Weidmüller

Indicators

Section F

Weidmüller supply a comprehensive range of indicators to suit most applications. The indicator range currently available is an extension of the Mann Series range and continues to grow with new products. Mann Series indicators are manufactured in Australia to meet local and worldwide standards such as C tick, UL, CE.

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Weidmüller supply a comprehensive range of indicators to suit most applications. The indicator range currently available is an extension of the Mann Series range and continues to grow with new products. Mann Series indicators are manufactured in Australia to meet local and worldwide standards such as C tick, UL, CE.

Indicators are available in either panel mount, DIN rail mount, or field mount suiting all installation requirements.

Our indicators can be powered from the input signal loop or by using an auxiliary DC or AC supply.
Loop powered indicators (powered from the 4-20mA signal loop) provide a display in the desired engineering units of the transmitters measuring range. They are available with LCD (Liquid Crystal Display) or LED (Light Emitting Diode) type display and only have a low voltage drop of 2.5 – 4V on the loop. To determine if the installation is suitable for a loop powered display subtract the voltage drop of the transmitter, indicator, and control system from the supply voltage, and be sure that adequate voltage remains for any losses around the rest of the loop.

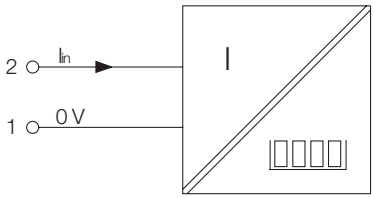
Auxiliary Powered indicators provide the most benefits of all indicators. As they have more power available they can provide more features than the equivalent loop powered device, for example they:

- Have the lowest voltage drop on the measuring loop (<1V)
- Convert inputs from low level sensors like thermocouples, RTDs
- Isolate, linearise, and re-transmit proportional analogue signals
- Provide mechanical relays outputs for control or alarming functions

Special function models are also available with multiple inputs to provide averaging, summation, or simple monitoring.

The AMS400 is an Auto/Manual station used when manual operation of field control devices (like valves) is required. This can be used for fine tuning operations, for manual takeover in case of control system malfunctions, or if you just require manual operation of a process.

Loop Powered LCD Indicator



LPD350

LPD350

The LPD350 is a compact, cost effective, 3+½ digit, loop powered indicator designed specifically for 4-20mA signals.

The decimal point can be moved to any of the positions ie 1.XXX, 1X.XX, 1XX.X or 1XXX so that it can display values in the range ±1999 display counts.

The LPD350 uses a liquid crystal display which can be read in a wide range of lighting conditions.

Loop powered operation means that the units can be mounted anywhere around the 4-20mA loop without additional wiring for power. Simply break the loop and connect the unit.

The housing has an industry standard 1/8 DIN facia with IP65 rated front suitable for wet areas. Wiring connections are by plug-in screw type, terminal blocks.

Features

- Large 3+½ digit LCD display in engineering units
- 4-20mA input
- Loop powered
- Direct or Reverse action display
- Linearity ±0.1% of span
- 1/8 DIN standard front with IP65 rating
- Removable, screw type, terminal blocks

Technical data

Display	3 + 1/2 digit, LCD display in engineering units
Display range	±1999
Input Type	4-20mA
Power supply	Loop powered
Input voltage drop	2.5V@20mA (125Ω)
Adjustments	Multi-turn potentiometers
Linearity	Typically ±0.1% of span
Housing	1/8 DIN facia (96x48mm), IP65, Panel mount

Applications

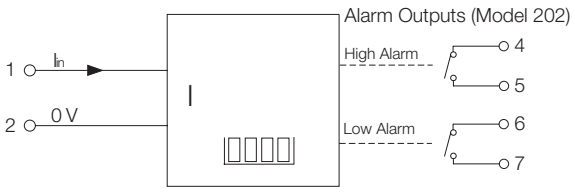
Use the LPD350 for:

- Good visibility in bright light
- Local process variable display where a power supply is not available
- Low cost indication

Ordering Data

Type	Description	Order No.
LPD350 0-100.0%	LPD350/4-20mA/0-100.0/X	**7940010163**
LPD350 Variable	Specify Display Range, e.g., 0-75.00	**8944990000**

Panel Mount, Loop Powered 4-20mA LED Display



Panel Mount, Loop Powered, LED Display

Panel Mount, Loop Powered, LED Display

These bright red LED displays need no external power supply and simply draw their power from the 4-20mA current loop. Models are available in two sizes and are easily configured from the front panel keypad.

Features

- Loop Powered Operation
- Bright LED Display
- Optional Solid State Alarms
- Front panel rating to IP65
- Standard front Facia size
- Easy Setup via Front Panel Keypad (with password protection)

Technical Data

Display	
Type	Scaleable, 4-digit, red 14.5mm LED Display
Scaling	-999 to 9999
Decimal point	Freely selectable
Inputs	
Type	4-20mA (Linear or Square root)
Impedance / Voltage drop	240Ω / 4.8V (Standard) 370Ω / 7.3V (with Alarms)
Alarms	
Type	Dual solid state relays
Rating	250Vac, 150mA
Mode	One high and one Low Alarm
Deadband	0-100%
Performance	
Accuracy	±0.05% of Span
Operating Temperature	0-60°C
Housing	
Material	Black ABS plastic
Front Panel Rating	IP65 with front gasket / IP54 without gasket
Keypad	Front panel keypad
Terminals	Plug-in, Screw Type 2.5mm²
Weight	200g
Dimensions	96 x 48 x 75mm

