

ZVEI interface types

Classification of interface types for Phoenix Contact safety products

Data sheet
108274_en_00

© PHOENIX CONTACT 2018-01-29



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

Table of contents

1	Description	1
2	Table of products.....	2
3	Safety relays.....	3
3.1	PSRmini.....	3
4	Configurable safety modules	18
4.1	PSRtrisafe	18
5	Safe I/Os.....	22
5.1	Inline	22
5.2	Aixioline F	27
6	Revision history	29



Make sure you always use the latest documentation. It can be downloaded at 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.
+49 52 81 9 46-27 77, safety-service@phoenixcontact.com



2 Table of products

Product category / product family			Order No.	Designation	Page
Safety relays	PSRmini		2700466	PSR-MC20-3NO-1DO-24DC-SC	page 3
			2700467	PSR-MC20-3NO-1DO-24DC-SP	page 3
			2700498	PSR-MC30-2NO-1DO-24DC-SC	page 6
			2700499	PSR-MC30-2NO-1DO-24DC-SP	page 6
			2700540	PSR-MC34-3NO-1DO-24DC-SC	page 9
			2700548	PSR-MC34-3NO-1DO-24DC-SP	page 9
			2700569	PSR-MC40-3NO-1DO-24DC-SC	page 12
			2700570	PSR-MC40-3NO-1DO-24DC-SP	page 12
			2700553	PSR-MC50-3NO-1DO-24DC-SC	page 15
			2700564	PSR-MC50-3NO-1DO-24DC-SP	page 15
Configurable safety modules	PSRtrisafe	Safety modules	2986229	PSR-SCP-24DC/TS/S	page 18
			2986232	PSR-SPP-24DC/TS/S	page 18
			2986012	PSR-SCP-24DC/TS/M	page 18
			2986025	PSR-SPP-24DC/TS/SM	page 18
		Safe extension modules	2986038	PSR-SCP-24DC/TS/SDI8/SDIO4	page 20
			2986041	PSR-SPP-24DC/TS/SDI8/SDIO4	page 20
			2986096	PSR-SCP- 24DC/TS/SDOR4/4X1	page 21
			2986106	PSR-SCP- 24DC/TS/SDOR4/4X1	page 21
Safe I/Os	Inline	Input modules	2985688	IB IL 24 PSDI 8-PAC	page 22
			2700994	IB IL 24 PSDI 16-PAC	page 23
		Output modules	2916493	IB IL 24 PSDO 4/4-PAC	page 24
			2700804	IB IL 24 PSDO 4/4-R-PAC	page 25
			2985631	IB IL 24 PSDO 8-PAC	page 26
			2916024	IB IL 24 LPSDO 8-PAC	page 26
			2700606	IB IL 24 LPSDO 8 V2-PAC	page 26
			2701625	IB IL 24 LPSDO 8 V3-PAC	page 26
	2985864	IB IL 24 PSDOR 4-PAC	page 26		
	2700563	IB IL 24 PSDOR 4-F-PAC	page 26		
	Axtoline F	Input modules	2701559	AXL F PSDI8/4 1F	page 27
			2702263	AXL F SSDI8/4 1F	page 27
		Output modules	2701560	AXL F PSDO8/3 1F	page 28
			2702264	AXL F SSDO8/3 1F	page 28
2702171			AXL F LPSDO8/3 1F	page 28	

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"> - Inputs are not types according to IEC 61131-2 - HP is S11 for S12 (24 V without cycle) 		

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 Ω	-	-
Input capacity C_L	-	-	-
Inductance L_L	-	-	-
Additional measure M	<ul style="list-style-type: none"> - Inputs are not types according to IEC 61131-2 - Switch-on pulses should be switched off for safety applications 		

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"> - Inputs are not types according to IEC 61131-2 - HP is S11 for S34 (manual start) - HP is A2 for S34 (automatic start) - Not suitable with sources containing discharge circuits 		

