

# M-JET®

## HAZARD MONITORING SYSTEM



components for your success



► English

# M-JET®

## INTRODUCTION



The M-JET is a multi-function hazard monitor compatible with various material handling equipment such as bucket elevators, conveyor systems and screw conveyors.

The M-JET analyzes data sent by sensors installed on the equipment and provides a safe and controlled shutdown, via output relays, in the event of equipment malfunction or operation beyond user programmed limits.

### M-JET MONITORS EQUIPMENT FOR THE FOLLOWING HAZARDS:

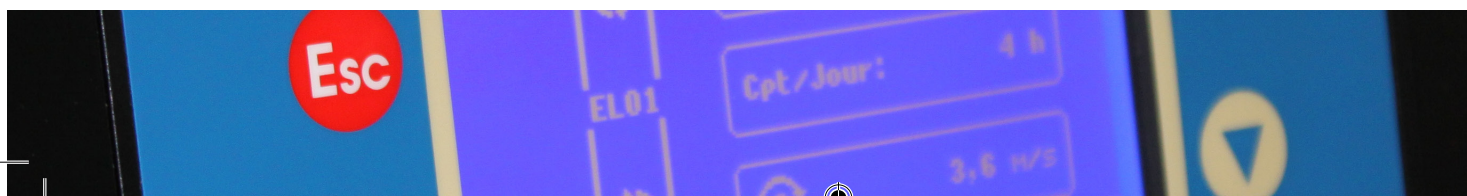
- Under speed due to belt slippage on the pulley
- Bearing and motor temperature
- Belt misalignment with contact or non-contact sensors
- Choke level on the conveyor input and output

**M-JET 1:** For equipment in NON-ATEX/Hazardous Location ZONES

**M-JET 2:** For equipment ATEX/Hazardous Location ZONES

**M-JET 2** is certified to the following standards:






- **EN 50495** Safety devices in ATEX Zone
- **SIL2 - EN 61508** Functional safety
- **EN 61326-1 CEM** Electromagnetic compatibility
- **EN 61010-1** Electrical equipment safety



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## PRODUCT GUIDE



	ITEM	MODEL		
p.4	<b>M-JET®</b>		Specifications	
p.5	55MJ9001	M-JET 1 HZ ATEX	Conveyor in a non Atex zone	 M-JET® 1
	55MJ9002	M-JET 2 ATEX ZONE	Conveyor in an Atex zone	 ATEX M-JET® 2
p.6	55MJ9001NT	M-JET 1 NT HZ ATEX	Conveyor in a non Atex zone with network connection (RJ45)	 ETHERNET M-JET® NT 1
	55MJ9002NT	M-JET 2 NT ATEX ZONE	Conveyor in an Atex zone, with network connection (RJ45)	 ATEX ETHERNET M-JET® NT 2
p.7	55UT9001	M-JET.COM	Connected system: Cloud, email, SMS	 @ M-JET®.COM



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## SPECIFICATIONS

### HOUSING:

ENCLOSURE WITH LARGE SCREEN AND USER KEYS

- Languages: French, English, Spanish, German, Italian and Chinese

### DISPLAY: THE CONVEYOR IMAGE TYPE IS SHOWN ON THE LCD. CONVEYOR TYPES AVAILABLE ARE:

TYPES OF CONVEYORS :

- Bucket elevator
- Chain conveyor
- Belt conveyor
- Screw conveyor

HOME SCREEN DISPLAY DATA WHEN CONVEYOR IS RUNNING:

- Warning or Alarm, if present
- Conveyor speed
- Run status
- Run time by day/accumulated

SPEED SETTING DISPLAY DATA:

- Under speed sensor status
- Conveyor speed
- Run status
- Run time by day/accumulated

### CONFIGURATION:

THERE ARE TWO WAYS TO CONFIGURE THE DEVICE

- **Manual** : With the keyboard on the front panel
- **USB**: Configuration can be imported with a USB key already loaded with the settings of another device

### ALARM MANAGEMENT:

- On-screen display of Warning or Alarm
- Drive a sound alarm or light
- Stop the conveyor

### DATA LOGGING :

THE M-JET RECORDS THE FOLLOWING DATA:

- **Alarm and Warning history**: M-JET can save 300 warnings or alarms
- **Configuration modification history**:  
Saves the last 365 configuration modifications" and move to the end of the previous line
- **Equipment run-time history**:  
M-JET saves conveyor run time during the last 365 days of use  
M-JET records temperature readings during the last 365 days of use

