MITSUBISHI

A8GT-TK type Numeric Keypad Panel

Mitsubishi Graphic Operation Terminal User's Manual

Thank you for choosing the Mitsubishi General Purpose PC Graphic Operation Terminal 800 series. To ensure correct use of this equipment, please read this manual carefully before operating it.

GOT MELSEC

MODEL	A8GT-TK-U-E
MODEL CODE	13JL51

IB-NA-66832-A (9711)MEE

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* The manual number is noted at the lower left of the back cover.

Print Date	*Manual Number	Revision
Nov. 1997	IB (NA)-66832-A	First printing

□ Precautions Regarding Safety □

(Please read carefully before using your equipment)

Before using this product, please read this manual and the relevant manuals introduced in this manual carefully and pay full attention to safety to handle the product correctly.
The instructions given in this manual are concerned with this product. For the safety instructions of the programmable controller system, please read the CPU module user's manual.
In this manual, the safety instructions are ranked as "DANGER" and "CAUTION".

DANGER	**Procedures which may lead to a dangerous condition and cause death or serious injury if not carried out properly.**
CAUTION	**Procedures which may lead to a dangerous condition and cause superficial to medium injury, or physical damage only, if not carried out properly.**

Depending on circumstances, procedures indicated by CAUTION may also be linked to serious results.
In any case, it is important to follow the directions for usage.
Store this manual in a safe place so that you can take it out and read it whenever necessary. Always forward it to the end user.

[Precautions Regarding Assembly]

DANGER

- When connecting the connection cable to the Numeric Keypad Panel, always switch off GOT power externally in all phases.
  A failure to do so can cause misoperation due to miss-input.

[Precautions Regarding Assembly]

⚠CAUTION

- Use the Numeric Keypad Panel in the environment defined in the general specifications given in the GOT user's manual.
  Using it in other environment can cause an electric shock, fire, misoperation, or product damage or deterioration.
- When plugging the connection cable, insert it into the Numeric Keypad Panel connector until it "clicks".
  After plugging, check that the cable is inserted far enough.
  Otherwise, mis-input can occur due to a contact fault.
- Plug the connection cable into the connector of the external I/O module and tighten the connector fixing screws within the specified torque range.
  Undertightening can cause mis-input due to a contact fault.
  Overtightening can cause mis-input due to damaged screws or external I/O module or a contact fault.
- When installing the Numeric Keypad Panel to a control box, mount or the like, tighten the fixing screws within the specified torque range.
  Undertightening can cause a drop.
  Overtightening can cause a drop due to damaged screws or Numeric Keypad Panel.

[Precautions Regarding Wiring]

DANGER

- Before starting wiring work, always switch power off externally in all phases.
  A failure to do so can cause an electric shock, product damage or misoperation.

⚠CAUTION

- The FG wire of the connection cable and the FG terminal of the GOT's power supply terminal block must be connected to ground separately using a class 3 or higher grounding method.
  Otherwise, misoperation can occur.

[Precaution Regarding Startup and Maintenance]

⚠CAUTION

- Do not disassemble or modify the Numeric Keypad Panel.
  This can cause a failure, misoperation, injury or fire.
- The Numeric Keypad Panel case is made of resin.Do not drop it or give it hard impact. This can cause the product to be damaged or fail.
- Always secure the connection cable connected to the Numeric Keypad Panel and the power wires drawn from the connection cable, e.g. run them in conduits or clamp them.
  Otherwise, the Numeric Keypad Panel or cable can be damaged due to dangling, moved or accidentally pulled cable or misoperation can occur due to improper cable connection.
- Do not hold and pull the cable part when unplugging the connection cable connected to the Numeric Keypad Panel or the power wires drawn from the connection cable.
  When the cable is fitted with a connector, hold the connector of the cable part connected to the Numeric Keypad Panel.
  If you pull the cable connected to the Numeric Keypad Panel, the Numeric Keypad Panel or cable can be damaged or misoperation can occur due to a contact fault.

[Precautions Regarding Product Disposal]

