BNC 75Ω connector

BNC75 Series



■Features

1. 50Ω-based BNC connector, 75Ω type

BNC type products are widely used as 50Ω connectors. Hirose's BNC75 is rated for 75Ω and can be mates with all other BNC connectors.

2. Easy on, easy-off bayonet lock system

Bayonet lock system that is easy to use and operate.

3. Applicable cable

Cable for this connector is coaxial with the diameter of approximately ϕ3 - ϕ6 (1.5C-QEV.CW etc.)

4. Reliable at high frequencies

Hirose 12G products corresponds to 12G (UHD) - SDI (SMPTE ST-2082) transmission.

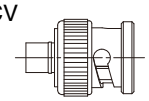
5. Applicable specifications

Japan Electronics and Information Technology Industries Association (JEITA RC-5233)

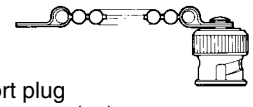
■Functional diagram

Plug side

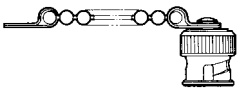
■Straight plug
Representative product :
BNC(75)-P-1.5CV



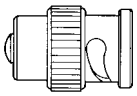
■Cap
CW-123A/U(44)



■ Short plug
JCW-159/U(41)

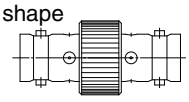


■Nonreflective terminator
●Mating interface shape : plug type
BNC-TMP-05(75)(50)



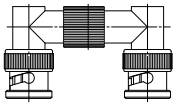
Plug-plug relay adapter

■Adapter
●Mating interface shape
Jack -jack type
BNC(75)-A-JJ(40)



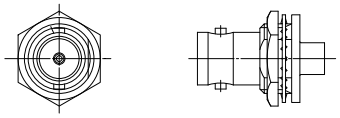
Jack-Jack relay adapter

■U-link
●Mating interface shape
Plug-plug type
BNC-UPA(75)-35(41)

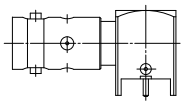


Jack side

■Panel jack
Representative product : BNC(75)-BPJ-1.5CV-(P)(40)

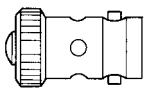


■Right angle receptacle
●PCB-mounted type
Representative product : BNC(75)-LR-PC-6(41)



■Various conversion adapters

■Non-reflective terminator
●Mating interface shape : Jack type
BNC-TMJ-05(75)(50)



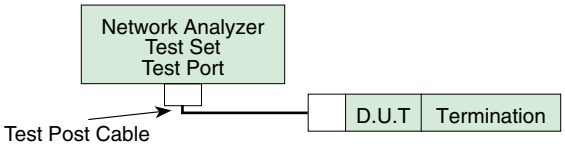
Feb.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

■Product Specifications

Rated value	Nominal characteristic impedance Rated voltage Rated frequency	75Ω AC 150Vrms DC～3GHz	Operation temperature range Operating relative humidity	-30℃～+60℃ Maximum of 85%

Items	Specifications	Conditions
1. Contact resistance	Maximum of 6mΩ	Measured at a maximum of DC 100mA
2. Insulation resistance	Minimum of 1,000MΩ	Measured at DC 500V
3. Withstanding voltage	No flashover or dielectric breakdown.	AC 500V for 1 minute
4. Voltage Standing Wave Ratio (※)	Maximum of 1.3	Up to DC 3GHz
5. Retaining force of a female contact	Minimum of 0.6N	Measured by a pin gauge of ϕ1.32mm
6. Mating cycles	Contact resistance : a maximum of 20mΩ	500 times
7. Vibration Resistance	No electrical discontinuity for 1μs or longer. No damage, crack or looseness of parts.	Frequency : 10 - 500Hz, half amplitude : 0.75mm Acceleration : 98m/s^2, 3 axis directions, 10 cycles each
8. Shock resistance	No electrical discontinuity for 1μs or longer. No damage, crack or looseness of parts.	Acceleration : 490m/s^2, duration : 11ms Half-sine, 3 directions, 3 times each
9. Moisture resistance	Insulation resistance : a minimum of 100MΩ (at high temperatures) Insulation resistance : a minimum of 1000MΩ (when dry) No damage, crack or looseness of parts.	Temperature : +25℃ - +65℃ Humidity : 80 - 96% Left for 240 hours
10. Thermal shock resistance	No damage, crack or looseness of parts.	(-55°C for 30 minutes→5 - 35°C for a maximum of 5 minutes→85°C for 30 minutes →5 - 35°C for a maximum of 5 minutes), 5 cycles
11. Corrosion resistance	No heavy corrosion.	In a 5% salt water solution for 48 hours on end

