefore savings based on the reduction in the cable infrastructure.

The RLCS solution was born from this research and development and by taking a holistic view of a full site.

As this is a completely new approach to traffic signal technology and we work in a safety critical environment, our first 'live' trial (junction) was installed on a private site at the end of 2013, and has been successfully operating ever since. We then moved to a second trial site (pedestrian crossing) in February 2014. Of course, the idea of trial sites is to help to refine the solution, and to identify any areas for improvement before a wider roll out, and these first two sites enabled us to review a number of elements that could work better.

### **Client trial site**

In April 2014, we worked with our Alliance partner, Lincolnshire County Council (UK) on the installation of the first PTC-1 RLCS site on the public highway.

This installation involved upgrading the current 48V PTC-1 installation to RLCS operation. This is a single stream, 13 phase site with 6 stages and 14 poles. The site also used a combination of Clearview (in-road) and AGD (above ground) detection methods, and was selected due its relatively complex nature; offering significant technical value from the field trial.

The installation involved re-cabling the site with the RLCS specific power and data cables, with the new cable infrastructure installed in a ring-main arrangement to minimise the on-street cabling.

To support RLCS operation, the existing 48V PTC-1 controller was upgraded to remove the conventional LCM's (Lamp Control Modules) which are no longer required. The additional RLCS power, data and control modules were also installed within the controller, with minimal on-street disruption.



The existing signal heads were upgraded and re-wired to house the RLU ( Remote Lamp Unit), RIO (Remote I/O) and ADU ( Audible Drive Unit) which are now located within the signal heads.

**"We welcomed the opportunity to work with Dynniq to install this latest technology; providing a trial site for a new innovation such as this was never in question. It's important for the industry to work together to develop new ideas and enable progress."**

---

Mike Nicholls, Highways Network Manager,  
Lincolnshire County Council

**Smart Technology  
Minimise the impact on existing  
infrastructure**

### **Full RLCS site**

In June 2015, the first ever site (a four pole pedestrian crossing) designed from the outset around the use of the RLCS solution was installed in the UK. It has no ducts installed across the carriageways, and makes full use of the slot-cutting and sub-duct process to eliminate the need to ducts to be installed across both road crossings.

### **Number of new sites continues**

Additional sites continue to be installed as this technology gains momentum and continues to demonstrate significant savings in time, disruption and cost.

In the summer of 2015, a Staffordshire project saw the first RLCS installation with Clearview Access Points communicating directly with the controller CPU via the RLCS data network, without the need for the Clearview M120 Interface Cards or any supplementary street cabling.

### **Puffin crossing installed in one day**

The use of RLCS technology as part of the installation of a Puffin crossing allowed Dynniq to complete the installation, including the road crossing, within a single day.

**"We are impressed at how quickly this has gone in and extremely happy with the limited disruption to the traveling public which is not only better from a congestion perspective but also a safety one. We will consider the use of this new technology for future installations within Fife."**

Murray Hannah, Fife Council



PTC-1® is a registered trade mark of Dynniq UK Ltd.  
© 2016 Dynniq UK Ltd. V1 09.16

### A significant milestone

RLCS reached London in 2016 when Dynniq, in partnership with Cubic Transportation Systems, installed a 14 pole junction for Transport for London (TfL). The challenge set by TfL was to engage the latest innovative solutions, to minimise the visibility of on-street furniture and to reduce installation times, thus limiting disruption to their network.

The chosen site has all-round Pedestrian Facilities, Pedestrian Countdown Timers & Bus Priority. It also uses a combination of Clearview Magnetometers, FLIR Trafficams and Radix RTM "wands" to provide the detection, and again to demonstrate the versatility of the PTC-1 RLCS solution, and its ability to support a diverse range of detection solutions.

A job of this size would typically take eight days on-street to complete. By opting to install the PTC-1 RLCS, the job was completed in two days (a weekend).



### **Dynniq UK Ltd**

Hazelwood House, Lime Tree Way,  
Basingstoke, Hampshire  
RG24 8WZ  
United Kingdom

T +44 (0)1256 891 800

E [marketing@dynniq.co.uk](mailto:marketing@dynniq.co.uk)

[www.dynniq.co.uk](http://www.dynniq.co.uk)