

Predix™ Microwave Barrier

Installation Guide and Operating Manual

English version (01.12.2014)

Dear Customer!

Thank you for choosing our product!

Before installation and use, please read this Installation Guide and Operating Manual carefully and thoroughly, so that you can take safe and full advantage of all features of the product.

This manual contains information about the design, operation, application and technical parameters of the **Predix**[™] Microwave Barrier. Instructions for its proper installation and use are also included in the manual.

- **Note**: Installation of the product <u>MUST</u> be done by qualified personnel. Installer must follow local laws, statutes and regulations. Manufacturer or retailer will take no responsibility, nor assume any liability, for damage or injury caused by the faulty installation or misuse of the product. <u>ANY</u> modification or maintenance done by unqualified or unauthorized personnel could damage the product.
- **Note**: Manufacturer continually refines the product to ensure optimal performance. Specifications subject to change without notice. As a result, temporary minor discrepancies between the actual device and that described in the contents of this manual may occur. Any such differences will not affect the intended operation of the device.

Disclaimer

The manufacturer/distributor reserves the right to revise any content in this manual at any time. While due diligence has been taken to ensure correct and comprehensive content, the manufacturer/distributor does not warrant or assume any legal liability whatsoever for the failure of any user of the product to follow the instructions, recommendations and guidelines contained in this manual.

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PRODUCT INVENTORY

<u>Item</u>	<u>Quantity</u>
Transmitter unit kit	1
Receiver unit kit	1
Mounting hardware set for attaching the transmitter and receiver units to posts	2
Protective cable hose	2*3 ft./0.9 m
Installation Guide and Operating Manual	1

Note: Power supply is not included.

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INTRODUCTION

This operating manual contains information on the function, assembly, adjustment, operating principle, technical features and composition of the **Predix**[™] Microwave Barrier and its implementation versions (hereafter referred to as 'the detector'), as well as its deployment and operation.

INTENDED USE

The product is designed for use as part of an electronic security system to ensure the early detection of an intruder penetrating a protected site.

SAFE USE

During preparation of the product for use, as well as during any maintenance undertaken while it is in actual operational use, appropriate technical safety precautions must be taken, and appropriate technical safety rules observed, that are designed to ensure safe installation, maintenance and operation of low-voltage electrical devices.

The emissions level of the transmitter unit of the product, in accordance with the effective norms for the personal safety of those who are not involved in the actual installation of the product, allows its safe continuous operation in its specific intended use, as detailed in this manual.

MODELS

Predix™-50	164 ft. (50-meter) coverage variant
Predix [™] -100	328 ft. (100-meter) coverage variant
Predix™-200	656 ft. (200-meter) coverage variant
Predix™-300	984 ft. (300-meter) coverage variant

PERFORMANCE CHARACTERISTICS AND FEATURES

The detector can function in areas with long grass or of uneven surfaces up to a height or height variance of 1 ft. (0.3 m) under the conditions specified below.

The detector meets a climatic implementation standard of temperatures ranging from 233° K through 338° K (from -40° F through $+147^{\circ}$ F, -40° C through $+65^{\circ}$ C), and also meets the European 'CE' safety standard.

The detector performs uninterruptedly, remains fully operational and does not generate an alarm signal under the following conditions:

- exposure to rain and snow up to an intensity of 1.57 in./h (40 mm/h);
- exposure to sunlight;
- exposure to wind up to a velocity of 67 mph (30 m/s);
- surface unevenness up to a variation of 1 ft. (0.3 m);
- grass cover up to a height of 1 ft. (0.3 m);
- snow cover, uncleared up to a height of 1 ft. (0.3 m) where the snow cover is higher than 1 ft. (0.3 m), the detection zone must be cleared.;

The detector is able to operate properly, and does not generate false alarms, in the event of any of the following disparate circumstances:

- a) movement of a person no closer than the following distance to the detection zone axis (an imaginary straight line extending from the transmitter unit center to the receiver unit center) of an individually protected segment:
 - 3.28 ft. (1.0 m) for a protected segment length of up to 164 ft. (50 m)
 - 3.94 ft. (1.2 m) for a protected segment length of from 165-328 ft. (51-100 m)
 - 5.91 ft. (1.8 m) for a protected segment length of from 329-656 ft. (101-200 m)
 - 6.56 ft. (2.0 m) for a protected segment length of from 657-984 ft. (201-300 m);
- b) movement of a motor vehicle no closer than the following distance to the detection zone axis of an individually protected segment:
 - 7.22 ft. (2.2 m) for a protected segment length of up to 164 ft. (50 m)
 - 8.20 ft. (2.5m) for a protected segment length of from 165-328 ft. (51-100 m)
 - 9.19 ft. (2.8 m) for a protected segment length of from 329-656 ft. (101-200 m)
 - 9.84 ft. (3.0 m) for a protected segment length of from 657-984 ft. (201-300 m);
- c) penetration of the detection zone by single small animals (e.g., birds) no closer than 9.84 ft. (3 m) to the transmitter unit or receiver unit of an individually protected segment;
- d) radiated emissions of 433 MHz-range radio devices and cellular telephones no closer than 1.64 ft. (0.5 m) to the transmitter unit or receiver unit.

The detector enables the adjustment of all parameters and signals with the aid of the tuning software running on a personal computer. The detector can be adjusted to modify the parameters of the operating signal – specifically, of the frequency channel – in order to eliminate possible mutual interference of adjacent detectors. It is therefore possible to set up multiple detectors in parallel.

The detector addresses a malfunction by disconnecting the outputs of the terminal control relay until the elimination of the malfunction when:

- a random, unanticipated chance malfunction occurs at the transmitter unit or receiver unit;
- an act of sabotage of the signal emission of the transmitter unit or of the signal reception of the receiver unit is attempted by the deliberate employment of radioreflecting, radio-absorbing or other signal-interfering or signal-manipulating materials or devices, or by the deliberate severance of its power supply.

Further, the LEDs of the operational receiver unit will provide an additional visual indication by flashing momentarily under the following circumstances:

- if an alarm signal is generated, the LEDs will flash for 5 seconds;
- if a lack of adequate signal strength is detected, an outage of the transmitter unit or receiver unit is detected, interference with the signal by a powerful source of radio noise is detected, and in certain other instances, the LEDs will flash for more than 30 seconds.

The detector is protected against possible reverse polarity of the supply voltage due to faulty installation, and against spikes with a voltage up to 1000 V of up to 1 ms generated in power lines during storms.

It is recommended that the electric supply of the detector come from a stabilized source of constant current with a nominal voltage from 12-36 VDC at a fluctuation not higher than 0.1V.

GENERAL OPERATING PRINCIPLES

The transmitter unit and receiver unit are placed at opposite ends of the area to be protected. The transmitter unit emits electromagnetic waves in the direction of the receiver unit. The receiver unit receives these waves, converts them into an electric signal, and analyzes this signal.

An intruder who penetrates the detection zone – either at full height or bent down – triggers the modulation of the signal received by the receiver unit. The depth of the modulation and the form of the signal depend on the size and mass of the intruder, the place where the area is penetrated, the relief of the area and the speed of the intruder's movement. The detector in turn signals the generation of an alarm by opening the output contacts of the terminal control relay.

