

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	Schneider Electric Industries SAS
Address	35 RUE JOSEPH MONNIER, RUEIL MALMAISON, 92500, France
Type	Electronic Frequency Convertor
Description	Altivar Process Modular; ATV types and MODBUO accessories, refer to Appendix for details
Trade Name	Altivar ATV6 , Altivar ATV9, MODBUOC, MODBUOM
Application	Marine, offshore and industrial applications suitable for use in environmental categories ENV1 and ENV2 as defined in Lloyd's Register's Type Approval System, Test Specification Number 1: March 2019
Specified Standard	IEC 61800-5-1:2007 + A1:2016 IACS UR E10 (Rev. 8 Feb. 2021)
Ratings	Refer to Appendix
Other Conditions	The complete installation and function is subject to separate plan appraisal according applicable Rules and Regulations, when installed on LR classed vessels. Converters are to be in compliance with LR Rules and Regulations and to be surveyed during manufacture and testing if used for essential or emergency

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services and rated 100kW or above.
Planned EMC measures are matter of assessment prior to installation onboard.
The type selection has to be according Schneider Catalog September 2019.
The installation requirements according APM Standard Integration Manual PHA2451702_05, issue 11/2019 have to be fulfilled.
The temperature range in operation is up to 40 °C. For ambient temperature > 40°C technical data sheet chapter 2.3 electrical data -drive ratings / derating curves to be applied. Shock dampers to be installed when installed on LR classed vessels.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document HTS/ETS 40486-20 AHB/TW/AC and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Appendix

TYPE Altivar Process Modular ATV electronic frequency converter and accessories according following type codes

Type	Module Size	Motor Power Normal Duty (ND) at 40°C [kW]	Motor Power Heavy Duty (HD) at 40°C [kW]	Current Rating at 40°C IN [A]	
				ND	HD
ATVx 400V Mains Supply ; SW Version: ATV6x V2.6IE29_B11/ ATV9x V3.1IE24_B17					
ATV6A0C11Q4/ATV9A0C11Q4 ATV6B0C11Q4/ATV9B0C11Q4	1	110	90	198 175	167 144
ATV6A0C13Q4/ATV9A0C13Q4 ATV6B0C13Q4/ATV9B0C13Q4	1	132	110	233 208	198 174
ATV6A0C16Q4/ATV9A0C16Q4 ATV6B0C16Q4/ATV9B0C16Q4	1	160	132	278 252	233 208
ATV6A0C20Q4/ATV9A0C20Q4 ATV6B0C20Q4/ATV9B0C20Q4	2	200	160	352 313	290 252
ATV6A0C25Q4/ATV9A0C25Q4 ATV6B0C25Q4/ATV9B0C25Q4	2	250	200	432 389	353 313
ATV6A0C31Q4/ATV9A0C31Q4 ATV6B0C31Q4/ATV9B0C31Q4	2	315	250	538 491	432 389
ATV6A0C35Q4/ATV9A0C35Q4 ATV6B0C35Q4/ATV9B0C35Q4	3	355	280	611 553	489 436
ATV6A0C40Q4/ATV9A0C40Q4 ATV6B0C40Q4/ATV9B0C40Q4	3	400	315	681 620	545 491
ATV6A0C45Q4/ATV9A0C45Q4 ATV6B0C45Q4/ATV9B0C45Q4	3	450	355	764 697	611 553
ATV6A0C50Q4/ATV9A0C50Q4 ATV6B0C50Q4/ATV9B0C50Q4	3	500	400	846 775	681 620
ATV6A0C56Q4/ATV9A0C56Q4 ATV6B0C56Q4/ATV9B0C56Q4	4	560	450	948 868	767 697
ATV6A0C63Q4/ATV9A0C63Q4 ATV6B0C63Q4/ATV9B0C63Q4	4	630	500	1058 971	849 775
ATV6A0C71Q4/ATV9A0C71Q4 ATV6B0C71Q4/ATV9B0C71Q4	5	710	560	1192 1094	951 868

