

Certificate of Acceptance

PA05/02900

Manufacturer:
Unipart Rail

Issue : T10
Valid From : 12/05/21
Monitoring Period 6 Months

Level Crossing Signals - LED Wig Wag and Standing Red Man Assemblies

Product Description

Combined certificate LED Wig Wags and Standing Red Man assemblies. Including associated parts and replaceable spares.

The complete LED Wig Wag assemblies are available with the following variants:

- 24 V DC or 110V AC
- Plug Coupled or Free Wired
- Standard or Narrow Backboard
- Extended Visor (Previously on PA05/05584)

Red and Amber LED Modules are all to Modification State A (increased luminous intensity), this will be clearly identified on the module label as 'Version No. Mod A' (Previously on PA05/02434)

The modules are available with the following variants:

- 24 V DC or 110V AC
- Fixed or Adjustable

The modules can also be combined with mask kits and mounting brackets for "Standing Red Man" and "Another Train Coming" applications at Level Crossings (Previously on PA05/04023).

Scope of Acceptance

Full Acceptance:

- 24V DC Wig Wag Assemblies and Modules (Fixed and Adjustable)
- 24V DC Plug Coupled Wig Wag Assemblies are available for maintenance spares, new installation will require further assessment
- Mk1 LED Wig Wag's should not be used for new works, they are still available for maintenance use only. Oversized Backboard for use at selected site as risk mitigation
- Extended visor – For Level crossing susceptible to sunlight swamping. Only fit Unipart Modules
- Standing Red Man / Another Train Coming - Where a signal is provided for pedestrians walking in the opposite direction to vehicular traffic (i.e. on a one-way road) it shall be proved by use of a lamp proving relay to pin code 062 (PADS No. 086/023451)
- Standing Red Man / Another Train Coming signals should be used with flasher type HRP78500 (PADS No. 085/002475)

Trial Acceptance (Atkins Signalling Method)

- 110V AC Assemblies and Fixed Modules - Accepted for use subject to a successful 6-month trial period from commissioning at the first deployment site
- 110V AC Standing Red Man – Including modified mounting bracket for use with plug coupled light units, using a longer bracket and anti-vandal hood.

For use on the following projects, trial in conjunction with the Atkins Signalling Method only, Feltham and NYL (sites see p2).

Network Rail Acceptance Panel (NRAP) hereby authorises the product above for use and trial use on railway infrastructure for which Network Rail is the Infrastructure Manager under the ROGS regulations.

Reviewed by:



Steve Rennolds
Product Acceptance Specialist

Product Image

Wig Wag Backboard



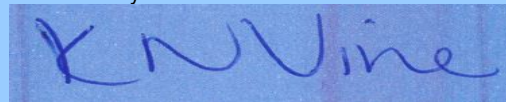
Standing Red Man



Extended Hood



Authorised by:



Ken Vine BSc CEng MIET FIRSE
Professional Head Level crossings

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Specific Conditions

The following Conditions are specific to the approved product/s contained within this Certificate. These conditions must be adhered to in addition to the Network Rail General Conditions contained within the "General Terms and Conditions" section. Failure to adhere to these conditions may result in the withdrawal or suspension of Acceptance of some, or all of the items contained within the accepted configuration.

Manufacturer

- 1) Each wig wag assembly shall be fitted with LED modules of the same modification state. It is not permissible to mix modification states on the same backboard.
- 2) Wig Wags may be supplied with either the I-Core (K310-32) or PMAFLEX-XSOL (XSOLG-36BG) conduit.
- 3) Wig-Wag assemblies shall be supplied with a D10 KS10 TP cover fitted to the terminal strip.
- 4) Unipart to undertake an inspection of the box section REF: CC00632 at Machynlleth in January 2020 to confirm any previous deterioration to the channel of the box section was due to transport and storage. I.e. new box section shows no sign of rapid deterioration. Advise Network Rail product introduction group.

User

MK2 Wig Wag Assemblies

- 1) For consistency of presentation to the road user, all wigwags on the same side of the level crossing shall be of the same modification state.
- 2) For plug coupled wigwags a 90-degree plug coupled lead shall be used to ensure clearance with the post bracket. A suitable lead is 086/000309 (note this is 12c rather than 10c).