A special feature of the design, in conformance with the intended functional properties of the detector, is the very narrow detection zone in the direction of the antennas, due to its 'K'-band (24 GHz) operating frequency range. Use of this comparatively high operating frequency band not only contributes to the narrow width of the detection zone, but also ensures higher sensitivity to moving objects in the direct vicinity of the detection zone axis.

A sample view of the detection zone profile of a 984 ft. (300 m)-long segment is shown in **Figure 1**.



Figure 1 – Sample view of the detection zone profile

The detector has two modes for the determination of a proper detection threshold level: 'auto' and manual. In 'auto' mode, the processor determines the optimal threshold level for the detection of intruders penetrating the detection zone on a ground surface. In manual mode, the optimal detection threshold level is explicitly specified by the operator. As a rule, the need for manual adjustment arises in the event of a significant operational variation from the routine operating conditions specified in this manual.

It should be noted that, in 'auto' mode, the optimal detection threshold level is determined in dB in relation to the average strength of the radio signal received. The detector automatically adapts to gradual changes in the received radio signal's average strength resulting from slow changes in weather conditions.

SELECTING THE INSTALLATION LOCATION

Attention! The safety and reliability of the operation of the detector depend on the strict observation of the following requirements.

The presence of water due to overflow/spillage/leakage/seepage/etc. from nearby structures (e.g., roofs, etc.) should be avoided in the direct vicinity of the detector units (in the direction of the emission, no closer than 16.40 ft. (5 m); perpendicularly to the direction of the emission, no closer than 0.82 ft. (0.25 m)).

The preparation and maintenance of an exclusion zone, where the presence of bushes and branches of trees, as well as of big, immovable objects (e.g., buildings, etc.) – see **Comment** below – is not allowed, is necessary. The presence or motion of other movable objects (tractors, people, animals, etc.) is also not permitted in the exclusion zone. The recommended width of the exclusion zone for various detector segment lengths is shown below.

The horizontal distance from the detection zone axis to the edge of the exclusion zone must be:

- at least 3.94 ft. (1.2 m) for a segment with a length of up to 164 ft.
 (50 m);
- at least 4.92 ft. (1.5 m) for a segment with a length of from 165-328 ft. (51-100 m);
- at least 6.56 ft. (2.0 m) for a segment with a length of from 329-656 ft. (101-200 m);
- at least 8.20 ft. (2.5 m) for a segment with a length of from 657-984 ft. (201-300 m).

In the exclusion zone, optimally the maximum height variation between bare ground and that with snow or long grass cover should not exceed 1 ft. (0.3 m). Note – modified effective use of the detector is still possible in conditions of greater height variation, e.g., in situations where it is conceivable that an intruder might attempt to evade detection by using higher areas of the snow cover itself for concealment of approach. In such cases, it may be necessary to alter the generally recommended height of installation of the detector units; however, the **Note** below should always be given due consideration.

Comment – Within the exclusion zone, there should be absolutely no presence of non-radio transparent (e.g., stone, metal, ferroconcrete, etc.) natural or man-made objects like boulders, walls, barriers or other large stationary entities which might conceivably produce signal disturbances such as noise or reflection.

The presence of nearby walkways, bikeways, roadways, railways, etc., forested tracts, and large, immovable objects and structures must be at a distance from the detector of no less than twice the width of the exclusion zone itself. In the event of subjection of the detector or immediately adjacent objects to vibration caused by passing traffic, the appropriate distance of the detector therefrom must be determined by trial-and-error.

In case of installation near power lines, the detector units should be placed no closer than 16.40 ft. (5 m) to lines of a voltage up to 35 kV, and no closer than 32.81 ft. (10 m) to lines of a higher voltage up to 500 kV. It is also recommended that, if practical, any cabling connected to the detector units be buried underground in such circumstances.

Note: If the above requirements are not strictly observed, the operating performance of the detector may not be optimal. In the absence of such compliance with said requirements, the determination of whether the continued use of the detector under the existing conditions is appropriate should be dictated by the actual performance experienced.

MOUNTING THE DETECTOR

In terms of its physical configuration, the final assembled detector is comprised of two oppositelyplaced separate units – the transmitter unit and receiver unit – which are identical in size and appearance. To perform proper physical orientation of the units, it is necessary first to loosen their fixing nuts, and then to tighten them after final adjustment. Firm attachment of the units on recommended round supporting posts is done with the aid of the mounting hardware. The recommended diameter of the posts is 2-3½ in. (5.1-8.9 cm). It is recommended to bury the connecting cables in the ground.

On existing soft ground or ground susceptible to periodic softness, the posts must be placed in foundations. The type and dimensions of the foundations should be determined in view of the type of soil and characteristic weather conditions at the site, in order to establish and maintain firm and steady support of the units during installation, adjustment and actual operation.

In areas with little snow, the section of the posts remaining above the ground should be at least 3.61 ft. (1.1 m) high. In places where the height of the snow cover may exceed 1.64 ft. (0.5 m), the section of the posts remaining above the ground should be at least 4.92 ft. (1.5 m) high.

The installation of the units must allow free access to their adjustment controls and fastening elements. They must remain accessible for special maintenance needs as well as for routine seasonal adjustments. The initial height at which the units should be positioned before further adjustment is 2.62 ft. (0.8 m), measured from the ground surface to the center of the unit. The brackets should be positioned on the posts so that the emission of the transmitter unit is directed toward the receiver unit.

Each unit must be fastened to its respective post with the help of two collars (where posts of asbestos cement are used, it is necessary to replace the supplied collars).





INITIAL SET-UP

Switch on the power supply of the detector, and check its voltage at the corresponding outputs of the units. The voltage can be checked by any device that provides such measurement. The measured value, taking into account the required reserve for usage, must be between 12-36 V.

After the power supply is switched on, it is necessary to perform the initial adjustment of the detector.

To perform the initial physical set-up of the detector, first loosen the fixing nuts of the transmitter unit and receiver unit.

Then, <u>after confirmation that the units are set to the same operating frequency</u>, establish a maximal initial working signal level by slowly and gradually orienting the transmitter unit and receiver unit to face each other via line-of-sight positioning.

ATTENTION! During the software adjustment process, until 'Finish' is clicked (see final step of '**Programming the receiver**' in the **APPENDIX** below), the detector may temporarily generate an alarm signal. This can occur if a detector incorporating v. 3.7 or later version of the firmware is used: the alarm relay then remains in a closed position during programming of the receiver.

Upon completion of the initial adjustment, the fixing nuts of the units must be tightened, with care taken not to allow the units to change position and thereby possibly degrade the already-established maximal initial working signal level.

See also 'APPENDIX – SOFTWARE CONFIGURATION AND PROGRAMMING PROCEDURES' below.

OPERATING FREQUENCY ADJUSTMENT

The detector has 250 independent frequency channels (1-250) available. The difference in frequency between adjacent channels is 1 MHz. The complete range of available channels comprises 24.001-24.250 GHz. The nominal operating frequency of channel 1 is 24.001 GHz, that of channel 10 is 24.010 GHz, and that of channel 250 is 24.250 GHz. The selection of a frequency channel is made with the help of tuning software. For proper operation of the detector, it is essential to specify the same frequency channel for both the transmitter unit and the receiver unit.

