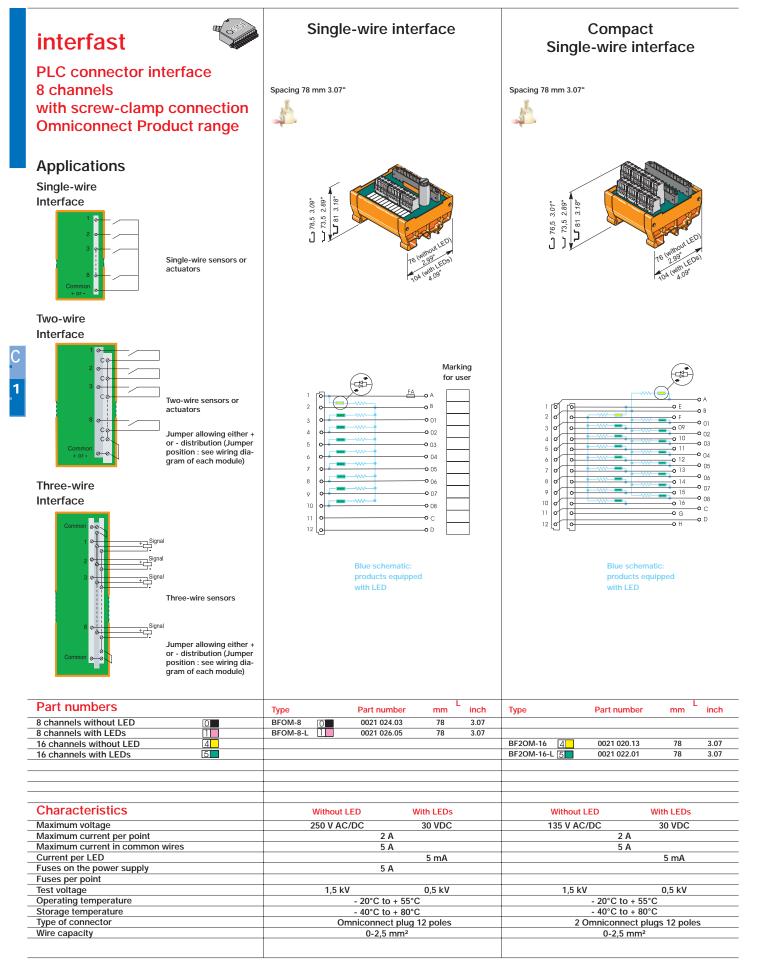
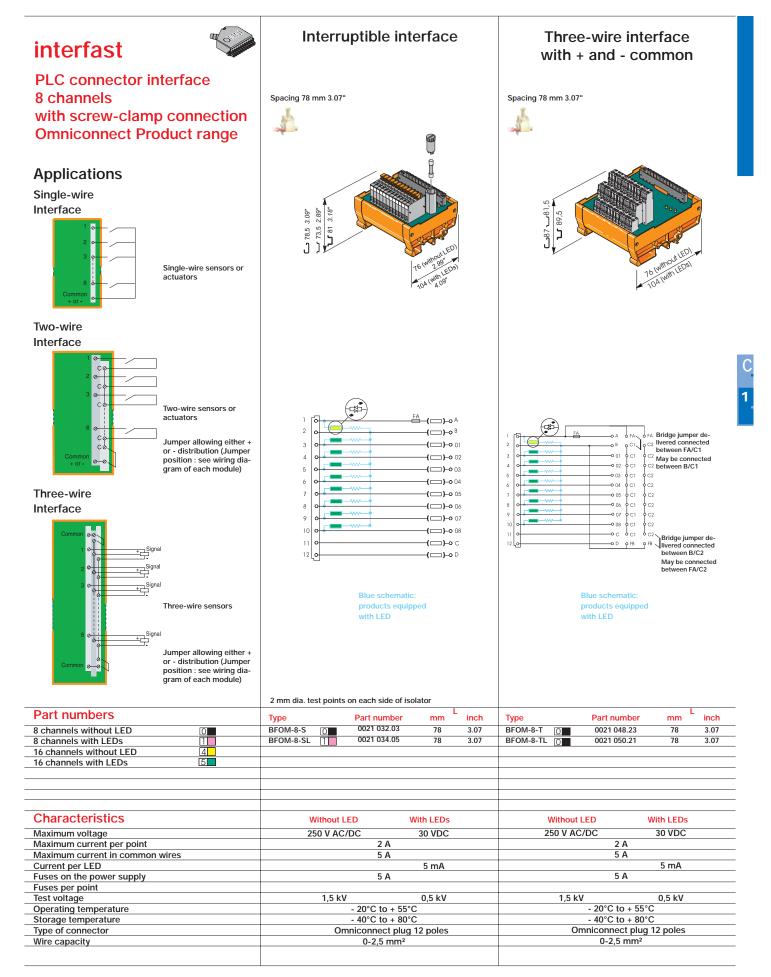
Interface boards

entrelec

Summary

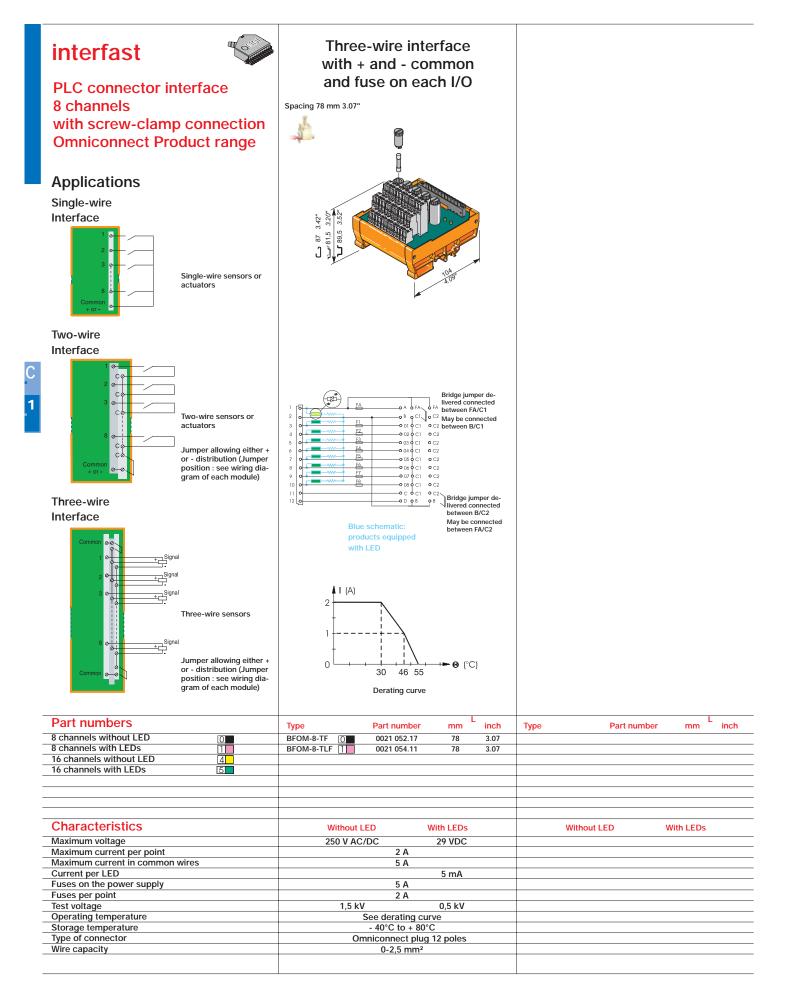
| C1 - Screw connection interfaces | 152 | |
|-----------------------------------|-----|----------|
| C2 - Screw decoupling interfaces | 162 | <u> </u> |
| | | |
| C3 - Spring connection interfaces | 178 | |
| C4 - Spring decoupling interfaces | 188 | |