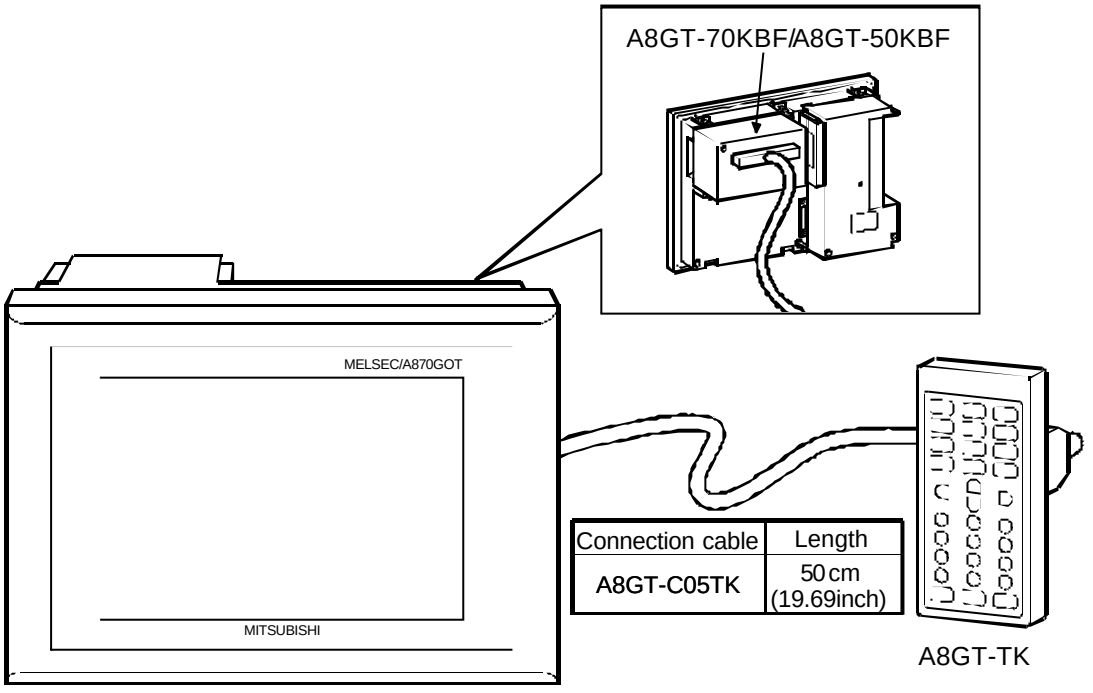
⚠CAUTION

- When disposing of the product, handle it as industrial waste.

Contents

1. Introduction

This user's manual gives specifications, handling instructions and other information of the A8GT-TK Numeric Keypad Panel (hereafter referred to as the "Numeric Keypad Panel").
First, please refer to the user's manual of the A8GT-70KBF/A8GT-50KBF external I/O module (hereafter referred to as the "external I/O module") being used.
The Numeric Keypad Panel is designed to be mountable onto a control box or the like. It is connected to the external I/O module or terminal block conversion module as a data entry Numeric Keypad Panel dedicated to the GOT800 series (hereafter referred to as the "GOT").



Restrictions on use

·Do not press two or more switches of the Numeric Keypad Panel at the same time.
Pressing two or more switches simultaneously can cause mis-input.

·When setting any operation to each key of the Numeric Keypad Panel on the SW3NIW-A8GOTP graphic settings software package, re-set the default key code of each key to “FFFF”.
Otherwise, operation setting will be invalid.

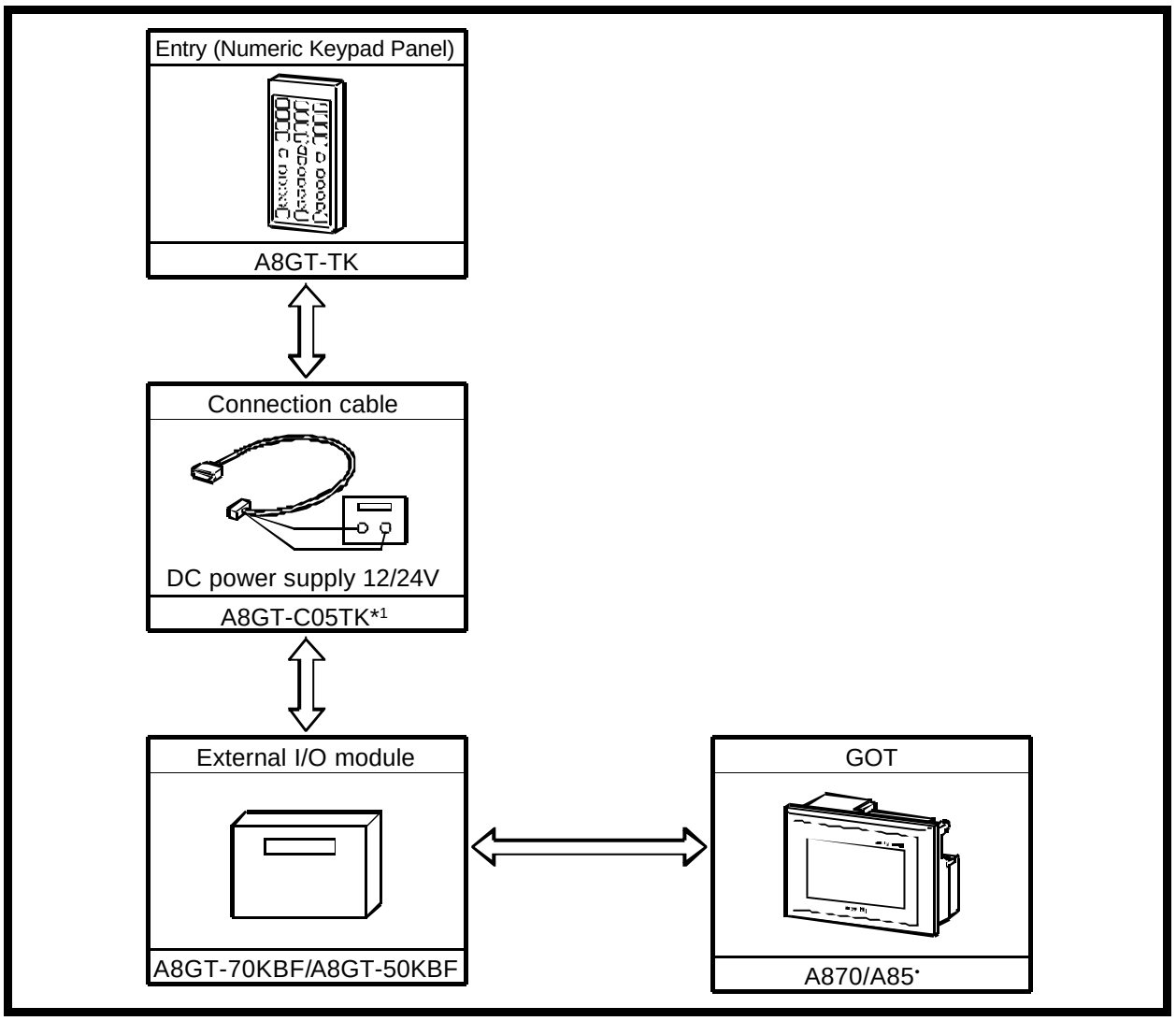
Performance Specifications		
Applicable model		A870GOT/A85□GOT
Connection interface		A8GT-70KBF/A8GT-50KBF
Application		Data entry from keyboard
Keyboard	Number of keys	31
	Key makeup	Function keys, cursor keys, ten-key pad, other function keys
	Operational life	200,000 times
Online connection/disconnection		Disallowed
Outline dimensions(mm/inch)		197/7.76(H)×70/2.76(W)×15/0.59(D)
Weight(kg/lb)		0.13/0.29

For general specifications, refer to the user's manual of the GOT used.

