



Traffic Open Products and Specifications

TOPAS – It's For You!

Keith Manston

ARTSM Chair

TOPAS Management Board Member

Email: enquiries@topasgroup.org.uk

Synopsis

TOPAS has been in full operation since 2016, when it took over responsibility for maintaining the range of TR 25XX specifications relinquished by the Highways Agency, as it transitioned to become Highways England. Since 2016, a key focus of TOPAS has been to manage and update this suite of specifications and to develop new specifications where a need is identified.

Coupled with the TOPAS Registrationⁱ process, which includes an independent assessment of compliance with the specifications, Purchasers now have a simple means to ensure that traffic related Products they buy will perform in a safe, predictable and reliable way, without needing to have the in-depth expertise necessary to fully specify the products themselves.

But when buying traffic related products, how many Purchasers actually require compliance with TOPAS specifications and how do they know if Products purchased are compliant with them?

This paper provides a little background context to TOPAS but mainly seeks to provide simple guidance on how Purchasers can ensure that Products purchased are compliant with the very latest TOPAS specifications and seeks to answer several frequently asked questions about TOPAS and its Specifications.

Background context

Historically, Type Approval was the formal authorisation required to use certain equipment on the highway and the Type Approval process was administered by the Highways Agency on behalf of the Department for Transport.

To facilitate this, the Highways Agency developed and maintained a set of detailed performance specifications, in recent times loosely termed the TR25XX specifications, against which manufactures could self-declare compliance and so gain Type Approval.

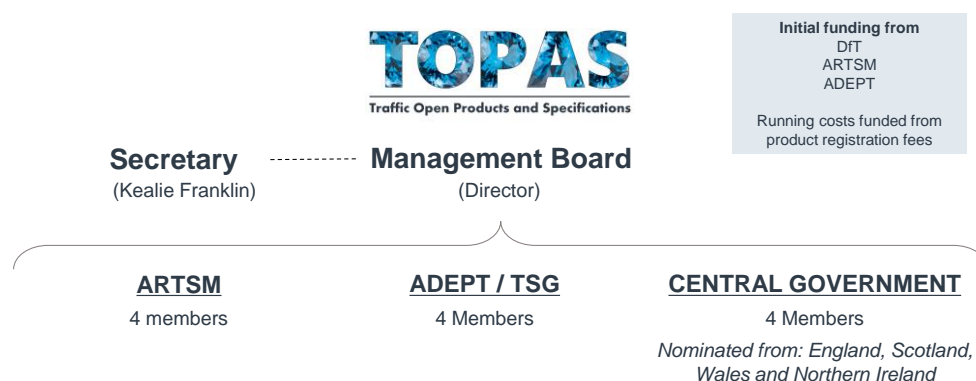
The requirement for Type Approval was contained in earlier versions of the Traffic Sign Regulations and General Directions (TSRGD, direction 56), but was removed in the most recent 2016 edition. At the same time the Highways Agency transitioned to Highways England and relinquished the maintenance and development of many of the TR25XX specifications.

Several years prior to this, representatives of ARTSM (the Association for Road Traffic Safety and Management) and TSG (the Traffic Systems Group of ADEPT, the Association of Directors of Environment, Economy, Planning & Transport), had already begun to work more closely together with the aim of improving engagement between users and Manufacturers, but the group was given new impetus by the proposed changes to Type Approval.

After discussion with interested parties, including ARTSM and the TSG, facilitated by the Department for Transport, it was recognised that the loss of the TR25XX specifications and the associated Type Approval process, would be problematic for both product Purchasers (mainly Local Authorities) and product Manufacturers. For Purchasers it would mean they would have to develop their own detailed procurement specifications for the equipment they were buying and each be able to verify that products supplied met their specifications – a very significant task, requiring considerable technical skill and knowhow, at a time when Local Authority staff numbers were under increasing pressure. For Manufacturers it could mean facing many differing product requirements for the same type of product, which would ultimately be costly and very time consuming to deliver.

