Keypads
Non encoded output
12, 16, 20 and 54 key

General

These dust and damp protected compact keypads, incorporating tactile feedback keys, are ideal for use in industrial environments.

4 models available:
■ 12 key,
■ 16 key,
■ 20 key,
■ 54 function keys (alphanumeric).

The keypads are constructed using a single piece elastomer membrane, with the keys moulded in.

A rigid support is incorporated for mounting on the panel.
■ The degree of protection with respect to the panel is ensured either by compression of the membrane or by a seal.
■ The keys are marked by hot die transfer.
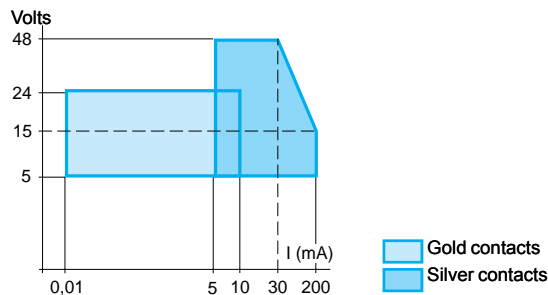Keys may be customised (see Order form, pages 35042/5 to 35042/7).

Environment

Protective treatment	Standard version		"TC" and "TH"
Ambient air temperature	For operation	°C	- 5…+ 70
	For storage	°C	- 40…+ 80
Degree of protection	Conforming to IEC 529 and NF C 20 010		IP 65
Materials in contact with external environment			Good resistance to the most severe industrial environments. Types of materials: please consult your Regional Sales Office.
Contact bounce time	Non encoded keypads	ms	≤ 5
Mechanical life	In millions of operating cycles		3
Key colours			Grey RAL 7032 and beige RAL 1019
Key travel		mm	2
Operating force	With tactile feedback	N	4
Mounting	12 and 16-way keypads		Surface mounting (fixing by keypad base onto panel)
	12, 16, 20 and 54-way keypads		Flush mounting (fixing from rear of panel into cut-out)
Type of connection			Non encoded keypads: straight gold plated male connector or 0.3 m ribbon cable + gold plated female connector

Keypads with non encoded output

Type of contact			By gold or silver contact module soldered to printed circuit
Switching compatibility	Gold contacts		TTL or CMOS, nominal rating: 5 V - 0.5 mA
	Silver contacts		Compatibility with PLCs
Insulation resistance		MΩ	> 100
Discharge voltage withstand	Conforming to IEC 801-2	kV	≤ 12 ; safety class 3
Operational power	Gold contacts		5 V - 0.5 mA
	Silver contacts		48 V - 200 mA
Dielectric strength		kV	≥ 2.5
Output mode	Depending on model		Common point or matrix

Voltage/current operating zone

References:
pages 35042/3 and 35042/4

Dimensions:
pages 35045/2 and 35045/3

Schemes:
pages 35045/4 and 35045/7

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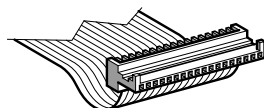# Keypads
Non encoded output
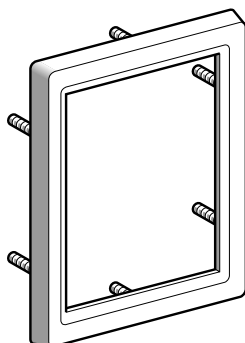### 12 and 16 key