2. System Configuration

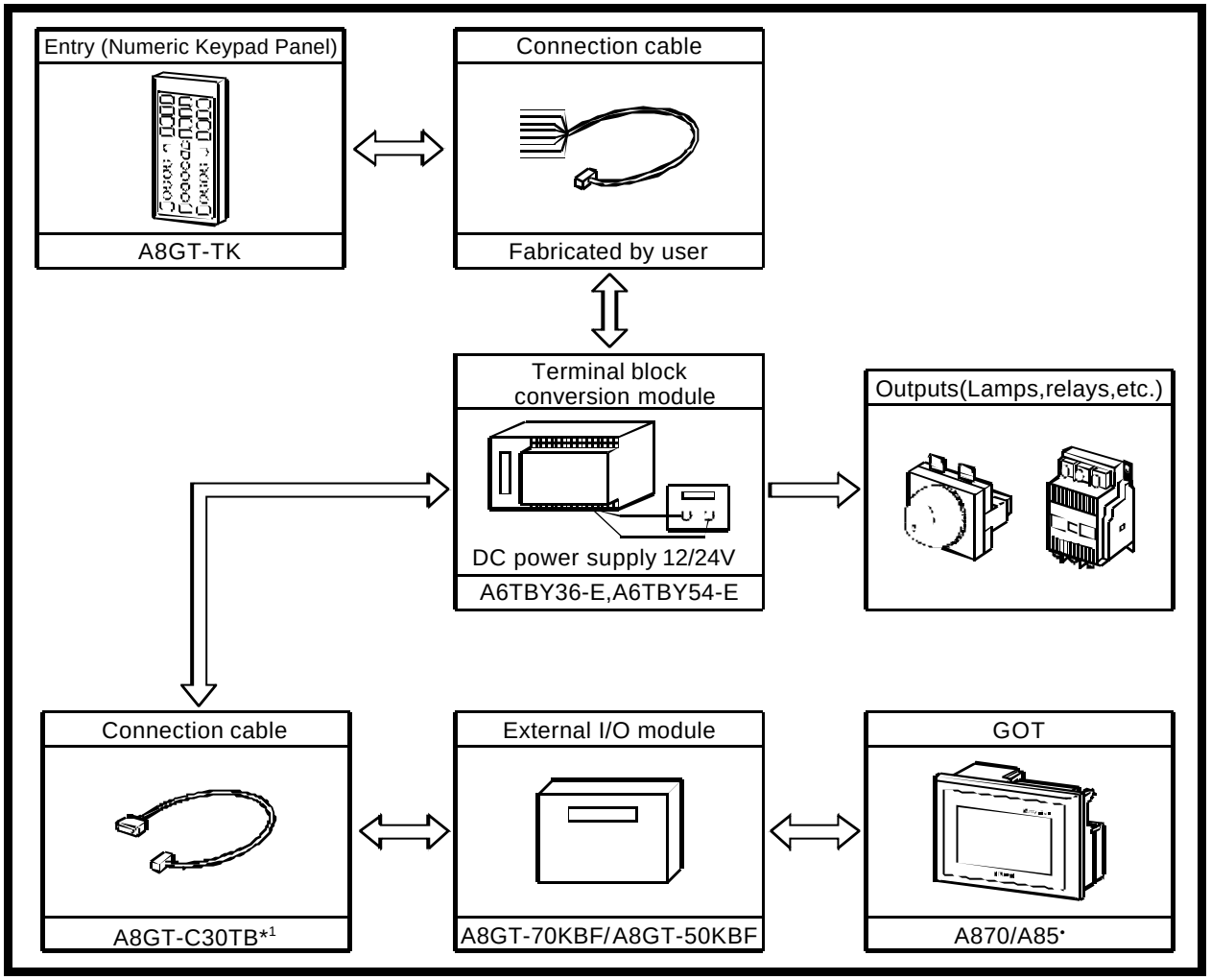
The system configuration differs when outputs are provided by the external I/O module and when outputs are not provided.

2.1 System Configuration for No Outputs



*1:The cable for connection between the external I/O module and Numeric Keypad Panel may be fabricated by the user.

2.2 System Configuration for Outputs



*1:The cable for connection between the external I/O module and terminal block conversion module may be fabricated by the user. For details of the fabricating method, refer to the user's manual of the external I/O module.

3. Connection Cables

This chapter provides how to wire and fabricate the connection cables.