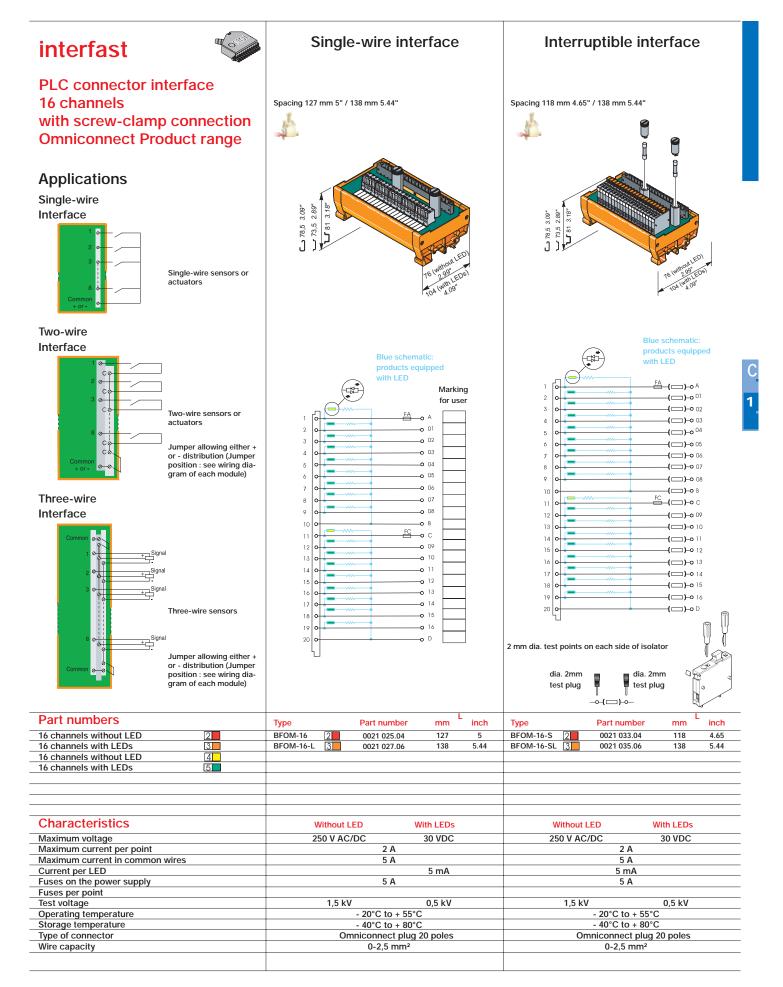




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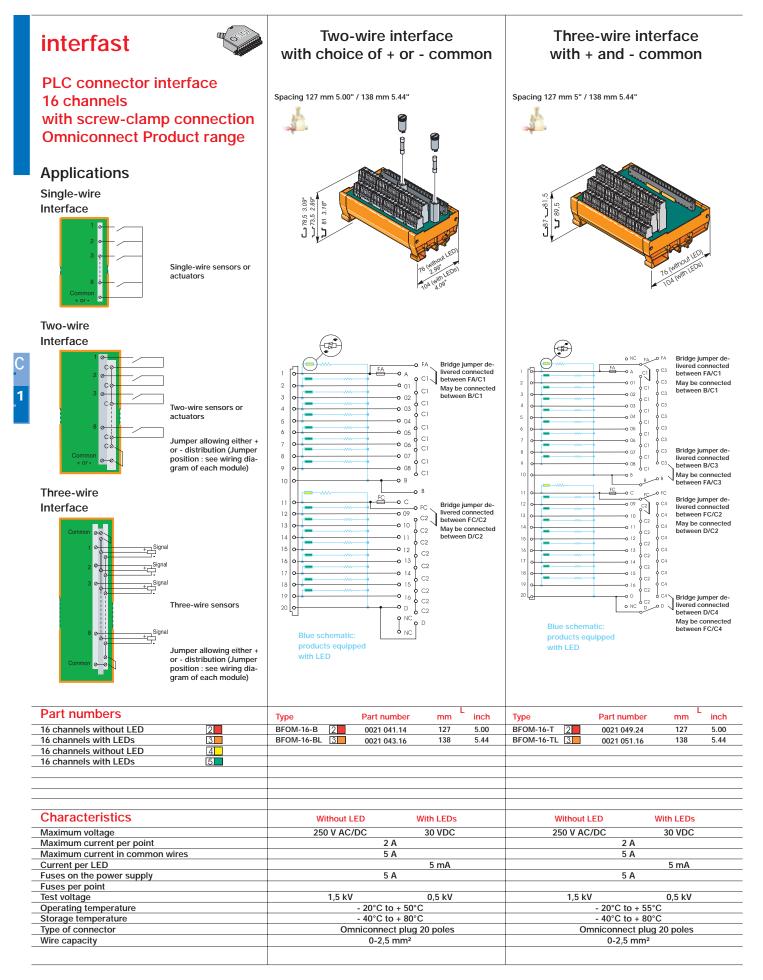
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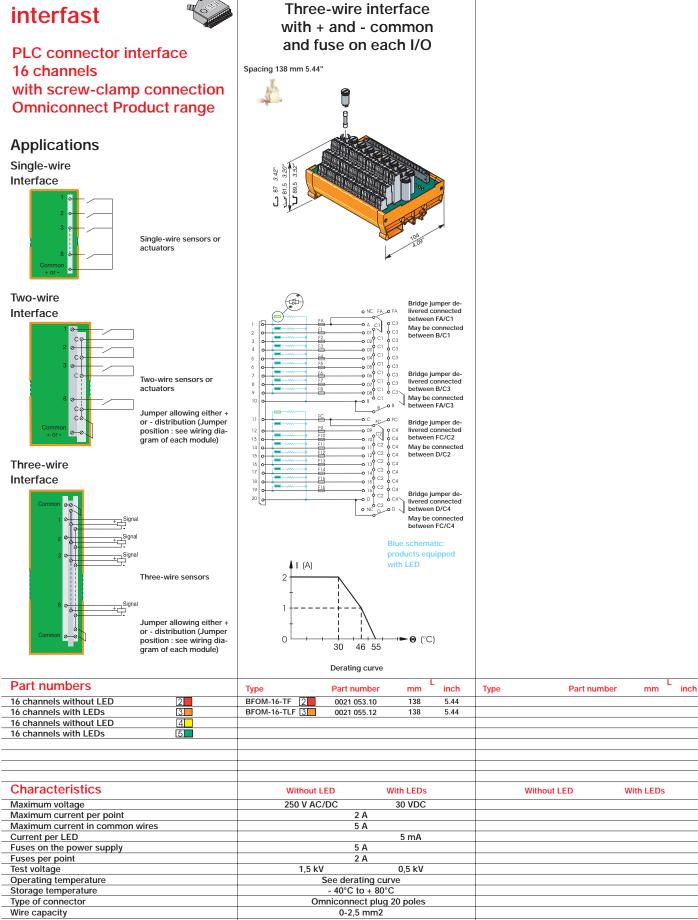


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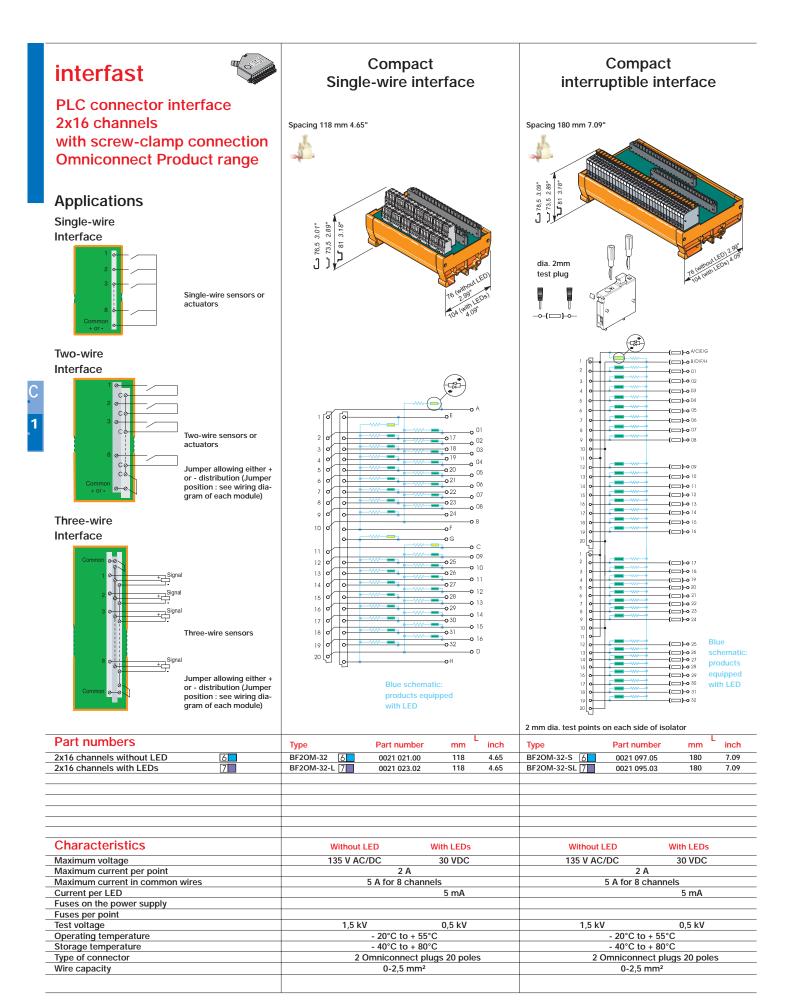
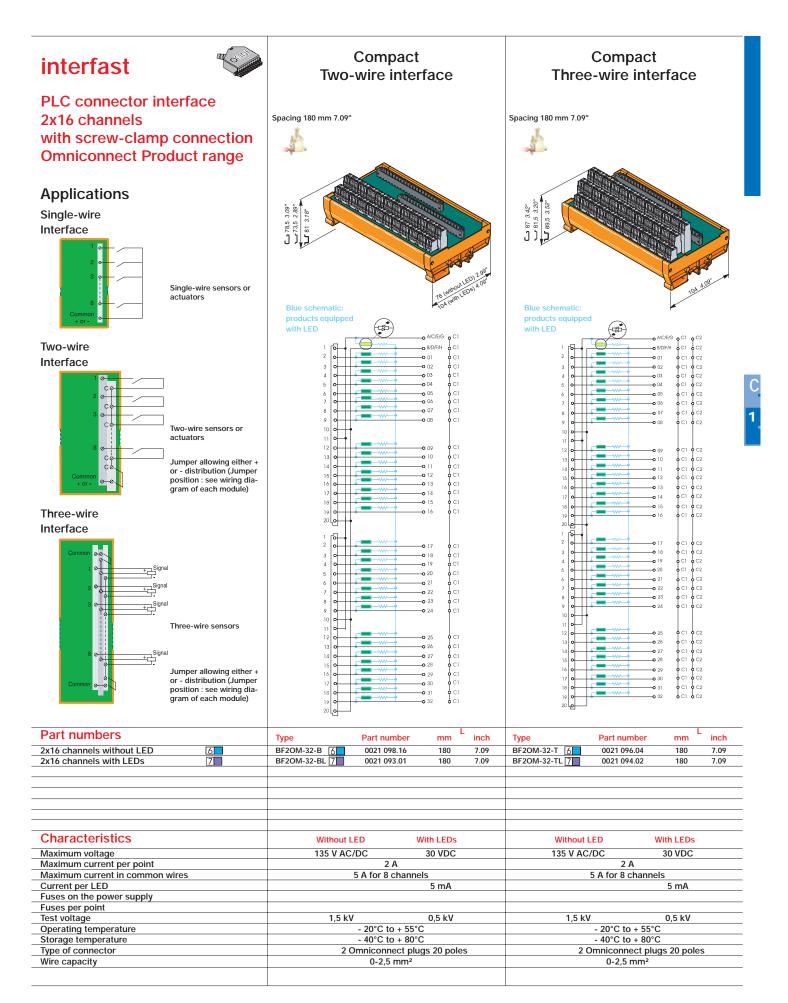


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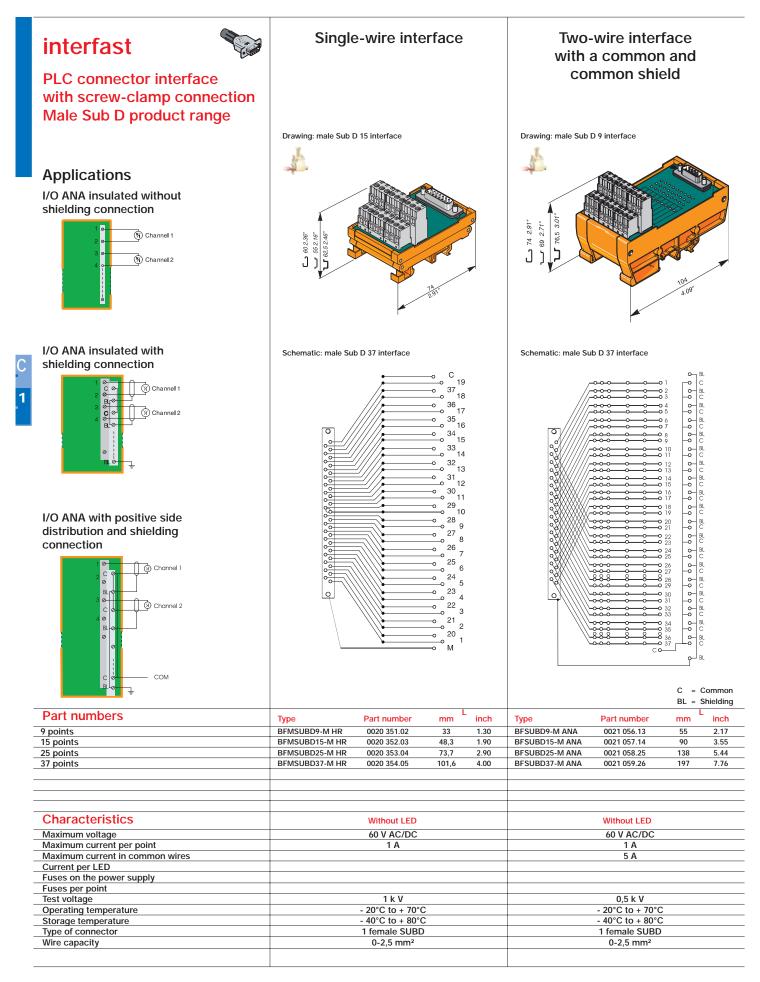
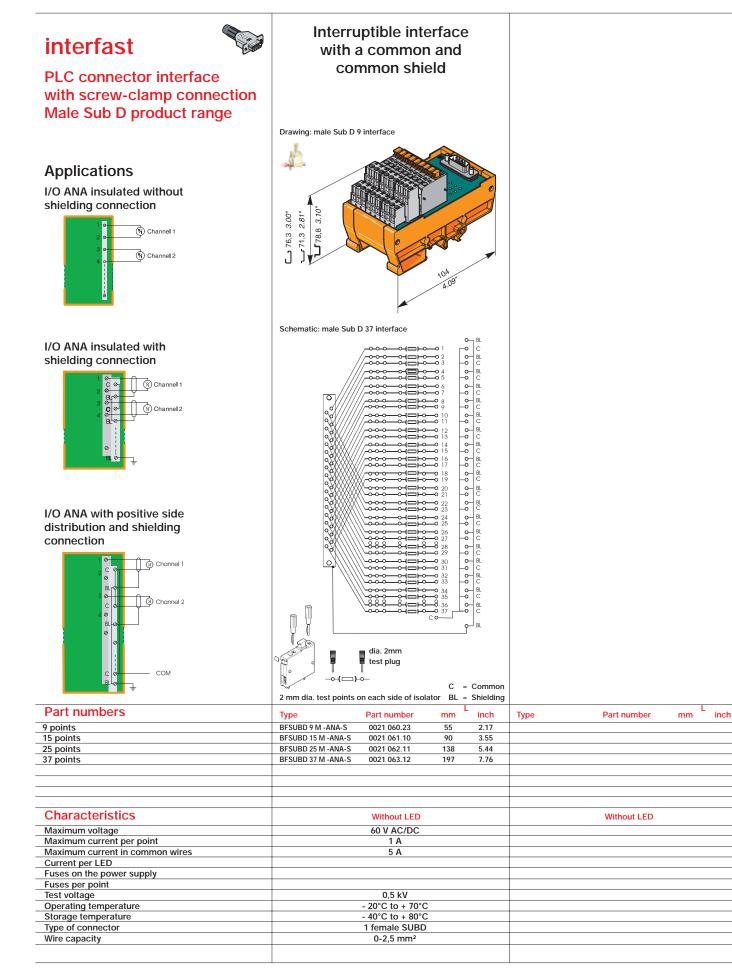


