

inSIGHT S4 Display Module

An incredibly versatile and compact display for any type of mobile machine.

Key Features

- Specially developed for use in mobile machines
- Robust yet lightweight aluminum die-cast housing for outdoor use
- Installation via clamping bracket or assembly with a standard ball holder
- High visibility display - easy to read in direct sunlight
- Super wide viewing angle - read from virtually any direction
- Short stroke keys with tactile feedback
- Key illumination in RGB
- Freely programmable in GSe-VISU and openSYDE



Display & Inputs

Display	Color TFT
Format	4.3 in (diagonal) 16:9 (WQVGA) ratio 95 x 54 mm
Resolution	480 x 272 pixel
Backlight	1000 nits (typical)
Contrast ratio	800:1 (typical)
Viewing angle	170°
Cover lens	Mineral clear glass
Keys	8 tactile illuminated keys
Key illumination	LED, RGB, individually controllable and dimmable

Mechanical Specifications

Faceplate material	Aluminum, black anodized
Housing material	Aluminum die-cast, powder-coated
Dimensions (W x H x D)	ca. 147 x 128 x 27 mm
Installed (W x H)	139.5 (±0.5) x 120.5 (±0.5) mm
Weight	~1.1 lbs (~500 g)
Assembly	Mounting with RAM®-Mount Panel mounting with clamping bracket
Protection class	IP65 + IP67
Operating temperature	-22° – 158°F (-30° – 70°C)
Storage temperature	-22° – 176°F (-30° – 80°C)

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Electrical Specifications

Supply voltage	VCC 8... 32 VDC
Power consumption	≤ 5W
Current consumption	UB = 12VDC <100µA
Consumption (Standby Mode)	UB = 24VDC <200µA
Processor	ARM® Cortex® A7 (i.MX 6)
Memory	256 MB RAM 64 MB Flash 8 kB FRAM
Interfaces (PN 100001380)	CAN Version 2.0 A/B, 125 kBit/s up to 1 MBit/s acc. ISO 11898:2003
Interfaces (PN 100001381)	1x CAN 1x Ethernet up to 1 GBit/s 1x USB Host 2.0

Additional Specifications

Temperature monitoring	Integrated sensor for measuring the device temperature
Supply voltage monitoring	Measuring circuit for monitoring the supply voltage
Brightness adjustment	Ambient light sensor in front panel for brightness adjustment of display and keys
Clock / battery	Real time clock (RTC), battery buffered (YR, M, D, W, WD, HR, MIN, SEC)
Wake-On-Key	When not in use (e.g. in the outdoor area of a machine), the operating device can be set to a sleep mode. Pressing any key for approx. 3s or rising edge at IGNITION input restarts the unit.

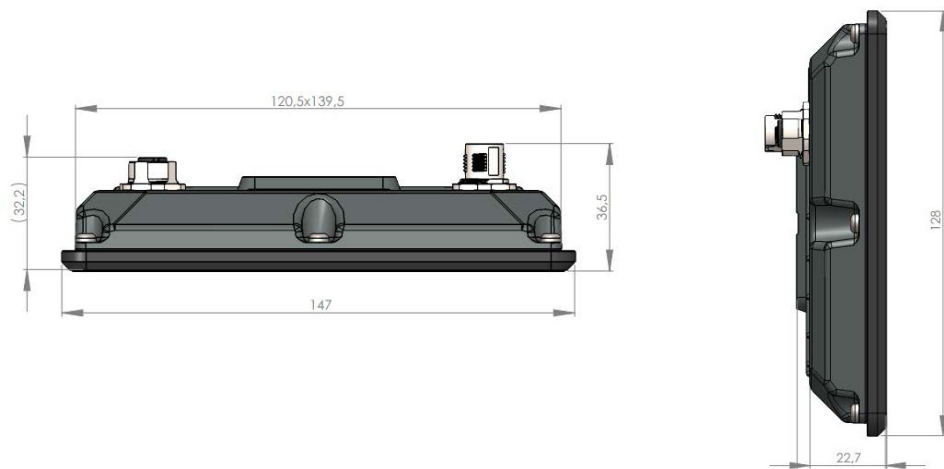
Part Numbers

PN 100001380	1x M12 + 1x CAN
PN 100001381	2x M12 + 1x CAN + Ethernet + USB

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Product Dimensions

All dimensions are given in [mm]



Test Standards & Certification

CE mark	Acc. EMC directive 2014/30/EU Acc. RoHS directive 2011/65/EU
EMC	EN 61000-6-2:2005 (EMC-Radio immunity) EN 61000-6-3:2007 (EMC- Interference emission) EN 61000-4-2:2009 ESD, Level 4: 15 kV EN 61000-4-4:2012: Immunity against burst, Level4: 4 kV EN 61000-4-5:2014: Immunity against surge, Level 3: 1 kV
Load Dump	ISO 16750 pulse 5b Level 3
Vibration	IEC 60068-2-64:2008 random 8h per axis 10 ... 299 Hz 1g 300 ... 499 Hz 0,05g 500 ... 2000 Hz 2g
Shock	EN 60068-2-27:2010-02 30g / 18ms; 5 shocks
Cold	EN 60068-2-1:2008-01 Test temperature -30°C 2h
Dry heat	EN 60068-2-2:2008-01 Test temperature 70°C 2h
Temperature change	EN 60068-2-30:2010-04 -30 °C ... +70°C, 20 cycles / 300 Min
Temperature shock	EN 60068-2-30:2010-04 -30 °C ... +70°C, 5 cycles / 120 Min
Damp heat	EN 60068-2-30:2010-06 Test Z/AD test temperature 40°C/ 93%RH / 21 days
E1 mark	UN/ECE-R10

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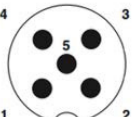
Pin Assignment

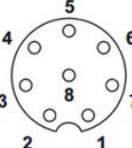
PN 100001380

M12 A-coded 5 pin, male	Pin	Signal	Description
	1	Ignition 8...32 VDC	Ignition input (KL15)
	2	U _B 8...32 VDC	Power supply (KL30)
	3	GND	Ground
	4	CAN_H	CAN0 High
	5	CAN_L	CAN0 Low

Pin Assignment

PN 100001381

M12 A-coded 5 pin, male	Pin	Signal	Description
	1	Ignition 8...32 VDC	Ignition input (KL15)
	2	U _B 8...32 VDC	Power supply (KL30)
	3	GND	Ground
	4	CAN_H	CAN0 High
	5	CAN_L	CAN0 Low

M12 A-coded, 8 pin, female	Pin	Signal	Description
	1	USB_D -	USB Data -
	2	USB_VBUS (+5V DC)	USB power supply out, I _{max} = 500mA
	3	GND	(USB) Ground
	4	Ethernet TPO_N	Ethernet Transmit -
	5	Ethernet TPI_P	Ethernet Receive +
	6	Ethernet TPO_P	Ethernet Transmit +
	7	USB_D +	USB Data +
	8	Ethernet TPI_N	Ethernet Receive -