XBL C1012R●●●

XBL C1016R●●●

XBL Z511

XBL Z512

XBL Z612

References

12-way keypads

Fixing method	Output mode	Type of connection	Contact	Reference	Weight kg
Fixing from rear of panel into cut-out (flush mounting)	Common point	Straight, gold plated male connector	Gold	**XBL C1012F181**	0.060
			Silver	**XBL C1012F111**	0.060
		0.3 m ribbon cable + gold plated female connector	Gold	**XBL C1012F184**	0.080
			Silver	**XBL C1012F114**	0.080
	Matrix	Straight, gold plated male connector	Gold	**XBL C1012F281**	0.060
			Silver	**XBL C1012F211**	0.060
		0.3 m ribbon cable + gold plated female connector	Gold	**XBL C1012F284**	0.080
			Silver	**XBL C1012F214**	0.080
Fixing by keypad base onto panel (surface mounting)	Common point	Straight, gold plated male connector	Gold	**XBL C1012R181**	0.080
			Silver	**XBL C1012R111**	0.080
		0.3 m ribbon cable + gold plated female connector	Gold	**XBL C1012R184**	0.100
			Silver	**XBL C1012R114**	0.100
	Matrix	Straight, gold plated male connector	Gold	**XBL C1012R281**	0.080
			Silver	**XBL C1012R211**	0.080
		0.3 m ribbon cable + gold plated female connector	Gold	**XBL C1012R284**	0.100
			Silver	**XBL C1012R214**	0.100

16-way keypads

Fixing method	Output mode	Type of connection	Type of contact	Reference	Weight kg
Fixing from rear of panel into cut-out (flush mounting)	Common point	Straight, gold plated male connector	Gold	**XBL C1016F181**	0.080
			Silver	**XBL C1016F111**	0.080
		0.3 m ribbon cable + gold plated female connector	Gold	**XBL C1016F184**	0.100
			Silver	**XBL C1016F114**	0.100
	Matrix	Straight, gold plated male connector	Gold	**XBL C1016F281**	0.080
			Silver	**XBL C1016F211**	0.080
		0.3 m ribbon cable + gold plated female connector	Gold	**XBL C1016F284**	0.100
			Silver	**XBL C1016F214**	0.100
Fixing by keypad base onto panel (surface mounting)	Common point	Straight, gold plated male connector	Gold	**XBL C1016R181**	0.100
			Silver	**XBL C1016R111**	0.100
		0.3 m ribbon cable + gold plated female connector	Gold	**XBL C1016R184**	0.120
			Silver	**XBL C1016R114**	0.120
	Matrix	Straight, gold plated male connector	Gold	**XBL C1016R281**	0.100
			Silver	**XBL C1016R211**	0.100
		0.3 m ribbon cable + gold plated female connector	Gold	**XBL C1016R284**	0.120
			Silver	**XBL C1016R214**	0.120

Note: For specific 12 and 16-way non encoded keypads, see Order form on pages 35042/5 and 35042/6.

Accessories for 12 and 16-way keypads

Description		Reference	Weight kg
Connecting ribbon cable length 0.50 m	18-way	**XBL Z511**	0.027
Straight male connector for soldering onto printed circuit board	2 x 10-way	**XBL Z512**	0.003
Assembly: frame, seal and fixings for surface mounting of a flush mounting type keypad	For 12-way keypads	**XBL Z612**	0.033
	For 16-way keypads	**XBL Z616**	0.040

Note: It is possible to convert the 2 x 10-way female connector/ribbon cable to a screw terminal type connector by using an AB1 BCP20235U plug-in terminal block. Please consult your Regional Sales Office.
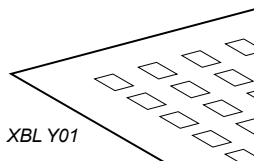
Keypads
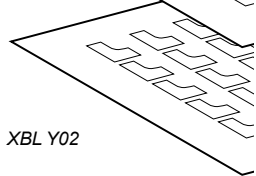## Non encoded output
20 and 54 key

XBL C1020F2●●

XBL C1054F●●●

XBL Y01

XBL Y02

References (continued)

20-way keypads

Fixing method	Output mode	Type of connection	Contact	Reference	Weight kg
Fixing from rear of panel into cut-out (flush mounting)	Matrix	Straight, gold plated male connector	Gold	**XBL C1020F281**	0.120
			Silver	**XBL C1020F211**	0.120
		0.3 m ribbon cable + gold plated female connector	Gold	**XBL C1020F284**	0.140
			Silver	**XBL C1020F214**	0.140