Applications

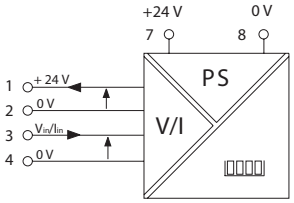
Use the Loop Powered LED Field displays for:

- Excellent visibility in poor lighting conditions
- Local process variable display where a power supply is not available

Ordering Data

Type	Description	Order No.
201	Basic, Panel Mount, Loop Powered, LED Display	**7940086158**
202	Panel Mount, Loop Powered, LED Display with Alarms	**7940086159**

Auxiliary Powered 3+½ Digit LED Indicator



DI350

DI350

The DI350 is our low cost 3+1/2 digit indicator for standard display applications. Housed in the industry standard 96x 48mm case, has IP65 front protection, and easy to read LED display with 14.2mm digits. The DI350 scaling is performed using potentiometers at rear of unit, allowing quick adjustment of required value. With option of AC or DC power supply, the DI350 will suit most stand alone indicator applications.

Available with inputs between 0-10V and 0-20mA and with a standard 24V output for a sensor or transmitter power supply.

Features

- Potentiometer adjustment for scaling
- AC or DC power supply
- 1/8 DIN standard front with IP65 rating
- Easy to read LED display

Technical Data

Display	
Type	3 + 1/2 digit, red LED display in engineering units
Display range	-1999 to 1999
Inputs	
Input Type	Analogue Current/Voltage
Input Range	4-20mA / 0-10V (Others on request)
Input Impedance	22Ω (current inputs) / 1MΩ (voltage inputs)
Sensor Power Supply	24Vdc (to 25mA)
Adjustments	
Type	22-turn potentiometers
Power Supply	
Power Supply Type	Auxiliary Power Supply
DC Voltage Range	24Vdc nominal (range 12-35Vdc)
AC Voltage Range	240Vac @ 47-63Hz nominal (range 200-264Vac)
Power Consumption	4.5W
Performance	
Linearity	Typically ±0.1%
Operating Temperature	0 to 60°C
Housing	
Type	Double Insulated Panel mount
Front bezel	IP65 rated 1/8 DIN format
Dimensions (mm)	48.8 x 96.6 x 143.5(behind panel)
Terminals	Screw Type
Conductor Type	0.5mm^2 to 2.5mm^2

Applications

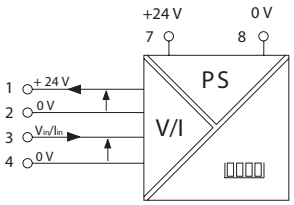
Use the DI350 for:

- VSD remote speed indicator
- Secondary indicator from PMX420Plus
- Remote indicator for field installation
- Any application requiring display of process value

Ordering Data

Type	Order No.
DI350 Variable (Specify Input/Power supply/Display Range)	**8944950000**
DI350 0-10V/0-100.0/240Vac	**7940011364**
DI350 4-20mA/0-100.0/240Vac	**7940010158**
DI350 0-10V/0-100.0/24Vdc	**7940011570**
DI350 4-20mA/0-100.0/24Vdc	**7940010185**

Auxiliary Powered 4+½ Digit LED Indicator



PM450

PM450

The PM450 is our low cost 4+1/2 digit indicator for standard display applications. Housed in the industry standard 96x 48mm case, has IP65 front protection, and easy to read LED display with 14.2mm digits. The PM450 scaling is performed using potentiometers at rear of unit, allowing quick adjustment of required value. With option of AC or DC power supply, the PM450 will suit most stand alone indicator applications.

Available with inputs between 0-10V and 0-20mA and with a standard 24V output for a sensor or transmitter power supply.

Features

- Potentiometer adjustment for scaling
- AC or DC power supply
- 1/8 DIN standard front with IP65 rating
- Easy to read LED display

Technical Data

Display	
Type	4 + 1/2 digit, red LED display in engineering units
Display range	-19999 to 19999
Inputs	
Input Type	Analogue Current/Voltage
Input Range	4-20mA / 0-10V (Others on request)
Input Impedance	10Ω (current inputs) / 10MΩ (voltage inputs)
Sensor Power Supply	24Vdc (to 25mA)
Adjustments	
Type	22-turn potentiometers
Power Supply	
Power Supply Type	Auxiliary Power Supply
DC Voltage Range	24Vdc nominal (range 20-28Vdc)
AC Voltage Range	240Vac @ 47-63Hz nominal (range 200-264Vac)
Power Consumption	6W
Performance	
Linearity	Typically ±0.1%
Operating Temperature	0 to 60°C
Housing	
Type	Double Insulated Panel mount
Front bezel	IP65 rated 1/8 DIN format
Dimensions (mm)	48.8 x 96.6 x 143.5(behind panel)
Terminals	Screw Type
Conductor Type	0.5mm^2 to 2.5mm^2