To help mitigate these issues, TOPAS was established in July 2014, and came into full operation in 2016, with the aim of maintaining the TR25XX specifications relinquished by the Highways Agency (now renamed TOPAS 25XX), updating them as required to keep pace with changing requirements and to also develop new specifications where the need arises.

TOPAS is operated by a “Management Board” of volunteers drawn from the Department for Transport, Transport for Scotland, Welsh Government, Transport NI, ARTSM and TSG. Most of the specification maintenance and the creation of new specifications is undertaken by members of ARTSM and TSG, with each update being offered for public review and comment via the TOPAS website www.topasgroup.org.uk.



TOPAS structure – tripartite representation

But TOPAS specifications and the verification of compliance against them differ in two main respects from the regime operated by the Highways Agency, prior to 2016.

- **Firstly**, compliance with TOPAS specifications is not mandatory and it is no longer necessary for equipment to be Type Approved before it is allowed to be installed.

Of course, equipment must meet national regulations, such as those enshrined within TSRGD (The Traffic Signs Regulations and General Directions), as well as many other underlying regulations including, for example, those for electromagnetic compatibility, but the performance of traffic equipment is no longer controlled by any national regulations.

TOPAS Specifications do however define performance requirements in detail and are an easy-to-use means for Purchasers to define the required performance of traffic Products in purchasing contracts between them and Product suppliers.

- **Secondly**, TOPAS operates a much more rigorous system for judging compliance with the TOPAS specifications than was undertaken by the Highways Agency when granting Type Approval, resulting in Products being Registered by TOPAS.

In both cases compliance verification is based on a Declaration of Conformity being made by the Manufacturer. For Type Approval applications this was sufficient, and Approval would be routinely granted based on this alone. However, for TOPAS Registration to be granted, a Manufacturer must submit a detailed Technical File to an Independent Technical Assessor who will review the file and only if they are satisfied will a product be recommended to the TOPAS Management Board for Registration.

This extra level of verification helps to significantly increase the confidence that a purchased Product will perform in a safe, predictable and reliable way.

TOPAS 0600 describes the Registration process in detail and is available from the TOPAS website at www.topasgroup.org.uk.

How do TOPAS specifications help Product Purchasers?

TOPAS specifications encapsulate the combined knowledge of numerous experts in the field of traffic management and control. They have been evolved over many years to deliver both compliance with national standards and a level of performance necessary to cope with today's demanding traffic environment. This 'encapsulated knowledge' frees Purchasers from the need to explicitly define Product performance in their own purchasing documentation and tenders – a task which would be extremely time consuming and in many cases something which many Purchasers would not have the expertise to do effectively.

Often the specifications also seek to enable interoperability between equipment. This enables Purchasers to source Products from several different manufacturers and still have confidence that they will not only function as required, but be able to be interchanged in the field, because, for example, their interfaces (including their physical connections) are all compliant with the relevant TOPAS specifications.

But of course, technology is continually changing and TOPAS specifications are regularly updated in line with changing requirements and solutions. A recent example of this is the new TOPAS 2542 specification which covers Products to be used to provide remote, non-contact activation of pedestrian push buttons. And TOPAS is always looking forward, so is currently actively involved in the creation of a new intelligent interface standard for advanced detectors. This will provide a detailed framework to allow these Products to interface to on-street equipment, such as controllers in an interchangeable way. The ultimate aim is to enable Purchasers to source from multiple suppliers with enhanced confidence that the detectors will reliably connect to their on-street equipment and will function as expected.

A list of current TOPAS specifications, showing which have been updated or newly created and which are currently under review is included at the end of this paper.

How to use TOPAS specifications when purchasing Products

As outlined above, TOPAS specifications are intended to be used directly in the procurement process and they are described as such in the preamble to each specification. In addition, the TOPAS Registration process offers a simple means for Purchasers to verify that products they purchase have been declared compliant with the specifications.

