

Instrumentation • Automation • Control • Embedded Systems



# **Innovating Instrumentation Solutions Worldwide**

Our expanding global footprint propels us to compete with the world's finest manufacturers, empowering industries worldwide with our exceptional instrumentation products.

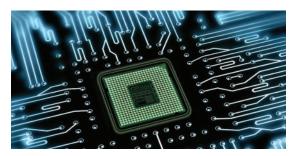


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# **Products for Process Instrumentation**



Engineering Excellence in Instrumentation.



Supersedes Catalog IC-03-2017



The products and systems described in this catalog are manufactured/distributed under application of a certified quality management system in accordance with ISO 9001.

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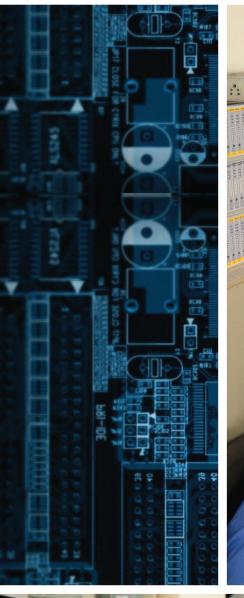
# Company Profile

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Over 30 Years In Industry



Competent and Efficient Workforce



Precision Product Design





Ashe Controls Private Limited was established in 1992 in Mumbai, India, with the primary objective to design and manufacture reliable and advanced instrumentation products. Over the years, the company has evolved into a reliable solutions provider in the instrumentation industry, with a range of performance driven products.

The company is proud to be a trusted partner to a host of discerning companies, offering a wide range of process control instrumentation and automation products for varied applications. Today, Ashe Controls is represented in more than 30 cities in India and across the world in countries like Singapore, the Middle East and Canada, with a customer base ranging from OEMs to System Integrators to Distributors.

At Ashe, we uphold product quality above all else and this is reflected in the integrity of design and workmanship in all our products. Our technical team comprises of a dynamic group of designers and engineers having several years of rich experience in the process control industry. With their in-depth knowledge, know-how and creativity, our team offers simple, practical, and cost-efficient solutions using state of the art technology, for hundreds of process measurement and control applications.



Strong Application Focus



High Performance Products



Robust Packaging



Timely Product Deliveries



Strong Customer Support



Happy and satisfied Clients



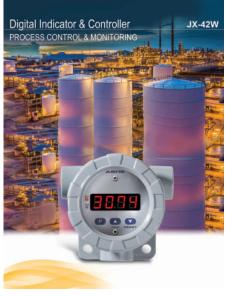
Our process measurement and control instrumentation products encompass a comprehensive range of high quality, precision instruments, meticulously designed to cater to the diverse needs of various industries. Our products find extensive use in applications ranging from regulating temperature, pressure, and flow in industrial processes, to analyzing gas and liquid properties and maintaining optimal conditions in research and development laboratories.



TX SERIES TRANSDUCERS & REPEATERS



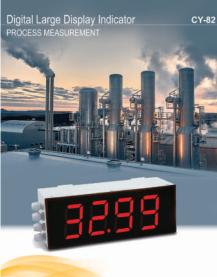
EX-I CERTIFIED LOOP POWERED INDICATORS



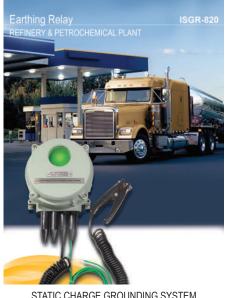
IP66 CERTIFIED WEATHERPROOF INDICATORS



CO GAS MONITORING AND CONTROL



WEATHERPROOF INDICATOR WITH 4" DISPLAY

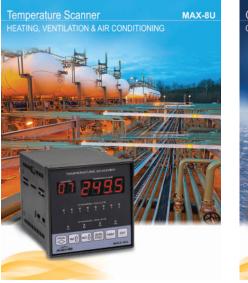


STATIC CHARGE GROUNDING SYSTEM





With over 32 years of proven functionality, our instruments have been deployed across industries such as Oil and Gas, Chemical, Food and Beverage, and Pharmaceutical, ensuring maximum efficiency and productivity. We take pride in delivering a high degree of a high degree of a esthetics, ergonomics, exceptional precision and reliability in each instrument, and our commitment to quality has helped establish us as a trusted name in the industry.



MULTICHANNEL TEMPERATURE MONITORING



GPS SYNCHRONIZED CURRENT INTERRUPT TIMER



MULTICHANNEL GAS MONITORING & CONTROL



FLOW TOTALIZER IN WEATHERPROOF EXECUTION



ANALOG & DIGITAL TO MODBUS RTU OR TCP/IP



STATIC POWER SWITCHING UNIT (SINGLE PHASE)





## Signal Transducers

## SINGLE CHANNEL ISOLATORS AND TRANSDUCERS



## Peak Value Isolator Transducer TX-201

- Two DC voltage or DC current analog inputs
- Isolated analog output of 4-20 mA DC proportional to higher of the two Inputs
- Fast response time with high speed signal comparators.
- Uninterrupted output signal with input redundancy



## DC Voltage Isolator Transducer TX-205

CE

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- DC Current (75 mV from Shunt) or DC Voltage (up to 500 VDC) Input options
- Isolated analog output of 4 to 20 mA DC proportional to input voltage.
- High load driving capacity of output signal
- Excellent linearity and accuracy



CE

#### Temperature Transducer (RTD) TX-210

CE

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- RTD Pt-100 sensor (three-wire) Input
- Three-port Optical and Galvanic Isolation between Input, Output and Power Supply
- AC or DC power supply options (prespecified)
- High Accuracy and Linearity to RTD Sensor signal



#### Temperature Transducer (TC) TX-215

- Thermocouple sensor inputs (Type J,K,R,S)
- High Accuracy and Linearity to Sensor signal.
- Three-port Optical and Galvanic Isolation between Input, Output and Power Supply
- AC or DC power supply option



## Line Frequency Transducer TX-225

- 45 to 65 Hz power line frequency input
- 4-20 mA DC isolated analog output linear to frequency
- Front accessible zero and span calibration
- High load driving capacity of output signal.