The following frequency channel-related operational practicality must be taken into account when installing multiple detectors in close physical proximity to one another, e.g., in a parallel configuration: Although the nominal transmission frequency of a given transmitter unit may be – for example – 24.150 GHz, its signal is receivable within an actual frequency range of 24.144-24.156 GHz.

It is therefore recommended that, in multiple-detector configurations, the operating frequency channels of the detectors be set as far apart as possible by spacing them at generous intervals across the entire available (1-250) channel range.

See also 'APPENDIX - SOFTWARE CONFIGURATION AND PROGRAMMING PROCEDURES' below.

DETECTION SPEED ADJUSTMENT

An important feature of the processing algorithm of the detector is its ability to evaluate the likely maximum speed at which an intruder could reasonably be anticipated to penetrate the detection zone in relation to the actual penetration speed of the intruder. The specification of the associated evaluation parameter is made by the user, depending on the physical characteristics of the protected area.

Three values for the highest anticipated intrusion speed can be specified in the alarm system: \sim 1.64 ft./0.5 m/s; \sim 6.56 ft./2 m/s; \sim 32.81 ft./10 m/s. Recommendations for the setting of this parameter are shown in **Table 1**.

Table 1

Operating environment of the detector	Recommended value for the upper detecting speed
Open terrain, without any obstacle hindering the movement of an intruder	"high" (~32.81 ft./10 m/s)
Partially physically protected perimeter (low fence, limited approach space near buildings and walls, shrubbery, etc.)	"medium" (~6.56 ft./2 m/s)
Fully physically protected perimeter (wall, high fence, etc., where the anticipated penetration speed of an intruder is significantly lower)	"low" (~1.64 ft./0.5 m/s)

Specifying an appropriate value can result in substantial reduction of the likelihood of erroneous responses by the alarm system, i.e., the frequency of false alarms generated by birds and other potentially disturbing moving objects.

See also 'APPENDIX – SOFTWARE CONFIGURATION AND PROGRAMMING PROCEDURES' below.

TESTING AND TUNING

To implement the desired operation of the detector, it must be set to operational status after verification of the proper generation of alarm signals. It is therefore necessary to first perform test penetrations of the detection zone along its entire length, especially at particularly vulnerable points like depressions and elevations. In the event that no signal, an insufficient signal, a falsely high signal or other faulty signal is generated when the detection zone is penetrated, it is necessary to readjust the detection threshold level taking the measures described immediately below.

ATTENTION! To optimize the efficacy of the noise-proof feature of the detector, it is recommended to establish the highest possible practical absolute value for the detection threshold level.

The final specification of the detection threshold level is done after first determining its appropriate value by performing test penetrations of the detection zone. The mass of the mock intruder performing the test penetrations should be 110-176 lbs. (50-80 kg), and the height of the mock intruder, when bent, must be 2.62-3.28 ft. (0.8-1 m). It is compulsory to perform test penetrations in the following places:

- in the middle of the segment in both upright and bent positions;
- at a distance of 49.21-65.62 ft. (15-20 m) from the transmitter unit and the receiver unit in both upright and bent positions;
- in a bent position in depressions.

When the mock intruder penetrates the detection zone, the resultant diminished signal should then surpass the established detection threshold level, thereby triggering the generation of an alarm signal.

Should the level of the received signal be insufficient (e.g., in cases where this is caused by the actual length of a protected segment being close to the maximum range of the detector used), it is recommended to increase the height(s) of the transmitter unit and/or receiver unit within a range of 2.30-3.28 ft. (0.7-1 m), first in 0.33 ft. (0.1 m) increments, then in finer increments of in./cm.

It must be taken into account that, in certain cases, the maximum level of the received signal during adjustment is achieved when the detector units have been inadvertently oriented in the direction of a nearby reflective surface (e.g., metal fencing, water surface, etc.). In such cases it is not advised to orient the detector units in such a direction.

One of the possible causes of erroneous responses of the detector (e.g., the generation of a false alarm in the absence of an actual intrusion or, conversely, the generation of no alarm in the event of an actual intrusion) may be the effect on the receiver unit of one segment of the emission of the transmitter unit of a nearby segment. Such effect can be verified by temporarily switching off the power supply of the nearby transmitter unit. To eliminate the effect, it is necessary to change the operating frequency of the affected detector. The operating frequency change must be done **in both the affected receiver unit and its transmitter unit**.

If the signal processing analysis suggests the possible presence of 'noise' in the received signal (e.g., by recording changes in signal strength not caused by an actual penetration of the detection zone), it is necessary to identify and eliminate the source of such noise, if possible, or to modify the physical configuration of the installation so as to effectively avoid the source of such noise.

Noise of an intermittent character may be caused by the sporadic penetration of the detection zone by wind-blown tree limbs; hence, the importance of strict maintenance of an adequate exclusion zone (see 'SELECTING THE INSTALLATION LOCATION' above). As mentioned above, noise of a constant character may be caused by the normal emitted signal of the transmitter unit of one detector affecting the received signal of the receiver unit of a nearby detector; hence, the importance of proper positioning of detectors in multiple-detector configurations (see 'INSTALLING MULTIPLE DETECTORS AT ONE SITE' below). The presence of such noise may be confirmed by temporarily switching off the power of the transmitter unit suspected of inadvertantly causing it.

Prior to actual operational implementation, it is strongly recommended, following testing and tuning, to verify the continued proper functionality of the detector by its uninterrupted operation for a probational period of not less than 3 days, with the logging of all events, including unintentionally generated alarms, and their subsequent analysis. Further deliberate test intrusions should be performed at least twice a day during this final verification period.

See also 'APPENDIX – SOFTWARE CONFIGURATION AND PROGRAMMING PROCEDURES' below.

INSTALLING MULTIPLE DETECTORS AT ONE SITE

Where several detectors are installed adjacently with the intent to prevent penetration of the barrier at the so-called "blind zones" in the immediate vicinity of the detector units, a segment coverage overlap of at least 11.07 ft. (3.5 m) should be established. In such a detector configuration, detector units of the same type (transmitter unit or receiver unit) must be placed side-by-side. Variants of such configuration are shown in **Figures 2.1**.