Standing Red Man / Another Train Coming

- 3) Lamp proving relays to pin code 062 (PADS No. 086/023451) are required for 24V DC units.
- 4) 24V DC units shall only be used with flasher type HRP78500 (PADS No. 085/02475).
- 5) All modules on a backboard shall be to the same modification state.

Extended Visor

- 6) Only to be fitted to wig wags that are susceptible to swamping by sunlight.

Current Atkins Signalling Method Locations

Feltham Project

Name	Type	ELR	Mileage	Workstation
Hampton	MCB-CCTV	NMS	14m.51ch	Basingstoke ROC (Strawberry Hill Workstation)
Strawberry Hill	MCB-CCTV	TSJ	12m.26ch	Basingstoke ROC (Strawberry Hill Workstation)
Sunningdale	MCB CCTV	RDG1	26m.66ch	Basingstoke ROC (Ascot Workstation)

NYL Project

Name	Type	ELR	Mileage	Workstation
Brundall	MCB-CCTV	NOL	5m 62ch	Brundall
Cantley (No.34)	MCB-CCTV	NOL	10m 04ch	Lowestoft
Lingwood Station Road (No.7)	MCB-CCTV	NAY	8m 03ch	Brundall
Oulton Broad North (No.76)	MCB-CCTV	NOL	22m 01ch	Lowestoft

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Product Configuration

MK2 Wig Wag Assemblies

Part No.	Description	Catalogue No.
Free Wired MK2 Wig Wag (Fixed Module Type with Tilt Bracket)		
0050/604501	24V DC MK2 LED Wig-Wag Complete Assembly – Standard (Fixed Module & Adjustable Bracket)	086/024647
0050/604549	24V DC MK2 LED Wig-Wag Complete Assembly – Narrow (Fixed Module & Adjustable Bracket)	086/024648
0050/605513	110V AC MK2 LED Wig-Wag Assembly (Complete) – Standard (Fixed Module & Adjustable Bracket)	086/023096 (Trial)
0050/605514	110V AC MK2 LED Wig-Wag Assembly (Complete) – Narrow (Fixed Module & Adjustable Bracket)	086/023097 (Trial)
Plug Coupled MK2 Wig Wag (Fixed Module Type with Tilt Bracket)		
0050/605493	110V AC Plug Coupled MK2 LED Wig-Wag Complete Assembly – Standard (Fixed Module & Adjustable Bracket)	086/023098 (Trial)
0050/605494	110V AC Plug Coupled MK2 LED Wig-Wag Complete Assembly – Narrow (Fixed Module & Adjustable Bracket)	086/023099 (Trial)
0050/604926	24V DC Plug Coupled MK2 LED Wig-Wag Complete Assembly – Standard (Fixed Module & Adjustable Bracket)	086/024649 (Spares)
0050/604929	24V DC Plug Coupled MK2 LED Wig-Wag Complete Assembly – Narrow (Fixed Module & Adjustable Bracket)	086/024651 (Spares)

Associated Products including Spare/Replacement Parts

0050/604502	MK2 LED Wig-Wag Backboard Only – Standard (Fixed Module & Adjustable Bracket Type)	086/024645
0050/604550	MK2 LED Wig-Wag Backboard Only – Narrow (Fixed Module & Adjustable Bracket Type)	086/024646
0050/608784	Stainless steel Universal U-Bolt kit to be used with the halogen, filament and MK1 LED and MK2 adjustable LED lights as part of the wig wag assembly, supplied with fixings	086/001644
0050/608786	Stainless steel U-Bolt kit for use on RTLs with extended arms. supplied complete with fixings	086/001645
D87.86030	50W Wig Wag 535mm Extended Visor Fitting Kit	086/008680
D87.86031	Dorman LED Wig Wag 535mm Extended Visor Fitting Kit	086/008681

LED Wig Wag Modules

24V DC Fixed Wig-Wag Modules		
LWFM2/R/2/50/01	24V DC LED Wig-Wag Module – Red (Fixed) 2 Wire connection cable	086/024181
LWFM2/A/2/50/01	24V DC LED Wig-Wag Module – Amber (Fixed) 2 Wire connection cable	086/024182
24V DC Adjustable Wig-Wag Modules		
LWWM2/R/2/50/01	24V DC LED Wig-Wag Module – Red (adjustable) 2 Wire connection cable	086/023395
LWWM2/A/2/50/01	24V DC LED Wig-Wag Module – Amber (adjustable) 2 Wire connection cable	086/023396
110V AC Fixed Wig-Wag Modules		
LWFM2/R/1/50/01	110Vac LED Wig-Wag Module – Red (Fixed) 3 Wire connection cable	0086/023224 (Trial)
LWFM2/A/1/50/01	110Vac LED Wig-Wag Module – Amber (Fixed) 3 Wire connection cable	0086/023225 (Trial)

