



06 13 04 TWY SB LS LS LS V 00

TWY C TWY D

24 300 RVR 25 31 35 ... VIS

ILS OS

2.3

31

# CONTROL AND MONITORING OF AIRFIELD **GROUND LIGHTING EQUIPMENT**

# **Description of function**

- airfield ground lighting equipment are shown on the screen representing the airport layout
- control of airfield ground lighting equipment is made by trackball and push-buttons situated at the bottom on the screen (touchscreen)

# CONTROL AND MONITORING CCR

## **Application**

• backgrounds a status of each CCR

## **Description/Properties**

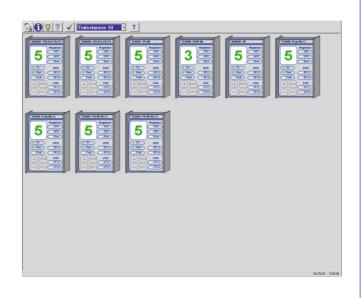
CCR's name (light system) is in its head. The regulators background own status via values:

- ON/OFF
- Control mode remote/local
- fault of regulation • Fault
- OVC over current
- OPC open circuit
- LF L1 lamp fault level 1
- LF L2 lamp fault level 2
- earth fault level 1 • EF L1
- EF L2 earth fault level 2

## Archive of ground fault detection TCR

Data selection by date or CCR or combination both. Select graph is windowing in main part of display:

- by days (graph of month)
- by hours (graph of day)



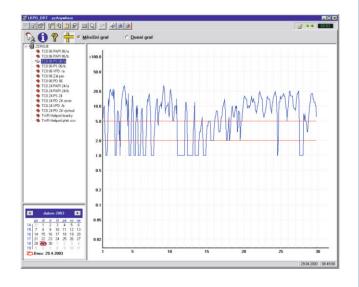
1019

13 24 L C B

H4 A1 A4 Z3

P VIS 26/24

ARR DEP RLS 22





2.3



# METEOROLOGICAL EQUIPMENT

# Application

- meteorological data for air traffic controller (for sending on board of the air-plane)
- automatic regulation of luminous intensity of airfield ground lighting equipment (data base the on measurement of runway visual range from the METAR/SPECI report)

# Connection

- serial lines RS-232 or TCP/IP
- working site Meteo is connected via the LAN network

## Representation

- basic meteorological data are shown in the report "Airfield ground lighting" at the top part of the screen in meteorological ruler. This ruler contains a selection of the most important meteorological data.
- color shading gives to the air traffic controllers information about trend of the measured data, or about manually entered values
- remaining meteorological data (among others also QFE) are in the data windows Metreport, which can be opened from the top bar
- extended meteorological information is shown in the data window Meteo
- it is possible to switch representation of meteorological in requested runway directions
- tendency of the runway visual range is expressed by color shading of RVR, if the visual range is below 1500 m:

Yellow	steady state
Red	deteriorating state
Green	improving state

# CALL CALL

# System provides the following information

1. direction and strength of wind with max and min values

2. RVR if it is measured on RWY at corresponding number of measuring points

- 3. value BASE
- 4. VIS general visibility
- 5. QNH
- 6. WX
- 7. temperature
- 8. dew point
- 9. bottom base of clouds

Meteo information (RVR) is used for automatic control of luminous intensity of individual sets.

## **Failure states**

- in case of unavailability of meteorological information the whole panel changes its color to violet
- if this unavailability last for more than 5 minutes, all the data will disappear

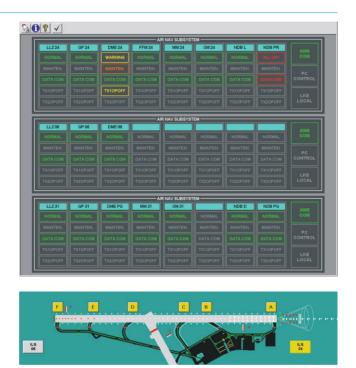
# RADIO-NAVIGATION EQUIPMENT (LLZ, GP, MM, OM, FFM, DME)

## **Description/Properties**

- system AMS sends a request and waits for data
- monitoring is performed continuously, regardless of state of the system

#### **Control of ILS**

- control is effected by the air traffic controller with use of mouse (trackball) and cursor on display
- control is always selected in such a manner that only one working site may control ILS equipment, and control of ILS from other working sites is blocked





