MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

ABB

TU849

REDUNDANT MODEM TERMINATION UNIT

Used with the applicable S800 I/O configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: ABB Compact Product Suite Catalog 3BSE062980; exact-model ABB hardware-selector specifications

Feature	TU847	TU848	TU849	TU860
Article number	3BSE022462R1	3BSE042558R1	3BSE042560R1	3BSE078710R1
Function	Module termination unit (MTU) for redundant configuration of the field communication interface CI840/CI840A. The MTU is a passive unit having connections for power supply, electrical ModuleBus, two CI840/CI840A and two rotary switches for station address (0 to 99) settings. A ModuleBus Optical Port TB842 can be connected to TU847 via TB806.	Module termination unit (MTU) for redundant configuration of Optical ModuleBus Modem TB840/ TB840A. The MTU is a passive unit having connections for two power supply (one for each modem), double electrical ModuleBus, two TB840/ TB840A and a rotary switch for cluster address (1 to 7) setting.	Module termination unit (MTU) for redundant configuration of Optical ModuleBus Modem TB840/ TB840A. The MTU is a passive unit having connections for two power supply, one for each modem, a single electrical ModuleBus, two TB840/ TB840A and a rotary switch for cluster address (1 to 7) setting.	Module termination unit (MTU) only for connecting S800 I/O modules to the Modulebus connector. Two mounting slots for redundant CI845 Ethernet FCI modules. Two mounting slots for redundant Ethernet Adapters. Not intended for functional safety applications. Also suitable for installation in hazardous areas classified as Zone 2 or Class I, Division 2.
Cable redundancy	No	Yes	Yes	
Module redundancy	Yes	Yes	Yes	
Type	Redundant CI840/CI840A, Single I/O	Redundant TB840/TB840A, Redundant I/O, Dual Power	Redundant TB840/TB840A, Single I/O, Dual Power	Redundant MTU for CI845, TC810 and S800 I/O Modules
Power Input	24 V d.c. (19.2 - 30 V)	24 V d.c (19.2 -30 V)	24 V d.c (19.2 -30 V)	24 V d.c (19.2 -30 V)
Hot Swap	No	No	No	No
Mounting	Vertical or Horizontal			Vertical mounting
Power Consumption at 24 V d.c.	N/A	N/A	N/A	N/A
Connector	PROFIBUS: DSUB9 connector Service ports: RJ45 connector	N/A	N/A	Maximum 2 FCI modules. Maximum 2 Ethernet Adapters. Inlet and connector for I/O cluster.
Acceptable wire sizes	Solid: 0.2 - 2.5 mm^2 Stranded: 0.2 -2.5 mm^2, 24 -12 AWG Recomended torque: 0.5 Nm	Solid: 0.2 - 2.5 mm^2 Stranded: 0.2 -2.5 mm^2, 24 -12 AWG Recomended torque: 0.5 Nm	Solid: 0.2 - 2.5 mm^2 Stranded: 0.2 -2.5 mm^2, 24 -12 AWG Recomended torque: 0.5 Nm	
Dielectric test voltage	500 V a.c	500 V a.c	500 V a.c	
Rated insulation voltage	50 V	50 V	50 V	
Power Dissipation	N/A	N/A	N/A	N/A
Width	124 mm (4.88 in.)	124 mm (4.88 in.)	124 mm (4.88 in.)	135 mm (5.31 in.)
Depth	47 mm (1.85 in.)	47 mm (1.85 in.)	47 mm (1.85 in.)	95.5 mm (3.76 in.)
Height	186.5 mm (7.34 in.)	186.5 mm (7.34 in.)	186.5 mm (7.34 in.)	210 mm (8.26 in.)
Weight	500 g (1.1 lbs.)	450 g (0.99 lbs.)	450 g (0.99 lbs.)	500 g (1.1 lbs.)
Climatic operating conditions	0 to +55 °C (Storage -25 to +70 °C), RH=5 to 95 % no condensation, IEC/EN 61131-2 (2)			-40°C (-40°F) to +70°C (158°F) (Storage -40°C (-40°F) to +85°C (185°F)) RH=5 to 95 % no condensation
Certificates and standards (3)				
Equipment class	Class 1 according to IEC 60536; (earth protected)	Class 1 according to IEC 60536; (earth protected)	Class 1 according to IEC 60536; (earth protected)	
Protection rating	IP20 according to IEC 60529	IP20 according to IEC 60529	IP20 according to IEC 60529	IP20 according to IEC 60529
CE- marking	Yes			
Electrical Safety	cULus	cULus	cULus	IEC/EN 61010-1, IEC 61010-2-201, UL 61010-2-201, CSA C22.2 No. 61010-2-201
Hazardous location	cULus Hazardous Location Class 1 Zone 2, ATEX Zone 2	cULus Hazardous Location Class 1 Zone 2, ATEX Zone 2	cULus Hazardous Location Class 1 Zone 2, ATEX Zone 2	EN 60079-0, EN60079-7, EN60079-15, UL 12.12.01/CSA C22.2 No. 213-17
Marine certificates	ABS, BV, DNV-GL, LR	ABS, BV, DNV-GL, LR	ABS, BV, DNV-GL, LR	–
RoHS compliance	DIRECTIVE/2011/65/EU (EN 50581:2012)			
WEEE compliance	DIRECTIVE/2012/19/EU			