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Standing Red Man / Another Train Coming

As per PADS No.	24V DC Free Wired LED Wig-Wag module 'Another Train Coming' complete assembly. Comprises: 1 x LED Wig-Wag Module – Red (086/023395), 1 x Mounting Bracket Assembly (086/024197) & 1 x 'Another Train Coming' mask and fixing kit (086/000038).	086/000037
D87.86023	LED Wig-Wag module 'Another Train Coming' mask and fixing kit.	086/000038
As Per PADS no.	24V DC Free Wired LED Wig-Wag module 'Standing Red Man' complete assembly. Comprises: 1 x LED Wig-Wag Module – Red (086/023395) 1 x Mounting Bracket Assembly (086/024197) & 1 x 'Standing Red Man' mask and fixing kit (086/024196).	086/024195
D87.86015	LED Wig-Wag module 'Standing Red Man' mask and fixing kit.	086/024196
YSC 157	Mounting Bracket Assembly for 24V DC free wired 'Standing Red Man' and 'Another Train Coming' LED module	086/024197
TBC	110V AC Free Wired LED Wig Wag module 'Standing Red Man' complete assembly. Comprises: 1 x 110V AC LED Wig-Wag Module – Red, 1 x Anti Vandal Mounting Bracket Assembly (0050/607671) & 1 x 'Standing Red Man' mask and fixing kit (086/024196)	TBC (following trial)
0050/607364 (TBC)	110V AC Plug Coupled LED Wig Wag module 'Standing Red Man' complete assembly. Comprises: 1 x LED Wig-Wag Module – Red Plug Coupled, 1 x Mounting Bracket Assembly (0050/607365) & 1 x 'Standing Red Man' mask and fixing kit (086/024196)	TBC (following trial)

Assessed Documentation

Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.	
-	'Flashing Road Light Manufactured By' Label artwork		09/06/14	3
PIY215-8 Issue 1	Mk2 Wig-Wag Acceptance report (PA05/02900 Issue 4)		15/08/14	4
PIY215-12 Rev A	Mk2 Narrow Wig-Wag Assembly		09/09/14	4
DR/NDS/972c	Wig-Wag Framework Contract, Schedule 4 – Goods / Specification		02/06/14	4
PIY 215-19	Mk2 Wig-Wag (Plug & Play) Electrical Connection Boxes	2	24/09/15	5
PIY 215-20 sheet 1 of 2	Mk2, Wig-Wag, (Plug & Play) General Assembly Drawing sheet ½	B	13/03/15	5
PIY 215-20 sheet 2 of 2	Mk2, Wig-Wag, (Plug & Play) General Assembly Drawing	C	13/03/15	5
PIY 215-21	Mk2 Wig-Wag Plug & Play with Yodel Alarm Electrical Schematic	B	13/03/15	5
PIY 215-23 sheets 1 & 2 of 2	Mk2 Narrow Wig-Wag, (Plug & Play) General Assembly	B	17/03/15	5
--	Weidmuller KS 10 O.D10 datasheet	--	23/09/15	5
460 Series	General Specification for 460 Series Sealed Diecast Box	5	10/06/04	5

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Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.	
CC0361/ED1111	Mk2 LED Wig-Wag Assembly (Complete). Change request to the Flashing Road Warning Light (FRWL) assembly U bolts from Mild steel to 304 grade stainless steel U bolts.	A	11/01/18	6
PLY 215-6	Mk2, Wig-Wag, 304 grade stainless steel U Bolt General Assembly Drawing sheet.	B	11/01/18	6
PIY 235-2	110Volt MK2 wig wag Earth and Bonding requirements	2	12/06/19	9
PA05/02434	LED 'Wig-Wag' Road Traffic Signal (Certificate)	T4	15/04/21	T10
PA05/05584	Extended Visors for Level Crossing Wig-Wags (Certificate)	1	15/04/21	T10
PA05/04023	Level Crossing Pedestrian Signal Mask Kits for Unipart Rail – Dorman LED Wig-Wag Modules' (Certificate)	3T	15/04/21	T10
EID1174-11-01	Wig Wag DFR RAM Assessment Document	C	01/10/20	T10
EID1174-11-03	Wig Wag PFMEA Combined – Ref YSC-SOP-240	B	01/07/20	T10
EID 1111	Existing Carbon Steel U-Bolts Versus New 304 Stainless Steel U-Bolt Analysis	-	26/02/21	T10
Notice Board	U-Bolt Corrosion on Wig-Wag Draft	0.1	18/05/21	T10