0 9

24

O O O O A A A

PS PS 10km 10km 1020



31

# CONTROL AND MONITORING LVP/LVTO

# Application

- preparation of low visibility procedures (Prep LVP)
- operation LVP
- preparation of low visibility take-off (LVTO)
- operation LVTO

# **Description/Properties**

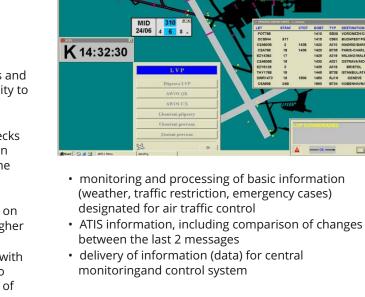
- system AMS performs control of parameters determined by the system for individual phases and it offers to bodies of air traffic control a possibility to acknowledge or cancel the proposed mode of operation
- after declaration of LVP or LVTO the system checks operating ability of individual devices of aviation safety technics (hereinafter AST) designed for the given mode of operation and meteorological conditions
- in case of AST change it degrades in depending on character of failure operation gradually from higher level to lower level, or directly to CAT I
- in case meteorological conditions are changed with improving/deteriorating tendency it proposes to bodies of air traffic control change to the mode of operation, which corresponds to the current meteorological situation at the airport

System AMS displays in the text window under the meteorological ruler the following:

- selected mode of operation corresponding to failure of AST
- information, which is to be sent to the crew on board of the airplane

# Control and monitoring of the following airport systems

- control of airfield ground lighting (for runways and taxiways - AGL), including system BRITE II and stop bars
- monitoring system for Low Visibility Procedures (LVP) and Low Visibility Take Off (LVTO)
- radionavigation equipment and systems (ILS, DME, NDB)
- radionavigation equipment En Route (VOR, DME)
- electric power systems (EPS)
- meteorological equipment (ME) AWOS
- protection zones
- central time
- AFTN
- data FPL Arrivals
- data FPL Departures
- RWY in USE SID





FRANSCON ELECTRONIC SYSTEMS, s.r.o., All rights reserved

2022

R

ELECTRONIC SYSTEMS

## chapter:

# 2.3

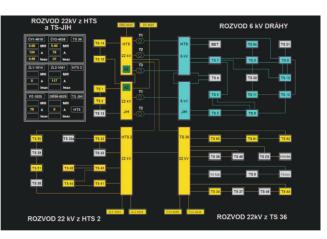
# SOFTWARE



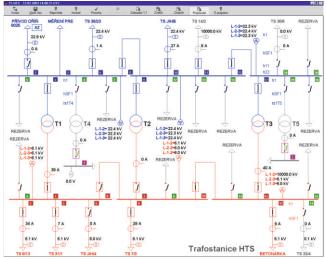
# ELECTRIC POWER SYSTEMS

# Application

- control and representation of state of the airport electric power system
- interactive diagrams of the whole airport power system
- interactive representation of individual transformer sub-stations with control of individual compartments and distributor fields in low and high voltage sections
- it sends data about power system to the airport monitoring system CAT II and CAT III
- archiving of all events occurred in the system
- optical and acoustical indication of change of condition



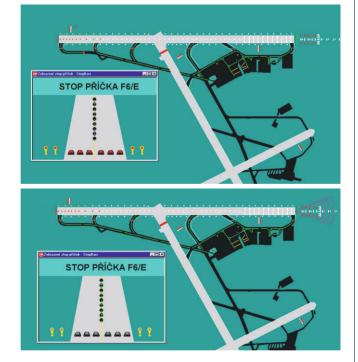
# TRAFOSTATION HTS



# CONTROL AND MONITORING STOP BARS

# **Description/Properties**

- stop bar ON
- stop bar OFF, following by centreline TWY







chapter:



# MONITORING UPS

#### **Description/Properties**

The UPS backgrounds own status via values:

- start and end test of battery
- operation for battery (time)
- operation regime by-pass
- low battery
- supervision request