Applications

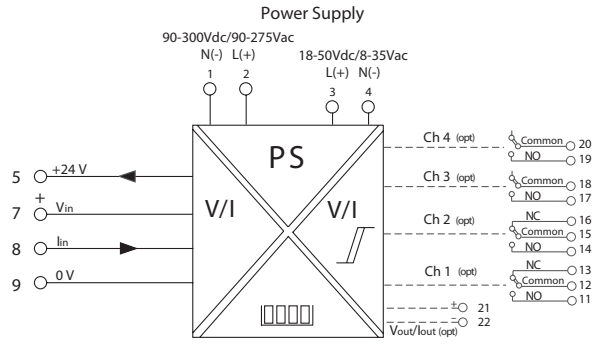
Use the PM450 for:

- VSD remote speed indicator
- Secondary indicator from PMX420Plus
- Remote indicator for field installation
- Any application requiring display of process value

Ordering Data

Type	Order No.
PM450/4-20mA/0-10000/240Vac	**7940018847**
PM450/4-20mA/0-100/24Vdc	**7940020541**
PM450 4-20mA/0-100.0/24Vdc	**7940010218**

Programmable Auxiliary Powered LED Indicator



PMX420Plus Wiring diagram (PMX420 does not have relays or analogue output)

PMX420Plus

A display is an essential part of any plant, allowing operators quick viewing of plant performance. Indicators with alarms allow operators more freedom to perform their duties knowing they will be notified when errors outside of preset values occur so preventative measures can be performed.

The PMX420Plus, with its four digit LED indication, provides easy to read display, while providing analogue retransmission to the control system or second display and four alarms allowing the operator to be notified of one or many events. Programming is performed by front pushbuttons with easy flowing parameter set.

PMX420Plus is equipped with a dual power supply of 18-50Vdc, and 90-275Vac and housed in an industry standard 96 x 48mm case providing IP65 front protection.

Features

- Volts or mA inputs
- AC and DC supply standard
- Front panel programming
- Sensor power supply
- Isolation 2kV

Applications

Use the PMX420 for:

- Local process indication with isolated retransmission and operator alarm.
- Tank level with Low/Low, Low/Hi and Hi/Hi alarms
- Analogue retransmission for second display

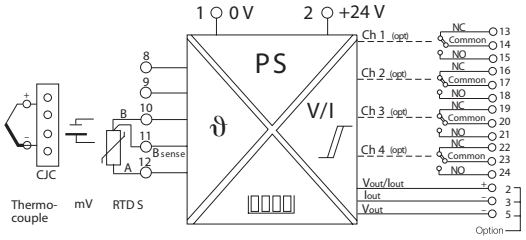
Technical Data

Display	
Type	Full 4 digit, red 14.2 mm LED
Scaling	To display in % or engineering units
Display range	-9999 to 9999
Status indicators	Alarm ch 1-4 and key status
Inputs	
Input Type	Analogue Current/Voltage
Input Range	Any range inside the limits ±22mA or ±11V
Input Impedance	25Ω (current)/1.5MΩ (voltage)
Sensor Power Supply	24Vdc (to 25mA)
Analogue Output (PMX420Plus Only)	
Output Type	Analogue Current/Voltage
Output Range	Inside the range 0-20.00 mA or ±10.00 V
Output Drive	10kΩ @ 10V (voltage outputs) or 700Ω @ 20mA (current outputs)
Alarm Outputs (PMX420Plus Only)	
Type	Four Channel (2 x SPDT and 2 x SPST)
Switching Voltage	240Vac/24Vdc
Continuous Current	3A (2 x SPDT) or 5A (2 x NO)
Power Supply	
Power Supply Type	Universal Auxiliary Power Supply
Voltage Range	18-50Vdc / 18-35Vac and 90-275Vac / 90-300Vdc
Power Consumption	Max. 8W
Performance	
Linearity	Typically ±0.1%
Step Response	300ms Typically
Operating Temperature	0 to 60°C
Housing	
Type	Double Insulated Panel mount
Front bezel	IP65 rated 1/8 DIN format
Dimensions (mm)	48.8 x 96.6 x 143.5(behind panel)
Terminals	Screw Type
Conductor Type	0.5mm^2 to 2.5mm^2

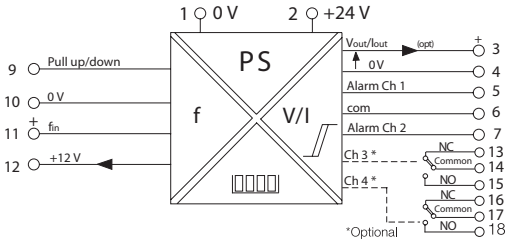
Ordering Data

Type	Order No.
PMX420 Programmable Display	**7940010525**
PMX420Plus (with Analogue Output and four Relay Outputs)	**7940011323**
IP66 Weatherproof housing	**7940015920**

Programmable Temperature and Frequency Indicators



PMX400/TMP Universal Temperature Display



PMX400/HZX Universal Display for Frequency based signals

PMX400 Series

The PMX400 Series consists of two models:

- The PMX400TMP Temperature Indicator for industrial temperature measurement using any standard 2 or 3 wire Pt100 RTD; Thermocouple types B, E, J, K, N, R, S and T or millivolts. Display shows either °C or °F or mV. Sensor diagnostics are also displayed.
- The PMX400HZX Frequency display/Tachometer makes the measurement of frequency, speed and flow very easy and accurate. It uses modern microprocessor timing techniques and changes strategy automatically to produce the best result for the application. It will accept any periodic waveform ranging from one pulse per hour to 10 kHz from a wide variety of sensor types.