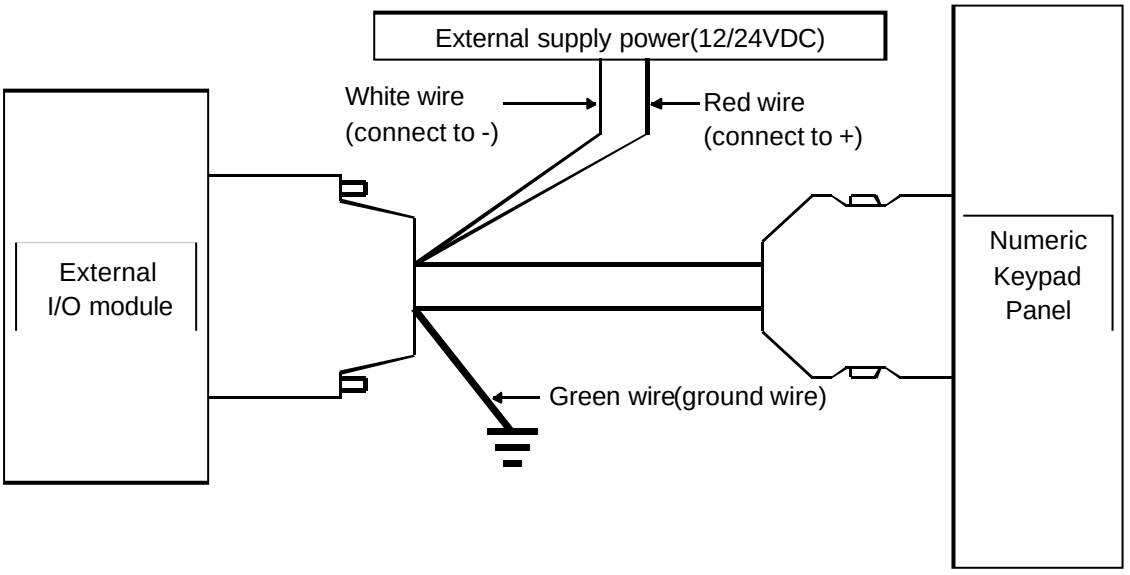
3.1 Cable for Connection between External I/O Module and Numeric Keypad Panel

Use the following cable for connection between the external I/O module and Numeric Keypad Panel.

- Type A8GT-C05TK Numeric Keypad Panel connection cable (cable length:50cm (19.65 inch))
- User-fabricated connection cable (max. cable length:20m (65.62feet.))

3.1.1 Wiring method

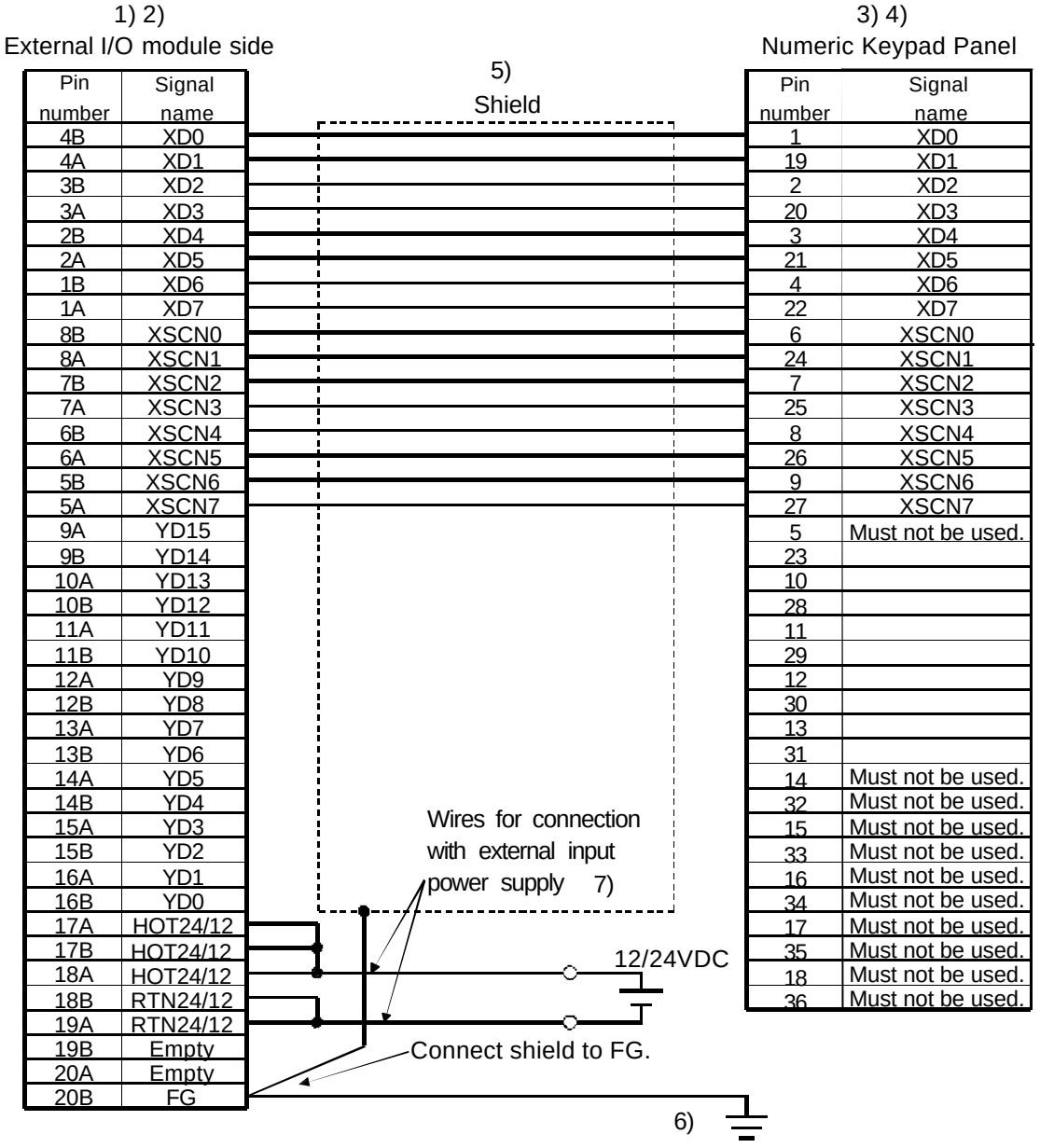
The following diagram shows how to wire the cable for connection between the external I/O module and Numeric Keypad Panel.



