

# ZVEI interface types

## Classification of interface types for Phoenix Contact safety products

Data sheet  
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### 1 Description

This technical note informs you about interface types according to ZVEI classification for Phoenix Contact safety products.

The classification and the specified relevant parameters enable simplified compatibility testing of device interfaces.



Further information on ZVEI classification can be found on the Internet at:

[zvei.org/en/association/division/automation-division/switchgear-controlgear-industrial-control-systems/?showPage=490](http://zvei.org/en/association/division/automation-division/switchgear-controlgear-industrial-control-systems/?showPage=490)

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Make sure you always use the latest documentation. It can be downloaded at [phoenixcontact.net/products](http://phoenixcontact.net/products).

This document provides additional data to the respective documentation for the products enclosed. The product documentation for the individual products takes priority and must always be observed.



Should you have any further questions, please contact the Safety service team.  
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### 3 Safety relays

#### 3.1 PSRmini

2700466 - PSR-MC20-3NO-1DO-24DC-SC

2700467 - PSR-MC20-3NO-1DO-24DC-SP

Digital inputs: S12

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Drain	A	M	Source	A	-	-	-
	C0	M		C1	C2	C3	-

Interface type A - drain			
Parameter	Min.	Typical (24 V)	Max.
Input current $I_i$ (in ON state)	> 2 mA	-	< 21 mA
Output voltage $U_i$	18.4 V	-	25 V
Input capacity $C_i$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- HP is S11 for S12 (24 V without cycle)</li> </ul>		

Interface type C - drain			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	1.5 ms
Test pulse interval T	7.5 ms	-	-
Input resistance R	6 k $\Omega$	-	-
Input capacity $C_L$	-	-	-
Inductance $L_L$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- Switch-on pulses should be switched off for safety applications</li> </ul>		

## Digital inputs: S34 (start input)

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Drain	A	M	Source	A	-	-	-
	C0	M		-	-	-	-

Interface type A - drain			
Parameter	Min.	Typical (24 V)	Max.
Input current $I_i$ (in ON state)	1.8 mA	-	200 mA
Output voltage $U_i$	18.4 V	-	25 V
Input capacity $C_i$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- HP is S11 for S34 (manual start)</li> <li>- HP is A2 for S34 (automatic start)</li> <li>- Not suitable with sources containing discharge circuits</li> </ul>		

Interface type C - drain			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	-
Test pulse interval T	-	-	-
Input resistance R	6 k $\Omega$	-	-
Input capacity $C_L$	-	-	-
Inductance $L_L$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- Not suitable with sources containing discharge circuits</li> <li>- No test pulses allowed when controlling with a source</li> </ul>		

## Relay outputs: 13/14, 23/24, 33/34

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Source	A	M	Drain	A	-	-	-
	C0	M		-	-	-	-

Interface type A - source			
Parameter	Min.	Typical (24 V)	Max.
Switching current $I_i$	3 mA	-	6 A
Switching voltage $U_i$	12 V AC/DC	-	250 V AC/DC
Internal resistance $R_i$	6 A < 50 m $\Omega$	-	10 mA < 20 $\Omega$
Load capacity $C_L$	-	-	See switching capacity in data sheet
Load inductance $L_L$	-	-	
Electrical isolation	Yes		
Additional measure M	- Outputs are not types according to IEC 61131-2		

Interface type C - source			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	-
Test pulse interval T	-	-	-
Nominal current $I_N$	-	-	6 A
Capacitive load $C_L$	-	-	See switching capacity in data sheet
Inductive load $L_L$	-	-	
Additional measure M	- Outputs are not types according to IEC 61131-2 - No test pulses are emitted at the output		

## Signal outputs: M1

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Source	C0	M	Drain	-	-	-	-

Interface type C - source			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	-
Test pulse interval T	-	-	-
Nominal current $I_N$	-	-	100 mA
Capacitive load $C_L$	-	-	-
Inductive load $L_L$	-	-	-
Additional measure M	- Outputs are not types according to IEC 61131-2 - No test pulses are emitted at the output		

2700498 - PSR-MC30-2NO-1DO-24DC-SC

2700499 - PSR-MC30-2NO-1DO-24DC-SP

Digital inputs: S12, S22

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Drain	A	M	Source	A	-	-	-
	C0	M		C1	C2	C3	-