Figure 2.1.2



Figure 2.1.3



TECHNICAL SPECIFICATIONS

Specification	Value
Detection zone length	32.81-984 ft./10-
	300 m
Minimum required level of signal received at maximum length of the detection zone	8 dB
Minimum detection zone height for a protected segment length of	8.20 ft./2.5 m
Pange of detection speeds	1 64 / 6 66 / 22 91
Range of detection speeds	1.04 / 0.30 / 32.81 ft /c
	11./5
	0.5 / 2 / 10 m/s
Working supply voltage, V-DC	12-36 VDC
Maximum current required at the working supply voltage of	
12V/24V/36V,	128mA/61mA/56mA
a) Predix™ transmitter unit	170mA/85mA/
b) Predix™ receiver unit	56mA
Maximum operable time after the supply is switched on	12 s
Maximum recovery time of the stand-by system after notification of	10 s
an alarm	
Parameters of signal, switched with the contacts of the output	
Circuit:	20 m 4
- maximum current, constant or alternate	30 MA
- maximum amplitude voltage	72 V
Relay contact signal parameters:	
- maximum input resistance of the circuit	5 kΩ
- impulse voltage	10-30 V
- maximum impulse duration	0.5 s
Minimum signal duration	5 s
Operating frequency	24.001-24.250 GHz
Overall dimensions of	
Predix™ 50-100 with bracket:	6.5x6.5x7.1 in./
	165x165x180 mm
Predix […] 200-300 with bracket:	3.9X9.1X/.1 IN./
Maximum weight of the packaged detector	4 Lbs./1.8 kg
Minimum average service life of the detector, years (warrantied)	2

WIRING CHARTS

Attention! The measurement (control) of the resistance of the circuits, and the isolation of the current-carrying cores of the connecting cables, can only be performed AFTER switching off the voltage of the power supply of the detector, and the disconnection of the circuits controlled.

No.	Color of the output	Purpose of output
1	Brown	Plus supply
2	White	Minus supply
3	Shielding of the cable (GND)	
4	Green (A)	RS-485
5	Yellow (B)	

 Table 2.1 – Connections of the transmitter unit

Table 2.2 – Connections of the receiver unit

No.	Color of the output	Purpose of output
1	Brown	Plus supply
2	White	Minus supply
3	Shielding of the cable (GND)	
4	Green (A)	RS-485
5	Yellow (B)	
6	Grey	alarm output (OC)
7	Pink	alarm output (OC)

APPENDIX – SOFTWARE CONFIGURATION AND PROGRAMMING PROCEDURES

For set-up and adjustment of the detector, the following additional items are necessary:

personal computer (Windows[®] operating system)
 Umirs USB-RS485 converter
 mini-USB cable
 software (the latest version of the software can be downloaded at any time at <u>www.umirs.eu</u>)

Installation of the USB-RS485 converter

Connect the USB-RS485 converter to the computer.

The proper device driver(s) for the specific operating system version in use can be determined and downloaded via the following link:

http://www.ftdichip.com/FTDrivers.htm

After successful installation, the COM-port assigned to the converter can be verified.

Installing the Predix[™] software

Launch the downloaded Setup Wizard.

Choose a language.

- click 'Next' to continue ...



Initiate the installation process.

click 'Next' to continue ...

Designate a destination folder for the software.

click 'Next' to continue ... _

Designate a destination folder in the Start Menu directory for shortcuts to the software.

click 'Next' to continue ... _

Create a desktop icon for quick access to the software.

- click the indicated check-box; _
- click 'Next' to continue ...

Proceed to install the software.

(this may take some moments)

click 'Install' ...

_

V

Setup will install Predix Control Panel into the following folder. To continue, click Next. If you would like to select a different folder, click Browse. C:\Program Files\UMIRS\Predix Control Panel Browse... At least 14,5 MB of free disk space is required. < Back Next > Cancel 🔂 Setup - Predix Control Panel Select Start Menu Folder Where should Setup place the program's shortcuts? Setup will create the program's shortcuts in the following Start Menu folder. To continue, click Next. If you would like to select a different folder, click Browse. UMIRS Predix Control Panel Browse... < Back Next > Cancel 🛃 Setup - Predix Control Panel Select Additional Tasks Which additional tasks should be performed? Select the additional tasks you would like Setup to perform while installing Predix Control Panel, then click Next. dditional icons: eate a desktop icon < Back Next > Cancel Setup - Predix Control Panel Ready to Install Setup is now ready to begin installing Predix Control Panel on your computer Click Install to continue with the installation, or click Back if you want to review or change any settings. Destination location: C:\Program Files\UMIRS\Predix Control Panel . Start Menu folder: UMIRS\Predix Control Panel Additional tasks: Additional icons: Create a desktop icon

< Back Install

Cancel

🔁 Setup - Predix Control Panel

Select Destination Location Where should Predix Control Panel be installed?



Complete the installation process.

- click 'Finish'.

Configuring the Predix[™] software

Choose a language.

- click 'Next' to continue ...

Select an input function.

- click the 'Radar-based barrier' check-box;
- click 'Next' to continue ...



Specify password(s) - optional.

- if desired,
 - type password(s);
 - re-type password(s);
 - click 'Check password';
 - click 'Next' to continue ...
- if not desired,
 - click 'Next' to continue ...

	Wizard
	Predx control panel configuration wzard version 1.2.518-8 2014/02.12 fumins Curves 2014/02.12
	Check. Step 4 of 5
Varify the sottings	Verify the program settings.
verify the settings.	If necessary, you can go back to the desired step by pressing the 'Back' button.
 click 'Done' to continue 	Vour selections
	Selected functions: Radar-based barrier
	User password: no
	Administrator password: no
	To complete the setup, dick 'Done'.
	< Back Done
	Wizard
	Predx: control panel configuration wizard version 1.2518.48 2014.02.12 Universion version 1.2518.49 2014
	Finish step 5 of 5
	Please wait while the wizard completes the setting of program options.
Configuration in progress	Completing the entry
	Creating passwords
(this may take some memorie)	done: 60 %
(this may take some moments)	
	Wizard
	Version 12.518.48 2014/02.12
	Europo www.umirs.eu
	Finish. Step 5 of 5
Complete the configuration process.	Please wait while the wizard completes the setting of program options.
- click 'Exit'	Completing the setup
	done: 100 %
	Configuration wizard has completed its work.
	Important! When you first start the control panel login as an administrator and connect to the detector. Only after that, you can login with user privileges.
	Click Exit to exit the wizard and run the control panel.
	Exit

Connecting a Predix[™] transmitter or receiver to the computer

Connecting a transmitter

- 1. Connect the green wire of the transmitter to the 'A' socket of the USB-RS485 converter.
- 2. Connect the yellow wire of the transmitter to the 'B' socket of the converter.
- 3. Connect the power supply of the transmitter.

Connecting a receiver

- 1. Connect the green wire of the receiver to the 'A' socket of the USB-RS485 converter.
- 2. Connect the yellow wire of the receiver to the 'B' socket of the converter.
- 3. Connect the power supply of the receiver.

Starting the programming procedure

Click the Predix™ icon.



(in Windows[®] 7, an error message indicating that the program is already running may appear. In this case, close the error message window and run the program as a system administrator)

When the Login window appears,

- if a password has previously been used, type it in the 'Password:' field.
- if a password has not previously been used, leave the 'Password:' field empty.

(although 'User' Login is an available option, 'Administrator' Login is necessary for programming the device)

First, select the COM-port previously assigned to the USB-RS485 converter from the drop-down list.

Then, select a communication rate for the COM-port. (in the screen image at right, it is 115200 bps)

The language of the software is also selectable.

Finally, click 'Start' to initiate communication with the detector.

