

TECHNICAL BULLETIN

OBSTRUCTION LIGHTING

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Product: FTS -372
 Brand(s): Flash Technology
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MONITORING CHANGES BETWEEN THE FTS-370D AND THE FTS-372

This document reviews the changes in monitoring between Vanguard® FTS-370d medium intensity obstruction lighting product and its successor, the Vanguard® FTS-372.

MODBUS

The Modbus map used by the FTS-370d is Version 11. The Modbus map used by the FTS-372 is Version 12. This means that the FTS-372 Modbus interface contains all the registers used by the FTS-370d, with several additional registers for increased data. The differences are detailed below.

Register Address	Read/Write	Register Name	Description / Values	FTS-372 usage difference
11	R/W	Beacons	1-8	FTS-372 can support up to 8 beacons, the FTS-370d supports up to 6.
12	R	Marker Tiers	0-8, Reads total Number of non-zero Marker's Per Tier below	FTS-372 can support up to 8 marker tiers, the FTS-370d supports up to 6.
19	R/W	Markers Enabled ²	Not Enabled (0), Enabled (1)	This register is not used in the FTS-372
23	R/W	FPM Red	20, 30, 40, 60, 100. Value 100 is for Steady on.	Value 100 is only available on the FTS-372

Register Address	Read/Write	Register Name	Description / Values	FTS-372 usage difference
26	R/W	Red Flash Mode ²	Legacy (0), Efficiency (1)	Legacy flash mode is not available on the FTS-372. Writes to this register will have no effect.
44	R	System 7 Expanded Results	See description for Register 38	New register, only available on FTS-372
45	R	System 8 Expanded Results	See description for Register 38	New register, only available on FTS-372
46	R	System 7 Results	See description for Register 32	New register, only available on FTS-372
47	R	System 8 Results	See description for Register 32	New register, only available on FTS-372
72	R	Controller Alarms/Indications	Bit 13: Indicates that IR (Infrared) is not available or supported by the attached beacon (IR N/A) ² Bit 14: Indicates possible cross talk in PLC communication (BIND ALARM) ² Bit 15: Indicates Tower Controller Communication Alarm (CTRL COMM ALARM) ⁸	Bits 13 and 14 not used on the FTS-372. Bit 15 represents communication issue with subordinate systems on the FTS-370d
143	R	Humidity	Humidity value measured at the base of the tower expressed in percentage	New register, only available on FTS-372
144	R	Last Photodiode Mode Change in RTC Timestamp Date	RTC Time in Day/Month/Year Hours:Minutes was the last sync event	New register, only available on FTS-372

Register Address	Read/Write	Register Name	Description / Values	FTS-372 usage difference
145	R	Last Photodiode Mode Change in RTC Timestamp Time	RTC Time in Day/Month/Year Hours:Minutes was the last sync event	New register, only available on FTS-372
146	R	Photodiode Mode	Photodiode Mode: 0: Day, 1: Night, 2: Disabled, 3: Twilight ⁴	New register, only available on FTS-372
148-149	R	Reboot Count	Reboot count MSB and LSB bytes	New register, only available on FTS-372
150	R	Display Board FW Version	FW version in the format of A.X.Y.Z	New register, only available on FTS-372
151	R	Tower Ctrl FW version	FW Version in the format of VX.Y	New register, only available on FTS-372
152	R	Run time Display Board – Days	Count of days since the display board last restarted	New register, only available on FTS-372
153	R	Run time Tower CTRL – Days	Count of days since the tower controller last restarted	New register, only available on FTS-372
228	R	RS-485/PLC Communications Quality	RS-485 or PLC Communications Quality with the beacon expressed in percentage, depending on communication method of this system ⁶	This register shows PLC comm quality on the FTS-370d, and RS-485 Comm quality on the FTS-372
229	R	Reboot Count	Running count of beacon reboots	New register, only available on FTS-372
230	R	Runtime - days	Count of days since the beacon last restarted	New register, only available on FTS-372

Register Address	Read/Write	Register Name	Description / Values	FTS-372 usage difference
231	R	Rapid Reboot Alarm	A non-zero value indicates that this beacon is rebooting very frequently.	New register, only available on FTS-372
297	R	RS-485/PLC Communications Quality	RS-485 or PLC Communications Quality with the marker expressed in percentage, depending on communication method.	This register shows PLC comm quality on the FTS-370d, and RS-485 Comm quality on the FTS-372
298	R	Reboot Count	Running count of marker controller reboots	New register, only available on FTS-372
299	R	Runtime - days	Count in days since the marker controller last restarted	New register, only available on FTS-372
305	R/W	Confirmation Relay Output Configuration	8: TWILIGHT relay output	Value of 8 is added for FTS-372, all other values are the same.
324-773	R/W	All additional registers above Register 323	Marker Settings and Diagnostics Extension, Hi Intensity Beacons, GPS Registers, Tower Configuration Extension, Intensity Change Times, Cellular Modem Settings	New register, only available on FTS-372

SNMP

The SNMP traps generated by the FTS-372 are a subset of the FTS-270 High Intensity MIB tables. Therefore, it will be possible for a customer to monitor both the FTS-270 and FTS-372 systems with a common set of MIB files. There is also an abundant amount of overlap between the FTS-370d and FTS-372 traps.