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| interfast Decoupling interface for PLC 16 optocoupler interface Omniconnect and HE 10/26 point product range | optocoupler i | pcouplers nput interface ge current insulated input |
|---|---|--|
| Part numbers | Permits electrical isolation between an AC input and a DC output. Protected against leakage current ≤ 5 mA. Indicating LED for PLC card supply. Inputs are mutually isolated for multi-source applications. Type P/N OI 16C-050 24 VAC / VDC 0020 921.16 OI 16C-050 48 VAC / VDC 0020 922.17 | Wiring diagram Positive common Fuse Fuse Foo mA Comparison Comp |
| Approval Characteristics INPUT Input voltage Typical triggering threshold Input current Switching time C/O Leakage current OUTPUT Max. output voltage Max. output current Residual voltage max. I and rated U standard U max. Input / Output isolation Isolation between each input channel | OI 16C-050 110 VAC 0020 923.10 OI 16C-050 230 VAC 0020 924.11 24 VAC/VDC 48 VAC/VDC 110VAC 50Hz 110 VAC 21,6 to 26,4 V 43,2 to 52,8 V 94 to 152 V 94 to 127 V 196 to 276 V 15 V 30 V 94 V 94 V 196 V 9 to 12 mA 9 to 11 mA 15 to 25 mA 15 to 25 mA 18 to 26 mA 1ms/25ms 1ms/55ms 10ms/25ms 10ms/25ms 10ms/25ms 1,5 mA 1,5 mA 5 mA 5 mA 5 mA 30 V 30 V 2000 V eff. 2000 V eff. | $\begin{array}{c} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 $ |
| TEMPERATURE Ambient temperature Storage Operating Wire capacity | - 40°C to + 80°C - 20°C to + 50°C 0 - 2,5 mm ² | Interface with positive common connection on optocouplers output. Interface compatible with automate input cards with negative common connection. |

 B27
 Low Voltage Products & Systems

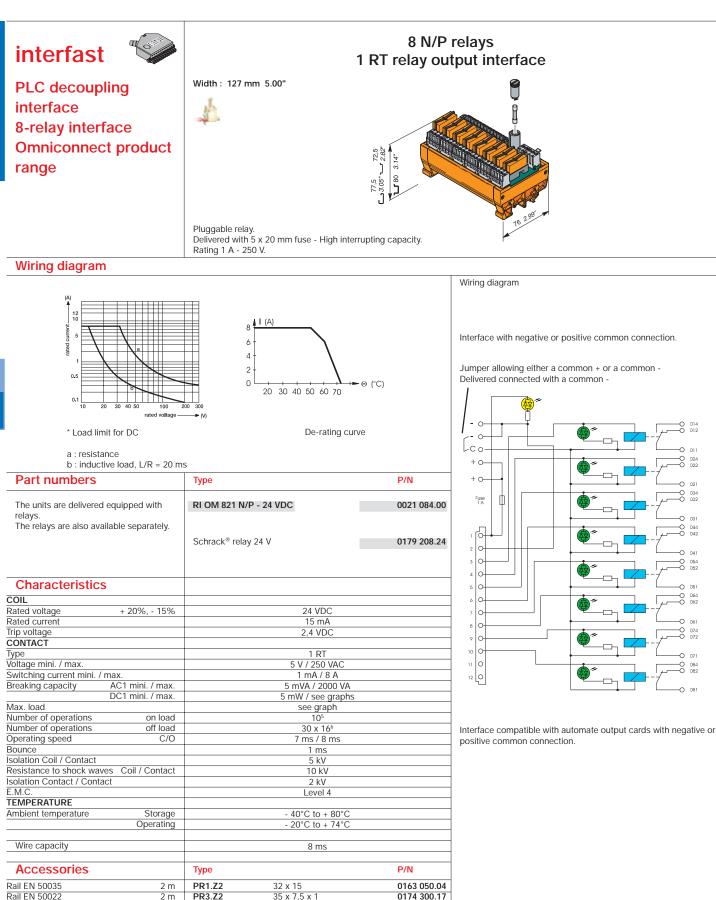
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| interfast Decoupling interface for PLC 16 optocoupler interface Omniconnect and HE 10/26 point product range | 16 P optocouplers optocoupler input interface protected against current leakage Width 254 mm 10" Image: Colspan="2">Image: Colspan="2">Image: Colspan="2" Image: Colspan="2" Image: Colspan="2" Image: Colspan="2" |
|--|--|
| | Delivered with 5 x 20 mm fuses - High interrupting capacity - Rating 500 mA - 250 V. |
| Wiring diagram | Permits electrical isolation between an AC input and a DC output. Protected against leakage current ≤ 5 mA. Indicating LED for PLC card supply. Inputs are mutually isolated for multi-source applications Input voltage. Positive common Positive common Inputs description of the protection of t |
| Part numbers | Type P/N OI 16C-050-B 24 VAC / VDC 0020 917.12 OI 16C-050-B 48 VAC / VDC 0020 917.12 OI 16C-050-B 48 VAC / VDC 0020 918.23 OI 16C-050-B 110 VAC 0020 919.24 OI 16C-050-B 230 VAC 0020 912.21 |
| Approval Characteristics | |
| INPUT Input voltage Typical triggering threshold Input current Switching time C/O Leakage current | 24 VAC/VDC 48 VAC/VDC 110VAC 50Hz 230 VAC 120 0 12 0 10 0 10 0 10 0 10 0 10 0 10 |
| OUTPUT Max. output voltage Max. output current | $\begin{array}{c} 1 \\ \hline \\$ |
| Residual voltage max. I and rated U standard U max. | <pre></pre> |
| TEMPERATURE Ambient temperature Storage Operating | - 40°C to + 80°C Interface with positive common connection on optocouplers output. - 20°C to + 50°C Interface compatible with automate input cards with negative common connection. |
| Wire capacity | 0 - 2,5 mm ² |

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35 x 15 x 2,3

35 x 15 x 1.5 th. 9,1 mm

0168 500.12

0168 700.22

0103 002.26

042

041

051

062

084 082

Rail EN 50022

Rail

164

End stop

2 m

2 m

(all rails)

PR4

PR5

BAM

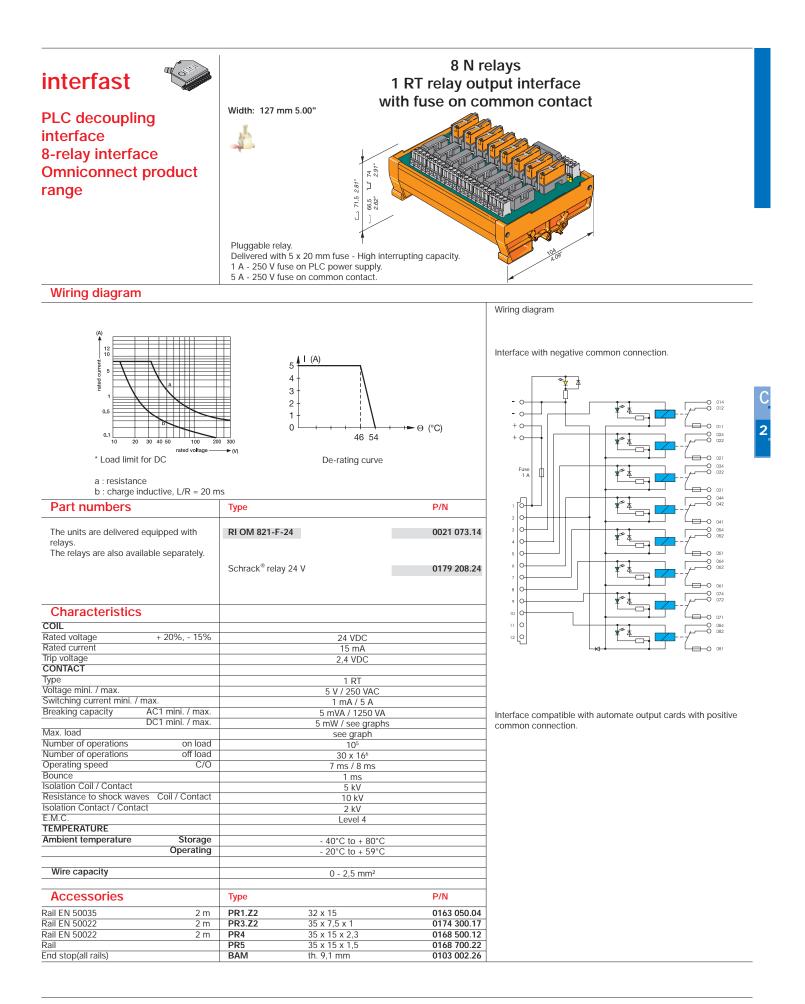
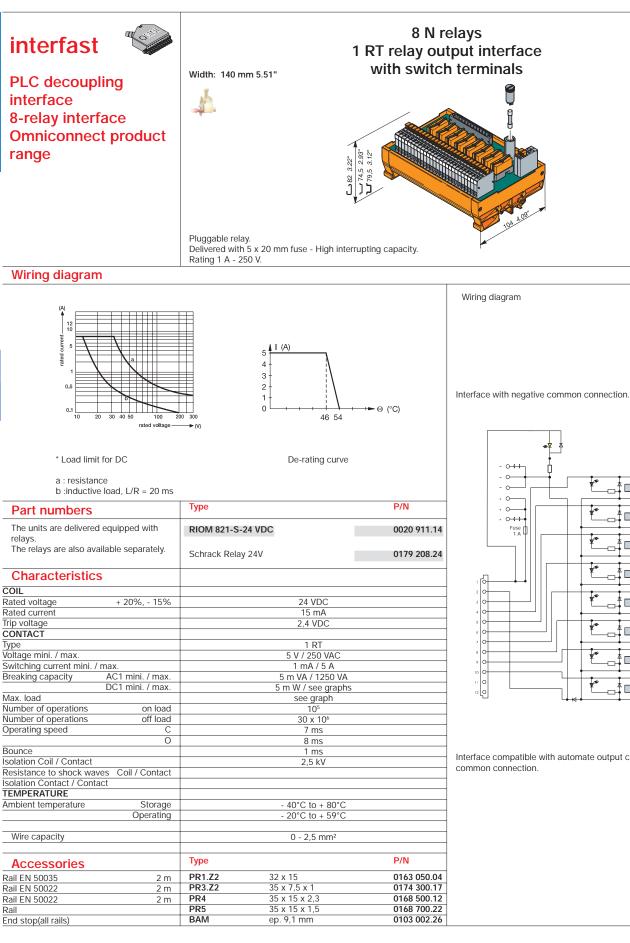
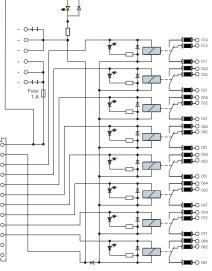