Start Stopped				🕐 🗹 Hints	D Network add	dress: 1	
mmorn Sy	stem Signaling Search About						
Setup			COM-po	ort			
🔦 Wizard			🖗 Choose your COM-port				
To open the Wizard, stop the program and click 'Open'.			Connect to: COM4			· <=	
A Wizard h passwords	elps you select the supported functions and specify the user and administrator		The win your sy	ndow 'Connect to' sh istem. Button 'Detec	iows a list of available CC t' refreshes the list.	M-ports in	
			Select f	from the list the nam	e of COM-port assigned	to the	
History This window	v shows the errors in the work program of the selected serial port. Date and tim	ye .	Select f	from the list the nam ter RS485, which is o	e of COM-port assigned connected to the detecto	to the r.	
History This window correspond	v shows the errors in the work program of the selected serial port. Date and tim to the current settings of the operating system.	ne	Select f	from the list the nam ter RS485, which is o ort settings	e of COM-port assigned connected to the detecto	to the r.	
History This window correspond If the numb automatica	w shows the errors in the work program of the selected serial port. Date and tim to the current settings of the operating system. ser of messages exceeds the value selected in the 'History max length', the winc by cleared and all messages are lost.	ne dow is	Select f	from the list the nam ter RS485, which is o ort settings Rate (bps):	e of COM-port assigned connected to the detecto	to the r.	
History This window correspond If the numb automatica	w shows the errors in the work program of the selected serial port. Date and tim to the current settings of the operating system. ser of messages exceeds the value selected in the 'History max length', the winc large message are lost. ice message history	ne dow is	Select f	from the list the nam ter RS485, which is o ort settings Rate (bps):	e of COM-port assigned i connected to the detecto 115200	to the	
History This window correspond If the numb automatica Serv Date:	w dows the errors in the work program of the selected serial port. Date and the to the current settings of the operating system. Or of nessages exceeds the value selected in the History max length, the wine for message and all messages are located in the History max length. (Inner: Message:	dow is	Select f convert Pr The det BN1, flo	from the list the nam ter RS485, which is o ort settings Rate (bps): fault baud rate for s ow control is not use	e of COM-port assigned i connected to the detecto 115200 erial port 115200 bps. Da d.	to the r.	
History This window correspond If the numb automatica Serv Date:	w shows the errors in the work program of the selected paral port. Date and the to the current settings of the operating system. Or of nessages council the value selected in the History max length', the wind dy cleared and all messages are lost. Icce message history Time: Message:	ne dow is	Select f convert Po The def 8N1, flo Languag To tran drop-do	from the list the nam ter RS485, which is o ort settings Rate (bps): fault baud rate for s ow control is not use ge slate the program in own list and click 'Ch	e of COM-port assigned i connected to the detecto 115200 erial port 115200 bps. De d. iterface, select your lang ange .	to the r. ata format uage from th	
History This window correspond If the numb automatica Serv Date:	w dows the errors in the work program of the selected serial port. Date and the to the current settings of the operating system. Our of nessage accesses the value selected in the Yistary max length, the wine for energiance particular setting of the test of the test of the for energiance the test of the test of the test of the former in the test of the test of the former is the test of the test of the former is the test of the test of the former is the test of	he dow is	Select f convert Po The det 8N1, flo Languag To tran drop-do Ct	from the list the nam ter RS485, which is d ort settings Rate (bps): fault baud rate for s ow control is not use ge slate the program in yown list and cick 'Ch toose your lang	te of COM-port assigned connected to the detecto 115200 erail port 115200 bps. Da d. terface, select your lang ange. guage	to the r. ata format uage from th	
History This windo, correspond If the num automatica Serv Date:	w dows the errors in the work program of the selected serial port. Date and the to the current settings of the operating system. Our of nessage exceeds the value selected in the Yistary max length, the wine by General and an encages are lock. The message linktory The: Message:	te dow is	Select f convert Provem The def BN1, flo Languay To tran drop-do Ch	from the list the name ter RS485, which is o ont settings Rate (bps): fault baud rate for s we control is not use ge salate the program in swn list and cick 'Ch 1005E your lang Language	te of COM-port assigned connected to the detecto 115200 erial port 115200 bps. Da d. tterface, select your lang ange: guage English	to the r, ata format uage from th	

	tart Stop	ped						1 🎛 🗹	Sound	🥐 📝 Hints	Netwo	ork address:
Com	mon System	Signalin	ng Search	About								
S	etup							_	COM-pr	ort		
	🔦 Wizard 👘								🖗 Choose your COM-port			
1	To open the Wiza	rd, stop t	the program a	nd dick 'Open'.						Connect to:	COM48	•
			6	Open							Detect	
	A Wizard helps yo	ou select t	the supported	functions and s	specify the us	ser and a	dministrato	r	The wir your sy	ndow 'Connect to' sl ystem. Button 'Dete	nows a list of avail ct' refreshes the li	lable COM-ports st.
H	listory This window show	vs the em	ors in the wor	k program of th	e selected se	rial port.	Date and t	ine	Select	from the list the nar ter RS485, which is	e of COM-port as connected to the	signed to the detector.
1	f the number of	e current :	settings of the	2 operating syst	em. In the Meters	r max len	oth' the wi	indaw ie	- P	ort settings		
1	automatically clea	ared and a	al messages a	re lost.		THE REAL	gur, u.c. m	1001110		Rate (bps)	115200	•
	🕑 Service n	iessage	e history						7.1			
	Date: Ti	ime:	Message:						8N1, fl	ow control is not us	enal port 115200 ed.	ops. Data form
	2014.02.13. 8	:47:39	Frame head	er error				~	Langua			
	2014.02.13. 8	3:47:45	Frame head	er errori					To tran	slate the program is	terface, select yo	our language fri
	2014.02.13. 8	:47:46	Frame head	er error!					drop-d	own list and dick 'Ch	ange'.	
	2014.02.13. 8	3:47:48	Frame head Frame head	er errori er errori					🔍 C	hoose your lan	guage	
		:48:03	Frame head	er error!				-		Language	English	-
	2014.02.13. 8											



Configuring the transmitter

Complete the configuration of the transmitter first. The factory default network address of the transmitter is '1'. Initiate communication between the device and the computer by clicking 'Start'. If successful, the default settings of the transmitter parameters are then displayed in the 'Internal state' section of the screen accessed via the 'System' tab.

Predix control panel. Adr	ninistrator. 1.2.518.48 2014.02.12	
Stop Working		👔 🗆 Sound 🛛 🖓 🗹 Hints 🔷 Network address: 1
Common System Signal	ling Search About	
State		
	2.07.24.00.2012	Here are displayed the current settings of system parameters.
Software version:	3.91 24.09.2013	Reset to default settings:
Module:	Transmitter	Reset
Producer ID:	0x000004D9	
Maximum range:	500 m	
Temperature:	38 Cor.: 0 + -	
Power supply:	normal	
Delivered frames:	84	The window 'Failed frames' shows the quality of the communication channel with the detector. The indicator shows the errors in frames transmitted through a serial port.
Failed frames:	0%	
Network		-
D Network config	Modify	Detectors can be networked, so that each detector should be assigned a unique network address between 1 and 255.
Network address:	1	To change the network address, check the checkbox 'Modify', then enter the desired address value and confirm by clicking 'Apply'.
Rate:	115200 👻	After changing the address of the detector, it is necessary to adjust the current setting in the Network address' on the top menu bar. After this, communication with the detector should be restored.
	Apply	If necessary, you can change the speed of information exchange over the network. In this case, you must stop the program by clicking the 'Stop' button to adjust the speed of COM-port, and resume work.
Transmitter Receiver Se	ettings	COM48: 115200 bps Tx: 87 Rx: 84 Bytes in RxBuf: 0 Bytes in TxBuf: 22 :) :) :(

The following information is displayed:

Software version (firmware version)

Module (type of connected device - 'Transmitter')

Producer ID (serial number of the device)

Maximum range (maximal operating range)

Temperature (this function is only available on devices with firmware version 3.9T or later)

Power supply (voltage - this function is only available on devices with firmware version 3.9T or later)

Delivered frames (current successfully delivered frames)

Failed frames (an increase of this parameter indicates a degradation of communication between the computer and the device)

The network address of the connected device may be changed in the 'Network config' section of the screen after first clicking the 'Modify' check-box.