CE

#### DC Current Signal Isolator TX-230

- Analog loop current input with isolated analog current output
- Three-port Optical and Galvanic Isolation between Input, Output and Power Supply
- High load driving capacity of output signal
- AC or DC power supply options (pre-specified)





#### SINGLE CHANNEL ISOLATORS AND TRANSDUCERS



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## Buffer Amplifier for Servo Valves TX-105

- Signal Transducer suitable for driving Moog or equivalent Servo Valves
- Unipolar or Bipolar signal input and output options
- Isolated interface between analog signal source or Servo Amplifiers with a Servo/ Proportional Valve
- Option of single or dual analog output signals



## AC Current Isolating Transducer TX-120

 0 to 1A or 0 to 5A AC current signal input from CT secondary

CE

CE

- Output signal of 4 to 20 mA or 0 to 10 VDC.
- Excellent accuracy and linearity to input AC current.
- Three-port Optical and Galvanic Isolation between Input, Output and Power Supply



CE

## Frequency to Current Transducer TX-125

- 0 to 10 KHz pulse frequency input signal
- Isolated output of 4 to 20 mA or 0 to 10 VDC.
- Three-port Optical and Galvanic Isolation between Input, Output and Power Supply
- Front accessible zero and span calibration for output



#### DC Voltage Signal Isolator TX-235

- DC Voltage input up to 500 VDC
- Three port Optically and Galvanically isolated DC Voltage output
- AC or DC power supply options (pre-specified)
- Auxiliary voltage output to drive external potentiometer for variable input.



#### Resistance Isolating Transducer TX-240

- Variable Resistance or Potentiometer input
- Analog Current or Voltage output options
  Three-port Optical and Galvanic Isolation
- between Input, Output and Power Supply
- AC or DC power supply options (pre-specified)



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## Current to Voltage Transducer TX-245

- 4 to 20 mA DC analog current input
- Three port Optically & Galvanically isolated DC Voltage output
- AC or DC power supply options
- High accuracy and linearity to input signal.





## Signal Transducers

## SINGLE CHANNEL ISOLATORS AND TRANSDUCERS



## AC Voltage Isolating Transducer TX-250

- AC Voltage input signal
- Analog DC Current or DC Voltage output options
- Three-port Optical and Galvanic Isolation between Input, Output and Power Supply
- Slim rugged DIN rail mount execution.



## Temperature Transmitter (two-wire) TX-10

- RTD Pt-100 (3-wire) sensor input
- Non-isolated 4 to 20 mA DC two-wire output configuration
- High load driving capacity
- Front accessible zero and span calibration



CE

#### Temperature Transmitter (two-wire) TX-15

- Various Thermocouple sensor inputs
- Non-isolated 4 to 20 mA DC two-wire output configuration
- Front accessible Zero and Span calibration
- High load driving capacity



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#### Temperature Transmitter (RTD Sensor) TX-22

- RTD Pt-100 (3-wire) input
- Direct Sensor Head Mounting
- Non Isolated 4 to 20 mA DC two-wire analog current output
- Front accessible Zero and Span calibration



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#### Temperature Transmitter (TC Sensor) TX-25

- Thermocouple sensor input (Types J,K,R,S)
- Direct Sensor Head Mounting
- Non-isolated 4 to 20 mA DC two-wire analog current output configuration
- Front accessible Zero and Span calibration



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#### Analog Signal Isolator TX-330

- Analog loop current input with isolated output
- Three port Optical and Galvanic isolation
- Front accessible Zero and Span calibration
- AC or DC power supply options (pre-specified)





#### MULTI CHANNEL ISOLATORS AND TRANSDUCERS



## Temperature Isolating Repeater (RTD) TX-212

- RTD Pt-100 sensor (three-wire) input
- Dual analog signal outputs proportional to temperature
- Three-port Optical and Galvanic Isolation between Input, Output and Power Supply
- High Accuracy and Linearity



#### AC Current Transducer(Repeater) TX-122

- 0 to 1A or 0 to 5A AC current signal input from CT secondary
- Dual isolated output signals of 4 to 20 mA or 0 to 10 VDC
- Front accessible zero and span calibration for each output
- Excellent accuracy and linearity to input AC current.



#### CE

## Multichannel Signal Converter TX-105-C4

- Up to four DC voltage input signals
- Up to four 4 to 20 mA DC analog outputs

CE

- Independent Zero and Span adjustment option
- High accuracy and linearity to input signal.
- Galvanic Isolation between Channels



CE

CE

## Signal Isolating Repeater (Dual Output) TX-232

- Various Analog and field Sensor input signal options
- Dual Analog signal outputs of 4 to 20 mA or 0 to 10 VDC.
- Optical and Galvanic isolation between Input, Outputs and Power Supply.
- Front accessible Zero and Span calibration for each output.



#### Signal Isolating Repeater (Four Outputs) TX-134

- Various Analog and field Sensor input signal options
- Four independent and isolated analog current or voltage output signals
- High load driving capacity of each output
- Front accessible Zero and Span calibration for each output.



CE

#### Signal Isolating Repeater (Four outputs) TX-234

- Various Analog and field Sensor input signal options
- Four independent and isolated output signals
- Front accessible Zero and Span calibration for each output.
- High load driving capacity of each output





## Signal Transducers

## MULTI CHANNEL ISOLATORS AND TRANSDUCERS



#### Resistance Multiplier(Dual Output) TX-242

- Tap Position Transmission application
- Dual analog isolated outputs with high load driving capacity.
- Three-port Optical and Galvanic Isolation between Input, Output and Power Supply
- High load driving capacity of each output



#### Multichannel Isolator Module TX-434

CE

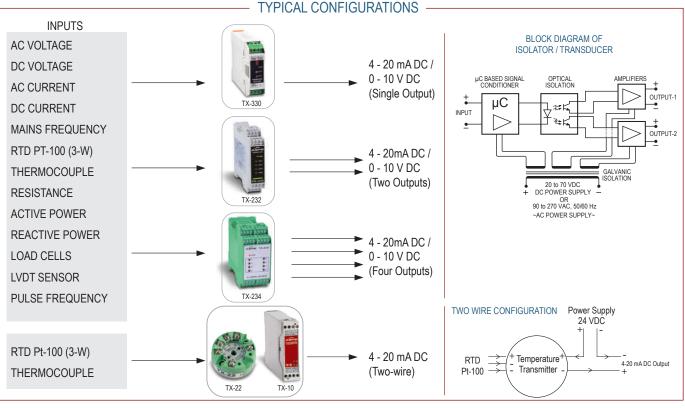
- Up to four DC Current or Voltage input signals
- Up to four DC Current or Voltage output signals
- Independent Zero and Span adjustment option for outputs
- High Accuracy and Linearity of output signals



## CE

#### Signal Isolating Repeater (Dual Output) TX-132

- Various Analog and field Sensor input signal options
- Dual Analog signal outputs of 4 to 20 mA or 0 to 10 VDC
- 110 VAC or 230 VAC power supply option
- Front accessible Zero and Span calibration for each output