※Some products may have different specifications from those shown above.
The specification values of the Voltage Standing Wave Ratio (V.S.W.R.) are the values measured in the measuring system shown in the Figure below :



■Materials / Finish

Parts	Materials	Finish	Remarks
Shell	Brass	Silver plating/nickel plating	———
Male contact	Brass	Silver plating/gold plating	———
Female contact	Beryllium copper	Silver plating/gold plating	———
Insulator	PTFE resin	———	Flame retardant
Gasket	Silicone rubber	———	———

■Product Number Structure

Refer to the chart below when determining the product specifications from the product number.
Please select from the product numbers listed in this catalog when placing orders.

BNC(75) - L P - 59/U - 12G
❶ ❷ ❸ ❹ ❺

❶ Series name : BNC(75)
: Complies with BNC75Ω

❷ Shape of connectors
None : Straight type
L : Right angle type
B : Bulk head type
BL : Bulk head right angle type
PL : Panel right angle type

❸ Connector type
P : Plug
PJ : Panel jack
R : Receptacle
PA : Panel adapter

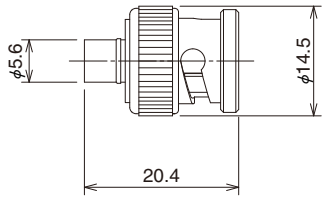
❹ 1) For plug / jack
··Applicable cable
2) For receptacle
PC : PCB-mounted type
3) For adapter
: Mating interface shape
4) All other cases
··additional number
5) Applicable frequency
None : 3GHz
12G : 12GHz

Feb.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

■Plug

●Straight plug

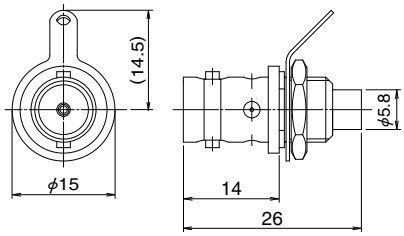




Part No.	HRS No.	Applicable cables	RoHS
BNC(75)-P-1.5CV	302-0404-7	1.5C-QEV.CW	Yes
BNC(75)-P-1.5CW	302-0003-0	1.5C-QEW.CW	

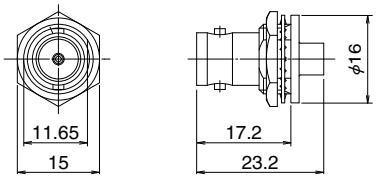
●Panel jack (Nut securing type)





Part No.	HRS No.	Applicable cables	Remarks	Mounting hole dimension	RoHS
BNC(75)-BPJ-1.5CW-2(40)	302-0343-4 40	1.5C-2W	Ships with toothed lug terminal strip	2-2	Yes

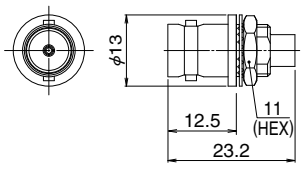




Part No.	HRS No.	Applicable cables	Remarks	Mounting hole dimension	RoHS
BNC(75)-BPJ-1.5CV-(P)(40)	302-0369-8 40	1.5C-2V	Ships with hex nut	2-1	Yes
BNC(75)-BPJ-1.5CV-1(40)	302-0375-0 40	1.5C-2V	Ships with round nut (refer to Note)		
BNC(75)-BPJ-1.5CW(P)(40)	302-0388-2 40	1.5C-2W	Ships with hex nut		

Note : Requires dedicated jigs.
※The shape diagram is a representative example.