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Interface compatible with automate output cards with positive

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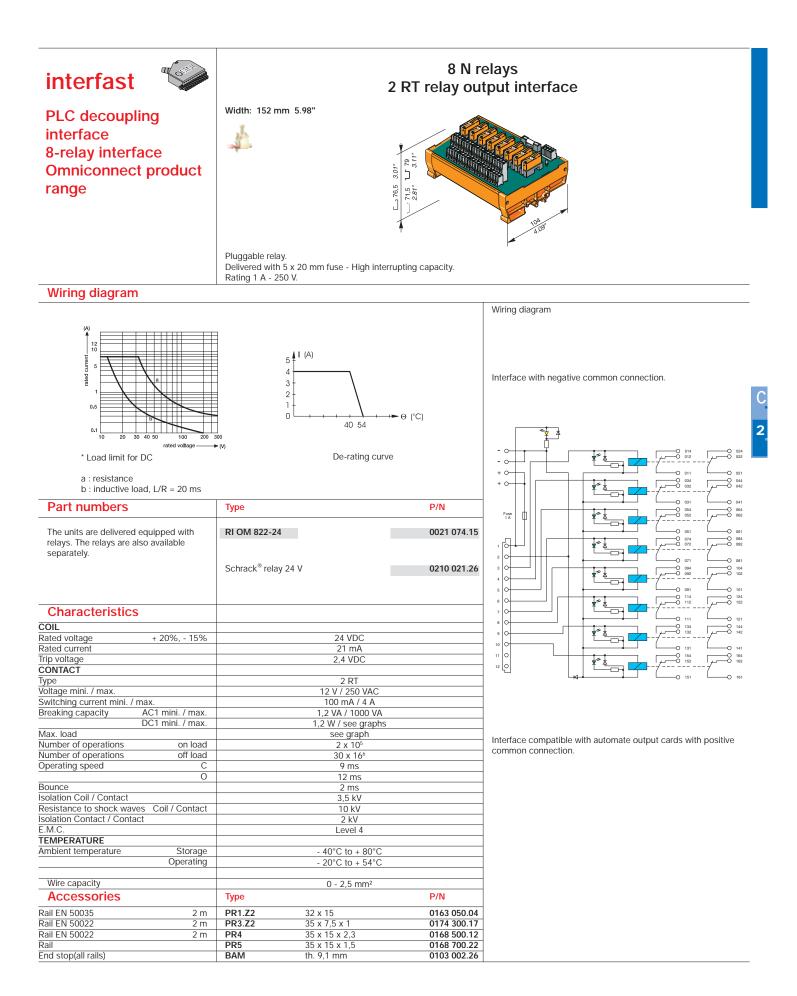
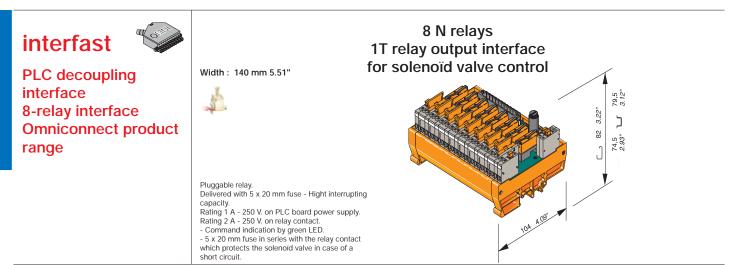
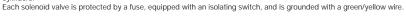


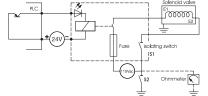
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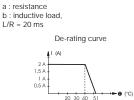


Wiring diagram

In the automobile industry, 50% of PLC outputs control solenoïd valves which work in pairs to control pneumatic or hydraulic cylinders

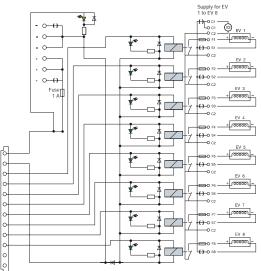






* Load limit for DC

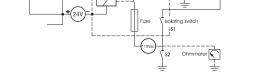




Interface with negative common connection.

Interface compatible with automate output cards with positive common connection.

2



If an insulation failure occurs between the solenoïd valve's E1 (+) and the ground (coil wire in contact with the frame), the fuse provides short circuit protection. A fault may appear between the solenoid valve's E2 (-) and the ground without disturbing , operation

To detect these faults, inspection operations are conducted.

Inspection operation:

After opening S2, measure the resistance between the circuit and the ground; by successively opening all of the isolating swit-ches S1, the solenoid valve (E2) in contact with ground is detected when the ohmmeter registers a high value.

| Part numbers | | Туре | | P/N | |
|------------------------------------|--------------------|---------------------------|----------------------|-------------|--|
| The units are delivered | equipped with | RIOM 8 CEV | - 24 VDC | 0021 075.16 | |
| relays. The relays are also ava | ilable constately | Schrack [®] rela | v 24V | | |
| The relays are also ava | liable separately. | | <i>y</i> 210 | 0179 208.24 | |
| Characteristics | ; | | | | |
| COIL | | | | | |
| Rated voltage | + 20%, - 15% | | 24 VDC | | |
| Rated current | | | 15 mA | | |
| Trip voltage | | | 2,4 VDC | | |
| CONTACT | | | | | |
| Туре | | | 1 T | | |
| Voltage mini. / max. | | | 5 V / 250 VAC | | |
| Switching current mini. / I | | | 1 mA / 5 A | | |
| Breaking capacity | AC1 mini. / max. | | 5 m VA / 1250 V | | |
| | DC1 mini. / max. | | 5 m W / see grap | hs | |
| Max. load | | see graph | | | |
| Number of operations | on load | | 10 ⁵ | | |
| Number of operations | off load | | 30 x 10 ⁶ | | |
| Operating speed | C/0 | | 7 ms / 8 ms | | |
| Bounce | | | 1 ms | | |
| Isolation Coil / Contact | | 2,5 kV | | | |
| Resistance to shock wave | | | | | |
| Isolation Contact / Conta | | | | - | |
| Distribution on the positive sid | | | 16 A by group of | | |
| Distribution on the negative | e side of the EV's | | 16 by group of 8 | 3 | |
| TEMPERATURE | | | | | |
| Ambient temperature | Storage | | - 40°C to + 80°C | | |
| | Operating | | - 20°C to + 51°C | | |
| Wire capacity | | | 0 - 2,5 mm² | | |
| Accessories | | Туре | 5 2,5 1111 | P/N | |
| Rail EN 50035 | 2 m | PR1.Z2 | 32 x 15 | 0163 050.04 | |
| Rail EN 50022 | 2 m | PR3.Z2 | 35 x 7,5 x 1 | 0174 300.17 | |
| Rail EN 50022 2 m | | | | | |
| Rail | | PR5 | 35 x 15 x 1,5 | 0168 700.22 | |
| End stop(all rails) | | BAM | th. 9,1 mm | 0103 002.26 | |

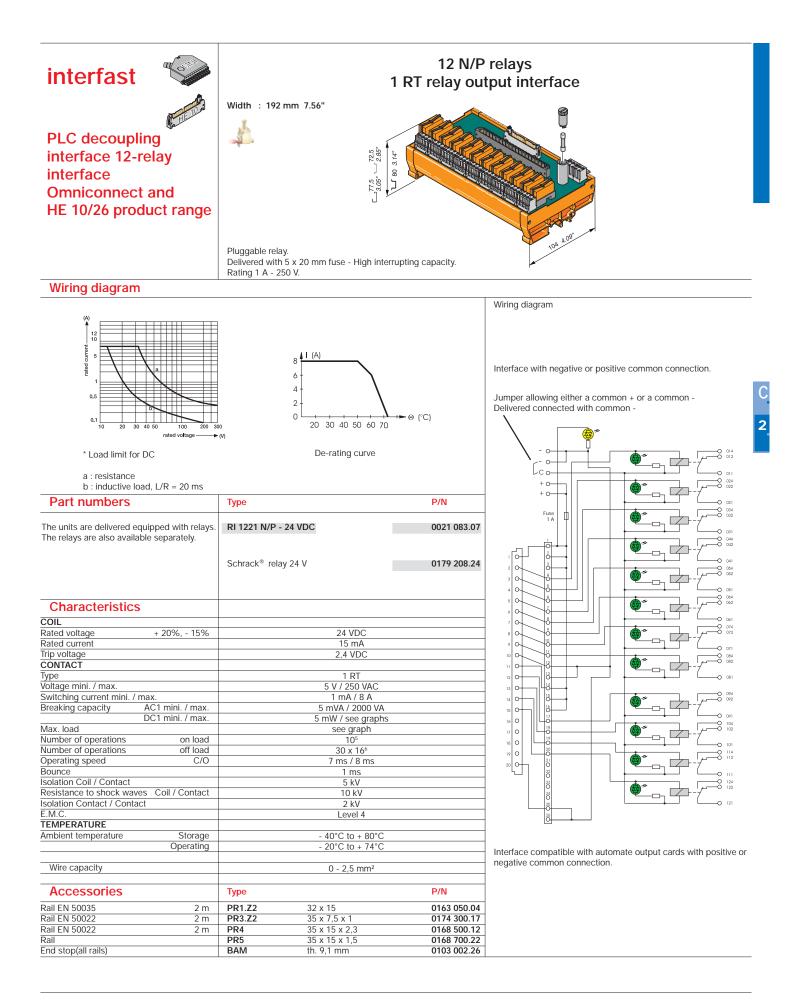
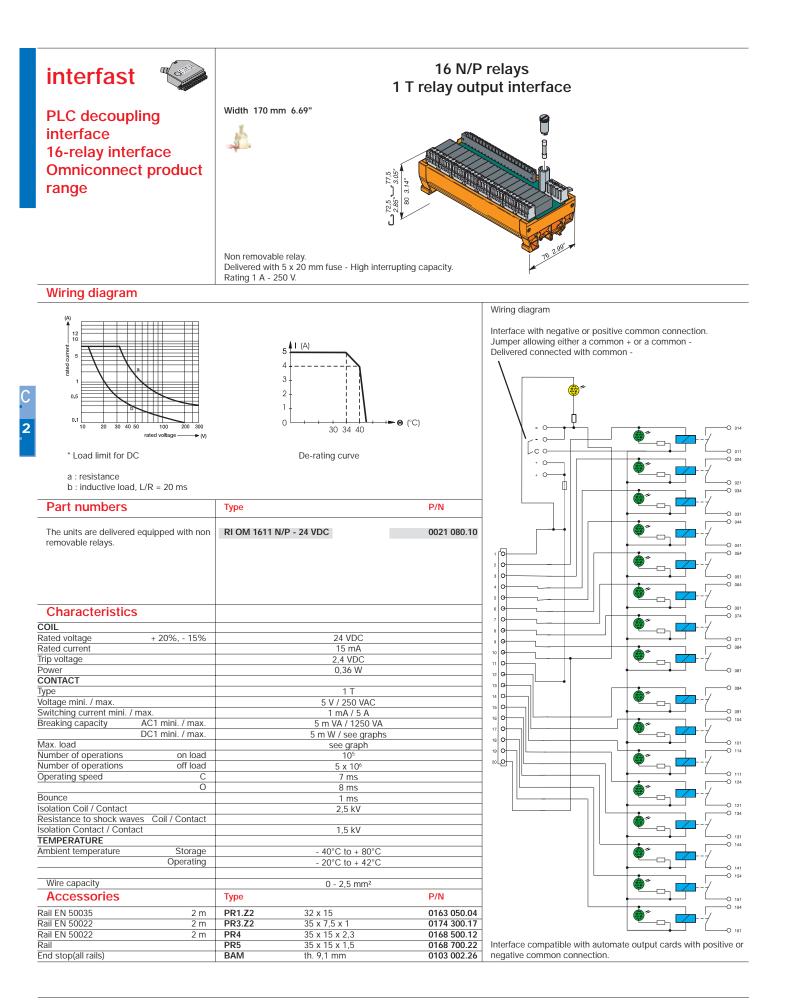
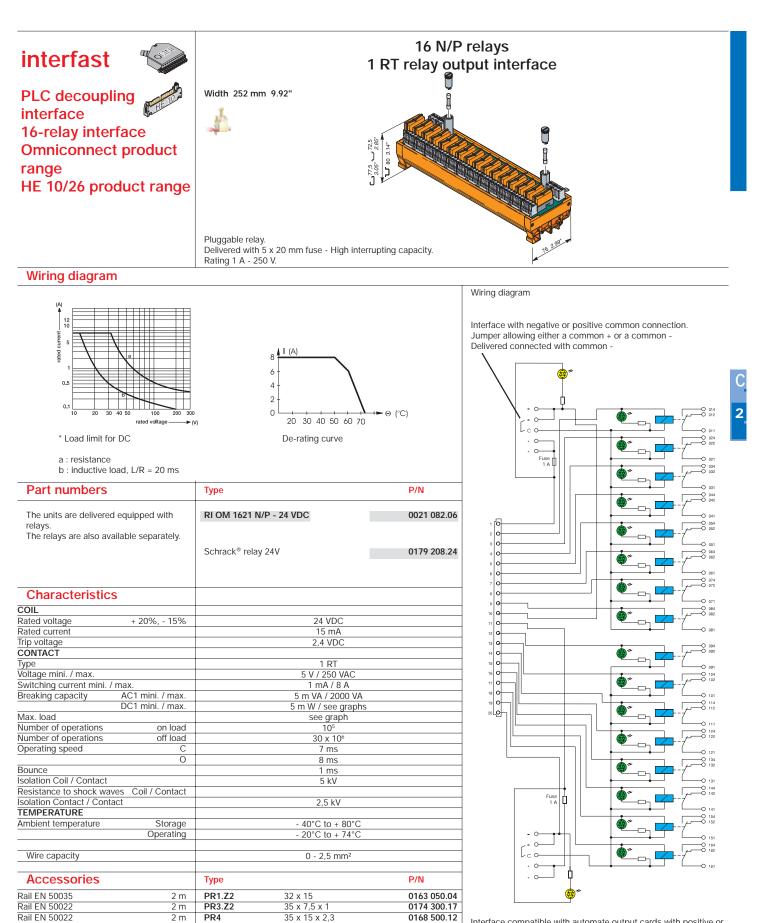