Features

- Bright four digit LED display in engineering units
- Up to 4 alarm channels
- Optional analogue output
- Auxiliary powered
- Fully Isolated
- 1/8 DIN standard front with IP65 rating
- Integral power supply for active input devices
- Indicate and change setpoints in engineering units

Technical Data

Display	Measured variable in engineering units and Alarm status
Input Type	Temperature measurement or Frequency based signals
Channels	Single
Analogue Output	Current/Voltage signal
Alarm Output	Up to four independent alarm channels
Inbuilt functions	Group/Siren Alarm
Power supply	Auxiliary Powered
Adjustments	Fully programmable from keypad
Linearity	Typically ±0.1% of span Inbuilt temperature linearisation
Isolation	1.5kVrms for 60s (AC & DC)
Housing	1/8 DIN facia, IP65, Panel mount

Applications

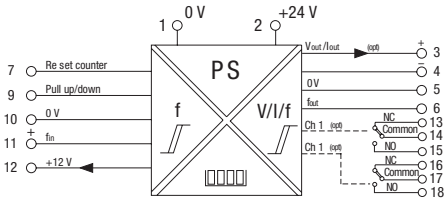
Use the PMX400 Series for:

- Local process indication with retransmission to control system
- Rate indication with Low/Low, Low/Hi and Hi/Hi alarms
- On/Off Control of Process

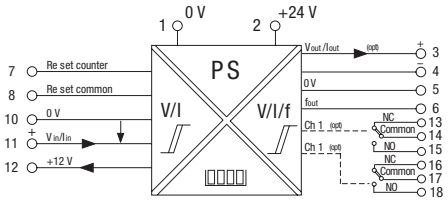
Ordering Data

Type	Description	Order No.	
		24Vdc	240Vac
PMX400TMP	Basic Temperature Display	**7940017862**	**7940010779**
PMX400TMP/.../AO	Temperature Display with Analogue Output	**7940026917**	**7940011192**
PMX400HZX	Basic Frequency Display	**7940015595**	**7940010186**
PMX400HZX/.../AO/RO	Frequency Display with Analogue and Alarm Outputs	**7940011979**	**7940012234**

Programmable Totalisers and Rate Indicators



PTX800D



PTX800A

PTX800 Series

The PTX800 Series fully programmable totalisers and rate indicators for flow and speed measurement are available in two models:

- PTX800A accepts rate signals in standard current/voltage format. It has low-cut out and linearisation for square law devices and has a 24Vdc supply for power active input devices.
- PTX800D will accept any periodic waveform and totalise the pulses in meaningful engineering units. It also calculates the resultant flow-rate. A 12Vdc supply is provided for powering proximity sensors and other active input devices.

You can set the basic display units for total or rate indication, then simply hold down the 'rate/total' button to check the other value. Both models are also available with optional alarm relays for monitoring and simple batching control and/or an isolated analogue output for retransmission.

Features

- Display total or rate in any engineering unit
- Bright 8 digit LED display
- Up to 2 alarm channels
- Optional analogue output
- Pulse output
- Remote or local reset for batching
- Last count retention in case of power failure
- Auxiliary powered
- Fully Isolated
- LED alarm status indication
- 1/8 DIN standard facia with IP65 rating
- Integral power supply for active input devices

Technical Data

Display	Total or Flow rate in engineering units and Alarm status
Input Type	Analogue Current/Voltage Signal or Digital sensor/flowmeter/low level digital signal
Sensor supply	For active input devices
Channels	Single
Analogue Output	Current/Voltage signal (optional)
Digital Output	Pulse output for unit change in total
Alarm Output	Two SPDT relay alarms (optional)
Power supply	Auxiliary Powered
Reset	From front panel or 'reset pulse' input
Adjustments	Fully programmable from keypad
Linearity	Typically ±0.1% of span Inbuilt square law linearisation
Isolation	1.5kVrms for 60s (AC & DC)
Housing	1/8 DIN facia, IP65, Panel mount

Applications

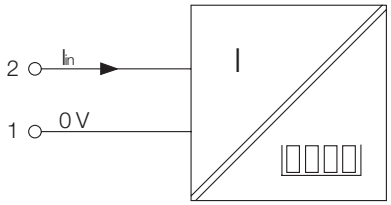
Use the PTX800 for:

- Machine speed/distance indication
- Flow total with pulse reduction output
- Flow total with output control and indication

Ordering Data

Type	Description	Order No.	
		24Vdc	240Vac
PTX800A	Base Analogue I/P Model	**7940010243**	**7940010165**
PTX800A/RO/AO	With Analogue/Alarm Output	**7940014374**	**7940010204**
PTX800D	Base Digital I/P Model	**7940011133**	**7940010244**
PTX800D/RO/AO	With Analogue/Alarm Output	**7940012323**	**7940015766**

Field Mount, Loop Powered Indicator



LPD450

LPD450F

The LPD450F is a loop powered Indicator which lets you display process variables locally in any required unit of measurement. With 20mm characters, the display is easy to read at a distance even in direct sunlight.

The display is loop powered by the 4-20mA current loop with no external supply required.