TYPE continued

Type	Module Size	Motor Power Normal Duty (ND) at 40°C [kW]	Motor Power Heavy Duty (HD) at 40°C [kW]	Current Rating at 40°C IN [A]	
				ND	HD
ATVx 400V Mains Supply ; SW Version: ATV6x V2.6IE29_B11/ ATV9x V3.1IE24_B17					
ATV6A0C80Q4/ATV9A0C80Q4 ATV6B0C80Q4/ATV9B0C80Q4	5	800	630	1335 1227	1061 971
ATVx 440V Mains Supply ; SW Version: ATV6x V2.6IE29_B11/ ATV9x V3.1IE24_B17					
ATV6A0C11R4/ATV9A0C11R4 ATV6B0C11R4/ATV9B0C11R4	1	110	90	183 159	155 132
ATV6A0C13R4/ATV9A0C13R4 ATV6B0C13R4/ATV9B0C13R4	1	132	110	214 190	183 159
ATV6A0C16R4/ATV9A0C16R4 ATV6B0C16R4/ATV9B0C16R4	1	160	132	255 229	214 190
ATV6A0C20R4/ATV9A0C20R4 ATV6B0C20R4/ATV9B0C20R4	2	200	160	325 285	269 229
ATV6A0C25R4/ATV9A0C25R4 ATV6B0C25R4/ATV9B0C25R4	2	250	200	396 354	325 285
ATV6A0C31R4/ATV9A0C31R4 ATV6B0C31R4/ATV9B0C31R4	2	315	250	493 446	396 354
ATV6A0C35R4/ATV9A0C35R4 ATV6B0C35R4/ATV9B0C35R4	3	355	280	559 503	450 396
ATV6A0C40R4/ATV9A0C40R4 ATV6B0C40R4/ATV9B0C40R4	3	400	315	623 563	501 446
ATV6A0C45R4/ATV9A0C45R4 ATV6B0C45R4/ATV9B0C45R4	3	450	355	697 634	559 503
ATV6A0C50R4/ATV9A0C50R4 ATV6B0C50R4/ATV9B0C50R4	3	500	400	771 704	623 563
ATV6A0C56R4/ATV9A0C56R4 ATV6B0C56R4/ATV9B0C56R4	4	560	450	865 789	703 634
ATV6A0C63R4/ATV9A0C63R4 ATV6B0C63R4/ATV9B0C63R4	4	630	500	965 883	776 704
ATV6A0C71R4/ATV9A0C71R4 ATV6B0C71R4/ATV9B0C71R4	5	710	560	1087 995	869 789
ATV6A0C80R4/ATV9A0C80R4 ATV6B0C80R4/ATV9B0C80R4	5	800	630	1216 1115	968 883

TYPE continued

Type	Module Size	Motor Power Normal Duty (ND) at 40°C [HP]	Motor Power Heavy Duty (HD) at 40°C [HP]	Current Rating at 40°C IN [A]	
				ND	HD
ATVx 480V Mains Supply ; SW Version: ATV6x V2.6IE29_B11/ ATV9x V3.1IE24_B17					
ATV6A0C11T4/ATV9A0C11T4 ATV6B0C11T4/ATV9B0C11T4	1	150	125	168 148	145 125
ATV6A0C13T4/ATV9A0C13T4 ATV6B0C13T4/ATV9B0C13T4	1	200	150	218 197	168 148
ATV6A0C16T4/ATV9A0C16T4 ATV6B0C16T4/ATV9B0C16T4	1	250	200	268 245	218 197
ATV6A0C20T4/ATV9A0C20T4 ATV6B0C20T4/ATV9B0C20T4	2	300	250	328 292	280 245
ATV6A0C25T4/ATV9A0C25T4 ATV6B0C25T4/ATV9B0C25T4	2	400	300	427 387	328 292
ATV6A0C31T4/ATV9A0C31T4 ATV6B0C31T4/ATV9B0C31T4	2	500	400	528 484	427 387
ATV6A0C35T4/ATV9A0C35T4 ATV6B0C35T4/ATV9B0C35T4	3	550	450	586 533	486 436
ATV6A0C40T4/ATV9A0C40T4 ATV6B0C40T4/ATV9B0C40T4	3	600	500	634 578	536 484
ATV6A0C45T4/ATV9A0C45T4 ATV6B0C45T4/ATV9B0C45T4	3	650	550	685 626	586 533
ATV6A0C50T4/ATV9A0C50T4 ATV6B0C50T4/ATV9B0C50T4	3	700	600	736 674	634 578
ATV6A0C56T4/ATV9A0C56T4 ATV6B0C56T4/ATV9B0C56T4	4	800	650	842 771	690 626
ATV6A0C63T4/ATV9A0C63T4 ATV6B0C63T4/ATV9B0C63T4	4	900	700	939 862	740 674
ATV6A0C71T4/ATV9A0C71T4 ATV6B0C71T4/ATV9B0C71T4	5	1000	800	1044 958	846 771
ATV6A0C80T4/ATV9A0C80T4 ATV6B0C80T4/ATV9B0C80T4	5	1100	900	1146 1049	942 862

