Modicon Quantum automation platform

Discrete I/O modules

DC and relay outputs

Type		32-channel discrete output modules			96-channel discrete output modules
					
Output voltage		5 V ⎓ TTL	24 V ⎓		
Modularity	Number of channels	32			96
	Number of groups	4			6
	Number of channels per common	8			16
Logic		Negative *(sink)*	Positive *(source)*	Negative *(sink)*	Positive *(source)*
Maximum load	Current per channel	75 mA	0.5 A		0.5 A
	Current per group	600 mA	4 A		3.2 A
	Current per module	2.4 A	16 A		19.2 A
I/O addresses		2 output words			6 output words
Bus current required		350 mA	330 mA		250 mA
Power dissipation		4 W	*(2)*	2.0 + (0.4 x total module load current) in W	7 W (all outputs at state 1)
External power supply (U_s)		4.5...5.5 V ⎓	19.2...30 V ⎓		
External fuses		–	Per group: 5 A Per point: 3 A recommended		Depending on use
Online modification of configuration *(1)*		Yes			
Functional safety certification		–	*(3)*	–	
Approvals		UL 508, CSA 22.2-142, CE, FM Class 1 Div. 2, ATEX Zone 2/22 *(5)*			
Module type		**140DDO15310**	**140DDO35300** **140DDO35301** *(2)*	**140DDO35310**	**140DDO36400** *(4)*
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(1) For online modification of configuration, see page 2/37.
(2) **140DDO35300** module: *1.75 + (0.4 x total module load current) in W*
140DDO35301 module: *5 W, with all outputs at state 1.*
(3) Only module **140DDO35300** *is non-interfering.*

More technical information on www.schneider-electric.com

16-channel discrete output module	12-channel discrete output module	32-channel discrete output module	16-channel discrete relay output module	8-channel discrete relay output module
				
10..0.60 V ⎓	24..0.125 V ⎓	10...30 V ⎓ controlled outputs	NO contacts	NO/NC contacts
16	12	32	16	8
2		4	16	8
8	6	8	1	
Positive *(source)*			–	
2 A	0.75 A	0.5 A	2 A	5 A
6 A	3 A	4 A	–	–
12 A	6 A	16 A	–	40 A at 40°C 20 A at 60°C
1 output word	1 output word and 1 input word	2 output words and 2 input words	1 output word	0.5 output word
160 mA	375 mA at 6 points 650 mA at 12 points	500 mA	1100 mA	560 mA
1 + (1 x total module load current) in W	1 + (0.77 x no. of outputs at state 1) in W	2.5 + (0.1 x no. of outputs at state 1) + (0.4 x total load current) in W	5.5 + (0.5 x N) in W (where N = number of channels at state 1)	2.75 + (0.5 x N) in W (where N = number of channels at state 1)
10..0.60 V ⎓	–	10...30 V ⎓	–	
Per group: 8 A Per point: 2 A recommended	–		Depending on use	
Yes				
–				
UL 508, CSA 22.2-142, CE, FM Class 1 Div. 2, ATEX Zone 2/22 *(5)*				
140DDO84300	**140DDO88500**	**140DVO85300**	**140DRA84000**	**140DRC83000**
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(4) For connection, requires the Modicon Telefast ABE 7 pre-wired system:
- Connection sub-bases ABE7R08S●●●/7S08●●●/7P08●●●/7R16●●●/7S16●●●/7P16●●● (see page 7/2)
- Connection cables TSXCDP053/●03 (see page 7/17)
(5) Only Conformal Coating versions, depending on model, are ATEX Zone 2/22 certified. For more information, see pages 8/2 to 8/9.