Interface type A - drain			
Parameter	Min.	Typical (24 V)	Max.
Input current $I_i$ (in ON state)	> 2 mA	-	20 mA
Output voltage $U_i$	18.4 V	-	25 V
Input capacity $C_i$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- HP is S11 for S12/S22 (24 V without cycle)</li> <li>- HP is S21 for S22 (0 V without cycle)</li> </ul>		

Interface type C - drain			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	1.5 ms
Test pulse interval T	7.5 ms	-	-
Input resistance R	6 k $\Omega$	-	-
Input capacity $C_L$	-	-	-
Inductance $L_L$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- Switch-on pulses should be switched off for safety applications</li> <li>- Not suitable with sources containing discharge circuits</li> </ul>		

**Digital inputs: S34 (start input)**

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Drain	A	M	Source	A	-	-	-
	C0	M		-	-	-	-

Interface type A - drain			
Parameter	Min.	Typical (24 V)	Max.
Input current $I_i$ (in ON state)	1.8 mA	-	200 mA
Output voltage $U_i$	18.4 V	-	25 V
Input capacity $C_i$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- HP is S11 for S34 (manual start)</li> <li>- HP is S21 for S34 (automatic start)</li> <li>- Not suitable with sources containing discharge circuits</li> </ul>		

Interface type C - drain			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	-
Test pulse interval T	-	-	-
Input resistance R	6 k $\Omega$	-	-
Input capacity $C_L$	-	-	-
Inductance $L_L$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- Not suitable with sources containing discharge circuits</li> <li>- No test pulses allowed when controlling with a source</li> </ul>		

## Relay outputs: 13/14, 23/24

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Source	A	M	Drain	A	-	-	-
	C0	M		-	-	-	-

Interface type A - source			
Parameter	Min.	Typical (24 V)	Max.
Switching current $I_i$	3 mA	-	6 A
Switching voltage $U_i$	12 V AC/DC	-	250 V AC/DC
Internal resistance $R_i$	6 A < 50 m $\Omega$	-	10 mA < 20 $\Omega$
Load capacity $C_L$	-	-	See switching capacity in data sheet
Load inductance $L_L$	-	-	
Electrical isolation	Yes		
Additional measure M	- Outputs are not types according to IEC 61131-2		

Interface type C - source			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	-
Test pulse interval T	-	-	-
Nominal current $I_N$	-	-	6 A
Capacitive load $C_L$	-	-	See switching capacity in data sheet
Inductive load $L_L$	-	-	
Additional measure M	- Outputs are not types according to IEC 61131-2 - No test pulses are emitted at the output		

## Signal outputs: M1

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Source	C0	M	Drain	-	-	-	-

Interface type C - source			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	-
Test pulse interval T	-	-	-
Nominal current $I_N$	-	-	100 mA
Capacitive load $C_L$	-	-	-
Inductive load $L_L$	-	-	-
Additional measure M	- Outputs are not types according to IEC 61131-2 - No test pulses are emitted at the output		

2700540 - PSR-MC34-3NO-1DO-24DC-SC

2700548 - PSR-MC34-3NO-1DO-24DC-SP

Digital inputs: S12, S22

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Drain	A	M	Source	A	-	-	-
	C0	M		C1	C2	C3	-

Interface type A - drain			
Parameter	Min.	Typical (24 V)	Max.
Input current $I_i$ (in ON state)	> 2 mA	-	20 mA
Output voltage $U_i$	18.4 V	-	25 V
Input capacity $C_i$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- HP is S11 for S12/S22 (24 V without cycle)</li> <li>- HP is A2 for S22 (0 V without cycle)</li> </ul>		

Interface type C - drain			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	1.5 ms
Test pulse interval T	7.5 ms	-	-
Input resistance R	6 k $\Omega$	-	-
Input capacity $C_L$	-	-	-
Inductance $L_L$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- Switch-on pulses should be switched off for safety applications</li> <li>- Not suitable with sources containing discharge circuits</li> </ul>		

**Digital inputs: S34 (start input)**

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Drain	A	M	Source	A	-	-	-
	C0	M		-	-	-	-