OID

The main difference will be in the OID prefix values.

FTS-370d OID prefix	FTS-372 OID prefix
1.3.6.1.4.1.9882.1.2.1.1.	1.3.6.1.4.1.9882.6.2.1.1.

DETERMINING THE DIFFERENCE BETWEEN FTS-372 AND FTS-270

In the FTS-372, there is a Varbind name towerSystemModeData. It's OID is 1.3.6.1.4.1.9882.6.2.1.2.4.10. This Varbind is appended to every trap reported from the FTS-372 in current firmware and for the FTS-270 in its next release. This is the method to determine if a particular trap comes from an FTS-372 or an FTS-270 system.

SIMPLE MONITORING USING A SINGLE TRAP

The FTS-372 has the ability to send a single trap (named systemHealthNotify, 161) for any critical alarm. This is meant for customers who wish to receive one trap for any critical condition on the tower. To utilize this feature make sure to enable System Health configuration under SNMP settings on the web GUI or System Settings on the OLED display.

LABELS

The FTS-372 MIB files support both High Intensity and Medium Intensity flash heads, some trap name changes will be evident between FTS-370d and FTS-372 for clearer distinction. The traps listed below have changed names, but the functionality remains the same.

FTS-370d trap name	370d Num	FTS-372 trap name	372 Num
whiteDayAlarmNotify	1	mediumIntensitywhiteDayAlarmNotify	32
whiteNightAlarmNotify	2	mediumIntensitywhiteNightAlarmNotify	34
redNightAlarmNotify	3	mediumIntensityredNightAlarmNotify	35
beaconCommunicationAlarmNotify	4	mediumIntensitybeaconCommunicationAlarmNotify	37
infraredAlarmNotify	27	mediumIntensityinfraredAlarmNotify	36
systemGPSSyncAlarmNotify	7	gpsSyncAlarmNotify	68
siteModeOverrideNotify	12	modeOverrideNotify	106
systemCommunicationAlarmNotify	6	rs485TowerCommunicationAlarmNotify	65
batteryVoltageNotify	18	lowBatteryAlarmNotify	115

FTS-370d trap name	370d Num	FTS-372 trap name	372 Num
lowTowerLightingDCVoltageAlarmNotify	19	beaconLowDCAlarmNotify	116
towerLightingConfigurationAlarmNotify	17	towerConfigurationAlarmNotify	69
markerAlarmNotify	24	markerTierAlarmNotify	131

NEWLY ADDED TRAPS

There are additional traps available in the FTS-372 not found in the FTS-370d. The differences in SNMP Traps are listed below.

FTS-372 Trap Name	Number	Description
mediumIntensityBeaconFirmwareBackupWarningNotify	53	Primary firmware failure and board is running back up firmware.
mediumIntensityBeaconRapidRebootNotify	54	The connected flash head is rebooting very frequent."
firmwareBackupWarningNotify	66	Primary firmware failure and board is running back up firmware
towerControllerrapidRebootNotify	85	Tower control board is rebooting very frequent.
towerControllerBoardCommunicationAlarmNotify	100	General communications failure with the tower control board
relayBoardConfigurationAlarmNotify	111	The system is detecting relay board that it is currently not configured to support.
alternateAutomaticUpdateNotify	119	A notification which is sent based on a configured time interval.
relayBoardCommunicationAlarmNotify	124	Communication failure with the relay board
systemHealthNotify	161	One or more devices have critical alarm active on the tower.
lowAUXPowerAlarmNotify	163	If Auxiliary power input to the Smart Power PCB is low.
noAUXPowerAlarmNotify	164	If no voltage is detected on the Auxiliary power input to the Smart Power PCB.
powerSupplyPCBCommunicationAlarmNotify	165	If the unit is equipped with Smart Power PCB and there is no communication to the smart Power PCB from the controller.

FTS-372 Trap Name	Number	Description
powerSupplyPCBDryContactNotify	166	If the unit is equipped with Smart Power PCB and there is a change in the Dry contact Input.
markerBoardFirmwareBackupWarningNotify	149	Primary firmware failure and board is running back up firmware.
markerBoardRapidRebootNotify	150	The connected Marker Board is rebooting very frequent.

DEPRECATED TRAPS

This lists shows which traps were present in the FTS-370d but are no longer generated in the FTS-372

Trap Name	Number
systemVoltageHighNotify	9
systemVoltageLowNotify	10
communicationChangeNotify	13
detectedSystemsNotify	16
towerLightingSyncAlarmNotify	20
plcBindingsAlarmNotify	21
infraredNotAvailableAlarmNotify	28
markerBoardOutputVoltageNotify	25
markerBoardOutputVoltageHighNotify	26

TRAPS IN WHICH ONLY THE NUMBER HAS CHANGED

This list shows traps that have retained the same name but have trap numbers deferent between the FTS-370d and FTS-372.

Trap Name	FTS-370d Number	FTS-372 Number
photodiodeModeChangeNotify	22	83
markerTierCommunicationAlarmNotify	23	133
automaticUpdateNotify	14	108
configurationChangeNotify	29	160

Please contact our Technical Support team if you have any issues.

They are available Monday – Friday, 8 am – 6 pm, US Central Time.

Call 800-821-5825, 3, 1 (Support/Obstruction)