

9415/00-310-42 Art. No. 207903



- Physical layer diagnostics for up to eight FOUNDATION™ fieldbus H1 segments transmitted via an H1 network of your choice
- Diagnostics for voltage/current, jitter, noise, signal level, imbalance
- DTM and EDD with numerous alarm setting options, access to maintenance information, detailed reporting

MY R. STAHL 9415A



The 9415 series diagnostic communication module (DCM) transmits the physical layer diagnostics data that is measured continuously by the 9412 series fieldbus power supplies for up to eight FF H1 segments to hosts or asset management systems. EDD and DTM are also available for integration. The data is logged in accordance with NAMUR NE 123 and processed in accordance with NAMUR NE 107 and FF-912. 9419 series bus carriers can be used for installation.

Technical Data

| Explosion Protection | |
|--------------------------------|---|
| Application range (zones) | 2 |
| Ex interface zone | 2 |
| IECEX gas certificate | IECEX BVS 11.0054X |
| IECEX gas explosion protection | Ex nA [ic] IIC T4 Gc |
| ATEX gas certificate | BVS 11 ATEX E 104 X |
| ATEX gas explosion protection | ⊕ II 3 G Ex nA [ic] IIC T4 Gc |
| FMus certificate | 3026646 |
| cFM certificate | 3026646C |
| Marking cFMus | NI, Class I, Div. 2, Groups A,B,C,D; Class I, Zone 2, AEx/Ex nA [ic] IIC ANI Class I,II,III, Div. 2, Groups A,B,C,D,E,F,G; T4 at Ta = -70°C See Doc. 9415 6 031 001 1 |
| Certificates | ATEX (BVS), Canada (FM), IECEX (BVS), International (FF), USA (FM) |
| Safety Data | |
| Max. voltage U_i | 32 V |
| Internal capacitance | Negligible |
| Internal inductance | 10 μ H |
| Auxiliary Power | |
| Auxiliary power | Via bus-Carrier series 9419 |
| Nominal voltage V_{nom} | 24 V DC |
| Auxiliary power voltage range | 18 ... 32 V DC |
| Current consumption | 40 mA at 24 V DC |
| Max. power dissipation | 1 W |
| Galvanic Isolation | |
| Fieldbus/supply | 1500 V AC |

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Input

| | |
|--------------------------------|---|
| Connection to | ISbus fieldbus power supplies 9412 (via bus-Carrier 9419) |
| Physical layer diagnostics | Via fieldbus power supplies 9412 |
| Physical Layer values segment | Jitter, signal level, noise, imbalance, voltage, current |
| Physical Layer values fieldbus | Jitter, signal level |
| Physical Layer values | As per NAMUR NE 123 |

Output

| | |
|-----------------------------|---|
| Connection to | Host and asset management systems with H1 interface |
| Specification | FOUNDATION™ fieldbus H1 (IEC 61158-2) |
| Data transmission | Via segment 1 to 4 or 8 (depending on bus-Carrier), arbitrary Alternatively: Via own diagnostics segment |
| Voltage range segment | 9 – 32 V |
| Current consumption segment | 13 mA |

Device Specific Data

| | |
|---------------------------------|--|
| LED operating conditions | "PWR" LED, green |
| LED error indication | "ERR" LED, red Flashes, DCM maintenance required Lights up, DCM error |
| LED segment | "SEG 1" to "SEG 2" LED, red Flashes, segment maintenance required Lights up, segment error |
| FF stack | Softing |
| Device-specific data technology | EDD and DTM |
| Retrievable parameters | Serial number Type Version Revision for DCM Fieldbus power supply bus-Carrier |
| Parameter data | Resource block for DCM device data, fieldbus power supply and bus-Carrier |
| Cyclic data transmission | 10 DI function blocks for status information/common alarms per segment |
| Acyclic data transmission | 9 transducer blocks with extensive information: Physical layer values, HI alarm, HIHI alarm, LO alarm, LOLO alarm, DCM status, segment status, fieldbus devices status |
| Module status and alarms | FF H1 events as per FF-912 NAMUR NE 107 (field diagnostics alarm) |
| Firmware update | RS232 via PC |

Diagnostics

| | |
|-----------------------------|---|
| Diagnostics connection type | 26-pole Connection to bus-Carrier 9419 |
|-----------------------------|---|

Ambient Conditions

| | |
|-------------------------------|--|
| Ambient temperature °C | -20 °C ... +70 °C |
| Ambient temperature °F | -4 °F ... +158 °F |
| Storage temperature °C | -40 °C ... +80 °C |
| Storage temperature °F | -40 °F ... +176 °F |
| Max. operating altitude | < 2000 m |
| Max. relative humidity | 95% (without condensation) |
| Electromagnetic compatibility | Tested to the following standards and regulations: EN 61326 (IEC/EN 61000-4-1 to 61000-4-6 and 61000-4-11), NAMUR NE21 |