More technical information on www.schneider-electric.com

Modicon Quantum automation platform

Discrete I/O modules

Input modules and output modules

References

Discrete input modules

Voltage	Modularity	Description	Logic	Safety	Reference	Weight kg/*lb*
5 V ⎓ TTL	32 inputs	4 groups of 8 inputs	Negative	–	**140DDI15310**	0.450/ *0.992*
24 V ⎓	32 inputs	4 groups of 8 inputs	Positive	Non-interfering *(1)*	**140DDI35300**	0.300/ *0.661*
			Negative	–	**140DDI35310**	0.300/ *0.661*
	96 inputs	6 groups of 16 inputs	Positive	–	**140DDI36400**	0.300/ *0.661*
	32 inputs	4 groups of 8 inputs	Positive	–	**140DSI35300**	0.300/ *0.661*
10…60 V ⎓	16 inputs	8 groups of 2 inputs	Positive	–	**140DDI84100**	0.300/ *0.661*
	32 inputs	4 groups of 8 inputs	Positive	–	**140DDI85300**	0.295/ *0.650*
125 V ⎓	24 inputs	3 groups of 8 inputs	Positive	–	**140DDI67300**	0.300/ *0.661*
24 V ∿	16 inputs	No common point	–	–	**140DAI34000**	0.300/ *0.661*
	32 inputs	4 groups of 8 inputs	–	–	**140DAI35300**	0.340/ *0.750*
48 V ∿	32 inputs	4 groups of 8 inputs	–	–	**140DAI45300**	0.300/ *0.661*
115 V ∿	16 inputs	No common point	–	–	**140DAI54000**	0.310/ *0.683*
	16 inputs	2 groups of 8 inputs	–	–	**140DAI54300**	0.300/ *0.661*
	32 inputs	4 groups of 8 inputs	–	–	**140DAI55300**	0.330/ *0.728*
230 V ∿	16 inputs	No common point	–	–	**140DAI74000**	0.350/ *0.772*
	32 inputs	4 groups of 8 inputs	–	–	**140DAI75300**	0.300/ *0.661*

Discrete output modules

Voltage		Description	Logic	Safety	Reference	Weight kg/*lb*
5 V ⎓ TTL	32 outputs	4 groups of 8 outputs	Negative	–	**140DDO15310**	0.450/ *0.992*
24 V ⎓	32 outputs	4 groups of 8 outputs	Positive	Non-interfering *(1)*	**140DDO35300**	0.450/ *0.992*
			Positive *(2)*	–	**140DDO35301**	0.450/ *0.992*
			Negative	–	**140DDO35310**	0.450/ *0.992*
	96 outputs	6 groups of 16 outputs	Positive	–	**140DDO36400**	0.450/ *0.992*
10…30 V ⎓	32 outputs	4 groups of 8 outputs	Positive	–	**140DVO85300**	0.300/ *0.661*
10…60 V ⎓	16 outputs	2 groups of 8 outputs	Positive	–	**140DDO84300**	0.450/ *0.992*
24…125 V ⎓	12 outputs	2 groups of 6 outputs	Positive	–	**140DDO88500**	0.450/ *0.992*
Relay 20…250 V ∿ 5…150 V ⎓	16 outputs	No common point	1 “NO” contact	–	**140DRA84000**	0.410/ *0.904*
	8 outputs	No common point	2 “NC” and “NO” contacts	–	**140DRC83000**	0.300/ *0.661*
24…48 V ∿	16 outputs	4 groups of 4 outputs	–	–	**140DAO84220**	0.450/ *0.992*
24…115 V ∿	16 outputs	No common point	–	–	**140DAO84010**	0.485/ *1.069*
24…230 V ∿	16 outputs	No common point	–	–	**140DAO84000**	0.485/ *1.069*
	32 outputs	4 groups of 8 outputs	–	–	**140DAO85300**	0.450/ *0.992*
100…230 V ∿	16 outputs	4 groups of 4 outputs	–	–	**140DAO84210**	0.450/ *0.992*

(1) Version ⩾ 1.
(2) Outputs protected against short-circuits and overloads by thermal monitoring.