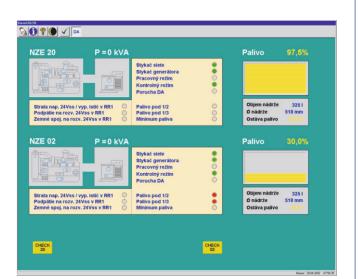
#### Stavová hlásení UPS IM 0655 ČAS V POČÍTAČI ČAS V UPS UPS 05.10.2002 04:34:04 - 05.10.2002 05:01:01 05.10.2002 04:34:59 - 05.10.2002 05:01:54 05.13.2002 03:01 - 05.10.2002 05:01:54 2.000 (104):90 (6),10,200 (5):11-51 2.000 (104):90 (6),12,200 (5):11-51 2.000 (105):44 (6),12,200 (105):11-51 2.000 (105):54 (7),12,000 (105):11-51 2.000 (104):100 (105):100 (105):100 2.000 (104):100 (105):100 (105):100 2.000 (104):100 (105):100 (105):100 2.000 (104):100 (105):100 (105):100 2.000 (104):100 (105):100 (105):100 2.000 (104):100 (105):100 (105):100 2.000 (104):100 (105):100 (105):100 2.000 (104):100 (105):100 (105):100 2.000 (105):100 (105):100 (105):100 2.000 (105):100 (105):100 (105):100 2.000 (105):100 (105):100 (105):100 (105):100 2.000 (105):100 (105): IM 065S 10-30 / 40-60 / 80-120 kVA UL2 220 V UL3 218 V ULS 219V 6.73A 1.1 112 12.12A 11.3 10.77 A

# MONITORING EMERGENCY POWER SUPPLY

#### **Description/Properties**

The PS backgrounds own status via values (for example):

- fuel in %
- operation power supply
- status of battery
- fault PS



# SOFTWARE FOR ARCHIVES

# **Description/Properties**

- all the data concerning operation of control workstations and information workstations, commands, handing over of control, requirements concerning constant current regulators and monitored signals are archived at central archive
- the data are archived for 1 year, after elapsing of one year they are automatically being deleted
- printing of archived data is possible on printer, which can be connected to any control or informative workstation

Program				.2001	<u> </u>	N							
A DI		Pr	nt .	Pri	2 nt Previ	ew Export		Refresh		stoner Pr	 Next page	Last page	
Archiv s	elect					Ovláda	ini						
Arch	Ŵ					Contract	and and	1	-				
÷ 🔿	Ovlád	ini.				1	Čas	Událost		Ovládání			
-		d1.8				965443	01.02.2001 05:07:			uvolnêno			
H- 🛄	CCR					965444	01.02.2001 05:07:			TS			
÷. 🗎	Radio	navica	CP.			0965445	01.02.2001 05:08:			uvolněno			
	Energ					965446	01.02.2001 05:08:			TS uvolněno			
1						965448	01.02.2001 05:08:			TEC			
÷ 🛄	Komu	nkace				965449	01.02.2001 05:08:						
6	ATSU	IDS .				965450	01.02.2001 05:09:						
_						0965451	01.02.2001 05:09			The second			
_	Meter	- AM	/05		_	0965475	01.02.2001 05:10:			uvolněno			
	Testy	SZZ				0965501	01.02.2001.05:22:	18 Ovládání I	\$ 24	TS			
	Archiv	IVD				965502	01.02.2001 05:22:	21 Ovládání II	S 06	TS			
_						0965503	01.02.2001 05:22:	23 Ovládání II	S 24	uvolněno			
	Meter	o - por	tmink	Y		965504	01.02.2001 05:22:			uvolněno			
÷. 📄	Brite	1 - žár	ovky.	remo	te	965509	01.02.2001 05:22:			TEC			
					•	965510	01.02.2001 05:22:			TEC			
Date se	lect :					965511	01.02.2001 05:22:			uvolněno			
_			-		_	965512	01.02.2001 05:23:			TEC			
•	Febr	uary,	200	1		0965513	01.02.2001 05:23						
Sun Mo	n Tur	Wed	Thu	Fri	Sat	□967275 □967479	01.02.2001 18:37:			TEC			
28 2		31		2	3	0967479	01.02.2001 20:44: 02.02.2001 05:08:			uvolnēno			
4 5		7	8	9	10	П967979	02.02.2001 05:08: 02.02.2001 05:09:						
11 1		14	15	16	17	0968041	02.02.2001 05:095						
18 19		21	22	23	24	0969053	02.02.2001 03:24:			TEC			
25 2		28	1	2	1	969276	02.02.2001 07:52			uvolněno			
4 5		7	8	0		969568	02.02.2001 13:00:			TEC			
2)10		1/20/			100	970136	02.02.2001 15:07:		4-22	uvolněno			

EN ISO 9001-2001

TRANSCON ELECTRONIC SYSTEMS, s.r.o., All rights reserved

0 2022

chapter:







This page is intentionally left blank.