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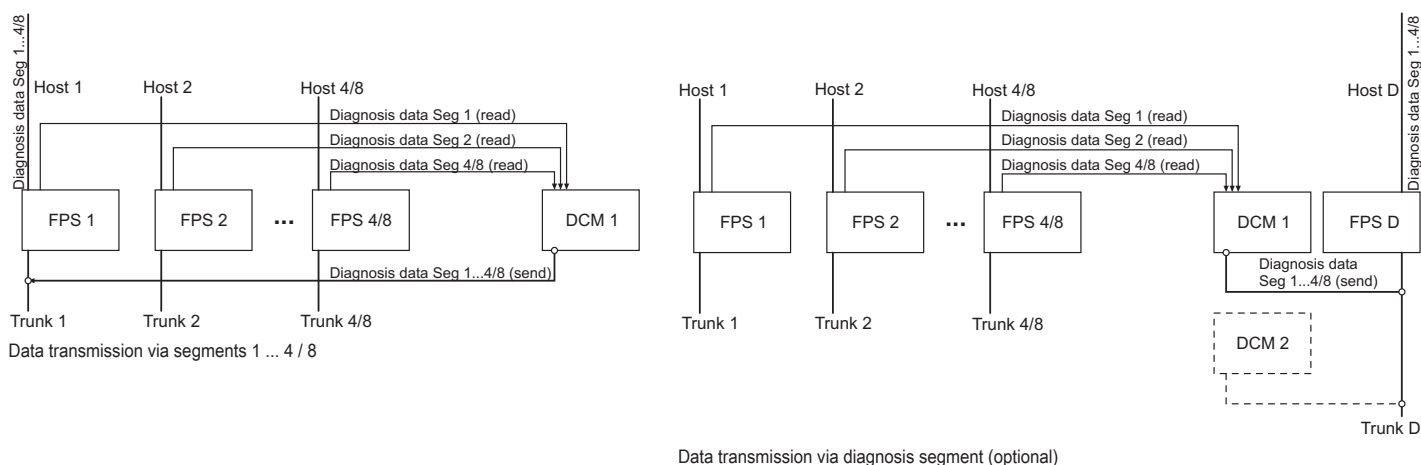
Mechanical Data

| | |
|---|---|
| Trunk connection type | Screw terminals |
| Connection terminals | 3-pole (+, -, shield) |
| Connection earthing | At "S" terminal |
| Single-wire connection | Trunk 0.2 to 2.5 mm ² rigid Trunk 0.2 to 2.5 mm ² flexible |
| Flexible single-wire connection with sleeve | Trunk 0.2 to 2.5 mm ² |
| Degree of protection (IP) (IEC 60529) | IP30 enclosure IP20 Ex e terminals |
| Module enclosure | PA 6.6 |
| Fire resistance (UL 94) | V0 |
| Pollutant class | Corresponds to G3 |
| AWG clamping range | 16 – 12 |
| Connection cross-section AWG | 16 ... 12 |
| Width | 35 mm |
| Width, inches | 1.39 in |
| Height | 113.5 mm |
| Length | 103 mm |
| Length in inches | 4.25 in |
| Mounting depth in inches | 4.51 in |
| Weight | 240 g |
| Weight | 0.53 lb |

Mounting / Installation

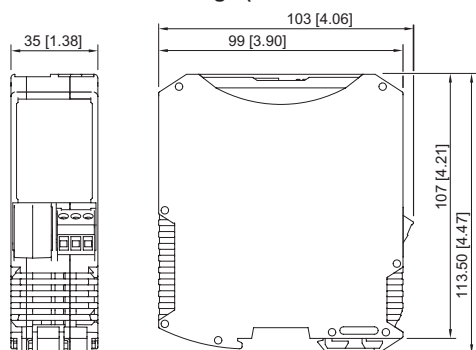
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|----------------------|----------------------------|
| Mounting type | In Series 9419 bus-Carrier |
| Mounting orientation | Horizontal Vertical |

Technical Drawings – Subject to Alterations




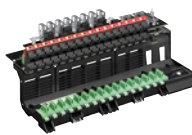





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Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



Accessories

| Cable for FOUNDATION Fieldbus, PROFIBUS PA | | Art. No. |
|--|---|----------|
|  | Cable type: O2YS(St+Ce)Y-fl Colour (sheath): Orange Application area: Universal use FISCO, UL listed, sunlight-resistant, oil-resistant, flame retardant | 169329 |
| Fieldbus power supply | | Art. No. |
|  | Fieldbus power supply and diagnostics | 200586 |
| Yokogawa bus-Carrier | | Art. No. |
|  | Yokogawa bus-Carrier for eight segments, simplex | 221454 |
|  | Yokogawa bus-Carrier for four segments, redundant | 221455 |
| | Yokogawa bus-Carrier for eight segments, redundant | 221456 |
| bus-Carrier | | Art. No. |
|  | bus-Carrier for four segments, redundant | 208746 |
| | bus-Carrier for eight segments, simplex | 208745 |
|  | bus-Carrier for eight segments, redundant | 208747 |
| bus-Carrier for linking device | | Art. No. |
|  | bus-Carrier for linking device for four segments, redundant | 250241 |
| | bus-Carrier for linking device for four segments, simplex | 250240 |
| | bus-Carrier for linking device for eight segments, simplex | 250242 |



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We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.