3.1.2 How to fabricate the cable

When you do not use the A8GT-C05TK Numeric Keypad Panel connection cable, fabricate the connection cable in accordance with the following wiring diagram and parts list (max. cable length: 20m (65.62 feet)).

(1) Wiring diagram



Pin number	Signal name
4B	XD0
4A	XD1
3B	XD2
3A	XD3
2B	XD4
2A	XD5
1B	XD6
1A	XD7
8B	XSCN0
8A	XSCN1
7B	XSCN2
7A	XSCN3
6B	XSCN4
6A	XSCN5
5B	XSCN6
5A	XSCN7
9A	YD15
9B	YD14
10A	YD13
10B	YD12
11A	YD11
11B	YD10
12A	YD9
12B	YD8
13A	YD7
13B	YD6
14A	YD5
14B	YD4
15A	YD3
15B	YD2
16A	YD1
16B	YD0
17A	HOT24/12
17B	HOT24/12
18A	HOT24/12
18B	RTN24/12
19A	RTN24/12
19B	Empty
20A	Empty
20B	FG

Pin number	Signal name
1	XD0
19	XD1
2	XD2
20	XD3
3	XD4
21	XD5
4	XD6
22	XD7
6	XSCN0
24	XSCN1
7	XSCN2
25	XSCN3
8	XSCN4
26	XSCN5
9	XSCN6
27	XSCN7
5	Must not be used.
23	
10	
28	
11	
29	
12	
30	
13	
31	
14	Must not be used.
32	Must not be used.
15	Must not be used.
33	Must not be used.
16	Must not be used.
34	Must not be used.
17	Must not be used.
35	Must not be used.
18	Must not be used.
36	Must not be used.

(2) Parts list

Number	Name	Type	Maker	Qty
1)	Connector	FCN-361J040-AU	FUJITSU LTD.	1
2)	Connector cover	FCN-360C040-B Tightening torque range: 35 to 48N·cm (3.6 to 4.9kg·cm){3.1 to 4.2lb·inch}		1
3)	Connector	D05-36PC-F0	Japan Aviation Electronics Industry, Ltd.	1
4)	Connector cover	D05-36H-S	Japan Aviation Electronics Industry, Ltd.	1

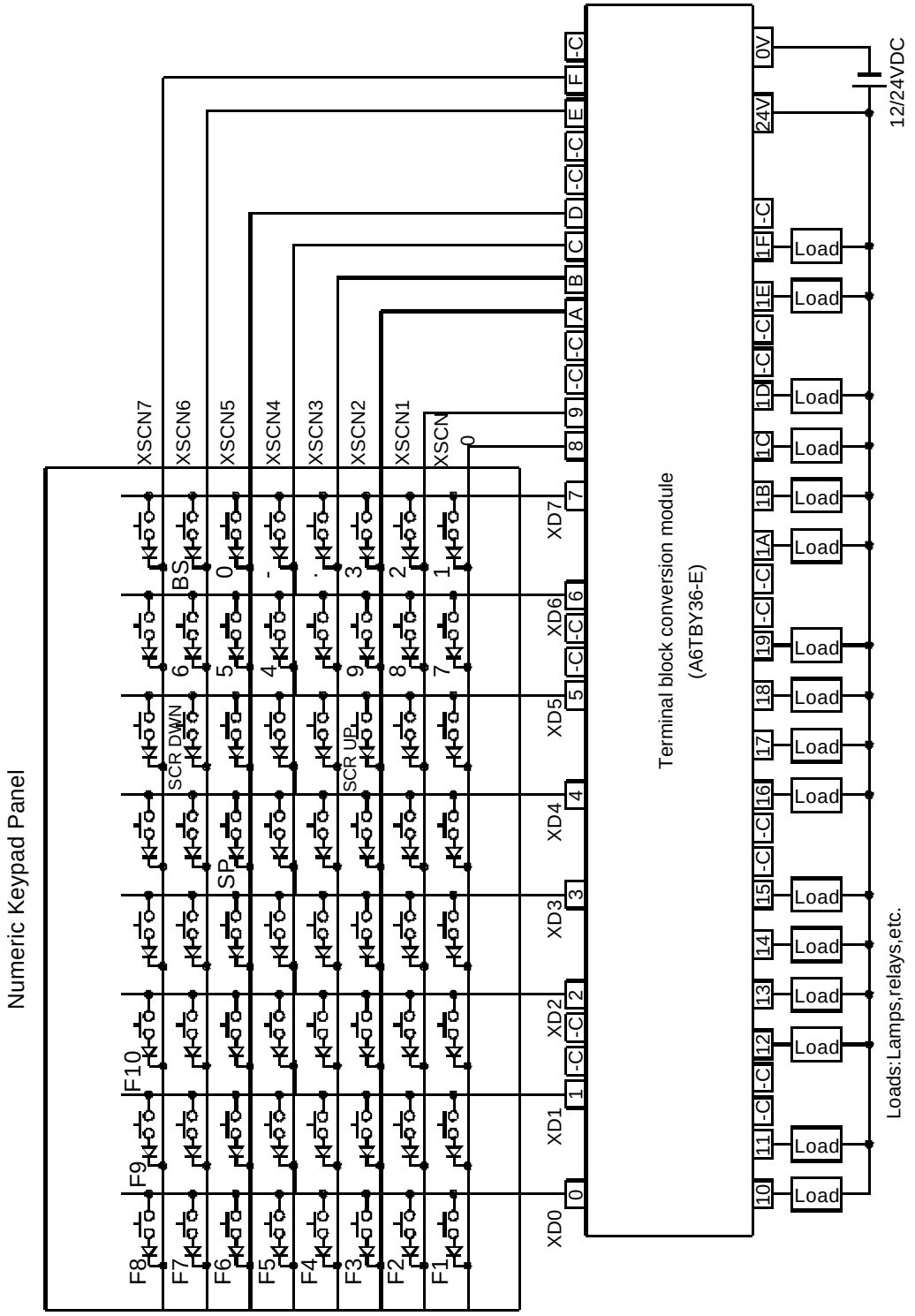
Number	Name	Type	Qty
5)	Twisted pair shielded cable	Conductor OD:1.0mm (0.04 inch) (equivalent to UL 2935 AWG28)	1
6)	FG wire	Conductor OD:1.8mm (0.07 inch) (equivalent to UL 1015 AWG14)	1
7)	External input power supply connecting wire	Conductor OD:0.6mm (0.02 inch) (equivalent to UL 1007 AWG24)	2

