HIRSCHMANN
A BELDEN BRAND

# Open Rail

# Managed switches

**10/100 Mbit/s – ETHERNET rail switch**
**All fiber ports 100 Mbit/s**

Stand: August 2012

| RS 20 | 24 | 00 | M2 | M2 | S | D | A | P | H | H | 07.1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Design | FE-ports | GE-ports | Uplink port 1 | Uplink port 2 | Temperature | Power Supply | Approvals | Software | Configuration | OEM type | Software release |

Optional

## Compact switch (Rail)

| | |
|---|---|
| RS 20 | 2x Fast-ETHERNET uplinks |
| RS 22 | inclusive 4 PoE ports |

## Number of Fast-ETHERNET ports

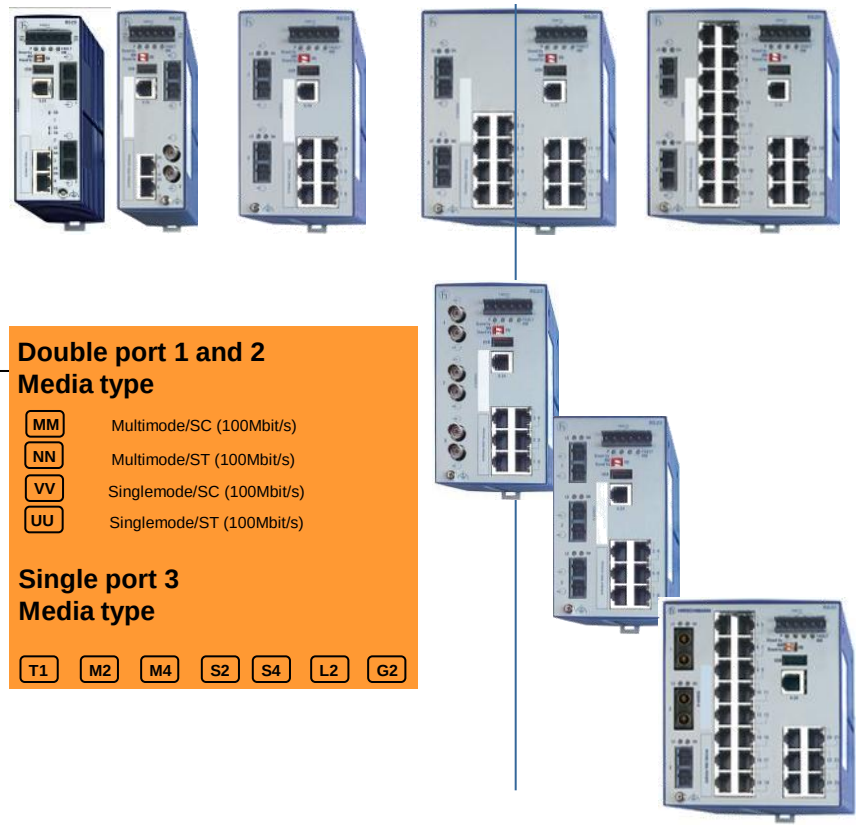
| | |
|---|---|
| 04 | 4x 10/100 Mbit/s |
| 08 | 8x 10/100 Mbit/s |
| 09 | 9x 10/100 Mbit/s |
| 16 | 16x 10/100 Mbit/s |
| 17 | 17x 10/100 Mbit/s |
| 24 | 24x 10/100 Mbit/s |
| 25 | 25x 10/100 Mbit/s |

## Number of Gigabit-ETHERNET ports

| | |
|---|---|
| 00 | No Gigabit-ETHERNET port |

## Media type uplink port 1 uplink port 2

| | |
|---|---|
| T1 | Twisted Pair /RJ45 (10/100Mbit/s - |
| M2 | Multimode/SC (100Mbit/s)<br>1300nm; 50/125µm; 0 – 8 dB;<br>0-5km; 1.0dB/km; 800MHz*km |
| M4 | Multimode/ST (100Mbit/s)<br>1300nm; 50/125µm; 0 – 8dB;<br>0-5km; 1.0dB/km; 800MHz*km |
| S2 | Singlemode/SC (100Mbit/s)<br>1300nm; 9/125µm; 0 – 16 dB;<br>0-30km; 0,4dB/km; 3,5ps/(nm*km) |
| S4 | Singlemode/ST (100Mbit/s)<br>1300nm; 9/125µm; 0 – 16 dB;<br>0-30km; 0,4dB/km; 3,5ps/(nm*km) |
| L2 | Singlemode LH /SC(100Mbit/s)<br>1550nm; 9/125µm; 7– 29 dB;<br>24-86km; 0,3dB/km; 19ps/(nm*km) |
| G2 | Singlemode LH+/SC(100Mbit/s)<br>1550nm; 9/125µm; 14-47dB;<br>67-176km; 0,25dB/km; 19ps/(nm*km) |