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## PRODUCT SELECTION GUIDE

TX-SERIES ISOLATORS AND TRANSDUCERS														
				Inj	out				Out	put		Power	Supply	Dimensions
Model No.	DC Current	AC Current	DC Voltage	AC Voltage	RTD Pt-100	Thermo- couple	Resis- tance	Freq- uency	DC Current	DC Voltage	Isolation	AC Voltage	DC Voltage	[HxWxD] mm
	L	U	V	н	R	Т	Е	F	G	0	Y	А	D	
TX-10					$\checkmark$				$\checkmark$			2-1	vire	75x22x110
TX-15												2-1	vire	75x22x110
TX-22					$\checkmark$				$\checkmark$			2-\	vire	Head mount
TX-25						$\checkmark$			$\checkmark$			2-1	vire	Head mount
TX-105	$\checkmark$		$\checkmark$						$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		75x55x110
TX-105 C4	4x L		4x V						4x G	4x O	$\checkmark$	$\checkmark$		75x55x110
TX-120									$\checkmark$		$\checkmark$			75x55x110
TX-122		$\checkmark$							2x G	2x O	$\checkmark$	$\checkmark$		75x55x110
TX-125									$\checkmark$		$\checkmark$			75x55x110
TX-132	$\checkmark$		$\checkmark$						2x G	2x O	$\checkmark$	$\checkmark$		75x55x110
TX-134			$\checkmark$			$\checkmark$			4x G	4x O	$\checkmark$			75x100x110
TX-201	2x L		2x V						$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	100x22x110
TX-205			$\checkmark$										$\checkmark$	100x22x110
TX-210					$\checkmark$				$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	100x22x110
TX-212					$\checkmark$				2x G	2x O			$\checkmark$	100x22x110
TX-215												$\checkmark$	$\checkmark$	100x22x110
TX-225														100x22x110
TX-230												$\checkmark$	$\checkmark$	100x22x110
TX-232			$\checkmark$						2x G	2x O		$\checkmark$		100x22x110
TX-234			$\checkmark$				$\checkmark$		4x G	4x O	$\checkmark$	$\checkmark$	$\checkmark$	100x45x110
TX-235			$\checkmark$				$\checkmark$						$\checkmark$	100x22x110
TX-240							$\checkmark$					$\checkmark$		100x22x110
TX-242							$\checkmark$		2x G		$\checkmark$	$\checkmark$	$\checkmark$	100x22x110
TX-245	$\checkmark$									$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	100x22x110
TX-250				$\checkmark$						$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	100x22x110
TX-330			$\checkmark$						$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	75x22x110
TX-434	4x L		4x V						4x G	4x O			$\checkmark$	75x90x50

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## LOOP POWERED LCD AND LED INDICATORS



## Loop Powered LCD Indicator - Module JM-408 M

- Standard 4 to 20 mA DC current loop powered operation (no external power supply required)
- Intrinsically Safe Ex-i certified by CIMFR
- 4-digit LCD or LED seven-segment display options
- Low Forward Voltage Drop



## Loop Powered LCD Indicator JM-408-CX

- Standard 4 to 20 mA DC current loop powered operation (no external power supply required)
- Intrinsically Safe Ex-i certified by CIMFR and PESO certified Flameproof Exd enclosure
- Low Forward Voltage Drop
- SS mounting accessories kit



## Loop Powered LED Indicator JM-408-EX

- Standard 4 to 20 mA DC current loop powered operation (no external power supply required)
- Intrinsically Safe Ex-i certified by CIMFR and PESO certified Flameproof Exd enclosure
- IP66 certified ingress protection
- Low Forward Voltage Drop



#### Loop Powered LED Indicator (compact) MMX-408

- Standard 4 to 20 mA DC current loop powered operation (no external power supply required)
- PESO certified Flameproof Exd enclosure
- 0.4" seven-segment LED display
- Low Forward Voltage Drop



#### Loop Powered LED Temp Indicator MTX-408

- Standard 4 to 20 mA DC current loop powered operation (24 VDC loop voltage for Transmitter powering required).
- Built-in Temperature Transmitter for direct RTD sensor input
- 0.4" seven-segment LED display
- PESO certified Flameproof Exd enclosure



## Loop Powered Indicator - Panel Mount MPX-408

- Standard 4 to 20 mA DC current loop powered operation (no external power supply required)
- LCD and LED seven-segment display options
- Fully configurable for zero, span and decimal settings
- Low Forward Voltage Drop



#### LOOP POWERED LCD AND LED INDICATORS



## Loop Powered Indicator Weather-proof JM-408-CW

- Standard 4 to 20 mA DC current loop powered operation (no external power supply required)
- Intrinsically Safe Ex-i certified and IP66 certified enclosure
- 4 ½ digit, 0.7" LCD seven-segment display
- Industrial grade Polycarbonate enclosure with safety glass window.



## LCD Loop Powered Indicator JM-408 S

- Standard 4 to 20 mA DC current loop powered operation
- Intrinsically Safe Ex-i certified and Stainless Steel SS316 die-cast enclosure IP66 certified enclosure

PRODUCT SELECTION GUIDE

- 4-digit, LCD / LED display option
- Low Forward Voltage Drop



## Loop Powered Indicator with control FLP JM-43

- Standard 4 to 20 mA DC current loop powered display (24VDC external power supply required for Relay driving).
- PESO certified Flameproof Exd enclosure (IP66)
- 4 digit, 0.7" LCD seven-segment display
- Three control Relay potential free contacts

#### LOOP POWERED INDICATORS Output Power Supply Display Dimensions [HxWxD] mm Exec-ution Model No. RS-485 RS-485 Relays oltag oltag couple Pt-100 /oltag /oltage Currer Display Display JM-408 M $\overline{\mathbf{A}}$ $\overline{\mathbf{A}}$ 0.5" Μ 72x20 JM-408 X $\checkmark$ $\checkmark$ $\checkmark$ 0.5" Х 140x130x130 JM-408 W $\checkmark$ $\checkmark$ $\checkmark$ 0.5" W 90x100x93 JM-408 S $\checkmark$ $\checkmark$ 0.5" S 125x125x115 140x130x130 JM-43 $\checkmark$ Х MMX 0.4" 110x110x100 $\checkmark$ $\checkmark$ Х MFX $\checkmark$ $\checkmark$ 0.5" W 120x80x85 MPX Ρ $\checkmark$ $\checkmark$ $\checkmark$ 0.5" 48x96x75 MTX $\checkmark$ $\checkmark$ 0.4" 110x110x100 X

#### NOTE

Module execution - M

Wall mount execution - A

Panel mount execution - P

Flame-proof execution Aluminum Alloy - X

Weather-proof execution - W

Flame-proof execution Stainless steel - S





#### PANEL MOUNT EXECUTION



## Universal Indicator with upto 4 Relay Series AF

- DC/AC Current, DC/AC Voltage, Temperature sensors (RTD Pt-100 & Thermocouple) input options.
- Up to four Relay change over contacts
- Dual 4-digit LED seven-segment displays
- Analog Retransmission output option



## Digital Indicator with 2 Relays & Modbus Series AK

- DC/AC Current, DC/AC Voltage, Temperature sensors (RTD Pt-100 & Thermocouple) input options.
- Up to two Relay change over contacts
- Data communication on RS-485 Modbus RTU option
- Analog Retransmission output.