### HISTORICAL DATA ANALYSIS:

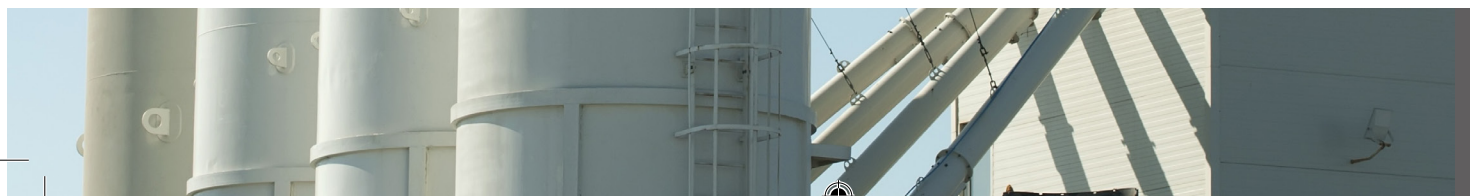
ARCHIVED DATA CAN BE VIEWED ON THE M-JET SCREEN OR DOWNLOADED TO A USB KEY IN CSV FORMAT.

### MAXIMUM SENSOR CONFIGURATION:

- 2 belt speed sensors
- 5 bearing temperature sensors
- 8 belt alignment sensors
- 2 choke level sensors

### STANDARDS:

- **EN 50495** Safety devices for ATEX Zone
- **SIL2 - EN61508** Functional safety
- **EN 61326-1 CEM** Electromagnetic compatibility
- **EN 61010-1** Electrical equipment safety

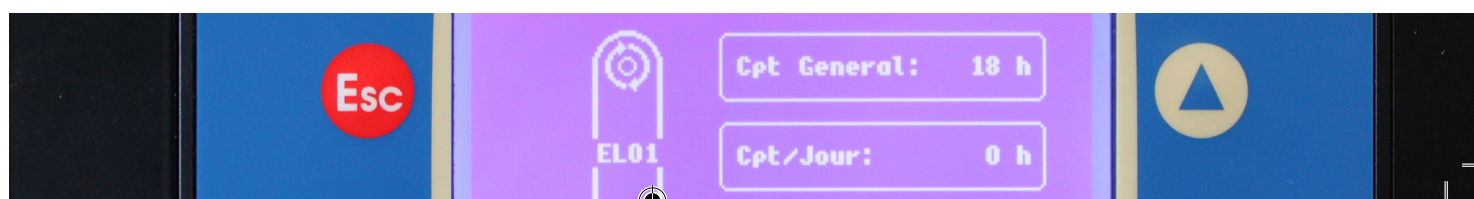
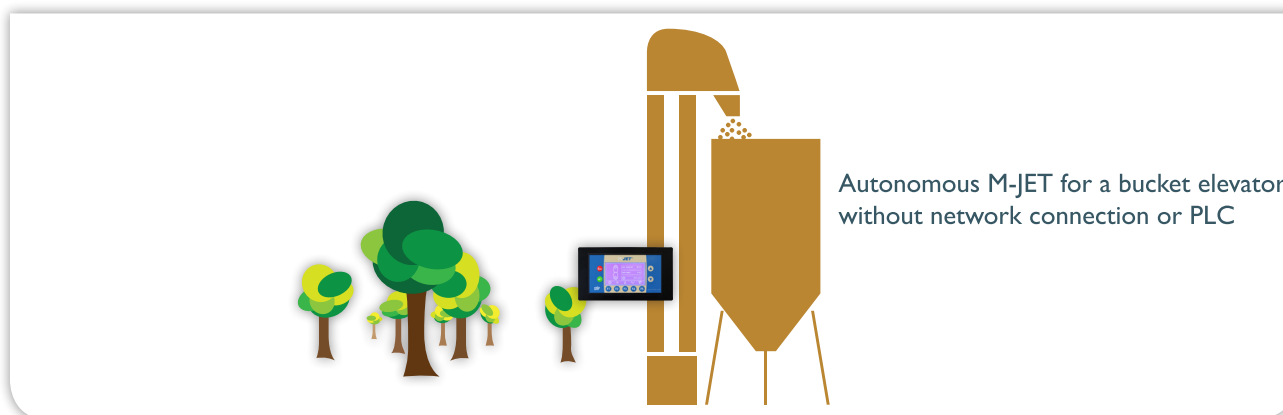


