

# Ethernet-APL field switch for use in Zone 1

## Series 9740

STAHL



- Operation of 16 Ethernet-APL or PROFIBUS PA field devices (PA proxy, only for 9740/12-16-40)
- All spurs intrinsically safe "ia" (2-WISE) with port profile A or A+B (only for 9740/12-16-00)
- Operation with 100BASE-TX (Zones 1, 2) and optionally 100BASE-FX (Zone 2)
- Redundant auxiliary power supply and extensive integrated diagnostics
- Installation in Zone 1

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### MY R. STAHL 9740B



The Series 9740 Ethernet-APL field switches are intended for the connection of intrinsically safe "2-WISE" field devices to higher-level 4-wire Ethernet networks, and supply the devices with intrinsically safe power. The field switches can be installed in Zone 1. The integrated diagnostics functions of the Ethernet-APL field switches make commissioning or troubleshooting far easier and faster.

|                 | IECEx / ATEX |   |   |    |    |    |
|-----------------|--------------|---|---|----|----|----|
| Zone            | 0            | 1 | 2 | 20 | 21 | 22 |
| Ex interface    | •            | • | • | •  | •  | •  |
| Installation in |              | • | • |    |    |    |

| Selection Table                          |                                                                           |                              |                                |                                |                                |               |          |        |
|------------------------------------------|---------------------------------------------------------------------------|------------------------------|--------------------------------|--------------------------------|--------------------------------|---------------|----------|--------|
| Product description                      | Ethernet-APL field switch Zone 1 installation Trunk 3TX spurs 16 ia 12A4B |                              |                                |                                |                                |               |          |        |
| Intrinsic safety concept                 | 2-WISE (CLC IEC/TS 60079-47)                                              |                              |                                |                                |                                |               |          |        |
| Power Class                              | A<br>B                                                                    |                              |                                |                                |                                |               |          |        |
| Spurs version                            | Number of ports spurs                                                     | Characteristic spurs         | Max. current consumpt. 24 V DC | Max. power consumption 24 V DC | Max. power dissipation at 24 V | Product Type  | Art. No. | Weight |
| Ethernet-APL (10BASE-T1L)                | 16                                                                        | 2-WISE power supply          | 1.3 A                          | 31.2 W                         | 19 W                           | 9740/12-16-00 | 304725   | 5.8 kg |
| Product description                      | Ethernet-APL field switch Zone 1 installation Trunk 3TX spurs 16 ia 16APA |                              |                                |                                |                                |               |          |        |
| Intrinsic safety concept                 | 2-WISE (CLC IEC/TS 60079-47)                                              |                              |                                |                                |                                |               |          |        |
| Power Class                              | FISCO (EN 60079-11, -25)<br>A                                             |                              |                                |                                |                                |               |          |        |
| Spurs version                            | Number of ports spurs                                                     | Characteristic spurs         | Max. current consumpt. 24 V DC | Max. power consumption 24 V DC | Max. power dissipation at 24 V | Product Type  | Art. No. | Weight |
| Ethernet-APL (10BASE-T1L)<br>PROFIBUS PA | 16                                                                        | 2-WISE power supply<br>FISCO | 0.95 A                         | 22.8 W                         | 13 W                           | 9740/12-16-40 | 304746   | 5.8 kg |

| Technical Data                  |                                           |
|---------------------------------|-------------------------------------------|
| Explosion Protection            |                                           |
| IECEx gas explosion protection  | Ex eb ia q [ia Ga] IIC T4 Gb              |
| IECEx dust explosion protection | [Ex ia Da] IIIC                           |
| ATEX gas explosion protection   | Ⓔ II 2 (1) G Ex eb ia q [ia Ga] IIC T4 Gb |
| ATEX dust explosion protection  | Ⓔ II (1) D [Ex ia Da] IIIC                |
| Notes                           | Certificates in preparation               |

## Technical Data

### Safety Data

|                                                    |              |
|----------------------------------------------------|--------------|
| Max. voltage $U_o$                                 | 17.5 V       |
| Max. current $I_o$ (Ex ia)                         | 380 mA       |
| Max. power $P_o$ (Ex ia)                           | 1.67 W       |
| Max. permissible external capacity $C_o$ for IIC   | 0.25 $\mu$ F |
| Max. permissible external inductance $L_o$ for IIC | 0.15 mH      |

### Electrical Data

|                             |                                                                                   |
|-----------------------------|-----------------------------------------------------------------------------------|
| Interface 1 version         | 100BASE-TX                                                                        |
| Number of ports interface 1 | 3 (XT1, XT2, XT3)                                                                 |
| Connection type interface 1 | Plug-in spring clamp terminal 5-pole black<br>Plug-in screw terminal 5-pole black |

### Auxiliary Power

|                                 |                  |
|---------------------------------|------------------|
| Auxiliary power nominal voltage | 24 V DC, 48 V DC |
|---------------------------------|------------------|

### Galvanic Isolation

|                                      |                              |
|--------------------------------------|------------------------------|
| Test voltage for galvanic separation | Acc. to standard EN 60079-11 |
|--------------------------------------|------------------------------|

### Field Device Interface

|                            |                         |
|----------------------------|-------------------------|
| Link spurs LED             | S01 ... S16 LED, yellow |
| Output power power class A | 0.54 W                  |

### Diagnostics

|                           |                                |
|---------------------------|--------------------------------|
| Physical layer 10BASE-T1L | SNR<br>TDR<br>Shield unbalance |
|---------------------------|--------------------------------|

### Ambient Conditions

|                          |                               |
|--------------------------|-------------------------------|
| Ambient temperature      | -40 °C ... +70 °C             |
| Ambient temperature note | (+60 °C for B-port operation) |

### Mounting / Installation

|               |                   |
|---------------|-------------------|
| Mounting type | On mounting plate |
|---------------|-------------------|

## Accessories

| Figure       | Description                                                                                                                      | Art. No. | Weight |
|--------------|----------------------------------------------------------------------------------------------------------------------------------|----------|--------|
| Terminal set |                                                                                                                                  |          |        |
|              | Terminal set for 9740/12<br>Version: Screw terminals<br>Contents: 16 x 3-pole, blue; 2 x 4-pole, black; 3 x 5-pole, black        | 305678   | 105 g  |
|              | Terminal set for 9740/12<br>Version: Spring clamp terminals<br>Contents: 16 x 3-pole, blue; 2 x 4-pole, black; 3 x 5-pole, black | 305679   | 120 g  |

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

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