## Digital Bar Graph Indicator Series BMX

- Dual 100 segment LED Bar-graph and Dual 4-digit seven segment LED displays
- Single and dual channel options
- Up to 2 control relay outputs per channel
- 4-20 mA DC Retransmission per channel



#### Digital Indicator & Controller (72x72 mm) Series CY-40

- DC/AC Current, DC/AC Voltage, Temperature sensors (RTD Pt-100 & Thermocouple) input options.
- Up to two Relay change-over contacts and analog retransmission output
- 4-digit 0.5" LED seven-segment display
- AC or DC power supply options



#### Digital Indicator & Controller(48x48 mm) Series CY-50

- DC/AC Current, DC/AC Voltage, Temperature sensors (RTD Pt-100 & Thermocouple) input options.
- Up to two Relay change-over contacts and analog retransmission output
- 4-digit 0.5" LED seven-segment display
- AC or DC power supply options



#### Digital Indicator & Controller (48x96 mm) Series CY-60

- DC/AC Current, DC/AC Voltage, Temperature sensors (RTD Pt-100 & Thermocouple) input options.
- Up to two Relay change-over contacts and analog retransmission output
- 4-digit 0.5" LED seven-segment display
- AC or DC power supply options





#### PANEL MOUNT EXECUTION



## Digital Indicator with Modbus In/Out CY-65

- Analog input and RS-485 Modbus output or RS-485 Modbus input and analog output (pre-specified)
- Up to two Relay change-over contacts
- 4-digit 0.5" LED seven-segment display
- AC or DC power supply options



#### Digital Indicator & Controller (96x96 mm) Series CY-70

- DC/AC Current, DC/AC Voltage, Temperature sensors (RTD Pt-100 & Thermocouple) input options.
- Up to two Relay change-over contacts and analog retransmission output
- 4-digit 0.5" LED seven-segment display
- AC or DC power supply options



#### Digital Indicator Controller (4" Display) Series CY-80

- DC/AC Current, DC/AC Voltage, Temperature sensors (RTD Pt-100 & Thermocouple) input options.
- Up to two Relay change-over contacts and analog retransmission output
- 4-digit 4" LED seven-segment display
- Field mount Weather-proof execution



#### Dual-Channel Digital Indicator Controller Series CY-90

- 4-20 mA DC and RTD (Pt-100) input signal options
- Dual 4-digit seven-segment red LED displays
- Two Relay change over contacts per channel
- Data communication on RS-485 Modbus RTU protocol



#### Digital Indicator DX-400

- AC/DC Current, AC/DC Voltage, Temperature Sensor input selection options
- Digital 3-1/2 digit process Indicator
- 0.5" LED seven segment display
- Front accessible zero and span calibration



#### Digital Indicator DXU-409

- AC/DC Current, AC/DC Voltage, Temperature Sensor input selection options
- Digital 4-½ digit process Indicator
- 0.5" LED seven segment display
- Front accessible zero and span calibration





#### PANEL MOUNT EXECUTION



## Digital Indicator Controller (DIN Rail) VX-72

- AC/DC Current, AC/DC Voltage, Temperature Sensor input selection options
- Up to two Relay change over contacts
- Analog Retransmission output option
- Compact DIN Rail mount execution



## Universal PID Controller (96x96 mm) PX-72

- DC Current, DC Voltage, Temperature Sensor (RTD Pt-100 and Thermocouple) inputs
- Dual display for Process Value and Set value with Bargraph display of PID analog output.

PRODUCT SELECTION GUIDE

- 24 VDC Auxillary Power supply output
- Auto and Manual PID tuning options



#### Digital pH Meter ApH-413

- Display range upto 14pH
- Retransmission for Temperature value
- Two control Relay outputs
- Bright dual line OLED Display

#### DIGITAL INDICATORS AND CONTROLLERS Output Power Supply Display Dimensions [HxWxD] mm Exec<sup>.</sup> ution Model No. RS-485 RS-485 Voltage Pt-100 Current /oltage Voltage Display Current Voltage Display **AF SERIES** AF-70 $\checkmark$ 96x96x75 $\checkmark$ $\checkmark$ 0.5" & 0.4' P AF-71 $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$ Ρ $\checkmark$ $\checkmark$ 1 $\checkmark$ 0.5" & 0.4" 96x96x75 AF-72 $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$ 2 $\checkmark$ P 96x96x75 0.5" & 0.4" AF-73 $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$ 3 $\checkmark$ Ρ 96x96x75 $\checkmark$ $\checkmark$ 0.5" & 0.4" 0.5" & 0.4" AF-74 $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$ Λ $\checkmark$ Ρ 96x96x75 **AK SERIES** AK-61 $\checkmark$ 96x48x75 $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$ 0.5' Ρ AK-62 $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$ 2 $\checkmark$ $\checkmark$ 0.5" Ρ 96x48x75 AK-62V $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$ 2 $\checkmark$ $\checkmark$ 0.5' Ρ 96x48x75

#### NOTE

DIN Rail mount execution - D

Panel mount execution - P

- Weather-proof execution W
- Wall mount execution A
- Flame-proof execution Aluminum Alloy X
- Flame-proof execution Stainless Steel S





## PRODUCT SELECTION GUIDE (CONT.)

				Input					Output		Power	Supply	Di	splay		Dimensions
Model No.	DC	AC	DC	AC	Thermo-	RTD	RS-485	DC	RS-485	Deleve	AC	DC	LCD	LED	Exec- ution	[HxWxD]
	Current	Current	Voltage	Voltage	couple	Pt-100		Current		Relays	Voltage	Voltage	Display	Display		mm
	L	U	V	H	T	R	М	G	М	4	A	D	С	E		
								ApH-SI	ERIES							
ApH-413			pН						$\checkmark$	2			16 x 2 OLED		Р	96x96x55
	DX-SERIES															
DX-400		$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$		$\checkmark$						0.5"	Р	48x96x75
DX-402	2x L	2x U	2x V	2x H							$\checkmark$			0.5"	Р	96x96x110
DX-404	4x L	4x U	4x V	4x H	$\checkmark$						$\checkmark$			0.5"	Р	96x192x150
DXU-409											$\checkmark$			0.5"	Р	48x96x110
								BMX-S	ERIES							
BMX-20											$\checkmark$			-	Р	80x160x150
BMX-21	$\checkmark$							$\checkmark$		1	$\checkmark$			0.3"	Р	80x160x150
BMX-22	$\checkmark$									2	$\checkmark$			0.3"	Р	80x160x150
	VX-SERIES															
VX-65									$\checkmark$	2	$\checkmark$			0.5"	D	75x55x110
VX-72			$\checkmark$		$\checkmark$	$\checkmark$		$\checkmark$		2	$\checkmark$			0.5" / 0.4"	D	75x55x110
								PX-SE	RIES							
PX-72	$\checkmark$		$\checkmark$			$\checkmark$			$\checkmark$	2	$\checkmark$			0.5" / 0.4"	Р	96x96x110
								CY-SE	RIES							
CY-40			$\checkmark$			$\checkmark$								0.5"	Р	72x72x55
CY-42						$\checkmark$				2	$\checkmark$			0.5"	Р	72x72x55
CY-50			$\checkmark$		$\checkmark$	$\checkmark$		$\checkmark$			$\checkmark$			0.3"	Р	48x48x75
CY-52										2				0.3"	Р	48x48x75
CY-60			$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$					$\checkmark$			0.5"	Р	48x96x55
CY-62			$\checkmark$							2				0.5"	Р	48x96x55
CY-65	$\checkmark$						$\checkmark$	$\checkmark$	$\checkmark$	2	$\checkmark$			0.5"	Р	48x96x55
CY-70														0.5"	P	96x96x55
CY-72			$\checkmark$	$\checkmark$						2				0.5"	P	96x96x55
CY-76										3				0.5"	P	96x96x110
CY-80										-				4"	A	160x435x70
CY-82										2				4" 0.5"	A	160x435x70
CY-90	2x L					2x R		2x G		4				0.5"	P	96x96x110
CY-92	2x L					2x R		2x G	$\checkmark$	4	$\checkmark$			0.5"	Р	96x96x110