Traffolyte Labels are also available as an option for both engineering units and tag numbers.

The electronic subassembly is housed in a rugged, glass reinforced polycarbonate, IP67 case suitable for any industrial environment. As an option, the unit can be supplied with a pipe mounting bracket.

Features

- IP67 Rated Housing
- 4-20mA inputs (Loop Powered)
- Peak and Valley Display Feature
- Inbuilt signal linearisation (√, x1.5 , x2.5 or user defined)
- Large 20mm LCD display in engineering units
- Stable and reliable
- Pipe mount kit available

Technical Data

Display	4 + 1/2 digit, LCD display in engineering units
Input Type	4-20mA
Features	Peak and Valley function, In built and user defined curve linearisation
Power supply	Loop powered
Adjustments	Fully programmable from keypad
Linearity	Typically ±0.1% of span
Housing	IP67 Polycarbonate, field mount housing

Applications

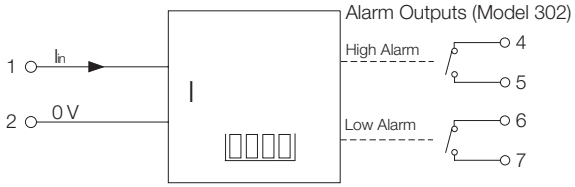
Use the LPD450F for:

- Good visibility in bright light
- Local process variable display where a power supply is not available
- Tank Level/Pressure/Flow

Ordering Data

Type	Description	Order No.
LPD450 0-100.0%	LPD450/4-20mA/0-100.0/X	**7940010236**
LPD450 Variable	Specify Display Range, e.g., 0-75.00	**8945000000**
Pipe mount kit	Pipe Mount kit for LPD450	**7940010667**

Field Mount, Loop Powered LED Display



Field Mount, Loop Powered, LED Display

Field Mount, Loop Powered LED Display

These bright red LED displays need no external power supply and simply draw their power from the 4-20mA current loop. Models are available in two sizes and are easily configured from the front panel keypad.

Features

- Loop Powered Operation
- Bright LED Display
- Optional Solid State Alarms
- Available in two sizes
- Enclosure protection to IP65
- Easy Setup via Front Panel Keypad (with password protection)

Technical Data

Display	
Type	Scaleable, 4-digit, red 14.5mm LED Display
Scaling	-999 to 9999
Decimal point	Freely selectable
Inputs	
Type	4-20mA (Linear or Square root)
Impedance / Voltage drop	240Ω / 4.8V (Standard) 370Ω / 7.3V (with Alarms)
Alarms	
Type	Dual solid state relays
Rating	250Vac, 150mA
Mode	One high and one Low Alarm
Deadband	0-100%
Performance	
Accuracy	±0.05% of Span
Operating Temperature	0-60°C
Housing	
Material	Grey ABS plastic
Rating	IP65
Keypad	Front panel keypad
Dimensions	100 x 100 x 57mm (Large case) 82 x 80 x 57mm (Small case)

Applications

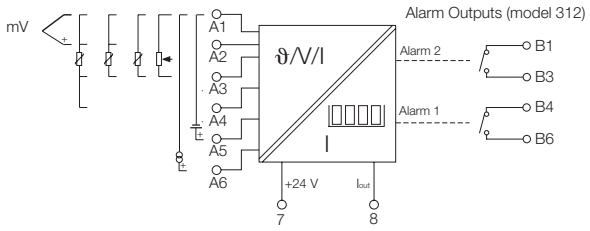
Use the Loop Powered LED Field displays for:

- Excellent visibility in poor lighting conditions
- Local process variable display where a power supply is not available

Ordering Data

Type	Description	Order No.
301	Large, IP65, Loop Powered, LED Display	**7940084183**
302	Large, IP65, Loop Powered, LED Display with Alarms	**7940084184**
305	Small, IP65, Loop Powered, LED Display	**7940083901**

Field Mount, Output Loop Powered Transmitter with LED Display



Field mount, Output Loop Powered, Signal Converter with LED Display

Output Loop Powered Signal Converter with LED Display

These bright red LED displays need no external power supply and simply draw their power from the 4-20mA output loop. If an analogue output is not required the supply voltage can be applied directly across the output terminals. The input circuit isolates and converts measurements from local temperature sensors or analogue current/voltage signals.

For signal monitoring applications, the display is also available with two alarm channels with solid state outputs.

Features

- Universal Temperature Sensor and Process Input
- Output loop powered operation
- Bright LED Display in °C or Engineering units
- Optional Solid State Alarms
- 6 point linearisation for process inputs
- Enclosure protection to IP65
- Easy Setup via Front Panel Keypad (with password protection)

Applications

Use the Loop Powered LED Field displays for:

- Excellent display visibility in dimly lit plant areas
- Temperature converter with local display
- Tank level display with linearisation and retransmission

