

www.railway-systems.eu www.railway-solutions.eu

### Catalog Card Edge Display WKR



\* The content presented on the display and its arrangement is generated by CASDIP and is not the issue of the device supplier. For your reference, an example screenshot of the edge display is shown in the figure above

Sat-System Sp. z o.o. Ul. Stanisława Staszica 47 05-092 Łomianki E-mail: sales@railway-systems.eu office@railway-systems.eu











viadectwo pieczeństwa

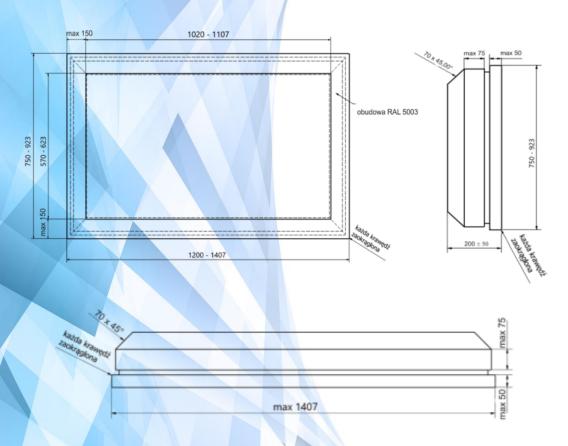
## Sat-System

#### PURPOSE, DEVICE CHARACTERISTICS

Edge displays are designed to present information about trains performing commercial stops provided for in the timetable of departing, arriving or terminating trains moving on the track adjacent to the edge of the platform at which they are installed. The scope of the information presented is consistent with TSI TAP. The design of the display prevents unauthorized access to the inside of the housing. The glass protecting the display screen is made of safety glass with an anti-reflective filter and a filter to prevent the interior of the device from heating up from sunlight, opened upwards with protection against spontaneous falling. Built-in ambient light sensor to adjust the brightness of the screen, and in the case of the version with a timer, the backlight of the dial

The housing has an IK-09 protection level ensuring a high degree of resistance to vandalism and accidental damage.

The systems installed in the display have electrical protections: residual current; overcurrent; overvoltage. Providing the highest level of protection for built-in electronic modules, computer, air conditioning system and monitor



The construction of the Edge Display is fully compliant with the current guidelines of PKP PLK SA Ipi-6 and good practices of PKP SA

Sat-System Sp. z o.o. Ul. Stanisława Staszica 47 05-092 Łomianki E-mail: sales@railway-systems.eu office@railway-systems.eu









Ministeristwo Spraw Wewpetrnych i Administracji

# Sat-System

### **TECHNICAL DATE**

Technical parameters	
Matrix	1xLCD - 46"
Active surface	1018,08 mm x 572,67 mm
Resolution	1920x1080
Contrast	5000:1
Luminance	2500 cd/m <sup>2</sup> (set remotely or automatically based on sensor reading external lighting)
Observation angle	178°/178°
Vitality	80 000 h
Supply voltage	100 - 230VAC (±10%) 50-60Hz ±1%
Power consumption	340W/700W
Security	residual current; overcurrent; overvoltage
Sensors	Indoor temperature and humidity, case opening, shock, light sensor, glass breakage
Controller	backlight, sensors, heating and cooling system, for analysis and implementation of CSDIP commands, equipped with a hardware and software watchdog
Protocols	TCP/IP; SNMP V1, V2 i V3; UDP; NTP
Operating temperature range	-40°C do +60°C
Dimensions	1228mm x 780mm x 201mm
Libra	80kg
Case	Made of corrosion-resistant material, painted in RAL 5022
Housing tightness	IP-65 ( according to PN-EN 60529:2003)
Level of security	IK-09 (according to PN-EN 5012:2001)

Sat-System Sp. z o.o. UI. Stanisława Staszica 47 05-092 Łomianki E-mail: sales@railway-systems.eu office@railway-systems.eu