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## CONTROL UNIT

M-JET 1 FOR CONVEYORS IN A NON ATEX/ HAZARDOUS LOCATION ZONE	M-JET 2 FOR CONVEYORS IN AN ATEX/ HAZARDOUS LOCATION ZONE
IN NON ATEX/HAZARDOUS LOCATION ZONES, ATEX APPROVED SENSORS ARE NOT REQUIRED	IN ATEX/HAZARDOUS LOCATION ZONES, THE USER IS REQUIRED TO CONNECT THE FOLLOWING SENSORS <ul style="list-style-type: none"> <li>• Belt speed: 1</li> <li>• Bearing temperature: 1 for each bearing</li> <li>• Belt alignment: 2 pairs of single sensors or 1 pair of dual sensors</li> </ul>

Input information:	M-JET 1	M-JET 2
Remote motor	✓	✓
Supply voltage:	M-JET 1	M-JET 2
Monitoring: 24VDC isolated	✓	✓
Sensors: 24VDC (Supplied by M-Jet)	✓	✓
Alarm outputs:	M-JET 1	M-JET 2
Engine stop	1	2
Light stack	3	3
Horn	1	1
Choke level	1	1
User settings:	M-JET 1	M-JET 2
Display parameters	✓	✓
Change settings via front panel	✓	✓
Historical timeline visualization	✓	✓
USB programming	✓	✓
Save settings and historical data to USB key	✓	✓
Approvals:	M-JET 1	M-JET 2
EN 61326-1 CEM Electromagnetic compatibility	✓	✓
N 61010-1 Electrical equipment safety	✓	✓
EN 50495 Safety devices for ATEX Zone	✗	✓
SIL2 EN 61508 Functional safety	✗	✓



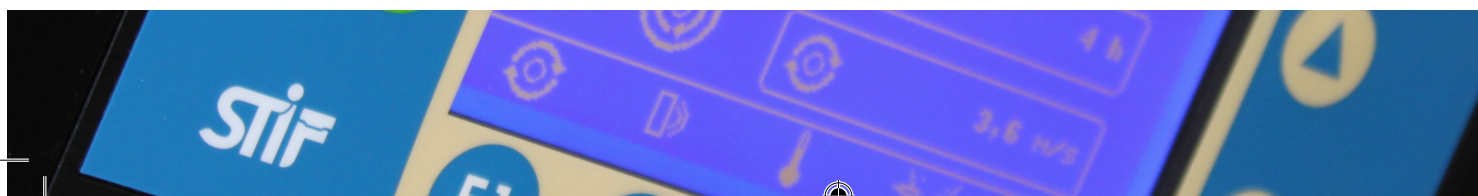


# M-JET® NT

## M-JET WITH NETWORK CONNECTION (RJ45)

M-JET 1 NT FOR CONVEYORS IN A NON ATEX/ HAZARDOUS LOCATION ZONE	M-JET 2 NT FOR CONVEYORS IN AN ATEX/ HAZARDOUS LOCATION ZONE
IN NON ATEX/HAZARDOUS LOCATION ZONES, ATEX APPROVED SENSORS ARE NOT REQUIRED	IN ATEX/HAZARDOUS LOCATION ZONES, THE USER IS REQUIRED TO CONNECT THE FOLLOWING SENSORS <ul style="list-style-type: none"> <li>• Belt speed: 1</li> <li>• Bearing temperature: 1 for each bearing</li> <li>• Belt alignment: 2 pairs of single sensors or 1 pair of dual sensors</li> </ul>

Input information:	M-JET 1	M-JET 2			
Remote motor	✓	✓			
Supply voltage:	M-JET 1	M-JET 2			
Monitoring: 24 VDC isolated	✓	✓			
Sensors: 24 VDC (Supplied by M-Jet)	✓	✓			
Alarm outputs:	M-JET 1	M-JET 2			
Engine stop	1	2			
Light stack	3	3			
Horn	1	1			
Choke level	1	1			
User settings:	M-JET 1	M-JET 2			
Display parameters	✓	✓			
Change settings via front panel	✓	✓			
Change settings remotely	✓	✗			
Historical timeline visualization	✓	✓			
USB programming	✓	✓			
Save settings and historical data to USB key	✓	✓			
Interface:	M-JET 1	M-JET 2	Approval:	M-JET 1	M-JET 2
LAN Communication	✓	✓	EN 61326-1 CEM Electromagnetic compatibility	✓	✓
Operation display	✓	✓	N 61010-1 Electrical equipment safety	✓	✓
Display settings	✓	✓	EN 50495 Safety devices for ATEX Zone	✗	✓
Data download	✓	✓	SIL2 EN 61508 Functional safety	✗	✓
Configure remotely	✓	✗			