Interface type A - drain			
Parameter	Min.	Typical (24 V)	Max.
Input current $I_i$ (in ON state)	1.8 mA	-	200 mA
Output voltage $U_i$	18.4 V	-	25 V
Input capacity $C_i$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- HP is S11 for S34 (manual start)</li> <li>- HP is A2 for S34 (automatic start)</li> <li>- Not suitable with sources containing discharge circuits</li> </ul>		

Interface type C - drain			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	-
Test pulse interval T	-	-	-
Input resistance R	6 k $\Omega$	-	-
Input capacity $C_L$	-	-	-
Inductance $L_L$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- Not suitable with sources containing discharge circuits</li> <li>- No test pulses allowed when controlling with a source</li> </ul>		

## Relay outputs: 13/14, 23/24/34

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Source	A	M	Drain	A	-	-	-
	C0	M		-	-	-	-

Interface type A - source			
Parameter	Min.	Typical (24 V)	Max.
Switching current $I_i$	3 mA	-	6 A
Switching voltage $U_i$	12 V AC/DC	-	250 V AC/DC
Internal resistance $R_i$	6 A < 50 m $\Omega$	-	10 mA < 20 $\Omega$
Load capacity $C_L$	-	-	See switching capacity in data sheet
Load inductance $L_L$	-	-	
Electrical isolation	Yes		
Additional measure M	- Outputs are not types according to IEC 61131-2		

Interface type C - source			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	-
Test pulse interval T	-	-	-
Nominal current $I_N$	-	-	6 A
Capacitive load $C_L$	-	-	See switching capacity in data sheet
Inductive load $L_L$	-	-	
Additional measure M	- Outputs are not types according to IEC 61131-2 - No test pulses are emitted at the output		

## Signal outputs: M1

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Source	C0	M	Drain	-	-	-	-

Interface type C - source			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	-
Test pulse interval T	-	-	-
Nominal current $I_N$	-	-	100 mA
Capacitive load $C_L$	-	-	-
Inductive load $L_L$	-	-	-
Additional measure M	- Outputs are not types according to IEC 61131-2 - No test pulses are emitted at the output		

2700569 - PSR-MC40-3NO-1DO-24DC-SC

2700570 - PSR-MC40-3NO-1DO-24DC-SP

## Digital inputs: S12, S22

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Drain	A	M	Source	A	-	-	-
	C0	M		C1	C2	C3	-

Interface type A - drain			
Parameter	Min.	Typical (24 V)	Max.
Input current $I_i$ (in ON state)	> 2 mA	-	20 mA
Output voltage $U_i$	20.4 V	-	26.4 V
Input capacity $C_i$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- HP is A1 for S12/S22 (24 V without cycle)</li> </ul>		

Interface type C - drain			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	1.5 ms
Test pulse interval T	7.5 ms	-	-
Input resistance R	6 k $\Omega$	-	-
Input capacity $C_L$	-	-	-
Inductance $L_L$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- Switch-on pulses should be switched off for safety applications</li> </ul>		

**Digital inputs: S34 (start input)**

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Drain	A	M	Source	A	-	-	-
	C0	M		-	-	-	-

Interface type A - drain			
Parameter	Min.	Typical (24 V)	Max.
Input current $I_i$ (in ON state)	1.8 mA	-	200 mA
Output voltage $U_i$	20.4 V	-	26.4 V
Input capacity $C_i$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- HP is A1 for S34 (manual start)</li> <li>- HP is A2 for S34 (automatic start)</li> <li>- Not suitable with sources containing discharge circuits</li> </ul>		

Interface type C - drain			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	-
Test pulse interval T	-	-	-
Input resistance R	6 k $\Omega$	-	-
Input capacity $C_L$	-	-	-
Inductance $L_L$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- Not suitable with sources containing discharge circuits</li> <li>- No test pulses allowed when controlling with a source</li> </ul>		

## Relay outputs: 13/14, 23/24, 33/34

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Source	A	M	Drain	A	-	-	-
	C0	M		-	-	-	-

Interface type A - source			
Parameter	Min.	Typical (24 V)	Max.
Switching current $I_i$	3 mA	-	6 A
Switching voltage $U_i$	12 V AC/DC	-	250 V AC/DC
Internal resistance $R_i$	6 A < 50 m $\Omega$	-	10 mA < 20 $\Omega$
Load capacity $C_L$	-	-	See switching capacity in data sheet
Load inductance $L_L$	-	-	
Electrical isolation	Yes		
Additional measure M	- Outputs are not types according to IEC 61131-2		