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 Ω	-	-
Input capacity C_L	-	-	-
Inductance L_L	-	-	-
Additional measure M	<ul style="list-style-type: none"> - Inputs are not types according to IEC 61131-2 - Not suitable with sources containing discharge circuits - No test pulses allowed when controlling with a source 		

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 Ω	-	10 mA < 20 Ω
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"> - Inputs are not types according to IEC 61131-2 - HP is S11 for S12/S22 (24 V without cycle) - HP is S21 for S22 (0 V without cycle) 		

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 Ω	-	-
Input capacity C_L	-	-	-
Inductance L_L	-	-	-
Additional measure M	<ul style="list-style-type: none"> - Inputs are not types according to IEC 61131-2 - Switch-on pulses should be switched off for safety applications - Not suitable with sources containing discharge circuits 		

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"> - Inputs are not types according to IEC 61131-2 - HP is S11 for S34 (manual start) - HP is S21 for S34 (automatic start) - Not suitable with sources containing discharge circuits 		

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 Ω	-	-
Input capacity C_L	-	-	-
Inductance L_L	-	-	-
Additional measure M	<ul style="list-style-type: none"> - Inputs are not types according to IEC 61131-2 - Not suitable with sources containing discharge circuits - No test pulses allowed when controlling with a source 		

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 Ω	-	10 mA < 20 Ω
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"> - Inputs are not types according to IEC 61131-2 - HP is S11 for S12/S22 (24 V without cycle) - HP is A2 for S22 (0 V without cycle) 		

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 Ω	-	-
Input capacity C_L	-	-	-
Inductance L_L	-	-	-
Additional measure M	<ul style="list-style-type: none"> - Inputs are not types according to IEC 61131-2 - Switch-on pulses should be switched off for safety applications - Not suitable with sources containing discharge circuits 		

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"> - Inputs are not types according to IEC 61131-2 - HP is S11 for S34 (manual start) - HP is A2 for S34 (automatic start) - Not suitable with sources containing discharge circuits 		

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 Ω	-	-
Input capacity C_L	-	-	-
Inductance L_L	-	-	-
Additional measure M	<ul style="list-style-type: none"> - Inputs are not types according to IEC 61131-2 - Not suitable with sources containing discharge circuits - No test pulses allowed when controlling with a source 		

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 mΩ	-	10 mA < 20 Ω
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"> - Inputs are not types according to IEC 61131-2 - HP is A1 for S12/S22 (24 V without cycle) 		

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 Ω	-	-
Input capacity C_L	-	-	-
Inductance L_L	-	-	-
Additional measure M	<ul style="list-style-type: none"> - Inputs are not types according to IEC 61131-2 - Switch-on pulses should be switched off for safety applications 		

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"> - Inputs are not types according to IEC 61131-2 - HP is A1 for S34 (manual start) - HP is A2 for S34 (automatic start) - Not suitable with sources containing discharge circuits 		

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 Ω	-	-
Input capacity C_L	-	-	-
Inductance L_L	-	-	-
Additional measure M	<ul style="list-style-type: none"> - Inputs are not types according to IEC 61131-2 - Not suitable with sources containing discharge circuits - No test pulses allowed when controlling with a source 		

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 Ω	-	10 mA < 20 Ω
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"> - Inputs are not types according to IEC 61131-2 - HP is A1 for S12/S13 (24 V without cycle) 		

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 Ω	-	-
Input capacity C_L	-	-	-
Inductance L_L	-	-	-
Additional measure M	<ul style="list-style-type: none"> - Inputs are not types according to IEC 61131-2 - Switch-on pulses should be switched off for safety applications 		

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"> - Inputs are not types according to IEC 61131-2 - HP is A1 for S34 (manual start) - HP is A2 for S34 (automatic start) - Not suitable with sources containing discharge circuits 		

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 Ω	-	-
Input capacity C_L	-	-	-
Inductance L_L	-	-	-
Additional measure M	<ul style="list-style-type: none"> - Inputs are not types according to IEC 61131-2 - Not suitable with sources containing discharge circuits - No test pulses allowed when controlling with a source 		