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 0168 500.12
 Interface compatible with automate output cards with positive or negative common connection.

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Rail

End stop(all rails)

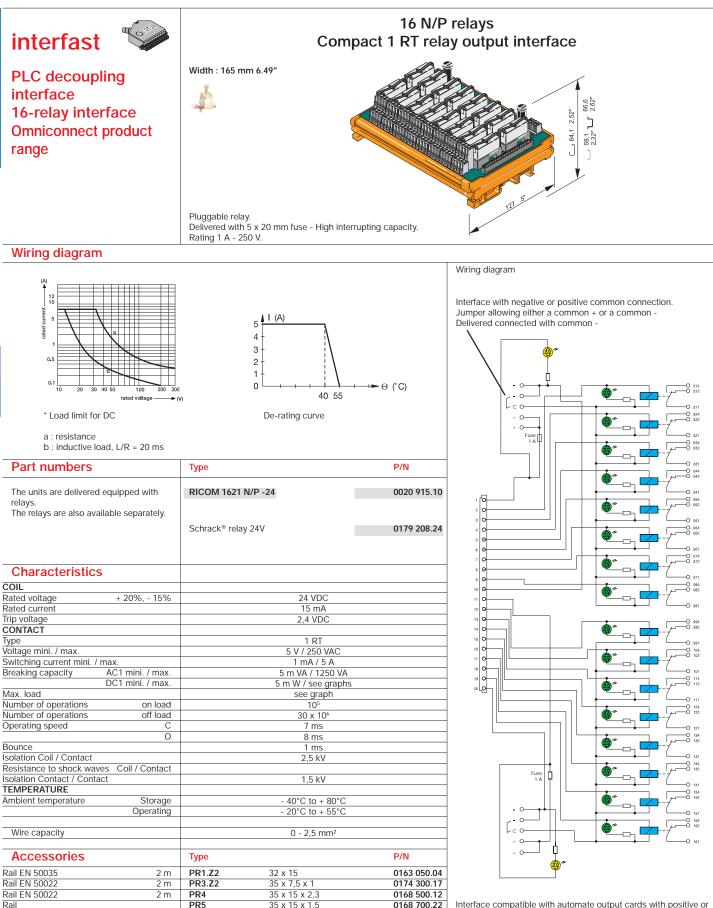
35 x 15 x 1.5

th. 9,1 mm

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PR5

BAM



0168 700.22 Interface compatible with automate output cards with positive or negative common connection.

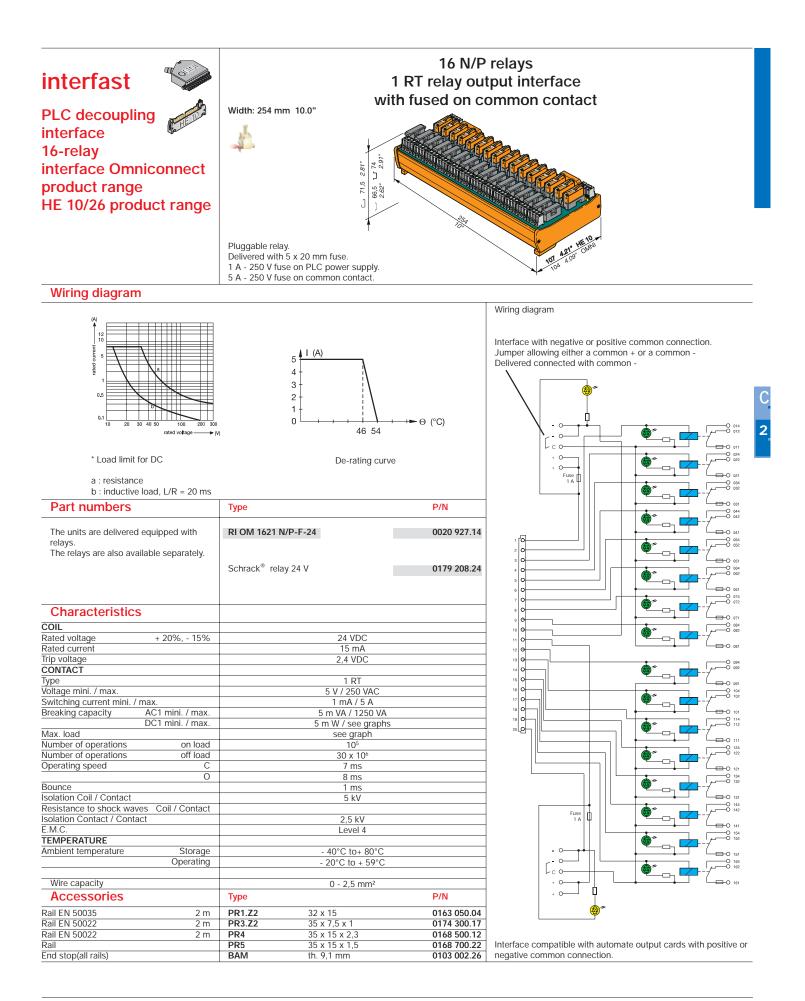
172

th. 9,1 mm

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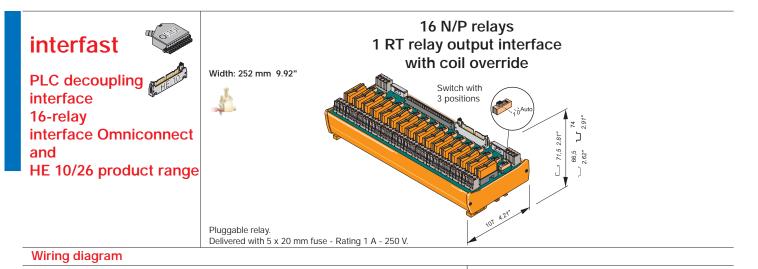
End stop(all rails)

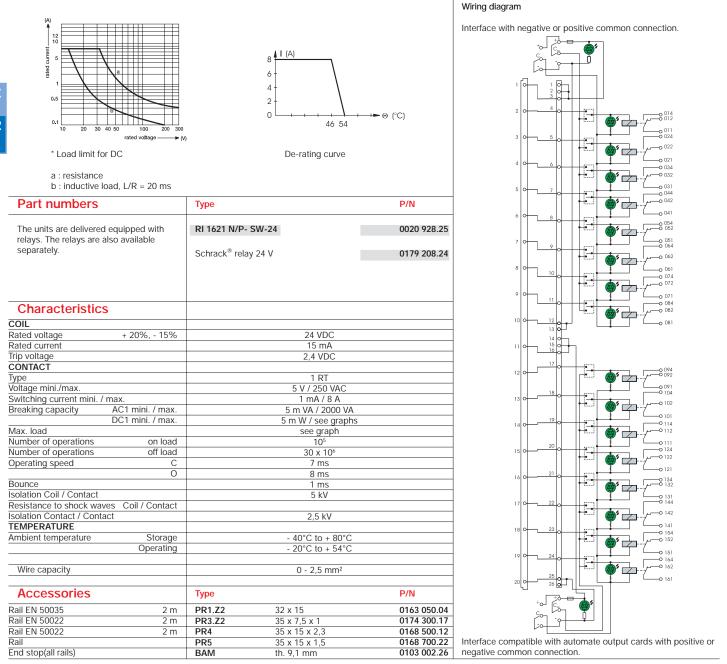
BAM



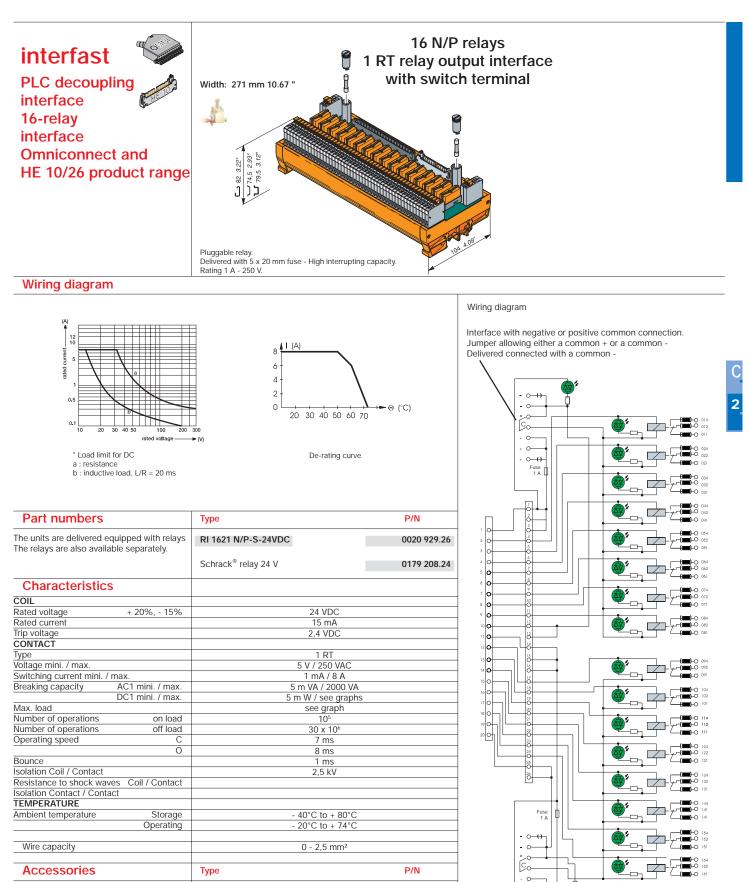
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PR1.Z2 0163 050.04 2 m 32 x 15 0 35 x 7,5 x 1 PR3.Z2 0174 300.17 2 m ~~~~ 35 x 15 x 2,3 0168 500.12 PR4 2 m 0168 700 22 Interface compatible with automate output cards with positive or PR5 35 x 15 x 1.5 BAM th. 9,1 mm 0103 002.26 negative common connection.