**Double port 1 and 2 Media type**

| | |
|---|---|
| MM | Multimode/SC (100Mbit/s) |
| NN | Multimode/ST (100Mbit/s) |
| VV | Singlemode/SC (100Mbit/s) |
| UU | Singlemode/ST (100Mbit/s) |

**Single port 3 Media type**

T1 M2 M4 S2 S4 L2 G2

**RS20 with 4/8/9/16/17/24/25 10/100 Mbit/s-ports**

## Software release

| | |
|---|---|
| xx.x | Newest software |

## OEM type

| | |
|---|---|
| H | Standard |
| X | Customer specific |

## Configuration

| | |
|---|---|
| H | Standard |
| X | Customer specific |

## Software version

| | |
|---|---|
| E | Enhanced<br>Remote access, diagnosis, filters, redundancy |
| P | Professional:<br>Enhanced software plus security, extended diagnosis and redundancy |
| U | Unmanaged |

## Approvals

| | |
|---|---|
| A | CE, cUL 508, ISA 12.12.01 class1 div.2 |
| B | CE, cUL 508, ISA 12.12.01 class1 div.2. EN50121-4, ATEX Zone2 |
| H | CE, cUL 508, ISA 12.12.01 class1 div.2. GL, IEC 61850-3, IEEE 1613, EN 50121-4 |

## Power supply

| | |
|---|---|
| D | 9,6 - 60V DC and 18 - 30 V AC |

## Temperature range

| | |
|---|---|
| S | Standard 0°C up to +60°C |
| T | Extended -40°C up to +70°C |
| E | Extended -40°C up to +70°C inclusive Conformal Coating |

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# Open Rail

# Managed switches

**10/100 Mbit – ETHERNET rail switch + 2 Gigabit ports**

Stand: August 2012

| RS 30 | 24 | 02 | 06 | T1 | S | D | A | P | H | H | 07.1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Design | FE-ports | GE-ports | Uplink port 1 | Uplink port 2 | Temperature | Power Supply | Approvals | Software | Configuration | OEM type | Software release |

Optional

**Compact switch (Rail)**

| | |
|---|---|
| RS 30 | 2x Gigabit-ETHERNET uplinks |
| RS 32 | inclusive 4 PoE ports |

**Number of Fast-ETHERNET ports**

| | |
|---|---|
| 08 | 8x 100 Mbit/s |
| 16 | 16x 100 Mbit/s |
| 24 | 24x 100 Mbit/s |

**Number of Gigabit-ETHERNET ports**

| | |
|---|---|
| 02 | 2x 1000 Mbit/s |

**Media type uplink port 1**

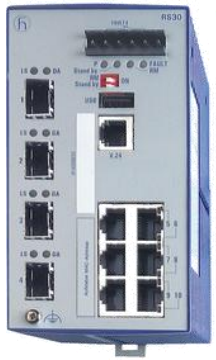
| | |
|---|---|
| T1 | Twisted Pair /RJ45 (10/100/1000Mbit/s) |
| 06 | SFP slot (1000Mbit/s) |
| 00 | Double SFP slot (1000Mbit/s or 100Mbit/s) |

* only combination **00 ZZ** possible

**Media type uplink port 2**

| | |
|---|---|
| T1 | Twisted Pair /RJ45 (10/100/1000Mbit/s) |
| 06 | SFP slot (1000Mbit/s) |
| ZZ | Double SFP slot (100 Mbit/s) |