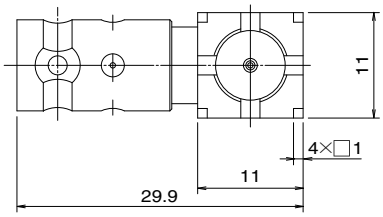
Part No.	HRS No.	Applicable cables	Mounting hole dimension	RoHS
BNC(75)-BPJ-1.5CV-2(40)	302-0380-0 40	1.5C-2V	3-1	Yes

Feb.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

■Receptacle

●Right angle receptacle (PCB-mounted type)



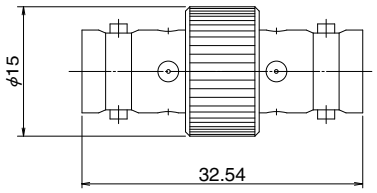


Part No.	HRS No.	Mounting hole dimension	RoHS
BNC(75)-LR-PC-6(41)	302-0363-1 41	4-1	Yes

■ Adapters

●Straight adapter

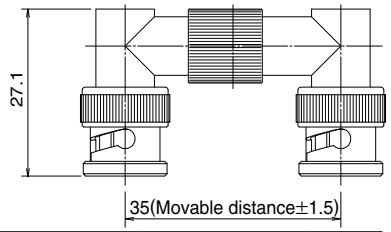




Part No.	HRS No.	RoHS
BNC(75)-A-JJ(40)	302-0384-1 40	Yes

●U-link (Mating interface shape : plug-plug)

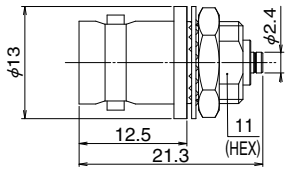




Part No.	HRS No.	RoHS
BNC-UPA(75)-35(41)	302-0301-4 41	Yes

●Conversion adapter (BNC (75) jack to H.FL jack panel adapter)

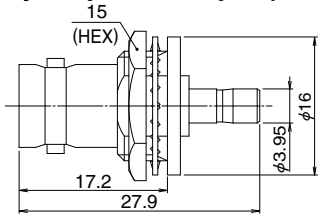




Part No.	HRS No.	Mounting hole dimension	RoHS
BNC(75)J-H.FLJ-BPA(40)	311-0302-8 40	3-1	Yes

●Conversion adapter (BNC (75) jack to PL71 jack panel adapter)





Part No.	HRS No.	Mounting hole dimension	RoHS
BNC(75)J-PL71J-BPA(40)	311-0304-3 40	2-1	Yes

Feb.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

■Nonreflective terminator

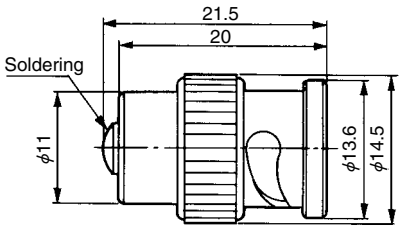
●Product Number Structure

BNC-TM P-05 (75) (**)
❶ ❷ ❸ ❹ ❺ ❻

❶ Series name : BNC series
❷ TM : Non-reflective terminator
❸ Connector type P : Plug type J : Jack type
❹ Power Example 05 : 0.5W 1 : 1W
❺ (75) : 75Ω
❻ (**) : 40 or 50 RoHS compliant

●Mating interface shape : plug type

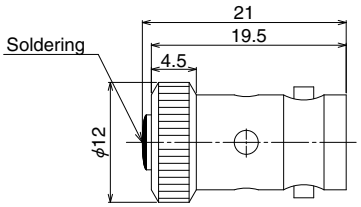




Part No.	HRS No.
BNC-TMP-05(75)(50)	353-0100-5 50

●Mating interface shape : Jack type





Part No.	HRS No.
BNC-TMJ-05(75)(50)	353-0101-8 50

◆Mounting hole dimension diagram (BNC 75Ω connector)