Low Voltage Products & Systems

Rail EN 50035

Rail EN 50022

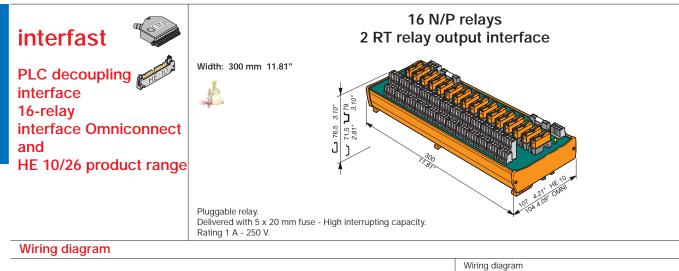
Rail EN 50022

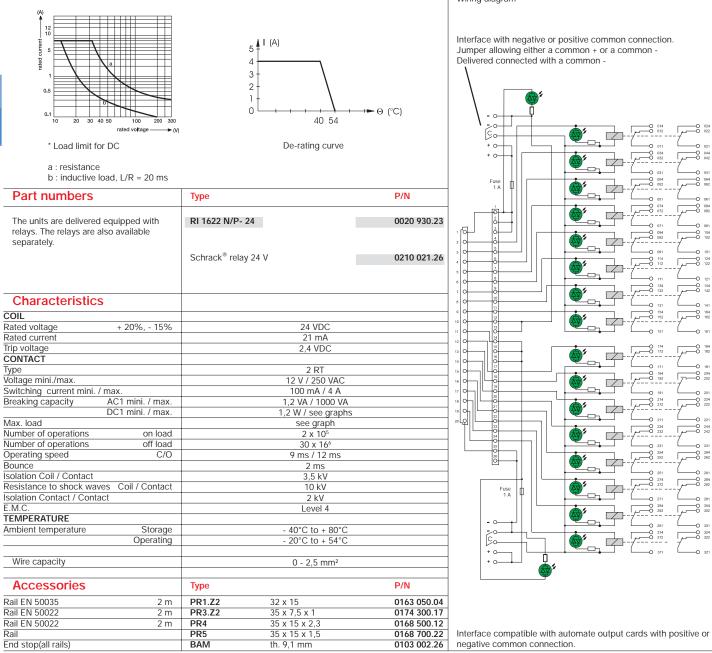
End stop(all rails)

Rail

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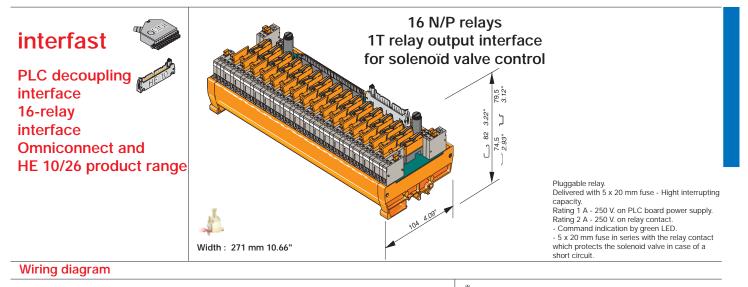




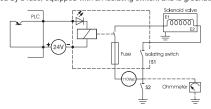
176

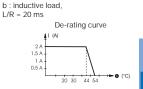
2

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In the automobile industry, 50% of PLC outputs control solenoïd valves which work in pairs to control pneumatic or hydraulic cylinders Each solenoïd valve is protected by a fuse, equipped with an isolating switch, and is grounded with a green/yellow wire.





2

* Load limit for DC

a : resistance

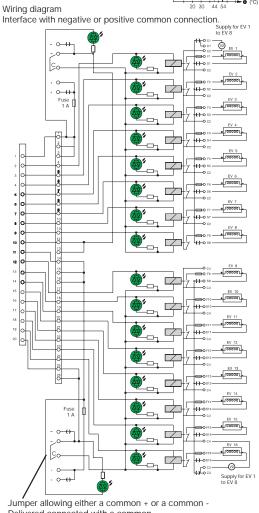
If an insulation failure occurs between the solenoïd valve's E1 (+) and the ground (coil wire in contact with the frame), the fuse provides short circuit protection. A fault may appear between the solenoid valve's E2 (-) and the ground without disturbing , operation

To detect these faults, inspection operations are conducted.

Inspection operation:

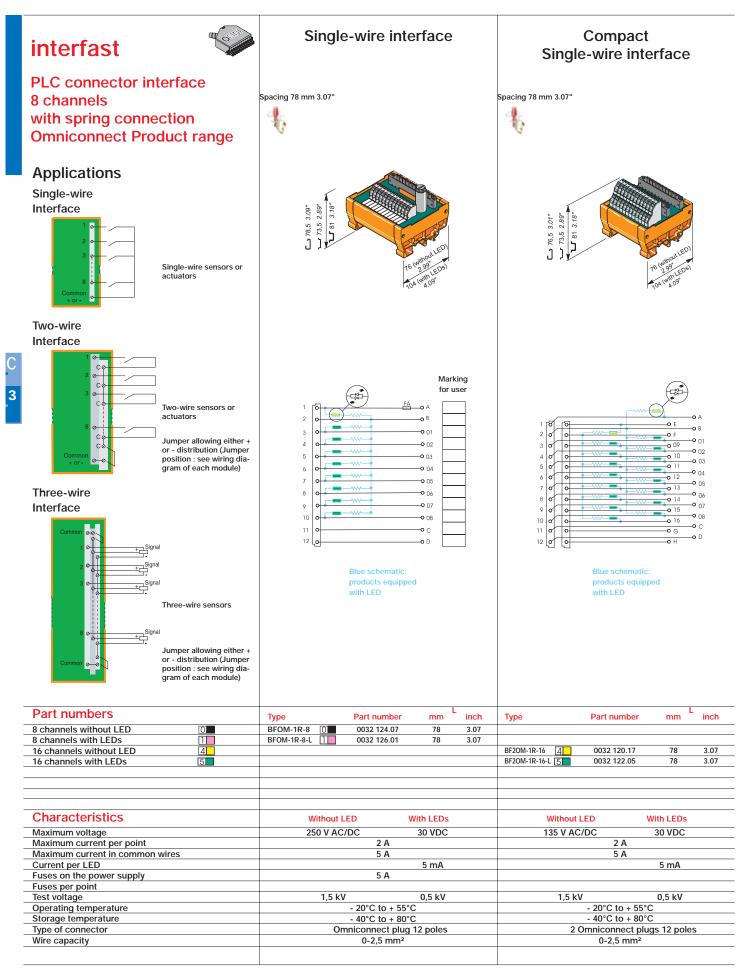
After opening S2, measure the resistance between the circuit and the ground; by successively opening all of the isolating swit-ches S1, the solenoid valve (E2) in contact with ground is detected when the ohmmeter registers a high value.

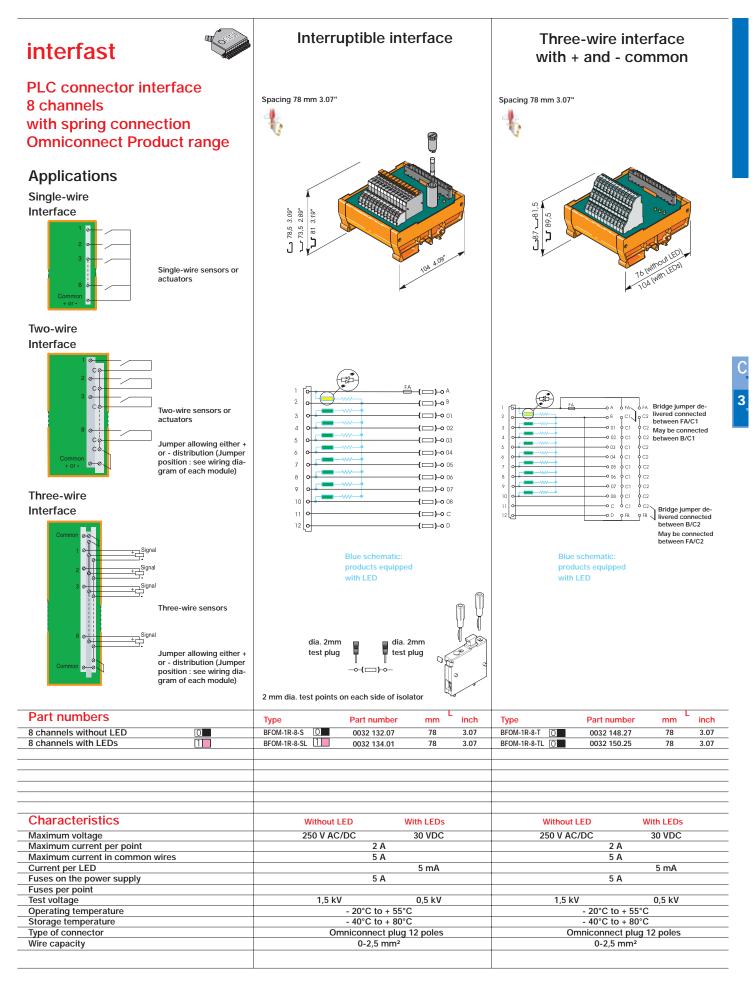
| Part numbers | Туре | | P/N |
|---|---------------------------|-------------------------|-------------|
| The units are delivered equipped with relays The relays are also available separately. | RI 16 CEV N/ | P - 24 V DC | 0020 931.10 |
| | Schrack [®] rela | y 24V | 0179 208.24 |
| Characteristics | | | |
| COIL | | | |
| Rated voltage + 20%, - 15% | | 24 VDC | |
| Rated current | | 15 mA | |
| Trip voltage | | 2,4 VDC | |
| CONTACT | | | |
| Туре | | 1 T | |
| Voltage mini. / max. | | 5 V / 250 VAC | |
| Switching current mini. / max. | | 1 mA / 5 A | |
| Breaking capacity AC1 mini. / max. | | 5 m VA / 1250 VA | |
| DC1 mini. / max. | | 5 m W / see graphs | |
| Max. load | | see graph | |
| Number of operations on load | | 105 | |
| Number of operations off load | | 30 x 10 ⁶ | |
| Operating speed C/O | | 7 ms / 8 ms | |
| Bounce | | 1 ms | |
| Isolation Coil / Contact | | 2,5 kV | |
| Resistance to shock waves Coil / Contact | | | |
| Isolation Contact / Contact | | | |
| Distribution on the positive side of the contacts | | 16 A by group of 8 | |
| Distribution on the negative side of the EV's | | 16 A by group of 8 | |
| TEMPERATURE | | | |
| Ambient temperature Storage | | - 40°C to + 80°C | |
| Operating | | - 20°C to + 51°C | |
| Wire capacity | | | |
| | | 0 - 2,5 mm ² | |
| Accessories | Туре | | P/N |
| Rail EN 50035 2 m | PR1.Z2 | 32 x 15 | 0163 050.04 |
| Rail EN 50022 2 m | PR3.Z2 | 35 x 7,5 x 1 | 0174 300.17 |
| Rail EN 50022 2 m | PR4 | 35 x 15 x 2,3 | 0168 500.12 |
| Rail | PR5 | 35 x 15 x 1,5 | 0168 700.22 |
| End stop(all rails) | BAM | th. 9,1 mm | 0103 002.26 |