**RS30 with 2 Gigabit ports and 8/16/24 10/100 BASE-TX ports**



SFP **GE + FE**

SFP **GE + FE**

SFP **FE**

SFP **FE**

SFP Fiberoptic Gigabit ETHERNET Transceiver

**M-SFP-LX/LC** (943 015-001)
optical budget **0dB .. 11dB**
wavelength: **1310nm**
max. length: MM 50/125µm: **0 – 550m**
MM 62,5/125µm: **0 – 550m**
SM 9/125µm: **0 – 20km**

**M-SFP-SX/LC** (943 014-001)
optical budget **0dB .. 7,5dB**
wavelength: **850nm**
max. length: MM 50/125µm: **0 – 550m**
MM 62,5/125µm: **0 – 275m**

**M-SFP-LH/LC** (943 042-001)
optical budget **6dB .. 22dB**
wavelength: **1550nm**
max. length: SM 9/125µm: **10 – 72km**

**M-SFP-LH+/LC** (943 049-001)
optical budget **13dB .. 32dB**
wavelength: **1550nm**
max. length: SM 9/125µm: **44 - 120km**

optional

**Software release**

| | |
|---|---|
| xx.x | Newest software |

**OEM type**

| | |
|---|---|
| H | Standard |
| X | Customer specific |

**Configuration**

| | |
|---|---|
| H | Standard |
| X | Customer specific |

**Software version**

| | |
|---|---|
| E | Enhanced<br>Remote access, diagnosis, filters, redundancy |
| P | Professional:<br>Enhanced software plus security, extended diagnosis and redundancy |
| U | Unmanaged |

**Approvals**

| | |
|---|---|
| A | CE, cUL 508, ISA 12.12.01 class1 div.2 |
| B | CE, cUL 508, ISA 12.12.01 class1 div.2. EN50121-4, ATEX Zone2 |
| H | CE, cUL 508, ISA 12.12.01 class1 div.2. GL, IEC 61850-3, IEEE 1613, EN 50121-4 |

**Power supply**

| | |
|---|---|
| D | 9,6 - 60V DC and 18 - 30 V AC |

**Temperature range**

| | |
|---|---|
| S | Standard 0°C up to +60°C |
| E | Extended -40°C up to +70°C inclusive Conformal Coating |
| T | Extended -40°C up to +70°C |

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# Open Rail

## Managed switches

### max. 4 optical ports

Stand: August 2012

| RS 40 | 00 | 09 | CC | CC | S | D | A | P | H | H | 07.1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Design | FE-ports | 9 GE-ports | port 1 -- port 2 Double port Dual speed SFP | port 3 -- port 4 Double port Dual speed SFP | Temperature | Power Supply | Approvals | Software | Configuration | OEM type | Software release |

Optional

**Compact switch (Rail)**

RS 40 — 9x Gigabit-ETHERNET

**Number of Fast-ETHERNET ports**

00

**Number of Gigabit-ETHERNET ports**

09 — 9x 10/100/1000 Mbit/s

- 5x 10/100/1000 Mbit/s
- 4x Combo ports SFP or RJ45

1. Combo SFP FE & GE
2. Combo SFP FE & GE
3. Combo SFP FE & GE
4. Combo SFP FE & GE
9. 10/100/1000BASE-TX


1. Combo 10/100/1000BASE-TX
2. Combo 10/100/1000BASE-TX
3. Combo 10/100/1000BASE-TX
4. Combo 10/100/1000BASE-TX
5. 10/100/1000BASE-TX
6. 10/100/1000BASE-TX
7. 10/100/1000BASE-TX
8. 10/100/1000BASE-TX

**Software release**

- xx.x — Newest software

**OEM type**

- H — Standard
- X — Customer specific

**Configuration**

- H — Standard
- X — Customer specific

### Software version

- E — Enhanced: Remote access, diagnosis, filters, redundancy
- P — Professional: Enhanced software plus security, extended diagnosis and redundancy

### Approvals

- A — CE, cUL 508, ISA 12.12.01 class1 div.2
- B — CE, cUL 508, ISA 12.12.01 class1 div.2. EN50121-4, ATEX Zone2
- H — CE, cUL 508, ISA 12.12.01 class1 div.2. GL, IEC 61850-3, IEEE 1613, EN 50121-4

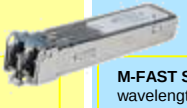
### Power supply

- D — 9,6 - 60V DC and 18 - 30 V AC

### Temperature range

- S — Standard 0°C up to +60°C
- E — Extended -40°C up to +70°C inclusive Conformal Coating
- T — Extended -40°C up to +70°C