(3) For detailed information on each module, please visit: **compacthardwareselector.com**

S800 I/O and S800L I/O

ModuleBus Communication Parts

ModuleBus Communication Parts		Article no.	
	**TU848 Termination Unit for 1+1 TB840** MTU with individual power supply. Support for redundant I/O. Including: - 1 pcs Power Supply Connector - 2 pcs TB807 Modulebus Terminator	3BSE042558R1	
	TU849 Termination Unit for 1+1 TB840. MTU with individual power supply. Support for non-redundant I/O. Including: - 1 pcs Power Supply Connector - 1 pcs TB807 Modulebus Terminator	3BSE042560R1	
	**TK811V015 POF Cable, 1.5 m, Duplex** L = 1.5 m latching duplex connector Duplex plastic fibre	3BSC950107R1	
	TK811V050 POF Cable, 5 m, Duplex L = 5 m latching duplex connector Duplex plastic fibre	3BSC950107R2	
	TK811V150 POF Cable, 15 m, Duplex L = 15 m latching duplex connector Duplex plastic fibre	3BSC950107R3	
	**TK812V015 POF Cable, 1.5 m, Simplex** L = 1.5 m latching connector Simplex plastic fibre	3BSC950118R1	
	TK812V050 POF Cable, 5 m, Simplex L = 5 m latching connector Simplex plastic fibre	3BSC950118R2	
	TK812V150 POF Cable, 15 m, Simplex L = 15 m latching connector Simplex plastic fibre	3BSC950118R3	

Power supplies and Voters selection guide

Feature	SD831	SD832	SD833	SD834	SS823	SS832	SD853	SD854	SS855
Rated output current	3 A	5 A	10 A	20 A	20 A	10 A (20 A in parallel operation)	10 A	20 A	40 A
Rated output power	72 W	120 W	240 W	480 W	-	-	240 W	480 W	-
Rated output voltage	24 V d.c.	24 V d.c.	24 V d.c.	24 V d.c.	-	-	24 V d.c.	24 V d.c.	-
Rated input power	134/143 VA	240/283 VA	447/514 VA	547/568 VA	500 W	2 x 10 A			2 x 20 A
Mains/input voltage, nominal	100-240 V a.c. 110-300 V d.c.	100-120 V a.c. 200-240 V a.c. Auto-select input	100-120 V a.c. 200-240 V a.c. Auto-select input	100-240 V a.c. 110-150 V d.c	1x24 V d.c	2x24 V d.c	100-240 V a.c. 110-150 V d.c.	100-240 V a.c. 110-150 V d.c.	-
Mains voltage variation allowed	100-240 V a.c. +-10 %. 110-300 V d.c. -20 % / +25 %	100-120 V a.c. +-10 %, 200-240 V a.c. +-10 %	100-120 V a.c. +-10 %, 200-240 V a.c. +-10 %	85-276 V a.c. 88-187 V d.c.	-	-	85-264 V a.c 88-180 V d.c.	85-264 V a.c. / 88-180 V d.c.	-
Primary peak inrush current at power on	<28/<54 A	<10 A	<10 A	<13 A	-	-	6 A / 9 A peak	10 A / 4.5 A peak	-
Applications	SELV and PELV	SELV and PELV	SELV and PELV	SELV and PELV	-	-	SELV and PELV	SELV and PELV	-
Load sharing	-	-	-	Parallell connection	Yes	-	Parallell connection	Parallell connection	Two in parallell for voting 40 A
Supervision relay	No	No	No	Yes	Yes	Yes	Yes	Yes	No
Power Factor (at rated output power)	0.61/0.56	0.56/0.47	0.59/0.51	0.95/0.90	-	-	0.99/0.97	0.99/0.95	-
Heat dissipation	10/8 W	14/13 W	24/22 W	40/31 W	24 W at 20 A and 6 W at 5 A	18 W	16.4 W / 12.1 W, 120/230 V a.c.	29.6/22.1 W, 120/230 V a.c.	2 x 10 A: 1.7 W 2 x 20 A: 5.9 W