Technical Data

Display	
Type	Scaleable, 4-digit, red 14.5mm LED Display
Display Units	Temperature or Engineering units
Range	-999 to 9999
Decimal point	Freely selectable
Inputs	
Type	Thermocouples, RTD, Potentiometer, Resistance, mV Infrared Sensor, or Process Current/Voltage Signals
Thermocouples	B, C, D, E, G, J, K, L, N, R, S or T
RTDs	Pt100, Pt500, Pt1000, Ni100 (2, 3 or 4-wire)
Infrared sensors	Exergen 140F-K and 440F-K
Potentiometers	50 to 500Ω (3-wire)
Resistance	0-1000Ω (2-wire)
Current (mA)	0-20mA / 4-20mA / -20 to +20mA into 5Ω
Voltage (V)	0-5V / 0-10V / -10 to +10V into 1MΩ
Millivolts	-100 to +100mV into 10MΩ
CJC	< 0.05°C per °C
Max RTD wire resistance	30Ω
Outputs	
Type	4-20mA Loop Powered
Applied Voltage Range	10-28Vdc
Sensor burnout	3.5mA (Downscale) or 21mA (Upscale)
Alarms	
Type	Dual solid state relays (Model 312 only)
Rating	250Vac, 150mA
Mode	One high and one Low Alarm Note: only one relay can operate at a time.
Deadband	0-100%
Performance	
Accuracy	±0.1% of Span or 1°C
Operating Temperature	0-60°C
Isolation	2kVdc for 60s
Housing	
Material	Grey ABS plastic
Rating	IP65
Keypad	Front panel keypad
Dimensions	100 x 100 x 57mm

Ordering Data

Type	Description	Order No.
311	Field Mount, Signal Converter with LED Display	**7940084185**
312	Field Mount, Signal Converter with LED Display and Alarms	**7940084186**

Modular Display Series

Modular Display Series

This fully modular system allows for maximum flexibility by using plug in cards allowing for input and outputs to be fitted to the basic displays shown below. All basic displays will require an input card to function and can have up to two output cards fitted (see page I.6 for option cards).

20mm IP65 Field Display Base Unit

20mm IP65 Field Display

- Digit size 20mm (Reading distance about 10m)
- Secure setup from front panel keypad or PC (Serial card required)
- IP65 Field Mount
- Can be fitted with two output cards

Technical Data

Display	
Scaling	In Engineering Units (Linearised if required)
Housing	
Type	Light grey polycarbonate
Protection Class	IP65
Weight	600g
Dimensions	180 x 130 x 80 mm

Ordering Data

Type	Description	Order No.
2800-240Vac	Base display with 85-240Vac power supply	**7940085030**
2800-24Vdc	Base display with 24Vdc power supply	**7940085031**

Applications

Cost saving wall or field mount installation

- Flow rate with six digits for accuracy
- Tank level with ten point linearisation scaled in litres

Large IP65 Field Display Base Units

Large IP65 Field Display

- 57mm, 100mm and 180mm Digit size
- Internal keypad and display for easy, secure setup
- IP65 Field Mount

Ordering data

Type	Description
575F5-240Vac	57mm High, 5-digit, 85-240Vac / [Input Card] / [Output Cards]
575F5-24Vdc	57mm High, 5-digit, 24Vdc / [Input Card] / [Output Cards]
FD100A4-240Vac	100mm High, 4-digit, 85-240Vac / [Input Card] / [Output Cards]
FD100A4-24Vdc	100mm High, 4-digit, 24Vdc / [Input Card] / [Output Cards]
FD100A6-240Vac	100mm High, 6-digit, 85-240Vac / [Input Card] / [Output Cards]
FD100A6-24Vdc	100mm High, 6-digit, 24Vdc / [Input Card] / [Output Cards]
FD200A4-240Vac	200mm High, 4-digit, 85-240Vac / [Input Card] / [Output Cards]
FD200A4-24Vdc	200mm High, 4-digit, 24Vdc / [Input Card] / [Output Cards]
FD200A6-240Vac	200mm High, 6-digit, 85-240Vac / [Input Card] / [Output Cards]
FD200A6-240Vac	200mm High, 6-digit, 24Vdc / [Input Card] / [Output Cards]

Technical Data

Display	
Readability	57mm digits: from 20m to 30m 100mm digits: from 40m to 50m 180mm digits: to 100m
Scaling	In Engineering Units (Linearised if required)
Housing	
Type	IP65, wall mount, metal housing
Dimensions (W x H x D)	280 x 140 x 100 mm (575F) 460 x 190 x 110 mm (1000F) 625 x 250 x 139 mm (1100F) 1030 x 375 x 210 mm (1800F)

Applications

Distant viewing of: Production Total and rate; Room temperature with local alarm; Main process value; or Hopper or tank level.

Large Panel Mount Display Base Units

Large Panel Mount Display

- Digit size 57mm and 100mm. Readability 20-30m and 40-50m.
- Internal keypad and display for easy, secure setup
- IP54 front panel

Technical Data

Display	
Type	Large red LED display
Readability	57mm digits: from 20m to 30m 100mm digits: from 40m to 50m
Scaling	In Engineering Units (Linearised if required)
Housing	
Type	IP54, panel mount, metal housing
Dimensions (W x H x D)	303 x 111 x 80 mm (910) 507 x 161 x 80 mm (920)

Type	Description	Order No.
910-24Vdc	57mm, 5-digit display, 24Vdc Power	**7940084968**
920-24Vdc	100mm, 4-digit display, 24Vdc Power	**7940084969**

Applications

- Distant viewing of production count
- Production total and rate
- Room temperature with local alarm
- Main process variable
- Hopper or tank level.