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## CONNECTED SYSTEM

CAPABILITIES WHEN THE M-JET IS CONFIGURED WITH A UTM BOX AND AN INTERNET OR LAN CONNECTED COMPUTER:

- Remote monitoring of several M-JETs from the same display
- Unified viewing of data in real time
- Graphic display of historical data
- Viewing of alarms
- Alarm notification by sending email
- Support tools to manage preventive maintenance



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Type	Name	Place	Status	Speed	Cpt/Day	Cpt/General
	EL01	Place 1	Ok	2,4m/s	5h	1125h
	<b>EL02</b>	Place 2	<b>Alarm</b>	-	<b>8h</b>	<b>1850h</b>
	EL03	Place 3	Ok	2,8m/s	3h	925h
	EL04	Place 4	Inactif	-	-	125h
	TB01	Place 1	Pre-Alarm	1,8m/s	7h	1575h

**Elevator EL02 — Place STIF USA — 31 mach 2014 15h31**
**Status: Alarm**

Dashboard
Temperature graph
Alarm graph
Alarm analysis
Maintenance
Param. M-JET.COM

**UNDER SPEED**

Speed	000	rpm
Under speed	10	%
No.2	-	
No.1	Ok	

**TEMPERATURE**

T° Max	80°C
No.4	65°C
No.3	68°C
No.2	58°C
No.1	56°C
T° Max	90°C
motor	73°C

**MISALIGNMENT**

No.4	Ok
No.3	Ok
No.2	Alarm
No.1	Ok

**LEVEL & CHOKE**

No.2	Ok
No.1	Ok

Access to graphics

Run time

Temperatures

Number of alarms

Ratio of alarms by type





[www.stifnet.com](http://www.stifnet.com)

## EUROPE

### STIF (Head Office) Factory

Z.A. de la Lande  
49170 Saint-Georges-sur-Loire - FRANCE  
Tél.: +33 2 41 72 16 82  
Fax: +33 2 41 39 32 12  
E mail: [sales@stifnet.com](mailto:sales@stifnet.com)  
Web: [www.stifnet.com](http://www.stifnet.com)

## ASIA

### STIF (SUZHOU) Factory

Unit 7, N°2318  
East Taihu Lake Road  
Wuzhong District, Suzhou City  
Jiangsu Province, CHINA  
Ph.: +86 512 6656 8968  
Fax: +86 512 6656 9128  
E mail: [sales@stif.cn](mailto:sales@stif.cn)  
Web: [www.stif.cn](http://www.stif.cn)

## STIF IBERICA

### Sales Office

La Selva - 21 Nave 2  
Pol. Indus. Les Salines - 08880 Cubelles  
BARCELONA - ESPAÑA  
Telf.: +34 938 950 262  
Fax: +34 938 950 298  
E mail: [ventas@stifiberica.es](mailto:ventas@stifiberica.es)  
Web: [www.stifnet.com](http://www.stifnet.com)

## STIF ASIA

### Sales Office

2 Jurong East St 21  
#04-28K IMM Building  
SINGAPORE 609601  
Ph.: +65 6563-2098  
Fax: +65 6562-6083  
E mail: [sales@stif.com.sg](mailto:sales@stif.com.sg)  
Web: [www.stifnet.com](http://www.stifnet.com)

## AMERICA

### STIF AMERICA

### Sales Office

Oficina 4-04—Centro Empresarial Mar del Sur  
Calle Primera El Carmen—Panamá  
Rep. de PANAMÀ  
Tel.: +507 393-3787  
Tel.: +507 261-5223  
Email: [stifamerica@stifnet.com](mailto:stifamerica@stifnet.com)

## PT. STIF INDONESIA

### Sales Office

Jl. Ratna n° 1A  
BEKASI – 17412  
INDONESIA  
Ph.: +62 21 8499 6745  
Fax: +62 21 8499 5151  
Email: [indo@stif.com.sg](mailto:indo@stif.com.sg)