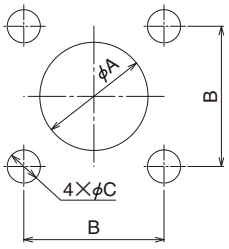


Diagram 1

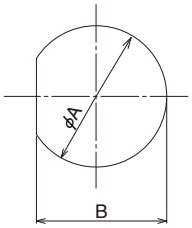


Diagram 2

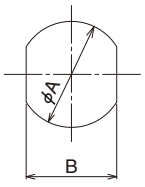


Diagram 3

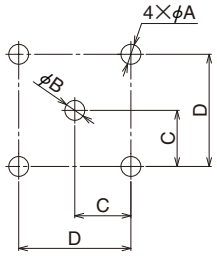


Diagram 4

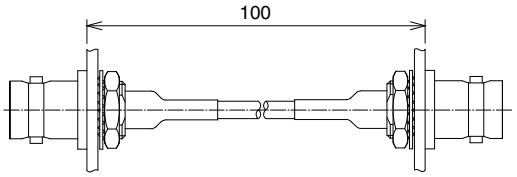
Attached diagram	No.	A	B	C	D
1	1-1	4.13 $^{+0.05}_{0}$	12.7	3	——
	1-2	11.4	12.7	3.2	——
	1-3	9.8	12.7	3	——
2	2-1	12.8 $^{+0.1}_{0}$	11.8 $^{+0.1}_{0}$	——	——
	2-2	11.3 $^{+0.1}_{0}$	10.3 $^{+0.1}_{0}$	——	——

Attached diagram	No.	A	B	C	D
3	3-1	9.6 $^{+0.1}_{0}$	8.2 $^{+0.1}_{0}$	——	——
4	4-1	1.8 $^{+0.1}_{0}$	1.8 $^{+0.1}_{0}$	5.08±0.05	10.16±0.05

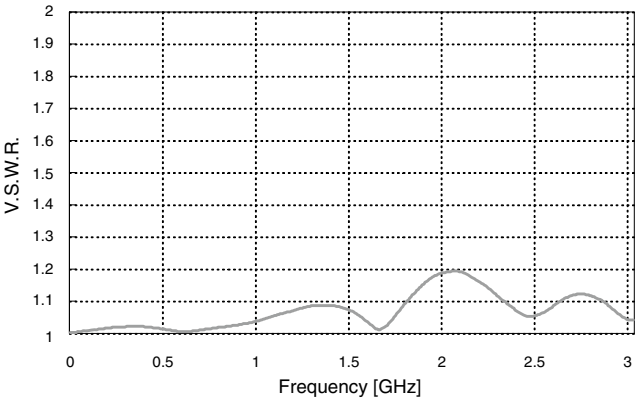
Feb.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