Interface type C - source			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	-
Test pulse interval T	-	-	-
Nominal current $I_N$	-	-	6 A
Capacitive load $C_L$	-	-	See switching capacity in data sheet
Inductive load $L_L$	-	-	
Additional measure M	- Outputs are not types according to IEC 61131-2 - No test pulses are emitted at the output		

## Signal outputs: M1

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Source	C0	M	Drain	-	-	-	-

Interface type C - source			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	-
Test pulse interval T	-	-	-
Nominal current $I_N$	-	-	100 mA
Capacitive load $C_L$	-	-	-
Inductive load $L_L$	-	-	-
Additional measure M	- Outputs are not types according to IEC 61131-2 - No test pulses are emitted at the output		

2700553 - PSR-MC50-3NO-1DO-24DC-SC

2700564 - PSR-MC50-3NO-1DO-24DC-SP

Digital inputs: S12, S13

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Drain	A	M	Source	A	-	-	-
	C0	M		C1	C2	C3	-

Interface type A - drain			
Parameter	Min.	Typical (24 V)	Max.
Input current $I_i$ (in ON state)	> 2 mA	-	20 mA
Output voltage $U_i$	20.4 V	-	26.4 V
Input capacity $C_i$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- HP is A1 for S12/S13 (24 V without cycle)</li> </ul>		

Interface type C - drain			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	1.5 ms
Test pulse interval T	7.5 ms	-	-
Input resistance R	6 k $\Omega$	-	-
Input capacity $C_L$	-	-	-
Inductance $L_L$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- Switch-on pulses should be switched off for safety applications</li> </ul>		

## Digital inputs: S34 (start input)

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Drain	A	M	Source	A	-	-	-
	C0	M		-	-	-	-

Interface type A - drain			
Parameter	Min.	Typical (24 V)	Max.
Input current $I_i$ (in ON state)	1.8 mA	-	200 mA
Output voltage $U_i$	20.4 V	-	26.4 V
Input capacity $C_i$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- HP is A1 for S34 (manual start)</li> <li>- HP is A2 for S34 (automatic start)</li> <li>- Not suitable with sources containing discharge circuits</li> </ul>		

Interface type C - drain			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	-
Test pulse interval T	-	-	-
Input resistance R	6 k $\Omega$	-	-
Input capacity $C_L$	-	-	-
Inductance $L_L$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs are not types according to IEC 61131-2</li> <li>- Not suitable with sources containing discharge circuits</li> <li>- No test pulses allowed when controlling with a source</li> </ul>		

## Relay outputs: 13/14, 23/24, 33/34

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Source	A	M	Drain	A	-	-	-
	C0	M		-	-	-	-

Interface type A - source			
Parameter	Min.	Typical (24 V)	Max.
Switching current $I_i$	3 mA	-	6 A
Switching voltage $U_i$	12 V AC/DC	-	250 V AC/DC
Internal resistance $R_i$	6 A < 50 m $\Omega$	-	10 mA < 20 $\Omega$
Load capacity $C_L$	-	-	See switching capacity in data sheet
Load inductance $L_L$	-	-	
Electrical isolation	Yes		
Additional measure M	- Outputs are not types according to IEC 61131-2		

Interface type C - source			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	-
Test pulse interval T	-	-	-
Nominal current $I_N$	-	-	6 A
Capacitive load $C_L$	-	-	See switching capacity in data sheet
Inductive load $L_L$	-	-	
Additional measure M	- Outputs are not types according to IEC 61131-2 - No test pulses are emitted at the output		

## Signal outputs: M1

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Source	C0	M	Drain	-	-	-	-

Interface type C - source			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	-
Test pulse interval T	-	-	-
Nominal current $I_N$	-	-	100 mA
Capacitive load $C_L$	-	-	-
Inductive load $L_L$	-	-	-
Additional measure M	- Outputs are not types according to IEC 61131-2 - No test pulses are emitted at the output		

## 4 Configurable safety modules

### 4.1 PSRtrisafe

2986229 - PSR-SCP-24DC/TS/S

2986232 - PSR-SPP-24DC/TS/S

2986012 - PSR-SCP-24DC/TS/M

2986025 - PSR-SPP-24DC/TS/M

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Drain	A	M	Source	A	-	-	-
	C1	M		-	C1	C2	C3
Source	C1	M	Drain	C0	C1	-	-
	D1	M		D0	D1	-	-