To make use of this provision, Purchasers simply need to require that traffic Products supplied against their tenders or other purchasing contracts are TOPAS Registered to the latest TOPAS specifications. Suggested contract / Tender wording is:

“All products supplied under this Contract / for this Tender (use wording as appropriate), shall be Registered to the latest relevant TOPAS specification. A copy of the TOPAS Registration certificate for each Product shall be supplied as part of the Contract / Tender response. (use wording as appropriate)”

However, asking for evidence of Registration is only a first step and Purchasers should also check that any compliance declarations they receive are valid and really to the latest specification versions.

This is easy to do via the TOPAS website www.topasgroup.org.uk by simply looking under the “Register” tab, which gives several options to view Registered products and quickly ascertain to which version of the relevant specification. (Products which are not registered to the latest version of the specification show the specification number along with the text “superseded”).

Although most traffic control and monitoring Products routinely purchased are already encompassed by relevant TOPAS specifications, it is noteworthy that a small number are not yet covered and this should be borne in mind when assessing Tender / Purchasing contract compliance. The full list of TOPAS specifications is included at the end of this paper but in summary TOPAS specifications currently cover:

- Traffic Controllers (permanent, portable and temporary)
- Above and below ground detectors
- Nearside pedestrian signals and demand units
- Tactile and audible equipment
- Non-contact pedestrian signal demand equipment
- Rising bollard control systems
- Wig-wag signals
- Tram signals
- Pedestrian countdown units
- Discontinues Variable Message Signs
- Electromechanical Variable Message Signs
- Remote Monitoring equipment

Notable exceptions are standard traffic signals and wait indicators. New specifications to cover these are currently being constructed and will be available in the near future, once reviewed and agreed by the wider traffic community.

Frequently Asked Questions

Q: Is there any charge to call-up TOPAS specifications in my purchasing contract / tender?

A: No, there is no charge – TOPAS specifications may be freely referenced whenever required.

Q: Why do I need to call up TOPAS specifications; aren't they mandatory?

A: Although some requirements referenced within TOPAS specifications are mandatory (such as compliance with TSRGD), compliance with TOPAS specifications themselves is not mandatory and they are only effective in a purchasing contract, if compliance with them is a condition of the contract.

Q: How do I ensure that Products I purchase are compliant with the latest TOPAS specification version?

A: Simply require that Products are TOPAS Registered to the latest specification issue (see suggested wording in the main body of the paper). All Registered products are listed on the TOPAS website, against the specification version, so reference to the website is an easy way of confirming compliance.

Q: What do I do if I think a TOPAS specification is wrong, out of date or a new specification is needed?

A: Please contact the TOPAS Administrator (enquiries@topasgroup.org.uk) providing as much detail as possible and your queries / concerns / new specification suggestions will be reviewed and answered by the TOPAS Board.

How you can help ensure TOPAS specifications remain relevant and available

The collaboration between manufacturers and users during the development of new and updated specifications has already helped to ensure that new, innovative Products, continue to properly consider, interoperability with existing equipment, the wider needs of the community and will meet appropriate manufacturing and quality requirements regarding their intended use.

But in our fast changing technical environment, ensuring that the TOPAS suite of specifications remains relevant is essential to their continued use. TOPAS welcomes prospective suppliers of new traffic control products, not covered by existing specifications, to propose new specifications! Such proposals go through a similar process to the review of an existing specification and would ideally require the prospective suppliers to provide a draft specification for consultation, with the final TOPAS specification ultimately incorporating industry and user comments. This would similarly apply to purchasing organisation with new requirements – simply email enquiries@topasgroup.org.uk providing as much detail as possible about your new specification proposal and this will be reviewed by the TOPAS Board as a candidate for a new specification.

But critically, for TOPAS to continue to manage and develop these specifications, **purchasers need to actively support TOPAS, by always specifying TOPAS Registered Products in their procurement documents**. This will in turn ensure Manufacturers have a strong incentive to Register their products with TOPAS and will ensure Purchasers continue to have a straightforward means of verifying that current and new Products will perform in a safe, predictable and reliable way.