## NOTE

DIN Rail mount execution - D

Panel mount execution - P

Weather-proof execution - W

Wall mount execution - A

Flame-proof execution Aluminum Alloy - X

Flame-proof execution Stainless Steel - S



# **Digital Indicators and Controllers**

## FIELD MOUNT EXECUTION



P2 O

#### Digital Indicator Module JX-40 M

- 4-20 mA DC Current, DC Voltage, RTD (Pt-100) or Thermocouple Input options
- Analog retransmission output
- 24 VDC Auxiliary output power option for Transmitter
- 4 digit seven segment LED display



## Digital Indicator Controller Module JX-42 M

- 4-20 mA DC Current, DC Voltage, RTD (Pt-100) or Thermocouple Input option
- Up to 2 control relay outputs
- Analog retransmission output
- 24 VDC Auxiliary output power option for Transmitter



#### Digital Indicator (Flameproof) JX-40 X

- 4-20 mA DC Current, DC Voltage, RTD (Pt-100) or Thermocouple Input option
- PESO certified flame-proof enclosure
- Analog retransmission output
- AC or DC Power Supply option



## Digital Indicator Controller (Flameproof) JX-42 X

- 4-20 mA DC Current, DC Voltage, RTD (Pt-100) or Thermocouple Input option
- Up to 2 control relay outputs
- IP66 PESO certified Flameproof enclosure
- AC or DC Power Supply option
- Suitable for Gas Groups IIA/IIB



#### Digital Indicator Controller (Flameproof) JX-42 S

- 4-20 mA DC Current, DC Voltage, RTD (Pt-100) or Thermocouple Input option
- Stainless Steel SS316 die-cast enclosure
- Up to 2 control relay outputs
- Analog Retransmission Output with 24 VDC Auxiliary output power option
- Suitable for Gas Groups IIA/IIB/IIC



#### Digital Ind'r Controller (Weatherproof) JX-42 W

- 4-20 mA DC Current, DC Voltage, RTD (Pt-100) or Thermocouple Input option
- Up to 2 control relay outputs
- IP66 Industrial grade Polycarbonate enclosure with safety glass window.
- AC or DC Power Supply options





### FIELD MOUNT EXECUTION



## Modbus Ind'r Controller (Flameproof) JX-67

- Analog signal or RS-485 Modbus protocol input option
- Analog signal or RS-485 Modbus protocol output option
- Up to 2 control relay outputs
- Bright 8x2 Alphanumeric OLED display



## PID Controller (Flameproof) JX-72

- 4-20 mADC, 0-10 VDC, RTD Pt-100 and Thermocouple J,K,R,S Input selection
- Universal input selection options
- Auto and Manual PID tuning option
- 4 to 20 mA DC Retransmission / PID control output (selectable)
- RS-485 on Modbus RTU communication



## Dual channel Indicator Controller JX-92

- 4-20 mADC / RTD-Pt-100 Input signal options
- 4-20 mADC Retransmission output for each input
- Two Relay change over contacts per channel
- Data communication on RS-485 Modbus RTU protocol

## PRODUCT SELECTION GUIDE

	JX-SERIES FIELD MOUNT DIGITAL INDICATORS AND CONTROLLERS															
Model	Input					Output Pow			Power Supply		Display		Dimensions			
No.	DC Current	AC Current	DC Voltage	AC Voltage	Thermo- couple	RTD Pt-100	RS- 485	Current	RS- 485	Relays	AC Voltage	DC Voltage	LCD Display	LED Display	Exec- ution	mm [HxWxD]
	L	U	V	Н	Т	R	М	G	М	4	A	D	С	E		
JX-42 M						$\checkmark$		$\checkmark$		2					М	72x20
JX-42 X								$\checkmark$		2	$\checkmark$	$\checkmark$			Х	130x140x130
JX-42 W								$\checkmark$		2	$\checkmark$				W	90x100x93
JX-42 S								$\checkmark$		2					S	125x125x115
JX-67								$\checkmark$		2					Х	130x140x130
JX-72								$\checkmark$		2	$\checkmark$				Х	130x140x130
JX-90								$\checkmark$							Х	130x140x130
JX-92	$\checkmark$							$\checkmark$		4		$\checkmark$			Х	130x140x130
NOTE																

#### NOTE

Modular execution - M

■ Weather-proof execution - W

Flame-proof Aluminum Alloy - X

Flame-proof Stainless steel - S



## **Temperature Scanners and Data Loggers**

### **TEMPERATURE SCANNERS**



## Single Channel Data Logger VZ-70

- 4-20 mADC input
- Up to 16 GB micro SD module card for high memory storage
- Data scanning and logging on removable SD card
- Compact DIN Rail Mount execution



## Temperature Scanner - 2 channel VZ-72

- Two RTD (Pt-100) three wire sensor inputs
- Up to two control relay outputs
- Standard DIN Rail mounting enclosure
- Universal AC power Supply



## Temperature Scanner - 4 channel MAX-4U

- Analog RTD Pt-100 (3-wire) and Thermocouples type J,K,R,S input signal options
- Four Relay outputs one per channel
- Data communication on RS-485 Modbus RTU protocol
- Four 4-20 mA DC retransmission outputs (one per channel)



## Temperature Scanner - 8 channel MAX-8U

- Analog RTD Pt-100 (3-wire) and Thermocouples type J,K,R,S input signal options
- Up to four freely assignable Relay outputs
- Data communication on RS-485 Modbus RTU protocol
- Two Analog Retransmissions



## Temperature Scanner - 16 channel MAX-16U

- Analog RTD Pt-100 (3-wire) and Thermocouples type J,K,R,S input signal options
- Up to four freely assignable Relay outputs
- Two Analog Retransmissions
- Extension board for input connections