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Modicon Quantum automation platform

Treatment for severe environments
"Conformal Coating"
discrete I/O modules

"Conformal Coating" discrete input modules *(1)*

Voltage	Modularity	Description	Logic	Safety	Certified ATEX Zone 2/22	Reference	Weight kg/*lb*
5 V ⎓ TTL	32 inputs	4 groups of 8 inputs	Negative	–	Yes	**140DDI15310C**	0.450/ *0.992*
24 V ⎓	32 inputs	4 groups of 8 inputs	Positive	Non-interfering *(2)*	Yes	**140DDI35300C**	0.300/ *0.661*
			Negative	–	Yes	**140DDI35310C**	0.300/ *0.661*
	96 inputs	6 groups of 16 inputs	Positive	–	–	**140DDI36400C**	0.300/ *0.661*
	32 inputs	4 groups of 8 inputs	Positive	–	–	**140DSI35300C**	0.300/ *0.661*
10…60 V ⎓	16 inputs	8 groups of 2 inputs	Positive	–	–	**140DDI84100C**	0.300/ *0.661*
	32 inputs	4 groups of 8 inputs	Positive	–	–	**140DDI85300C**	0.295/ *0.650*
125 V ⎓	24 inputs	3 groups of 8 inputs	Positive	–	–	**140DDI67300C**	0.300/ *0.661*
24 V ∿	16 inputs	No common point	–	–	–	**140DAI34000C**	0.300/ *0.661*
	32 inputs	4 groups of 8 inputs	–	–	–	**140DAI35300C**	0.340/ *0.750*
48 V ∿	32 inputs	4 groups of 8 inputs	–	–	–	**140DAI45300C**	0.300/ *0.661*
115 V ∿	16 inputs	No common point	–	–	–	**140DAI54000C**	0.310/ *0.683*
	16 inputs	2 groups of 8 inputs	–	–	–	**140DAI54300C**	0.300/ *0.661*
	32 inputs	4 groups of 8 inputs	–	–	–	**140DAI55300C**	0.330/ *0.728*
230 V ∿	16 inputs	No common point	–	–	–	**140DAI74000C**	0.350/ *0.772*
	32 inputs	4 groups of 8 inputs	–	–	–	**140DAI75300C**	0.300/ *0.661*
24 V ∿	16 inputs	No common point	Positive	–	Yes	**140SDI95300S**	0.300/ *0.661*

"Conformal Coating" discrete output modules *(1)*

Voltage	Modularity	Description	Logic	Safety	Certified ATEX Zone 2/22	Reference	Weight kg/*lb*
5 V ⎓ TTL	32 outputs	4 groups of 8 outputs	Negative	–	–	**140DDO15310C**	0.450/ *0.992*
24 V ⎓	32 outputs	4 groups of 8 outputs	Positive	Non-interfering *(2)*	Yes	**140DDO35300C**	0.450/ *0.992*
			Positive *(3)*	–	Yes	**140DDO35301C**	0.450/ *0.992*
			Negative	–	–	**140DDO35310C**	0.450/ *0.992*
	96 outputs	6 groups of 16 outputs	Positive	–	–	**140DDO36400C**	0.450/ *0.992*
10…30 V ⎓	32 outputs	4 groups of 8 outputs	Positive	–	–	**140DVO85300C**	0.300/ *0.661*
10…60 V ⎓	16 outputs	2 groups of 8 outputs	Positive	–	–	**140DDO84300C**	0.450/ *0.992*
24…125 V ⎓	12 outputs	2 groups of 6 outputs	Positive	–	–	**140DDO88500C**	0.450/ *0.992*
Relay 20…250 V a 5…150 V c	16 outputs	No common point	1 "NO" contact	–	Yes	**140DRA84000C**	0.410/ *0.904*
	8 outputs	No common point	2 "NC" and "NO" contacts	–	–	**140DRC83000C**	0.300/ *0.661*
24…48 V ∿	16 outputs	4 groups of 4 outputs	–	–	–	**140DAO84220C**	0.450/ *0.992*
24…115 V ∿	16 outputs	No common point	–	–	–	**140DAO84010C**	0.485/ *1.069*
24…230 V ∿	16 outputs	No common point	–	–	–	**140DAO84000C**	0.485/ *1.069*
	32 outputs	4 groups of 8 outputs	–	–	–	**140DAO85300C**	0.450/ *0.992*
100…230 V ∿	16 outputs	4 groups of 4 outputs	–	–	–	**140DAO84210C**	0.450/ *0.992*
24 V ∿	16 inputs	No common point	Positive	–	Yes	**140SDO95300S**	0.450/ *0.992*

(1) For accessories, connection cables, replacement parts, see page 3/15.
(2) Version ⩾ 1.
(3) Outputs protected against short-circuits and overloads by thermal monitoring.