

BS 376-1:2012



BSI Standards Publication

Railway signalling symbols

Part 1: Specification for schematic symbols

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Published by BSI Standards Limited 2012

ISBN 978 0 580 74977 3

ICS 01.080.20; 45.020

The following BSI references relate to the work on this standard:

Committee reference GEL/9/1

Draft for comment 11/30244342 DC

Publication history

First published July 1951

Second (present) edition, July 2012

Amendments issued since publication

Date	Text affected
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Summary of pages

This document comprises a front cover, an inside front cover, pages i to ii, pages 1 to 32, an inside back cover and a back cover.

Foreword

Publishing information

This part of BS 376 is published by BSI and came into effect on 31 July 2012. It was prepared by Subcommittee GEL/9/1, *Signalling and communications*, under the authority of Technical Committee GEL/9, *Railway electrotechnical applications*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This part of BS 376 supersedes BS 376-1:1951 (incorporating Amendment No.1:1951), which is withdrawn.

Relationship with other publications

BS 376 is issued in two parts, namely:

- BS 376-1, Schematic symbols
Part 1 is for use on general plans, showing signalling requirements; it does not show the component parts of the apparatus to be used.
- BS 367-2, Wiring symbols and written circuits
Part 2 represents:
 - a) the actual apparatus used, with its electrical connections; and
 - b) simplified wiring diagrams.

Information about this document

This is a full revision of the standard, updated to current practice.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is "shall".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

1 Scope

This British Standard specifies the symbols to be used on railway signalling plans but does not provide guidance on their application.

This British Standard does not apply to tramways operated on line of sight or using highway signals. It does not include proprietary systems and specialized applications.

NOTE 1 The symbols in this British Standard provide for apparatus in general use. They have been designed so that they can be combined together where one does not represent the complete device. In this British Standard, where certain elements are added for illustrative purposes, they are shown by dashed lines. If additional information is required to support the symbol, a “#” may be used to reference a note on the plan.

NOTE 2 The symbols are shown relative to the driver’s point of view; on actual plans the symbols are rotated.

NOTE 3 The size of symbols are drawn in proportion but are not necessarily relative to one another nor give specific size to use.

2 Terms and definitions

For the purposes of this part of BS 376, the following terms and definitions apply.

2.1 normal

display or position of a piece of apparatus in its quiescent state

3 Signals

The colours of signal aspects used in the symbols given in Table 1 shall conform to Figure 1. Where other colours are used, it shall be defined on the plan.

Figure 1 Colours of signal aspects and indicators

a) Red (R)		b) Yellow (Y)	
c) Green (G)		d) White (W)	

If other aspects than these are required, they shall be specified.

Where the normal aspect is required to be shown, the normal aspect shall be indicated by double lines.

Colour light signals shall be indicated on schematics with the symbols given in Table 1.

Table 1 Colour light signals

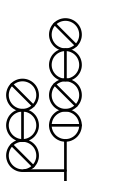
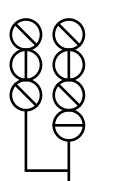
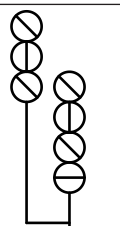
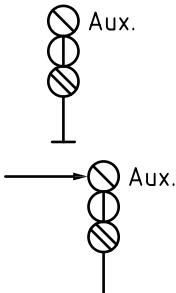
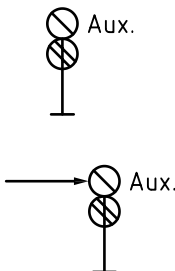
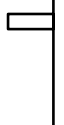
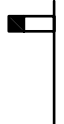
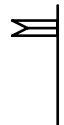
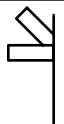
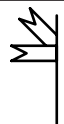
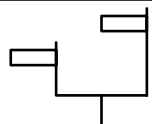
Signal type	Symbol			
	Normal red	Normal yellow	Normal double yellow	Normal green
1.1 Two aspect:				
Multi-unit				
Single-unit searchlight				
1.2 Three aspect:				
Multi-unit				
Single-unit searchlight				
1.3 Four aspect:				
Multi-unit				
Fourth aspect used in conjunction with single-unit searchlight				
1.4 Example of approach lighting				
1.5 Aspect capable of flashing, e.g. double yellow				
1.6 Aspect not used, e.g. green not in use				
1.7 Splitting distant advance warning of junction:				
a) Divergence to left				
b) Equal speed routes				
c) Divergence to right				

Table 1 Colour light signals

1.8 Auxiliary light Any aspect, also acting as an auxiliary	 
1.9 Slotted signals, colour light	 

Semaphore signals shall be indicated on schematics with the symbols given in Table 2. Proportions for semaphore arms shall be in accordance with Annex A.

Table 2 Semaphore signals

Signal type	Stop signal	Distant signal
2.1 Mechanical ordinary		
2.2 Power (all types)		
2.3 Fixed arm		
2.4 Slot		
2.5 Junction signal, e.g. divergence to left		

Miscellaneous signals shall be indicated on schematics with the symbols given in Table 3.

