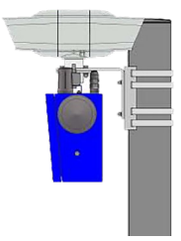
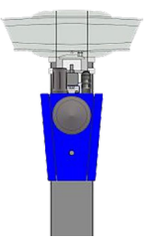
Display for mobility applications

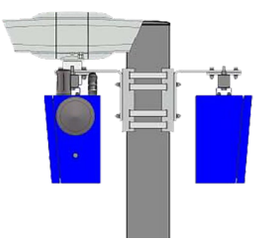
LED DSAplus



Type 1



Type 2



Type 3

The dynamic text indicator (LED DSAplus) with integrated acoustic module has been specially developed for use at unoccupied small and medium-sized railway stations. The fully graphic-capable indicator displays the text using a white power LED and guarantees very good legibility, even in full sunlight, and a reading range of up to 40 metres. The device is available in three versions, so that there are different mounting options depending on the location.

HIGHLIGHTS

- Text display: fixed, flashing or scrolling text
- Playback of electronic and direct voice announcements possible
- Separate brightness control for double-sided displays
- LED viewing surface made of laminated safety glass, anti-reflective thanks to internal contrast film
- Self-diagnosis system in the event of faults (automatic cold start)

Funkwerk Systems GmbH – Member of Funkwerk Group
Liebigstraße 1A | 85757 Karlsfeld | T. +49 (0) 8131 9075-100 | M. info@funkwerk.com | www.funkwerk.com

© Subject to change without notice | Version 09/2024

TECHNICAL DATA

GENERAL DESCRIPTION

Exact designation	Type 1 – LED DSAplus single-sided – Standard / Premium Type 2 – LED DSAplus double-sided – Standard / Premium Type 3 – LED DSAplus Master-Slave – Standard / Premium Standard: resolution 158 x 20 px Premium: resolution 224 x 46 px all types fully graphics-capable with integrated acoustic module
Area of application	outdoor and indoor, also with direct sunlight

LED-PANEL

LED area	Power LED (SMT), very good readability even in full sunlight			
	LED size [mm]	**Resolution [px]**	**Module size [px]**	**Grid dimension [mm]**
Standard (Type 1; 2; 3)	886,1 x 145,9	158 x 20	79 x 20	5,625 x 7,50
Premium (Type 1; 2; 3)	883,85 x 204,1	224 x 46	112 x 46	3,95 x 4,46
Background colour	black			
Viewing angle	> 120°			
	Max. brightness [cd/m²]		**Typ. brightness [cd/m²]**	
Standard (Type 1; 2; 3)	2.950		1.000	
Premium (Type 1; 2; 3)	5.750		1.900	
Brightness control	Automatic adjustment to ambient brightness			
LED control	Multiplex			
LED monitoring	Individual LED monitoring with transfer of fault classes or exact number of defective LEDs to higher-level AVMS (computer-aided operation control system)			

© Subject to change without notice | Version 09/2024

Funkwerk Systems GmbH – Member of Funkwerk Group
Liebigstraße 1A | 85757 Karlsfeld | T. +49 (0) 8131 9075-100 | M. info@funkwerk.com | www.funkwerk.com

HOUSING

Front glass	anti-reflective laminated safety glass with a thickness of 7.14 mm, with anti-reflective contrast film on the inside
Housing material	Aluminium
Surface	Powder coating, RAL 5022 (midnight blue, matt)

DIMENSIONS / WEIGHT

	Dimension (W x H x D) [mm]	Weight (without trim strip) [kg]
Type 1 – LED DSAplus single-sided – Standard	1.010 x 280 x 180	16,7
Type 2 – LED DSAplus double-sided – Standard		22,0
Type 3 – LED DSAplus Master-Slave – Standard		16,8 Master / 12,2 Slave
Type 1 – LED DSAplus single-sided – Premium		17,5
Type 2 – LED DSAplus double-sided – Premium		23,5
Type 3 – LED DSAplus Master-Slave – Premium		17,7 Master / 13,2 Slave

© Subject to change without notice | Version 09/2024

Funkwerk Systems GmbH – Member of Funkwerk Group
Liebigstraße 1A | 85757 Karlsfeld | T. +49 (0) 8131 9075-100 | M. info@funkwerk.com | www.funkwerk.com

POWER SUPPLY

Power supply	230 V / 50 Hz	
	Normal operation, without PoE	**Test operation, all LEDs at maximum brightness, acoustic amplifier full load, PoE in operation**
Type 1 – LED DSAplus single-sided – Standard	P = < 32 W	P = < 144 W
Type 2 – LED DSAplus double-sided – Standard	P = < 40W	P = < 202 W
Type 3 – LED DSAplus Master-Slave – Standard	P = < 42W	P = < 204 W
Type 1 – LED DSAplus single-sided – Premium	P = < 42 W	P = < 221 W
Type 2 – LED DSAplus double-sided – Premium	P = < 50 W	P = < 368 W
Type 3 – LED DSAplus Master-Slave – Premium	P = < 52 W	P = < 370 W

GENERAL TECHNICAL PROPERTIES

Temperature range operation	-30° C to +45° C
Temperature range storage	-30° C to +60° C
Protection class / electrical protection class	IP65 / Protection Class 2
Approvals	CE (EMC and electrical safety)
Data supply	LTE GSM modem with two external antennas (MiMo)
Photobiological safety	risk group 0 (free group, no photobiological hazard)
Acoustic module	20 W amplifier with 2 100 V LF outputs Measuring microphone Floating contact for switching on external devices Frequency range: 200 Hz to 15 kHz The railway-approved type DPD-10 loudspeaker is recommended

© Subject to change without notice | Version 09/2024

Funkwerk Systems GmbH – Member of Funkwerk Group
Liebigstraße 1A | 85757 Karlsfeld | T. +49 (0) 8131 9075-100 | M. info@funkwerk.com | www.funkwerk.com