◆High-frequency characteristic of 75Ω hirose products

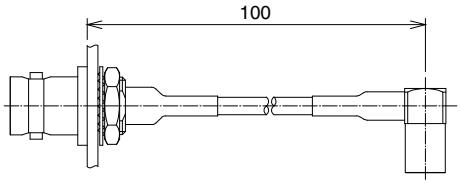
●BNC75 Series



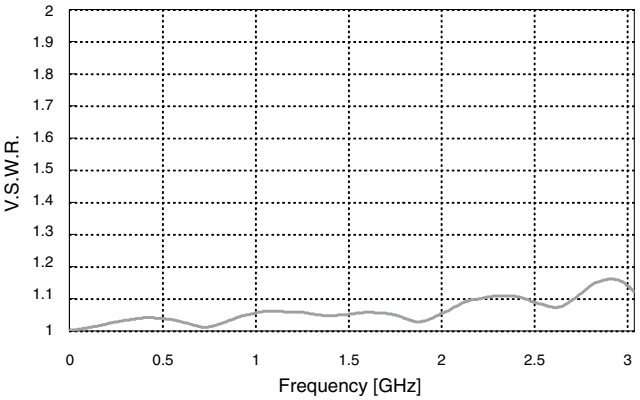
BNC(75)-BPJ-1.5CV-※ BNC(75)-BPJ-1.5CV-※



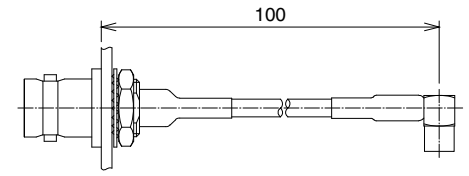
●PL71 Series



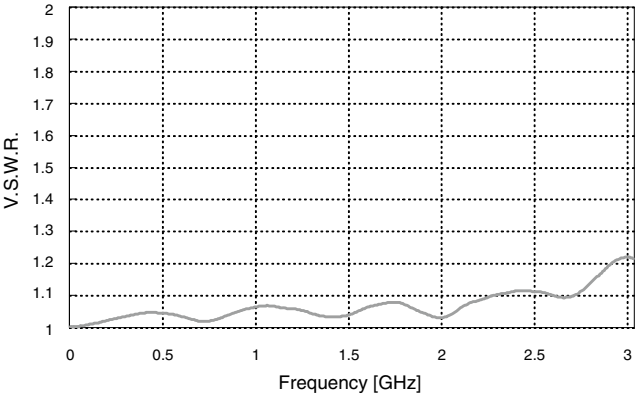
BNC(75)-BPJ-1.5CV-※ PL71-LP-1.5C(40)



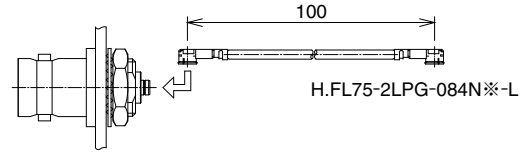
●PL75 Series



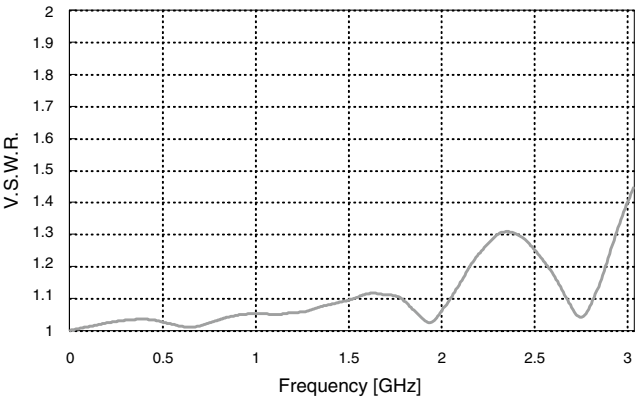
BNC(75)-BPJ-1.5CV-※ PL75-LP-1.5CV



●H.FL75 Series



BNC(75)J-H.FLJ-BPA(40)



Feb.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

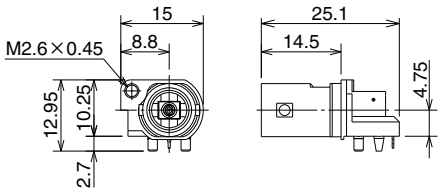
■BNC75 corresponding to 12G-SDI

BNC75 corresponding to 12G-SDI is prepared for 12G-SDI transmission. The connector prossess good reflection characteristic with a frequency band of 12GHz.

■Right angle receptacle

●Center contact THT version, Minimum PCB mount pitch

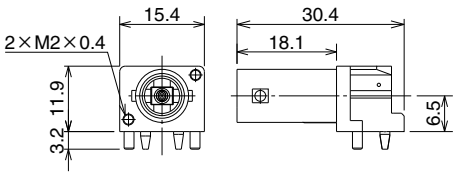




Part No.	HRS No.	RoHS
BNC(75)-PLR-PC(D)-12G-3	302-0088-0	Yes

●Center contact SMT version, Minimum PCB mount pitch

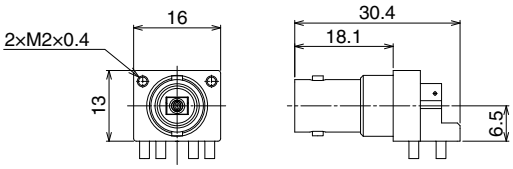




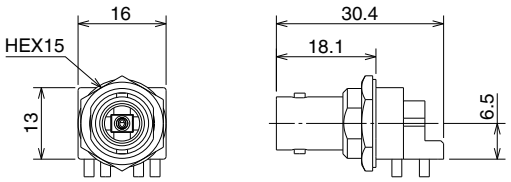
Part No.	HRS No.	Panel mount	Minimum PCB mount pitch	RoHS
BNC(75)-PLR-PC-12G-2	302-0085-0	Screw：M2×0.4	16mm	Yes