Input and Output Cards for Modular Displays

Input and Output Cards for Modular Displays

Each of the modular display types above has three card slots. All displays require at least one input card and can be fitted with output cards to suit the application such as analogue output, alarms or serial communications.

The input cards can be changed to suit different input functions. Changing the input card gives you another instrument. For example change a pulse input card to process input card. All cards are plug and play and only require sensor setup and any relevant output/display scaling settings which can be made from the keypad or via a PC when using a serial card. All input cards can supply the sensor with 24Vdc (to 150mA) except the Strain Gauge which supplies the bridge with 10V.

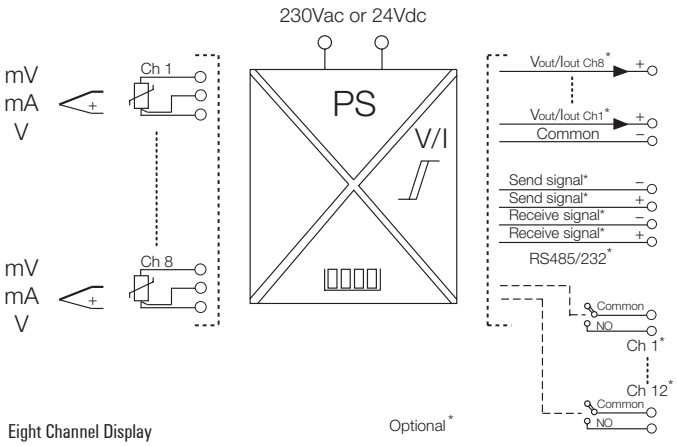
Input Cards

Type	Description	Ranges	Order No.
2012	Process Inputs / Potentiometer Input Card	Process Signals: 0-20mA/4-20mA/0-5V/0-10V	**7940084970**
2021	Temperature Sensor / Potentiometer / Process Input Card	Millivolts: 0-25mV / 0-55mV / 0-100mV / 0-1V / 0-2.5V Process Signals: 0-20mA/4-20mA/0-5V/0-10V/±10V Thermocouples: J, K, L, T, N, R, S, C, D,B, G RTDs (3 or 4 wire): Pt100, Pt1000, Ni100	**7940084971**
2026	Totaliser / Rate Input Card	Process Signals: 0-20mA/4-20mA/0-5V/0-10V Millivolts: 0-25mV / 0-55mV / 0-100mV / 0-1V / 0-2.5V	**7940084972**
2041	Strain Gauge (provides 10V Excitation) Input Card	Max. four 350Ω sensors (4 or 6 wire connection)	**7940084973**
2051	Frequency (pulse) Input Card	Frequency: PNP/NPN, Namur, Contact, Pickup	**7940084975**
2061	Counter (pulse) Input Card	Frequency: PNP/NPN, Namur, Contact, Pickup	**7940084976**
2064	Incremental Sensors where the counting direction is indicated by the phase shift of the channels A and B	Dual frequency inputs	**7940084977**
2071	RS232/RS485 Serial Input Card	RS232 / RS485	**7940084978**
2081	BCD, Binary and Grey Code Input Card	Digital Voltage Signals (5-24V ='1' and 0V = '0')	**7940087979**

Output Cards

Type	Description	Ranges	Order No.
2000-OUT	Isolated Process Output Card	Process Signals: 0-20mA/4-20mA/0-5V/0-10V	**7940084980**
2000-RS	Serial Output Card	RS232 / RS485	**7940084981**
2000-REL2	Dual Relay Output Card	Two SPDT Relay Contacts	**7940084982**
2000-REL3	Triple Relay Card	Three SPDT Relay Contacts	**7940084983**
2000-I/O	Four Alarm Card with Solid State Outputs	Four Solid State Outputs	**7940084984**

Eight Channel Display



Eight Channel Display

Eight Channel Display

The 538-8 accepts up to eight individually configured inputs from thermocouples, RTDs, V, or mA and allows individual scaling for each input with manual or automatic display scrolling of each channel.

The unit has two alarm channels as standard but can be fitted with a ten relay option card allowing a total of twelve relays. Serial communications or eight analogue outputs are also available.

Features

- Settings via front panel keys or from PC using USB Interface
- 8 input channels
- Thermocouples, RTD´s, 0/4..20 mA, 0..5/10V
- Each channel can be configured individually
- 2 relay alarms as standard
- 10 extra alarms as option (5 if analogue output is used)
- 8 output 0-20mA / 4-20 mA as option
- Serial port RS232 or RS485 as option
- Power supply 230 VAC or 24 VDC

Applications

Use the eight channel display for applications:

- Where display, output signals and alarms are desired simultaneously for several measurements
- Space saving of eight panel meters in one independent monitor