## Temperature Scanner - 16 channel MAX-16X

- Sixteen freely assignable Relay outputs
- Analog RTD Pt-100 (3-wire) and Thermocouples type J,K,R,S input signal options
- Two Analog Retransmissions
- Extension board for relay connections



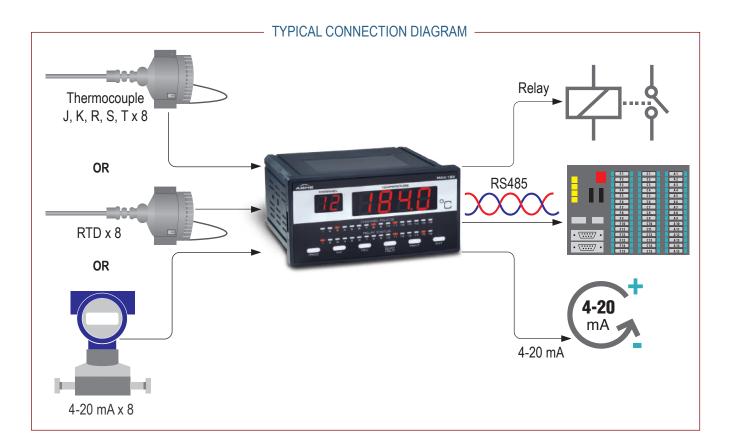


## PRODUCT SELECTION GUIDE

				MAX	( AND VZ	Z SERIE	S TEMF	PERATU	RE SCA	NNERS				
				Input					Output		Power	Supply		Dimensions
Model No.	DC Current	AC Current	DC Voltage	AC Voltage	Thermo- couple	RTD	RS- 485	Curr- ent	RS-485	Relays	AC Voltage	DC Voltage	Exec- ution	[HxWxD] mm
	L	U	V	Н	Т	R	М	G	M	4	А	D		
VZ-70	$\checkmark$												D	75x55x110
VZ-72										2	$\checkmark$	$\checkmark$	D	75x55x110
MAX-4U	$\checkmark$									4			Р	96x96x110
MAX-8U	$\checkmark$				$\checkmark$	$\checkmark$				4		$\checkmark$	Р	96x96x110
MAX-16U	$\checkmark$				$\checkmark$					4		$\checkmark$	Р	96x96x110
MAX-16X	$\checkmark$				$\checkmark$	$\checkmark$				16		$\checkmark$	Р	80x160x150

NOTE DIN Rail execution - D

Panel mount execution - P



# Flow Totalizers and Batch Controllers





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## Flow Totalizer / Batch Controller MX-450

- Analog / Pulse input selection option
- 4 digit Flow Rate + 8 digit Flow Total
- Two control Relay change-over contacts assignable to Flow rate or Total
- Retransmission and RS-485 on Modbus RTU data communication



## Flow Totalizer / Batch Ctr (Weatherproof) MX-450 W

- Analog / Pulse input selection option
- 4 digit flow Rate + 8 digit Flow Total
- Auxiliary power supply option
- IP65 Industrial grade ABS enclosure



## Flow Totalizer / Batch Controller MX-460

- Analog / Pulse input selection option
- 5 digit flow Rate + 8 digit Flow Total
- Two control Relay change-over contacts assignable to Flow rate or Total
- Retransmission and RS-485 on Modbus RTU data communication



## Flow Totalizer / Batch Controller MX-45

- 4-digit Flow rate + 6 digit Flow Total
- Ex-d certified Flameproof enclosure
- Retransmission output option
- Two control Relay change-over contacts



#### Flow Totalizer / Batch Controller MX-450 X

- 4 digit Flow Rate + 8 digit Flow Total
- Analog / Pulse input selection
- Two Relay change-over contacts
- Data communication on RS-485 on Modbus RTU



## Flow Totalizer / Batch Controller MX-460 X

- 5 digit Flow Rate + 8 digit Flow Total
- Analog/Pulse input signal
- Two control Relay change-over contacts
- AC or DC power supply option

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## PRODUCT SELECTION GUIDE

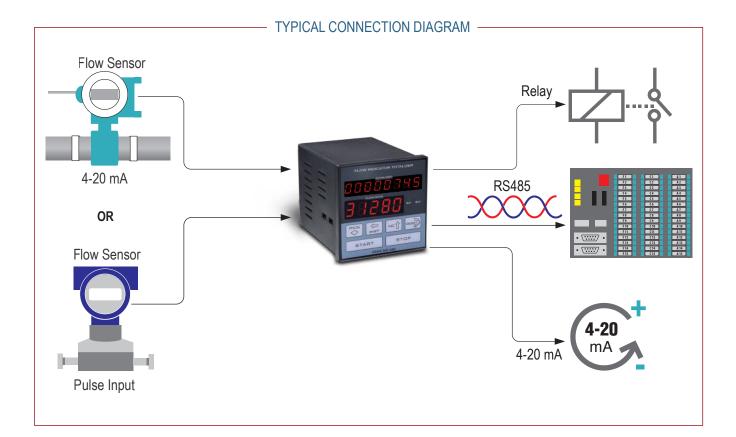
MX-SERIES FLOW TOTALIZERS														
	In	put		Output		Power	Supply							
Model No.	DC Current	Frequency	DC Current	RS-485	Relays	AC Voltage	DC Voltage	Execution	Dimensions [HxWxD] mm					
	L	F	G	М	4	А	D							
MX-450	$\checkmark$	$\checkmark$			2		$\checkmark$	Р	96x96x75					
MX-460	$\checkmark$	$\checkmark$			2	$\checkmark$	$\checkmark$	Р	96x96x75					
MX-450 W	$\checkmark$	$\checkmark$			2		$\checkmark$	W	166x161x121					
MX-450 X	$\checkmark$	$\checkmark$			2		$\checkmark$	Х	350x250x250					
MX-460 X	$\checkmark$	$\checkmark$			2		$\checkmark$	Х	350x250x250					
MX-45	$\checkmark$		$\checkmark$	$\checkmark$	2		$\checkmark$	Х	100x110x95					

#### NOTE

Panel mount execution - P

Weather-proof execution - W

Flame-proof execution Aluminum Alloy - X





## **Stream Selectors / Sequencers**

## MULTI CHANNEL STREAM SELECTORS



#### Stream Selector STL-92

- Upto Two Stream selection option
- 20 character x 4 line OLED display
- Retransmission for each stream signal
- Three control relay outputs for each channel