Drawings

Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.	
YSC-75	NRS drawing – narrow backboard.		03.05.06	1
YSC-72	NRS drawing – standard backboard		03.05.06	1
YSC-73	NRS drawing – complete assembly (Standard)		03.05.06	1
YSC-76	NRS drawing – complete assembly (Narrow)		05.05.06	1
YSC-74	NRS drawing – wig wag mounting arm (narrow)		03.05.06	1
YSC-71	NRS drawing – wig wag mounting arm (standard)		03.05.06	1
YSC-167	Drawing for Oversized Wig Wag backboard (Special)		01.02.10	2
YSC-168	Drawing for Oversized Wig Wag backboard (Special) Assembly complete with angle bracket		01.02.10	2
YSC-169	Drawing for Oversized Wig Wag backboard (Special) Assembly complete with special mounting arm		01.02.10	2
PIY235-20	Drawing MK2 110V Wig Wag Plug-Play Electrical Schematic.pdf	A	12/06/19	9
PIY215-21	Drawing MK2 24V Wig Wag Plug-Play Electrical Schematic (002).pdf	B	12/06/19	9
YSC-341	Universal Wig Wag U Bolt & Kit List	A	03/02/21	T10
YSC-342	Universal Extension Arm U-Bolt & Kit List	A	03/02/21	T10

Certificate History

Issue	Date	Issue History
1	08/05/2006	First accepted for use.
2	26/03/2010	Re-issued to add oversized backboards.
3	09/06/2014	Third acceptance to capture the upgrade of the LED modules to modification state A.
4	09/09/2014	Fourth acceptance that introduces several mechanical changes for the Mk2 Wig-Wag. The vertical tilt alignment is now part of the bracket assembly rather than part of the LED module.

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5	09/02/2015	Fifth acceptance to include plug coupled variants.
6	18/01/2018	Sixth acceptance to capture the upgrade to the FRWL Full assembly from Mild steel U bolts, to 304 grade stainless steel U bolts. Also applicable to cat no: 086/024648 Part no: 0050/604549
7	09/05/2018	Certificate Update. - Change of authoriser name.
8	18/07/2018	Addition of 2-part numbers, (1) MK1 Stainless Steel bolts and fixings. (2) MK2 Stainless Bolts and fixings.
9	17/10/2019	Addition and certification amendment to separate 24Vdc and 110Vac Plug Coupled Mk2 LED Wig-Wag Assembly. With the inclusion of 2 new part numbers.
T10	12/05/2021	Tenth acceptance that includes the amalgamation of four certificates (02900/02434/04023/05584) on to one certificate (Including DFR for move to Assembly work moving to Southport, following York site closure). Inclusion of two new stainless-steel U-Bolts, assembly from Mild steel U bolts, to 304 grade stainless steel. Removal of obsolete parts/products. (Full & Trials carried over from certificates PA05/02434 T4 /04023 T3 /05584 1)

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Contact Details

Manufacturer

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(Cert 8&9)

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General Terms & Conditions

1) General

- 1) This certificate can only be amended by Network Rail Technology Introduction Group. Any alterations made by a different person will invalidate the entire certificate.
- 2) Failure to abide by the requirements in this Certificate of Acceptance may invalidate the certificate, thereby restricting the right to operate the product and / or limiting the future supply and deployment of the product on the infrastructure.
- 3) Upon the review date this certificate and the product it relates to is invalid and not accepted for use. Manufacturers are to make an application for a review prior to the review date.