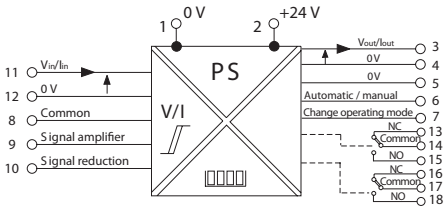
Technical Data

Display	
Type	Scalable, 4-digit, red 14.5mm LED Display
Display Units	Temperature or Engineering units
Range	-999 to 9999
Decimal point	Floating
Inputs	
Type	Thermocouples, RTD, Potentiometer, Resistance, mV, or Process Current/Voltage Signals
Thermocouples	K, J, J/DIN, R, S, T, E
RTDs	Pt100 (2 or 3-wire)
Potentiometers	20 to 1kΩ (3-wire)
Resistance	0-1000Ω (2-wire) or 10kΩ (Optional)
Current (mA)	0-20mA / 4-20mA into 50Ω
Voltage (V)	0-1V / 0-5V / 0-10V /1-5V into 1MΩ
Millivolts	0-20mV / 0-50mV / 0-500mV / 0-1000mV into 1MΩ
CJC	< 0.05°C per °C
Max RTD wire resistance	100Ω
Outputs	
Analogue Outputs (Optional)	Eight 0-20mA/4-20mA, 0-600Ω drive Outputs with common -ve rail
Serial Port (Optional)	RS232 / RS485
Alarms	
Type	Normally open relay contacts
Rating (Standard alarms)	230Vac, 3A (2 only)
Rating (Optional Alarms)	60Vac, 0.5A (+10)
Deadband	0-90%
Performance	
Accuracy	±0.1% of Span or 1°C
Operating Temperature	0-55°C
Housing	
Type	Panel mount
Keypad	Front panel
Dimensions	96 x 96 175mm (cut-out 91.5 x 91.5mm)

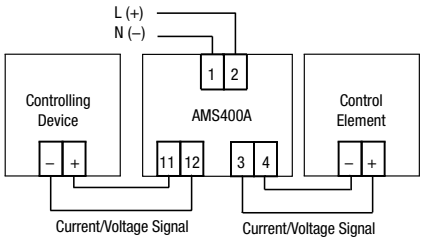
Ordering Data

Type	Description	Order No.
538-8SC-230VAC	Eight channel display, base unit - 230Vac	**7940084985**
538-8-24VDC	Eight channel display, base unit - 24Vdc	**7940084986**
DCS770	USB Programming Interface	**7940085066**
DCS771	USB Programming Interface and Power Supply	**7940085067**
538OUT-8	8 galvanically isolated outputs, 0/4-20 mA, 0-10V	**7940084987**
538REL-10	10 alarm relays, max 60 V, 0.5 A	**7940084988**
RS232-538	Serial output signal RS232	**7940084989**
RS485-538	Serial output signal RS485	**7940084990**

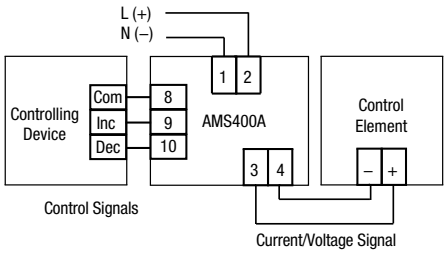
Auto/Manual Station



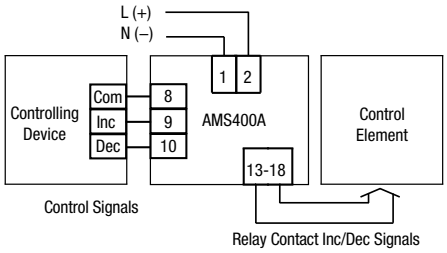
AMS400A



AMS400A Analogue to Analogue Mode



AMS400A Digtal Control to Analogue Element Mode



AMS400A Digital to Digital mode

AMS400A

The AMS400A is an interface device used between controlling equipment and field devices to allow manual takeover of automatically controlled processes. Typical applications are:

- manual start-up of sensitive processes before handover to automatic control
- manual over-ride in case of controller failure or malfunction.

A fully configured AMS400A can be installed in three I/O configurations, which interface between:

- Analogue control equipment and analogue control devices
- Digital control equipment and analogue control devices
- Digital control equipment and digital control devices

For analogue to analogue operation there are digital outputs available to force a change to automatic or manual mode. You can also set ramp rates and handover settings to ensure a smooth transfer of control.

Features

- IP65 Rated front suitable for wet areas
- Allows manual takeover of automatically controlled processes
- Flexible set-up allows connection to digital and analogue control devices and systems
- Bright clear display of process variable
- Gives feedback of Auto/Manual operation status to control system

Technical Data

Display	Measured variable in engineering units and Alarm status
Input Type	Current/Voltage Signal
Channels	Single
Analogue Output	Current/Voltage signal
Alarm Output	Up to four SPDT relay alarms
Inbuilt functions	Maximum/Minimum recall
Power supply	Auxiliary Powered
Adjustments	Fully programmable from keypad
Linearity	Typically ±0.1% of span Inbuilt square law linearisation
Isolation	1.5kVrms for 60s (AC & DC)
Housing	1/8 DIN facia, IP65, Panel mount

Applications

Use the AMS400A for:

- Manual control of valves where a control system failure is unacceptable
- Interface for valve maintenance and calibration
- Conversion of new analogue control valves from older increment/decrement control

Ordering Data

Type	Description	Order No.	
		24Vdc	240Vac
AMS400A AA	AMS400A/4-20mA/CC/.../AO	**7940011895**	**7940011623**
AMS400A DA/D	AMS400A/4-20mA/CC/.../AO/RO	**7940015937**	**7940023926**

For other ranges please specify AMS400A 1/2/3/4 where:

1=Analogue input format
2=Digital input format
3=Power supply voltage
4=Output type (AO for analogue output, RO for relay output or AORO for both types)