TYPE continued

Type	Module Size	Motor Power Normal Duty (ND) at 40°C [KW]	Motor Power Heavy Duty (HD) at 40°C [KW]	Current Rating at 40°C IN [A]	
				ND	HD
ATVx 500V Mains Supply ; SW Version: ATV6x V2.6IE29_B11/ ATV9x V3.1IE24_B17					
ATV6A0C11N6/ATV9A0C11N6 ATV6B0C11N6/ATV9B0C11N6	1	75	55	110 98	83 72
ATV6A0C13N6/ATV9A0C13N6 ATV6B0C13N6/ATV9B0C13N6	1	90	75	129 117	110 98
ATV6A0C16N6/ATV9A0C16N6 ATV6B0C16N6/ATV9B0C16N6	1	110	90	154 141	129 117
ATV6A0C20N6/ATV9A0C20N6 ATV6B0C20N6/ATV9B0C20N6	1	132	110	183 169	154 141
ATV6A0C25N6/ATV9A0C25N6 ATV6B0C25N6/ATV9B0C25N6	2	160	132	225 204	190 169
ATV6A0C31N6/ATV9A0C31N6 ATV6B0C31N6/ATV9B0C31N6	2	220	160	303 278	225 204
ATV6A0C40N6/ATV9A0C40N6 ATV6B0C40N6/ATV9B0C40N6	2	280	220	380 352	303 278
ATV6A0C50N6/ATV9A0C50N6 ATV6B0C50N6/ATV9B0C50N6	3	355	280	484 446	385 352
ATV6A0C63N6/ATV9A0C63N6 ATV6B0C63N6/ATV9B0C63N6	3	450	355	607 562	484 446
ATV6A0C80N6/ATV9A0C80N6 ATV6B0C80N6/ATV9B0C80N6	4	560	450	756 701	610 564
ATV6A0M10N6/ATV9A0M10N6 ATV6B0M10N6/ATV9B0M10N6	5	710	560	954 884	758 701
ATV6A0M12N6/ATV9A0M12N6 ATV6B0M12N6/ATV9B0M12N6	6	800	710	1070 991	954 884
ATVx 600V Mains Supply ; SW Version: ATV6x V2.6IE29_B11/ ATV9x V3.1IE24_B17					
ATV6A0C11T6/ATV9A0C11T6 ATV6B0C11T6/ATV9B0C11T6	1	125	100	112 102	92 82
ATV6A0C13T6/ATV9A0C13T6 ATV6B0C13T6/ATV9B0C13T6	1	150	125	131 121	112 102
ATV6A0C16T6/ATV9A0C16T6 ATV6B0C16T6/ATV9B0C16T6	1	175	150	152 142	131 121

TYPE continued

Type	Module Size	Motor Power Normal Duty (ND) at 40°C [HP]	Motor Power Heavy Duty (HD) at 40°C [HP]	Current Rating at 40°C IN [A]	
				ND	HD
ATVx 600V Mains Supply ; SW Version: ATV6x V2.6IE29_B11/ ATV9x V3.1IE24_B17					
ATV6A0C20T6/ATV9A0C20T6 ATV6B0C20T6/ATV9B0C20T6	1	200	175	172 161	152 142
ATV6A0C25T6/ATV9A0C25T6 ATV6B0C25T6/ATV9B0C25T6	2	250	200	218 199	179 160
ATV6A0C31T6/ATV9A0C31T6 ATV6B0C31T6/ATV9B0C31T6	2	350	250	298 277	218 199
ATV6A0C40T6/ATV9A0C40T6 ATV6B0C40T6/ATV9B0C40T6	2	450	350	379 355	298 277
ATV6A0C50T6/ATV9A0C50T6 ATV6B0C50T6/ATV9B0C50T6	3	550	450	464 434	383 355
ATV6A0C63T6/ATV9A0C63T6 ATV6B0C63T6/ATV9B0C63T6	3	650	550	544 511	464 434
ATV6A0C80T6/ATV9A0C80T6 ATV6B0C80T6/ATV9B0C80T6	4	800	650	670 628	547 513
ATV6A0M10T6/ATV9A0M10T6 ATV6B0M10T6/ATV9B0M10T6	5	1000	800	833 785	673 628
ATV6A0M12T6/ATV9A0M12T6 ATV6B0M12T6/ATV9B0M12T6	6	1200	1000	994 937	835 785
ATVx 690V Mains Supply ; SW Version: ATV6x V2.6IE29_B11/ ATV9x V3.1IE24_B17					
ATV6A0C11Q6/ATV9A0C11Q6 ATV6B0C11Q6/ATV9B0C11Q6	1	110	90	118 102	100 85
ATV6A0C13Q6 /ATV9A0C13Q6 ATV6B0C13Q6/ATV9B0C13Q6	1	132	110	138 122	118 102
ATV6A0C16Q6/ATV9A0C16Q6 ATV6B0C16Q6/ATV9B0C16Q6	1	160	132	163 148	138 122
ATV6A0C20Q6/ATV9A0C20Q6 ATV6B0C20Q6/ATV9B0C20Q6	1	200	160	200 183	163 148
ATV6A0C25Q6/ATV9A0C25Q6 ATV6B0C25Q6/ATV9B0C25Q6	2	250	200	255 228	211 183
ATV6A0C31Q6/ATV9A0C31Q6 ATV6B0C31Q6/ATV9B0C31Q6	2	315	250	316 287	255 228