Bezp

Ministerstwo Spraw Wewnetternych i Administracji



### **COMPLIANCE WITH STANDARDS**

Study name	Number and title of the standard	Requirements
Luminance measurement average display	PN-ISO 9241-305:2009E Human interaction ergonomics and system - Part 305: Methods laboratory tests optical monitors electronic screens	Point 6.6.1 of the standard An average luminance of 300 cd/m2 is required for the minimum brightness level and 2500 cd/m2 for the maximum brightness level. It is allowed to conduct the test by an independent non-accredited test body
Measurement unevenness luminance display	PN-ISO 9241-305:2009E Ergonomics of human-system interaction - Part 305: Laboratory test methods optical monitors electronic screens	Point 6.6.3 of the standard Display backlight uniformity of at least 90% is required It is allowed to conduct the test by an independent non- accredited test body
Cold resistance	PN-EN 60068-2-1:2009 Environmental research. Part 2-1: Trials. Trial A: Cold	For external devices: Sharpness: -40oC For indoor units: Sharpness: -10oC
Dry resistance hot	PN-EN 60068-2-2:2009 Environmental research. Part 2-2: Trials. Test B: Dry heat	For external devices: Sharpness: +55oC For indoor units: Sharpness: +45oC
Resistance to humid hot cyclical	PN-EN 60068-2-30:2008 Environmental research. Part 2-30: Trials. Test Db: Damp heat cyclic	For external devices: Sharpness: +55oC Humidity: 95%
Resistance to sinusoidal vibration	PN-EN 60068-2-6:2008 Environmental research. Part 2-6: Trials. Fc test: Vibration (sinusoidal)	For external devices: Frequency: 3 - 40 Hz Amplitude: 0.2 mm Frequency: 40 - 100 Hz Amplitude: 0.03 mm
Impact resistant mechanical	PN-EN 60068-2-27:2009 Environmental research. Part 2-27: Trials. Trial of Ea: Strokes	For external devices: Shock acceleration: 2g Shock duration: 11 ms
Grade check IP protection	PN-EN 60529:2003/A2:2014-07 Degrees of protection provided by enclosures (IP code)	Device testing without negative pressure. 1. Main stations: IP42 2. Edge: IP65 3. Entrance platforms: IP65 4. Collective station: IP65 5. Multi-functional displays: IP65
Grade check IK protection	PN-EN 50102:2001 Degrees of protection by external mechanical impacts provided by electrical equipment enclosures (code IK)	For external device enclosures: IK09 (IK08 for multifunction display buttons) For indoor unit enclosures: IK07

Sat-System Sp. z o.o. Ul. Stanisława Staszica 47 05-092 Łomianki E-mail: sales@railway-systems.eu office@railway-systems.eu



IRIS, Certification IST/TS 22163:2017

CCJ AQAP 2110:2016 Bezpieczeństwa Przemysłowego





Measurement electromagnetic disorders conducted	PN-EN 55016-2-1:2014- 09/A1:2017-12 Requirements for measuring equipment and disturbance measurement methods and immunity to disturbances - Part 2-1: Disturbance measurement methods and immunity tests - Conducted disturbance measurements	In accordance with the standards PN-EN 50121-1:2017-06 and PN-EN 50121-4:2017-04 Criterion B
Measurement electromagnetic disorders radial	PN-EN 55016-2-3:2017- 06/A1:2020-01 Requirements for measuring apparatus and methods for measuring radio disturbances and immunity to disturbance - Part 2-3: Disturbance measurement methods and immunity tests - Disturbance measurements radiated	According to Norm PN-EN 61000-6-4:2019-12
Resistance to discharge electrostatic	PN-EN 61000-4-2:2011 Compatibility electromagnetic (EMC) - Part 4-2: Test and measurement methods - Immunity test electrostatic discharge	According to standards PN-EN 50121-1:2017-06 and PN-EN 50121-4:2017-04
Series resistance fast electrical states transitional	PN-EN 61000-4-4:2013-05 Compatibility electromagnetic (EMC) - Part 4-4: Test and measurement methods - Immunity test against bursts of electrical fast transients	According to standards PN-EN 50121-1:2017-06 and PN-EN 50121-4:2017-04
Impact resistant	PN-EN 61000-4-5:2014- 10/A1:2018-01 Compatibility electromagnetic (EMC) - Part 4-5: Test and measurement methods - Surge immunity test	According to standards PN-EN 50121-1:2017-06 and PN-EN 50121-4:2017-04
Resistance to conducted disorders wired, induced by the field about frequencies radio	PN-EN 61000-4-6:2014-04 Compatibility electromagnetic (EMC) - Part 4-6: Test and measurement methods - Immunity to conducted disturbances induced by radio frequency fields	According to standards PN-EN 50121-1:2017-06 and PN-EN 50121-4:2017-04

Sat-System Sp. z o.o. UI. Stanisława Staszica 47 05-092 Łomianki E-mail: sales@railway-systems.eu office@railway-systems.eu









Ministerstwo Spraw Wewnetrznych i Administracji

Kond MS\