Interface type A - drain			
Parameter	Min.	Typical (24 V)	Max.
Input current $I_i$ (in ON state)	-	4 mA	-
Output voltage $U_i$	Module supply - 1 V		-
Input capacity $C_i$	-	-	15 nF
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs and outputs are not types according to IEC 61131-2</li> <li>- INs HTL; operating voltage limits</li> </ul>		

Interface type C - drain			
Class C1			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	1 ms
Test pulse interval T	15 ms <sup>1)</sup> 30 ms <sup>2)</sup>	-	-
Input resistance R	-	2.3 k $\Omega$	-
Input capacity $C_L$	-	-	15 nF
Inductance $L_L$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs and outputs are not types according to IEC 61131-2</li> <li>- INs HTL; operating voltage limits</li> </ul>		
<b>Notes:</b>			
1) PSR-...-24DC/TS/S			
2) PSR-...-24DC/TS/M			

<b>Interface type C - source</b>			
<b>Class C1</b>			
<b>Parameter</b>	<b>Min.</b>	<b>Typical (24 V)</b>	<b>Max.</b>
Test pulse duration $t_i$	-	-	1 ms
Test pulse interval T	15 ms	-	15 s <sup>1)</sup> 5 s <sup>2)</sup>
Nominal current $I_N$	0.016 A	-	2 A
Capacitive load $C_L$	-	-	10 $\mu$ F
Inductive load $L_L$	-	-	1 H
<b>Notes:</b>			
1) PSR-...-24DC/TS/S			
2) PSR-...-24DC/TS/M			

<b>Interface type D - source</b>			
<b>Class D1</b>			
<b>Parameter</b>	<b>Min.</b>	<b>Typical (24 V)</b>	<b>Max.</b>
Test pulse duration $t_i$	-	-	1 ms
Test pulse interval T	15 s	-	15 s <sup>1)</sup> 20 s <sup>2)</sup>
Leakage current $I_{Leakage}$ (in OFF state)	-	-	2 mA
Nominal current $I_N$	0.016 A	-	2 A
Capacitive load $C_L$	-	-	10 $\mu$ F
Inductive load $L_L$	-	-	1 H
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs and outputs are not types according to IEC 61131-2</li> <li>- INs HTL; operating voltage limits</li> </ul>		
<b>Notes:</b>			
1) PSR-...-24DC/TS/S			
2) PSR-...-24DC/TS/M			

2986038 - PSR-SCP-24DC/TS/SDI8/DIO4

2986041 - PSR-SPP-24DC/TS/SDI8/DIO4

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Drain	A	M	Source	A	-	-	-
	C1	M		-	C1	C2	C3
Source	C1	M	Drain	C0	C1	-	-

Interface type A - drain			
Parameter	Min.	Typical (24 V)	Max.
Input current $I_i$ (in ON state)	-	4 mA	-
Output voltage $U_i$	Module supply - 1 V	-	-
Input capacity $C_i$	-	-	15 nF
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs and outputs are not types according to IEC 61131-2</li> <li>- INs HTL; operating voltage limits</li> </ul>		

Interface type C - drain			
Class C1			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	1 ms
Test pulse interval T	60 ms	-	-
Input resistance R	-	2.3 k $\Omega$	-
Input capacity $C_L$	-	-	15 nF
Inductance $L_L$	-	-	-
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs and outputs are not types according to IEC 61131-2</li> <li>- INs HTL; operating voltage limits</li> </ul>		

Interface type C - source			
Class C1			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	1 ms
Test pulse interval T	15 ms	-	15 s
Nominal current $I_N$	0.016 A	-	2 A
Capacitive load $C_L$	-	-	10 $\mu$ F
Inductive load $L_L$	-	-	1 H
Additional measure M	<ul style="list-style-type: none"> <li>- Inputs and outputs are not types according to IEC 61131-2</li> <li>- INs HTL; operating voltage limits</li> </ul>		