3.2 Cable for Connection between Terminal Block Conversion Module and Numeric Keypad Panel

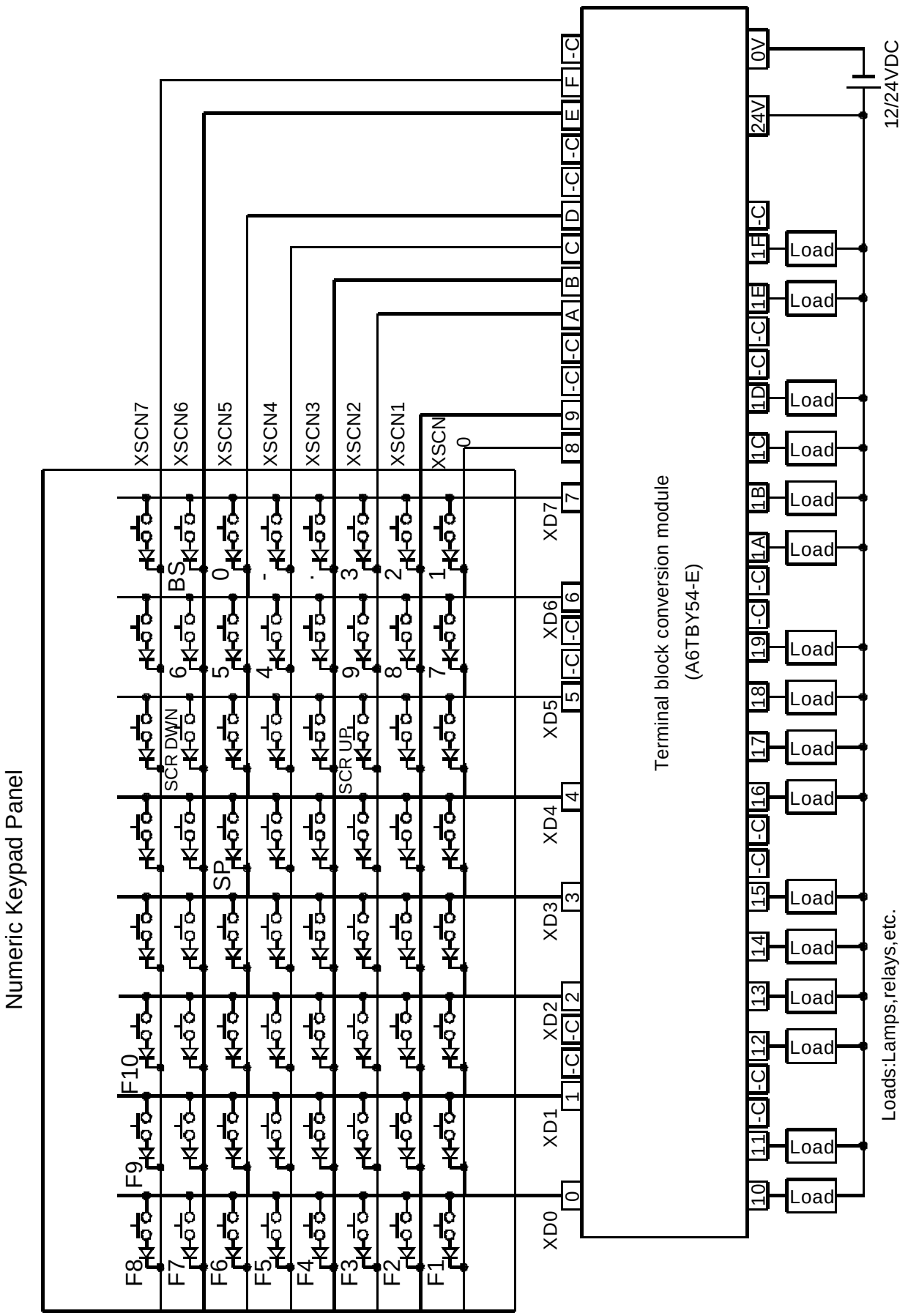
Fabricate the cable for connection between terminal block conversion module and Numeric Keypad Panel in accordance with the following wiring diagram, parts list and assembly diagram (max. cable length: 10m (32.79feet)).