Table 3 Miscellaneous

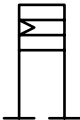
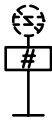
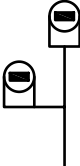
Signal type	Symbol	
3.1 Reflectorized stop board, # is supplementary legend to be shown		
3.2 Reflectorized distant board		
3.3 Internally illuminated sign, # is supplementary legend to be shown		
3.4 Traction rail dead section: a) Indicator b) Repeater	 a)	 b)
3.5 Banner signal		
3.6 Banner repeating signal: a) Repeating stop signal (2 states) b) Repeating stop signal (3 states, capable of showing green) c) Repeating distant signal d) Repeating stop signal (2 states), normally off e) Repeating stop signal (3 states, capable of showing green), normally caution f) Repeating stop signal (3 states, capable of showing green), normally clear	 a)	 b)
	 c)	 d)
	 e)	 f)
3.7 Banner repeating signal, splitting, e.g. left-hand divergence (2 states)		

Table 3 Miscellaneous

3.8 Fog repeater	
3.9 Semaphore signal lamp-intensified light	

Subsidiary and shunting signals shall be indicated on schematics with the symbols given in Table 4.

Table 4 Subsidiary and shunting signals

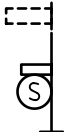
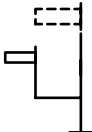
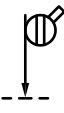
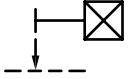
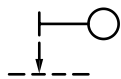
Signal type	Symbol		
4.1 Position light, used with a main aspect, normally out: a) Subsidiary signal, steady aspect b) Subsidiary signal, capable of flashing, e.g. proceed on sight authority (PoSA)			
4.2 Subsidiary signal: a) Miniature arm ^{A), B)} b) Disc ^{A)} c) Offset miniature arm ^{C)}			
4.3 Shunting signals, miniature arm: a) Dwarf signal ^{C)} b) e.g. three arms, bottom arm shown normally off ^{C)}			
4.4 Shunting signals, disc: a) Single (red) b) Single (yellow) c) Double d) Power operated e) External lighting f) Internal lighting			
4.5 Shunting signals, position light: a) Normally on (red) b) Normally on (yellow) c) Normally off			

Table 4 Subsidiary and shunting signals

4.6 Shunting signals, slotted: a) Disc b) Position light	 a)  b)
4.7 Limit of shunt a) Indicator b) Position light	 a)  b)
4.8 Shunting, set back indicator, normally out, displays white when off, e.g. elevated head	

A) Where required, letter to be added to the symbol to identify route class is C for call on, S for shunt ahead and W for warning.
B) The miniature arm has a horizontal band.
C) The miniature arm has a vertical band.

Indicator signals shall be indicated on schematics with the symbols given in Table 5.

Table 5 Indicators

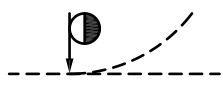
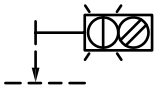
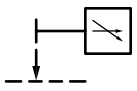
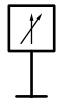
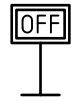
Signal type	Symbol
5.1 Point indicator: a) Mechanical b) Colour light c) Position indicator	 a)  b)  c)
5.2 Route indicator: a) Standard, # is number of indications b) Miniature, # is number of indications	 a)  b)
5.3 Preliminary route indicator (PRI), example shows indicator capable of showing straight route and divergence to right	
5.4 Alphanumeric indicator ^{A)}: a) Example shows single-sided right away indicator b) Example shows double-sided off indicator	 a)  b)

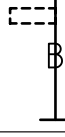
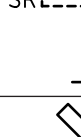
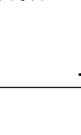
Table 5 Indicators

5.5 Junction indicator for use with colour light: a) Example shows three divergences to the left b) Example shows divergences to the left and right	 a)	 b)
5.6 Junction indicator repeater		
5.7 Loading/unloading indicator		
5.8 Driver's level crossing indicator		
5.9 Signal passed at danger (SPAD) indicator		
5.10 Carriage depot indicator with plunger, # is supplementary legend		
5.11 Train protection and warning system (TPWS) lineside status indicator for radio electronic token block (RETB) lines		
5.12 Combined stop board/TPWS indicator, # is supplementary legend		

^{A)} This can indicate: TT - tripcock test, OFF - off, BT - brake test, BU - barriers up, RA - right away and CD - closed doors.

Ancillary features shall be indicated on schematics with the symbols given in Table 6.

Table 6 Ancillary features

Signal type	Symbol
6.1 Signal not in use	 
6.2 Signal, where the lever is electrically locked	
6.3 Signal, where the lever is released by block at "line clear"	
6.4 Signal, where the lever is released by token	
6.5 Signal, where the lever is interlocked with a key	
6.6 Arm electrically indicated in signal box	
6.7 Light electrically indicated in signal box	
6.8 Slot indicated in signal box	
6.9 Arm and slot, indicated in signal box	
6.10 Telephone:	
a) Direct to signaller	
b) Direct to signaller, two-way ringing	
c) Other, # is purpose, e.g. electrification control room (ECR)	
	a) b) c)