●Center contact SMT version

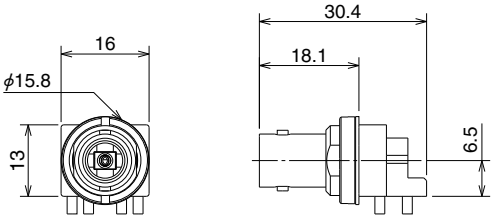












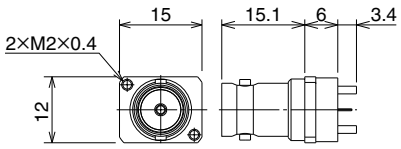
Part No.	HRS No.	Panel mount	Minimum PCB mount pitch	RoHS
BNC(75)-PLR-PC-12G-1	302-0083-0	Screw：M2×0.4	17mm	Yes
BNC(75)-BLR-PC-12G	302-0081-0	Nut：HEX15	17.5mm	
BNC(75)-BLR-PC-12G(01)	302-0081-0 01	Nut：ϕ15.8	16.5mm	

Feb.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

■Straight receptacle

●Center contact THT version, Minimum PCB mount pitch



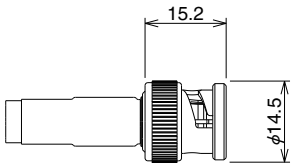


Part No.	HRS No.	Panel mount	Minimum PCB mount pitch	RoHS
BNC(75)-PR(6)-PC-12G	302-0086-0	Screw：M2×0.4	16mm	Yes

■Plug

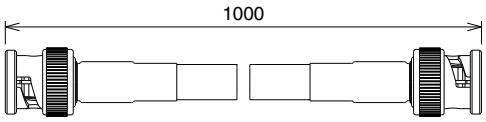
●Straight crimp version

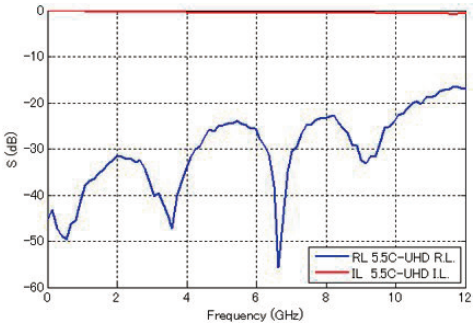




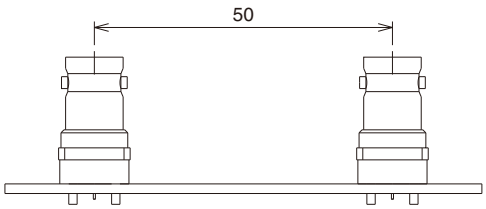
Part No.	HRS No.	Applicable cables	RoHS
BNC(75)-P-5.5C-12G	302-0091-0	5.5C-UHD/FW	Yes
BNC(75)-P-3.3C-12G	302-0092-0	3.3C-UHD/FW	

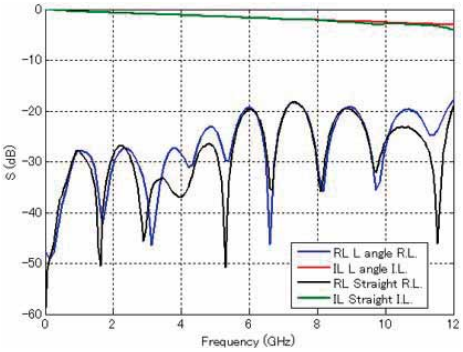
◆Plug assembly High-frequency characteristics





◆Receptacle High-frequency characteristics





Creative Links to World Electronics ®

HRS

HIROSE ELECTRIC CO.,LTD.

2-6-3,Nakagawa Chuoh,Tsuzuki-Ku,Yokohama-Shi 224-8540,JAPAN
TEL: +81-45-620-3526 Fax: +81-45-591-3726
http://www.hirose.com
http://www.hirose-connectors.com

Feb.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

The characteristics and the specifications contained herein are for reference purpose. Please refer to the latest customer drawings prior to use.
The contents of this catalog are current as of date of 07/2018. Contents are subject to change without notice for the purpose of improvements.