(1) Wiring diagram

1) For use of the terminal block conversion module (A6TBY36-E)



2) For use of the terminal block conversion module (A6TBY54-E)

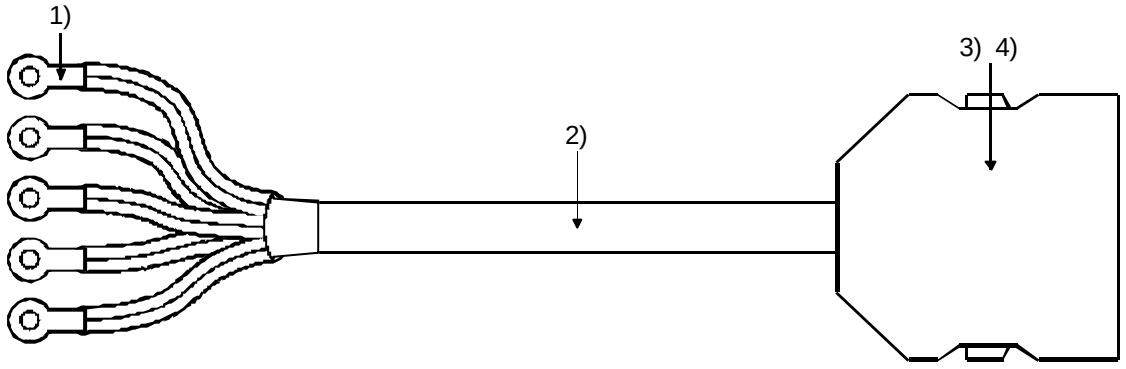


(2) Parts list

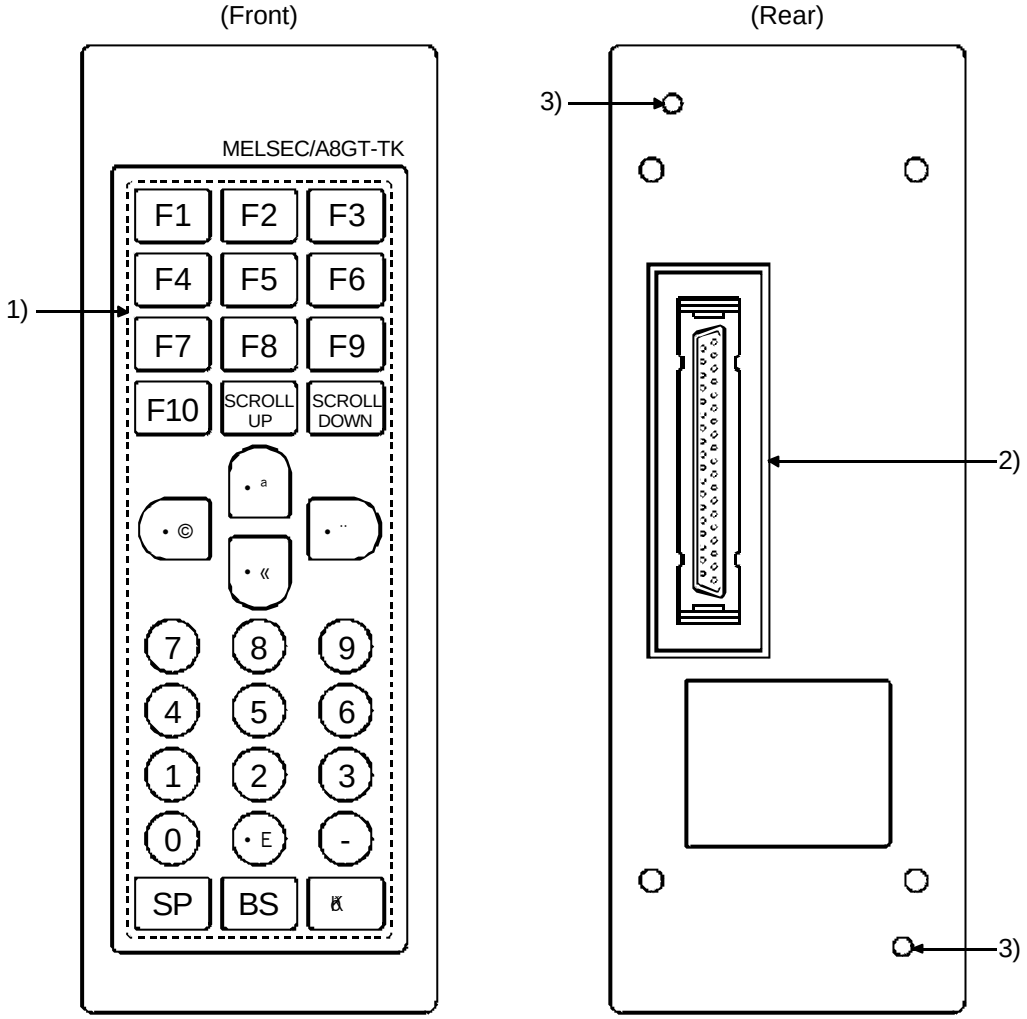
Number	Name	Specifications	Qty
1)	Solderless termi-nal (with insulat-ion sleeve)	1.25-3.5	16
2)	Twisted pair shielded cable	Conductor OD: 1mm (0.04 inch) (equivalent to UL 2935 AWG28)	1

Number	Name	Type	Maker	Qty
3)	Connector	D05-36PC-F0	Japan Aviation Electronics Industry, Ltd.	1
4)	Connector cover	D05-36H-S	Japan Aviation Electronics Industry, Ltd.	1