The communication rate may also be changed, via the 'Rate' field.

To activate the settings, click 'Apply' - the device will then be addressable at the newly-specified network address.

To program the transmitter, click the 'Transmitter' tab at the bottom left of the 'System' window, and then click the 'Modify' check-box to start the programming procedure.

Set the operating frequency channel of the currently addressed transmitter by specifying a value between 1 and 250 in the 'Frequency channel' field.

Stop	Working		📑 🗹 So	ound 🛛 🕐 🗹 Hints	Network address: 1	
Transmitter	parameter		State:	Norm	al	
Freque	Modify parameter	1				
	Disarmed:	Apply Reset				
C	Output power:	normal				

If a power supply is connected, the 'State' field's

status will be 'Normal'. If the device has no power supply connected, the 'State' field's status will be 'Inactive'.

(this feature is only available on devices with firmware version 3.9T or later)

The 'Output power' field indicates whether the currently addressed transmitter has an adequate power supply.

The 'Disarmed' check-box option (only available on devices with firmware version 3.9T or later) permits the temporary disabling of the transmitter without the need to switch off its power supply.

To activate the settings, click 'Apply'.

Configuring the receiver

The factory default network address of the receiver is '2'.

Initiate communication between the device and the computer by clicking 'Start'. If successful, the default settings of the receiver parameters are then displayed in the 'Internal state' section of the screen accessed via the 'System' tab.

Predix control panel. Administration	inistrator. 1.2.518.48 2014.02.12	
Stop Working		🚹 🗖 Sound 🛛 🖓 🖓 Hints 🔷 Network address: 2
Common System Signalin	ng Search About	
State		
Software version: 3	3.9R 24.09.2013	Here are displayed the current settings of system parameters.
Module:	Receiver	Reset to default settings:
Producer ID:	OxFFFFFFF	Reset
Maximum range: 5	50 m	
Temperature: 3	38 Cor.: 0 + -	
Power supply:	normal	
Delivered frames: 8	89	The window 'Failed frames' shows the quality of the communication channel with the detector. The indicator shows the errors in frames transmitted through a serial port.
Failed frames:	0%	
Network		
D Network config	Modify	Detectors can be networked, so that each detector should be assigned a unique network address between 1 and 255.
Network address:	2	To change the network address, check the checkbox 'Modify', then enter the desired address value and confirm by clicking 'Apply'.
Rate:	115200 🗸	After changing the address of the detector, it is necessary to adjust the current setting in the Network address' on the top menu bar. After this, communication with the detector should be restored.
	Apply	If necessary, you can change the speed of information exchange over the network. In this case, you must stop the program by dicking the 'Stop' button to adjust the speed of COM-port, and resume work.
Transmitter Receiver Sett	tings	COM48: 115200 bps Tx: 94 Rx: 178 Bytes in RxBuf: 90 Bytes in TxBuf: 35 :) :) :) :)

The following information is displayed:

Software version (firmware version)

Module (type of connected device - 'Receiver')

Producer ID (serial number of the device)

Maximum range (maximal operating range)

Temperature (this function is only available on devices with firmware version 3.9R or later)

Power supply (voltage - this function is only available on devices with firmware version 3.9R or later)

Delivered frames (current successfully delivered frames)

Failed frames (an increase of this parameter indicates a degradation of communication between the computer and the device)

The network address of the connected device may be changed in the 'Network config' section of the screen after first clicking the 'Modify' check-box.

The communication rate may also be changed, via the 'Rate' field.

To activate the settings, click 'Apply' - the device will then be addressable at the newly-specified network address.

Programming the receiver

To program the receiver, click the 'Receiver' tab at the bottom left of the 'System' window.

Click 'Begin', and then click the 'Modify' check-box to start the programming procedure.



First, set the operating frequency channel of the currently addressed receiver by specifying a value between 1 and 250 in the 'Frequency channel' field.

Next, specify the detection threshold level. In 'auto' mode, the receiver sets the detection threshold level automatically, and its detection algorithm adapts to gradual changes of the environment (e.g., snowfall, growing grass, etc.), thus minimizing false

Receiver State: Normal Wodfy parameter Frequency channel: 1 State: State: <t< th=""><th>Stop Working</th><th></th><th>📑 📰 Sound</th><th>🛛 🗹 Hints</th><th>Network address:</th><th>2</th></t<>	Stop Working		📑 📰 Sound	🛛 🗹 Hints	Network address:	2
Modify parameter Collogram Sector 34 Sector 34 <td< th=""><th>Receiver Setup Begin</th><th>Finish</th><th>State:</th><th>Norma</th><th>al</th><th></th></td<>	Receiver Setup Begin	Finish	State:	Norma	al	
Detection threshold: diff auto Intruder speed: medium Disarmed: Apply Reset Demodation frequency, itre: 2879 Name Frei: Therbodt	Modify parameter	inel: 1	Oscillogram	elect X: 0.1 § elect Y: 0 1000	length 450 max X: 450 1000 max Y: 1000	 ▼ 0. ×
Intruder speed: medium Disarmed: Apply Reset Demoduaton frequency. Htt: Stratt	>Detection thresh	auto -	b ()			- 10
Disarmed: Apply Reset Demodulation frequency, life: Signal: 2879 211 Noise Ixed: Treshold:	Intruder spe	eed: medium -				- 800
Demodulation frequency, Inte: 2879 211 Note level: Treefold:	Disarn	Apply Reset				- 600 - 500
Noise level: Threshold:	Demodulation frequency, kHz	z: Signal: 211				- 400 - 300 - 200
55 165 ^{ar}	Noise level:	Threshold: 165	a[]	225	337	- 100

alarms potentially caused by routine natural conditions.

The detection threshold level may also be set manually, from -1 to -15 dB.

See sample associated displays on following page.

Then, specify the intruder speed, i.e., the anticipated speed of an intruder's penetration. There are 3 options: low – medium – high.

In 'auto' mode:

In manual mode, -1 dB:



In manual mode, -15 dB:

The receiver also has a 'Disarmed' check-box option (only available on devices with firmware version 3.9R or later) that permits the temporary disabling of the receiver without the need to switch off its power supply – with the 'State' of the output relay remaining normal. A newly 'Disarmed' receiver status is also indicated by the LED on the paired transmitter's circuit board flashing three times.