TYPE continued

Type	Module Size	Motor Power Normal Duty (ND) at 40°C [KW]	Motor Power Heavy Duty (HD) at 40°C [KW]	Current Rating at 40°C	
				IN [A] ND	HD
ATVx 690V Mains Supply ; SW Version: ATV6x V2.6IE29_B11/ ATV9x V3.1IE24_B17					
ATV6A0C40Q6/ATV9A0C40Q6 ATV6B0C40Q6/ATV9B0C40Q6	2	400	315	394 363	316 287
ATV6A0C50Q6/ATV9A0C50Q6 ATV6B0C50Q6/ATV9B0C50Q6	3	500	400	495 453	401 362
ATV6A0C63Q6/ATV9A0C63Q6 ATV6B0C63Q6/ATV9B0C63Q6	3	630	500	615 568	495 453
ATV6A0C80Q6/ATV9A0C80Q6 ATV6B0C80Q6/ATV9B0C80Q6	4	800	630	776 718	619 569
ATV6A0M10Q6/ATV9A0M10Q6 ATV6B0M10Q6/ATV9B0M10Q6	5	1000	800	969 898	779 718
ATV6A0M12Q6/ATV9A0M12Q6 ATV6B0M12Q6/ATV9B0M12Q6	6	1200	1000	1161 1078	971 898

TYPE continued

Type	Breaking Voltage [Vdc]	Max. continuous breaking current at 40°C [A]	Max. continuous breaking power at 40°C [kW]	Current Rating at 40°C IN [A]
400V Power Supply				
MODBUOC16Q4APM	780	69	75	85
MODBUOC31Q4APM	780	125	130	161
MODBUOC50Q4APM	780	198	225	247
MODBUOC63Q4APM	780	125	260	161
MODBUOC80Q4APM	780	198	355	274
440V Power Supply				
MODBUOC16R4APM	780	69	75	85
MODBUOC31R4APM	780	125	130	161
MODBUOC50R4APM	780	198	225	247
MODBUOC63R4APM	780	125	260	161
MODBUOC80R4APM	780	198	355	274
480V Power Supply				
MODBUOC16T4APM	780	69	75	85
MODBUOC31T4APM	780	125	130	161
MODBUOC50T4APM	780	198	225	247
MODBUOC63T4APM	780	125	260	161
MODBUOC80T4APM	780	198	355	274
500V Power Supply				
MODBUOC20N6APM	1130	58	85	74
MODBUOC40N6APM	1130	110	165	142
MODBUOC63N6APM	1130	175	285	216
MODBUOC80N6APM	1130	110	330	142
MODBUOM10N6APM	1130	175	450	216
MODBUOM12N6APM	1130	172	550	204
600V Power Supply				
MODBUOC20T6APM	1130	58	85	74
MODBUOC40T6APM	1130	110	165	142
MODBUOC63T6APM	1130	175	285	216
MODBUOC80T6APM	1130	110	330	142
MODBUOM10T6APM	1130	175	450	216
MODBUOM12T6APM	1130	172	550	204

TYPE continued

Type	Breaking Voltage [Vdc]	Max. continuous breaking current at 40°C [A]	Max. continuous breaking power at 40°C [kW]	Current Rating at 40°C IN [A]
690V Power Supply				
MODBUOC20Q6APM	1130	58	85	74
MODBUOC40Q6APM	1130	110	165	142
MODBUOC63Q6APM	1130	175	285	216
MODBUOC80Q6APM	1130	110	330	142
MODBUOM10Q6APM	1130	175	450	216
MODBUOM12Q6APM	1130	172	550	204

Degree of protection: IP 00
 Pollution degree: 2
 Overvoltage Category: III
 Nominal Input frequency: 50/60 Hz

PLACE OF PRODUCTION

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