(3) Assembly diagram



4. Structure



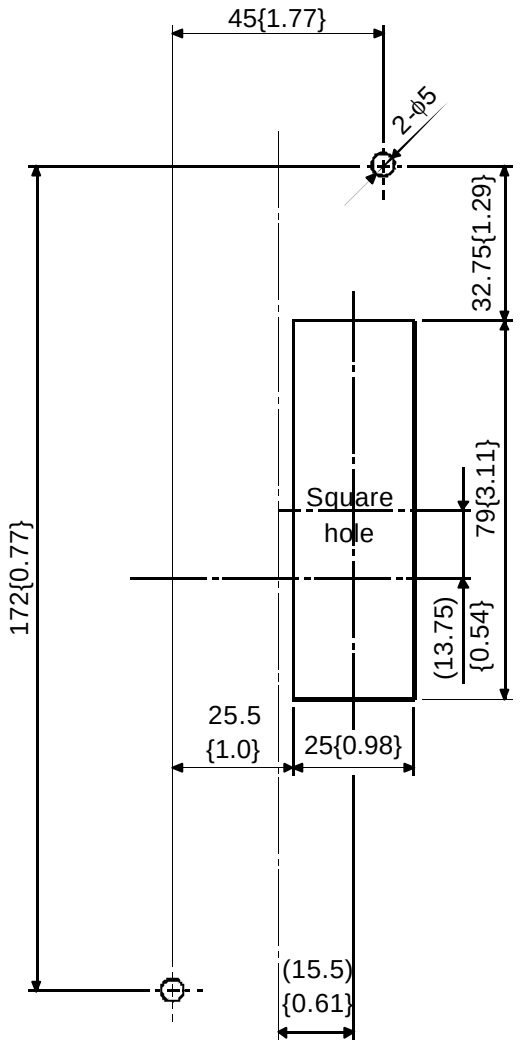
Number	Name	Description
1)	Keys	Used to enter data.
2)	Connector	Connector for connection of the cable to the external I/O module or terminal block conversion module.
3)	Installation screw holes (for M4 screws)	When the Numeric Keypad Panel is installed on a control box or the like, it is fixed with M4 screws (user prepared). Screw hole depth: 5mm(0.20inch) Tightening torque range: 62 to 83.5N·cm(6.3 to 8.5kg·cm){5.5 to 7.4lb·inch}

5. Installation

When installing the Numeric Keypad Panel on a control box door, mount or the like, the door or mount must be machined.

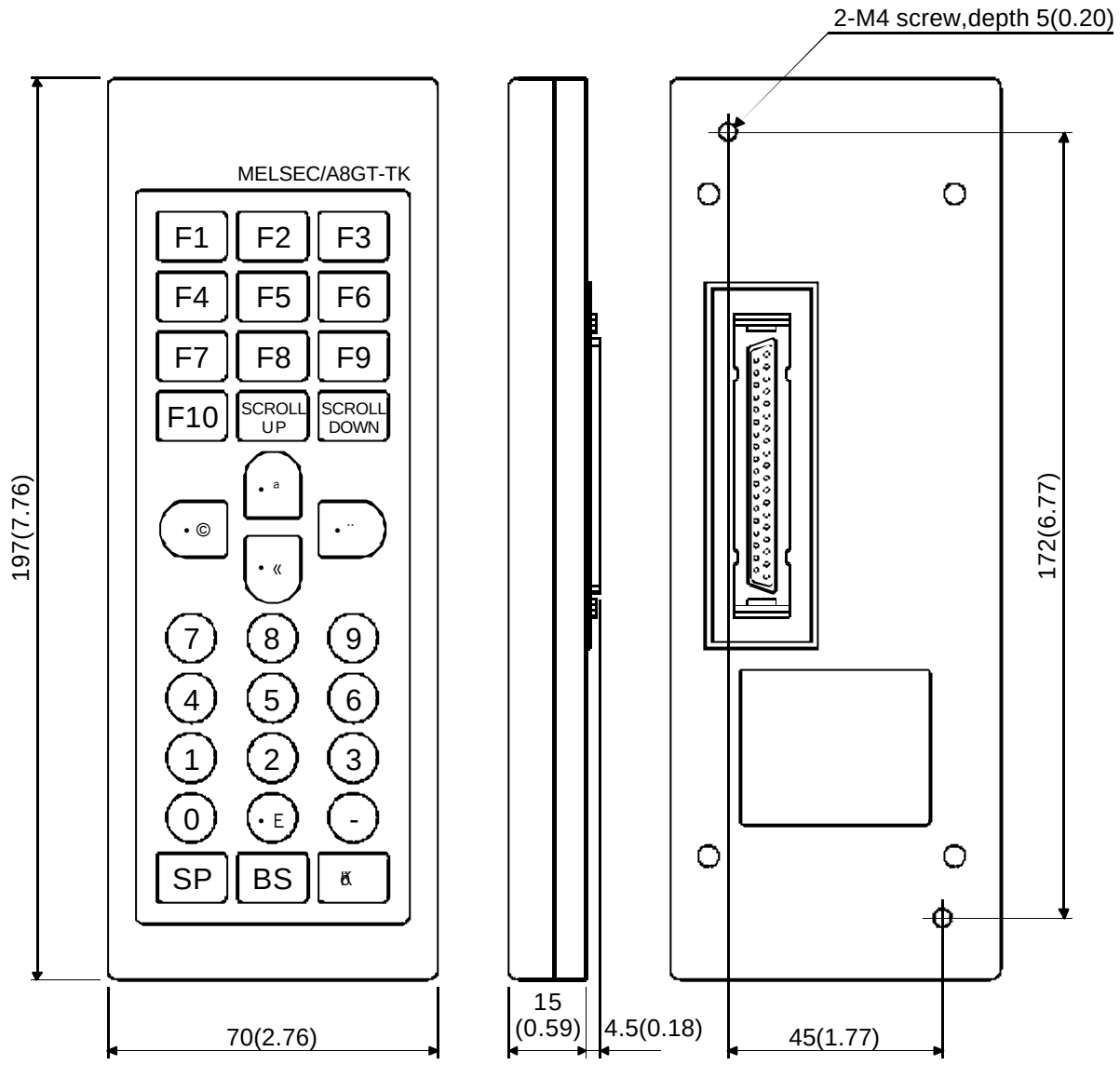
The following diagram shows mounting panel machining dimensions.

Mounting panel machining dimensions (front view)



Unit:mm{inch}

6. Outline Drawing



Unit: mm (inch)