2986096 - PSR-SCP-24DC/TS/SDOR4/4X1

2986106 - PSR-SPP-24DC/TS/SDOR4/4X1

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Source	A	-	Drain	A	-	-	-

Interface type A - source			
Parameter	Min.	Typical (24 V)	Max.
Switching current $I_i$	3 mA	-	6 A
Switching voltage $U_i$	12 V AC/DC	-	250 V AC/DC
Internal resistance $R_i$	50 m $\Omega$	-	20 $\Omega$
Load capacity $C_L$	-	-	-
Load inductance $L_L$	-	-	-
Electrical isolation	Yes		
Additional measure M	-		

## 5 Safe I/Os

### 5.1 Inline

#### 2985688 - IB IL 24 PSDI 8-PAC

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Drain	A	M	Source	A	-	-	-
	C0	M		C0	C1	C2	C3

Interface type A - drain			
Parameter	Min.	Typical (24 V)	Max.
Input current $I_i$ (in ON state)	3.1 mA	4.2 mA	-
Output voltage $U_i$	Module supply - 1 V		-
Input capacity $C_i$	-	-	10 nF
Additional measure M	- Depending on the parameterization		

Interface type C - drain			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	14 ms <sup>1)</sup>
Test pulse interval T	30 ms	-	-
Input resistance R	3.5 k $\Omega$	6.1 k $\Omega$	-
Input capacity $C_L$	-	-	10 nF
Inductance $L_L$	-	-	-
Additional measure M	- Depending on the parameterization		
<b>Notes:</b>			
<sup>1)</sup> Depending on the parameterized filter time			

## 2700994 - IB IL 24 PSDI 16-PAC

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Drain	A	M	Source	A	-	-	-
	C0	M		C0	C1	C2	C3

**Additional measures:**  
<sup>1)</sup> Depending on the parameterization

Interface type A - drain			
Parameter	Min.	Typical (24 V)	Max.
Input current $I_i$ (in ON state)	2.0 mA	2.7 mA	-
Output voltage $U_i$	Module supply - 1 V	-	-
Input capacity $C_i$	-	-	10 nF
Additional measure M	- Depending on the parameterization		

Interface type C - drain			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	12 ms <sup>1)</sup>
Test pulse interval T	30 ms	-	-
Input resistance R	4.8 k $\Omega$	8.6 k $\Omega$	-
Input capacity $C_L$	-	-	10 nF
Inductance $L_L$	-	-	-
Additional measure M	- Depending on the parameterization		

**Notes:**  
<sup>1)</sup> Depending on the parameterized filter time

## 2916493 - IB IL 24 PSDO 4/4-PAC

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Source	C0	M	Drain	C0	-	-	-
	D0	M		D0	-	-	-

Interface type C - source			
Class C0 <sup>1)</sup>			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	3 ms
Test pulse interval T	15 s	-	20 s
Nominal current $I_N$	0.016 A <sup>2)</sup>	-	2 A <sup>2)</sup>
Capacitive load $C_L$	-	-	40 $\mu$ F <sup>3)</sup>
Inductive load $L_L$	-	-	1 H <sup>4)</sup>
Additional measure M	- 1-channel assignment, pulses up to 3 ms		
<b>Notes:</b>			
1) With 1-channel parameterization			
2) Depending on the ambient temperature, observe derating			
3) Depending on the ohmic load			
4) Depending on the switching frequency			

Interface type D - source			
Class D0 <sup>1)</sup>			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	3 ms
Test pulse interval T	15 s	-	20 s
Nominal current $I_N$	0.016 A <sup>2)</sup>	-	2 A <sup>2)</sup>
Capacitive load $C_L$	-	-	40 $\mu$ F <sup>3)</sup>
Inductive load $L_L$	-	-	1 H <sup>4)</sup>
Additional measure M	- 2-channel assignment, pulses up to 3 ms		
<b>Notes:</b>			
1) With 2-channel parameterization			
2) Depending on the ambient temperature, observe derating			
3) Depending on the ohmic load			
4) Depending on the switching frequency			

## 2700804 - IB IL 24 PSDO 4/4-R-PAC

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Source	D0	M	Drain	D0	-	-	-

Interface type D - source			
Class D0 <sup>1)</sup>			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	3 ms
Test pulse interval T	15 s	-	20 s
Nominal current $I_N$	0.016 A <sup>2)</sup>	-	2 A <sup>2)</sup>
Capacitive load $C_L$	-	-	40 $\mu$ F <sup>3)</sup>
Inductive load $L_L$	-	-	1 H <sup>4)</sup>
Additional measure M	- 2-channel assignment, pulses up to 3 ms		
<b>Notes:</b>			
1) With 2-channel parameterization			
2) Depending on the ambient temperature, observe derating			
3) Depending on the ohmic load			
4) Depending on the switching frequency			