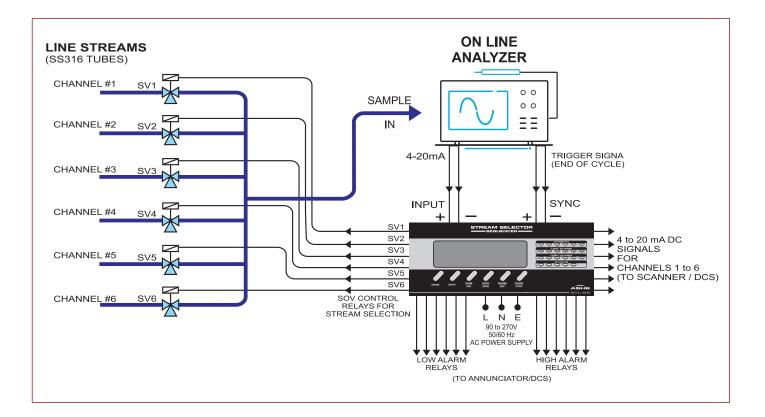
#### Stream Selector STL-94

- Upto Four Stream selection option
- Three control Relay outputs per channel
- Time and Pulse mode operation
- Sample and Hold facility for non-active channels



#### Stream Selector STL-96

- Upto Six Stream selection option
- Three control relay outputs for each channel
- Sample and Hold facility for non-active channels
- 20 character x 4-line OLED Display





# ORing Diode Modules and Power Supply Units

## DIODE REDUNDANCY MODULES



#### Diode ORing Module RD-5A

- Diode ORing for dual SMPS Redundancy
- DIN Rail mount Polycarbonate enclosure
- Fuse protection for high current
- Up to 5A current rating



#### Diode ORing Module RD-10A

- Diode ORing for dual SMPS Redundancy
- Fuse protection for high current
- Up to 10A current rating
- Industrial grade Polycarbonate enclosure



#### Diode ORing Module RD-10A-M

- Diode ORing for dual SMPS Redundancy
- DIN Rail mount execution in Metal enclosure
- Up to 10 A current rating
- LED indications for Input and Output Voltage



#### Diode ORing Module RD-20A-M

- Diode ORing for dual SMPS Redundancy
- DIN Rail mount execution in Metal enclosure
- Up to 20A current rating
- LED indications for Input and Output Voltage

POWER SUPPLY UNITS



## SMPS Power Supply Unit SX-2402

- Load Rating of 2.5 Ampere
- Reliable Current-Mode PWM power control
- Short-Circuit and Overload protection
- Compact and rugged enclosure



## SMPS Power Supply Unit SX-2405

- Load Rating of 5 Ampere
- Reliable Current-Mode PWM power control
- Universal AC Power supply
- Galvanic isolation upto 3kV



#### FAN SPEED MONITORS AND CONTROLLERS



#### FAN Monitoring Modules FMC-R2

- Dynamic Fan operation supervision
- Ambient temperature monitoring, indication and retransmission
- Options of two AC or DC Fans
- Alarm relays for temperature and Fan faults
- Three-digit temperature display



#### Fan Status Monitor FSM-R8A

- Simultaneous monitoring of up to eight AC Fans
- Bicolor LED indication for status of all Fans
- Easy Fan selection option by DIP switches
- Extended bi-color LED panel for door mounting



## DC Fan Speed Control Modules FLC-R2

- Fan monitoring and control for 2 to 6 Fans
- Temperature monitored DC Fan speed control
- Control of 3-wire or 4-wire DC Fans
- Interlock of Door Switch, Smoke Detector, Blocked Rotor, etc. for Rack safety monitoring



## FAN Monitoring Modules FMC-R4

- Dynamic Fan operation supervision
- Ambient temperature monitoring, indication and retransmission
- Four AC or DC Fans options
- Alarm relays for temperature and Fan faults
- RS-485 Modbus RTU Protocol



#### Fan Status Monitor FSM-R8D

- Simultaneous monitoring of up to eight DC Fans
- Easy Fan selection option by DIP switches
- Status indication of normal and alarm conditions
- Extended bi-color LED panel for door mounting



## DC Fan Speed Control Modules FLC-R4

- Fan monitoring and control for 2 to 6 Fans
- Digital indication of rack temperature
- Control of 3-wire or 4-wire DC Fans
- Data communication on Modbus RTU





## REL HUMIDITY+TEMPERATURE INDICATORS AND CONTROLLERS



#### Rel Humidity & Temp Contr. + RH Probe **AHT-74**

- Humidity and Temperature Indication
- Relay Control and Retransmission for RH and Temp
- Extended Probe for RH and Temp
- Up to four control relay outputs

#### Thermostat TM-50

- Built-in precision Temperature Sensor
- Digital display for temperature indication
- Single Relay control output
- Analog Retransmission option .



#### **RH+T Indicator Transmitter HTR-92**

- Bright OLED Display for both parameters
- Data communication on Modbus RTU
- Built-in precision RH+T Sensor
- Two 4 to 20 mA retransmission signals for RH and Temperature



#### **Compact RH+Temp Indicator** HTI-90

- Bright OLED alphanumeric Display
- AC power supply operation with power adaptor
- Built-in precision RH and Temperature Sensors
- Dual Temperature Sensor option with . extendable cable



#### **Compact Temperature Controller** TM-52

- Built-in precision Temperature Sensor
- Dual Relay control outputs •
- Analog Retransmission option •
- Digital display for temperature indication •



#### Thermostats for Panels **ATS-40**

- Built-in precision Temperature Sensor
- Digital indication of temperature
- Compact DIN Rail mount execution .
- Lower and upper temperature level monitoring





## CO Gas Monitoring System CO-SAFE

- Analog input from gas sensor with retransmission and RS-485 Modbus outputs
- 2" digital display for Gas level
- Four control relay outputs for Alarms and Fault Inhibit
- Data logging with removable micro SD card



SINGLE AND MULTI CHANNEL GAS MONITORS

## Digital Ind. Controllers (Flameproof) JX-42

- 4 to 20mA input from Gas sensor with Retransmission
- Up to two control relay outputs
- PESO certified flame proof Al Die-cast enclosure
- AC/DC power supply options



## Loop Powered Indicator for Gas level JM-408

- 4 to 20mA input from Gas sensor
- 4-digit seven segment LED or LCD display options
- PESO certified flame proof Al Die-cast enclosure
- Intrinsically Safe Ex-i certified design



## Loop Powered Indicator with control FLP JM-43

- 4 to 20 mA DC current loop powered display (24VDC external power supply required for Relay driving).
- PESO certified Exd and IP66 Flameproof enclosure
- 4 digit, 0.7" LCD seven-segment display

ASHE

Three control Relay potential free contacts



## Gas Monitoring Unit, 8 channel GGM-8

- 24 Gases and 7 units freely customizable for each channel
- 8x 4 to 20 mADC Retransmission signal (one for each channel)
- 7" Touch screen HMI Display for Operator interface
- Four control relay outputs- three for alarms and one for Fault / Inhibit
- RS-485 Modbus RTU output



## Gas Monitoring Unit, 16 channel GGM-16

- 24 Gases and 7 units freely customizable for each channel
- 16x 4 to 20 mADC Retransmission signal (one for each channel)
- 7" Touch screen HMI Display for Operator interface
- Four control relay outputs- three for alarms and one for Fault / Inhibit
- RS-485 Modbus RTU output