54-way alphanumeric keypads

Fixing method	Type of contact	Output mode	Type of connection	Contact	Reference	Weight kg
Fixing from rear of panel into cut-out (flush mounting)	Gold or silver (recommended for very dirty or dusty environments)	Matrix	Elbowed, gold plated male connector	Gold	**XBL C1054F282**	0.380
				Silver	**XBL C1054F212**	0.380
			0.3 m ribbon cable + gold plated female connector	Gold	**XBL C1054F284**	0.400
				Silver	**XBL C1054F214**	0.400
	Conductive silicone	Matrix	Elbowed, gold plated male connector	–	**XBL C1054F222**	0.380
			0.3 m ribbon cable + gold plated female connector	–	**XBL C1054F224**	0.400

These keypads include 2 keys with a red LED (10 mA max.) for the functions "Shift lock" and "Control" (CTRL), the connections of which are brought out separately, in addition to those of the "Shift" key (resistor to be connected in series, see scheme on page 35045/7).

Note: For specific 20 and 54-way non encoded keypads, see Order form on pages 35042/5 to 35042/7.

Separate components for 12 and 54-way keypads

Description		Unit reference	Weight kg
White legends (blank) **(sold in sheets of 40 legends)**	For keys without LED	**XBL Y01**	0.002
	For keys with LED	**XBL Y02**	0.002

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Customer			Schneider Electric Industries	
Company	Order N°	Delivery date	Sales office - Subsidiary Co.	Order N°

These keypads are identical to the standard types except that they may be customised by:
- Using keys of alternative colours.
- Marking individual keys with characters or symbols as shown on pages 35044/2 and 35044/3.
- Using keys with transparent plunger caps, enabling blank white legends to be inserted *(1)*.
- Fitting a ribbon cable longer or shorter than the standard length.

Basic reference to be completed

Number of identical keypads		XBL C	0	5	4	F	2			

Type of contact

Gold	8	
Conductive silicone	2	
Silver	1	

Type of connection

Elbowed, gold plated male connector	2	
Ribbon cable + gold plated female IDC connector, length 30 cm	4	

Ribbon cable

Length other than 30 cm, please specify in cm (max.: 90 cm, in steps of 10 cm)	L ● ●

Directions for use

For each key of the keypad select:
- The colour, by ticking the appropriate box:
- ☐ B for beige,
- ☐ G for grey.
- The character or number (indicate clearly on the diagram),
- ☐ or a character or symbol selected from pages 35044/2 and 35044/3 (indicate the reference clearly on the diagram).

Note:
For a legend holder (transparent plunger cap for white legend) (1), mark 2 oblique strokes.
For a black matching blanking plug in unused ways, mark a cross.