Stop V	Working]	🚹 🕅 Sou	nd 🛛 🕐 🗹 H	lints	D Ne	etwork a	ddress:	2
Setup E	legin	Finish	St	ate:	No	rma	al			
Modify par Frequer	ameter icy channel:	1	Oscillogran		select X: 0 0.1 select Y: 0	t end 450 1000	length 450 1000	max X: max Y:	450 1000	•
Detectio	n threshold:	auto	br sghal	łd						2
Intr	uder speed:	medium	-							-
	Disarmed:	Apply Reset								
Demodulation	requency, kHz:	Signal: 191								
Noise level:		Threshold:		~~~~~		~~~~		~~~		
J		142		112		25	33	7		KUS

The displayed 'Demodulation frequency, kHz' value should be between 2700 and 3000, indicating optimal communication between the transmitter and receiver.

The displayed 'Signal' value indicates the actual level of the signal currently received from the transmitter.

The displayed 'Threshold' value indicates the actual level of the detection threshold.

To activate the settings, click 'Apply'.

Complete the programming process.

- click 'Finish'.

Further functions of the software

Via the 'Common' tab:

View/modify User and Administrator profiles, COM-port settings, and language.

Also found here is a log which can store up to 10,000 events (after which the system automatically overwrites the oldest events).

Via the 'System' tab:

View pertinent details about a connected transmitter or receiver.

nop		🛿 Sound 🛛 😰 🗹 Hints	Network address: 2
mon System Signaling Search About			
Setup		COM-port	
K Wizard		🙀 Choose your COM	-port
To open the Wizard, stop the program and click 'Open'.		Connection	COM49 -
		connect to.	
Open			Detect
		The window 'Connect to' sho	ws a list of available COM-ports in
A wizard helps you select the supported functions and sp passwords.	beatry the user and administrator	your system. Button 'Detect	refreshes the list.
fistory		Select from the list the name	of COM-port assigned to the
This window shows the errors in the work program of the	selected serial port. Date and time	Converter K5465, which is o	sinected to the detector.
If the number of messages exceeds the value selected in	i the 'History max length', the window is	• Port settings	
automatically cleared and all messages are lost.		Rate (bps):	115200 -
Service message history		The default baud rate for se	rial port 115200 bps. Data format
Date: Time: Message:		orv1, now control is not used	
	*	Language	
		To translate the program int	erface, select your language from th
		Choose your land	196.
		- choose your lang	uaye
	*	Language	English -
Records: 1 History max length:	: 1000 - Clear window		Change
Stop Working		🛛 Sound 🛛 🕐 📝 Hints	Network address: 2
Stop Working mmon System Signaling Search About		🗹 Sound 🛛 🙎 🗹 Hints	Network address: 2
Stop Working mmon System Signaling Search About State		☑ Sound 🛛 🕄 🗹 Hints	Network address: 2
Stop Working mmon System Sgnaling Search About State Ø Internal state		🛛 Sound 🛛 🭳 🗹 Hints	Network address: 2
Stop Working mmon System Signaling Search About State © Internal state Software version: 3.98, 24,09,2013	Here are displayed the current s	Sound 🤊 🖉 Hints	Network address: 2
Stop Working mmon System Signaling Search About State Internal state Software version: 3.9R 24.09.2013 Modula: Barrahar	Here are displayed the current so Reset to default settings:	Sound 2 Hints	Network address: 2
Stop Working mmon System Signaling Search About State Ø Internal state Software version: 3.9R 24.09.2013 Modue: Receiver	Here are displayed the current st Reset to default actings: Reset	Sound 2 Hints	Network address: 2
Stop Working mmon System Signaling Search About State © Internal state Software version: 3.9R 24.09.2013 Module: Receiver Producer ID: 0xffffffff	Here are displayed the current is Reset to default settings: Reset	Sound 2 Hints	Network address: 2
Stop Working mmon System Sgraling Search About State Software version: 3.9R 24.09.2013 Module: Receiver Producer D: bofffffff Maximum range: 50 m	Here are displayed the current set Reset to default setting: Reset	Sound ? Hints	Network address: 2
Stop Working mmon System Signaling Search About State @ Internal state Software version: 3.9R 24.09.2013 Module: Receiver Produce ID: OxfHFFFF Maximum range: 50 m Temperature: 41 Cor.: 0 +	Here are displayed the current is Reset to default settings: Reset	Sound ? Hints	Network address: 2
Stop Working mmon System Signaling State Software version: 3.9R.24.09.2013 Module: Receiver Producer ID: Producer ID: Dofffffffff Temperature: 50 m Temperature; 51 m Power supprint: 11 Core: 0 Power supprint: prover supprint:	Here are displayed the current is Reset to default settings: Reset	Sound 🥄 🗹 Hints	Network address: 2
Stop Working mmon System Signaling Search About State © Internal state © Internal state © Internal state Producer ID: 0x5FHFFFF Producer ID: 0x5FHFFFF Mashum ranges 50 m Temperature: 41 Cor.: 0 m Power axpty: normal Delivered finances: 227	Here are displayed the current is Reset to default settings: Reset The window Failed frames' show	Sound R Hints	Network address: 2
Stop Working mmon System Signaling Search About State Ø Internal state Software version: 3.9R 24.09.2013 Module: Receiver Producer ID: OxfIFFFF Maximum range: 50 m Temperature: 41 Cor.: 0 m Power supply: normal Delevered fames: 227 Facilit fores: 09%	Here are displayed the current is Reset to default activity: Reset The window Failed fames' abor indicator shows the errors in fam	Sound R Hints Hings of system parameters. s the quality of the communication enes transmitted through a senal p	Network address: 2
Stop Working mmc System Signaling State Ø Internal state Ø Internal state Internal state Module: Receiver Receiver Producer ID: DoffHFFFFF Module: Receiver Power suppriv: Internal Delivered frames: 227 Failed frames: 0%	Here are displayed the current is Reset to default settings: Reset The window Failed frames' show indicator shows the errors in fram	Sound R Hints	Network address: 2
Working mmon System Sgraling Search About State Software version: 3.9R 24.09.2013 Model: Receiver Produce ID: 0x9HIFFIFF Model: Receiver Produce ID: 0x9HIFFIFF Produce ID: 0x9HIFFIFF Model: Receiver Produce ID: 0x9HIFFIFF Produce ID: 0x9HIFFIFF ID: 0x9HIFFIFF ID: 0x9HIFFIFF Power supply: normal Deveed formes: 227 Faded formes: 0%6	Here are displayed the current set Reset to default settings: Reset Reset The window Failed frames' show indicator shows the errors in fram	Sound R Hints	Network address: 2
Stop Working mmcc System Signaling Search About State Ø Internal state Ø Internal state Produce TD: Dafffer Maximum range: 50 m Temperature: 41 Cor.: 0 min Power supply: normal Delivered frams: 227 Falled frams: 227 Falled frams: 0%6	Here are displayed the current a Reset to default settings: Reset The window Tailed frame; show indicator shows the errors in flar details about the errors in flar	Sound R Hints	Network address: 2 Network address: 2
Stop Working mmc System Sgraing Search About State Software version: 3.9R 24.09.2013 Module: Receiver Producer ID: Dofffffff Modinum range: 50 m Temperature: 41 Cort: 0 m Power auphy: normal Delivered frames: 227 Feldel frames: 0% Network config Mod	Here are displayed the current s Reset to default settings: Reset The window Tailed frames' show indicator shows the errors in fram fig. Detectors can be networked, so To those the statunk defaurt	Sound R Hints	Network address: 2
Stop Working mmo System Signaling Search About State Ø Internal state Software version: 3-9R 24.09.2013 Module: Receiver Produce ID: OxfIFFFFFF Produce ID: OxfIFFFFFFF Produce ID: OxfIFFFFFF Produce ID: OxfIFFFFFF Produce ID: OxfIFFFFFFF Produce ID: OxfIFFFFFFF Produce ID: OxfIFFFFFF Produce ID: OxfIFFFFFF Produce ID: OxfIFFFFFFF Produce ID: OxfIFFFFFF Produce ID: OxfIFFFFFFF Produce ID: OxfIFFFFFFF Produce ID: OxfIFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	Here are displayed the current of Reset to default settings: Reset to default settings: Reset The window Failed Famed' show indicator shows the errors in france of the rethonology. The technology of the rethonology of t	Sound R Hints	Network address: 2
Stop Working mmcc System Signaling Search About State © Internal state Softwere version: 3.9R 24.09.2013 Module: Receiver Produer ID: Diffff Maximum range: 50 m Temperature: 41 Cor.: 0 min Power supply: normal Delivered frame: 227 Failed frame: 277 Failed frame: 0%6 Network Network config Model	Here are displayed the current a Reset to default actings: Reset Reset The window Failed frames' show indextor shows the errors in far between 1 and 25. To change the network address, and confirm by doing Apply. After drange the address of Apply.	Sound R Hints	In channel with the detector. The ort.
Stop Working mmo System Sgraking Search About State Software version: 3.9R 24.09.2013 Module: Receiver Producer ID: OxfIFFFFF Producer ID: OxfIFFFFFF Maximum range: 50 m Temperature: 41 Cor.: 0 m Power apply: normal Delivered frames: 20% Network config Model Network address: 2 Rate: 115200 v	Here are displayed the current s Reset to default settings: Reset	Sound R Hints	Network address: 2 Network address: 2 Network address: 2 Network address network address network address value at the current setting in the with the detector should be
Stop Working mmon System Signaling Search About State Ø Internal state Ø Internal state Producer ID: 0xfffffffffffff Maximur anset: 50 m Temperature: 41 Cor.: 0 m/m Power suppr: normal Delvered frame: 227 Falled frame: 20% Network config Modi Network address: Rate: 115200 v Apply	Here are displayed the current on Reset to default actimps: Reset The window Failed formed above indicator shows the errors in fare behaven 1 and 255. To drange the network address, and confirmer defaults and dress of the Network address of the former defaults and H'receasery, you can drange the If oncessery, you can drange the	Sound Relationship of the communication the quality of the communication the transmitted through a senal p that each detector should be ass check the checkbox Modify, the e detector, it is necessary to ag the detector should be ass check the checkbox Modify.	In channel with the detector. The ort.
Stop Working mmo System Sgraking Search About State Software version: 3.9R 24.09.2013 Module: Receiver Producer D: bofffffff Maximum range: 50 m Temperature: 41 Cort: 0 mic Power supply: normal Delivered frames: 227 Falled frames: 277 Falled frames: 27	Here are displayed the current as Reset to default actings: Reset Reset Detectors can be networked, so To three the network address, To three the network address, To three the network address, To three to premer restored. After changing the address of the top me restored address, or you can change the most. Bay the program by diding work.	Sound P Hints Hin	In dramel with the detector. The ort.