For more information on TOPAS, visit the website: www.topasgroup.org.uk or email enquiries@topasgroup.org.uk. The Management Board may provide limited advice on TOPAS processes, but appropriate, commercial advice should be sought for more detailed, technical enquiries.

Status of TOPAS specifications

Specifications which have been updated from their original Highways Agencyⁱⁱ technical content and re-issued or have been newly created

Specifications which are under review or in the process of being drafted

Specification Number	Specification Title	Status
TOPAS 0600D	Self-Certification Procedures for Registration Process of Traffic Control Equipment	Status Live
TOPAS 0601A	Specification Review Process	Status Live
TOPAS 2500B	Specification for Traffic Signal Controller	Status Live
TOPAS 2502B	Performance Specification for Portable Traffic Signal Control Equipment for use at Roadworks	Status Live Under Review
TOPAS 2503B	Performance Specification for Pedestrian Facilities at Temporary Standalone Traffic Signals	Status Live Under Review
TOPAS 2504A	Performance Specification for Vehicle Detection Equipment for Vehicle Actuated Portable Traffic Signals	Withdrawn (Now included in TOPAS 2505B)
TOPAS 2505B	Performance Specification for Above Ground Vehicle Detector Systems for use at Traffic Signal Installations	Status Live
TOPAS 2506A	Performance Specification for Above Ground On-Crossing Pedestrian detection Systems	Status Live
TOPAS 2507A	Performance Specification for Kerbside Detection Systems for use with Nearside Signals and Demand Units	Status Live
TOPAS 2508C	Performance Specification for Tactile Equipment for use at Pedestrian Crossings	Status Live
TOPAS 2509B	Performance Specification for Audible Equipment for use at Pedestrian Crossings	Status Live
TOPAS 2510A	Performance Specification for Rising Bollards Control Systems	Status Live
TOPAS 2511A	Performance Specification for Nearside Signal and Demand Units	Status Live
TOPAS 2512B	Performance Specification for Below Ground Vehicle Detection Equipment	Status Live
TOPAS 2513A	Performance Specification for Wig Wag Signal Control Equipment	Status Live Under Review
TOPAS 2514A	Performance Specification for Light Control of Tramcars	Status Live
TOPAS 2515C	Performance Specification for Equipment to Detect High and Over-height Vehicles at Low Structures	Status Live
TOPAS 2516D	Performance Specification for Discontinuous Variable Message Signs	Status Live
TOPAS 2517B	Performance Specification for Electromechanical Variable Message Signs	Status Live
TOPAS 2520A	Performance Specification for Uni-Directional Logic Equipment	Withdrawn
TOPAS 2522A	Remote Monitoring and Control of Traffic Control Equipment via a Telecommunications Network	Status Live
TOPAS 2523B	Traffic Control Equipment Interfacing Specification	Status Live

Specification Number	Specification Title	Status
TOPAS 2537A	Performance Specification for Portable Traffic Signal Control Equipment with Pedestrian Facilities for use at Roadworks	Status Live Under Review
TOPAS 2538A	Performance Specification for Portable Traffic Signal Control Equipment for a Stand-alone Pedestrian Facility	Status Live Under Review
TOPAS 2540A	Portables and Temporary signals (with Hall Routes) (Will ultimately replace TOPAS 2503, 2504, 2537 and 2538).	New specification under construction
TOPAS 2542A	Performance Specification for Non-contact pedestrian signal demand equipment	Status Live
TOPAS 2543A	Traffic Signals and related equipment	New specification under construction
TOPAS 2581A	Performance Specification for Pedestrian Countdown Units for use at Traffic Signals	Status Live
TOPAS 2130B	Environmental tests for Road Equipment	Status Live

ⁱ Terms such as Registration, Purchasers, Products, and Manufacturers are defined TOPAS Terms and so are capitalised throughout to highlight this.

ⁱⁱ Products compliant with the earlier Highways Agency specifications and were Type Approved by the Highways Agency retain their Type Approved Status if they are unchanged since that time. Products which have changed since Type Approval ceased will not have had their Type Approval status updated and New Products introduced since 2016 will not have been able to be Type Approved.