54-way keypad (front view)
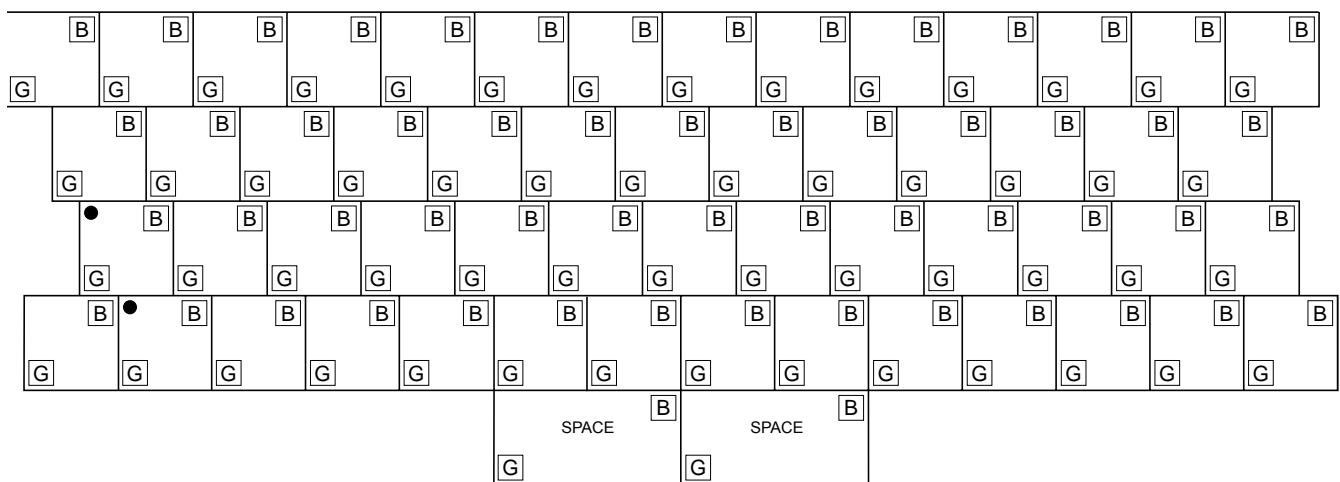
● Red LEDs (connect resistor in series, see scheme on page 35045/7).

Example of form completion
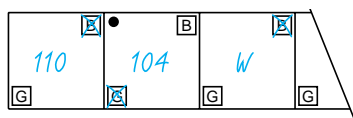
(1) For blank white legends, see references page 35042/4.

Characteristics: page 35042/2	References: pages 35042/3 and 35042/4	Dimensions: page 35045/3	Schemes: pages 35045/6 and 35045/7

Keypads
Non encoded output
12, 16 and 20 key

Customer			Schneider Electric Industries	
Company	Order N°	Delivery date	Sales office - Subsidiary Co.	Order N°

Reference (completed reference from page 35042/7)

Number of identical keypads	XBL C	5								

Directions for use

For each key of the keypad select:
■ The colour, by ticking the appropriate box:
□ B for beige,
□ G for grey.
■ The character or number (indicate clearly on the diagram),
□ or a character or symbol selected from pages 35044/2 and 35044/3 (indicate the reference clearly on the diagram).

Note:
For a legend holder (transparent plunger cap for white legend) (1), mark 2 oblique strokes.
For a black matching blanking plug in unused ways, mark a cross.

12-way keypad

16-way keypad

20-way keypad

Example of form completion

(1) For blank white legends, see references page 35042/4.

Characteristics: page 35042/2	References: pages 35042/3 and 35042/4	Dimensions: page 35045/3	Schemes: pages 35045/6 and 35045/7

Keypads
Non encoded output
12, 16 and 20 key

These keypads are identical to the standard types except that they may be customised by:
- Using keys of alternative colours.
- Marking individual keys with characters or symbols as shown on pages 35044/2 and 35044/3.
- Using keys with transparent plunger caps, enabling blank white legends to be inserted *(1)*.
- Fitting a ribbon cable longer or shorter than the standard length.

Basic reference to be completed (on completion, transfer to page 35042/6)

Number of identical keypads		XBL C	5									

Number of keys								
12 keys	0	1	2					
16 keys	0	1	6					
20 keys	0	2	0					

Fixing method (12 and 16 key)
Fixing from rear of panel into cut-out (flush mounting)	F
Fixing by keypad base onto panel (surface mounting)	R

Fixing method (20 key)
Fixing from rear of panel into cut-out (flush mounting)	F

Output mode (12 and 16 key)
Common point	1
Matrix	2

Output mode (20 key)
Matrix	2

Type of contact
Gold	8
Silver	1

Type of connection
Straight, gold plated male connector	1
Ribbon cable + gold plated female IDC connector, length 30 cm	4

Ribbon cable
Other cable lengths, please specify in cm (max.: 90 cm, in steps of 10)	L	●	●

(1) For blank white legends, see references page 35042/4.