Sat-System
Railway Systems

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Catalog Card
Information Display Stand
one-sided/double-sided

Sat-System Sp. z o.o.
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ISO 9001:2015
IST/TS 22163:2017
AQAP 2110:2016
Świadectwo Bezpieczeństwa Przemysłowego
Koncesja MSWiA

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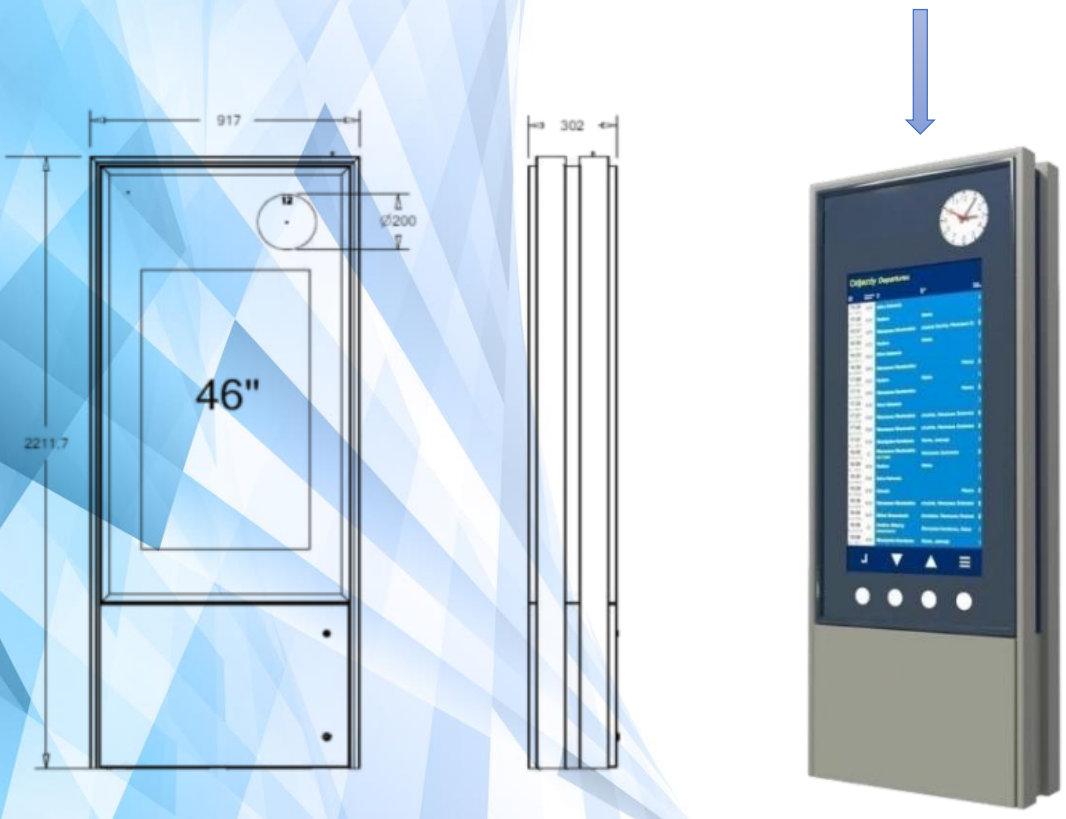
PURPOSE, DEVICE CHARACTERISTICS

The standing information display is built on the basis of a professional 46” LCD screendesigned to operate continuously 24/7 (24 hours / 7 days a week). It is used for presentationsinformation on the current train timetable at the entrances to the platforms or intunnels, as well as for the presentation of other important additional and alarm information. It can also beused to present tourist information or as a city guide.

The display is adapted to work on both outdoor and indoor platforms.The housing has a degree of protection IP-65 and IK09. The design of the display prevents access to itthe inside of the housing to third parties. The glass protecting the display screen is made of glasswith an anti-reflective filter and a filter to prevent the interior from heating updevices from sunlight. Built-in ambient light sensor for adjustmentscreen brightness level. It is also equipped with an analog clock with a dial diameter of 200 mmautomatic dial illumination.

Inside the display, a highly efficient heating and cooling system is integrated withhumidity and temperature sensors maintaining proper working conditions inside the display,regardless of the climatic conditions at the installation site.

***It is possible to make the display as double-sided with screens and touch buttonslocated on both sides of the housing without changing its dimensions.



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

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TECHNICAL DATE

Technical parameters	
Matrix	1xLCD - 46"
Active Surface	1018,08 mm x 572,67 mm
Resolution	1920x1080
Contrast	5000:1
Luminance	2500 cd/m² (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	380W/750W
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
Clock	200mm dial analog round displayed in z board header adjustable dial illumination
Operating temperature range	-40°C do +60°C
Dimensions	2212mm x 917mm x 302mm
Libra	150kg
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)

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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

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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 disturbances - 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

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