# Static Charge Grounding Relays



## Resistance based FLP Earthing Relay SGR-250 X

- Microcontroller based Intrinsically Safe Exi certified design
- Vehicle Recognition system
- PESO certified Exd Explosion-proof enclosure
- Safety Relay interlock for loading/unloading operations



#### Res. + Cap. based FLP Earthing Relay ISGR-820 X

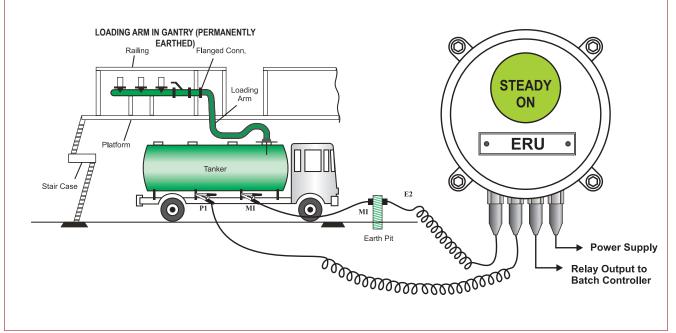
- Microcontroller based Intelligent Vehicle recognition system
- Intrinsically-safe Ex-i certified design
- PESO certified Exd flameproof enclosure
- Data communication on RS485 Modbus RTU.



## Resistance based Earthing Relay Module SGR-250 M

- Microcontroller based intrinsically safe Exi certified design
- Vehicle Recognition system
- Two or five relay changeover contacts option
- Alarm indication on front panel

#### **TYPICAL CONNECTION DIAGRAM**







### STATIC POWER SWITCHING UNITS



## Static Power Switch - 21 Ampere SPX-21

- Up to 21 Ampere load current rating
- Ultra-high speed Opto-Thyristor switching of inputs
- Digital Display for Input Voltages and Output Current monitoring
- 110 VAC / 230 VAC Single Phase Power Supply inputs

## Static Power Switch - 31 Ampere SPX-31

- Up to 31 Ampere load current rating
- 110 VAC / 230 VAC Single Phase Power Supply inputs
- Ultra-high speed Opto-Thyristor switching
- One Control Relay output for remote power fail alarm

## Static Power Switch - 41 Ampere SPX-41

- Up to 41 Ampere load current rating
- Control Relay output for remote power fail alarm
- Ultra-high speed Opto-Thyristor switching
- Automatic recovery after power failure resumption



## Static Power Switch - 51 Ampere SPX-51

- 110 VAC / 230 VAC Single Phase Power Supply inputs
- Relay change over contacts on Input switching
- Up to 51 Ampere load current rating
- Automatic recovery after power failure resumption

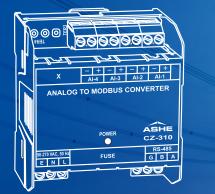
## Static Power Switch - 61 Ampere SPX-61

- Upto 65 Ampere maximum load rating
- Ultra high speed Opto-Thyristor switching
- 110 VAC / 230 VAC Single Phase Power Supply inputs
- Control Relay output for remote power fail alarm

## Static Power Switch - 21 & 31 Ampere SPX-21D and 31D

- Up to 21 Ampere and 31 Ampere load current rating
- Industrial grade DIN Rails mounting ABS enclosure
- Digital Display for Input Voltages and Output Current monitoring
- 110 VAC / 230 VAC Single Phase Power Supply





# Modbus Converters and Fuse Failure Relays

## ANALOG+DIGITAL SIGNALS TO MODBUS RTU/TCP CONVERTERS



#### Modbus Converters ADM-48

- 5-Analog input signals and 8-Digital input signals
- Modbus RTU or Modbus TCP/IP protocol Output
- Isolation level of 1500 V AC for Digital inputs.
- Compact DIN Rail mount execution



## Modbus RTU Interface Module ADM-7332

- 7-Analog input signals and 3-Digital input signals
- 3 Analog output signals
- Two control relay outputs
- Modbus RTU or Modbus TCP/IP protocol Output



## Modbus Interface Modules CZ-310

- 4-Analog input signals
- Modbus RTU or Modbus TCP/IP protocol Output
- Universal AC Power Supply
- Compact DIN Rail mount execution

## FUSE FAILURE RELAYS



#### Fuse Failure Relay, 6-channel FFR-6

- 6 Fuse monitoring
- 0 to 230 V AC/DC Input
- LED indications for Fuse status
- One Control Relay output



#### Fuse Failure Relay, 8-channel FFR-8

- 8 Fuse monitoring
- LED indications for Fuse status
- 0 to 230 V AC/DC Input
- Compact DIN Rail mount execution



## Fuse Failure Relay, 10-channel MFR-10

- 10 Fuse monitoring
- 0 to 750 V AC/DC Input
- Two Control Relay outputs
- Extension board for Input connections



# **Application Specific Instruments**

## CUSTOMISED PRODUCTS



## GPS Based Current Interrupt Timer AC-82G

- Synchronous switching for multiple Cathodic Protection Rectifier units
- RTC timer synchronized to atomic clock by GPS
- 8-key tactile membrane keypad
- Bright dual line OLED Display
- RTC battery backup



## Ammeter Modules DAX-V1

- Current measurement of power strip
- Offered for various Current ratings (32A, 63A, etc)
- External CT included
- Audio beeper for high current alarm



## Three Zone Temperature Indicator 3ZTC

- Sequential temperature indication of three levels within panel
- Three temp sensors with extended cable
- Panel door mount digital display module
- Precision temperature monitoring



## Smoke and Fire Alarm Unit FAU-02

- Continuous monitoring of smoke and fumes by lonization and Optical smoke detector
- Bright LED window with audio hooter to indicate alarms
- Alarm acknowledgement from front panel
- Slim Rack-mount execution instruments



#### Keypad Lock CL-1

- Access control of Server Racks
- Five digit numeric code security
- Master over-ride code for emergency access
- Solenoid output for door latching



## Membrane Keyboard (User Config keys) AK-132M

- Standard 107- keys with 32 additional configurable keys
- Touchpad Mouse or Trackball control options
- Tactile and Non-tactile membrane keys options
- Desk top or Flush-panel mounting execution





At Ashe Controls, quality is at the core of everything we do. We firmly believe that quality is not just limited to our products, but it extends through our entire value chain. From carefully sourcing the electronic components to evaluating our people, we ensure that every aspect of our business meets the highest standards of quality. Our manufacturing units, products, processes, and techniques are constantly monitored, evaluated, and improved to ensure that we are always exceeding industry benchmarks for quality and processing standards. We are committed to delivering products that meet the highest standards of quality, and we take great pride in our dedication to this pursuit.



# Some of our esteemed clients





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