Delivered connected with a common

Interface compatible with automate output cards with positive or negative common connection





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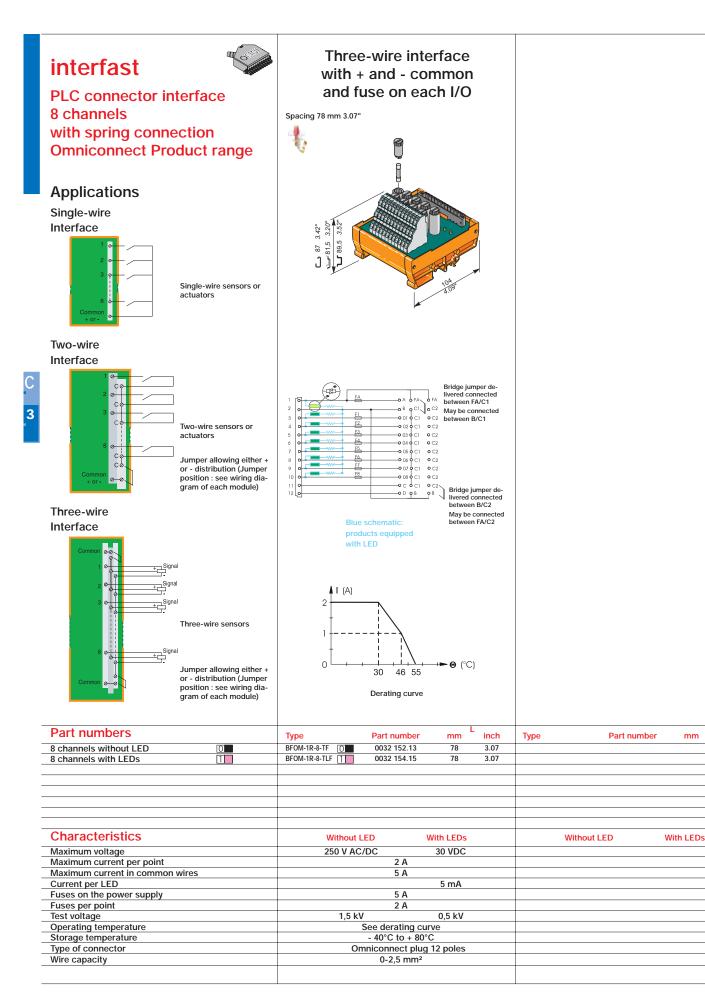
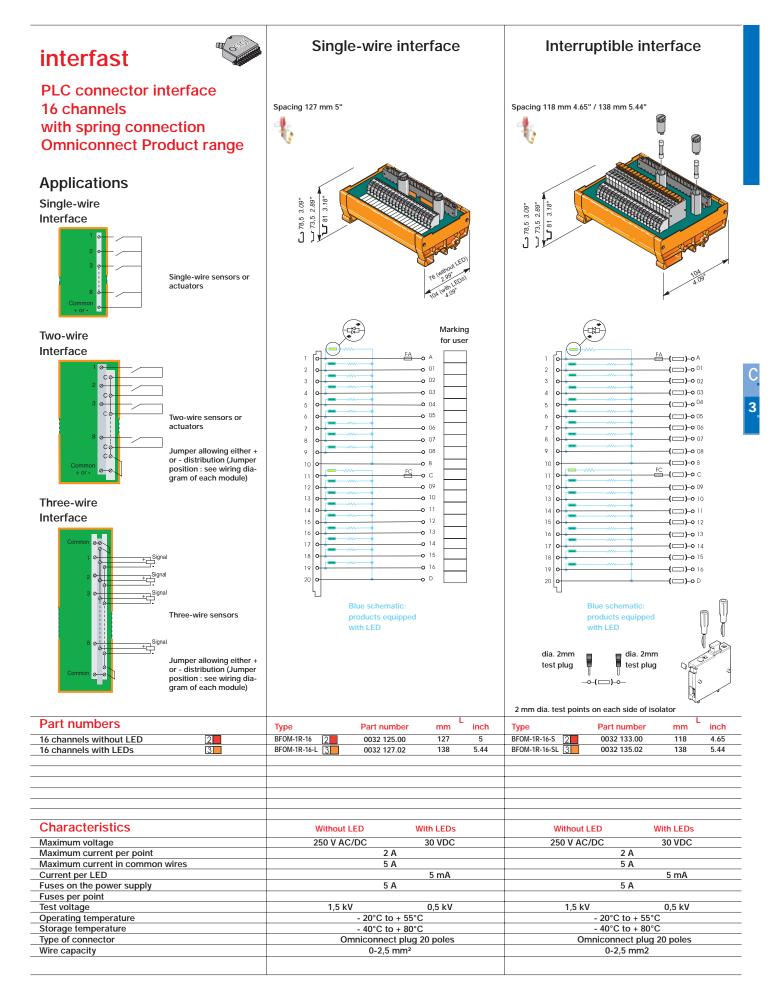


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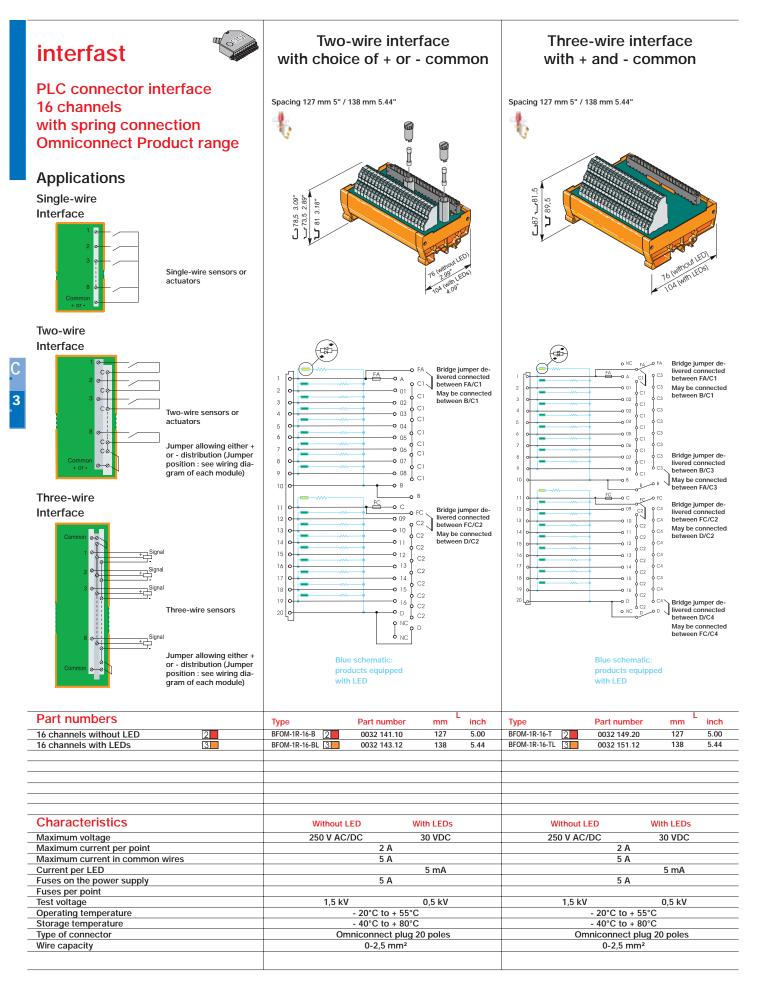
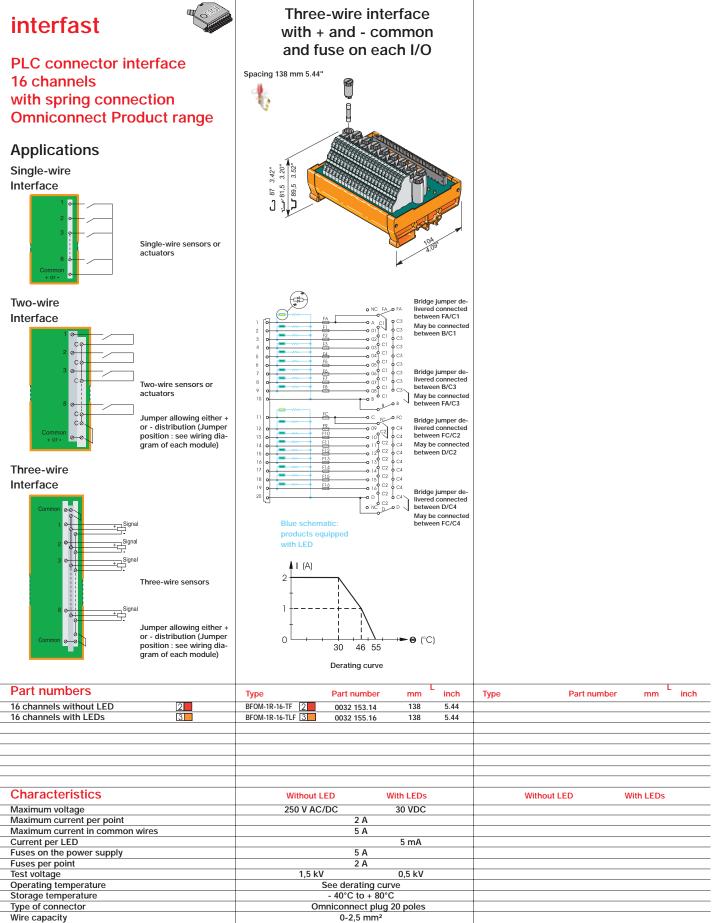