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 Ω	-	10 mA < 20 Ω
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"> - Inputs and outputs are not types according to IEC 61131-2 - INs HTL; operating voltage limits 		

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 ¹⁾ 30 ms ²⁾	-	-
Input resistance R	-	2.3 k Ω	-
Input capacity C_L	-	-	15 nF
Inductance L_L	-	-	-
Additional measure M	<ul style="list-style-type: none"> - Inputs and outputs are not types according to IEC 61131-2 - INs HTL; operating voltage limits 		
Notes:			
1) PSR-...-24DC/TS/S			
2) PSR-...-24DC/TS/M			

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 ¹⁾ 5 s ²⁾
Nominal current I_N	0.016 A	-	2 A
Capacitive load C_L	-	-	10 μ F
Inductive load L_L	-	-	1 H
Notes:			
1) PSR-...-24DC/TS/S			
2) PSR-...-24DC/TS/M			

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

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 Ω	-
Input capacity C_L	-	-	15 nF
Inductance L_L	-	-	-
Additional measure M	<ul style="list-style-type: none"> - Inputs and outputs are not types according to IEC 61131-2 - INs HTL; operating voltage limits 		

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 μ F
Inductive load L_L	-	-	1 H
Additional measure M	<ul style="list-style-type: none"> - Inputs and outputs are not types according to IEC 61131-2 - INs HTL; operating voltage limits 		

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 Ω	-	20 Ω
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 ¹⁾
Test pulse interval T	30 ms	-	-
Input resistance R	3.5 k Ω	6.1 k Ω	-
Input capacity C_L	-	-	10 nF
Inductance L_L	-	-	-
Additional measure M	- Depending on the parameterization		
Notes:			
¹⁾ 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:

¹⁾ 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 ¹⁾
Test pulse interval T	30 ms	-	-
Input resistance R	4.8 k Ω	8.6 k Ω	-
Input capacity C_L	-	-	10 nF
Inductance L_L	-	-	-
Additional measure M	- Depending on the parameterization		
Notes:			
¹⁾ 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 ¹⁾			
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 ²⁾	-	2 A ²⁾
Capacitive load C_L	-	-	40 μ F ³⁾
Inductive load L_L	-	-	1 H ⁴⁾
Additional measure M	- 1-channel assignment, pulses up to 3 ms		
Notes:			
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 ¹⁾			
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 ²⁾	-	2 A ²⁾
Capacitive load C_L	-	-	40 μ F ³⁾
Inductive load L_L	-	-	1 H ⁴⁾
Additional measure M	- 2-channel assignment, pulses up to 3 ms		
Notes:			
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 ¹⁾			
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 ²⁾	-	2 A ²⁾
Capacitive load C_L	-	-	40 μ F ³⁾
Inductive load L_L	-	-	1 H ⁴⁾
Additional measure M	- 2-channel assignment, pulses up to 3 ms		
Notes:			
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 ¹⁾	-	2 A ¹⁾
Capacitive load C_L	-	-	40 μ F ²⁾
Inductive load L_L	-	-	1 H ³⁾
Additional measure M	- Pulses up to 3 ms		
Notes:			
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 ¹⁾²⁾ 5 V AC/DC ¹⁾³⁾
Internal resistance R_i	10 m Ω	-	100 m Ω
Load capacity C_L	-	-	1 μ F ²⁾
Load inductance L_L	-	-	-
Electrical isolation	Yes		
Additional measure M	-		
Notes:			
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 ¹⁾
Test pulse interval T	30 ms	-	-
Input resistance R	3.5 k Ω	6.1 k Ω	-
Input capacity C_L	-	-	10 nF
Inductance L_L	-	-	-
Additional measure M	- Depending on the parameterization		
Notes:			
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 ¹⁾	-	2 A ¹⁾
Capacitive load C_L	-	-	10 μ F ²⁾
Inductive load L_L	-	-	1.0 H ³⁾
Additional measure M	- Pulses up to 1.5 ms		
Notes:			
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