Via the 'Signaling' tab:

Verify proper functioning of relay contacts and LEDs.

To change the settings, click the 'Modify' check-box.

It is possible to activate the alarm relay, without generating an actual alarm, to check the communication between the detector

Predix control panel. Administrator. 1.2.518.48 2014.02.12							
Stop Working	👔 🗹 Sound 🛛 🕽 🖉 Hints 🔲 Network address: 2						
Common System Signaling Search About							
Configuration							
FD interface: disabled ~							
FD interface relay:							
Apply							
Test	-						
A Relays and leds Modify	You can test the connect/disconnect of relay contacts. To do this, check the checkbox 'Modify', then from the drop-down list select the desired test, confirm the changes by dicking the button 'Apply'.						
Select relay: disabled ~							
Relay test: disconnect	Relay state to be changed in accordance with the selected setting.						
Select led: disabled	To exit the relays test in the drop down list 'Select relay' set 'Disabled' and click the button 'Apply'. All relays must return to its current state.						
Led test: turn off	You can test the work of the detector leds. To do this, check the checkbox 'Modify', then from the drop-down list select the desired test, confirm the changes by clicking the button' Apply'.						
State: Alarm relay: connected	Led state to be changed in accordance with the selected setting.						
Cover relay: disconnected	To exit the leds test in the drop down list 'Select led' set 'Disabled' and click the button 'Apply'. All leds						
Alarm led: turned off							
Transmitter Receiver Settings	COM48: 115200 bps Tx: 48 Rx: 76 Bytes in RxBuf: 59 Bytes in TxBuf: 0 ;) ;) ;)						

and the alarm panel (refer to instructions in associated screen display).

Note: 'disabled' means 'none' selected from drop-down list; 'cover relay' option in drop-down list not currently available.

Similarly, 'Select led' is 'disabled' by default (in this state, the alarm LED is automatically switched on by an actual alarm). When 'Select led' is enabled (by selecting 'alarm led' from the drop-down list), the LEDs will light up automatically without an actual alarm - this setting is used only for testing the operation of the LEDs. If 'turn off' is specified for 'Led test', the LEDs will not operate even in the event of an actual alarm.

Note: 'disabled' means 'none' selected from drop-down list.

To activate the settings, click 'Apply' – the current settings may then be visually verified.



Selectively identify and list connected devices, and view their pertinent details.

Via the 'About...' tab:

View the currently-used version of the software.



Via the 'Sound' check-box:

Activate/deactivate an audible tone in case of an alarm. (useful when programming the detector outdoors)

Via the 'Hints' check-box:

Activate/deactivate helpful hints, which are text-sensitive, and appear when the cursor is positioned over existing explanatory text.

Stop	Working		1 🔢 🖾 🛙	iound 🛛 🏾 🕐	Hints	D Ne	etwork address	s:
eceiver Setup								
	Begin	Finish	State	NC	brma	al		
Modify	parameter		Oscillogram	the select X:	art end	length		
Frequ	ency channel:	1 🗧	> II !	0.1 select Y: 0	450	450	max X: 450	
			a	••				
Detec	tion threshold:	auto -	signal threshold					
-		no o di uno						
I	ntruder speed:	meaium						
	Disarmed:							
		Apply Reset						
Demodulat	ion frequency, kHz:	Signal:						
28	6/	183						
Noise leve	k .	Threshold:	v		- <u>Y</u> -=-			
47		143	al					
47		143	0 112		225	33	7	
ansmitter	Receiver Settings		COM48: 115200 bps T	x: 197 Rx: 224	Bytes in RxE	luf: 18	Bytes in TxBuf: 4	48