2985631 - IB IL 24 PSDO 8-PAC  
 2916024 - IB IL 24 LPSDO 8-PAC  
 2700606 - IB IL 24 LPSDO 8 V2-PAC  
 2701625 - IB IL 24 LPSDO 8 V3-PAC

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Source	C0	M	Drain	C0	-	-	-

Interface type C - source			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	3 ms
Test pulse interval T	15 s	-	20 s
Nominal current $I_N$	0.016 A <sup>1)</sup>	-	2 A <sup>1)</sup>
Capacitive load $C_L$	-	-	40 $\mu$ F <sup>2)</sup>
Inductive load $L_L$	-	-	1 H <sup>3)</sup>
Additional measure M	- Pulses up to 3 ms		
<b>Notes:</b>			
1) Depending on the ambient temperature, observe derating			
2) Depending on the ohmic load			
3) Depending on the switching frequency			

2985864 - IB IL 24 PSDOR 4-PAC  
 2700563 - IB IL 24 PSDOR 4-F-PAC

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Source	A	-	Drain	A	-	-	-

Interface type A - source			
Parameter	Min.	Typical (24 V)	Max.
Switching current $I_i$	5 mA	-	4 A
Switching voltage $U_i$	5 V AC/DC	-	30 V AC/DC <sup>1)2)</sup> 5 V AC/DC <sup>1)3)</sup>
Internal resistance $R_i$	10 m $\Omega$	-	100 m $\Omega$
Load capacity $C_L$	-	-	1 $\mu$ F <sup>2)</sup>
Load inductance $L_L$	-	-	-
Electrical isolation	Yes		
Additional measure M	-		
<b>Notes:</b>			
1) Depending on the ambient temperature, observe derating			
2) Valid for terminal points 1.2; 1.3; 2.2; 2.3; 3.2; 3.3; 4.2 and 4.3			
3) Valid for terminal points 5.1; 5.2; 5.3; 5.4; 6.1; 6.2; 6.3 and 6.4			

## 5.2 Aixioline F

2701559 - AXL F PSDI8/4 1F

2702263 - AXL F SSDI8/4 1F

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Drain	A	M	Source	A	-	-	-
	C0	M		C0	C1	C2	C3

Interface type A - drain			
Parameter	Min.	Typical (24 V)	Max.
Input current $I_i$ (in ON state)	3.1 mA	4.2 mA	-
Output voltage $U_i$	Module supply - 1 V	-	-
Input capacity $C_i$	-	-	10 nF
Additional measure M	- Depending on the parameterization		

Interface type C - drain			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	14 ms <sup>1)</sup>
Test pulse interval T	30 ms	-	-
Input resistance R	3.5 k $\Omega$	6.1 k $\Omega$	-
Input capacity $C_L$	-	-	10 nF
Inductance $L_L$	-	-	-
Additional measure M	- Depending on the parameterization		
<b>Notes:</b>			
1) Depending on the parameterized filter time			

2701560 - AXL F PSDO8/3 1F  
 2702264 - AXL F SSDO8/3 1F  
 2702171 - AXL F LPSDO8/3 1F

Source/ drain	Interface type	Additional measure	Source/ drain	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Source	C0	M	Drain	C0	-	-	-

Interface type C - source			
Class C0			
Parameter	Min.	Typical (24 V)	Max.
Test pulse duration $t_i$	-	-	1.3 ms
Test pulse interval T	15 s	-	20 s
Nominal current $I_N$	0.016 A <sup>1)</sup>	-	2 A <sup>1)</sup>
Capacitive load $C_L$	-	-	10 $\mu$ F <sup>2)</sup>
Inductive load $L_L$	-	-	1.0 H <sup>3)</sup>
Additional measure M	- Pulses up to 1.5 ms		
<b>Notes:</b>			
1) Depending on the ambient temperature, observe derating			
2) Depending on the ohmic load			
3) Depending on the switching frequency			

## 6 Revision history

Revision	Date	Contents
00	2018-01-29	First publication