2) Manufacturer

The Manufacturer shall:

- 1) Ensure that all products supplied comply with the standards defined in the Acceptance Requirements or otherwise documented as part of the assessment, including meeting the reliability requirements included in the Acceptance Requirements and in any deed of warranty for the relevant certificate number.
- 2) Notify Network Rail Technology Introduction Group:
 - a. Within 48 hours, of any deficiencies affecting the quality, functionality or safety integrity of the product (including corrective action undertaken or proposed).
 - b. Of any intended change to the accepted product; changes include:
 - i. a change to the product configuration (to the actual product or its application);
 - ii. a variation to or addition of manufacturing locations or processes;
 - iii. a change in the name or ownership of the manufacturing company;
 - iv. any changes to the ability or intention to support with technical services, spares or repairs.
- 3) The Manufacturer shall provide Network Rail Technology Introduction Group at least 12 (twelve) months notice of its intention to discontinue supply or to provide such notice as is reasonable if such discontinuance is outside its control and will offer the opportunity of a Last Time Buy to Network Rail together with date for last order placement and supply of the parts affected. The introduction of proposed alternative products shall be communicated to the Network Rail Technology Introduction Group.
- 4) Provide further copies of operating and maintenance manuals to purchasers / users of the product as necessary (including certificates of conformance, calibration etc).
- 5) Provide further copies of training manuals and an appropriate level of training to purchasers or users of the product as necessary.
- 6) Where applicable, specialist technical support, repairs and servicing of the product shall be carried out by the Original Equipment Manufacturer (OEM) or authorised agent only.
- 7) Network Rail may request information from the manufacturer to prove product compliance with clauses 1 and 2 above and reserve the right to suspend and/or withdraw any application where information is not forthcoming within a reasonable timeframe.
- 8) In accordance with Network Rail's Quality Assurance Policy Statement 2011, where the specification and/or Product Acceptance Certificates specify quality assurance classifications (QA1 to QA5) for the products, the manufacturer shall comply with the specified level of quality assurance for each product and allow Network Rail access to carry out its quality assurance checks.
- 9) The manufacturer shall give Network Rail's representatives access at all reasonable times to its premises and allow them to inspect its quality systems and production methods and, if requested, to inspect, examine and test the products both during and after their manufacture and the materials being used in their manufacture.

3) Conditions of Use

Specifiers, installers, operators, maintainers, etc. using the product shall:

- 1) Comply with the certificate conditions. If a condition is not understood guidance must be sought from Network Rail Technology Introduction Group.
- 2) Check that the application of use complies with the relevant certificate's scope of acceptance.
- 3) Report any defect if it is a design or manufacturing fault likely to affect performance and/or the safe operation of the railway in writing to Network Rail Technology Introduction Group.
- 4) Inform Network Rail Technology Introduction Group in writing of a change to the product configuration (or to the actual product or its application).
- 5) Operate, maintain and service the product in accordance with Network Rail standards and Operation and Maintenance manuals as appropriate.
- 6) Be appropriately trained and authorised for the installation, maintenance and use of the product.
- 7) Only send products for repair or reconditioning to the Original Equipment Manufacturer (OEM) or authorised agent.
- 8) Users are to be aware that Product Acceptance is not a substitute for design approval.

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4) Compliance

Railways and Other Guided Systems (ROGS) Regulations

1) Where the product is to be used in areas where Network Rail is not the Infrastructure Manager (e.g. leased stations), the sponsor shall additionally obtain formal consent from the Infrastructure Manager for the locality where the equipment is to be installed. This may include a requirement for additional safety verification. The decision of that Infrastructure Manager is binding, and cannot be overridden by Network Rail except by the escalation processes established in the ROGS regulations

2) As required in Railway Group Standard GE/RT8270, at each use of this product the project or group responsible for installation and commissioning shall be required to demonstrate compatibility with:

- a. All rail vehicle types that have access rights over the area affected by the change
- b. Infrastructure managed by others
- c. Neighbours.

Railway Interoperability Regulations

3) For interoperable constituents of systems the project or group responsible for installation and commissioning shall be required to demonstrate compliance with the relevant Technical Specifications for Interoperability (TSI) where appropriate.

4) An authorisation from the national safety authority (i.e. the Railway Safety Directorate of the Office of Rail Regulation) is required before the equipment is to be used in revenue earning service.

5) Supply Chain Arrangements

1) Certificates of acceptance do not imply any particular quantity of supply nor any exclusivity of supply.

2) Products may be purchased by Network Rail or its agents, suppliers or contractors.

3) Manufacturers should note that it is not necessary to enter into any exclusive supply arrangements with resellers or other suppliers