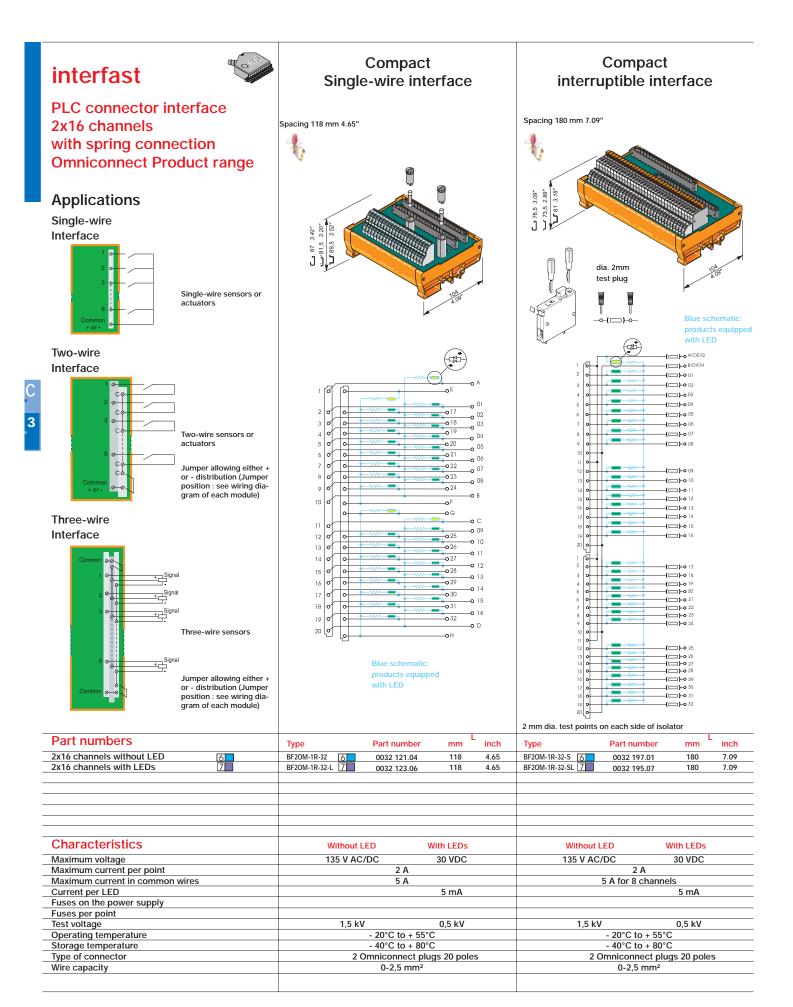
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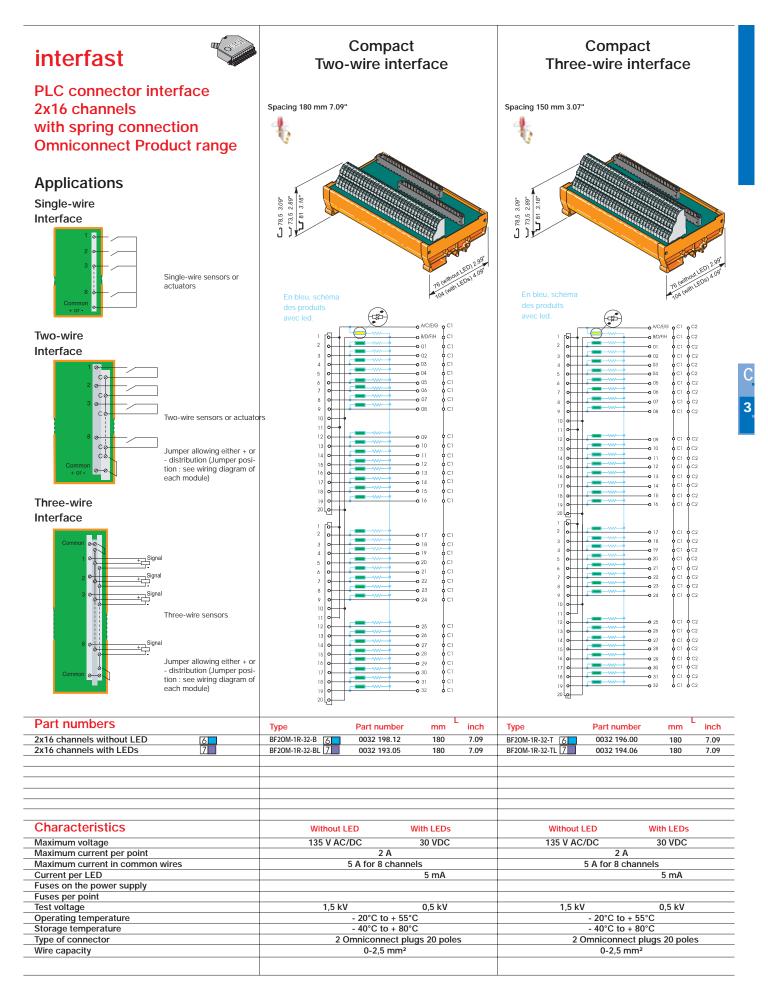
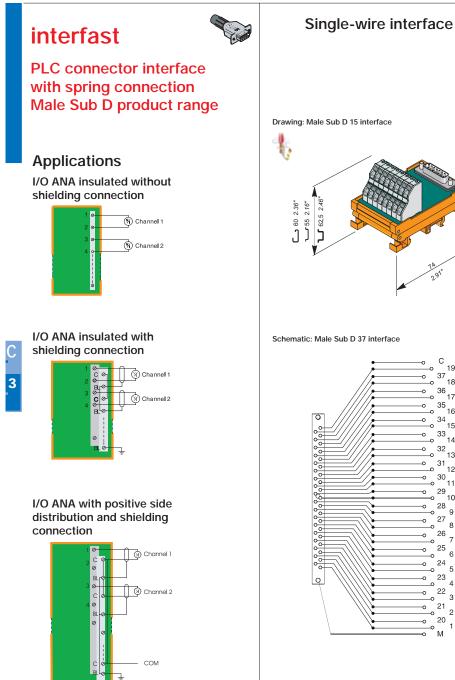


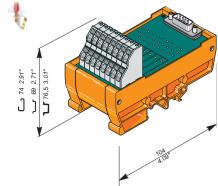
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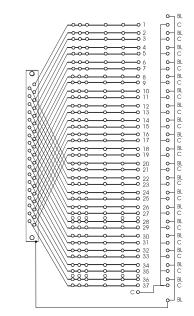


Two-wire interface with a common and common shield





Schematic: Male Sub D 37 interface



C = Common BL = Shielding

| | | | | | | | | 5 |
|--------------|--------------|-------------|-------|------|------------------|-------------|-----|-----------|
| Part numbers | Туре | Part number | mm | inch | Туре | Part number | mm | L inch |
| 9 points | BFSUBD9M-1R | 0032 051.11 | 33 | 1.30 | BFSUBD9M-1R-ANA | 0032 156.17 | 55 | 2.17 |
| 15 points | BFSUBD15M-1R | 0032 052.12 | 48,3 | 1.90 | BFSUBD15M-1R-ANA | 0032 157.10 | 90 | 3.55 |
| 25 points | BFSUBD25M-1R | 0032 053.13 | 73,7 | 2.90 | BFSUBD25M-1R-ANA | 0032 158.21 | 138 | 5.44 |
| 37 points | BFSUBD37M-1R | 0032 054.14 | 101,6 | 4.00 | BFSUBD37M-1R-ANA | 0032 159.22 | 197 | 7.76 |
| | | | | | | | | |

С 19 37 18 -0

0

-0 -0³⁶17

-0³⁵16

-0 33-0 14

-0 ³² -0 ³² 13

 $-0^{-0}^{-0}^{-0}^{-0}^{-12}_{-12}^{-0}^{-0}^{-0}^{-0}_{-0}^{-11}_{-11}^{-10}$

 $\begin{array}{c} \bullet & \bullet \\ \hline \bullet & \bullet \\ \hline \bullet & \bullet \\ \hline \bullet & \bullet \\ \bullet$

26 0

25 0

24

22 0

M

4

3

2 20

_0 7

_0 6

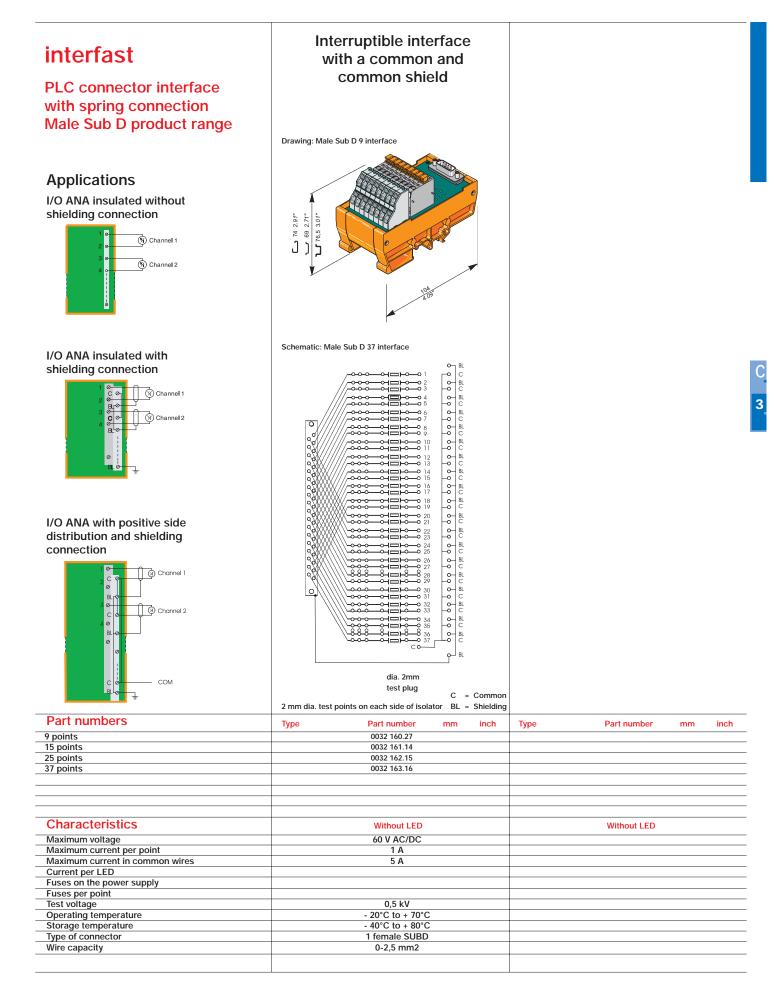
0

~ 21 -0

-0 ____ 5 23 -0

-0

| Characteristics | Without LED | Without LED |
|---------------------------------|------------------|------------------|
| Maximum voltage | 60 V AC/DC | 60 V AC/DC |
| Maximum current per point | 1 A | 1 A |
| Maximum current in common wires | | 5 A |
| Current per LED | | |
| Fuses on the power supply | | |
| Fuses per point | | |
| Test voltage | 1 k V | 0,5 k V |
| Operating temperature | - 20°C to + 70°C | - 20°C to + 70°C |
| Storage temperature | - 40°C to + 80°C | - 40°C to + 80°C |
| Type of connector | 1 female SUBD | 1 female SUBD |
| Wire capacity | 0-2,5 mm² | 0-2,5 mm² |
| | | |



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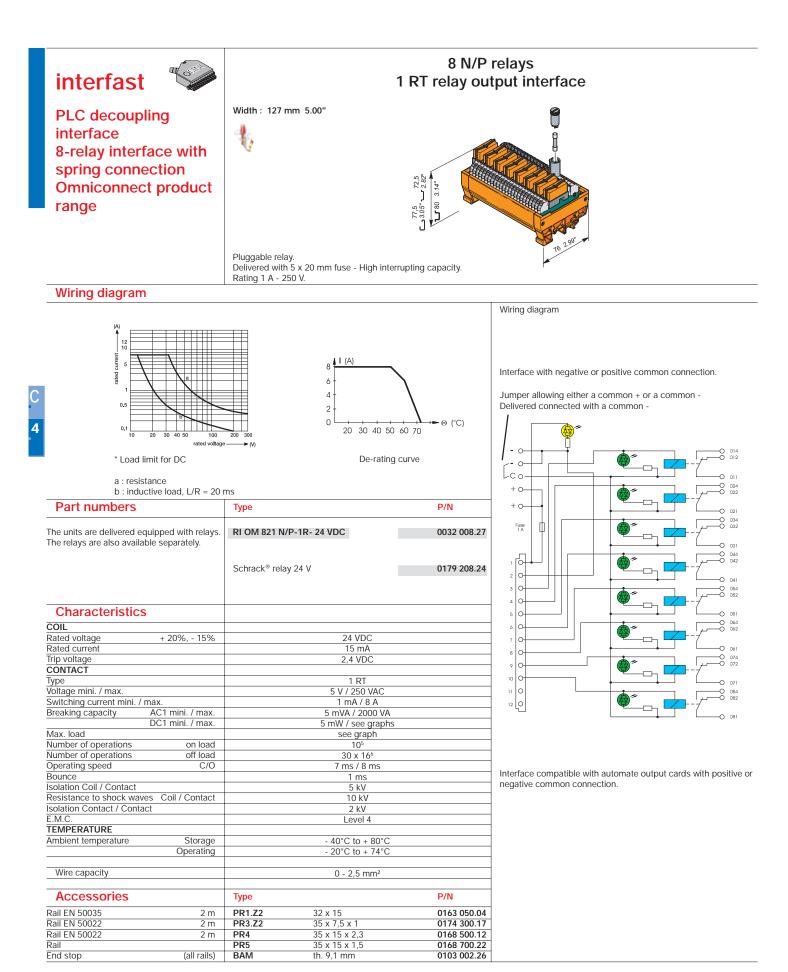


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