## SFP Fiberoptic Gigabit ETHERNET Transceiver



**M-SFP-SX/LC** (943 014-001)
optical budget **0dB .. 7,5dB**
wavelength: **850nm**
max. length: MM 50/125µm: **0 – 550m**
MM 62,5/125µm: **0 – 275m**

**M-SFP-LH/LC** (943 042-001)
optical budget **6dB .. 22dB**
wavelength: **1550nm**
max. length: SM 9/125µm: **10 – 72km**

**M-SFP-LX/LC** (943 015-001)
optical budget **0dB .. 11dB**
wavelength: **1310nm**
max. length: MM 50/125µm: **0 – 550m**
MM 62,5/125µm: **0 – 550m**
SM 9/125µm: **0 – 20km**

**M-SFP-LH+/LC** (943 049-001)
optical budget **13dB .. 32dB**
wavelength: **1550nm**
max. length: SM 9/125µm: **44 - 120km**

## SFP Fiberoptic Fast ETHERNET Transceiver

**M-FAST SFP MM/ LC** (943 865-001)
wavelength: **1310nm**
max. length: MM 50/125µm: **0-5km**
**0-11dB**
MM 62,5/125µm: **0-4km**
**0-8dB**

**M-FAST SFP SM+/ LC** (943 867-001)
optical budget **10-29dB**
wavelength: **1310nm**
max. length: SM 9/125µm: **25-65km**

**M-FAST SFP SM/ LC** (943 866-001)
optical budget **0-13dB**
wavelength: **1310nm**
max. length: SM 9/125µm: **0-25km**

**M-FAST SFP LH/ LC** (943 868-001)
optical budget **10-29dB**
wavelength: **1550nm**
max. length: SM 9/125µm: **40-104km**

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# Open Rail

## Managed switches

max. 4 optical ports

Stand: August 2012

| RS 30 | 08 | 02 | 00 | ZZ | S | D | A | P | H | H | 07.1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Design | FE-ports | GE-ports | port 1 -- port 2 -- port 3 -- port 4 | | Temperature | Power Supply | Approvals | Software | Configuration | OEM type | Software release |

Optional

**Compact switch (Rail)**

RS 30 — 2x Gigabit-ETHERNET uplinks

**Number of Fast-ETHERNET ports**

- 08 — 8x 100 Mbit/s
- 16 — 16x 100 Mbit/s
- 24 — 24x 100 Mbit/s

**Number of Gigabit-ETHERNET ports**

- 02 — 2x 1000 Mbit/s

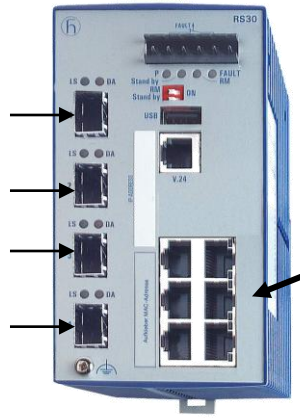
**port 1and port 2 Media type**

- 00 — **Double port** SFP slot (1000Mbit/s or 100Mbit/s)

**port 3 and port 4 Media type**

- ZZ — **Double port** SFP slot (100Mbit/s)

**RS30 with 4 fiber ports and 6/14/22 10/100 Mbit/s ports Twisted Pair**




**Software release**

- xx.x — Newest software

**OEM type**

- H — Standard
- X — Customer specific

**Configuration**

- H — Standard
- X — Customer specific

**Software version**

- E — Enhanced: Remote access, diagnosis, filters, redundancy
- P — Professional: Enhanced software plus security, extended diagnosis and redundancy
- U — unmanaged

**Approvals**

- A — CE, cUL 508, ISA 12.12.01 class1 div.2
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**Power supply**

- D — 9,6 - 60V DC and 18 - 30 V AC

**Temperature range**

- S — Standard 0°C up to +60°C
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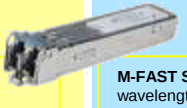

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**M-FAST SFP LH/ LC** (943 868-001)
optical budget **10-29dB**
wavelength: **1550nm**
max. length: SM 9/125µm: **40-104km**